



**REPUBLIC OF ZAMBIA**  
**ZAMBIA AIRPORTS CORPORATION**  
**LIMITED**  
**Kenneth Kaunda International Airport**  
**P. O. BOX 30175,**  
**Lusaka. 10101**  
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AIP AIRAC AMDT 03/22

01 DEC 2022

## 29 DEC 2022

1. Insert or replace respectively the attached pages with effective date:

page to be destroyed		page to be inserted	
GEN 0.4 - 1	24 FEB 2022	GEN 0.4 - 1	29 DEC 2022
GEN 0.4 - 2	24 FEB 2022	GEN 0.4 - 2	29 DEC 2022
GEN 0.4 - 3	24 FEB 2022	GEN 0.4 - 3	29 DEC 2022
GEN 0.4 - 4	24 FEB 2022	GEN 0.4 - 4	29 DEC 2022
GEN 0.6 - 1	24 FEB 2022	GEN 0.6 - 1	29 DEC 2022
GEN 0.6 - 2	24 FEB 2022	GEN 0.6 - 2	29 DEC 2022
GEN 1.2 - 1	24 FEB 2022	GEN 1.2 - 1	29 DEC 2022
GEN 1.2 - 2	24 FEB 2022	GEN 1.2 - 2	29 DEC 2022
GEN 1.2 - 3	24 FEB 2022	GEN 1.2 - 3	29 DEC 2022
GEN 1.2 - 4	24 FEB 2022	GEN 1.2 - 4	29 DEC 2022
GEN 1.5 - 1	24 FEB 2022	GEN 1.5 - 1	29 DEC 2022
GEN 1.5 - 2	24 FEB 2022	GEN 1.5 - 2	29 DEC 2022
		GEN 1.5 - 3	29 DEC 2022
		GEN 1.5 - 4	29 DEC 2022
GEN 1.7 - 1	24 FEB 2022	GEN 1.7 - 1	29 DEC 2022
GEN 1.7 - 2	24 FEB 2022	GEN 1.7 - 2	29 DEC 2022
GEN 2.4 - 1	24 FEB 2022	GEN 2.4 - 1	29 DEC 2022
GEN 2.4 - 2	24 FEB 2022	GEN 2.4 - 2	29 DEC 2022
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GEN 2.4 - 4	24 FEB 2022	GEN 2.4 - 4	29 DEC 2022
GEN 2.4 - 5	24 FEB 2022		
GEN 2.4 - 6	24 FEB 2022		
GEN 2.5 - 1	24 FEB 2022	GEN 2.5 - 1	29 DEC 2022
GEN 2.5 - 2	24 FEB 2022	GEN 2.5 - 2	29 DEC 2022
GEN 3.3 - 1	24 FEB 2022	GEN 3.3 - 1	29 DEC 2022
GEN 3.3 - 2	24 FEB 2022	GEN 3.3 - 2	29 DEC 2022
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GEN 4.1 - 1	24 FEB 2022	GEN 4.1 - 1	29 DEC 2022
GEN 4.1 - 2	24 FEB 2022	GEN 4.1 - 2	29 DEC 2022
GEN 4.2 - 1	24 FEB 2022	GEN 4.2 - 1	29 DEC 2022
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		GEN 4.2 - 3	29 DEC 2022
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ENR 2.1 - 4	24 FEB 2022	ENR 2.1 - 4	29 DEC 2022
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ENR 2.2 - 2	24 FEB 2022	ENR 2.2 - 2	29 DEC 2022
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ENR 3.1 A400 - 3	24 FEB 2022	ENR 3.1 A400 - 3	29 DEC 2022
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ENR 3.1 B530 - 2	24 FEB 2022	ENR 3.1 B530 - 2	29 DEC 2022
ENR 3.1 G652 - 1	24 FEB 2022	ENR 3.1 G652 - 1	29 DEC 2022
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ENR 3.2 UM439 - 1	24 FEB 2022	ENR 3.2 UM439 - 1	29 DEC 2022
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ENR 3.2 UN305 - 1	24 FEB 2022	ENR 3.2 UN305 - 1	29 DEC 2022
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ENR 3.3 UM214 - 1	24 FEB 2022	ENR 3.3 UM214 - 1	29 DEC 2022
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AD 2 FLSW 12 - 4	24 FEB 2022	AD 2 FLSW 12 - 4	29 DEC 2022

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0.4 - 2	29 DEC 2022	2.6 - 2	24 FEB 2022	1.2 - 2	24 FEB 2022
0.4 - 3	29 DEC 2022	2.7 - 1	24 FEB 2022	1.3 - 1	24 FEB 2022
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3.2 UA607 - 2	29 DEC 2022	3.5 - 2	24 FEB 2022	AD 2 FLCP 1 - 2	29 DEC 2022
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3.2 UG424 - 2	29 DEC 2022	4.1 - 2	29 DEC 2022	AD 2 FLCP 2 - 2	24 FEB 2022
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3.2 UG655 - 1	29 DEC 2022	4.3 - 1	24 FEB 2022	AD 2 FLCP 6 - 1	24 FEB 2022
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3.2 UG656 - 2	29 DEC 2022	4.4 - 2	24 FEB 2022	AD 2 FLCP 14 - 2	24 FEB 2022
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## GEN 1.2 ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT

### 1 General

- | 1.1. All flights within, into, from or overflying Zambian territory shall be subject to the current Zambian regulations relating to Civil Aviation. These regulations correspond in essence to the Standards and Recommended Practices contained in Annex 9 to the Convention on International Civil Aviation.
- | 1.2. International flights into or departing from Zambian territory shall make their first landing at, or final departure from an International Aerodrome listed below:
  - a. Kenneth Kaunda International Airport
  - b. Harry Mwaanga Nkumbula International Airport
  - c. Simon Mwansa Kapwepwe International Airport
  - d. Mfuwe International Airport
- | 1.3. 1.3 Flights of foreign aircraft shall be conducted in the airspace of the Republic of Zambia in accordance with:
  - a. the State of the airline must be a party to the International Air Service Transit Agreement and/or the International Air Transport Agreement Zambia is a party to both Agreements.
  - b. the airline must be eligible to make the flights under the provisions of a Bilateral or Multilateral Agreement to which the State of the airline and Zambia are contracting parties and must have a permit to operate into or in transit across Zambia.

- | 1.4. All flights within, into, from or over the Zambian territory shall be required to obtain an airspace clearance on the following link [www.airforce.mil.zm](http://www.airforce.mil.zm) Flight Clearance Management System, 48 hours before the scheduled date of flight.

### 2 Scheduled flights

#### 2.1 General

- 2.1.1. Application for such permits shall be submitted in ample time to:

The Permanent Secretary  
Ministry of Transport and Logistics  
P.O. Box 50065  
Lusaka 10101  
Zambia

with a copy to:

The Director General  
Zambia Civil Aviation Authority  
P.O. Box 50137 Lusaka  
Zambia

#### 2.2 Documentary requirements for clearance of aircraft.

- 2.2.1. It is necessary that the under mentioned aircraft documents be submitted by airline operators for clearance on entry and departure of their aircraft to and from Zambia. All documents listed below must follow the ICAO standard format as set forth in the relevant appendices to ICAO Annex 9 and are acceptable when furnished in English and completed in legible handwriting. No visas are required with such documents.

##### 2.2.2 Aircraft documents required (arrival/departure)

Required by	General Declaration	Pax manifest	Cargo manifest	Report of Departure	Report of Arrival
				Customs	Customs
				Form 7	Form 2
Customs & Excise	2	2	2	2	2

**NOTE:**

- a. Form 2 and 7 are completed when arriving or departing.
- b. One copy of the General Declaration is endorsed and returned by customs, signifying clearance.
- c. If no passengers are embarking (disembarking) and no articles are laden (unladen), no aircraft document except copies of General Declaration need to be submitted to the above authorities.

### **3 Non-scheduled flights**

#### **3.1 Procedures**

3.1.1. If an operator intends to carry out a (series of ) non-scheduled flight(s) in transit across, on non traffic stops in the territory of Zambia, it is necessary for the operator to obtain prior permission.

3.1.2. If an operator intends to perform a single or a (series of) non-scheduled flight(s) in Zambia for the purpose of taking on or discharging passengers, cargo or mail, it is necessary for the operator to apply for Temporary Air Service Permit (TASP) for permission to carry out such operations not less than Seventy Two (72) hours in advance of intended landing to:

The Permanent Secretary,  
Ministry of Transport and Logistics  
P.O. Box 50065, Lusaka, 10101  
Zambia

with a copy to:-

The Director General  
Zambia Civil Aviation Authority  
P.O. BOX 50137  
LUSAKA 10101  
ZAMBIA  
Tel.: 260 211 251677  
Fax: 260 211 251841  
E-mail: civil.aviation@caa.co.zm

The application must include the following information in the order shown hereunder:

- a. Name of operator including Place of business and all numbers of communications;
- b. Type of aircraft and registration marks and MTOW;
- c. Flight route, date and time of arrival at and departure from destination aerodrome;
- d. Place or places of embarkation or disembarkation abroad, as the case may be, of passengers and/or freight;
- e. Purpose of flight and number of passengers and/or nature and amount of freight; and
- f. Receiving Party (name, address and business of charterer, if any)

3.1.2.1. When due to flight urgency, the seventy two (72) hours notification may not apply. The applicant shall via email or in the application indicate the reasons for not submitting the application within the specified period.

3.1.2.2. The applicant of a Temporary Air Service Permit (TASP) will not commence his flight until he has been issued with a TASP and the number is known. The validity of such permissions is 72 hours starting from the date indicated in the permission.

#### **3.2 Documentary requirements for clearance of aircraft**

3.2.1. The same requirements as for SCHEDULED FLIGHTS.

### **4 Private flights**

#### **4.1 Advance notification of arrival**

All private international flights requiring landing or overfly the Republic of Zambia and all domestic private flights (except where a special arrangement exists) must have prior permission and applications for clearance addressed to Director General (ZCAA) must be submitted not less than Forty-Eight (48) hours. (See GEN 1.1 for address)

Details as specified in in GEN1.2.3.1.2 must be included . Confirmation of approval must be received before commencement of either International or Local flights.

#### **4.2 Documentary requirements for clearance of aircraft**

The Same requirements as for SCHEDULED FLIGHTS.

### **5 Public health measures applied to aircraft**

5.1. In relation to Public Health issues, the Pilot in Command of aircraft, or their agents, shall make known to the Air Traffic Control by radio as early as possible before arrival at the airport of destination any cases of illness indicative of a disease of an infectious nature or evidence of a public health risk on board as soon as such illnesses or public health risks are made known to the Officer or Pilot in Command.

This information must be immediately relayed to the competent authority at the airport. In urgent circumstances, such information should be communicated directly by the officers or Pilot in Command to the relevant airport authority.

5.2. If evidence of possible health risks including infection or contamination sources are detected on board the aircraft, the aircraft shall be sent to the quarantine area to use all necessary specific health measures in accordance with International Health Regulations (IHR 2005).

5.3. All aircraft arriving in the Republic of Zambia from an area with an outbreak of communicable disease shall have appropriate verification in the health part of the aircraft General Declaration.

### **6 Military Flights/State Aircraft**

Foreign military aircraft/State aircraft must obtain Diplomatic and administrative clearance from the Government and the application(s) should be addressed to.

The Permanent Secretary  
Ministry of Foreign Affairs  
P.O Box 50069  
Lusaka, 10101  
Zambia  
Tel: +260 211 252718/252708/252675  
Fax:+260 211 250240  
email: info@mofa.gov.zm

The application should contain the following information

- a. Name of applicant / Operator including place of business and all numbers of communications;
- b. Address
- c. Telephone number
- d. Date of application
- e. Aircraft Details
  - i. Aircraft type (military or Civil)
  - ii. Aircraft registration
  - iii. Aircraft call sign
  - iv. Colour of aircraft
- f. Crew details
  - i. Name and Nationality of Aircraft Captain
  - ii. Number of crew and nationality
- g. Flight Details

- i. Date(s) of flight
- ii. Departure point and Destination
- iii. Route, Flight levels and Crusing Speeds
- h. Any other destination(s) within Zambia
- i. Description of Photographic equipment/firearms
- j. Purpose of flight
- k. Applicant should sign State name and put date of application.

## GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS

### 1 General

Commercial air transport aircraft operating within the Republic of Zambia must adhere to the provision of ICAO Annex 6 – Operation of Aircraft, Part 1 – International Commercial Air Transport – Aeroplane, Chapter 6 (Aeroplane Instruments, Equipment and Flight documents) and ZCARS part 7 – Instruments and Equipment

### 2 Special equipment to be carried

Not Applicable.

### 3 Requirements for SSR transponder

- 3.1. All aircraft operating in the airspace of Zambia shall be equipped with serviceable Secondary Surveillance Radar (SSR) transponder in accordance with the requirements of ICAO Annex 10 and ZCARS part 7.
- 3.2. Operators of aircraft not equipped with SSR transponder and carrying out special aviation work (agricultural, construction, rescue and training) or performing one-shot flight may operate only on special authorization of the Director General of Civil Aviation Authority.

### 4 Requirements for ACAS II

- 4.1. All commercial aircraft operating in the airspace in Zambia with maximum certificated take-off mass exceeding 5700 kilograms or authorized to carry more than 19 passengers and non-commercial aircraft with maximum certificated take-off mass exceeding 15000 kilograms or authorized to carry more than 30 passengers shall be equipped with Airborne Collision Avoidance System (ACAS II) in compliance with the requirements of ICAO Annex 10.
- 4.2. Any airborne collision avoidance system installed on an aircraft in Zambia shall be approved by the Civil Aviation Authority.
- 4.3. Each person operating an aircraft equipped with an airborne collision avoidance system shall have that system on and operating.

### 5 Requirements for RVSM

- a. In respect of groups of aeroplanes that are nominally of identical design and build with respect to all details that could influence the accuracy of height-keeping performance, the height-keeping performance capability shall be such that the Total Vertical Error (TVE) for the group of aeroplanes shall have a mean no greater than 25 m (80 ft) in magnitude and shall have a standard deviation no greater than  $28 - 0.013z^2$  for  $0 \leq z \leq 25$  when  $z$  is the magnitude of the mean TVE in metres, or  $92 - 0.004z^2$  for  $0 \leq z \leq 80$  where  $z$  is in feet. In addition, the components of TVE shall have the following characteristics:
  1. the mean Altimetry System Error (ASE) of the group shall not exceed 25 m (80 ft) in magnitude;
  2. the sum of the absolute value of the mean ASE and of three standard deviations of ASE shall not exceed 75 m (245 ft); and
  3. the differences between cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.
- b. In respect of aeroplanes for which the characteristics of the airframe and altimetry system fit are unique and so cannot be classified as belonging to a group of aeroplanes encompassed by paragraph 1, the height-keeping performance capability shall be such that the components of the TVE of the aeroplane have the following characteristics
  1. the ASE of the aeroplane shall not exceed 60 m (200 ft) in magnitude under all flight conditions; and the differences between the cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential
  2. The differences between the cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.

### 6 Requirements for PBN/RNAV/RNP

- 6.1. Except for the State aircraft, all aircraft carrying out IFR flights in the controlled airspace in Zambia, except TMAs, shall have and use RNAV/RNP equipment based on all sensors meeting RNAV5 and RNP 10 navigation specification requirements in accordance with ZCARS part 7.
- 6.2. Flight operations and air traffic control procedures are carried out according to the requirements of ICAO Docs 8168, 4444 and 7030 and Part 7 of the ZCARS.

### **6.3 Navigation Specification**

A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined Required Navigation Performance (RNP) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

## **7 Equipment and flight documents to be carried by all types of flights**

7.1. Instrumental, radio and navigation equipment installed on civil aircraft corresponds to requirement of Chapter 6 and 7 of ICAO Annex 6 and Part 7 of ZCARS.

7.2. The following documents or copies thereof shall be carried on board the aircraft during the flight:

- a. Certificate of Registration of the aircraft;
- b. Certificate of Airworthiness of the aircraft;
- c. Certified copy of the Noise Certificate (if applicable), including an English translation;
- d. Certified copy of the Air Operator Certificate;
- e. the Aircraft Radio Licence
- f. the original or a copy of the Third Party Liability Insurance Certificate(s);
- g. Each flight crew member shall, on each flight, carry a valid flight crew licence with appropriate rating(s) for the purpose of the flight;
- h. the current parts of the Operations Manual(OM) relevant to the duties of the crew are carried on each flight;
- i. those parts of the OM which are required for the conduct of a flight are easily accessible to the crew on board the aeroplane;
- j. the current Aeroplane Flight Manual (AFM);
- k. Operational Flight Plan;
- l. ATS flight plan (FPL);
- m. NOTAM/AIS briefing documentation;
- n. Meteorological information;
- o. Mass and Balance documentation;
- p. Notification of special loads including dangerous goods including written information to the commander;
- q. Cargo manifest, passenger manifest;
- r. Forms to comply with the reporting requirements of the Authority and the Operator;

7.3. Current and suitable maps and charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted.

7.4. Procedures, as prescribed in ICAO Annex 2, for pilots-in-command of intercepted aircraft.

7.5. A list of visual signals for use by intercepting and intercepted aircraft, as contained in ICAO Annex 2.

## **8 Equipment to be carried on all internal and on certain flights**

8.1. On all flights with single-engine and that multi-engine aircraft not capable to maintain the prescribed minimum safe altitude in the event of engine failure, the following emergency equipment shall be carried.

8.2. Signalling equipment:

- a. An Emergency Locator Transmitter (ELT); with frequency of 121.500 MHz.
- b. Two signal flares of the day and night type;
- c. A signal sheet (1x1 m) in a reflecting color;
- d. A knife;
- e. An electric hand torch.

8.3. Survival equipment:

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In accordance with ICAO Annex 6, Part 1.and ZCARS Part 7

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## GEN 1.7 DIFFERENCES FROM ICAO STANDARDS, RECOMMENDED PRACTICES AND PROCEDURES

### 1 Annexes To The Convention On International Civil Aviation

ANNEX 1 -	<b>Personnel Licensing</b>
Reference	Nil
ANNEX 2 -	<b>Rules of the air</b>
Reference	Nil
ANNEX 3 -	<b>Meteorological service for international air navigation:</b>
Reference	Nil
ANNEX 4 -	<b>Aeronautical charts</b>
Reference	Nil
ANNEX 5-	<b>Units of measurements to be used in air and ground operations</b>
Reference	Nil
ANNEX 6 -	<b>Operation of aircraft</b>
Reference	Nil
ANNEX 7-	<b>Aircraft nationality and registration marks</b>
Reference	Nil
ANNEX 8-	<b>Airworthiness of aircraft</b>
Reference	Nil
ANNEX 9-	<b>Facilitation</b>
Reference	Nil
ANNEX 10	<b>Aeronautical telecommunications</b>
-	
Reference	Nil
ANNEX 11	<b>Air traffic services</b>
-	
Reference	Nil
ANNEX 12	<b>Search and rescue</b>
-	
Reference	Nil
ANNEX 13	<b>Aircraft accident investigation</b>
-	
Reference	Nil
ANNEX 14	<b>Aerodromes</b>
-	
Reference	Nil
ANNEX 15	<b>Aeronautical information services</b>
-	
Reference	Nil
ANNEX 16	<b>Environmental protection</b>
-	

Reference	Nil
ANNEX 17	<b>Security - Safeguarding international civil aviation against acts of unlawful interference</b>
-	
Reference	Nil
ANNEX 18	<b>The safe transport of dangerous goods by air</b>
-	
Reference	Nil
ANNEX 19	<b>Safety management</b>
-	
Reference	Nil



## GEN 2.4 LOCATION INDICATORS

Encode		Decode	
Location	Indication	Indication	Location
AMELIA	FLAI*	FLAA*	KAWA
B-HIGH	FLBH*	FLAB*	KAKUMBI
BALABALA	FLRR*	FLAC*	LWIMBA
BAOBAB PLAINS	FLBP*	FLAD*	LUWOMBA
BAOBAB RIDGE	FLBB*	FLAE*	FOREST IN
CERES	FLCR*	FLAG*	KHAL-AMANZI
CHABWINO	FLCA*	FLAI*	AMELIA
CHALATA	FLCB*	FLAJ*	KALA AERODROME
CHIFUNDA	FLCF*	FLAT*	KATETE
CHILANGA	FLCL*	FLAX*	MACHA
CHILONGOLO	FLCG*	FLBA*	MBALA
CHIMBWI	FLCM*	FLBB*	BAOBAB RIDGE
CHINGOMBE	FLCN*	FLBH*	B-HIGH
CHINSALI	FLCS*	FLBM*	MAMBILIMA
CHIPATA	FLCP	FLBP*	BAOBAB PLAINS
CHITOKOLOKI	FLCT*	FLBW*	NABWALYA
CHUNGA	FLCU*	FLCA*	CHABWINO
DELTA FARM	FLDF*	FLCB*	CHALATA
DIPALATA	FLDP*	FLCF*	CHIFUNDA
EAST EIGHT	FLEH*	FLCG*	CHILONGOLO
EAST FIVE	FLEE*	FLCL*	CHILANGA
EAST FOUR	FLED*	FLCM*	CHIMBWI
EAST FOURTEEN	FLEN*	FLCN*	CHINGOMBE
EAST ONE	FLEA*	FLCP	CHIPATA
EAST SEVEN	FLEG*	FLCR*	CERES
EAST SIX	FLEF*	FLCS*	CHINSALI
EAST THREE	FLEC*	FLCT*	CHITOKOLOKI
EAST TWO	FLEB*	FLCU*	CHUNGA
FAIRFIELD	FLFF*	FLDB*	MAFUNDZALO
FARM CENTRE	FLFC*	FLDF*	DELTA FARM
FENWOOD	FLFD*	FLDP*	DIPALATA
FLYBY	FLFB*	FLEA*	EAST ONE
FOREST IN	FLAE*	FLEB*	EAST TWO
FULAZA	FLFZ*	FLEC*	EAST THREE
HARRY MWAANGA NKUMBULA INTL	FLHN	FLED*	EAST FOUR
HILLCREST	FLHC*	FLEE*	EAST FIVE
HIPPO	FLHP*	FLEF*	EAST SIX
IKAROS	FLIS*	FLEG*	EAST SEVEN
INJA	FLIJ*	FLEH*	EAST EIGHT
JEKI	FLJK*	FLEN*	EAST FOURTEEN
KABOMPO	FLPO*	FLFB*	FLYBY
KABWE	FLKW*	FLFC*	FARM CENTRE
KAILA	FLKF*	FLFD*	FENWOOD
KAKUMBI	FLAB*	FLFF*	FAIRFIELD
KALA AERODROME	FLAJ*	FLFI	LUSAKA FIR
KALABO	FLKL*	FLFR*	LUANGWA
KALENE HILL	FLKI*	FLFZ*	FULAZA
KALUMBILA	FLKM*	FLGE*	MUKINGE HILL

Encode		Decode	
Location	Indication	Indication	Location
KANFINSA	FLKJ*	FLHC*	HILLCREST
KAOMA	FLKO*	FLHG*	WARDY
KASABA BAY	FLKY*	FLHN	HARRY MWAANGA NKUMBULA INTL
KASAMA	FLKS	FLHP*	HIPPO
KASANKA	FLKA*	FLIJ*	INJA
KASAVASA	FLKT*	FLIL*	MOUNT ISABELLE
KASHIKISHI	FLKH*	FLIS*	IKAROS
KASOMPE	FLKE*	FLJH*	PILATUS ENGINEERING
KATETE	FLAT*	FLJK*	JEKI
KAWA	FLAA*	FLKA*	KASANKA
KAWAMBWA	FLKB*	FLKB*	KAWAMBWA
KENNETH KAUNDA INTL	FLKK	FLKE*	KASOMPE
KHAL-AMANZI	FLAG*	FLKF*	KAILA
KOTAKOTA	FLTA*	FLKH*	KASHIKISHI
KYINDU	FLKN*	FLKI*	KALENE HILL
LESA	FLLE*	FLKJ*	KANFINSA
LOLOMA	FLOL*	FLKK	KENNETH KAUNDA INTL
LOZA	FLLZ*	FLKL*	KALABO
LUANGWA	FLFR*	FLKM*	KALUMBILA
LUELO	FLLR*	FLKN*	KYINDU
LUEMBE	FLUB*	FLKO*	KAOMA
LUENGU (MUKUMPU)	FLLJ*	FLKS	KASAMA
LUKULU	FLLK*	FLKT*	KASAVASA
LUNDAZI	FLLD*	FLKW*	KABWE
LUNGA	FLNG*	FLKY*	KASABA BAY
LUSAKA CITY	FLLC*	FLKZ*	MWANYA
LUSAKA FIR	FLFI	FLLC*	LUSAKA CITY
LUSALI HILLS	FLLH*	FLLD*	LUNDAZI
LUSHIMBA SPRINGS	FLLM*	FLLE*	LESA
LUWOMBA	FLAD*	FLLH*	LUSALI HILLS
LWIMBA	FLAC*	FLLJ*	LUENGU (MUKUMPU)
MAAMBA	FLMB*	FLLK*	LUKULU
MACHA	FLAX*	FLLM*	LUSHIMBA SPRINGS
MAFUNDZALO	FLDB*	FLLR*	LUELO
MAMBILIMA	FLBM*	FLLZ*	LOZA
MANO	FLNO*	FLMA	MANSA
MANSA	FLMA	FLMB*	MAAMBA
MARAAMBA MICROLIGHT	FLMR*	FLMC*	MASTOCK CHIWA
MASEBE RANCH	FLYS*	FLMF	MFUWE
MASTOCK CHIWA	FLMC*	FLMG	MONGU
MAYFIELD	FLYD*	FLMH*	MUSHISHIMA
MAYOBA	FLSR*	FLMI*	MUNWA NKOZI
MAZIBA BAY	FLMY*	FLMJ*	MUTEMWA
MBALA	FLBA*	FLML*	MUFULIRA
MBIZI	FLZI*	FLMP*	MPIKA
MFUWE	FLMF	FLMQ*	MULEMBO
MKUSHI RIVER	FLMV*	FLMR*	MARAAMBA MICROLIGHT
MONGU	FLMG	FLMU*	MULUBEZI
MOUNT ISABELLE	FLIL*	FLMV*	MKUSHI RIVER

Encode		Decode	
Location	Indication	Indication	Location
MPIKA	FLMP*	FLMW*	MWINILUNGA
MTENDERE	FLTD*	FLMY*	MAZIBA BAY
MUFULIRA	FLML*	FLNA*	NGOMA
MUKINGE HILL	FLGE*	FLNG*	LUNGA
MULEMBO	FLMQ*	FLNK*	NKAMBA BAY
MULOBA	FLOB*	FLNO*	MANO
MULOBEZI	FLMU*	FLNZ*	NZIMBA AERODROME
MUNWA NKOZI	FLMI*	FLOB*	MULOBA
MUSHISHIMA	FLMH*	FLOL*	LOLOMA
MUTEMWA	FLMJ*	FLOT*	OTAGO
MWALESHI	FLWS*	FLPE*	PETAUKE
MWANYA	FLKZ*	FLPO*	KABOMPO
MWINILUNGA	FLMW*	FLPZ*	PEDZA
NABWALYA	FLBW*	FLRA*	RAPID ONE ZERO
NGOMA	FLNA*	FLRB*	RAPID TWO ONE
NKAMBA BAY	FLNK*	FLRC*	RIVER CLUB
NZIMBA AERODROME	FLNZ*	FLRR*	BALABALA
OTAGO	FLOT*	FLRZ*	ROYAL ZAMBEZI
PEDZA	FLPZ*	FLSE*	SERENJE
PETAUKE	FLPE*	FLSG*	SINAZONGWE
PILATUS ENGINEERING	FLJH*	FLSH*	SHIWANGANDU
RAPID ONE ZERO	FLRA*	FLSI*	SUN INTERNATIONAL
RAPID TWO ONE	FLRB*	FLSJ*	SAKEJI
RIVER CLUB	FLRC*	FLSK	SIMON MWANSA KAPWEPWE INTERNATIONAL AIRPORT
ROYAL ZAMBEZI	FLRZ*	FLSN*	SENANGA
SAKEJI	FLSJ*	FLSO*	SOUTH DOWNS
SENANGA	FLSN*	FLSR*	MAYOBA
SERENJE	FLSE*	FLSS*	SESHEKE
SESHEKE	FLSS*	FLST*	STRAVENDALE
SHIWANGANDU	FLSH*	FLSW	SOLWEZI
SIMON MWANSA KAPWEPWE INTERNATIONAL AIRPORT	FLSK	FLTA*	KOTAKOTA
SINAZONGWE	FLSG*	FLTB*	TURNBULL
SOLWEZI	FLSW	FLTD*	MTENDERE
SOUTH DOWNS	FLSO*	FLTF*	TAFIKA
STRAVENDALE	FLST*	FLTI*	TARANAKI
SUN INTERNATIONAL	FLSI*	FLTO*	TONGABEZI
TAFIKA	FLTF*	FLTT*	TAITA FALCON
TAITA FALCON	FLTT*	FLUB*	LUEMBE
TARANAKI	FLTI*	FLVX*	VIXERS
TONGABEZI	FLTO*	FLWA*	WEST ONE
TURNBULL	FLTB*	FLWB*	WEST TWO
VIXERS	FLVX*	FLWC*	WEST THREE
WAKAWAKA	FLWW*	FLWD*	WEST FOUR
WARDY	FLHG*	FLWE*	WEST FIVE
WEST FIVE	FLWE*	FLWF*	WEST SIX
WEST FOUR	FLWD*	FLWG*	WEST SEVEN
WEST ONE	FLWA*	FLWS*	MWALESHI
WEST SEVEN	FLWG*	FLWW*	WAKAWAKA

Encode		Decode	
Location	Indication	Indication	Location
WEST SIX	FLWF*	FLYD*	MAYFIELD
WEST THREE	FLWC*	FLYS*	MASEBE RANCH
WEST TWO	FLWB*	FLZB*	ZAMBEZI
ZAMBEZI	FLZB*	FLZI*	MBIZI



## GEN 2.5 LIST OF RADIO NAVIGATION AIDS

Identification	Station name	Facility	Purpose	Station name	Facility	Identification	Purpose
CO	SIMON MWANSA KAPWEP-WE	DME	A	CHIPATA HARRY MWAANGA NKUMBULA	NDB NDB	CP LZ	AE A
CO	SIMON MWANSA KAPWEP-WE	GP	A	HARRY MWAANGA NKUMBULA	VOR/DME	VLI	AE
CO	SIMON MWANSA KAPWEP-WE	LOC	A	KAOMA KAPIRI-MPOSHI KASAMA	NDB NDB	KO KM	E E
CP	CHIPATA	NDB	AE	KENNETH KAUNDA	NDB	LE	A
KM	KAPIRI-MPOSHI	NDB	E	KENNETH KAUNDA	NDB	LN	A
KO	KAOMA	NDB	E	KENNETH KAUNDA	DME	LO	A
KS	KASAMA	NDB	AE	KENNETH KAUNDA	DME	LO	A
KT	SOUTH-DOWNS (KITWE)	NDB	A	KENNETH KAUNDA	GP	LO	A
LE	KENNETH KAUNDA	NDB	A	KENNETH KAUNDA	LOC	LO	A
LN	KENNETH KAUNDA	NDB	A	KENNETH KAUNDA	NDB	LW	A
LO	KENNETH KAUNDA	DME	A	KENNETH KAUNDA	VOR/DME	VLS	AE
LO	KENNETH KAUNDA	DME	A	KENNETH KAUNDA	NDB	LY	A
LO	KENNETH KAUNDA	GP	A	LILAYI (KENNETH KAUNDA)	NDB		
LO	KENNETH KAUNDA	LOC	A	MANSA	NDB	MA	AE
LW	KENNETH KAUNDA	NDB	A	MFUWE INTER-NATIONAL AIRPORT	VOR/DME	VMF	AE
LY	LILAYI (KENNETH KAUNDA)	NDB	A	MFUWE	NDB	MF	A
LZ	HARRY MWAANGA NKUMBULA	NDB	A	MONGU	NDB	MG	A
MA	MANSA	NDB	AE	MONGU	VOR/DME	VMG	E
MF	MFUWE	NDB	A	NDOLA	VOR/DME	VND	E
MG	MONGU	NDB	A	SIMON	DME	CO	A
SW	SOLWEZI	NDB	A	MWANSA	GP	CO	A
VCD	SIMON MWANSA KAPWEP-WE	VOR/DME	A	KAPWEP-WE			
VLI	HARRY MWAANGA NKUMBULA	VOR/DME	AE	SIMON MWANSA KAPWEP-WE	LOC	CO	A

<i>Identifi-cation</i>	<i>Station name</i>	<i>Facility</i>	<i>Purpose</i>	<i>Station name</i>	<i>Facility</i>	<i>Identifi-cation</i>	<i>Purpose</i>
VLS	KENNETH KAUNDA	VOR/DME	AE	SIMON MWANSA	VOR/DME	VCD	A
VMF	MFUWE INTER-NATIONAL AIRPORT	VOR/DME	AE	KAPWEP-WE	NDB	SW	A
VMG	MONGU	VOR/DME	E	SOLWEZI SOUTH-DOWNS (KITWE)	NDB	KT	A
VND	NDOLA	VOR/DME	E				

## GEN 3.3 AIR TRAFFIC SERVICES

### 1 Responsible Service

#### 1.1 Responsible authority

The Civil Aviation Authority is responsible for the regulation of the operations of Air Navigation and Air Traffic Services in Zambia.

The Director General  
Zambia Civil Aviation Authority  
P.o Box 50137  
Lusaka 10101  
ZAMBIA

Fax: +260 211 251841  
ATS: FLHQYAYA/FLHQYFYX  
Email: [civil.aviation@caa.co.zm](mailto:civil.aviation@caa.co.zm)

The Zambia Airports Corporation Limited is responsible for administration and operation of Air Traffic Services in Zambia

The Managing Director  
Zambia Airports Corporation Limited  
Air Navigation Services  
Kenneth Kaunda International Airport  
P.o. Box 30175  
Lusaka 10101  
ZAMBIA

Fax: 224777,271018, 271118  
ATS: FLKKYKYQ  
Email: [zacl@zacl.aero](mailto:zacl@zacl.aero)  
website: [www.zacl.co.zm](http://www.zacl.co.zm)

### 2 Area of Responsibility

Air Traffic Services are provided within the Lusaka FIR in conformity with the Zambia Civil Aviation Requirements (ZCARs) Part 12 vol II and ICAO Standards and Recommended Practices and Procedures.

### 3 Types of services

The following types of services are provided:

- Flight Information Service (FIS)
- Area Control (ACC); and
- Approach Control (APP)
- Aerodrome Control (TWR)
- Ground Control (GND)
- Aerodrome Flight Information Service (AFIS)

Note: Alerting Service (ALRS) is provided under each type of service mentioned above.

### 4 Co-ordination Between the Operator and ATS

Co-ordination between the operator and Air Traffic Services is effected in accordance with 2.15 of ICAO Annex 11 and 2.1.1.4 and 2.1.1.5 of part III of the Procedures For Air Navigation Services:- Air Traffic Management (Doc 4444, PANS/ATM).

### 5 Minimum Flight Altitude

The minimum flight altitude on the ATS routes as presented in section ENR 3, have been determined so as to ensure at least 1000 ft minimum vertical clearance above the highest obstacle within 2NM on each side of the centre line of the route.

**5.1 Required Navigation Performance**

The required navigation performance accuracy necessary for the operation of air routes within Lusaka FIR is RNP 10. The RNP 10 represents a navigation accuracy of plus or minus 10 NM (18.5km) on a 95 percent containment basis. The RNP type is a containment value expressed as distance in NM from the intended position within which flight would be at least 95 percent of the total flying time.

**6 ATS Units Address List**

<b>Unit Name</b>	<b>Postal Address</b>	<b>Telephone No</b>	<b>Telefax</b>	<b>AFTN Address</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
LUSAKA ACC	Lusaka Area Control Centre Kenneth Kaunda International Airport P.O Box 30175 LUSAKA 10101	+260-211-271091 +260-211-271044 +260-211-271313 +260 950 708 012 EXT : 410	+260-211-271469	FLFIZQZX
LUSAKA APP	Lusaka Approach Control Unit Kenneth Kaunda International Airport P.O Box 30175 LUSAKA 10101	+260-211-271091 +260-211-271044 +260-211-271313 +260 950 708 012 EXT:409	+260-211-271469	FLFIZAZX
KENNETH KAUNDA TWR	Lusaka Aerodrome Control Unit Kenneth Kaunda International Airport P.O Box 30175 LUSAKA 10101	+260 950 707 432 +260-211-271091 +260-211-271044 +260-211-271313 +260 950 708 012 EXT:408	+260-211-271469	FLKKZTZX
KENNETH KAUNDA BRIEFING	Lusaka AIS Briefing Office Kenneth Kaunda International Airport P.O Box 30175 LUSAKA 10101	+260 950 708010 +260 967 980776 +260-211-271048 EXT:333/334	+260-211-271469	FLKKZPZX
LIVINGSTONE APP	Livingstone Approach Control Unit Harry Mwaanga Nkumbula Airport P.O Box 60199 LIVINGSTONE	+260-213-324235	+260-213-324235	FLHNZAZX
HARRY MWAANGA NKUMBULA TOWER	Livingstone Aerodrome Control Unit Harry Mwaanga Nkumbula Airport P.O Box 60199 LIVINGSTONE	+260-213-320388		FLHNZTZX
HARRY MWAANGA NKUMBULA BREIFING	Livingstone AIS Briefing Office Harry Mwaanga Nkumbula Airport P.O Box 60199 LIVINGSTONE	+260 -213- 323222		FLHNZPZX
MFUWE APP	Mfuwe Approach Control Unit Mfuwe Airport P.O Box 2 MFUWE	+260-216-245027 +260 979 752 200	+ 260-216-245027	FLMFZTZX
MFUWE TWR	Mfuwe Aerodrome Control Unit Mfuwe Airport P.O Box 2	+260-216-245027 +260 979 752 200		FLMFZTZX

MFUWE BRIEFING	Mfuwe AIS Briefing Mfuwe Airport P.O Box 2 MFUWE	+260-216-245083/245142 +260-965-860493		FLMFZPZX
SIMON MWANSA KAPWEPWE APP	Ndola Approach Control Unit Simon Mwansa Kapwepwe International Airport P.O Box 70095 NDOLA	+260-212-612869 +260 971 232 376	+260-212-612635	FLSKZAZX
SIMON MWANSA KAPWEPWE BRIEFING	Ndola AIS Briefing Simon Mwansa Kapwepwe International Airport P.O Box 70095 NDOLA	+260-212-611193/611194		FLSKZPZX
SIMON MWANSA KAPWEPWE TWR	Ndola Aerodrome Control Unit Simon Mwansa Kapwepwe International Airport P.O Box 70095 NDOLA	+260 971 232 376 +260-212-612869 +260 971 232 376	+260-212-612635	FLSKZTZX
CHIPATA FIS	Chipata Flight Information Service Chipata Airport P.O BOX 510105 CHIPATA	+260 950 707 421	NIL	FLCPZPZX
KASAMA FIS	Kasama Flight Information Service Kasama Airport P.O BOX 410268 KASAMA	+260 950 707 407	NIL	FLKSZPZX
MANSA FIS	Mansa Flight Information service Mansa Aerodrome P.O BOX 710002 MANSA	+260 950 707 423	NIL	FLMAZPZX
MONGU FIS	Mongu Flight Information Service Mongu Aerodrome P.O BOX 910038 MONGU	+260 950 707 425		FLMGZPZX
SOLWEZI TOWER	Solwezi Aerodrome Control Unit Solwezi Aerodrome P.O BOX 110005 SOLWEZI	+260 950 707 420		FLSWZTZX AND FLSWZPZX

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#### **GEN 4.1 AERODROME/HELIPORT CHARGES**

Traffic charges applying to the use of Zambian international and provincial aerodromes can be found on the Zambia Airports Corporation Limited website in the following link:  
<https://www.zacl.co.zm/corporate/airport-services/local-cuisine>

- a. **International Charges Table** - For Aircraft over the weights shown and information on charges relating to specific aircraft types please contact:

Commercial Manager  
Kenneth Kaunda International Airport  
PO Box 30175  
Lusaka  
Zambia

Tel: 260-211-271313/271184  
Fax: 260-211-271037

- b. **Domestic Flights** - Landing and parking fees at the airports of Kenneth Kaunda (FLKK), Simon Mwansa (FLSK), Mfuwe (FLMF) and Harry Mwaanga (FLHN). For Aircraft over the weights shown and information on charges relating to specific aircraft types please contact:

Commercial Manager  
Kenneth Kaunda International Airport  
PO Box 30175  
Lusaka  
Zambia

Tel: 260-211-271313/271184  
Fax: 260-211-271037

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## GEN 4.2 AIR NAVIGATION CHARGES

### GEN 4.2 AIR NAVIGATION CHARGES

Air navigational facility charges shall be payable in respect of each flight flying into or through airspace within the boundary of Lusaka FIR at the rates specified below:

#### 4.2.1 Approach control

4.2.1.1 Users of Kenneth Kaunda, Harry Mwaanga Nkumbula, Simon Mwansa Kapwepwe and Mfuwe International Airports including All provincial and Strategic aerodromes will be charged for the services rendered by the ATC units of the abovementioned airports.

4.2.1.2 The charges will be collected by the aerodrome authorities, in addition to the landing and other auxiliary fees. The approach control charges are in two categories: domestic and international navigation categories

The calculation of the charges will be made on the basis on the landing fees charged for use of these airports.

(1) The calculation of the charges for domestic navigation is based on 15 % of the domestic landing fees charged.

(2) The calculation of the charges for international navigation is based on the formula below

$$\left( \frac{D}{100} \times \sqrt{\frac{MTOW}{50}} \times \$20 \right),$$

Where:

D = Distance covered in the Zambian Airspace

MTOW = Maximum Take Off Weight of an aircraft in tones

v= Square root \$=United States Dollar:

**NOTE:**For Harry Mwaanga Nkumbula International Airport the Formula does not apply for aircraft flying in from/to Harare FIR. International Air Navigation charges in this sector is calculated as 15% of the international landing.

4.2.1.3 The charges will be assessed in accordance with the following regulations:

(a) For an aircraft executing a training or test flight, a charge shall be one landing charge for every one hour of training regardless of the number of touch and go landings.

For any other aircraft in the category of helicopters shall be charged 50% landing of the fixed wing aircraft and full rate will be charged for navigation.

#### 4.2.2 Route air navigation service

##### 4.2.2.1 General

For aircraft flying en-route within the Lusaka Flight Information Region (FIR), a charge shall be paid for each flight in accordance with the following stipulations:

##### 4.2.2.2 Calculation Formula

The charge per flight on overflights is calculated using the same formula as the international navigation formula given above. Refer to the same formula below:

$$\left( \frac{D}{100} \times \sqrt{\frac{MTOW}{50}} \times \$20 \right),$$

In the above formula, D = Distance, MTOW = Maximum Take Off Weight of an aircraft in tones, and \$= United States Dollars.

#### **4.2.2.2.1 Distance Factor**

The distance factor shall be calculated on the basis of the total distance (great circle distance in Kilometers) between:-

-Aerodrome/airfield of departure within, or point of entry into Lusaka FIR and

- Aerodrome/airfield of arrival within Lusaka FIR, nor point of exit from Lusaka FIR.

The distances to be taken into account are published in an average catalogue; in case a distance is not shown in the catalogue, the charge will be based on the actual flown distance.

#### **4.2.2.2.2 Weight Factor**

In those cases where an operator has informed the Zambia airports Corporation Limited that two or more aircraft, which are of different versions of the same type, are in operation, their respective maximum take-off weight of aircraft of that type shall be used for the calculation of the charges where weight factor for each aircraft type is required. The calculation of this factor per aircraft type and per operator will be affected for as long as the version remains the same. If the operator has given no such indication, the weight factor for an aircraft of similar type shall be used to calculate the charges.

#### **4.2.2.3 Service Unit Rate**

In order to illustrate the effects of the rules, some examples of flights are given below:

(a) Flight from Lusaka to Harry Mwaanga Nkumbula International (Livingstone) with DC 9- 40

With maximum take-off weight (MTOW) of 55  
Being a domestic flight and that the formula needs no distance factor, the

Calculation for the charge will be as follows:

- Domestic landing fee =US\$ 200 for day landing
- Domestic navigation=15 % of landing charge, therefore,
- 15 % of Domestic landing fee=US\$ 30
- Total landing and navigation charge= US\$230

(b) A minimum of \$ 5 navigation fees shall be applicable on both Domestic and international flights

#### **4.2.3 Cost basis for air navigation services and exemptions/reductions**

##### **4.2.3.1 Cost basis for Air Navigation Services**

The cost basis for air navigation is available on request for Zambia Airports Corporation Limited (for address see GEN 1.1)

##### **4.2.3.2 Exemption/Reductions**

The following categories of flights shall be exempted for payment of air navigation facility charge:

- | (a) Test flight made at request of Zambia Airports Corporation Limited;
- | (b) Technical check flights made by aircraft engaged in commercial aviation, with no remuneration being received from passengers and goods, if such be on board;
- | (c) Flights made for search and rescue purposes.
- | (d) Technical return flights, i.e., take-off with forced return to the aerodrome of departure due to technical disturbances adverse weather conditions and the like:
- | (e) Aircraft owned by the Civil Aviation Administration of Zambia;
- | (f) Zambia military aircraft.

| It is a condition for obtaining the exemption mentioned above except under d. that special prior notification should be made to the Air Navigation Services department of the Zambia Airports Corporation Limited.

#### | **4.2.4 Methods of payment**

| The owner/operator of an aircraft are jointly and severally responsible for payment of the charge. Notification of the charge will be made bi-weekly or monthly by the Zambia Airports Corporation Limited Administration by forwarding an invoice. Payment is due 30 days after the date of the invoice.

- | (a) Collection can be done by distress,
- | (b) Permission to fly to or from Zambian territories can be denied
- | (c) Permission already granted can be withdrawn.

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## ENR 2.1 FIR, TMA

Name Lateral limits Vertical limits Class of Airspace	Unit providing service	Call sign languages area and conditions of use hours of service	Frequency and Purpose	Remarks
1	2	3	4	5
<b>LUSAKA FIR</b> Area bounded by lines joining points S 13°00'00" E 022°00'00"; S 13°00'00" E 023°00'00"; S 11°00'00" E 024°20'00"; S 12°00'00" E 025°30'00"; S 12°00'00" E 028°00'00"; S 08°07'00" E 029°53'00"; S 08°11'32" E 030°46'16" (Intersection of boundaries of the Democratic Republic of Congo, Tanzania and Zambia) and along the Tanzania/Zambia border up to S 09°22'00" E 033°00'00" then along Malawi/Zambia border up to S 14°00'00" E 033°15'00" then along Mozambique/Zambia border up to S 15°37'55" E 030°24'57" then along Zimbabwe/Zambia border up to S 17°48'08" E 025°15'52" then along Namibia/Zambia border up to S 17°39'00" E 023°26'00" then along Angola/Zambia border up to point of origin.  UNL _____ FL145 Class: A  FL145 _____ GND Class: C  FL145 _____ GND Class: G	G/A/G	LUSAKA INFOR English HJ OUT-SIDE THESE HOURS VIA LUSAKA CONTROL	6952.0 KHZ	1) VDF available 2) Selcal not avble 3) ATS STNS avble on notified freqs as relay units during their hrs of service 4) Except when authorised no aircraft to be operated in this airspace unless two-way radio contact is maintained with ATC.
<b>LUSAKA UPPER CONTROL AREA (UTA)</b> Area bounded by lines joining points S 17°25'00" E 023°04'00" then along the clockwise arc of a circle of 150NM radius centred on S 17°48'45" E 025°49'12" (VOR VLI); to S 12°00'00" E 026°21'00" then along the clockwise arc of a circle of 150NM radius centred on S 12°59'53" E 028°40'00" (VOR VND); to S 10°33'00" E 023°04'00" then	LUSAKA ACC	LUSAKA CONTROL English H24	120.500 MHZ AREA CTRL FLIGHT INF SERVICE ADVISORY SERVICE 8888.0 KHZ REGIONAL NETWORK 8873.0 KHZ REGIONAL NETWORK 6586.0 KHZ REGIONAL NETWORK 6915.0 KHZ SUBREGION NETWORK	VHF EXTD RANGE 120.500Mhz

<i>Name Lateral limits Vertical limits Class of Airspace</i>	<i>Unit providing service</i>	<i>Call sign languages area and conditions of use hours of service</i>	<i>Frequency and Purpose</i>	<i>Remarks</i>
1	2	3	4	5
along the clockwise arc of a circle of 150NM radius centred on S 13°15'15" E 031°54'49" (VOR VMF); to to point of origin.  UNL FL245 Class: A				
<b>LIVINGSTONE CTA</b> FLHN1 Area bounded by lines joining points S 17°34'00" E 025°02'00" then along the clockwise arc of a circle of 50NM radius centred on S 17°48'42" E 025°49'11" (VOR VLI); to S 17°02'00" E 026°03'00"; S 17°34'00" E 026°37'00"; S 18°04'00" E 026°36'00" then along Zimbabwe/Zambia border up to S 17°34'00" E 025°01'00" to point of origin. FLHN2 Area bounded by lines joining points S 17°02'00" E 026°03'00"; S 16°27'00" E 026°41'00"; S 17°01'00" E 027°15'00"; S 17°34'00" E 026°37'00" to point of origin.	FLHN ATS	Living-stone Tower English 0500-1600	118.100 MHZ VDF available in approach Nil	
<b>LIVINGSTONE CTA1</b> Area bounded by lines joining points S 17°34'00" E 025°02'00" then along the clockwise arc of a circle of 50NM radius centred on S 17°48'42" E 025°49'11" (VOR VLI); to S 17°02'00" E 026°03'00"; S 17°34'00" E 026°37'00"; S 18°04'00" E 026°36'00" then along Zimbabwe/Zambia border up to S 17°34'00" E 025°01'00" to point of origin.  FL245 FL145 Class: A  FL145	LIVINGS-TONE APP	Livingstone Approach English 0500-1600	124.300 MHZ	1) VDF AVBLE 2) Except where authorised, no aircraft is to be operated in this airspace unless two way radio contact is maintained with ATC

Name Lateral limits Vertical limits Class of Airspace	Unit providing service	Call sign languages area and conditions of use hours of service	Frequency and Purpose	Remarks
1	2	3	4	5
FL065 Class: C  FL065 GND Class: G				
<b>LIVINGSTONE CTA2</b> Area bounded by lines joining points S 17°02'00" E 026°03'00"; S 16°27'00" E 026°41'00"; S 17°01'00" E 027°15'00"; S 17°34'00" E 026°37'00" to point of origin.  FL245 FL145 Class: A  FL145 FL115 Class: C  FL115 GND Class: G	LIVINGS-TONE APP	Livingstone Approach English 0500-1600	124.300 MHZ	1) VDF AVBLE 2) Except where authorised, no aircraft is to be operated in this airspace unless two way radio contact is maintained with ATC
<b>LUSAKA TMA</b> FLKK1 Area bounded by lines joining points S 14°00'00" E 029°24'00"; S 14°34'50" E 029°21'28"; S 14°03'09" E 030°17'25"; S 14°43'58" E 030°17'51"; S 15°10'14" E 029°16'03" then along the clockwise arc of a circle of 50NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to S 15°54'35" E 029°03'02" then along Zimbabwe/Zambia border up to S 16°03'04" E 028°51'40" then along the clockwise arc of a circle of 50.07NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to S 15°31'25" E 027°34'56"; S 14°38'32" E 027°44'16"; S 13°51'19" E 027°11'44"; S 13°39'14" E 027°33'14"; S			1) Except when authorised no aircraft to be operated in this airspace unless two-way radio contact is maintained with ATC.	

<i>Name Lateral limits Vertical limits Class of Airspace</i>	<i>Unit providing service</i>	<i>Call sign languages area and conditions of use hours of service</i>	<i>Frequency and Purpose</i>	<i>Remarks</i>
1	2	3	4	5
<p>14°01'00" E 027°46'04"; S 14°00'00" E 029°24'00" to point of origin.</p> <p><b>FLKK3</b> Area bounded by lines joining points S 16°08'07" E 028°11'16"; S 17°01'00" E 027°15'00"; S 16°27'00" E 026°41'00"; S 15°32'42" E 027°35'19" then along the counter clockwise arc of a circle of 50.01NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to point of origin.</p> <p><b>LUSAKA TMA 2</b> Area bounded by lines joining points S 16°08'27" E 028°12'36" then along the counter clockwise arc of a circle of 50.03NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to S 16°09'06" E 028°34'23"; S 16°35'25" E 028°35'08" then along Zimbabwe/Zambia border up to S 16°49'25" E 028°08'19" to point of origin.</p> <hr/>				
<p><b>LUSAKA TMA 1</b> Area bounded by lines joining points S 14°00'00" E</p>	LUSAKA APP	LUSAKA APP English H24	121.300 MHZ APPROACH DEPARTURE TMA CTRL.	1) VDF AVBLE 2) Except when authorised no

<i>Name Lateral limits Vertical limits Class of Airspace</i>	<i>Unit providing service</i>	<i>Call sign languages area and conditions of use hours of service</i>	<i>Frequency and Purpose</i>	<i>Remarks</i>
1	2	3	4	5
<p>029°24'00"; S 14°34'50" E      029°21'28"; S 14°03'09" E      030°17'25"; S 14°43'58" E      030°17'51"; S 15°10'14" E      029°16'03" then along the clockwise arc of a circle of 50NM radius centred on S 15°19'41"      E 028°25'15" (VOR VLS); to S 15°54'35" E 029°03'02" then along Zimbabwe/Zambia border up to S 16°03'04" E 028°51'40" then along the clockwise arc of a circle of 50.07NM radius centred on S 15°19'41"      E 028°25'15" (VOR VLS); to S 15°31'25" E 027°34'56"; S 14°38'32" E 027°44'16"; S 13°51'19" E 027°11'44"; S 13°39'14" E 027°33'14"; S 14°01'00" E 027°46'04"; S 14°00'00" E 029°24'00" to point of origin.</p> <p style="text-align: center;"><u>FL245</u>  <u>FL145</u>          Class: A</p> <p style="text-align: center;"><u>FL145</u>  <u>FL075</u>          Class: C</p> <p style="text-align: center;"><u>FL075</u>  <u>GND</u>          Class: G</p>	LUSAKA RADAR	LUSAKA AP-PROACH RADAR English 0400 - 1800	120.100 MHZ RADAR SURVEIL-LANCE. RADAR VECTORS. ASSISTANCE TO AIRCRAFT IN EMERGENCY.	<p>aircraft to be operated in this airspace unless two way radio contact is maintained with ATC.</p> <p>3) All ACFT operating with in FL 245/GND in this airspace shall be allocated:-</p> <p>a) Northbound ACFT ODD IFR levels.</p> <p>b) Southbound ACFT EVEN IFR levels from 152000S to 155953S</p> <p>4) No IFR flights below FL080</p>
<p><b>LUSAKA TMA 2</b>          Area bounded by lines joining points S 16°08'27" E 028°12'36" then along the counter clockwise arc of a circle of 50.03NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to S 16°09'06" E 028°34'23"; S 16°35'25" E 028°35'08" then along Zimbabwe/Zambia border up to S 16°49'25" E 028°08'19" to point of origin.</p> <p style="text-align: center;"><u>FL245</u>  <u>FL145</u>          Class: A</p>				<p>1) VDF AVBLE</p> <p>2) Except when authorised no aircraft to be operated in this airspace unless two way radio contact is maintained with ATC.</p>

<i>Name Lateral limits Vertical limits Class of Airspace</i>	<i>Unit providing service</i>	<i>Call sign languages area and conditions of use hours of service</i>	<i>Frequency and Purpose</i>	<i>Remarks</i>
1	2	3	4	5
<u>FL145</u> <u>FL075</u> Class: C  <u>FL075</u> <u>GND</u> Class: G				
<b>LUSAKA TMA 3</b> Area bounded by lines joining points S 16°08'07" E 028°11'16"; S 17°01'00" E 027°15'00"; S 16°27'00" E 026°41'00"; S 15°32'42" E 027°35'19" then along the counter clockwise arc of a circle of 50.01NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to to point of origin.  <u>FL245</u> <u>FL145</u> Class: A  <u>FL145</u> <u>FL075</u> Class: C  <u>FL075</u> <u>GND</u> Class: G				1) VDF AVBLE 2) Except when authorised no aircraft to be operated in this airspace unless two way radio contact is maintained with ATC.
<b>MFUWE TMA</b> Area bounded by lines joining points S 12°58'00" E 030°18'40"; S 13°01'38" E 031°05'37" then along the clockwise arc of a circle of 50NM radius centred on S 13°15'43" E 031°54'49" (VOR VMF); to S 13°00'02" E 032°43'30"; S 13°00'00" E 032°56'20"; S 14°00'00" E 032°35'03"; S 14°00'00" E 032°18'40" then along the clockwise arc of a circle of 50NM radius centred on S 13°15'43" E 031°54'49" (VOR VMF); to S 14°05'22" E 031°47'07"; S 14°43'58" E 030°17'51"; S 14°03'09" E	MFUWE APP.	MFUWE APP. English HJ	120.700 MHZ AP-PROACH/DE-PAR TERMINAL AREA CONTROL 6915.0 KHZ Sub-regional network 6952.0 KHZ Domestic flight information service network	1) VDF AVAILABLE 2) Except when authorised, no aircraft to be operated in this airspace unless two-way radio contact is maintained with Air Traffic Control.

## ENR 2.2 OTHER REGULATED AIRSPACE

Within or below the joint Lusaka/Ndola TMA all flights (whether IFR or VFR) north of latitude of Kenneth Kaunda International (15° 20' S) up to Ndola latitude (12° 59' S) will be allocated flight levels as shown in the table below

MAGNETIC TRACK	
270°-089°	090°-269°
THROUGH NORTH	THROUGH SOUTH
<u>FLIGHT LEVELS</u>	<u>FLIGHT LEVELS</u>
70	60
90	80
110	100
130	120
150	140
170	160
etc	etc
<b>NOTE:</b>	at or above flight level 245 the normal semi-circular rule of flight level allocation will apply. All flights below FL070 in the joint Lusaka/Ndola TMA will be operated under VFR only. Flights within the joint Lusaka/Ndola TMA may be operated under VFR/IFR with 1000ft between them.

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## ENR 3.1 LOWER ATS ROUTES

<i>Route designator Name of sig- nificant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit MEA Airspace class</i>	<i>Lateral lim- its (NM) MOCA</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>
				<i>Odd</i>	<i>Even</i>		
1	2	3	4	5	6		7
<b>A400</b>							
▲EGSUD 13°06'36"S 022°00'000"E							
	125° 306° 154 NM	FL245 FL145 Class A FL145 FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with Inf.Ser LSK CTRL FREQ. 8888.0Khz 8873.0Khz 6952.0Khz 120.500Mhz
△GEXAG 14°28'07"S 024°14'04"E							
	125° 307° 38 NM	FL245 FL145 Class A FL145 FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with Inf.Ser LSK CTRL FREQ. 8888.0Khz 8873.0Khz 6952.0Khz 120.500Mhz
▲KAOMA NDB 'KO' 14°47'08"S 024°47'24"E							
	125° 303° 76 NM	FL245 FL145 Class A FL145 FL075 Class G	10	↓	↑		Two-way radio contact to be maintained with Area Ctrl LSK CTRL FREQ. 120.500mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲IXATA 15°22'24"S 025°56'49"E							
	122° 302°	FL145	10	↓	↑		Two-way radio contact to be maintained with

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit MEA Airspace class</b>	<b>Lateral limits (NM) MOCA</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
	45 NM	FL075 Class C					LUSAKA AP-PROACH FREQ. 121.300mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲EVOLU 15°42'42"S 026°38'18"E							
	084° 264° 56 NM	FL245 FL145 Class A FL145 FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with Area Ctrl LSK CTRL FREQ. 120.500mhz LUSAKA AP-PROACH FREQ. 121.300mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲ETBOM 15°31'25"S 027°34'56"E							
	082° 262° 50 NM	FL245 FL145 Class A FL145 FL075 Class C FL075 GND Class G	10				Two-way radio contact to be maintained with LUSAKA AP-PROACH FREQ. 121.300mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲KENNETH KAUN-DA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	100° 280° 51 NM	FL245 FL145 Class A FL145	10	↓	↑		LUSAKA AP-PROACH FREQ. 121.300mhz

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit MEA Airspace class</b>	<b>Lateral limits (NM) MOCA</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
		FL075 Class C FL075 GND Class G					Two-way radio contact to be maintained with Area Ctrl FREQ. 120.500mhz
▲TIMAX 15°23'24"S 029°17'36"E							
	099° 279° 63 NM	FL245 FL145 Class A FL145 FL075 Class C FL075 GND Class G	10				LUSAKA AP-PROACH FREQ. 121.300mhz Two-way radio contact to be maintained with Area Ctrl FREQ. 120.500mhz
▲KEPOK 15°27'00"S 030°23'00"E							

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## ENR 3.1 LOWER ATS ROUTES

<b>Route designator Name of sig- nificant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit MEA Airspace class</b>	<b>Lateral lim- its (NM) MOCA</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>A405</b>							
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E							
	196° 018° 202 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with ATC Units in these airspaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz
▲ETOLI 12°11'30"S 032°35'18"E	200° 021° 74 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with ATC Units in these airspaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz
▲ADMIS 13°22'52"S 032°19'15"E	200° 353° 12 NM	FL245 FL145 Class A FL145 FL075 Class C	0		↓		Two-way radio contact to be maintained with ATC Units in these airspaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz MFUWE APPROACH FREQ 120.700Mhz
▲UDPIX 13°34'42"S 032°16'00"E							

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit MEA Airspace class</b>	<b>Lateral limits (NM) MOCA</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
							Two-way radio contact to be maintained with ATC Units in these airspaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz MFUWE APPROACH FREQ 120.700Mhz
▲TEVAS 14°22'18"S 032°03'30"E							

ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Later- al lim- its (NM) MOCA	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
<b>A409</b>							
▲SOBTO 10°03'54"S 028°56'44"E							
	189° 008° 63 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with Area Control Area Control Frequency 120.500Mhz
▲MANSA NDB 'MA' 11°07'27"S 028°51'46"E							
	189° 009° 113 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with Area Control Area Control Frequency 120.500Mhz
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E							
	189° 010° 58 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↑	↓		Two-way radio contact to be maintained with Area Control Area Control Frequency 120.500Mhz
▲AVEKU 13°58'00"S 028°33'54"E							
	190° 011°	FL245 FL145	0				Two-way radio contact to be maintained

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit MEA Airspace class</b>	<b>Lateral limits (NM) MOCA</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
▲KENNETH KAUN-DA VOR/DME 'VLS' 15°19'41"S 028°25'15"E		Class A FL145 FL075 Class C					with NDOLA AP-PROACH FREQ 120.000Mhz
▲ETLUN 16°28'00"S 028°07'00"E	200° 021° 70 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↑	↓		Two-way radio contact to be maintained with NDOLA AP-PROACH FREQ 120.000Mhz  LUSAKA AP-PROACH FREQ 121.300Mhz
▲ESTAK 16°51'00"S 028°00'00"E	203° 023° 24 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with LUSAKA AP-PROACH FREQ 121.300Mhz
Two-way radio contact to be maintained with Lusaka Control in these airspaces. Lusaka Control Frequency: 8888.0Khz 120.500Mhz 6586.0Khz 6952.0Khz							

ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Later- al lim- its (NM) MOCA	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>B530</b>							
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E							
	046° 224° 221 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↓	↑		Two-way radio contact to be maintained with NDOLA APPROACH 120.000Mhz
▲KASAMA NDB 'KS' 10°12'59"S 031°08'22"E							
	063° 242° 110 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↓	↑		Two-way radio contact to be maintained with Lusaka Control in these airspaces. Lusaka Control Frequency: 8888.0Khz 120.500Mhz 6586.0Khz 6952.0Khz
▲UTEMA 09°17'49"S 032°45'08"E							
	063° 243° 48 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↓	↑		Two-way radio contact to be maintained with Lusaka Control in these airspaces. Lusaka Control Frequency: 8888.0Khz 120.500Mhz 6586.0Khz 6952.0Khz
▲MBEYA NDB 'MB' 08°55'34"S							

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit MEA Airspace class</b>	<b>Lateral limits (NM) MOCA</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<i>Odd</i>		
1	2	3	4	5	6	7
033°27'27"E	Two-way radio contact to be maintained with ATS in these airspace Ndola Approach Kasama /Mansa information available as relay stations Lusaka Contol Frequency: 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz					

ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Later- al lim- its (NM) MOCA	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>G652</b>							
▲UDNOR 11°33'55"S 023°56'57"E							
	120° 301° 193 NM	FL245 FL145 Class A FL145 FL075 Class G	10	↓	↑		Two-way radio contact to be maintained with ATC in these airspace Solwezi Approach Freq 123.925Mhz as a relay station. Lusaka Control Frequency 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲NIDOS 13°04'00"S 026°51'06"E							
	149° 329° 85 NM	FL245 FL145 Class A FL145 FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with ATC in these airspace Solwezi Approach Freq 123.925MHz as a relay station. Lusaka Control Frequency 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲AVUPA 14°14'00"S 027°41'00"E							
	151° 332° 78 NM	FL245 FL145 Class A FL145	10	↓	↑		Two-way radio contact to be maintained with Lusaka Approach Control.

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit MEA Airspace class</b>	<b>Lateral limits (NM) MOCA</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
		FL075 Class C					Lusaka Approach. Frequency: 121.300Mhz SOLWEZI AP- PROACH FREQ 123.925Mhz
▲KENNETH KAUN- DA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	143° 322° 25 NM	FL245 FL145 Class A FL145 FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with Lusaka Approach Control. Lusaka Approach. Frequency: 121.300Mhz
▲VLS08 15°37'50"S 028°43'01"E							
	142° 322° 26 NM	FL245 FL145 Class A FL145 FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with Lusaka Approach Control. Lusaka Approach. Frequency: 121.300Mhz
▲GADBA 15°56'03"S 029°00'53"E							

ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Later- al lim- its (NM) MOCA	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>G655</b>							
▲MOTAM 12°00'00"S 027°35'48"E							
	169° 350° 55 NM	FL245 FL145 Class A FL145 FL075 Class C		↓	↑		
▲EGPAK 12°54'06"S 027°49'06"E							
	170° 351° 109 NM	FL245 FL145 Class A FL145 FL075 Class C		↓	↑		
▲CTR BDRY 14°40'36"S 028°15'24"E							
	171° 352° 42 NM	FL245 FL145 Class A FL145 GND Class C	10	↓	↑		Two-way radio contact to be maintained with ATC unit Ndola Approach 120.000Mhz Lusaka Approach 121.300Mhz
▲KENNETH KAUNDA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	184° 004°	FL245 FL145		↑	↓		

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit MEA Airspace class</b>	<b>Lateral limits (NM) MOCA</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
▲CTR BDRY 15°44'42"S 028°26'12"E		Class A FL145 GND Class C					
	183° 004° 25 NM	FL245 FL145 Class A FL145 GND Class C		↑	↓		
▲TMA BDRY 16°09'48"S 028°27'12"E							
	184° 005° 28 NM	FL245 FL145 Class A FL145 GND Class C FL075 GND Class G		↑	↓		
▲RETAR 16°37'47"S 028°28'18"E							
Two-way radio contact to be maintained with ATC unit Ndola Approach available as a relay station. No IFR flights below FL 075 in these airspaces. Lusaka Control frequency: 120.500Mhz 6589.0Khz 8888.0Khz.							

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Later-al lim-its (NM) MOCA	Direc-tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
		FL145 FL075 Class C					Lusaka Control Frequency: 120.500Mhz 8888.0Khz 6586.0Khz
▲KENNETH KAUNDA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	230° 052° 161 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↑	↓		Two-way radio contact to be maintained with Area Control. Lusaka Control Frequency: 120.500Mhz 8888.0Khz 6586.0Khz
▲AVOMU 17°13'58"S 026°26'53"E							
	233° 054° 50 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↑	↓		Two-way radio contact to be maintained with Area Control. Lusaka Control Frequency: 120.500Mhz 8888.0Khz 6586.0Khz
▲HARRY MWAANGA NKUMBULA VOR/DME 'VLI' 17°48'45"S 025°49'12"E							

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ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Later- al lim- its (NM) MOCA	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
<b>R782</b>							
▲LABON 13°40'00"S 032°48'00"E							
	253° 073° 67 NM	FL245 FL145 Class A FL145 FL075 Class C		↑	↓		
▲IXALU 14°04'48"S 031°44'00"E							
	253° 074° 63 NM	FL245 FL145 Class A FL145 FL075 Class C		↑	↓		
▲NESAK 14°27'48"S 030°44'00"E							
	254° 074° 88 NM	FL245 FL145 Class A FL145 FL075 Class C		↑	↓		
▲IBNOP 14°59'36"S 029°19'18"E							
	254° 074° 31 NM	FL245 FL145 Class A		↑	↓		

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit MEA Airspace class</b>	<b>Lateral limits (NM) MOCA</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
		FL145 — FL075 Class C					
▲CTR BDRY 15°10'42"S 028°49'24"E							
	254° — 075° 25 NM	FL245 — FL145 Class A FL145 — FL075 Class C		↑	↓		
▲KENNETH KAUN-DA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
Two-way radio contact to be maintained with ATC and Mfuwe information available as relay station in these airspaces. Lusaka Control. Frequency: 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz							

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later-al lim-its (NM)	Direc-tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UA400</b>							
▲EGSUD 13°06'36"S 022°00'000"E							
	125° 306° 154 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka Area CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲GEXAG 14°28'07"S 024°14'04"E	125° 307° 38 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka Area CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
△ KAOMA NDB 'KO' 14°47'08"S 024°47'24"E	125° 303° 76 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
△ IXATA 15°22'24"S 025°56'49"E	122° 302° 45 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>		
1	2	3	4	5	6	7
						8873.0Khz 6952.0Khz
▲EVOLU 15°42'42"S 026°38'18"E						
	083° 263° 106 NM	UNL FL245 Class A		↓ ↑		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲KENNETH KAUN-DA VOR/DME 'VLS' 15°19'41"S 028°25'15"E						
	099° 279° 114 NM	UNL FL245 Class A		↓ ↑		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲KEPOK 15°27'00"S 030°23'00"E						
UA400 is a contingency route						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UA409</b>							
▲SOBTO 10°03'54"S 028°56'44"E							
	185° 007° 64 NM	UNL FL245  Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲MANSA NDB 'MA' 11°07'27"S 028°51'46"E							
	190° 009° 113 NM	UNL FL245  Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E							
	191° 012° 140 NM	UNL FL245  Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>		
1	2	3	4	5	6	7
						8888.0Khz 8873.0Khz 6586.0Khz
▲KENNETH KAUN-DA VOR/DME 'VLS' 15°19'41"S 028°25'15"E						
	200° 021° 70 NM	UNL FL245 Class A		↑ ↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ETLUN 16°28'00"S 028°07'00"E						
	203° 023° 24 NM	UNL FL245 Class A		↑ ↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ESTAK 16°51'00"S 028°00'00"E						
Two-way radio contact to be maintained with Lusaka Control in these airspaces. Lusaka Control Frequency: 8888.0Khz 120.5.500Mhz 6586.0Khz 6952.0Khz						
UA409 is a contingency route						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UA607</b>							
▲BESHO 11°59'29"S 027°48'57"E							
	143° 324° 78 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E							
	159° 341° 176 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲AVIVA 15°40'05"S 029°57'00"E							
Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz							
UA607 is a contingency route							

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ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UB528</b>							
▲APDAR 14°02'00"S 022°00'000"E							
	145° 325° 29 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲APKUS 14°25'00"S 022°19'00"E							
	139° 319° 76 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲NIBEG 15°18'44"S 023°14'47"E							
	141° 322° 177 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲IMVES 17°25'17"S 025°23'23"E							
	140° 321° 34 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Livingstone Approach available as a relay station.

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		<b>6</b>	<b>7</b>
▲HARRY MWAANGA NKUMBULA VOR/DME 'VLI' 17°48'45"S 025°49'12"E							Lusaka Control Frequency 120.500Mhz 124.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
Two-way radio contact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz							

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later-al lim-its (NM)	Direc-tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UB530</b>							
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E							
	046° 224° 221 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.000Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲KASAMA NDB 'KS' 10°12'59"S 031°08'22"E							
	063° 242° 110 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲UTEMA 09°17'49"S 032°45'08"E							
	063° 243° 48 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E							

<i><b>Route designator Name of significant points Coordinates</b></i>	<i><b>Track MAG Rev Track MAG Length (NM)</b></i>	<i><b>Upper limit Lower limit Airspace class</b></i>	<i><b>Later- al lim- its (NM)</b></i>	<i><b>Direc- tion of cruising levels</b></i>	<i><b>RNP Type</b></i>	<i><b>Remarks</b></i>
				<i><b>Odd</b></i>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Two-way radio contact to be maintained with ATS in these airspace Ndola Approach Kasama /Mansa information available as relay stations Lusaka Contol Frequency: 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later-al lim-its (NM)	Direc-tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UG424</b>							
▲SONPO 11°20'00"S 028°20'00"E							
	073° 254° 34 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.000Khz 8873.000Khz 6586.000Khz
▲MANSA NDB 'MA' 11°07'27"S 028°51'46"E							
	071° 249° 72 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.000Khz 8873.000Khz 6586.000Khz
▲EKBOV 10°40'00"S 030°00'000"E							
	071° 251° 73 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.000Khz

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>		
1	2	3	4	5	6	7
						8873.000Khz 6586.000Khz
▲KASAMA NDB 'KS' 10°12'59"S 031°08'22"E						
	071° 250° 123 NM	UNL FL245 Class A		↓ ↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.000Khz 8873.000Khz 6952.000Khz
▲GESAT 09°26'30"S 033°03'47"E	070° 250° 19 NM	UNL FL245 Class A		↓ ↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.000Khz 8873.000Khz 6952.000Khz
▲IBROP 09°19'24"S 033°21'16"E	070° 250° 8 NM	UNL FL245 Class A		↓ ↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.000Khz 8873.000Khz 6952.000Khz
▲ITBEX 09°16'20"S 033°28'47"E						
	Two-way radio contact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz					
	UG424 is a contingency route					

**ENR 3.2 UPPER ATS ROUTES**

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>UG652</b>							
▲UDNOR 11°33'55"S 023°56'57"E							
	120° 300° 77 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲ITLOR 12°10'00"S 025°06'13"E							
	120° 301° 74 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲OKSED 12°44'34"S 026°13'07"E							
	121° 301° 42 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲NIDOS 13°04'00"S 026°51'06"E							
	149° 329° 85 NM	UNL FL245  Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
▲AVUPA 14°14'00"S 027°41'00"E						6952.0Khz
	151° 332° 78 NM	UNL FL245  Class A				Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲KENNETH KAUN-DA VOR/DME 'VLS' 15°19'41"S 028°25'15"E	142° 323° 50 NM	UNL FL245  Class A		↓	↑	Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲GADBA 15°56'03"S 029°00'53"E						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UG655</b>							
▲MOTAM 12°00'00"S 027°35'48"E							
	169° 352° 205 NM	FL330 FL245  Class A		↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲KENNETH KAUNDA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	185° 005° 78 NM	FL330 FL245  Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲RETAR 16°37'47"S 028°28'18"E							
Two-way radio contact to be maintained with Area Control freq. 120.500Mhz							

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ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UG656</b>							
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E							
	178° 358° 21 NM	UNL FL145  Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ITBEX 09°16'20"S 033°28'47"E	178° 359° 21 NM	UNL FL145  Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲OVANA 09°37'00"S 033°30'000"E	178° 359° 65 NM	UNL FL145  Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>		
1	2	3	4	5	6	7
▲MEKRO 10°44'20"S 033°35'00"E						8873.0Khz 6586.0Khz
	<hr/> 182° 360° 43 NM	UNL FL145 Class A		↑ ↓		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲UTALA 11°22'12"S 033°37'54"E	<hr/> 183° 360° 6 NM	UNL FL145 Class A		↑ ↓		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ANTOP 11°30'00"S 033°38'30"E						

## ENR 3.2 UPPER ATS ROUTES

<i><b>Route designator Name of sig- nificant points Coordinates</b></i>	<i><b>Track MAG Rev Track MAG Length (NM)</b></i>	<i><b>Upper limit Lower limit Airspace class</b></i>	<i><b>Later- al lim- its (NM)</b></i>	<i><b>Direction of cruising levels</b></i>		<i><b>RNP Type</b></i>	<i><b>Remarks</b></i>	
				<i><b>Odd</b></i>	<i><b>Even</b></i>			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>		
<b>UL431</b>								
▲GIPVO 11°40'00"S 033°18'00"E								
	<p style="text-align: center;">237° 057° 52 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓	Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz		
▲ETOLI 12°11'30"S 032°35'18"E								
	<p style="text-align: center;">234° 055° 70 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓	Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz		
△ ABVMF 12°56'00"S 031°40'00"E								
	<p style="text-align: center;">239° 060° 23 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓	120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz		
△ IMLUP 13°08'53"S 031°21'05"E								
	<p style="text-align: center;">236° 057° 65 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓	120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz		

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
△ APGIK 13°49'12"S 030°28'18"E						
	237° 059° 150 NM	UNL FL245 Class A		↑	↓	Two-way radio contact to be maintained with AREA CTRL FREQ and Lusaka APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 121.300Mhz
▲KENNETH KAUN-DA VOR/DME 'VLS' 15°19'41"S 028°25'15"E						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later-al lim-its (NM)	Direc-tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UM439</b>							
▲KENNETH KAUNDA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	240° 061° 77 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲IBGOT 16°04'42"S 027°19'50"E							
	239° 060° 72 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲DURTO 16°47'18"S 026°19'42"E							
	241° 062° 66 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Livingstone Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 124.300Mhz

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>		
1	2	3	4	5	6	7
						8888.0Khz 8873.0Khz 6586.0Khz
▲IMVES 17°25'17"S 025°23'23"E						
	240° 060° 22 NM	UNL FL245 Class A		↑ ↓		Two-way radio contact to be maintained with ATC in these airspaces. Livingstone Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 124.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲TIKOK 17°38'18"S 025°05'06"E						
Two-way radio contact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later-al lim-its (NM)	Direc-tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UN305</b>							
▲LABON 13°40'00"S 032°48'00"E							
	<p style="text-align: center;">253° 073° 67 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz
▲IXALU 14°04'48"S 031°44'00"E							
	<p style="text-align: center;">253° 074° 63 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz
▲NESAK 14°27'48"S 030°44'00"E							
	<p style="text-align: center;">254° 073° 9 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz
△ GESUD 14°31'12"S 030°35'00"E							

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		<b>6</b>	<b>7</b>
	<p style="text-align: center;">253° 075° 135 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓		<p>Two-way radio contact to be maintained with AREA CTRL FREQ and LUSAKA APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 121.300Mhz</p>
▲KENNETH KAUN-DA VOR/DME 'VLS' 15°19'41"S 028°25'15"E	<p>Two-way radio contact to be maintained with area control Lusaka Control Frequency:- 120.500Mhz</p>						

**ENR 3.2 UPPER ATS ROUTES**

<i>Route designator Name of sig- nificant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>
				<i>Odd</i>	<i>Even</i>		
1	2	3	4	5	6	7	
<b>UN308</b>							
▲KASAMA NDB 'KS' 10°12'59"S 031°08'22"E							
	043° 222° 88 NM	UNL FL245 Class A		↓	↑		Two-way radio con- tact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz
▲UDNOT 09°05'08"S 032°06'11"E							

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## ENR 3.2 UPPER ATS ROUTES

<i><b>Route designator Name of significant points Coordinates</b></i>	<i><b>Track MAG Rev Track MAG Length (NM)</b></i>	<i><b>Upper limit Lower limit Airspace class</b></i>	<i><b>Later- al lim- its (NM)</b></i>	<i><b>Direction of cruising levels</b></i>		<i><b>RNP Type</b></i>	<i><b>Remarks</b></i>	
				<i><b>Odd</b></i>	<i><b>Even</b></i>			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>		
<b>UP312</b>								
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E								
	196° 016° 25 NM	UNL FL245  Class A		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz	
▲IBROP 09°19'24"S 033°21'16"E	196° 017° 10 NM	UNL FL245  Class A		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz	
▲APKOL 09°29'16"S 033°18'44"E	197° 019° 167 NM	UNL FL245  Class A		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz	
▲ETOLI 12°11'30"S 032°35'18"E								

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
	<p style="text-align: center;">196° — 017° 73 NM</p>	<p style="text-align: center;">UNL — FL245  Class A</p>		↑ ↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz
▲ADMIS 13°22'52"S 032°19'15"E						
	<p style="text-align: center;">200° — 020° 12 NM</p>	<p style="text-align: center;">UNL — FL245  Class A</p>		↑ ↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz
▲UDPIX 13°34'42"S 032°16'00"E						
	<p style="text-align: center;">199° — 020° 49 NM</p>	<p style="text-align: center;">UNL — FL245  Class A</p>		↑ ↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz
▲TEVAS 14°22'18"S 032°03'30"E						
UP312 is a contingency route						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UR525</b>							
▲KAOMA NDB 'KO' 14°47'08"S 024°47'24"E							
	124° 302° 76 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Area Control Mongu information available as a relay station. Lusaka Control Freq. 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz
▲IXATA 15°22'24"S 025°56'49"E	122° 302° 45 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Area Control Lusaka Control Freq. 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz
▲EVOLU 15°42'42"S 026°38'18"E	124° 305° 46 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with AREA CTRL FREQ and Lusaka APPROACH. 121.300Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲IBGOT 16°04'42"S 027°19'50"E	123° 303°	UNL FL245		↓	↑		Two-way radio contact to be maintained

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
		51 NM				with AREA CTRL FREQ and Lusaka APPROACH. 121.300Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲ETLUN 16°28'00"S 028°07'00"E						
	<u>122°</u> 302° 23 NM	UNL FL245 Class A		↓	↑	Two-way radio contact to be maintained with AREA CTRL FREQ and Lusaka APPROACH. 121.300Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲RETAR 16°37'47"S 028°28'18"E						
UR525 is a contingency route						

**ENR 3.2 UPPER ATS ROUTES**

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>UR779</b>							
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E							
	219° 039° 39 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Kasama/Mfuwe available as a relay stations. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲GESAT 09°26'30"S 033°03'47"E	219° 040° 106 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ITKAN 10°50'48"S 031°58'36"E	220° 040° 19 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available HJ as a relay stations. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲APGEL 11°05'42"S							

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>	<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
031°47'00"E						
	220° 042° 139 NM	UNL FL245 Class A		↑ ↓		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available HJ as a relays stations. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲GEPET 12°56'30"S 030°20'00"E						
	222° 042° 33 NM	UNL FL245 Class A		↑ ↓		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available HJ as a relays stations. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲AVEKA 13°22'36"S 029°59'18"E						
	222° 044° 148 NM	UNL FL245 Class A		↑ ↓		Two-way radio contact to be maintained with AREA CTRL FREQ and Lusaka APPROACH. 121.300Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲KENNETH KAUNDA VOR/DME 'VLS' 15°19'41"S 028°25'15"E						
	231° 052°	UNL FL245		↑ ↓		Two-way radio contact to be maintained

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		<b>6</b>	<b>7</b>
	161 NM	Class A					with AREA CTRL FREQ and Lusaka APPROACH. 121.300Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲AVOMU 17°13'58"S 026°26'53"E							
	233° 054° 50 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Livingstone Approach 124.300Mhz available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲HARRY MWAANGA NKUMBULA VOR/DME 'VLI' 17°48'45"S 025°49'12"E							

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**ENR 3.2 UPPER ATS ROUTES**

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
<b>UR984</b>							
▲KENOT 08°34'48"S 029°39'42"E							
	<p>139° 321° 131 NM</p>	<p>UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>
▲KASAMA NDB 'KS' 10°12'59"S 031°08'22"E							
	<p>147° 327° 65 NM</p>	<p>UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>
▲APGEL 11°05'42"S 031°47'00"E							
	<p>147° 328° 81 NM</p>	<p>UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>
▲ETOLI 12°11'30"S 032°35'18"E							

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Lateral limits (NM)</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
				<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		<b>6</b>	<b>7</b>
	<p style="text-align: center;">148° 328° 40 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>
▲TIBAK 12°44'00"S 032°59'24"E	<p>Two-way radio contact to be maintained with area control Lusaka Control Frequency:- 120.500Mhz</p>						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
<b>UT916</b>							
▲KENNETH KAUNDA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	218° 040° 192 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲XOSIV 18°02'50"S 026°39'24"E							

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ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
			<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
<b>UM214</b>						
▲ ETOXO 11°31'36"S 024°56'17"E						
	168° 348° 39 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
△ ITLOR 12°10'00"S 025°06'13"E						
	168° 349° 78 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ DUGBA 13°25'51"S 025°25'59"E						
	169° 353° 120 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ IXATA 15°22'24"S						

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
			<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
025°56'49"E						
	171° 353° 87 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ DURTO 16°47'18"S 026°19'42"E						
	172° 353° 27 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Livingstone Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ AVOMU 17°13'58"S 026°26'53"E						
	173° 353° 50 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Livingstone Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ XOSIV 18°02'50"S 026°39'24"E						
UM214 is a contingency route						

ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

<i><b>Route designator Name of significant points Coordinates</b></i>	<i><b>Track MAG Rev Track MAG Length (NM)</b></i>	<i><b>Upper limit Lower limit Airspace class</b></i>	<i><b>Direction of cruising levels</b></i>		<i><b>RNP Type</b></i>	<i><b>Remarks</b></i>
			<i><b>Odd</b></i>	<i><b>Even</b></i>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
<b>UM215</b>						
▲ MOTAM 12°00'00"S 027°35'48"E						
	169° 352° 205 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
△ KENNETH KAUN-DA VOR/DME 'VLS' 15°19'41"S 028°25'15"E						
	185° 005° 78 NM	UNL FL245 Class A	↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 121.300Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
△ RETAR 16°37'47"S 028°28'18"E						

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ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
			<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
<b>UM731</b>						
▲ EPNUL 13°35'38"S 022°00'10"E						
	163° 344° 53 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC Units in these air-spaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz
△ APKUS 14°25'00"S 022°19'00"E						
	161° 341° 79 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC Units in these air-spaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz
▲ AVONI 15°38'00"S 022°52'00"E						
	163° 345° 126 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC Units in these air-spaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz
▲ EPMAG 17°34'59"S 023°41'13"E						
UM731 is a contingency route						

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## ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
			<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
<b>UQ83</b>						
▲ INUXI 12°00'00"S 027°03'00"E						
	230° 051° 66 NM	UNL FL245 Class A	↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ OKSED 12°44'34"S 026°13'07"E						
	231° 052° 62 NM	UNL FL245 Class A	↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ DUGBA 13°25'51"S 025°25'59"E						
	232° 053° 94 NM	UNL FL245 Class A				Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ GEXAG 14°28'07"S						

<b>Route designator Name of significant points Coordinates</b>	<b>Track MAG Rev Track MAG Length (NM)</b>	<b>Upper limit Lower limit Airspace class</b>	<b>Direction of cruising levels</b>		<b>RNP Type</b>	<b>Remarks</b>
			<b>Odd</b>	<b>Even</b>		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
024°14'04"E						
	233° 054° 76 NM	UNL FL245 Class A				Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ NIBEG 15°18'44"S 023°14'47"E						
	234° 054° 29 NM	UNL FL245 Class A				Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ AVONI 15°38'00"S 022°52'00"E						
	232° 053° 62 NM	UNL FL245 Class A				Two-way radio contact to be maintained with ATC in these airspaces. Livingstone Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 124.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ UVDOM 16°20'05"S 022°04'32"E						

## ENR 4.1 RADIO NAVIGATION AIDS - EN-ROUTE

NAME OF STATION (VAR)	IDENT	FREQUEN-CY (CH)	HOURS OF OPERATION	COORDI-NATES	ELEVATION DME ANTENNA	COVERAGE REMARKS
1	2	3	4	5	6	7
CHIPATA NDB (05° W)	CP	218.00 KHZ	H24	133350.28S 0323507.68E	-	Power output 100w Coverage 50NM
HARRY MWAANGA NKUMBULA VOR/DME (07° W)	VLI	112.50 MHZ (CH72X)	H24	174845.37S 0254912.07E	3297.2507 FT (1005 M)	co-axially co-located with DME
KAOMA NDB (07° W)	KO	349.00 KHZ	H24	144707.80S 0244724.00E	-	Power output 100w Coverage 50NM
KAPIRI-MPOSHI NDB (05° W)	KM	312.00 KHZ	H24	133448.00S 0282445.00E	-	Power output 125w Coverage 60NM
KASAMA NDB (03° W)	KS	367.00 KHZ	H24	101259.10S 0310822.14E	4687.2178 FT (1429 M)	Power output 100w Coverage 50NM
KENNETH KAUNDA VOR/DME (05° W)	VLS	113.50 MHZ (CH82X)	H24	151940.82S 0282515.40E	3804 FT (1159 M)	co-axially co-located with DME
MANSA NDB (04° W)	MA	316.00 KHZ	H24	110727.00S 0285146.20E	-	Power output 1kw Coverage 200NM
MFUWE INTERNATION-AL AIRPORT VOR/DME (04° W)	VMF	112.90 MHZ (CH76X)	H24	131542.79S 0315448.72E	1850.83 FT (564 M)	co-axially co-located with DME
MONGU VOR/DME (07° W)	VMG	115.30 MHZ (CH100X)	H24	131500.00S 0231100.00E	3465 FT (1056 M)	co-axially co-located with DME
NDOLA VOR/DME (04° W)	VND	112.10 MHZ (CH58X)	H24	123542.72S 0282344.52E	4196 FT (1279 M)	co-axially co-located with DME

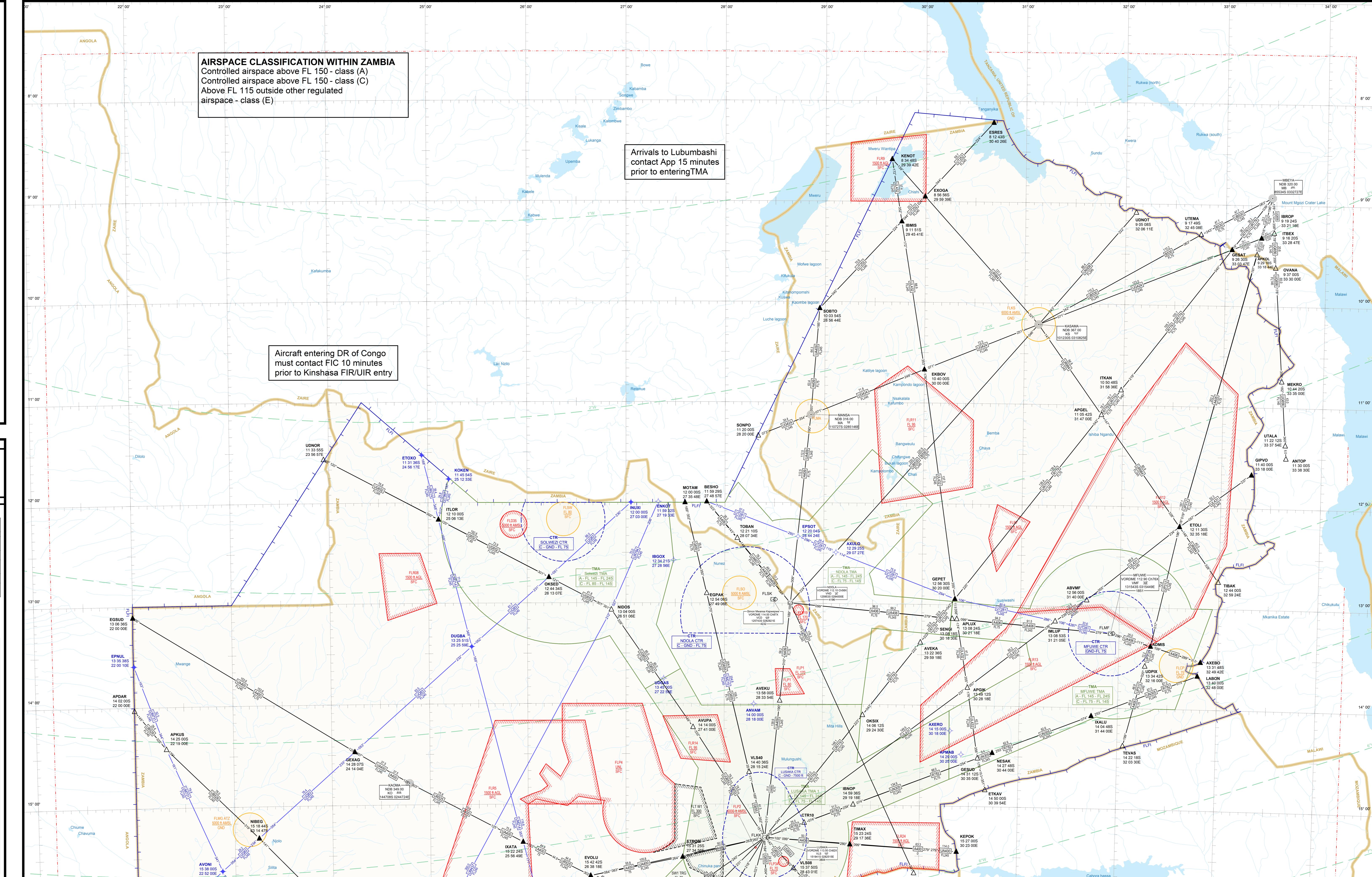
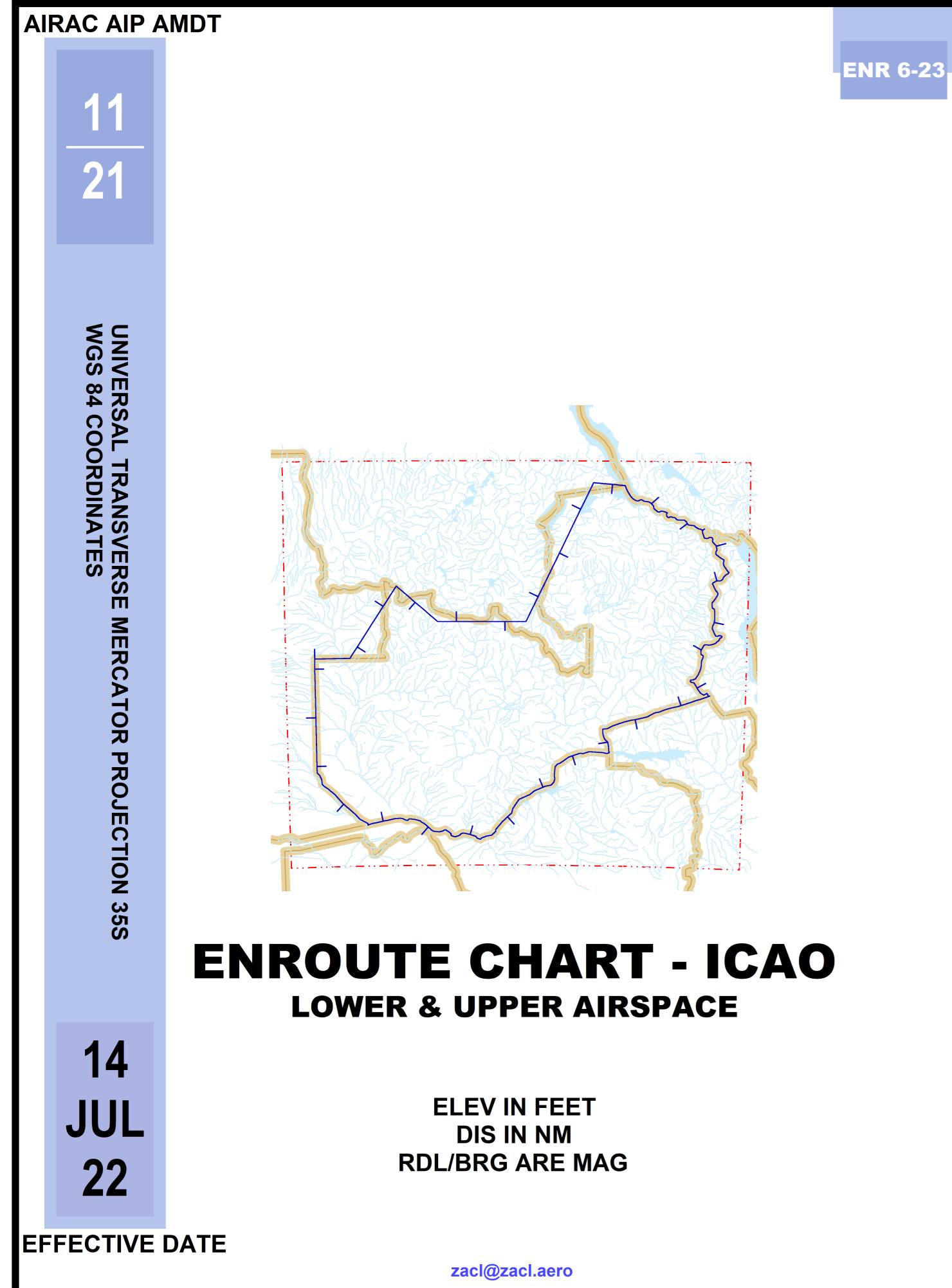
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## ENR 5.2 MILITARY EXERCISE AND TRAINING AREAS

Name & Lateral Limits	Upper/lower limits and system/means of activation announcement INFO for CIV FLT	Remarks Time of ACT Risk of interception (ADIZ)
1	2	3
<b>MILITARY EXERCISE AND TRAINING AREAS</b>		
<b>SW1 TRG</b> Area bounded by lines joining points S 15°25'42" E 027°59'52"; S 15°42'55" E 027°59'52"; S 15°43'38" E 027°58'23"; S 15°44'44" E 027°57'58"; S 15°44'44" E 027°54'05"; S 15°42'50" E 027°54'05"; S 15°42'50" E 027°53'11"; S 15°43'57" E 027°50'00"; S 15°44'44" E 027°49'00"; S 15°42'00" E 027°48'10"; S 15°38'00" E 027°39'16"; S 15°30'47" E 027°36'08" to point of origin.	FL070 _____ GND	Flying training will take place from sunrise to sunset
<b>WEST ONE</b> Area bounded by lines joining points S 14°48'00" E 027°30'00"; S 14°50'00" E 027°46'00"; S 15°20'30" E 027°55'50"; S 15°29'00" E 027°17'00" then follow FLP4 Eastern boundary up to point of origin.	FL300 _____ GND	The flying training area will be activated every Mondays and Wednesdays from 0730 to 1230 UTC and Air traffic controller (ATC) will give routing instructions to IFR Flights when the area is active.

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## AD 1.3 INDEX TO AERODROMES

Aerodrome/heliport name Location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD Section and remarks
	International- al - National (INTL - NTL)	IFR-VFR	S = Scheduled NS = Non-Scheduled P = Private	
1	2	3	4	5
AMELIA (FLAI)	NTL	IFR - VFR	NS-P	
B-HIGH (FLBH)	NTL	IFR - VFR	NS-P	
BALABALA (FLRR)	NTL	IFR - VFR	NS-P	
CHABWINO (FLCA)	NTL	IFR - VFR	NS-P	
CHALATA (FLCB)	NTL	IFR - VFR	NS-P	
CHILANGA (FLCL)	NTL	IFR - VFR	NS-P	
CHILONGOLO (FLCG)	NTL	IFR - VFR	NS	
CHIMBWI (FLCM)	NTL	IFR - VFR	NS-P	
CHINGOMBE (FLCN)	NTL	IFR - VFR	NS-P	
CHINSALI (FLCS)	NTL	IFR - VFR	NS-P	
CHIPATA (FLCP)	NTL	IFR - VFR	NS-P-S	FLCP AD 2
CHITOKOLOKI (FLCT)	NTL	IFR - VFR	NS-P	
CHUNGA (FLCU)	NTL	IFR - VFR	NS-P	
DELTA FARM (FLDF)	NTL	IFR - VFR	NS-P	
DIPALATA (FLDP)	NTL	IFR - VFR	NS-P	
EAST EIGHT (FLEH)	NTL	IFR - VFR	NS-P	
EAST FIVE (FLEE)	NTL	IFR - VFR	NS-P	
EAST FOUR (FLED)	NTL	IFR - VFR	NS-P	
EAST FOURTEEN (FLEN)	NTL	IFR - VFR	NS-P	
EAST ONE (FLEA)	NTL	IFR - VFR	NS-P	
EAST SEVEN (FLEG)	NTL	IFR - VFR	NS-P	
EAST SIX (FLEF)	NTL	IFR - VFR	NS-P	
EAST THREE (FLEC)	NTL	IFR - VFR	NS-P	
EAST TWO (FLEB)	NTL	IFR - VFR	NS-P	
FAIRFIELD (FLFF)	NTL	IFR - VFR	NS-P	
FARM CENTRE (FLFC)	NTL	IFR - VFR	NS-P	
FENWOOD (FLFD)	NTL	IFR - VFR	NS-P	
FLYBY (FLFB)	NTL	IFR - VFR	NS-P	
FOREST IN (FLAE)	NTL	IFR - VFR	NS-P	
FULAZA (FLFZ)	NTL	IFR - VFR	NS-P	
HARRY MWAANGA NKUMBULA INTL (FLHN)	INTL-NTL	IFR - VFR	NS-P-S	FLHN AD 2
HILLCREST (FLHC)	NTL	IFR - VFR	NS-P	
HIPPO (FLHP)	NTL	IFR - VFR	NS-P	
IKAROS (FLIS)	NTL	IFR - VFR	NS-P	
INJA (FLIJ)	NTL	IFR - VFR	NS-P	
JEKI (FLJK)	NTL	IFR - VFR	NS-P	
KABOMPO (FLPO)	NTL	IFR - VFR	NS-P	
KABWE (FLKW)	NTL	IFR - VFR	NS-P	
KAILA (FLKF)	NTL	IFR - VFR	NS-P	
KAKUMBI (FLAB)	NTL	IFR - VFR	NS-P	
KALENE HILL (FLKI)	NTL	IFR - VFR	NS-P	
KALUMBILA (FLKM)	NTL	IFR - VFR	NS-P	
KANFINSA (FLKJ)	NTL	IFR - VFR	NS-P	

Aerodrome/heliport name Location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD Section and remarks
	International- al - National (INTL - NTL)	IFR-VFR	S = Scheduled NS = Non-Scheduled P = Private	
	1	2	3	4
KAOMA (FLKO)	NTL	IFR - VFR	NS-P	
KASABA BAY (FLKY)	NTL	IFR - VFR	NS-P-S	
KASAMA (FLKS)	NTL	IFR - VFR	NS-P	FLKS AD 2
KASANKA (FLKA)	NTL	IFR - VFR	NS-P	
KASAVASA (FLKT)	NTL	IFR - VFR	NS-P	
KASHIKISHI (FLKH)	NTL	IFR - VFR	NS-P	
KASOMPE (FLKE)	NTL	IFR - VFR	NS-P	
KATETE (FLAT)	NTL	IFR - VFR	NS-P	
KAWA (FLAA)	NTL	IFR - VFR	NS-P	
KAWAMBWA (FLKB)	NTL	IFR - VFR	NS-P	
KENNETH KAUNDA INTL (FLKK)	INTL-NTL	IFR - VFR	NS-P-S	FLKK AD 2
KHAL-AMANZI (FLAG)	NTL	IFR - VFR	NS-P	
KYINDU (FLKN)	NTL	IFR - VFR	NS-P	
LESA (FLLE)	NTL	IFR - VFR	NS-P	
LOLOMA (FLOL)	NTL	IFR - VFR	NS-P	
LOZA (FLLZ)	NTL	IFR - VFR	NS-P	
LUELO (FLLR)	NTL	IFR - VFR	NS-P	
LUEMBE (FLUB)	NTL	IFR - VFR	NS-P	
LUKULU (FLLK)	NTL	IFR - VFR	NS-P	
LUNDAZI (FLLD)	NTL	IFR - VFR	NS-P	
LUSAKA CITY (FLLC)	NTL	IFR - VFR		
LUSALI HILLS (FLLH)	NTL	IFR - VFR	NS-P	
LUSHIMBA SPRINGS (FLLM)	NTL	IFR - VFR	NS-P	
LUWOMBA (FLAD)	NTL	IFR - VFR	NS-P	
LWIMBA (FLAC)	NTL	IFR - VFR	NS-P	
MAAMBA (FLMB)	NTL	IFR - VFR	NS-P	
MACHA (FLAX)	NTL	IFR - VFR	NS-P	
MAFUNDZALO (FLDB)	NTL	IFR - VFR	NS-P	
MAMBILIMA (FLBM)	NTL	IFR - VFR	NS-P	
MANO (FLNO)	NTL	IFR - VFR	NS-P	
MANSA (FLMA)	NTL	IFR - VFR	NS-P	FLMA AD 2
MASEBE RANCH (FLYS)	NTL	IFR - VFR	NS-P	
MASTOCK CHIAWA (FLMC)	NTL	IFR - VFR	NS-P	
MAYFIELD (FLYD)	NTL	IFR - VFR	NS-P	
MAYOBA (FLSR)	NTL	IFR - VFR	NS-P	
MBIZI (FLZI)	NTL	IFR - VFR	NS-P	
MFUWE (FLMF)	INTL-NTL	IFR - VFR	NS-P-S	FLMF AD 2
MKUSHI RIVER (FLMV)	NTL	IFR - VFR	NS-P	
MONGU (FLMG)	NTL	IFR - VFR	NS-P-S	FLMG AD 2
MOUNT ISABELLE (FLIL)	NTL	IFR - VFR	NS-P	
MPIKA (FLMP)	NTL	IFR - VFR	NS-P	
MUFULIRA (FLML)	NTL	IFR - VFR	NS-P	

Aerodrome/heliport name Location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD Section and remarks
	International - National (INTL - NTL)	IFR-VFR	S = Scheduled NS = Non-Scheduled P = Private	
1	2	3	4	5
MUKINGE HILL (FLGE)	NTL	IFR - VFR	NS-P	
MULEMBO (FLMQ)	NTL	IFR - VFR	NS-P	
MULOBA (FLOB)	NTL	IFR - VFR	NS-P	
MULOBEZI (FLMU)	NTL	IFR - VFR	NS-P	
MUNWA NKOZI (FLMI)	NTL	IFR - VFR	P-S	
MUSHISHIMA (FLMH)	NTL	IFR - VFR	P-S	
MWALESHI (FLWS)	NTL	IFR - VFR	NS-P	
MWANYA (FLKZ)	NTL	IFR - VFR	NS-P	
MWINILUNGA (FLMW)	NTL	IFR - VFR	NS-P	
NABWALYA (FLBW)	NTL	IFR - VFR	NS-P	
NGOMA (FLNA)	NTL	IFR - VFR	NS-P	
NKAMBA BAY (FLNK)	NTL	IFR - VFR	NS-P	
NZIMBA AERODROME (FLNZ)	NTL	IFR - VFR	NS-P	
OTAGO (FLOT)	NTL	IFR - VFR	NS-P	
PEDZA (FLPZ)	NTL	IFR - VFR	NS-P	
PETAUKE (FLPE)	NTL	IFR - VFR	NS-P	
Pilatus ENGINEERING (FLJH)	NTL	IFR - VFR	NS-P	
RAPID ONE ZERO (FLRA)	NTL	IFR - VFR	NS-P	
RAPID TWO ONE (FLRB)	NTL	IFR - VFR	NS-P	
RIVER CLUB (FLRC)	NTL	IFR - VFR	NS	
SAKEJI (FLSJ)	NTL	IFR - VFR	NS-P	
SENANGA (FLSN)	NTL	IFR - VFR	NS-P	
SERENJE (FLSE)	NTL	IFR - VFR	NS-P	
SESHEKE (FLSS)	NTL	IFR - VFR	NS-P	
SHIWANGANDU (FLSH)	NTL	IFR - VFR	NS-P	
SIMON MWANSA KAP- WEPWE INTERNATIONAL- AL AIRPORT (FLSK)	INTL-NTL	IFR - VFR	NS-P-S	FLSK AD 2
SINAZONGWE (FLSG)	NTL	IFR - VFR	NS-P	
SOLWEZI (FLSW)	NTL	IFR - VFR	NS-P-S	FLSW AD 2
SOUTH DOWNS (FLSO)	NTL	IFR - VFR	NS-P	
STRAVENDALE (FLST)	NTL	IFR - VFR	NS-P	
SUN INTERNATIONAL (FLSI)	NTL	IFR - VFR	NS-P	
TARANAKI (FLTI)	NTL	IFR - VFR	NS-P	
VIXERS (FLVX)	NTL	IFR - VFR	NS-P	
WAKAWAKA (FLWW)	NTL	IFR - VFR	NS-P	
WARDY (FLHG)	NTL	IFR - VFR	NS-P	
WEST FIVE (FLWE)	NTL	IFR - VFR	NS-P	
WEST FOUR (FLWD)	NTL	IFR - VFR	NS-P	
WEST ONE (FLWA)	NTL	IFR - VFR	NS-P	
WEST SEVEN (FLWG)	NTL	IFR - VFR	NS-P	
WEST SIX (FLWF)	NTL	IFR - VFR	NS-P	

Aerodrome/heliport name Location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD Section and remarks
	International - National (INTL - NTL)	IFR-VFR	S = Scheduled NS = Non-Scheduled P = Private	
1	2	3	4	5
WEST THREE (FLWC)	NTL	IFR - VFR	NS-P	
WEST TWO (FLWB)	NTL	IFR - VFR	NS-P	
ZAMBEZI (FLZB)	NTL	IFR - VFR	NS-P	

**AD 1.5 CERTIFICATION OF AERODROMES**

AERODROME NAME AND LOCATION	STATUS OF CERTIFICATION	DATE OF CERTIFICATION	VALIDITY OF CERTIFICATION OPERATOR AND REMARKS
Kenneth Kaunda International Airport - FLKK	CERTIFIED	20 <sup>th</sup> August, 2022	19 <sup>th</sup> August 2024. Zambia Airports Corporation Limited.
Harry Mwaanga Nkumbula International Airport - FLHN	CERTIFIED	25 <sup>th</sup> November 2022	24 <sup>th</sup> November 2024. Zambia Airports Corporation Limited.
Simon Mwansa Kapwepwe International Airport - FLSK	CERTIFIED	27 <sup>th</sup> September 2021	26 <sup>th</sup> September 2023. Zambia Airports Corporation Limited.

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**FLCP AD 2.1 AERODROME LOCATION INDICATOR AND NAME**  
**FLCP - CHIPATA**

**FLCP AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

1	<i>ARP coordinates and site at AD</i>	S 13°33'25.00" E 032°35'14.20" Nil
2	<i>Direction and distance from (city)</i>	5NM NW of Chipata
3	<i>Elevation/Reference temperature</i>	Elev: 3359 FT (1024 M) / T: 32.2° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	5° W ( 2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited Box 510105 Chipata Airport Tel: 260 - 950-707421 Tel: 260-216-222828 AFS: FLCPZPZX
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

**FLCP AD 2.3 OPERATIONAL HOURS**

1	<i>AD Administration</i>	0600-1500
2	<i>Customs and immigration</i>	On Request
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	Nil
9	<i>Handling</i>	Nil
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

**FLCP AD 2.4 HANDLING SERVICES AND FACILITIES**

**FLCP AD 2.5 PASSENGER FACILITIES**

1	<i>Hotels</i>	Hotels and rest houses in town
2	<i>Restaurants</i>	In town
3	<i>Transportation</i>	Nil
4	<i>Medical facilities</i>	First aid at AD, Hospital in town
5	<i>Bank and Post Office</i>	Bank and Post Office in town
6	<i>Tourist Office</i>	Tourist Office Jassat Travel Agency PO Box 510040 Tel: 260-216-221471/ 260-216-221029/ 260-216-221767 Telex: 260-212-617250
7	<i>Remarks</i>	Nil

**FLCP AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	<i>AD category for fire fighting</i>	CAT 4
2	<i>Rescue equipment</i>	YES; Two (2) fire tenders, 1 Ambulances, 9 trained personnel per shift.
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

**FLCP AD 2.7 SEASONAL AVAILABILITY**

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

**FLCP AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA**

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>
		FLCP Apron	Bitumen	SIWL 9500 KG
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Designator of TWY</i>	<i>Width</i>	<i>Surface</i>
		FLCP Taxiway	18 M	Bitumen
3	<i>Altimeter checkpoint location and elevation</i>	Location: At Apron	THR36	THR18
		Elevation: Nil Info	3363FT	3295FT
4	<i>VOR/INS checkpoints</i>	VOR: Nil		
		INS: Nil		
5	<i>Remarks</i>	Nil		

**FLCP AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS**

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	Nil
2	<i>RWY and TWY markings and LGT</i>	RWY: Edge markings and threshold TWY: Nil
3	<i>Stop bars</i>	Nil
4	<i>Remarks</i>	Nil

**FLCP AD 2.10 AERODROME OBSTACLES**

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
18/APCH	FLCP_3911 Elev: 1011.37 m Unlighted	S 13°33'00.64" E 032°35'10.49"	Nil
18/APCH	FLCP_3958 Elev: 1010.296 m Unlighted	S 13°33'02.61" E 032°35'05.21"	Total Area of Object is 61.36 m <sup>2</sup> as the maximum size of the Obstacle_ with this point the Highest Point of Object
18/APCH	FLCP_87 Elev: 1006.72 m Unlighted	S 13°33'00.66" E 032°35'11.40"	Total Area of Object is 58.692 m <sup>2</sup> as the maximum size of the Obstacle_ with this point the Highest Point of Object
36/APCH	FLCP_2495 Elev: 1070.852 m Unlighted	S 13°34'48.92" E 032°35'40.43"	Nil
36/APCH	FLCP_2907_ Elev: 1160.489 m Unlighted	S 13°36'25.06" E 032°35'38.26"	Nil

In approach/TKOF areas			
RWY/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Remarks
a	b	c	d
36/APCH	FLCP_3608 Elev: 1030.621 m Unlighted	S 13°33'59.96" E 032°35'19.97"	Nil
36/APCH	FLCP_3673 Elev: 1045.11 m Unlighted	S 13°34'11.41" E 032°35'15.96"	Nil
36/APCH	FLCP_3704 Elev: 1032.429 m Unlighted	S 13°33'58.25" E 032°35'19.58"	Nil
36/APCH	FLCP_4141 Elev: 1057.704 m Unlighted	S 13°34'12.04" E 032°35'19.80"	Nil
36/APCH	FLCP_709 Elev: 1254.464 m Unlighted	S 13°38'25.94" E 032°37'00.72"	Nil
36/TKOF	FLCP_3911 Elev: 1011.37 m Unlighted	S 13°33'00.64" E 032°35'10.49"	Nil
36/TKOF	FLCP_3958 Elev: 1010.296 m Unlighted	S 13°33'02.61" E 032°35'05.21"	Total Area of Object is 61.36 m <sup>2</sup> as the maximum size of the Obstacle_ with this point the Highest Point of Object
In circling area and at AD			
Obstacle type Elevation Markings/LGT	Coordinates	Remarks	
a	b	c	
NOTE: Nil			

#### FLCP AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Chipata
2	Hours of service MET Office outside hours	0600 - 1500 UTC Nil
3	Office responsible for TAF preparation Period of validity	Kenenth Kaunda International Airport As required by flights
4	Trend forecast Interval of issuance	Metar - Speci 2 HR
5	Briefing/consultation provided	Prior notice required
6	Flight documentation Language(s) used	Nil
7	Charts and other information available for briefing or consultation	Provided in tabular form for domestic flights only
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	Mfuwe Approach Chipata FIS
10	Additional information (limitation of service, etc.)	Nil

#### FLCP AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designations RWY</i>	<i>TRUE &amp; MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
08	078°(True) 000°(Mag)	809 x 21	Grass SWY: Nil	GUND: Nil	THR -	
26	258°(True) 000°(Mag)	809 x 21	Grass SWY: Nil	GUND: Nil	THR -	
18	169°(True) 174°(Mag)	1470 x 21	SIWL 9500 KG SWY: Nil	S 13°33'04.20" E 032°35'08.26" GUND: Nil	THR 3295 FT (1004 M)	
36	349°(True) 354°(Mag)	1470 x 21	SIWL 9500 KG SWY: Nil	S 13°33'51.09" E 032°35'17.90" GUND: Nil	THR 3363 FT (1025 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	
7	8	9	10	11	12	
For Rwy 08: Nil	Nil	Nil	Nil	Nil	Nil	
For Rwy 26: Nil	Nil	Nil	Nil	Nil	Nil	
For Rwy 18: +1.1%	Nil	Nil	1590 x 140	Nil	Nil	
For Rwy 36: Nil	Nil	Nil	1590 x 140	Nil	Nil	
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
08						
26						
18	Due slope usually aircraft land RWY 18 and take off at RWY 36. Prevailing wind is EASTERLY.					
36	Due slope usually aircraft land RWY 18 and take off at RWY 36. Prevailing wind is EASTERLY.					

**FLCP AD 2.13 DECLARED DISTANCES**

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
08	809	809	809	809	
18	1470	1470	1470	1470	
26	809	809	809	809	
36	1470	1470	1470	1470	

**FLCP AD 2.14 APPROACH AND RUNWAY LIGHTING**

<i>RWY Designator</i>	<i>APCH LGT type LEN INTST</i>	<i>THR LGT colour WBAR</i>	<i>VASIS (MEHT) PAPI</i>	<i>TDZ, LGT LEN</i>	<i>RWY Centre Line LGT Length, spacing, colour, INTST</i>	<i>RWY edge LGT LEN, spacing colour INTST</i>	<i>RWY End LGT colour WBAR</i>	<i>SWY LGT LEN (M) colour</i>	<i>Remarks</i>
1	2	3	4	5	6	7	8	9	10
08	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
26	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
36	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
18	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

### FLCP AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

### FLCP AD 2.16 HELICOPTER LANDING AREA

As guided by AFIS

### FLCP AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	Chipata ATZ Circular area centered on S 13°33'50" E 032°35'08" within a 10NM radius.
2	Vertical limits	GND to 6000 FT AMSL
3	Airspace classification	G
4	ATS unit call sign Language(s)	Mfuwe Approach, English Chipata Radio, English
5	Transition altitude	7000 FT (2134 M)
6	Hours of applicability	0600-1500
7	Remarks	Nil

### FLCP AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
AFIS	Chipata Radio	118.3 MHZ 6952.0 KHZ	Mon-Fri 0600-1500	Nil	Nil	Primary Freq. Secondary Freq. (HF)

### FLCP AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB (05° W)	CP	218.00 KHZ	H24	S 13°33'50.28" E 032°35'07.68"	—	Power output 100w Coverage 50NM

### FLCP AD 2.20 LOCAL AERODROME REGULATIONS

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules. Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

### FLCP AD 2.21 NOISE ABATEMENT PROCEDURES

### FLCP AD 2.22 FLIGHT PROCEDURES

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules.

Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

### FLCP AD 2.23 ADDITIONAL INFORMATION

**FLCP AD 2.24 CHARTS RELATED TO AN AERODROME**

<i>Charts</i>	<i>Pages</i>
LANDING CHART - ICAO	AD 2 FLCP 2 - 1
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 18-36	AD 2 FLCP 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLCP 6 - 1
Instrument Approach Chart — ICAO NDB RWY 18	AD 2 FLCP 14 - 1

In approach/TKOF areas			
RWY/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Remarks
a	b	c	d
28/TKOF	Mast Elev: 3452 FT (1052 M)	S 17°48'10.80" E 025°51'24.00"	All obstructions outside approach And take-off areas are provided with day markings and obstruction lights.
28/TKOF	Mast Elev: 3485 FT (1062 M)	S 17°49'04.30" E 025°51'27.70"	All obstructions outside approach And take-off areas are provided with day markings and obstruction lights.
33/TKOF	Mast Elev: 3452 FT (1052 M)	S 17°48'10.80" E 025°51'24.00"	All obstructions outside approach And take-off areas are provided with day markings and obstruction lights.
33/TKOF	Mast Elev: 3485 FT (1062 M)	S 17°49'04.30" E 025°51'27.70"	All obstructions outside approach And take-off areas are provided with day markings and obstruction lights.
In circling area and at AD			
Obstacle type Elevation Markings/LGT	Coordinates	Remarks	
a	b	c	
NOTE: Nil			

#### FLHN AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Harry Mwaanga Nkumbula
2	Hours of service MET Office outside hours	0500-1600 or on request
3	Office responsible for TAF preparation Period of validity	Harry Mwaanga Nkumbula 9, 18 HR
4	Trend forecast Interval of issuance	METAR TREND 2HR, SPECI as required
5	Briefing/consultation provided	Personal briefing and consultation
6	Flight documentation Language(s) used	Charts, abbreviated plain language text English
7	Charts and other information available for briefing or consultation	Cross section form of forecasts, charts and tables forms of documentation for both international and domestic flights

8	<i>Supplementary equipment available for providing information</i>	Nil
9	<i>ATS units provided with information</i>	FLHN MET Briefing Office
10	<i>Additional information (limitation of service, etc.)</i>	Nil

**FLHN AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS**

<i>Designations RWY</i>	<i>TRUE &amp; MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
10	094°(True) 102°(Mag)	2987 x 46	PCN 52/F Bitumen SWY: Nil	S 17°49'13.48" E 025°48'10.89" GUND: Nil	THR 3253.7073 FT (992 M)	
28	274°(True) 282°(Mag)	2987 x 46	PCN 52/F Bitumen SWY: Nil	S 17°49'20.26" E 025°49'52.08" GUND: Nil	THR 3236.6634 FT (987 M)	
15	139°(True) 147°(Mag)	1373 x 30	AUW 20500 KG Grass Note: Max tyre Pres. 7.73Kg/cm sq SWY: Nil	S 17°48'46.16" E 025°48'52.49" GUND: Nil	THR 3287.21 FT (1002 M)	
33	319°(True) 327°(Mag)	1373 x 30	AUW 20500 KG Grass Note: Max tyre Pres. 7.73Kg/cm sq SWY: Nil	S 17°49'16.18" E 025°49'19.72" GUND: Nil	THR 3275.12 FT (998 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 10: +1.2%	Nil	360 x 150	3107 x 280	Nil	Nil	Nil
For Rwy 28: +1.2%	60 x 45	240 x 150	3107 x 280	Nil	Nil	Nil
For Rwy 15: Nil	91 x 30	Nil	1732 x 152	Nil	Nil	Nil
For Rwy 33: Nil	0 x 30	Nil	1732 x 152	Nil	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
10	NIL					
28	NIL					
15	NIL THR DISP by 75M					
33	NIL					

**FLHN AD 2.13 DECLARED DISTANCES**

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
10	2987	3347	2987	2987	
15	1373	1464	1464	1373	
28	2987	3227	3047	2987	
33	1373	1373	1373	1373	

### FLHN AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
10	UEL high intensity lights 371 M	Green high intensity lights	PAPI 3°	Nil	Nil	50 M White high intensity lights	Red high intensity lights	Nil	Nil
28	UEL high intensity lights 390 M	Green high intensity lights	PAPI 3°	Nil	Nil	60 M White high intensity lights	Red high intensity lights	Nil	Nil
15	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
33	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

### FLHN AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN :
2	LDI location and LGT Anemometer location and LGT	LDI: Nil Anemometer: Nil
3	TWY edge and centre line lighting	Taxiway Edge: Twy B - Blue Taxiway Edge: Twy A - Blue
4	Secondary power supply/switch-over time	15 seconds
5	Remarks	Nil

### FLHN AD 2.16 HELICOPTER LANDING AREA

As guided by ATC

### FLHN AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	LIVINGSTONE CTR Area bounded by lines joining points S 17°51'36" E 025°30'36" then along the clockwise arc of a circle of 18NM radius centred on S 17°48'44" E 025°49'12" to S 17°56'30" E 026°06'15"; S 17°58'05" E 026°05'23" then along Zimbabwe/Zambia border up to S 17°51'46" E 025°30'39" to point of origin.
2	Vertical limits	GND to FL65
3	Airspace classification	C
4	ATS unit call sign Language(s)	Livingstone Approach, English Livingstone Tower, English
5	Transition altitude	5000 FT (1524 M)
6	Hours of applicability	0600-1500

7	Remarks	Nil
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### FLHN AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
Approach Control	Livingstone Approach	124.3 MHZ	0500-1600	Nil	Nil	
Fuelling	Air Puma	131.7 MHZ	0500- 1600	Nil	Nil	
Emergency	Emergency	121.5 MHZ	0500-1600	Nil	Nil	Emergency
Approach Radar Control	Livingstone Radar Approach	124.4 MHZ	0500-1600	Nil	Nil	
Tower Control	Livingstone Tower	118.1 MHZ	0500-1600	Nil	Nil	VDF available in approach

### FLHN AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB (07° W)	LZ	308.00 KHZ	H24	S 17°49'11.43" E 025°47'40.09"	—	Power output 125w Coverage 60NM
VOR/DME (07° W)	VLI	112.50 MHZ (CH72X)	H24	S 17°48'45.37" E 025°49'12.07"	3297 FT	co-axially co-located with DME

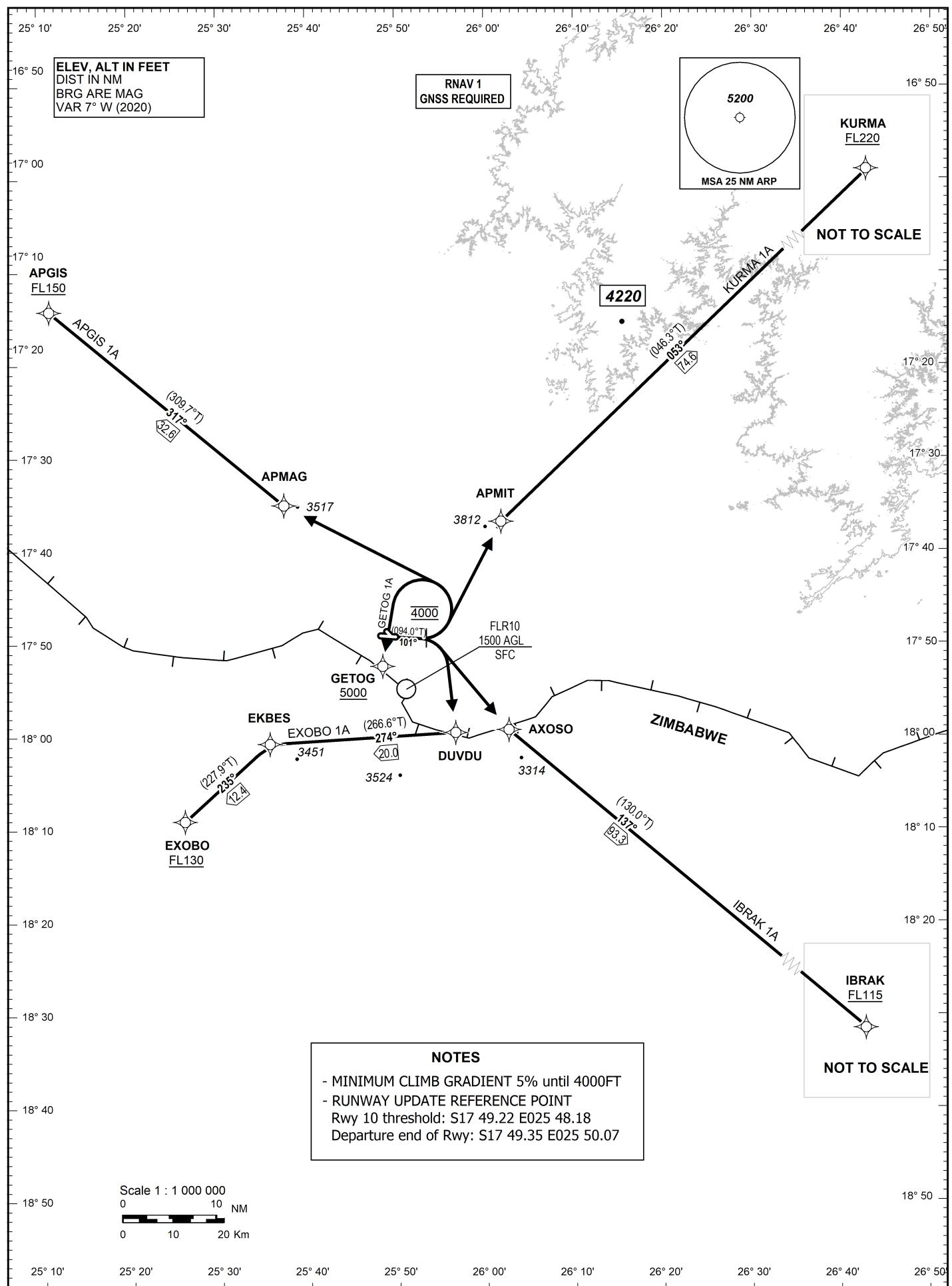
STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO

HARRY MWAANGA NKUMBULA INTL/Livingstone

(FLHN)

RNAV SID RWY 10

APGIS 1A, EXOBO 1A, GETOG 1A, IBRAK 1A, KURMA 1A

TRANSITION ALTITUDE  
5000APP 124.300  
TWR 118.100

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**HARRY MWAANGA NKUMBULA INTL/Livingstone**

(FLHN)

**RNAV SID RWY 10**

APGIS 1A, EXOBO 1A, GETOG 1A, IBRAK 1A, KURMA 1A

**TABULAR DESCRIPTION**

**RNAV SID RWY 10**

APGIS 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMAG	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	APGIS	-	317 (309.7)	-	32.6	-	+FL150	-	-	-	RNAV 1

**EXOBO 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	DUVDU	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	EKBES	-	274 (266.6)	-	20.0	-	-	-	-	-	RNAV 1
040	TF	EXOBO	-	235 (227.9)	-	12.4	-	+FL130	-	-	-	RNAV 1

**GETOG 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	GETOG	-	-	-	-	L	+5000	-	-	-	RNAV 1

**IBRAK 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	AXOSO	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	IBRAK	-	137 (130.0)	-	93.3	-	+FL115	-	-	-	RNAV 1

**KURMA 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMIT	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	KURMA	-	053 (046.3)	-	74.6	-	+FL220	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
RNAV SID RWY 10**

APGIS 1A, EXOBO 1A, GETOG 1A, IBRAK 1A, KURMA 1A

**WAYPOINT LIST  
RNAV SID RWY 10**

Waypoint Identifier	Coordinates	
APGIS	S 17 14 13.0	E 025 11 11.6
APMAG	S 17 35 09.6	E 025 37 23.7
APMIT	S 17 36 56.4	E 026 01 45.9
AXOSO	S 17 59 22.1	E 026 02 33.8
EKBES	S 18 00 50.3	E 025 35 40.0
EXOBO	S 18 09 09.0	E 025 26 02.7
GETOG	S 17 52 30.0	E 025 48 24.0
DUVDU	S 17 59 39.6	E 025 56 34.0
IBRAK	S 18 59 15.8	E 027 17 59.3
KURMA	S 16 45 04.0	E 026 57 59.0

**ROUTING**

NAME	TEXT
APGIS 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn LEFT direct to APMAG, then track 317° to APMAG. MCA/MCL: APGIS AT or ABOVE FL150.
EXOBO 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn RIGHT direct to DUVDU, track 274° to EKBES, then track 235° to EXOBO. MCA/MCL: EXOBO AT or ABOVE FL130.
GETOG 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn LEFT direct to GETOG. MCA/MCL: GETOG AT or ABOVE 5000'.
IBRAK 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn RIGHT direct to AXOSO, then track 137° to IBRAK. MCA/MCL: IBRAK AT or ABOVE FL115.
KURMA 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn LEFT direct to APMIT, then track 053° to KURMA. MCA/MCL: KURMA AT or ABOVE FL220.

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**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

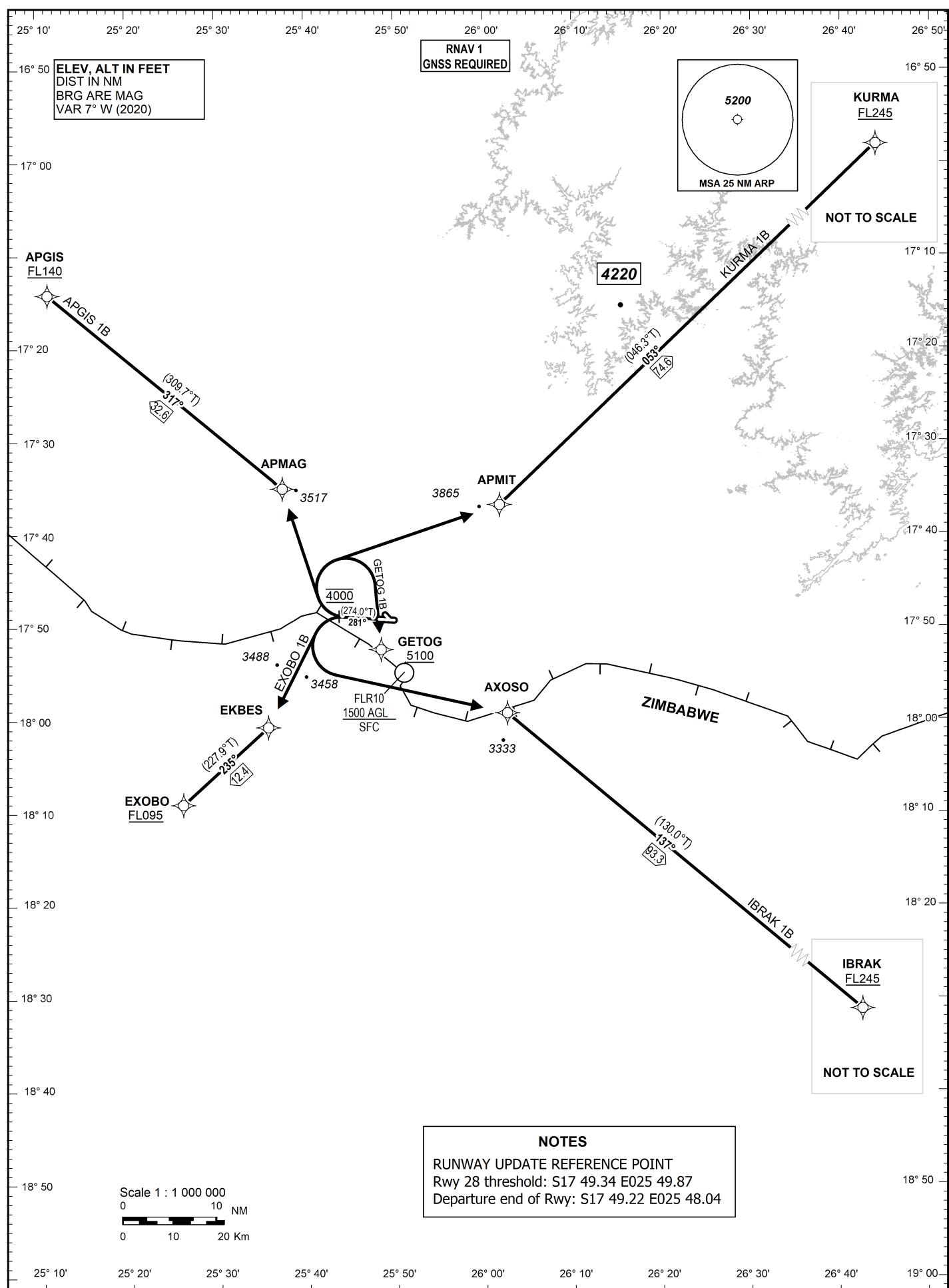
**TRANSITION ALTITUDE  
5000**

**HARRY MWAANGA NKUMBULA INTL/Livingstone**

**(FLHN)**

**RNAV SID RWY 28**

APGIS 1B, EXOBO 1B, GETOG 1B, IBRAK 1B, KURMA 1B



**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**HARRY MWAANGA NKUMBULA INTL/Livingstone**

(FLHN)

**RNAV SID RWY 28**

APGIS 1B, EXOBO 1B, GETOG 1B, IBRAK 1B, KURMA 1B

**TABULAR DESCRIPTION**

**RNAV SID RWY 28**

APGIS 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMAG	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	APGIS	-	317 (309.7)	-	32.6	-	+FL140	-	-	-	RNAV 1

**EXOBO 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	EKBES	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	EXOBO	-	235 (227.9)	-	12.4	-	+FL095	-	-	-	RNAV 1

**GETOG 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	GETOG	-	-	-	-	R	+5100	-	-	-	RNAV 1

**IBRAK 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	AXOSO	-	-	-	-	L	-	-	-	-	RNAV 1
030	TF	IBRAK	-	137 (130.0)	-	93.3	-	+FL245	-	-	-	RNAV 1

**KURMA 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMIT	-	-	-	-	R	-	-	-	-	RNAV 1
030	TF	KURMA	-	053 (046.3)	-	74.6	-	+FL245	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO****HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
RNAV SID RWY 28**

APGIS 1B, EXOBO 1B, GETOG 1B, IBRAK 1B, KURMA 1B

**WAYPOINT LIST  
RNAV SID RWY 28**

Waypoint Identifier	Coordinates	
APGIS	S 17 14 13.0	E 025 11 11.6
APMAG	S 17 35 09.6	E 025 37 23.7
APMIT	S 17 36 56.4	E 026 01 45.9
AXOSO	S 17 59 22.1	E 026 02 33.8
EKBES	S 18 00 50.3	E 025 35 40.0
EXOBO	S 18 09 09.0	E 025 26 02.7
GETOG	S 17 52 30.0	E 025 48 24.0
IBRAK	S 18 59 15.8	E 027 17 59.3
KURMA	S 16 45 04.0	E 026 57 59.0

**ROUTING**

NAME	TEXT
APGIS 1B	After take-off climb on course 281° to 4000 FT, turn RIGHT direct to APMAG, then track 317° to APGIS . MCA/MCL: APGIS AT or ABOVE FL140.
EXOBO 1B	After take-off climb on course 281° to 4000 FT, turn LEFT direct to EKBES, then track 235° to EKBES. MCA/MCL: EXOBO AT or ABOVE FL095.
GETOG 1B	After take-off climb on course 281° to 4000 FT, turn RIGHT direct to GETOG. MCA/MCL: GETOG AT or ABOVE 5100'.
IBRAK 1B	After take-off climb on course 281° to 4000 FT, turn LEFT direct to AXOSO, then track 137° to IBRAK. MCA/MCL: IBRAK AT or ABOVE FL245.
KURMA 1B	After take-off climb on course 281° to 4000 FT, turn RIGHT direct to APMIT, then track 53° to KURMA. MCA/MCL: KURMA AT or ABOVE FL245.

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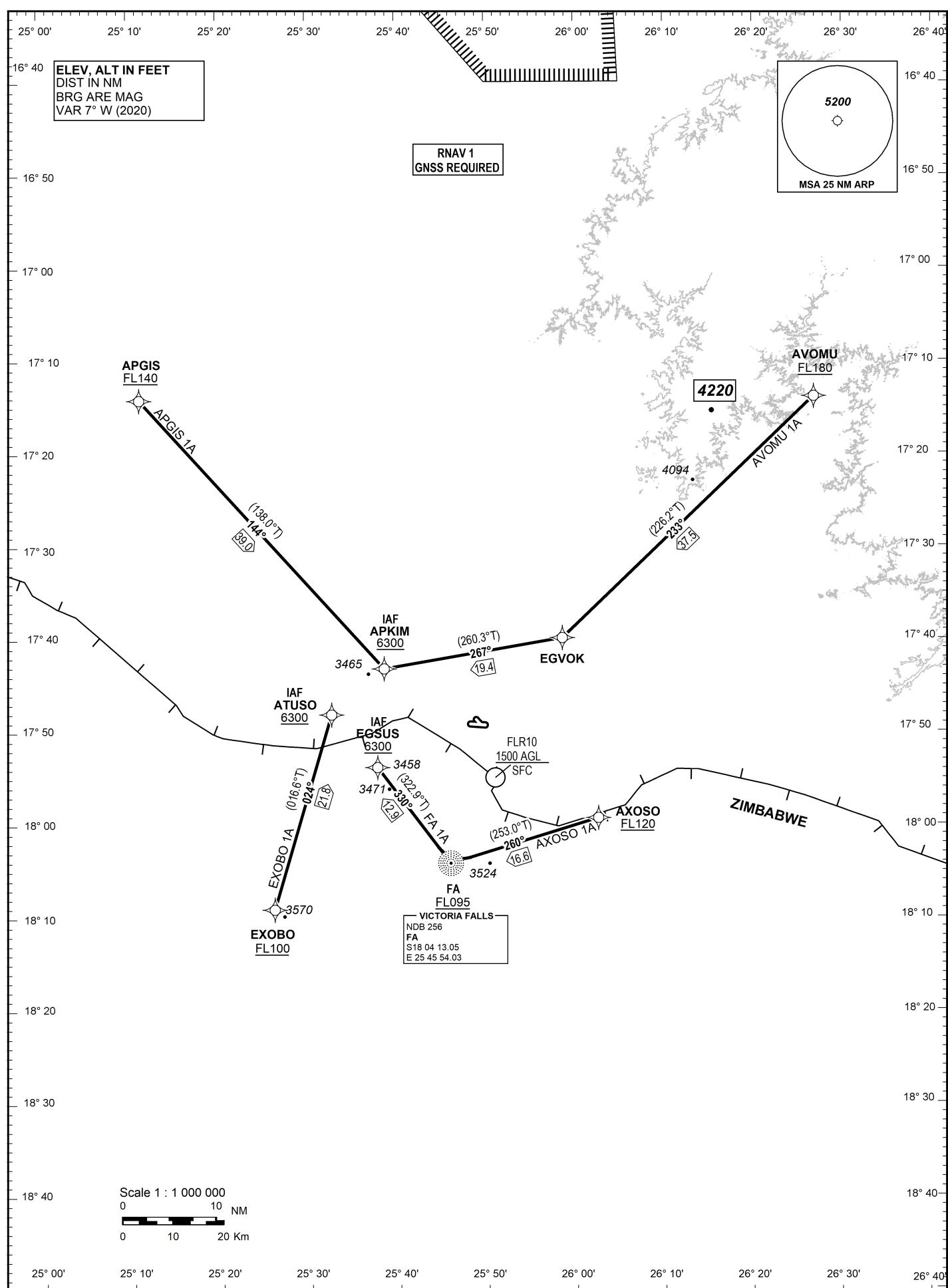
STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAOTRANSITION ALTITUDE  
5000

## HARRY MWAANGA NKUMBULA INTL/Livingstone

(FLHN)

## RNAV STAR RWY 10

APGIS 1A, AVOMU 1A, AXOSO 1A, EXOBO 1A, FA 1A



**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

**HARRY MWAANGA NKUMBULA INTL/Livingstone**

**(FLHN)**

**RNAV STAR RWY 10**

APGIS 1A, AVOMU 1A, AXOSO 1A, EXOBO 1A, FA 1A

**TABULAR DESCRIPTION**

**RNAV STAR RWY 10**

**APGIS 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	APGIS	-	-	-	-	-	+FL140	-	-	-	RNAV 1
020	TF	APKIM	-	144 (138.0)	-	39.0	-	+6300	-	-	-	RNAV 1

**AVOMU 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AVOMU	-	-	-	-	-	+FL180	-	-	-	RNAV 1
020	TF	EGVOK	-	233 (226.2)	-	37.5	-	-	-	-	-	RNAV 1
030	TF	APKIM	-	267 (260.3)	-	19.4	-	+6300	-	-	-	RNAV 1

**AXOSO 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AXOSO	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	FA	-	260 (253.0)	-	16.6	-	+FL095	-	-	-	RNAV 1
030	TF	EGSUS	-	330 (322.9)	-	12.9	-	+6300	-	-	-	RNAV 1

**EXOBO 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	EXOBO	-	-	-	-	-	+FL100	-	-	-	RNAV 1
020	TF	ATUSO	-	024 (016.6)	-	21.8	-	+6300	-	-	-	RNAV 1

**FA 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	FA	-	-	-	-	-	+FL095	-	-	-	RNAV 1
020	TF	EGSUS	-	330 (322.9)	-	12.9	-	+6300	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO****HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)****RNAV STAR RWY 10**

APGIS 1A, AVOMU 1A, AXOSO 1A, EXOBO 1A, FA 1A

**WAYPOINT LIST  
RNAV STAR RWY 10**

WaypointIdentifier	Coordinates	
APGIS	S 17 14 13.0	E 025 11 11.6
APKIM	S 17 43 14.1	E 025 38 31.5
ATUSO	S 17 48 09.8	E 025 32 34.8
AVOMU	S 17 13 58.0	E 026 26 53.0
AXOSO	S 17 59 22.1	E 026 02 33.8
EGSUS	S 17 53 51.6	E 025 37 43.5
EGVOK	S 17 39 57.9	E 025 58 34.5
EXOBO	S 18 09 09.0	E 025 26 02.7
FA	S 18 04 13.1	E 025 45 54.0

**ROUTING**

NAME	TEXT
APGIS 1A	From APGIS track 144° to APKIM. MEL/MEA: APGIS AT or ABOVE FL140, APKIM AT or ABOVE 6300'.
AVOMU 1A	From AVOMU track 233° to EGVOK, track 267° to APKIM. MEL/MEA: AVOMU AT or ABOVE FL180, APKIM AT or ABOVE 6300'.
AXOSO 1A	From AXOSO track 260° to FA, track 330° to EGSUS. MEL/MEA: AXOSO AT or ABOVE FL120, FA AT or ABOVE FL095, EGSUS AT or ABOVE 6300'.
EXOBO 1A	From EXOBO track 024° to ATUSO. MEL/MEA: EXOBO AT or ABOVE FL100, ATUSO AT or ABOVE 6300'.
FA 1A	From FA track 330° to EGSUS. MEL/MEA: FA AT or ABOVE FL095, EGSUS AT or ABOVE 6300'.

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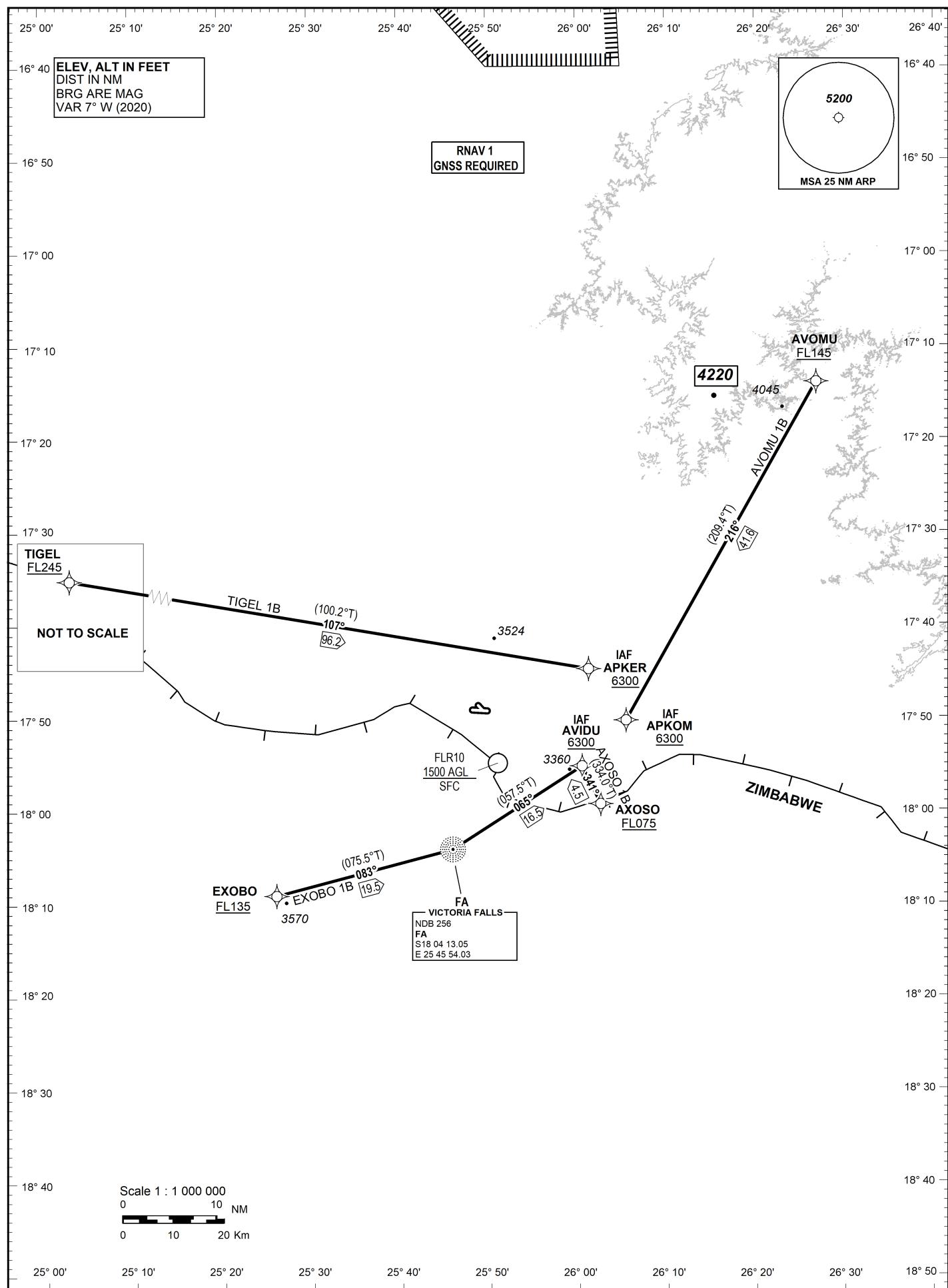
STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAOTRANSITION ALTITUDE  
5000

## HARRY MWAANGA NKUMBULA INTL/Livingstone

(FLHN)

RNAV STAR RWY 28

AVOMU 1B, AXOSO 1B, EXOBO 1B, TIGEL 1B



**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

**HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
RNAV STAR RWY 28**

AVOMU 1B, AXOSO 1B, EXOBO 1B, TIGEL 1B

**TABULAR DESCRIPTION**

**RNAV STAR RWY 28**

**AVOMU 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AVOMU	-	-	-	-	-	+FL145	-	-	-	RNAV 1
020	TF	APKOM	-	216 (209.4)	-	41.6	-	+6300	-	-	-	RNAV 1

**AXOSO 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AXOSO	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	AVIDU	-	341 (334.0)	-	4.5	-	+6300	-	-	-	RNAV 1

**EXOBO 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	EXOBO	-	-	-	-	-	+FL135	-	-	-	RNAV 1
020	TF	FA	-	083 (075.5)	-	19.5	-	-	-	-	-	RNAV 1
030	TF	AVIDU	-	065 (057.5)	-	16.5	-	+6300	-	-	-	RNAV 1

**TIGEL 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	TIGEL	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	APKER	-	107 (100.2)	-	96.2	-	+6300	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO****HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
RNAV STAR RWY 28**

AVOMU 1B, AXOSO 1B, EXOBO 1B, TIGEL 1B

**WAYPOINT LIST  
RNAV STAR RWY 28**

WaypointIdentifier	Coordinates	
APKER	S 17 44 50.7	E 026 01 15.2
APKOM	S 17 50 22.7	E 026 05 27.1
AVIDU	S 17 55 18.0	E 026 00 29.5
AVOMU	S 17 13 58.0	E 026 26 53.0
AXOSO	S 17 59 22.1	E 026 02 33.8
EXOBO	S 18 09 09.0	E 025 26 02.7
FA	S 18 04 13.1	E 025 45 54.0
TIGEL	S 17 28 12.0	E 024 22 00.0

**ROUTING**

NAME	TEXT
AVOMU 1B	From AVOMU track 216° to APKOM. MEL/MEA: AVOMU AT or ABOVE FL145, APKOM AT or ABOVE 6300'.
AXOSO 1B	From AXOSO track 341° to AVIDU. MEL/MEA: AXOSO AT or ABOVE FL075, AVIDU AT or ABOVE 6300'.
EXOBO 1B	From EXOBO track 083° to FA, track 065 to AVIDU. MEL/MEA: EXOBO AT or ABOVE FL075, AVIDU AT or ABOVE 6300'.
TIGEL 1B	From TIGEL track 107° to APKER. MEL/MEA: TIGEL AT or ABOVE FL245, APKER AT or ABOVE 6300'.

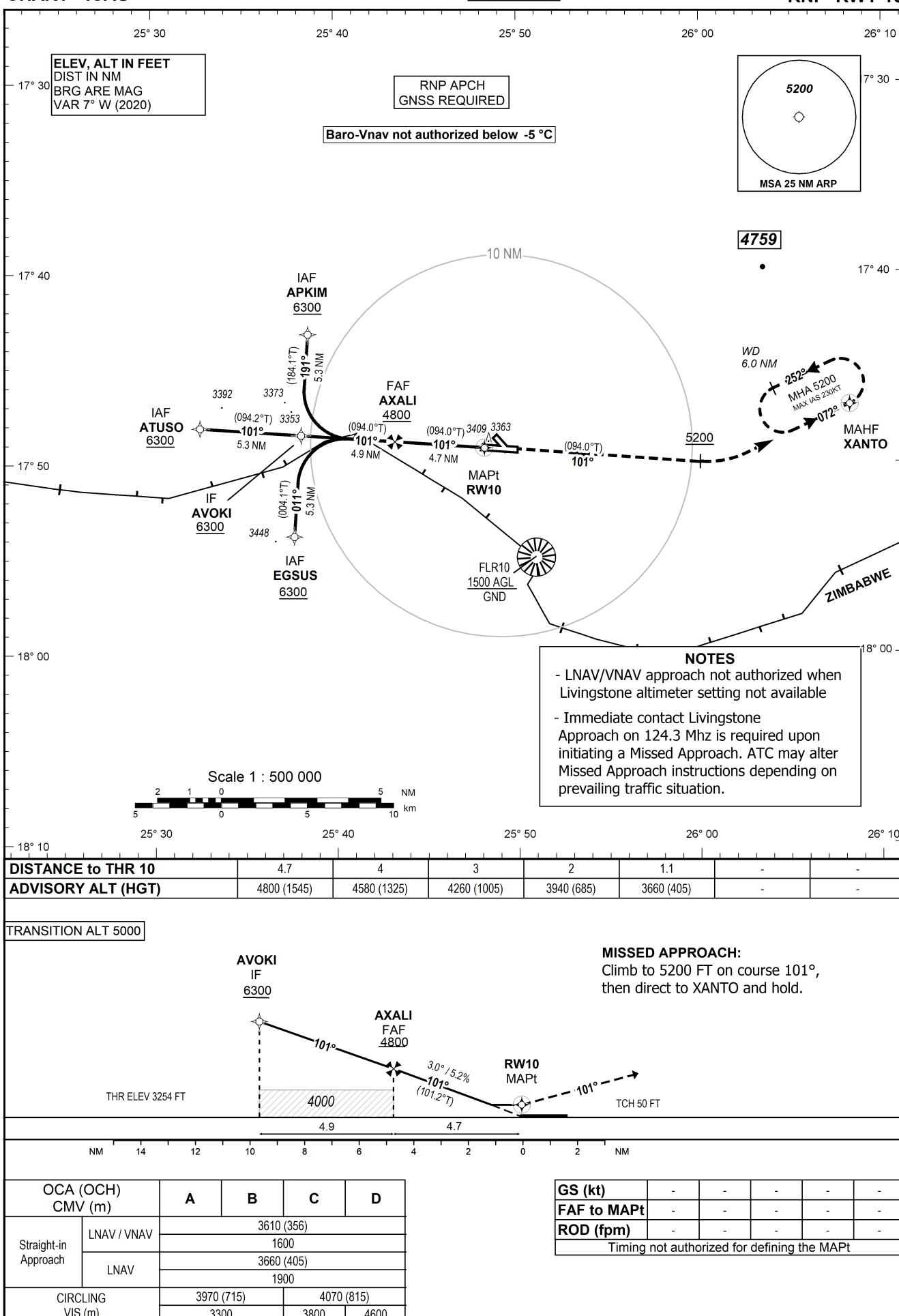
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**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 3255 FT  
HEIGHTS RELATED TO  
AD ELEV**

**HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
RNP RWY 10**

APP 124.300  
TWR 118.100



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	EGSUS	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVOKI	-	011 / (004.1)	5.3	-	+6300	-	-	RNP APCH
010	IF	APKIM	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVOKI	-	191 / (184.1)	5.3	-	+6300	-	-	RNP APCH
010	IF	ATUSO	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVOKI	-	101 / (094.2)	5.3	-	+6300	-	-	RNP APCH
030	TF	AXALI	-	101 / (094.0)	4.9	-	+4800	-	-	RNP APCH
040	TF	RW10	Y	101 / (094.0)	4.7	-	@3304	-	-3.00 / 50	RNP APCH
050	CA	-	-	101 / (094.0)	-	-	+5200	-	-	RNP APCH
060	DF	XANTO	Y	-	-	-	+5200	-	-	RNP APCH
070	HM	XANTO	Y	072 / (065.0)	6.0	L	+5200	-230	-	RNP APCH

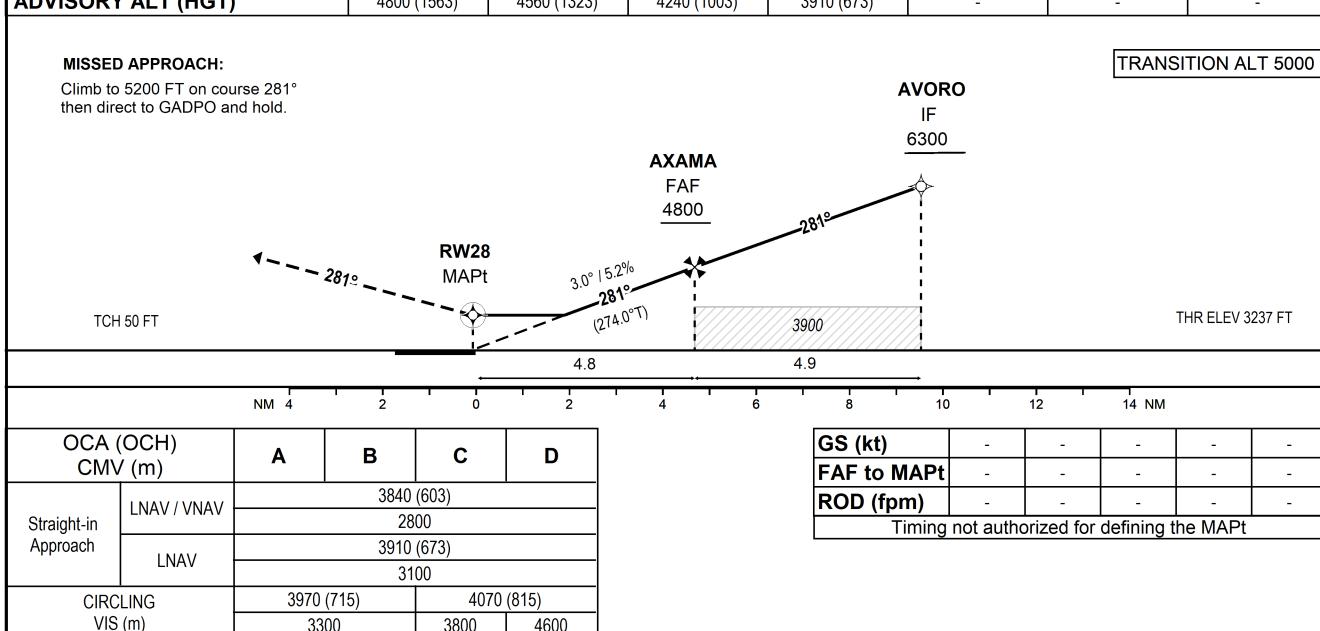
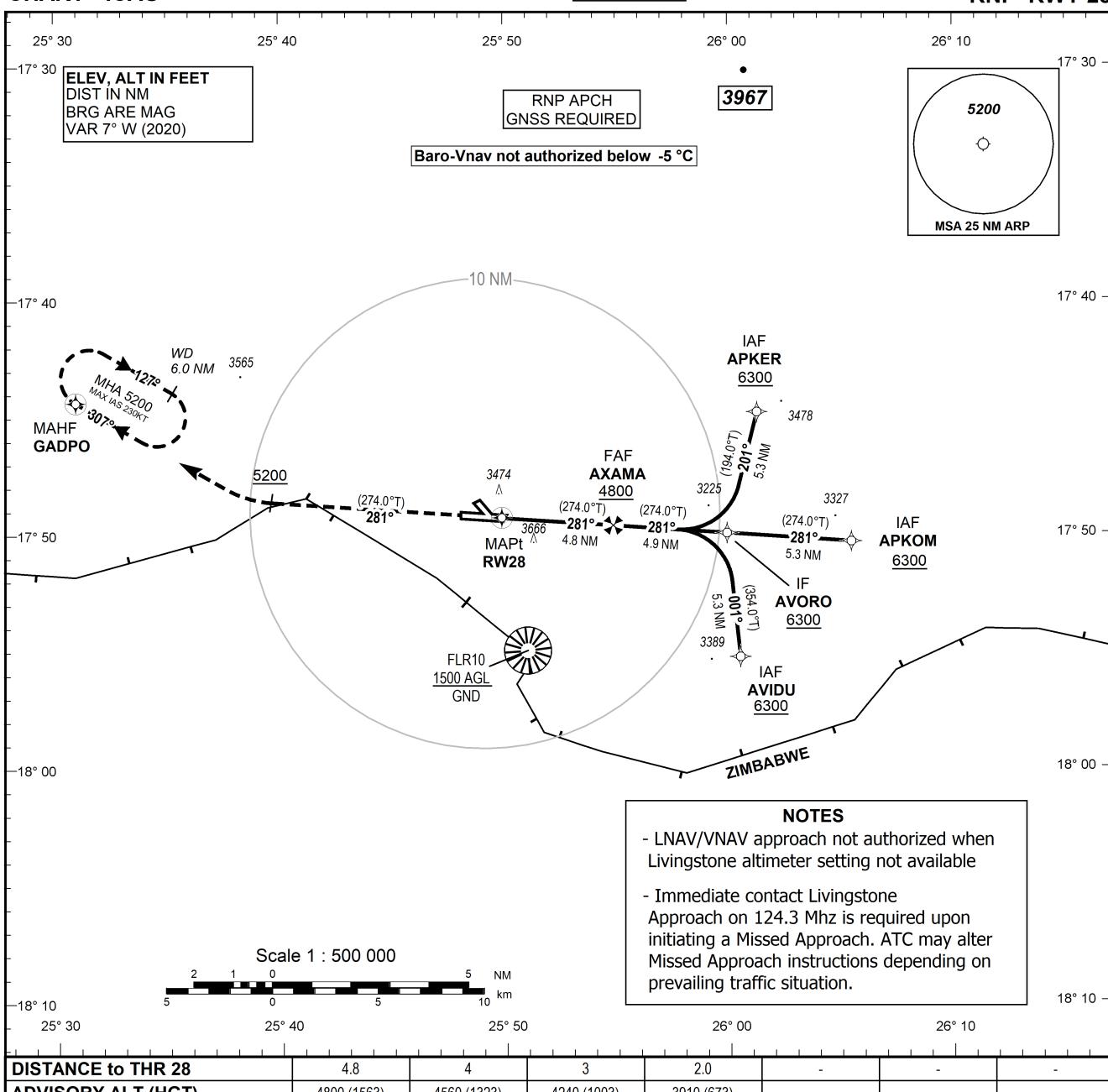
<i>Waypoint Identifier</i>	<i>Coordinates</i>
APKIM	S 17 43 14.1 E 025 38 31.5
ATUSO	S 17 48 09.8 E 025 32 34.8
AVOKI	S 17 48 32.8 E 025 38 07.5
AXALI	S 17 48 53.7 E 025 43 16.2
EGSUS	S 17 53 51.6 E 025 37 43.5
XANTO	S 17 44 24.6 E 026 13 53.6
RW10	S 17 49 13.48 E 025 48 10.89

INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 3255 FT  
HEIGHTS RELATED TO  
THR RWY 28 - ELEV 3237 FT

HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
RNP RWY 28

APP 124.300  
TWR 118.100



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	APKOM	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVORO	-	281 / (274.0)	5.3	-	+6300	-	-	RNP APCH
010	IF	APKER	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVORO	-	201 / (194.0)	5.3	-	+6300	-	-	RNP APCH
010	IF	AVIDU	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVORO	-	001 / (354.0)	5.3	-	+6300	-	-	RNP APCH
030	TF	AXAMA	-	281 / (274.0)	4.9	-	+4800	-	-	RNP APCH
040	TF	RW28	Y	281 / (274.0)	4.8	-	@3287	-	-3.00 / 50	RNP APCH
050	CA	-	-	281 / (274.0)	-	-	+5200	-	-	RNP APCH
060	DF	GADPO	Y	-	-	-	+5200	-	-	RNP APCH
070	HM	GADPO	Y	307 / (300.1)	6.0	R	+5200	-230	-	RNP APCH

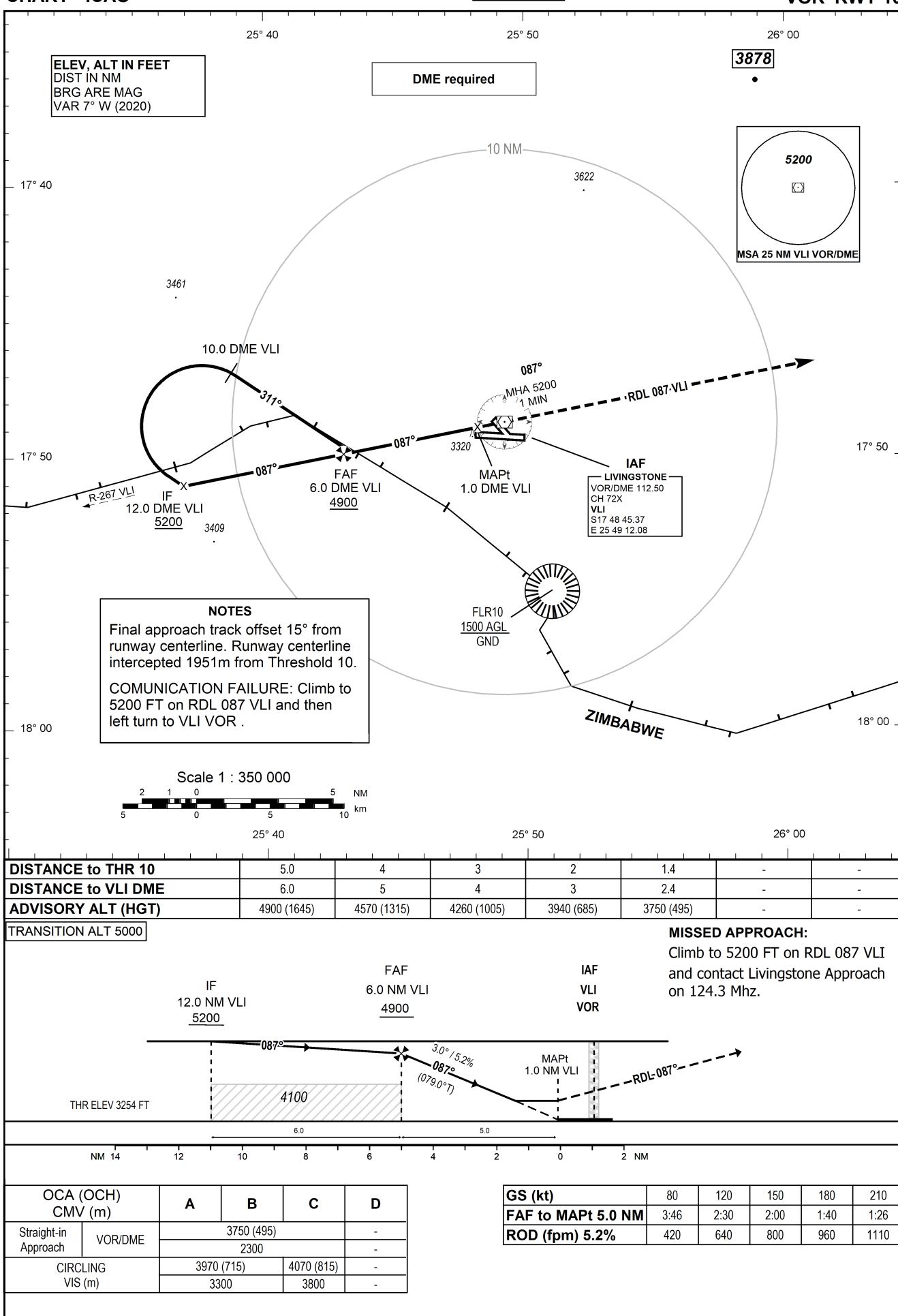
<i>Waypoint Identifier</i>	<i>Coordinates</i>
APKER	S 17 44 50.7 E 026 01 15.2
APKOM	S 17 50 22.7 E 026 05 27.1
AVIDU	S 17 55 18.0 E 026 00 29.5
AVORO	S 17 50 00.5 E 025 59 54.6
AXAMA	S 17 49 40.1 E 025 54 50.2
GADPO	S 17 41 08.5 E 025 25 06.5
RW28	S 17 49 20.26 E 025 49 52.08

INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 3255 FT  
HEIGHTS RELATED TO  
AD ELEV

HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
VOR RWY 10

APP 124.300  
TWR 118.100



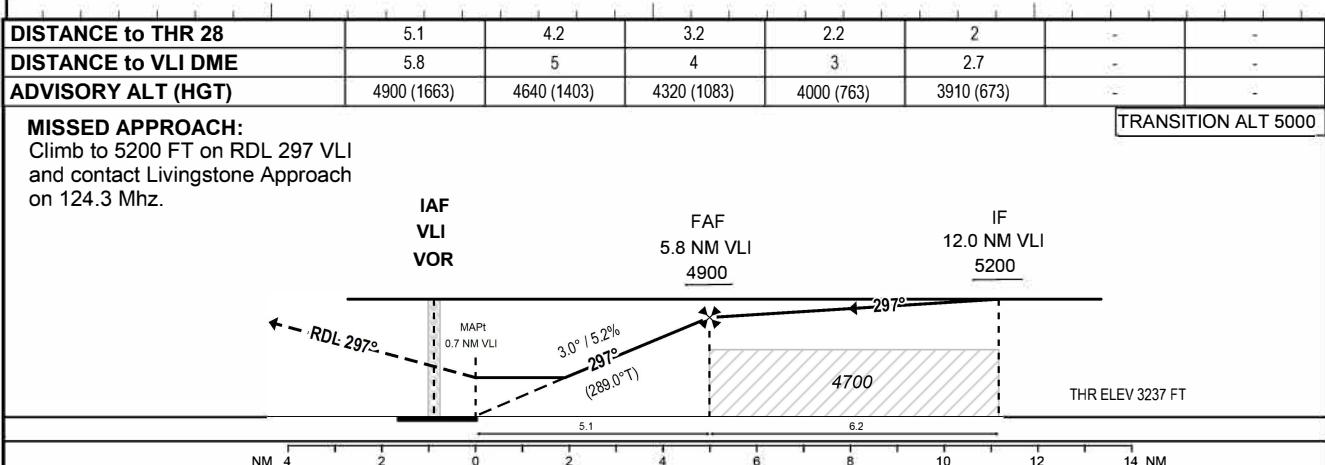
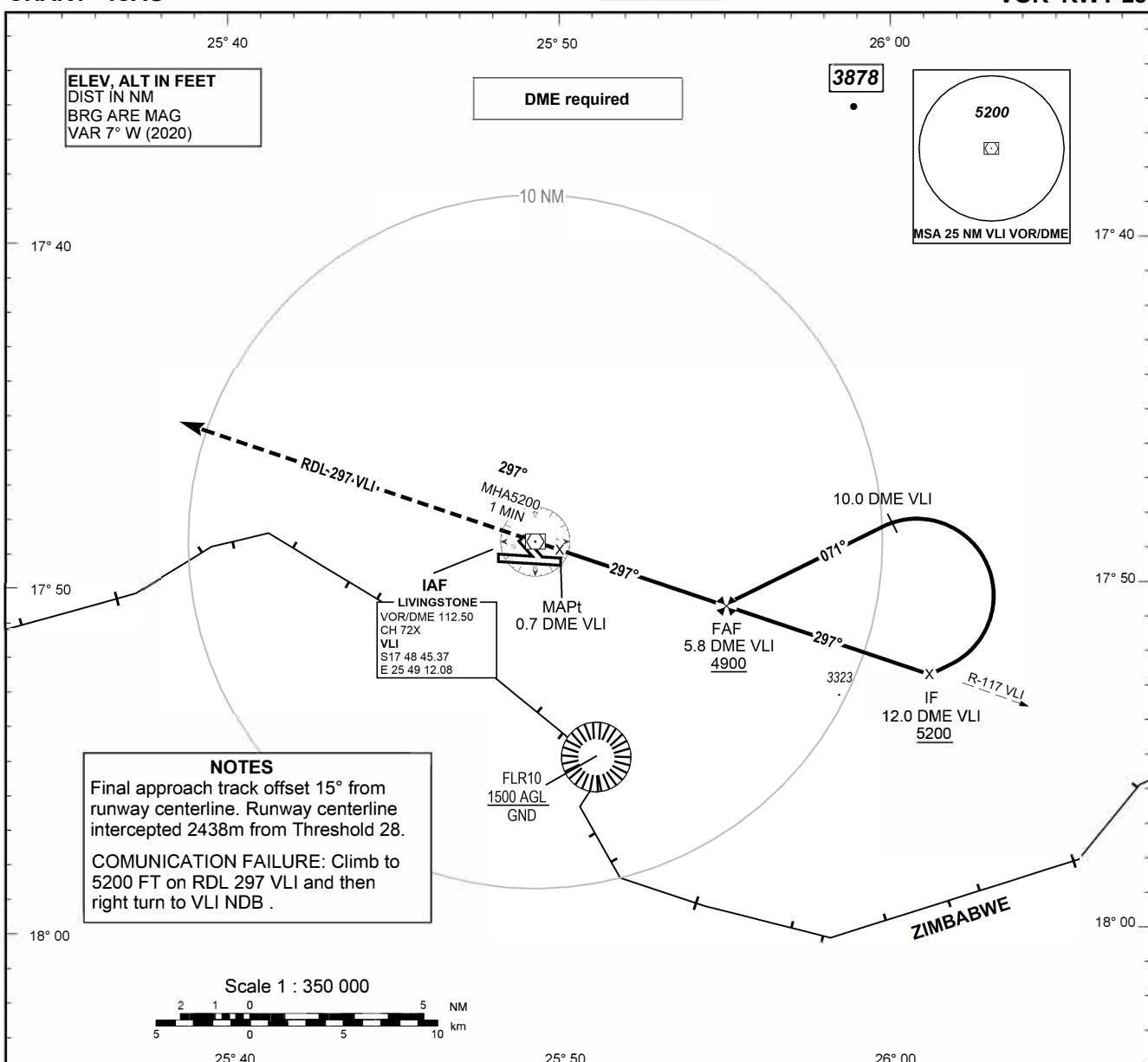
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INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 3255 FT  
HEIGHTS RELATED TO  
THR RWY 28 - ELEV 3237 FT

HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
VOR RWY 28

APP 124.300  
TWR 118.100



OCA (OCH) CMV (m)	A	B	C	D	GS (kt)	80	120	150	180	210
Straight-in Approach	VOR/DME	3910 (673)		-	FAF to MAPt 5.1 NM	3:48	2:32	2:02	1:41	1:27
		3100		-	ROD (fpm) 5.2%	420	640	800	960	1110
CIRCLING	VIS (m)	3970 (715)	4070 (815)	-						
		3300	3800	-						

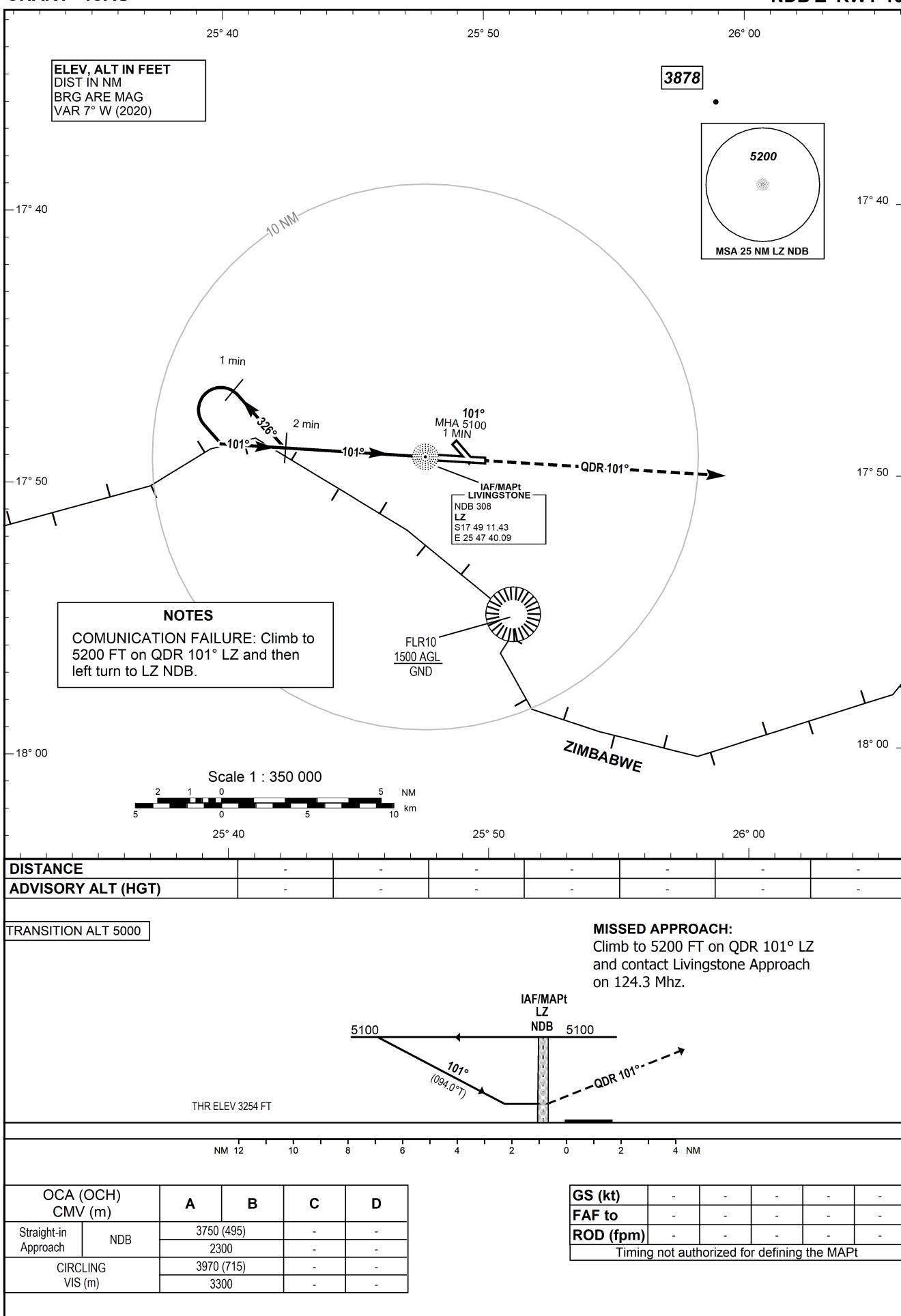
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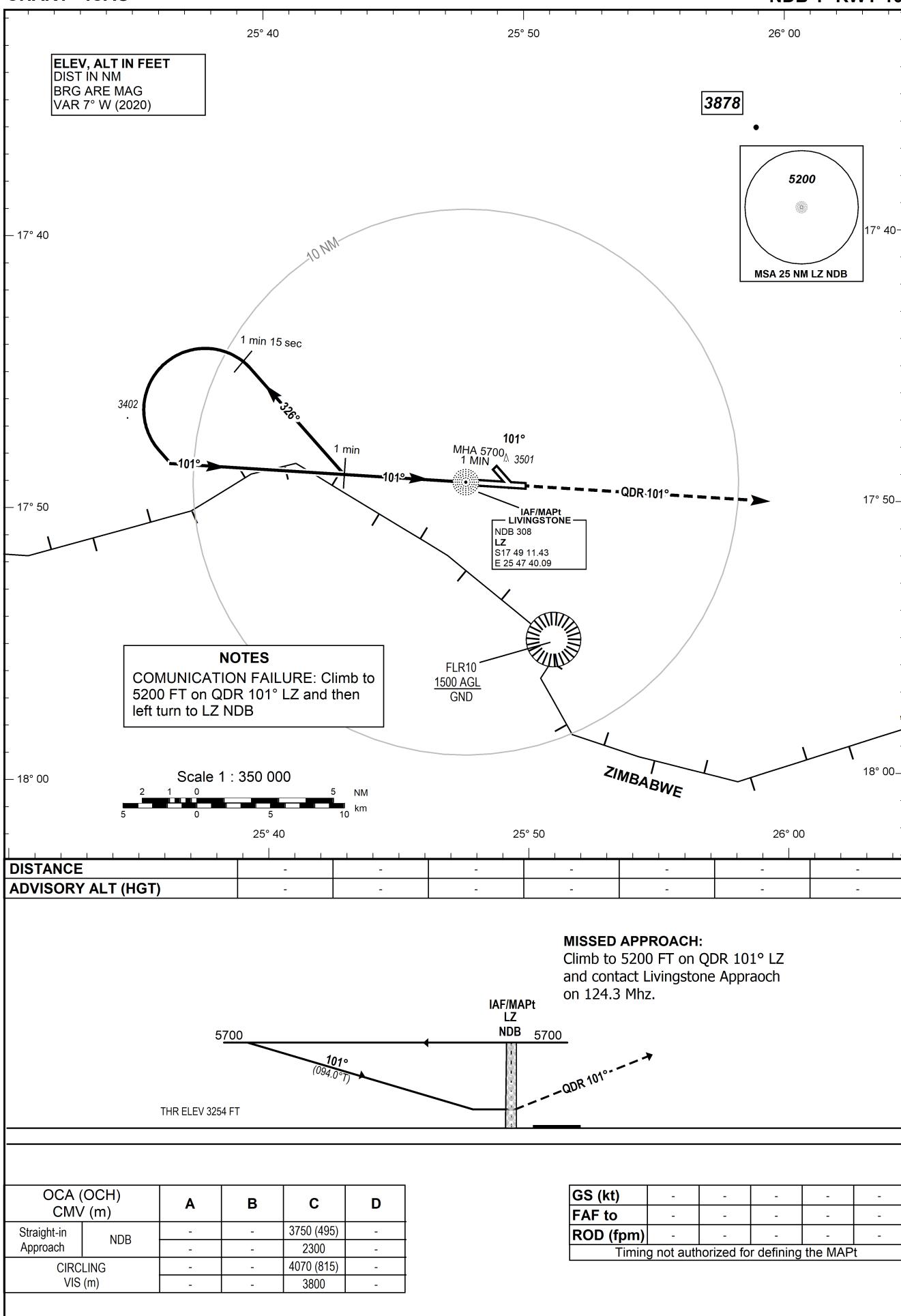
AERODROME ELEV 3255 FT  
HEIGHTS RELATED TO  
AD ELEV

HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
NDB Z RWY 10

APP 124.300  
TWR 118.100



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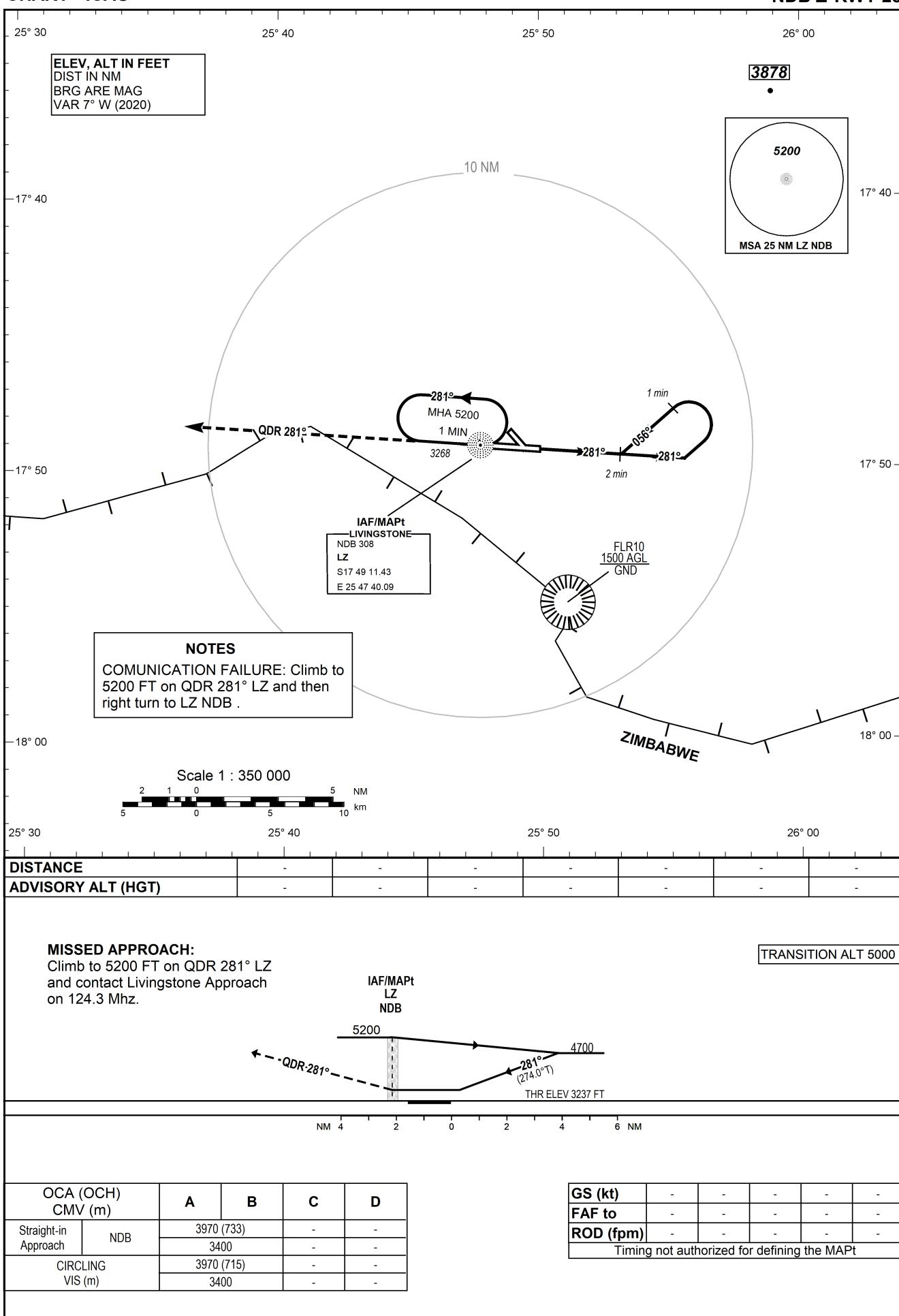
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AERODROME ELEV 3255 FT  
HEIGHTS RELATED TO  
THR RWY 28 - ELEV 3237 FT

HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
NDB Z RWY 28

APP 124.300  
TWR 118.100



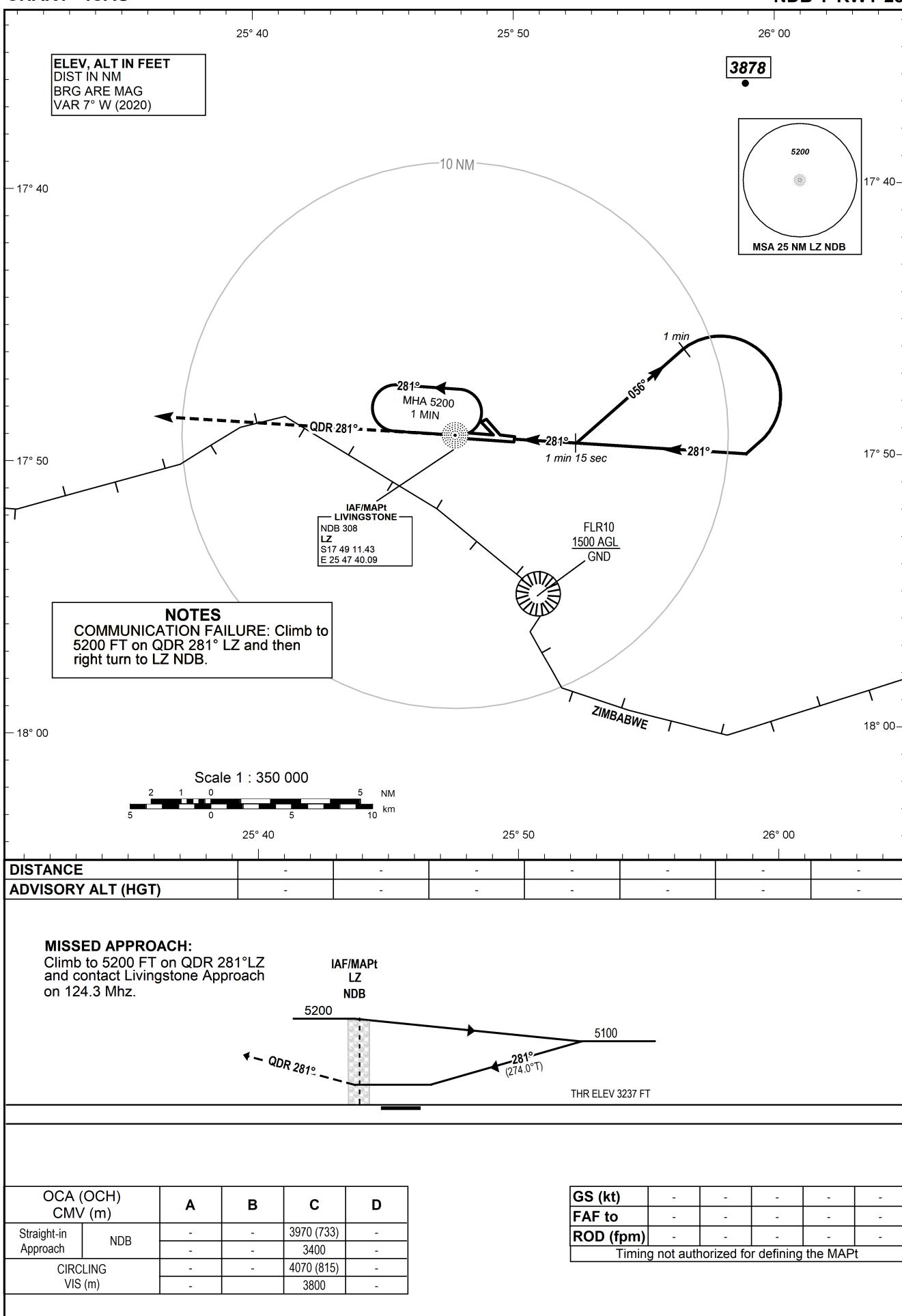
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AERODROME ELEV 3255 FT  
HEIGHTS RELATED TO  
AD ELEV

HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
NDB Y RWY 28

APP 124.300  
TWR 118.100



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**FLKK AD 2.1 AERODROME LOCATION INDICATOR AND NAME**  
**FLKK - KENNETH KAUNDA INTL**

**FLKK AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

1	<i>ARP coordinates and site at AD</i>	S 15°19'50.80" E 028°27'09.40" Nil
2	<i>Direction and distance from (city)</i>	11 NM NE from Lusaka post office
3	<i>Elevation/Reference temperature</i>	Elev: 3780.43 FT (1152 M) / T: 32° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	8° W ( 2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited. Kenneth Kaunda International Airport, Box 30175 Lusaka Zambia Tel: 260-211-271044, 260-211-271248 Fax: 260-211-224777, 260-211-271781 AFS: FLKKZPZX eMail: zacl@zocl.aero Website: www.zacl.co.zm
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Helicopter operations to be guided by ATC.

**FLKK AD 2.3 OPERATIONAL HOURS**

1	<i>AD Administration</i>	H24 Daily
2	<i>Customs and immigration</i>	H24 Daily
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	As AD Administration
9	<i>Handling</i>	As AD Administration
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

**FLKK AD 2.4 HANDLING SERVICES AND FACILITIES**

1	<i>Cargo-handling facilities</i>	Trucks 1.5-3.5 tonnes. Up to 10 tonnes handling possible, Mechanical forlifts, conveyors, cold rooms, cargo x-rays, customs clearance.
2	<i>Fuel/oil types</i>	Fuel : A1 , AVGAS_LL , AVTUR Oil : All types normally available.
3	<i>Fuelling facilities/capacity</i>	2 mobile dispensers 11365 & 682 litres per minute
4	<i>De-icing facilities</i>	Nil
5	<i>Hangar space for visiting aircraft</i>	Nil
6	<i>Repair facilities for visiting aircraft</i>	Avble for A/craft up to 5 700 KG. Major repairs by arrangement with the AD
7	<i>Remarks</i>	Nil

**FLKK AD 2.5 PASSENGER FACILITIES**

1	<i>Hotels</i>	In the city
2	<i>Restaurants</i>	At AD and in the city
3	<i>Transportation</i>	Taxis and car hire from the AD
4	<i>Medical facilities</i>	First aid at AD, hospital in the city.
5	<i>Bank and Post Office</i>	At AD and in the City

6	<i>Tourist Office</i>	At AD and in the city : Zambia National Tourist Board Te: (260-211) 229087 – 90 Fax : (260 -211) 225174
7	<i>Remarks</i>	Nil

**FLKK AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	<i>AD category for fire fighting</i>	Within AD HR: CAT 9
2	<i>Rescue equipment</i>	YES; Three (3) fire tenders, 2 Ambulances, 17 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

**FLKK AD 2.7 SEASONAL AVAILABILITY**

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

**FLKK AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA**

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>	
		Apron 1A (International)	Concrete	PCN 120/R/A/W/T	
		Apron 1B (International and Domestic)	Concrete	PCN 59/R/A/W/T	
		Apron 1C (International and Domestic)	Concrete	PCN 59/R/A/W/T	
		Apron 2 (VIP)	Concrete	PCN 120/R/A/W/T	
		Apron 3 (International and Domestic (Cargo))	Concrete	PCN 120/R/A/W/T	
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Designator of TWY</i>	<i>Width</i>	<i>Surface</i>	<i>Strength</i>
		A	23 M	Asphalt	PCN 59/F/A/W/T
		B	23 M	Asphalt	PCN 59/F/A/W/T
		C	23 M	Asphalt	PCN 59/F/A/W/T
		D	23 M	Asphalt	PCN 59/F/A/W/T
		E	23 M	Asphalt	PCN 59/F/A/W/T
		F	23 M	Asphalt	PCN 59/F/A/W/T
		G	23 M	Asphalt	PCN 59/F/A/W/T
		G4			PCN 120/F/A/W/T
		H	23 M	Asphalt	PCN 59/F/A/W/T
		I	23 M	Asphalt	PCN 59/F/A/W/T
		J	23 M	Asphalt	PCN 59/F/A/W/T
		L	23 M	Asphalt	PCN 59/F/A/W/T
		N	23 M	Asphalt	PCN 59/F/A/W/T
		P	23 M	Asphalt	PCN 59/F/A/W/T
3	<i>Altimeter checkpoint location and elevation</i>	Location: At apron Elevation: 3771 FT			
4	<i>VOR/INS checkpoints</i>	VOR: Holding bays to RWY and THR RWY 10 INS: Aprons			

5	Remarks	<b>Note:</b> Access to Apron 1 via Taxiway Golf 4 (G4) with lighting and markings
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### FLKK AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	Aircraft ID marking provided on ground, taxiing guidance provided on R/T. Standard marking at Apron, Mandatory Information and Location signs provided. Guidelines at Apron. Nose-in Guidance at aircraft stands.  Taxiing guidance signs at all intersections with TWY and RWY and at all holding positions. Guidelines at apron. Nose-in guidance at aircrafts stands. Letter coded entry gates - Alpha, Bravo, Charlie and G4 into and out of apron
2	<i>RWY and TWY markings and LGT</i>	RWY: Designation, TDZ, Aiming Point, Centre line, RWY side strip, marked and lighted.  TWY: Centre line, holding positions and at all TWY/RWY intersections, marked and lighted.
3	<i>Stop bars</i>	At all holding positions, TWY/RWY intersections, marked and lighted.
4	<i>Remarks</i>	Heavy Aircraft (Cat D and E) to use low power when taxiing to Apron 1  PAX Boarding Bridge (PBB) available for parking Stands A1 to A6

### FLKK AD 2.10 AERODROME OBSTACLES

In approach/TKOF areas			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
10/APCH	FLKK_3833 Elev: 1162.807 m Unlighted	S 15°19'50.09" E 028°25'50.69"	Nil
10/APCH	FLKK_3834 Elev: 1163.017 m Unlighted	S 15°19'50.30" E 028°25'50.72"	Nil
10/APCH	FLKK_3835 Elev: 3824 FT (1165.438 M) Unlighted	S 15°19'50.11" E 028°25'51.54"	Nil
10/APCH	FLKK_3836 Elev: 1161.41 m Unlighted	S 15°19'50.08" E 028°25'51.40"	Nil
10/APCH	FLKK_476 Elev: 1159.881 m Unlighted	S 15°19'37.71" E 028°25'51.00"	Nil
10/APCH	FLKK_477 Elev: 1160.596 m Unlighted	S 15°19'37.77" E 028°25'49.79"	Nil
10/APCH	FLKK_478 Elev: 1162.165 m Unlighted	S 15°19'37.19" E 028°25'50.05"	Nil
10/APCH	FLKK_480 Elev: 1165.737 m Unlighted	S 15°19'48.66" E 028°25'45.82"	TotalAreaofObjectis44236.085m <sup>2</sup> ,asthe-maximumsizeoftheObstacle,withthispointtheHighest-PointofObject

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
10/APCH	FLKK_485 Elev: 1163.872 m Unlighted	S 15°19'50.53" E 028°25'42.17"	Nil
10/APCH	FLKK_525 Elev: 3923 FT (1195.62 M) Unlighted	S 15°19'46.74" E 028°25'32.79"	Nil
10/APCH	FLKK_526 Elev: 1174.573 m Unlighted	S 15°19'51.61" E 028°25'25.01"	Nil
28/APCH	FLKK_417 Elev: 3815 FT (1162.871 M) Unlighted	S 15°20'04.03" E 028°28'31.36"	Nil
28/APCH	FLKK_418 Elev: 1150.962 m Unlighted	S 15°20'03.68" E 028°28'29.17"	Nil
28/APCH	FLKK_423 Elev: 1150.731 m Unlighted	S 15°19'51.44" E 028°28'31.07"	Nil
28/APCH	FLKK_427 Elev: 3818 FT (1163.876 M) Unlighted	S 15°20'03.61" E 028°28'25.28"	Nil
28/APCH	FLKK_428 Elev: 1147.262 m Unlighted	S 15°20'03.24" E 028°28'23.91"	Nil
<i>In circling area and at AD</i>			
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>	
a	b	c	
NOTE: Nil			

**FLKK AD 2.11 METEOROLOGICAL INFORMATION PROVIDED**

1	<i>Associated MET Office</i>	Kenneth Kaunda International Airport
2	<i>Hours of service MET Office outside hours</i>	H24
3	<i>Office responsible for TAF preparation Period of validity</i>	Kenneth Kaunda International Airport 9, 18 HR
4	<i>Trend forecast Interval of issuance</i>	Trend Metar, SPECI 2HR
5	<i>Briefing/consultation provided</i>	Personal briefing and consultation
6	<i>Flight documentation Language(s) used</i>	Charts, abbreviated plain language text English
7	<i>Charts and other information available for briefing or consultation</i>	Cross section form of forecasts, charts and tabular forms of documentation for both International and domestic flights.
8	<i>Supplementary equipment available for providing information</i>	Nil

9	<i>ATS units provided with information</i>	FLKK MET Briefing Office
10	<i>Additional information (limitation of service, etc.)</i>	Nil

### FLKK AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designations RWY</i>	<i>TRUE &amp; MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
10	095°(True) 101°(Mag)	3962 x 46	PCN 59/F SWY: Nil	S 15°19'44.82" E 028°26'03.25" GUND: Nil	THR 3780.43 FT (1152 M)	
28	275°(True) 280°(Mag)	3962 x 46	PCN 59/F SWY: Nil	S 15°19'56.58" E 028°28'15.53" GUND: Nil	THR 3747.89 FT (1142 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 10: +1.2%	305 x 46	915 x 306	4539 x 280	92 x 90	Nil	Nil
For Rwy 28: +1.2%	152 x 46	1737 x 306	4539 x 280	92 x 90	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
10						
28						

### FLKK AD 2.13 DECLARED DISTANCES

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
10	3962	4877	4267	3962	
28	3962	5699	4114	3962	

### FLKK AD 2.14 APPROACH AND RUNWAY LIGHTING

<i>RWY Designator</i>	<i>APCH LGT type LEN INTST</i>	<i>THR LGT colour WBAR</i>	<i>VASIS (MEHT) PAPI</i>	<i>TDZ, LGT LEN</i>	<i>RWY Centre Line LGT Length, spacing, colour, INTST</i>	<i>RWY edge LGT LEN, spacing colour INTST</i>	<i>RWY End LGT colour WBAR</i>	<i>SWY LGT LEN (M) colour</i>	<i>Remarks</i>
1	2	3	4	5	6	7	8	9	10
10	CAT1 high intensity lights 900 M CALVERT	Green high intensity lights	PAPI 3°	Nil	30 M White high intensity lights 3962 m Directional	60 M White high intensity lights Omni-directional	Red	Nil	Nil

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
28	Simple approach system high intensity lights 420 M	Green high intensity lights	PAPI 3°	Nil	30 M White high intensity lights 3962 m Directional	60 M White high intensity lights Omni-directional	Red	Nil	Nil

**FLKK AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY**

1	<i>ABN/IBN location, characteristics and hours of operation</i>	IBN : At Tower Building, steady Red/IBN H24: H24
2	<i>LDI location and LGT Anemometer location and LGT</i>	LDI: Nil Anemometer: Nil
3	<i>TWY edge and centre line lighting</i>	Taxiway centre line: A - TWY Illuminated sign boards A,B,C at Entrance to RWY and Apron
4	<i>Secondary power supply/switch-over time</i>	Secondary power supply to all lighting at AD. Switch-overtime of within 15 seconds
5	<i>Remarks</i>	Nil

**FLKK AD 2.16 HELICOPTER LANDING AREA**

As guided by ATC

**FLKK AD 2.17 ATS AIRSPACE**

1	<i>Designation and lateral limits</i>	LUSAKA CTR Area bounded by lines joining points S 14°54'32" E 028°03'59" then along the clockwise arc of a circle of 18NM radius centred on S 14°59'00" E 028°22'00" to S 14°50'42" E 028°38'36"; S 15°09'15" E 028°48'45" then along the clockwise arc of a circle of 25NM radius centred on S 15°19'36" E 028°25'12" to S 15°14'43" E 027°59'50" to point of origin.
2	<i>Vertical limits</i>	GND to 7500 FT AMSL
3	<i>Airspace classification</i>	C
4	<i>ATS unit call sign Language(s)</i>	LUSAKA APP, English Kenneth Kaunda TWR, English
5	<i>Transition altitude</i>	6000 FT (1829 M)
6	<i>Hours of applicability</i>	H24
7	<i>Remarks</i>	Nil

**FLKK AD 2.18 ATS COMMUNICATION FACILITIES**

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
ACC	Lusaka Area	120.5 MHZ	H24	Nil	Nil	

<i>Service designation</i>	<i>Call sign</i>	<i>Frequency</i>	<i>Hours of operation</i>	SATVOICE	Logon address	<i>Remarks</i>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Approach Control	Lusaka Approach	121.3 MHZ	H24	Nil	Nil	VDF available
Approach Radar	Lusaka Radar Approach	120.1 MHZ	H24	Nil	Nil	
HF	-	6586.0 KHZ 6915.0 KHZ 6952.0 KHZ 8888.0 KHZ 8903.0 KHZ	H24	Nil	Nil	
Fuelling	Air Puma	131.7 MHZ	H24	Nil	Nil	
Tower Control	Kenneth Kaunda Tower	118.1 MHZ	H24	Nil	Nil	VDF avbl. in emergency
SATPHONE			H24	Nil	Nil	+870 776 124 495

### FLKK AD 2.19 RADIO NAVIGATION AND LANDING AIDS

<i>Type of aid MAG VAR CAT of ILS/MLS</i>	<i>ID</i>	<i>Frequency</i>	<i>Hours of operation</i>	<i>Site of transmitting antenna coordinates</i>	<i>Elevation of DME transmitting antenna</i>	<i>Remarks</i>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
NDB (05° W)	LE	325.00 KHZ	H24	S 15°20'16.14" E 028°31'59.63"	—	Power output 1kw Coverage 200NM
NDB (05° W)	LN	338.00 KHZ	H24	S 14°58'52.62" E 028°22'26.34"	—	Power output 100w Coverage 50NM
LOC 10 ILS CAT II	LO	110.30 MHZ	H24	S 15°19'57.99" E 028°28'31.38"	—	100° MAG/0.26 NM TO THR RWY 28 Frequency 110.300Mhz H 24 (6° W/1994)
GP 10 ILS CAT II	LO	335.00 MHZ	H24	S 15°19'41.58" E 028°26'14.65"	—	100° MAG/0.26 NM TO THR RWY 28 Frequency 110.300Mhz H 24 (6° W/1994)
DME 10 ILS CAT II (05° W)	LO	(CH40X)	H24	S 15°19'41.58" E 028°26'14.65"	3812 FT	100° MAG/0.26 NM TO THR RWY 28 Frequency 110.300Mhz H 24 (6° W/1994)

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB (05° W)	LW	386.00 KHZ	H24	S 15°19'25.08" E 028°22'15.78"	—	Power output 125w Coverage 60NM
NDB	LY	235.00 KHZ	H24	S 15°29'36.00" E 028°14'37.98"	—	Power output 125w Coverage 60NM
VOR/DME (05° W)	VLS	113.50 MHZ (CH82X)	H24	S 15°19'40.82" E 028°25'15.40"	3804 FT	co-axially co-located with DME

## FLKK AD 2.20 LOCAL AERODROME REGULATIONS

### FLKK AD 2.20.1 Airport regulations

At Kenneth Kaunda International Airport several local regulations apply. These are: -

- | a. Information about aircraft stand including visual docking guidance system
- | b. Information about taxiing from aircraft stands including taxi clearance;
- | c. Marshaller assistance
- | d. Engine start-up and use of APU
- | e. Fuel spillage; and
- | f. Precautions during extreme weather conditions.

| Marshaller assistance can be requested and further information about the regulations can be obtained from the Airport Manager or Surface Movement Control (SMC).

When local regulation is of importance for the safe operation of the aircraft on the apron, the information may be given by Airport Manager "Local Regulations" may be requested in writing from

Airport Manager  
Kenneth Kaunda International Airport  
| P.O Box 30175, LUSAKA 10101

### FLKK AD 2.20.2 Taxiing

| Arriving aircraft will be allocated a stand number by the TWR. General aviation aircraft will have to use apron Charlie parking area.

| Departing IFR flights shall contact the Kenneth Kaunda TWR to obtain pushback clearance. Request for ATC clearance may take place at the earliest 10 minutes prior to engine start-up and Frequency 118.10 MHz shall be used.  
Departing aircraft shall obtain taxi instruction from Kenneth Kaunda TWR.

#### a. Push-back procedure

S.No.	Aircraft Stand	Pushback/Taxi Procedure
1	A1	Turn right and follow lead line joining taxiway Golf 4

2	A2, A3, A4, A5, A6	Turn right or left and follow lead out line to join taxiway Golf 4, Alpha, Bravo and Charlie.
3	B1, B2, B3, B4, B5, B6, B7	Turn right or left and follow lead out line to join taxiway Alpha, Bravo and Charlie.
4	C1, C2	Turn right or left and follow lead out line to join taxiway Alpha, Bravo and Charlie.
5	C3	Turn left and follow lead line joining taxiway Charlie.
Remarks	Remarks To reduce RWY occupancy time, while backtracking on RWY all ACFT shall maintain speed of 25 KT or more DRG dry RWY condition.	

#### **FLKK AD 2.20.3 Parking area for small aircraft (general Aviation)**

| General aviation aircraft shall be guided by marshallers to the parking area Apron 1.

#### **FLKK AD 2.20.4 Parking area for helicopters**

Helicopters will be guided by a marshaller or TWR on the stand.

#### **FLKK AD 2.20.5 Apron — taxiing during winter conditions**

| Taxi lanes in the apron area are not equipped with center line lights. Taxi lane center line markings are visible all the time.

#### **FLKK AD 2.20.6 Taxiing — limitations**

| Tight turning angle onto exit Gate Alpha from stands A1, A2, A3, A4, A5, A6 and B1 to taxiway Delta for heavy aircraft. Taxiing information will be given to each aircraft from the TWR.

#### **FLKK AD 2.20.7 School and training flights - Technical test flights — use of runways**

School and training flights may only be made after permission has been obtained from ATS. Permission will only be granted for such flights subject to departing and arriving traffic density.

#### **FLKK AD 2.20.8 Helicopter traffic — limitation**

Non-scheduled public air traffic with helicopters is permitted only after approval from the Lusaka ATSU. Any contact concerning the above shall be made via the handling company or directly to the Airport Manager during the hours of service and, if possible, not later than the day before the flights is to be carried out.

Any request for approval of traffic shall contain the following information:

- a. Owner/operator
- b. Type of helicopter, registration/call sign
- c. Date, arrival time/departure time, destination(s)
- d. Requested altitude
- e. ATS route used
- f. ATS serviceable communication

#### **FLKK AD 2.20.9 Removal of disabled aircraft from runways**

When an aircraft is disabled on the runway, it is the duty of the owner or user of such aircraft to have it removed as soon as possible after prior approval from Director General of Civil Aviation Authority. If a disabled aircraft is not removed as quickly as possible by the owner or user, the aircraft will be removed by the aerodrome authority or at the owner's or user's expense.

### **FLKK AD 2.21 NOISE ABATEMENT PROCEDURES**

TO BE DEVELOPED.

### **FLKK AD 2.22 FLIGHT PROCEDURES**

#### **FLKK AD 2.22.1 General**

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules.

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Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

Unless permission has been obtained from an ATC unit, all flights within the Lusaka FIR shall be conducted within and in accordance with established ATS routes.

#### **FLKK AD 2.22.2 Procedures for flights within Lusaka UTA**

The inbound, transit and outbound routes shown on charts may be varied at the discretion of ACC. En-route clearance shall be given under the conditions described below.

- a. A flight plan shall be submitted for the flight concerned
- b. En-route clearance shall be obtained from Lusaka ACC
- c. Deviation from the en-route clearance may be made when prior permission has been obtained
- d. Two-way radio contact shall be established with ACC before the flight takes place in the UTA
- e. Two-way radio communication shall be maintained with ACC or nearest ATS Unit on the frequency prescribed
- f. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2
- g. The pilot —in- command shall be the holder of an International VHF licence.

#### **FLKK AD 2.22.3 Procedures for IFR flights**

The inbound transit and outbound routes shown on charts may be varied at the discretion of ATS. If necessary, in the case of congestion, inbound aircraft may also be instructed to hold at one of the designated airways, reporting points.

#### **FLKK AD 2.22.4 Radar procedures within Lusaka TMA and CTR**

Normally, aircraft will be vectored and sequenced from a circle 50NM radius centered at VLS VOR/DME to the appropriate final approach track (ILS. Locator, VOR/DME), so as to ensure an expeditious flow of traffic. Radar vectors and flight levels/altitudes will be issued as required, for spacing and separating aircraft so that the correct landing intervals are maintained, taking into account aircraft characteristics.

Radar vectoring charts are not published since the instrument approach procedures and altitude ensure that adequate terrain clearance exists at all times until the point where the pilot will resume navigation on final approach or circuit it.

#### **FLKK AD 2.22.5 Surveillance Radar Approaches**

NIL

#### **FLKK AD 2.22.6 Communication failure**

In the event of communication failure, the pilot shall act in accordance with the communication failure procedures in ICAO Annex 2.

Flights departing from unmanned aerodromes within the TMA and CTR shall obtain en-route ATC clearance from Lusaka Approach control or Lusaka ACC immediately before leaving the aerodrome traffic zone.

#### **FLKK AD 2.22.7 Procedures for VFR flights within Lusaka TMA and CTR**

Provided that the VFR conditions shall so permit, ATC clearance for VFR flights will be given under the conditions described below.

1. flight plan . Containing items 7 to 18 and shall be submitted.
2. ATC clearance shall be obtained 5 minutes before the aircraft enters the Control Zone or Control Area.
3. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2.
4. Deviation from the ATC clearance may only be made when prior permission has been obtained or under emergency situation

5. The flight shall be conducted with vertical visual reference to the ground unless the flight can be conducted in accordance with the Instrument Flight Rules.
6. Two-way radio communication shall be maintained on the frequency prescribed. Information about the appropriate frequency can be obtained from Lusaka Approach.
7. The pilot-in-command shall be the holder of an International VHF Licence.

NOTE: ATC clearance is intended only to provide separation between IFR and VFR flights

### **FLKK AD 2.23 ADDITIONAL INFORMATION**

#### **FLKK AD 2.23.1 Bird concentrations in the vicinity of the airport**

Migratory birds are usually present at the aerodrome from late October to April during the country's wet season. Cattle egrets cross the approach path of runway 10 at less than 5000 feet between 15:00 UTC and 18:00 UTC almost all year round. During the above periods pilots of aircraft are advised where the design limitations of aircraft installation permit, to operate landing lights in flight, within the terminal area and during take-off, approach-to-land and climb and descent procedures.

As far as practicable, Aerodrome Control will inform pilots of this bird activity and the estimated heights AGL. As a control measure, runway sweeps are conducted daily before landing and takeoff on aircrafts.

The aircraft engine noise is not always effective in the clearing of these birds from the landing area, pilots should exercise extreme caution. Prominent birds around the airport are as tabulated below.

SPECIES	STATUS
Lapwing	Resident
Lark	Resident
Night Jar	Migrant
Swallows	Migrant
Guinea Fowl	Resident
Black Bellied Bustard	Resident
Kites	Migrant
Pied Crow	Resident
Heron	Possible migrant
Ban Swallow	Migrant/Resident
Abdim's Storks	Migrant
Owls	Resident
Cattle Egret	Migrant/Resident

#### **FLKK AD 2.23.2 Local Flying Restrictions**

Only aircraft equipped with serviceable VHF radio will be accepted at this airport.

Aircraft flying in Lusaka circuit are restricted to maximum altitude of 5000FT on Lusaka QNH. Circuit traffic on the right hand traffic pattern to remain north of the Great East Road and clear of Airforce Base.

Blasting operations on the right hand at 152200S 0282500E. Monday to Friday between 1200 and 1430 UTC.

### **FLKK AD 2.24 CHARTS RELATED TO AN AERODROME**

Charts	Pages
AERODROME CHART - ICAO	AD 2 FLKK 2 - 1
APRON PARKING DIAGRAM - APRON 1.pdf	AD 2 FLKK 2 - 3
APRON PARKING DIAGRAM - APRON 2 and 3.pdf	AD 2 FLKK 2 - 5
AERODROME GROUND MOVEMENT CHART - ICAO	AD 2 FLKK 3 - 1
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 10-28	AD 2 FLKK 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLKK 6 - 1
TERMINAL AREA CHART - ICAO DEPARTURE AND TRANSIT ROUTES - TMA	AD 2 FLKK 9 - 1

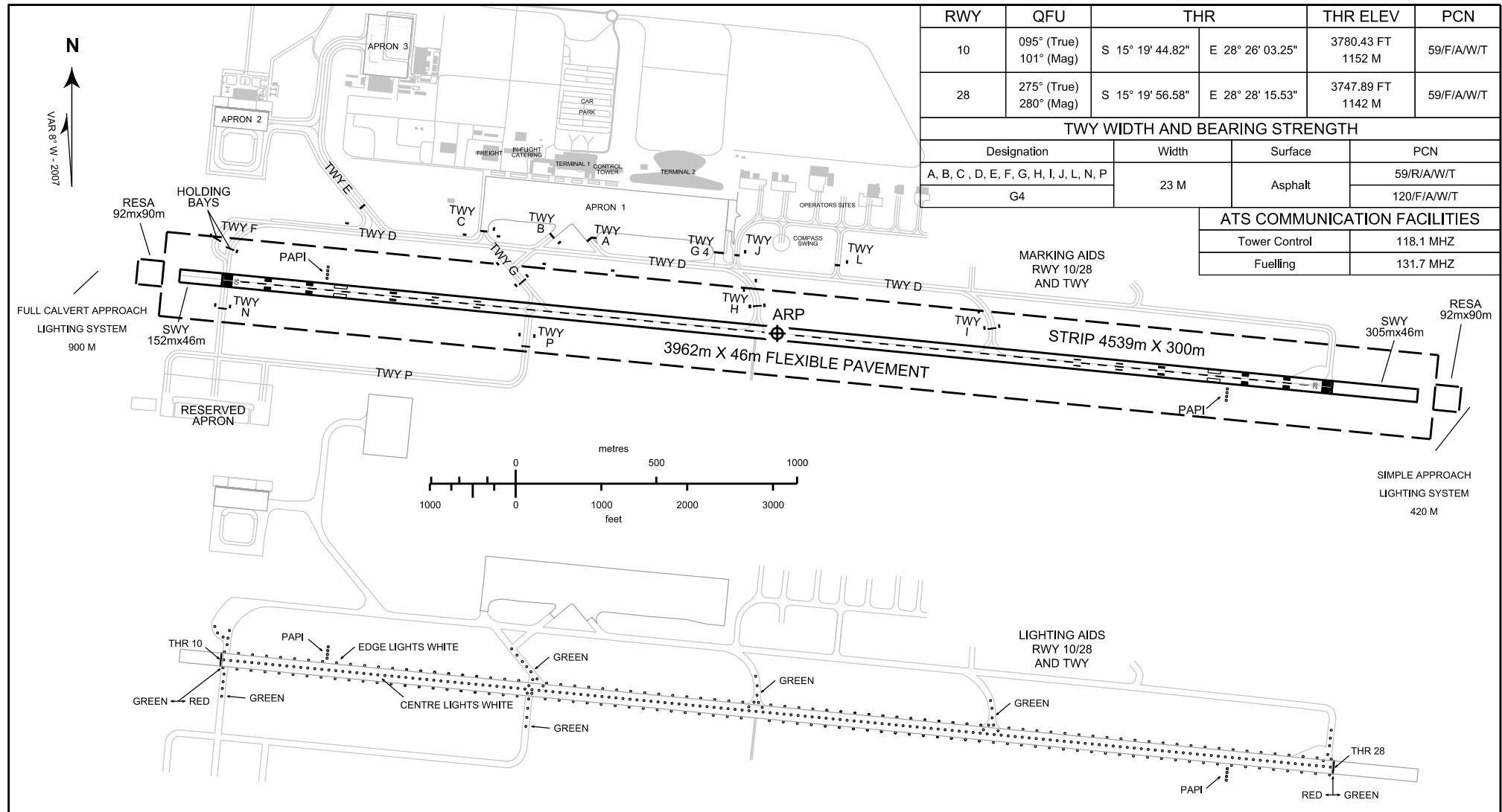
<i>Charts</i>	<i>Pages</i>
Standard Departure Chart — Instrument — ICAO RNP SID RWY 10	AD 2 FLKK 10 - 1
Standard Departure Chart — Instrument — ICAO RNP SID RWY 28	AD 2 FLKK 10 - 5
Standard Arrival Chart — Instrument — ICAO RNP STAR RWY 10	AD 2 FLKK 12 - 1
Standard Arrival Chart — Instrument — ICAO RNP STAR RWY 28	AD 2 FLKK 12 - 5
Instrument Approach Chart — ICAO RNP RWY 10	AD 2 FLKK 14 - 1
Instrument Approach Chart — ICAO RNP RWY 28	AD 2 FLKK 14 - 3
Instrument Approach Chart — ICAO ILS Z RWY 10	AD 2 FLKK 14 - 5
Instrument Approach Chart — ICAO ILS Y RWY 10	AD 2 FLKK 14 - 7
Instrument Approach Chart — ICAO VOR RWY 10	AD 2 FLKK 14 - 9
Instrument Approach Chart — ICAO VOR RWY 28	AD 2 FLKK 14 - 11
Instrument Approach Chart — ICAO NDB Z RWY 10	AD 2 FLKK 14 - 13
Instrument Approach Chart — ICAO NDB Y RWY 10	AD 2 FLKK 14 - 15
Instrument Approach Chart — ICAO NDB X RWY 10	AD 2 FLKK 14 - 17
Instrument Approach Chart — ICAO NDB W RWY 10	AD 2 FLKK 14 - 19
Instrument Approach Chart — ICAO NDB Z RWY 28	AD 2 FLKK 14 - 21
Instrument Approach Chart — ICAO NDB Y RWY 28	AD 2 FLKK 14 - 23
Instrument Approach Chart — ICAO NDB X RWY 28	AD 2 FLKK 14 - 25
Instrument Approach Chart — ICAO NDB W RWY 28	AD 2 FLKK 14 - 27

AERODROME  
CHART - ICAO

AD ELEV  
3780 FT

ARP  
15° 19' 51" S  
028° 27' 09" E

LUSAKA / Kenneth Kaunda INTL  
RWY 10/28

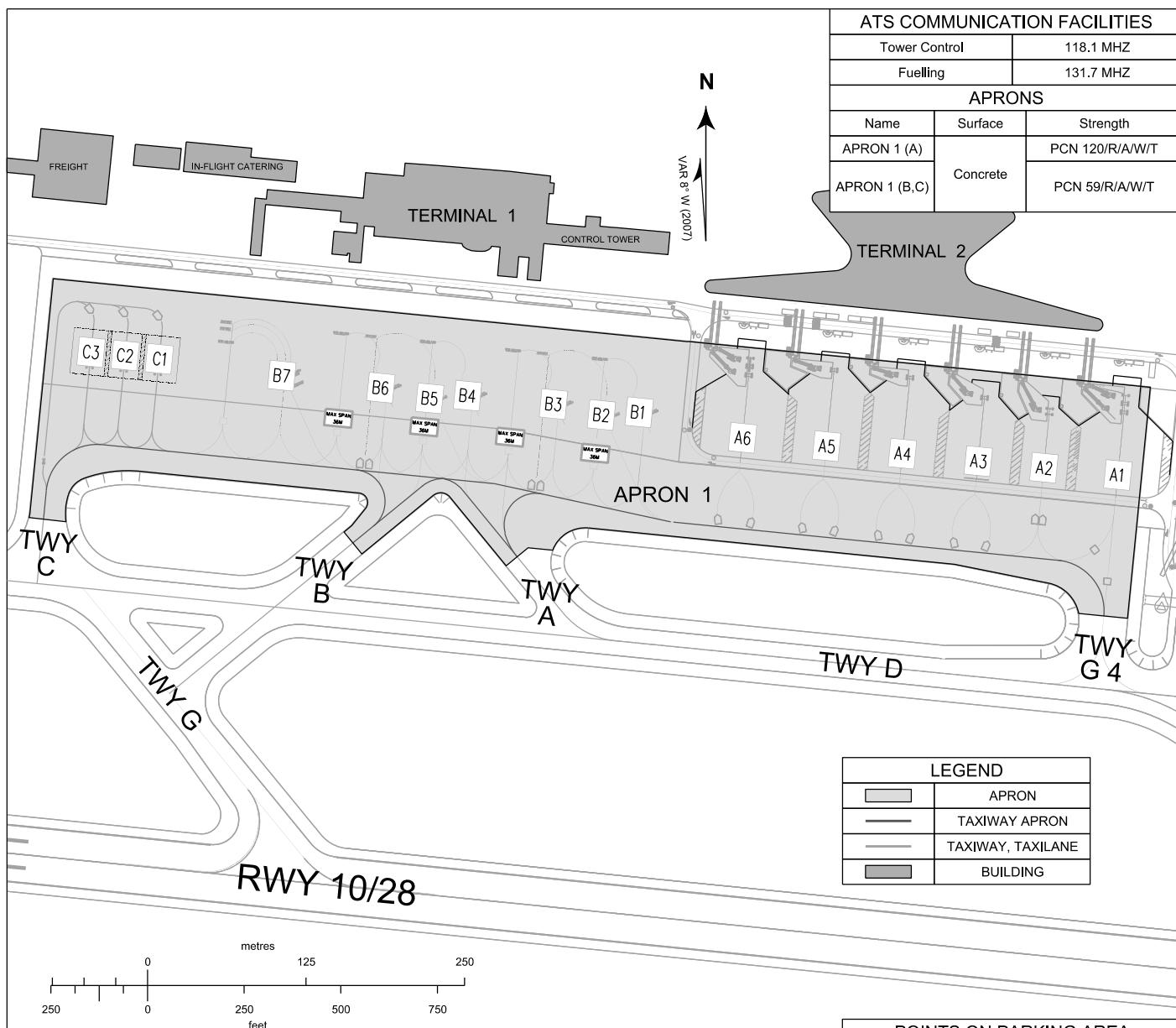


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AIRCRAFT PARKING/  
DOCKING CHART - ICAO

APRON ELEV  
3767 FT

LUSAKA / Kenneth Kaunda INTL



PARKING TYPE NUMBER LIST		
PARKING STAND NO.	MULTIPLE MARSHALLER AND TOWING STOP LINE NUMBER	PARKING TYPE
A1, A6	1	A340-600/B777-300
	2	B777-200, B747-400, A330-300, A330-400, B767-300, B767-400ER
	3	A330-200, A340-200, B787-8
	4	B767-200, A321
	5	A300-600R, A310, A319, A320, B757-200, B737
A3, A4, A5	1	B767-400ER
	2	A300-600R, A310, A319, A320, B767-200, 300, B757-200, B737
A2	1	A321
	2	A319, A320, B737-800
B1, B3, B4, B6	1	A319, A320, B737-800WL, B737-300
B2, B5	1	A330-300, B747-400, B777-200, B787-8/9
B7	1	A330-300, B747-400, B777-200, B787-8/9
	2	A319, A320, A321, B737-800WL, B737-300, B757-200, B767-300
C1, C2, C3	1	CRJ200, CESSNA 210

POINTS ON PARKING AREA		
STAND	S	E
A1	15° 19' 35.60"	28° 27' 03.12"
A2	15° 19' 35.96"	28° 27' 01.12"
A3	15° 19' 35.66"	28° 26' 59.39"
A4	15° 19' 35.16"	28° 26' 57.42"
A5	15° 19' 34.99"	28° 26' 55.42"
A6	15° 19' 34.76"	28° 26' 53.21"
B1	15° 19' 36.37"	28° 26' 50.11"
B2	15° 19' 36.44"	28° 26' 49.11"
B3	15° 19' 36.17"	28° 26' 47.84"
B4	15° 19' 35.97"	28° 26' 45.57"
B5	15° 19' 36.04"	28° 26' 44.57"
B6	15° 19' 35.78"	28° 26' 43.28"
B7	15° 19' 35.49"	28° 26' 40.66"
C1	15° 19' 34.44"	28° 26' 37.39"
C2	15° 19' 34.37"	28° 26' 36.48"
C3	15° 19' 34.28"	28° 26' 35.58"

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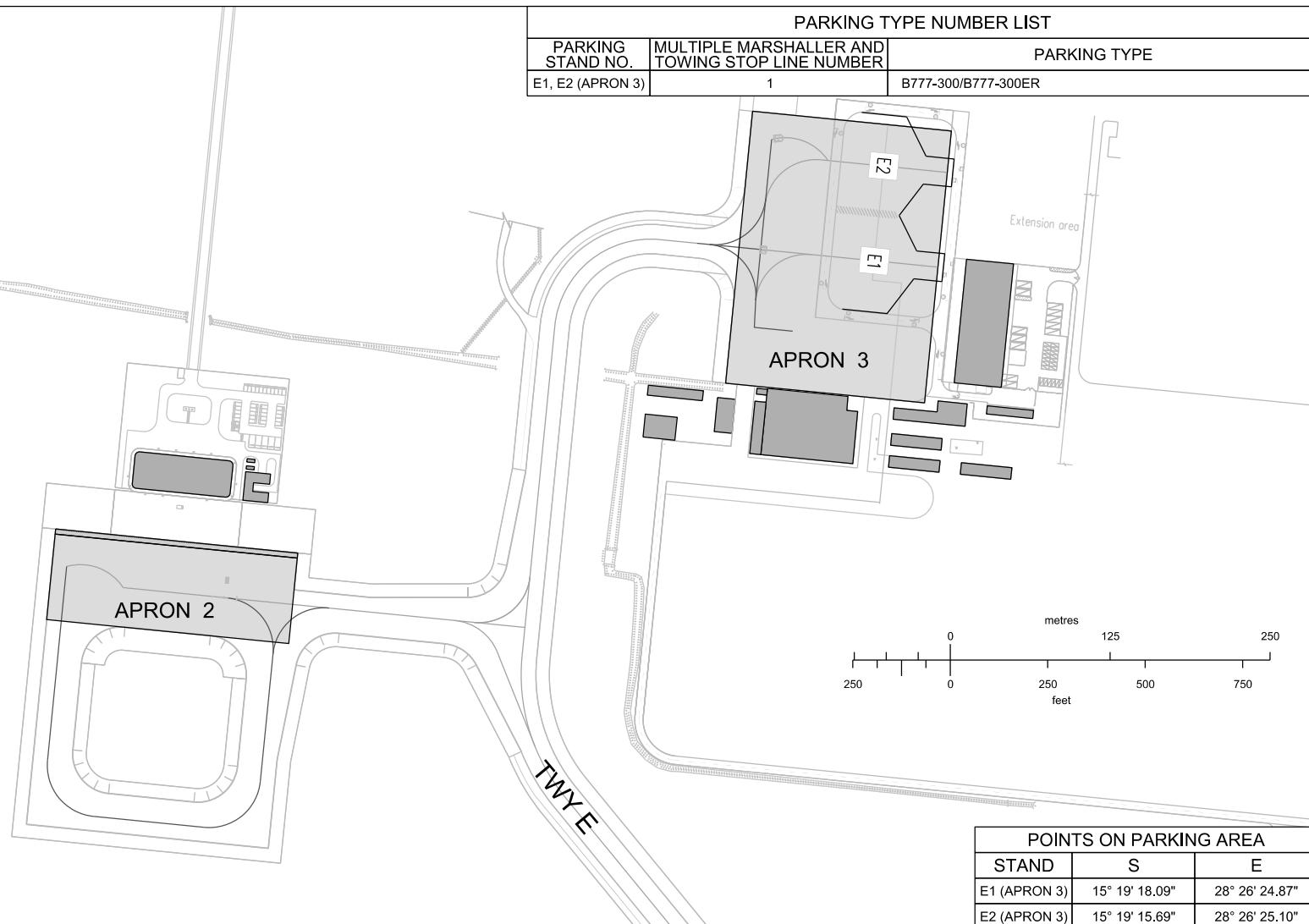
AIRCRAFT PARKING/  
DOCKING CHART - ICAO

APRON 2 and 3

LUSAKA / Kenneth Kaunda INTL

ATS COMMUNICATION FACILITIES		
Tower Control	118.1 MHZ	
Fuelling	131.7 MHZ	
APRONS		
Name	Surface	Strength
APRON 2	Concrete	PCN 120/R/A/W/T
APRON 3	Concrete	PCN 120/R/A/W/T
APRONS ELEVATION		
APRON 2	3760 FT	
APRON 3	3749 FT	

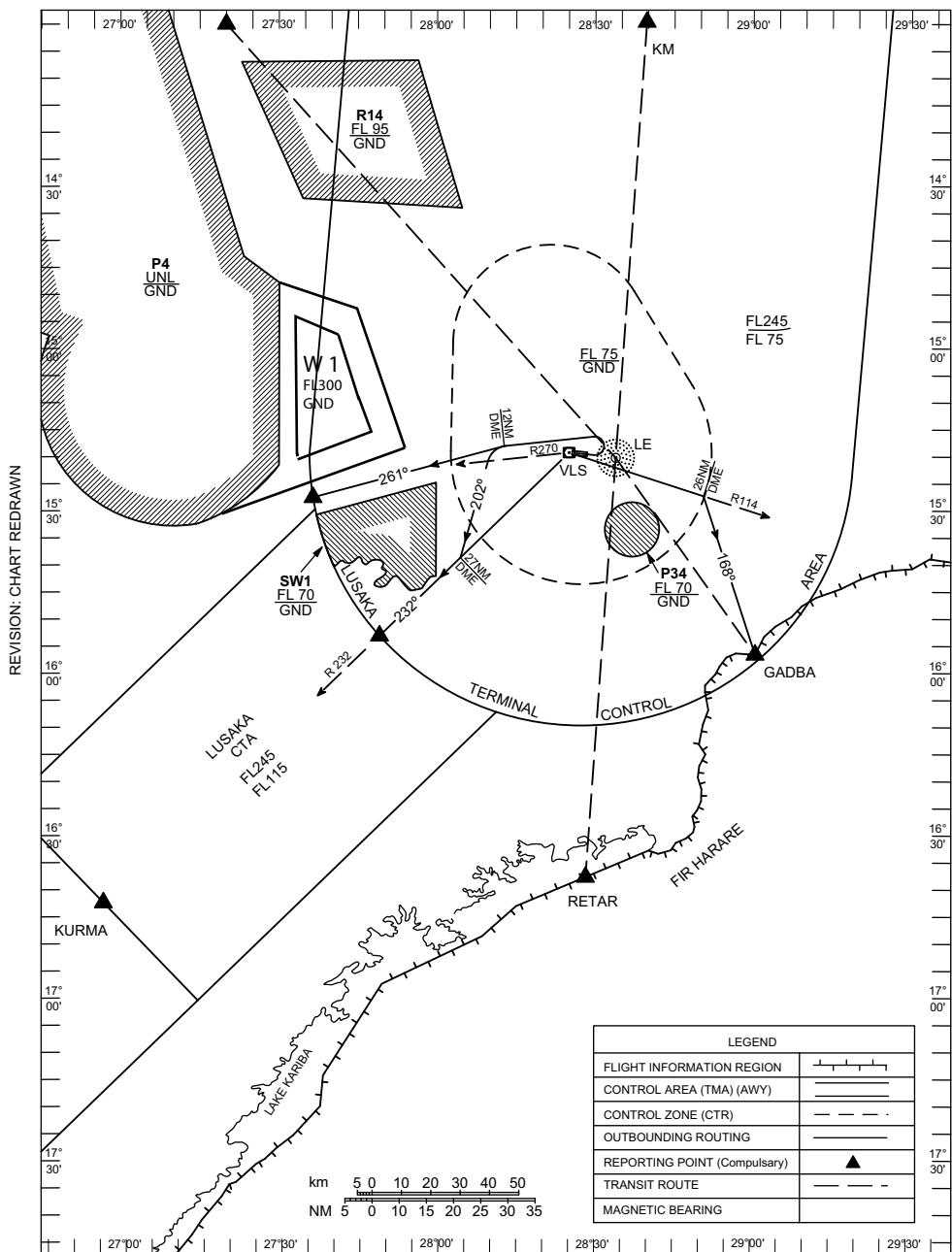
PARKING TYPE NUMBER LIST		
PARKING STAND NO.	MULTIPLE MARSHALLER AND TOWING STOP LINE NUMBER	PARKING TYPE
E1, E2 (APRON 3)	1	B777-300/B777-300ER



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**TERMINAL AREA CHART - ICAO  
DEPARTURE AND TRANSIT ROUTES - TMA**

KENNETH KAUNDA



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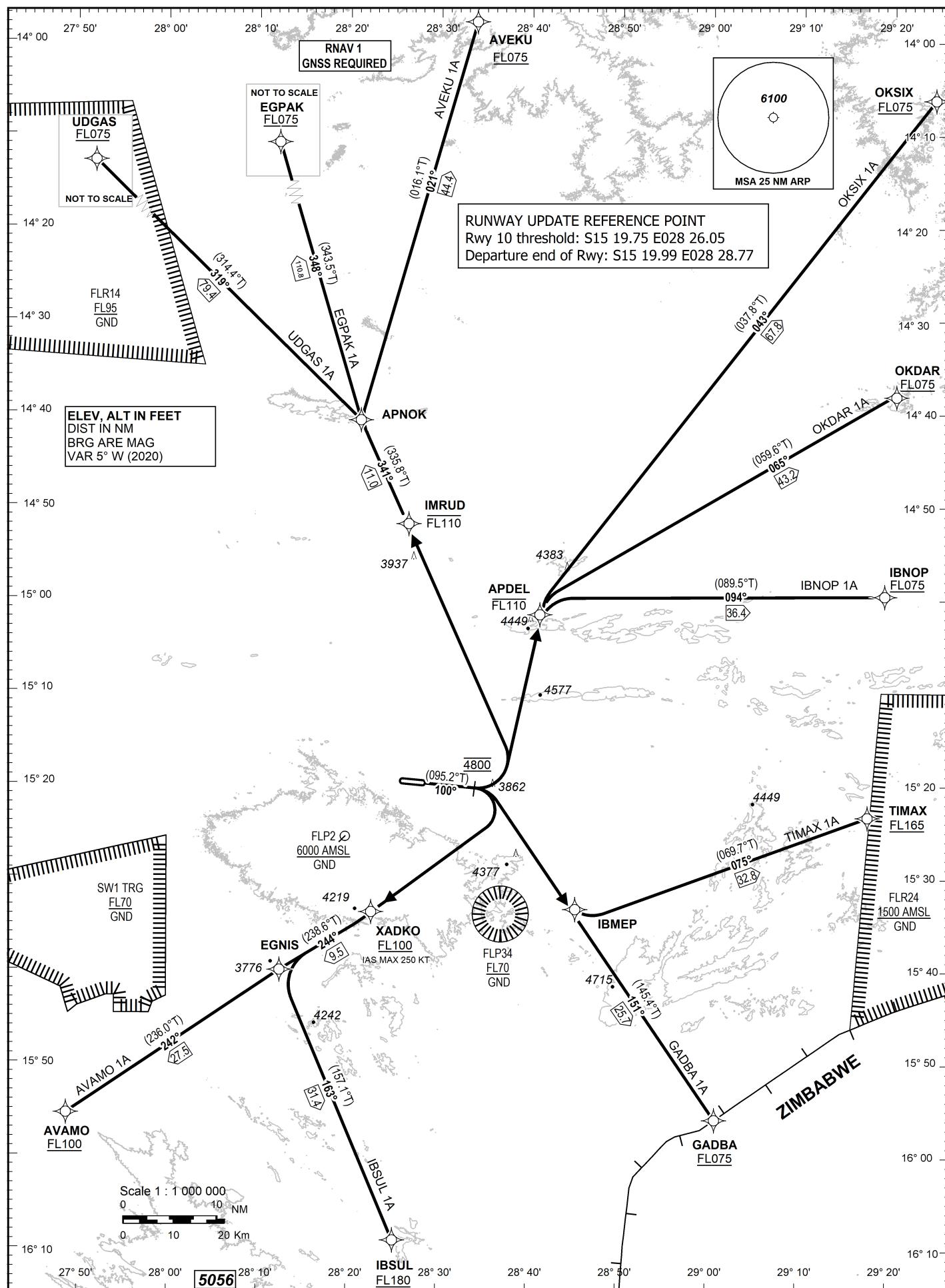
STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAOTRANSITION ALTITUDE  
6000APP 121.300  
120.100  
TWR 118.100

KENNETH KAUNDA INTL/Lusaka

(FLKK)

RNAV SID RWY 10

AVAMO 1A, AVEKU 1A, EGPAK 1A, GADBA 1A, IBNOP 1A, IBSUL 1A, OKDAR 1A, OKSIX 1A, TIMAX 1A, UDGAS 1A



**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

KENNETH KAUNDA INTL/Lusaka  
(FLKK)  
**RNAV SID RWY 10**

AVAMO 1A, AVEKU 1A, EGPAK 1A, GADBA 1A, IBNOP 1A, IBSUL 1A, OKDAR 1A, OKSIX 1A, TIMAX 1A, UDGAS 1A

<b>TABULAR DESCRIPTION</b>												
<b>RNAV SID RWY 10</b>												
<b>AVAMO 1A</b>												
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	XADKO	-	-	-	-	-	+FL100	-250	-	-	RNAV 1
030	TF	EGNIS	-	244 (238.6)	-	9.5	-	-	-	-	-	RNAV 1
040	TF	AVAMO	-	242 (236.0)	-	27.5	-	+FL100	-	-	-	RNAV 1
<b>AVEKU 1A</b>												
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	IMRUD	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APNOK	-	341 (335.8)	-	11.0	-	-	-	-	-	RNAV 1
040	TF	AVEKU	-	021 (016.0)	-	44.4	-	+FL075	-	-	-	RNAV 1
<b>EGPAK 1A</b>												
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	IMRUD	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APNOK	-	341 (335.8)	-	11.0	-	-	-	-	-	RNAV 1
040	TF	EGPAK	-	348 (343.5)	-	110.8	-	+FL075	-	-	-	RNAV 1
<b>GADBA 1A</b>												
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	IBMEP	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	GADBA	-	151 (145.4)	-	25.7	-	+FL075	-	-	-	RNAV 1
<b>IBNOP 1A</b>												
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	APDEL	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	IBNOP	-	094 (089.5)	-	36.4	-	+FL075	-	-	-	RNAV 1
<b>IBSUL 1A</b>												
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	XADKO	-	-	-	-	-	+FL110	-250	-	-	RNAV 1
030	TF	EGNIS	-	244 (238.6)	-	9.5	-	-	-	-	-	RNAV 1
040	TF	IBSUL	-	163 (157.1)	-	31.4	-	+FL180	-	-	-	RNAV 1
<b>OKDAR 1A</b>												
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	APDEL	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	OKDAR	-	065 (059.6)	-	43.2	-	+FL075	-	-	-	RNAV 1
<b>OKSIX 1A</b>												
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	APDEL	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	OKSIX	-	043 (037.8)	-	67.8	-	+FL075	-	-	-	RNAV 1
<b>TIMAX 1A</b>												
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	IBMEP	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	TIMAX	-	075 (069.7)	-	32.8	-	+FL165	-	-	-	RNAV 1
<b>UDGAS 1A</b>												
Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	IMRUD	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APNOK	-	341 (335.8)	-	11.0	-	-	-	-	-	RNAV 1
040	TF	UDGAS	-	319 (314.4)	-	79.4	-	+FL075	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**KENNETH KAUNDA INTL/Lusaka  
(FLKK)  
RNAV SID RWY 10**

AVAMO 1A, AVEKU 1A, EGPAK 1A, GADBA 1A, IBNOP 1A, IBSUL 1A, OKDAR 1A, OKSIX 1A, TIMAX 1A, UDGAS 1A

**WAYPOINT LIST  
RNAV SID RWY 10**

WaypointIdentifier	Coordinates	
APDEL	S 15 00 00.1	E 028 41 43.7
APNOK	S 14 40 54.2	E 028 21 15.1
AVAMO	S 15 55 29.0	E 027 48 48.0
AVEKU	S 13 58 00.0	E 028 33 54.0
EGNIS	S 15 40 05.0	E 028 12 27.9
EGPAK	S 12 54 06.0	E 027 49 06.0
GADBA	S 15 56 03.2	E 029 00 53.2
IBNOP	S 14 59 36.0	E 029 19 18.0
IBSUL	S 16 09 09.0	E 028 25 10.0
XADKO	S 15 35 05.9	E 028 20 54.9
IBMEP	S 15 34 50.2	E 028 45 45.9
IMRUD	S 14 50 59.7	E 028 25 54.7
OKDAR	S 14 38 00.0	E 029 20 12.0
OKSIX	S 14 06 12.0	E 029 24 30.0
TIMAX	S 15 23 24.0	E 029 17 36.0
UDGAS	S 13 44 59.6	E 027 22 58.5

**ROUTING**

NAME	TEXT
AVAMO 1A	After take-off climb on course 100° to 4800 FT, turn RIGHT direct to XADKO, then track 244° to EGNIS , then track 242° to AVAMO. IAS 250kt until XADKO.  MCA/MCL: XADKO AT or ABOVE FL100, AVAMO AT or ABOVE FL100.
AVEKU 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to IMRUD, then track 341° to APNOK, then track 021° to AVEKU.  MCA/MCL: KK110 AT or BELOW FL110, AVEKU AT or ABOVE FL075
EGPAK 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to IMRUD, then track 341° to APNOK, then track 348° to EGPAK.  MCA/MCL: KK110 AT or BELOW FL110, EGPAK AT or ABOVE FL075.
GADBA 1A	After take-off climb on course 100° to 4800 FT, turn RIGHT direct to IBMEP, then track 151° to GADBA.  MCA/MCL: GADBA AT or ABOVE FL075.
IBNOP 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to APDEL, then track 094° to IBNOP.  MCA/MCL: APDEL AT or BELOW FL110, IBNOP AT or ABOVE FL075.
IBSUL 1A	After take-off climb on course 100° to 4800 FT, turn RIGHT direct to XADKO, then track 244° to EGNIS , then track 163° to IBSUL. IAS 250kt until XADKO.  MCA/MCL: KK111 AT or ABOVE FL110, IBSUL AT or ABOVE FL180.
OKDAR 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to APDEL, then track 065° to OKDAR.  MCA/MCL: APDEL AT or BELOW FL110, OKDAR AT or ABOVE FL075.
OKSIX 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to APDEL, then track 043° to OKSIX.  MCA/MCL: APDEL AT or BELOW FL110, OKSIX AT or ABOVE FL075.
TIMAX 1A	After take-off climb on course 100° to 4800 FT, turn RIGHT direct to IBMEP, then track 075° to TIMAX.  MCA/MCL: TIMAX AT or ABOVE FL165.
UDGAS 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to IMRUD, then track 341° to APNOK, then track 319° to UDGAS.  MCA/MCL: KK110 AT or BELOW FL110, UDGAS AT or ABOVE FL075.

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**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**TRANSITION ALTITUDE  
6000**

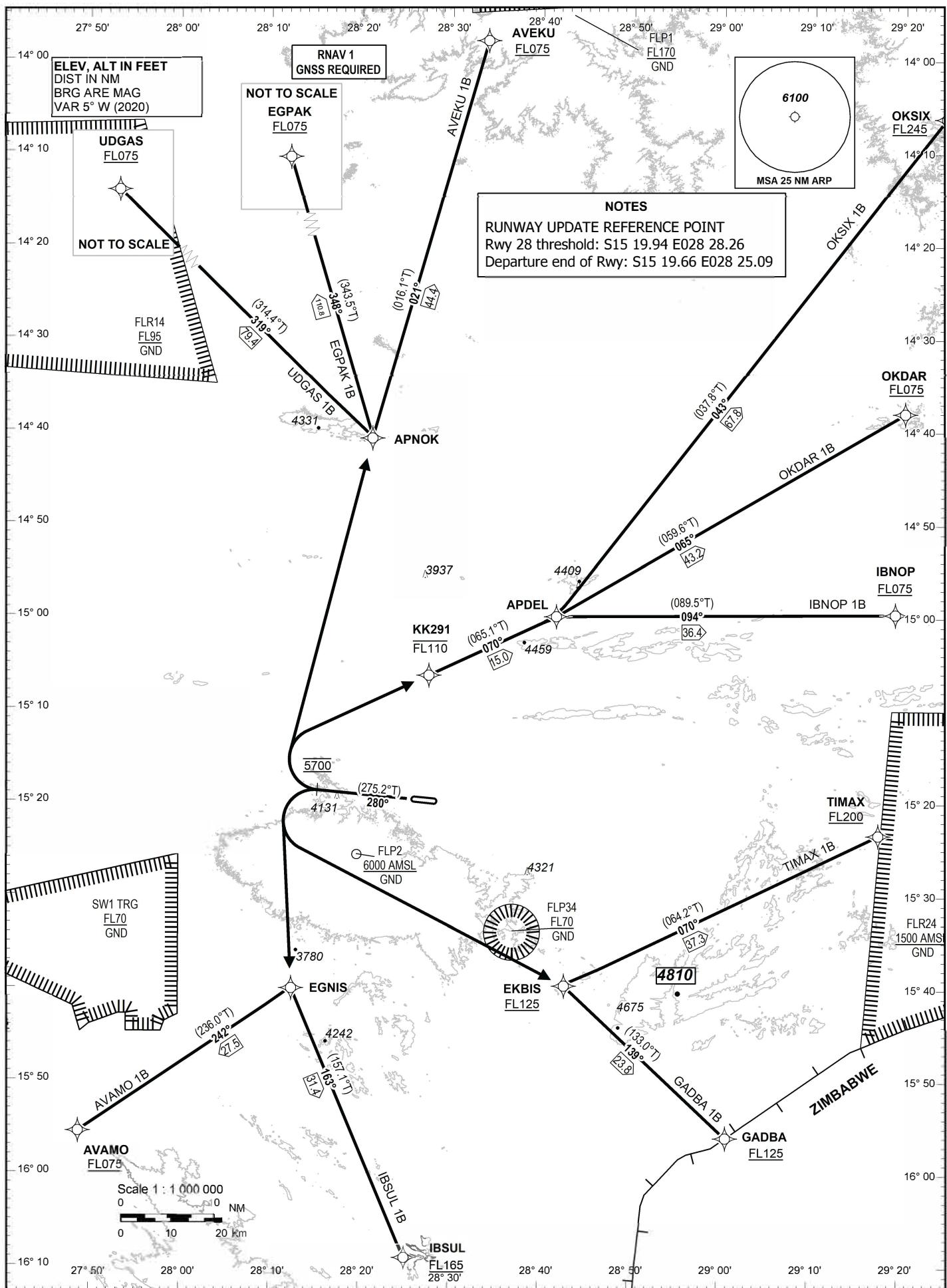
APP 121.300  
120.100  
TWR 118.100

**KENNETH KAUNDA INTL/Lusaka**

(FLKK)

**RNAV SID RWY 28**

AVAMO 1B, AVEKU 1B, EGPAK 1B, GADBA 1B, IBNOP 1B, IBSUL 1B, OKDAR 1B, OKSIX 1B, TIMAX 1B, UDGAS 1B



**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

KENNETH KAUNDA INTL/Lusaka

(FLKK)

**RNAV SID RWY 28**

AVAMO 1B, AVEKU 1B, EGPAK 1B, GADBA 1B, IBNOP 1B, IBSUL 1B, OKDAR 1B, OKSIX 1B, TIMAX 1B, UDGAS 1B

**TABULAR DESCRIPTION**

**RNAV SID RWY 28**

**AVAMO 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	EGNIS	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	AVAMO	-	242 (236.0)	-	27.5	-	+FL075	-	-	-	RNAV 1

**AVEKU 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	APNOK	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	AVEKU	-	021 (016.1)	-	44.4	-	+FL075	-	-	-	RNAV 1

**EGPAK 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	APNOK	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	EGPAK	-	348 (343.5)	-	110.8	-	+FL075	-	-	-	RNAV 1

**GADBA 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	EKBIS	-	-	-	-	-	+FL125	-	-	-	RNAV 1
030	TF	GADBA	-	139 (133.0)	-	23.8	-	+FL125	-	-	-	RNAV 1

**IBNOP 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	KK291	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APDEL	-	070 (065.1)	-	15.0	-	-	-	-	-	RNAV 1
040	TF	IBNOP	-	094 (089.5)	-	36.4	-	+FL075	-	-	-	RNAV 1

**IBSUL 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	EGNIS	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	IBSUL	-	163 (157.1)	-	31.4	-	+FL165	-	-	-	RNAV 1

**OKDAR 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	KK291	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APDEL	-	070 (065.1)	-	15.0	-	-	-	-	-	RNAV 1
040	TF	OKDAR	-	065 (059.6)	-	43.2	-	+FL075	-	-	-	RNAV 1

**OKSIX 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	KK291	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APDEL	-	070 (065.1)	-	15.0	-	-	-	-	-	RNAV 1
040	TF	OKSIX	-	043 (037.8)	-	67.7	-	+FL245	-	-	-	RNAV 1

**TIMAX 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	EKBIS	-	-	-	-	-	+FL125	-	-	-	RNAV 1
030	TF	TIMAX	-	070 (064.2)	-	37.3	-	+FL200	-	-	-	RNAV 1

**UDGAS 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	APNOK	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	UDGAS	-	319 (314.4)	-	79.4	-	+FL075	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO****KENNETH KAUNDA INTL/Lusaka**

(FLKK)

**RNAV SID RWY 28**

AVAMO 1B, AVEKU 1B, EGPAK 1B, GADBA 1B, IBNOK 1B, IBSUL 1B, OKDAR 1B, OKSIX 1B, TIMAX 1B, UDGAS 1B

**WAYPOINT LIST  
RNAV SID RWY 28**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
APDEL	S 15 00 00.1	E 028 41 43.7	TIMAX	S 15 23 24.0	E 029 17 36.0
APNOK	S 14 40 54.2	E 028 21 15.1	UDGAS	S 13 44 59.6	E 027 22 58.5
AVAMO	S 15 55 29.0	E 027 48 48.0			
AVEKU	S 13 58 00.0	E 028 33 54.0			
EGNIS	S 15 40 05.0	E 028 12 27.9			
EGPAK	S 12 54 06.0	E 027 49 06.0			
EKBIS	S 15 39 44.6	E 028 42 48.5			
GADBA	S 15 56 03.2	E 029 00 53.2			
IBNOK	S 14 59 36.0	E 029 19 18.0			
IBSUL	S 16 09 09.0	E 028 25 10.0			
KK291	S 15 06 22.8	E 028 27 37.7			
OKSIX	S 14 06 12.0	E 029 24 30.0			

**ROUTING**

NAME	TEXT
AVAMO 1B	After take-off climb on course 280° to 5700 FT, turn LEFT direct to EGNIS, then track 242° to AVAMO. MCA/MCL: AVAMO AT or ABOVE FL075.
AVEKU 1B	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to APNOK, then track 021° to AVEKU . MCA/MCL: AVEKU AT or ABOVE FL075.
EGPAK 1B	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to APNOK, then track 348° to EGPAK . MCA/MCL: EGPAK AT or ABOVE FL075.
GADBA 1B	After take-off climb on course 280° to 5700 FT, turn LEFT direct to EKBIS, then track 139° to GADBA . MCA/MCL: EKBIS AT or ABOVE FL125, GADBA AT or ABOVE FL125.
IBNOK 1B	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to KK291, then track 070° to APDEL , then track 094° to IBNOK . MCA/MCL: KK291 AT or BELOW FL110, IBNOK AT or ABOVE FL075.
IBSUL 1B	After take-off climb on course 280° to 5700 FT, turn LEFT direct to EGNIS, then track 163° to IBSUL. MCA/MCL: IBSUL AT or ABOVE FL165.
OKDAR 1B	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to KK291, then track 070° to APDEL , then track 065° to OKDAR. MCA/MCL: KK291 AT or BELOW FL110, OKDAR AT or ABOVE FL075.
OKSIX	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to KK291, then track 070° to APDEL , then track 043° to OKSIX. MCA/MCL: KK291 AT or BELOW FL110, OKSIX AT or ABOVE FL245.
TIMAX 1B	After take-off climb on course 280° to 5700 FT, turn LEFT direct to EKBIS, then track 070° to TIMAX . MCA/MCL: EKBIS AT or ABOVE FL125, TOMAX AT or ABOVE FL200.
UDGAS 1B	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to APNOK, then track 319° to UDGAS . MCA/MCL: UDGAS AT or ABOVE FL075.

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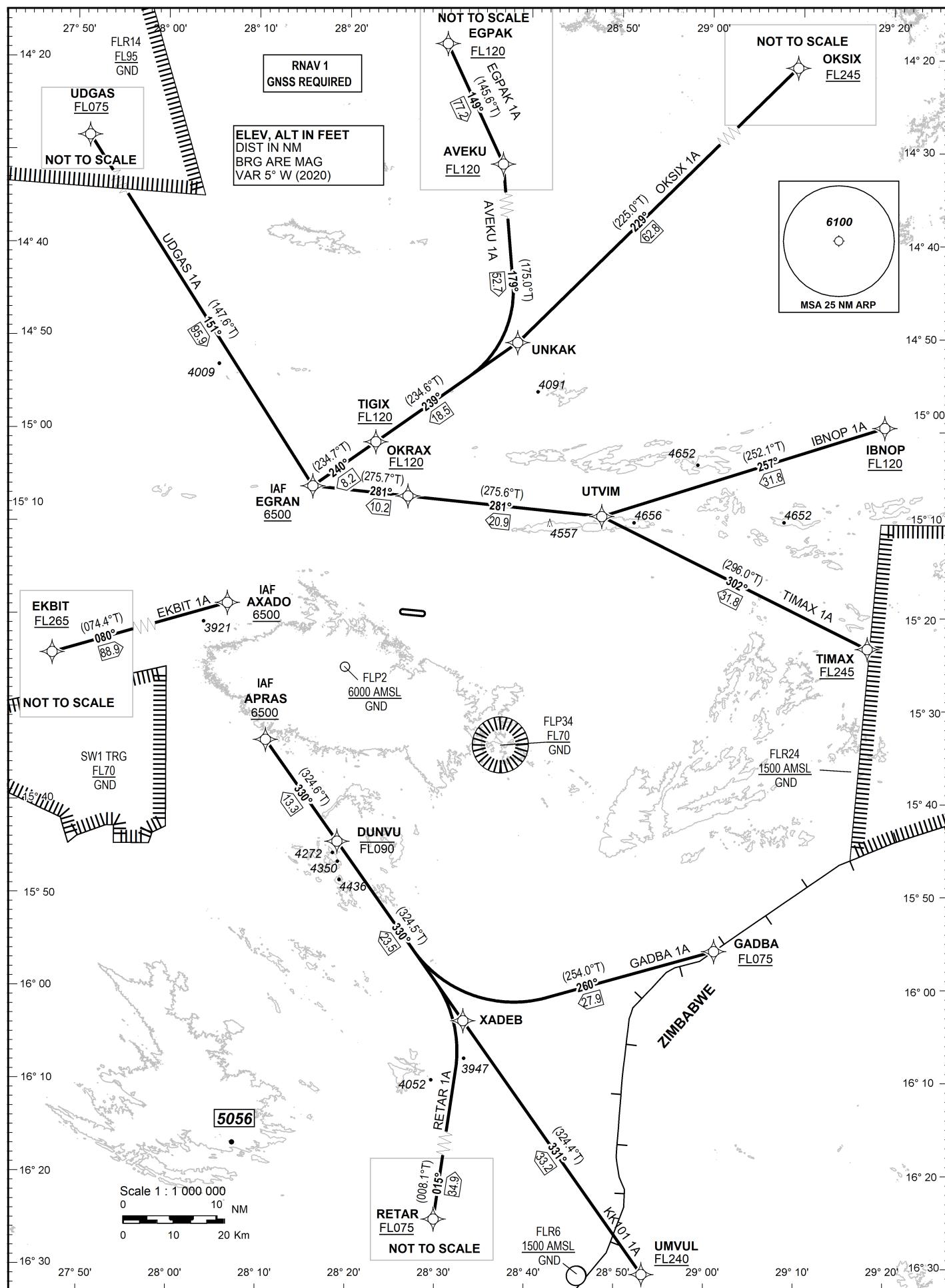
STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAOTRANSITION ALTITUDE  
6000APP 121.300  
120.100  
TWR 118.100

KENNETH KAUNDA INTL/Lusaka

(FLKK)

RNAV STAR RWY 10

AVEKU 1A, EGPAK 1A, EKBIT 1A, GADBA 1A, IBNOP 1A, OKSIX 1A, RETAR 1A, TIMAX 1A, UDGAS 1A, UMVUL 1A





**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO****KENNETH KAUNDA INTL/Lusaka****(FLKK)****RNAV STAR RWY 10**

AVEKU 1A, EGPAK 1A, EKBIT 1A, GADBA 1A, IBNOP 1A, OKSIX 1A, RETAR 1A, TIMAX 1A, UDGAS 1A, UMVUL 1A

**WAYPOINT LIST  
RNAV STAR RWY 10**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
APRAS	S 15 33 33.8	E 028 10 55.0	UNKAK	S 14 50 42.0	E 028 38 35.9
AVEKU	S 13 58 00.0	E 028 33 54.0	TIGIX	S 15 01 28.3	E 028 22 58.4
AXADO	S 15 18 50.6	E 028 06 36.8	OKSIX	S 14 06 12.0	E 029 24 30.0
DUNVU	S 14 44 29.1	E 028 18 55.4	RETAR	S 16 37 46.8	E 028 28 18.0
EGPAK	S 12 54 06.0	E 027 49 06.0	TIMAX	S 15 23 24.0	E 029 17 36.0
EGRAN	S 15 06 15.1	E 028 16 01.4	UDGAS	S 13 44 59.6	E 027 22 58.5
EKBIT	S 15 43 05.0	E 026 37 59.0	UMVUL	S 16 30 52.0	E 028 53 08.0
GADBA	S 15 56 03.2	E 029 00 53.2			
IBNOP	S 14 59 36.0	E 029 19 18.0			
XADEB	S 16 03 42.8	E 028 33 03.9			
OKRAK	S 15 07 16.7	E 028 26 33.9			
UNKAK	S 14 50 42.0	E 028 38 35.9			

**ROUTING**

NAME	TEXT
AVEKU 1A	From AVEKU track 179° to UNKAK, track 239° to TIGIX, track 240° to EGRAN. MEL/MEA: AVEKU AT or ABOVE FL120, TIGIX AT or ABOVE FL120, EGRAN AT or ABOVE UNKAK 6500'.
EGPAK 1A	From EGPAK track 149° to AVEKU, track 179° to UNKAK, track 239° to TIGIX, track 240° to EGRAN. MEL/MEA: EGPAK AT or ABOVE FL120, TIGIX AT or ABOVE FL120, EGRAN AT or ABOVE 6500'.
EKBIT 1A	From EKBIT track 080° to AXADO. MEL/MEA: EKBIT AT or ABOVE FL265, AXADO AT or ABOVE 6500'.
GADBA 1A	From GADBA track 260° to XADEB, track 330° to DUNVU, track 330° to APRAS. MEL/MEA: GADBA AT or ABOVE FL075, DUNVU AT or BELOW FL090, APRAS AT or ABOVE 6500'.
IBNOP 1A	From IBNOP track 257° to UTVIM, track 281° to OKRAX, track 281° to EGRAN. MEL/MEA: IBNOP AT or ABOVE FL120, OKRAX AT or ABOVE FL120, EGRAN AT or ABOVE 6500'.
OKSIX 1A	From OKSIX track 229° to UNKAK, track 239° to TIGIX, track 240° to EGRAN. MEL/MEA: OKSIX AT or ABOVE FL245, TIGIX AT or ABOVE FL120, EGRAN AT or ABOVE 6500'.
RETAR 1A	From RETAR track 015° to XADEB, track 330° to DUNVU, track 330° to APRAS. MEL/MEA: RETAR AT or ABOVE FL075, DUNVU AT or BELOW FL090, APRAS AT or ABOVE 6500'.
TIMAX 1A	From TIMAX track 302° to UTVIM, track 281° to OKRAX, track 281° to EGRAN. MEL/MEA: TIMAX AT or ABOVE FL245, OKRAX AT or ABOVE FL120, EGRAN AT or ABOVE 6500'.
UDGAS 1A	From UDGAS track 151° to EGRAN. MEL/MEA: UDGAS AT or ABOVE FL075, EGRAN AT or ABOVE 6500'.
UMVUL 1A	From UMVUL track 331° to XADEB, track 330° to DUNVU, track 330° to APRAS. MEL/MEA: UMVUL AT or ABOVE FL240, DUNVU AT or BELOW FL090, APRAS AT or ABOVE 6500'.

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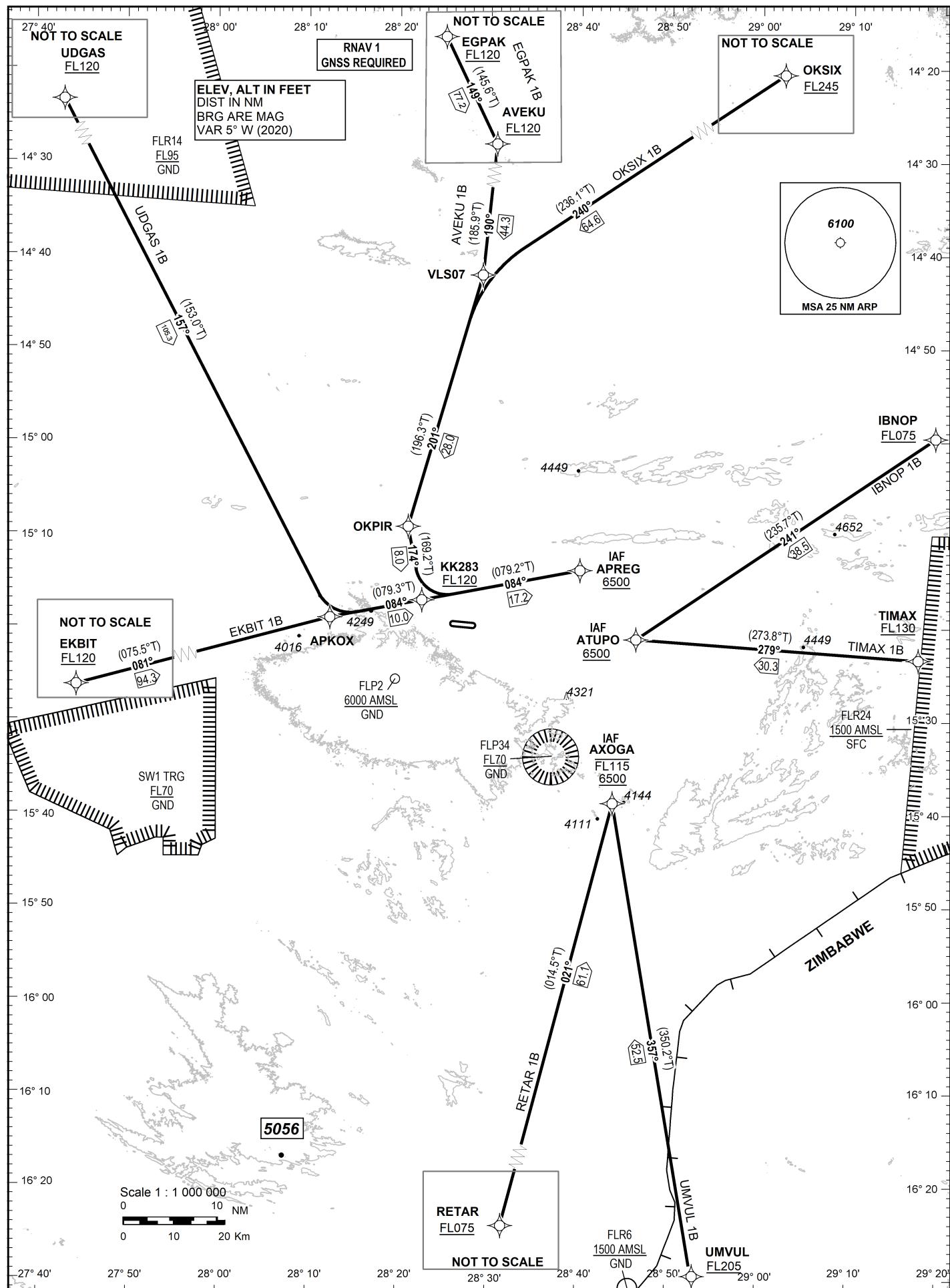
STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAOTRANSITION ALTITUDE  
6000APP 121.300  
120.100  
TWR 118.100

KENNETH KAUNDA INTL/Lusaka

(FLKK)

RNAV STAR RWY 28

AVEKU 1B, EGPAK 1B, EKBIT 1B, IBNOP 1B, OKSIX 1B, RETAR 1B, TIMAX 1B, UDGAS 1B, UMVUL 1B



**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

**KENNETH KAUNDA INTL/Lusaka**

(FLKK)

**RNAV STAR RWY 28**

AVEKU 1B, EGPAK 1B, EKBIT 1B, IBNOP 1B, OKSIX 1B, RETAR 1B, TIMAX 1B, UDGAS 1B, UMVUL 1B

**TABULAR DESCRIPTION**

**RNAV STAR RWY 28**

**AVEKU 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AVEKU	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	VLS07	-	190 (185.9)	-	44.3	-	-	-	-	-	RNAV 1
030	TF	OKPIR	-	201 (196.3)	-	28.0	-	-	-	-	-	RNAV 1
040	TF	KK283	-	174 (169.2)	-	8.0	-	+FL120	-	-	-	RNAV 1
050	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

**EGPAK 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
10	IF	EGPAK	-	-	-	-	-	+FL120	-	-	-	RNAV 1
20	TF	AVEKU	-	149 (145.6)	-	77.2	-	-	-	-	-	RNAV 1
30	TF	VLS07	-	190 (185.9)	-	44.3	-	-	-	-	-	RNAV 1
40	TF	OKPIR	-	201 (196.3)	-	28.0	-	-	-	-	-	RNAV 1
50	TF	KK283	-	174 (169.2)	-	7.3	-	-	-	-	-	RNAV 1
60	TF	APREG	-	084 (079.2)	-	16.5	-	+6500	-	-	-	RNAV 1

**EKBIT 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	EKBIT	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	APKOK	-	081 (075.5)	-	94.3	-	-	-	-	-	RNAV 1
030	TF	KK283	-	084 (079.3)	-	10.0	-	+FL120	-	-	-	RNAV 1
040	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

**IBNOP 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	IBNOP	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	ATUPO	-	241 (235.7)	-	38.5	-	+6500	-	-	-	RNAV 1

**OKSIX 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	OKSIX	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	VLS07	-	240 (236.1)	-	64.6	-	-	-	-	-	RNAV 1
030	TF	OKPIR	-	201 (196.3)	-	28.0	-	-	-	-	-	RNAV 1
040	TF	KK283	-	174 (169.2)	-	8.0	-	+FL120	-	-	-	RNAV 1
050	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

**RETAR 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	RETAR	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	AXOGA	-	021 (014.5)	-	61.1	-	-	-FL115 +6500	-	-	RNAV 1

**TIMAX 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	TIMAX	-	-	-	-	-	+FL130	-	-	-	RNAV 1
020	TF	ATUPO	-	279 (273.8)	-	30.3	-	+6500	-	-	-	RNAV 1

**UDGAS 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UDGAS	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	APKOK	-	157 (153.0)	-	105.3	-	-	-	-	-	RNAV 1
030	TF	KK283	-	084 (079.3)	-	10.0	-	+FL120	-	-	-	RNAV 1
040	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

**UMVUL 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UMVUL	-	-	-	-	-	+FL205	-	-	-	RNAV 1
020	TF	AXOGA	-	357 (350.2)	-	52.5	-	-	-FL115 +6500	-	-	RNAV 1

**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO****KENNETH KAUNDA INTL/Lusaka****(FLKK)****RNAV STAR RWY 28**

AVEKU 1B, EGPAK 1B, EKBIT 1B, IBNOP 1B, OKSIX 1B, RETAR 1B, TIMAX 1B, UDGAS 1B, UMVUL 1B

**WAYPOINT LIST  
RNAV STAR RWY 28**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
APKOX	S 15 19 05.0	E 028 12 26.6	TIMAX	S 15 23 24.0	E 029 17 36.0
APREG	S 15 13 58.0	E 028 40 05.4	UDGAS	S 13 44 59.6	E 027 22 58.5
ATUPO	S 15 21 21.7	E 028 46 20.0	UMVUL	S 16 30 52.0	E 028 53 08.0
AVEKU	S 13 58 00.0	E 028 33 54.0	VLS07	S 14 42 17.0	E 028 29 11.0
AXOGA	S 15 38 57.6	E 028 43 50.8			
EGPAK	S 12 54 06.0	E 027 49 06.0			
EKBIT	S 15 43 05.0	E 026 37 59.0			
IBNOP	S 14 59 36.0	E 029 19 18.0			
KK283	S 15 17 12.6	E 028 22 36.5			
OKPIR	S 15 09 19.0	E 028 21 03.7			
OKSIX	S 14 06 12.0	E 029 24 30.0			
RETAR	S 16 37 46.8	E 028 28 18.0			

**ROUTING**

NAME	TEXT
AVEKU 1B	From AVEKU track 190° to VLS07, track 201° to OKPIR, track 174° to KK283, track 084° to APREG. MEL/MEA: AVEKU AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
EGPAK 1B	From EGPAK track 149° to AVEKU, track 190° to VLS07, track 201° to OKPIR, track 174° to KK283, track 084° to APREG. MEL/MEA: EGPAK AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
EKBIT 1B	From EKBIT track 081° to APKOX, track 084° to KK283, track 084° to APREG. MEL/MEA: EKBIT AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
IBNOP 1B	From IBNOP track 241° to ATUPO. MEL/MEA: IBNOP AT or ABOVE FL075, ATUPO AT or ABOVE 6500'.
OKSIX 1B	From OKSIX track 240° to VLS07, track 201° to OKPIR, track 174° to KK283, track 084° to APREG. MEL/MEA: OKSIX AT or ABOVE FL245, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
RETAR 1B	From RETAR track 021° to AXOGA. MEL/MEA: RETAR AT or ABOVE FL075, AXOGA BETWEEN FL115 and 6500'.
TIMAX 1B	From TIMAX track 241° to ATUPO. MEL/MEA: TIMAX AT or ABOVE FL130, ATUPO AT or ABOVE 6500'.
UDGAS 1B	From UDGAS track 157° to APKOX, track 084° to KK283, track 084° to APREG. MEL/MEA: UDGAS AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
UMVUL 1B	From UMVUL track 357° to AXOGA. MEL/MEA: UMVUL AT or ABOVE FL205, AXOGA BETWEEN FL115 and 6500'.

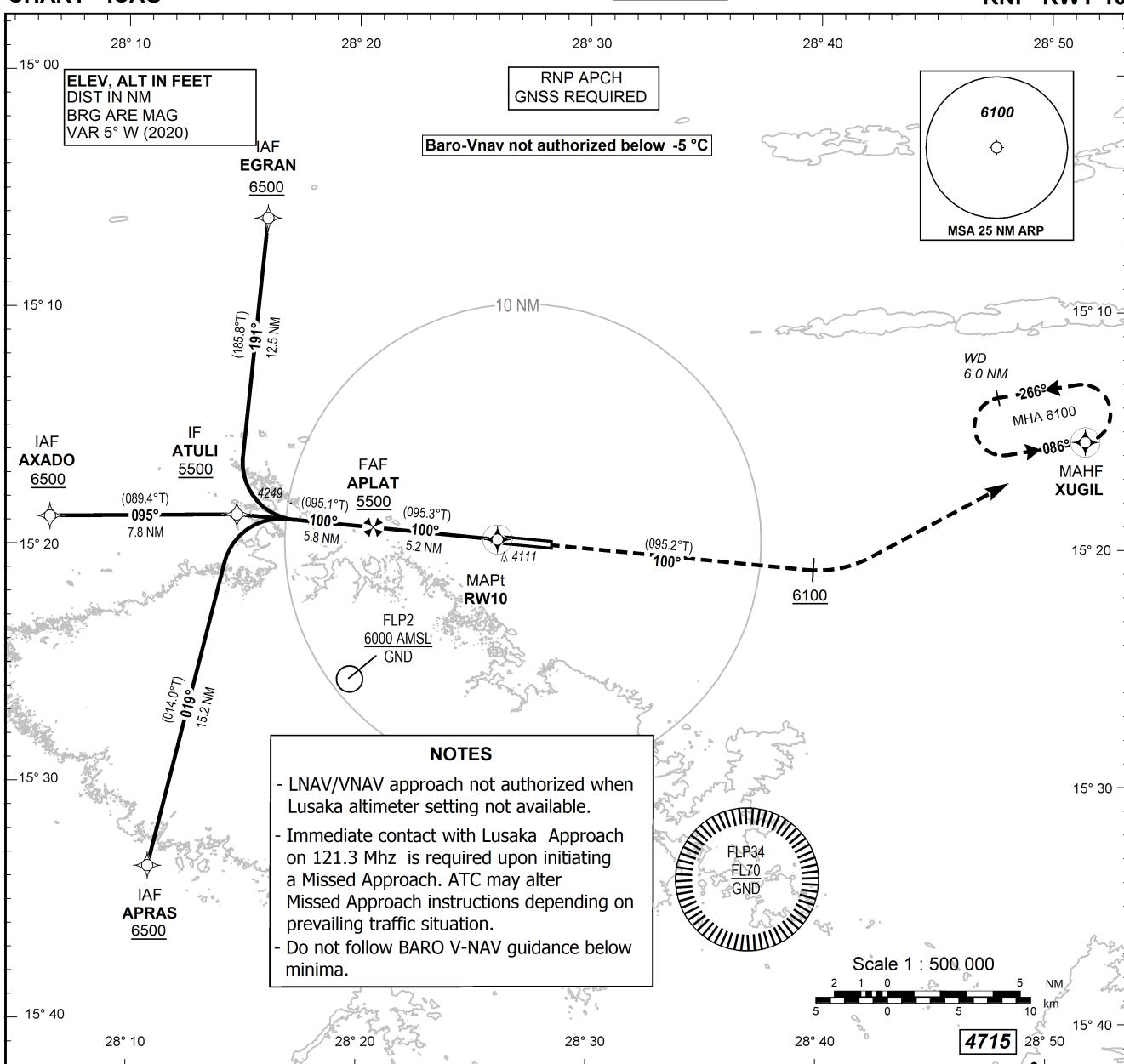
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**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 3780 FT  
HEIGHTS RELATED TO  
AD ELEV**

APP	121.300
	120.100
TWR	118.100

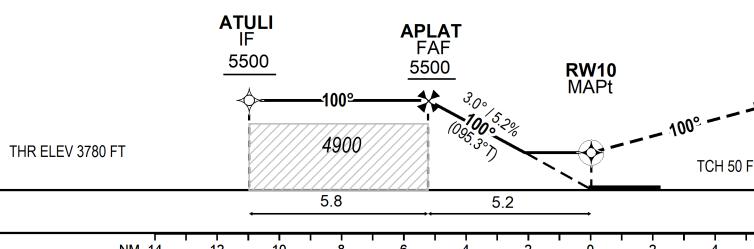
**KENNETH KAUNDA INTL/Lusaka  
(FLKK)  
RNP RWY 10**



DISTANCE to THR 10	5.2	4	3	2	1.5	-	-
ADVISORY ALT (HGT)	5500 (1720)	5100 (1320)	4790 (1010)	4470 (690)	4320 (540)	-	-

TRANSITION ALT 6000

**MISSSED APPROACH:**  
Climb to 6100 FT on course 100°, then direct to XUGIL and hold.



OCA (OCH) CMV (m)	A	B	C	D
Straight-in Approach	LNAV / VNAV	4280 (500)	2300	
Straight-in Approach	LNAV	4320 (540)	2400	
CIRCLING VIS (m)	4460 (680)	4540 (760)	4830 (1050)	4840 (1060)
	3100	3500	4900	

GS (kt)	-	-	-	-	-
FAF to MAPt	-	-	-	-	-
ROD (fpm)	-	-	-	-	-

Timing not authorized for defining the MAPt

<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	EGRAN	-	-	-	-	+6500	-	-	RNP APCH
020	TF	ATULI	-	191 / (185.8)	12.5	-	+5500	-	-	RNP APCH
<hr/>										
010	IF	APRAS	-	-	-	-	+6500	-	-	RNP APCH
020	TF	ATULI	-	019 / (014.0)	15.2	-	+5500	-	-	RNP APCH
<hr/>										
010	IF	AXADO	-	-	-	-	+6500	-	-	RNP APCH
020	TF	ATULI	-	095 / (089.4)	7.8	-	+5500	-	-	RNP APCH
<hr/>										
030	TF	APLAT	-	100 / (095.1)	5.8	-	+5500	-	-	RNP APCH
040	TF	RW10	Y	100 / (095.3)	5.2	-	@3830	-	-3.00 / 50	RNP APCH
050	CA	-	-	100 / (095.2)	-	-	+6100	-	-	RNP APCH
060	DF	XUGIL	Y	-	-	-	+6100	-	-	RNP APCH
070	HM	XUGIL	Y	086 / (080.7)	6.0	L	+6100	-230	-	RNP APCH

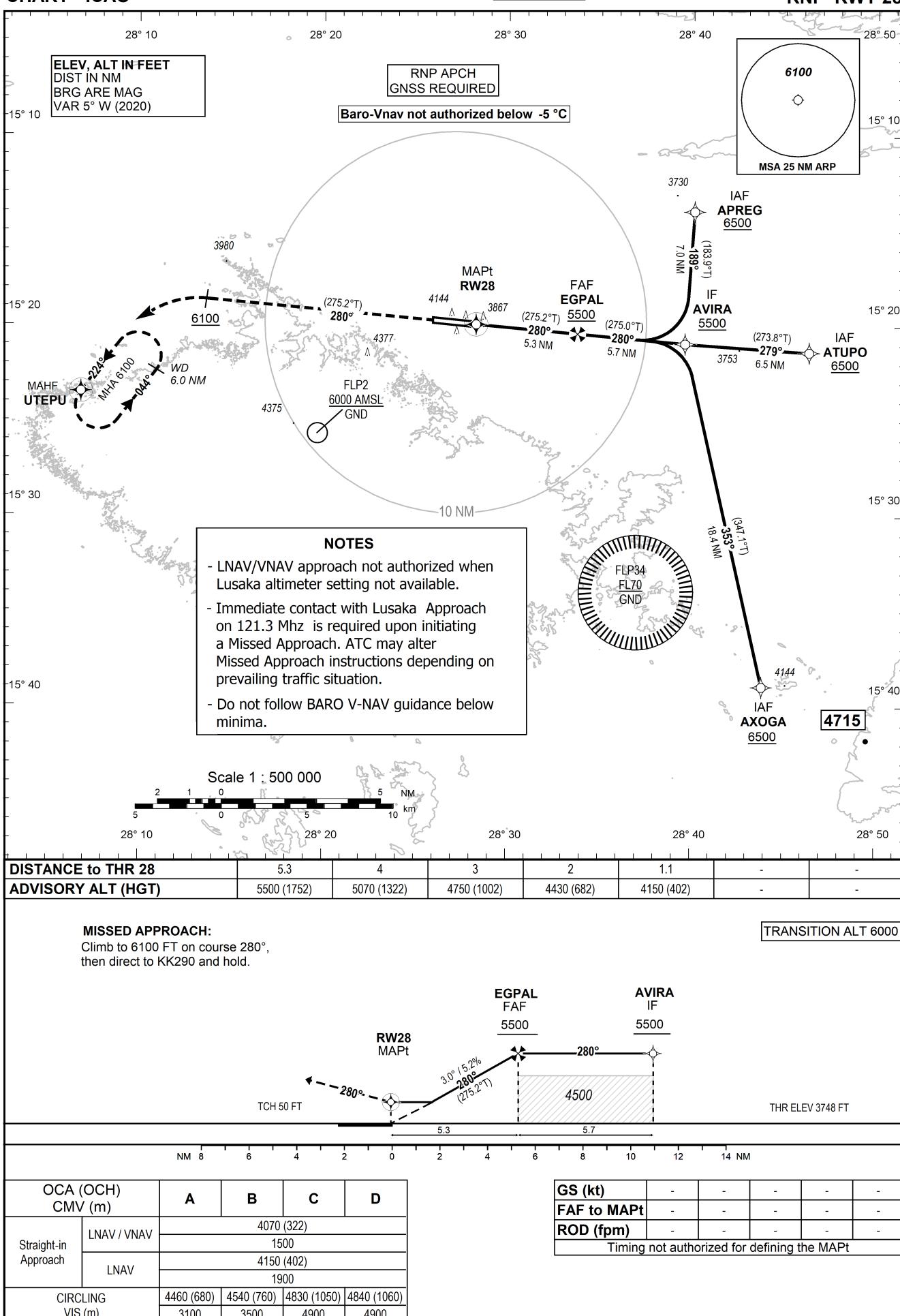
<i>Waypoint Identifier</i>	<i>Coordinates</i>
APLAT	S 15 19 15.9 E 028 20 39.2
APRAS	S 15 33 33.8 E 028 10 55.0
ATULI	S 15 18 45.2 E 028 14 43.6
AXADO	S 15 18 50.6 E 028 06 36.8
EGRAN	S 15 06 15.1 E 028 16 01.4
XUGIL	S 15 15 28.0 E 028 51 32.5
RW10	S 15 19 44.82 E 028 26 03.25

INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 3780 FT  
HEIGHTS RELATED TO  
THR RWY 28 - ELEV 3748 FT

APP 121.300  
120.100  
TWR 118.100

KENNETH KAUNDA INTL/Lusaka  
(FLKK)  
RNP RWY 28



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	AXOGA	-	-	-	-	+6500	-	-	RNP APCH
020	TF	AVIRA	-	353 / (347.1)	18.4	-	+5500	-	-	RNP APCH
010	IF	ATUPO	-	-	-	-	+6500	-	-	RNP APCH
020	TF	AVIRA	-	279 / (273.8)	6.5	-	+5500	-	-	RNP APCH
010	IF	APREG	-	-	-	-	+6500	-	-	RNP APCH
020	TF	AVIRA	-	189 / (183.9)	7.0	-	+5500	-	-	RNP APCH
030	TF	EGPAL	-	280 / (275.0)	5.7	-	+5500	-	-	RNP APCH
040	TF	RW28	Y	280 / (275.2)	5.3	-	@3798	-	-3.00 / 50	RNP APCH
050	CA	-	-	280 / (275.2)	-	-	+6100	-	-	RNP APCH
060	DF	UTEPU	Y	-	-	-	+6100	-	-	RNP APCH
070	HM	UTEPU	Y	224 / (218.3)	6.0	L	+6100	-230	-	RNP APCH

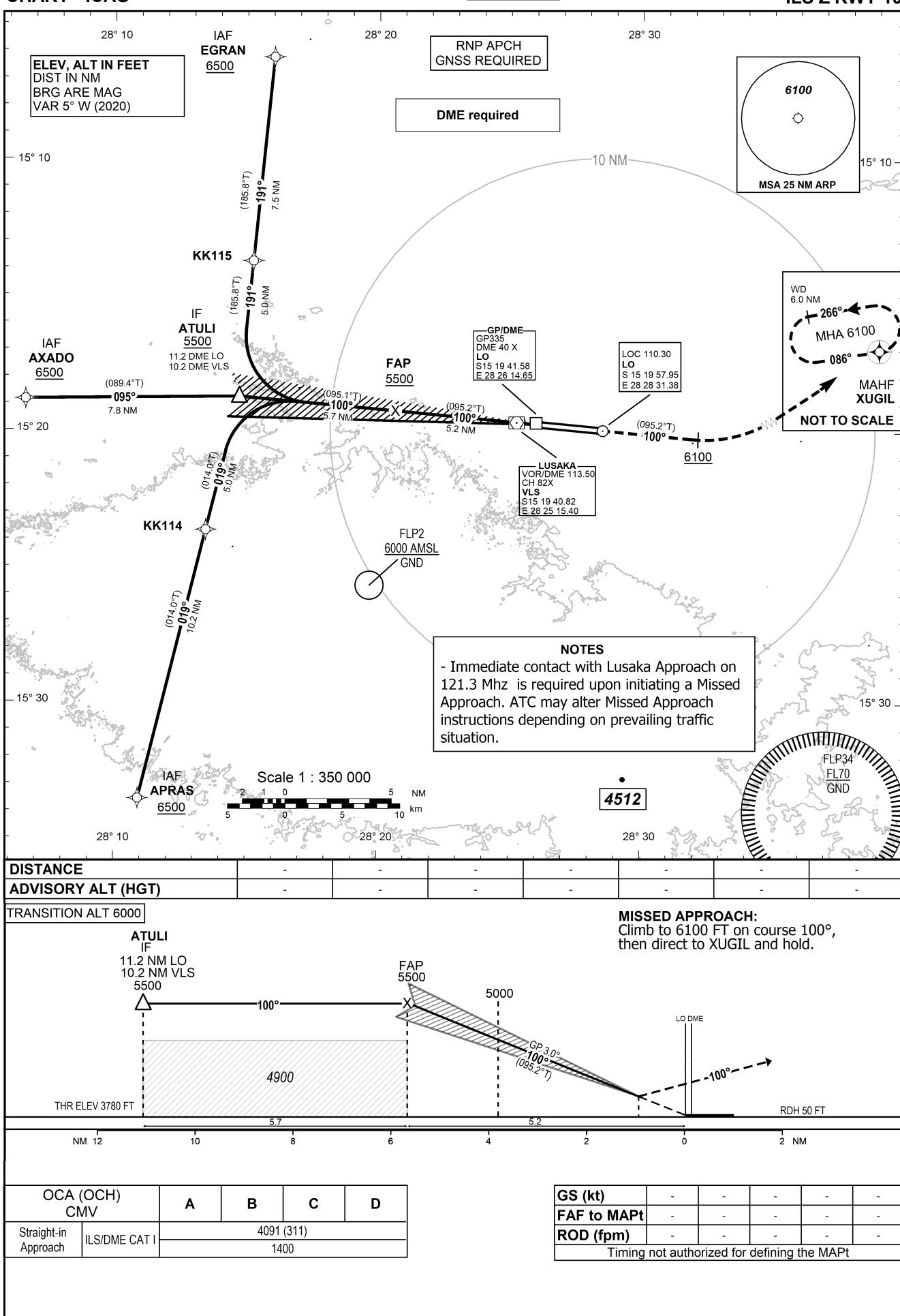
<i>Waypoint Identifier</i>	<i>Coordinates</i>
APREG	S 15 13 58.0 E 028 40 05.4
ATUPO	S 15 21 21.7 E 028 46 20.0
AVIRA	S 15 20 55.8 E 028 39 35.8
AXOGA	S 15 38 57.6 E 028 43 50.8
EGPAL	S 15 20 25.9 E 028 33 46.0
UTEPU	S 15 23 30.3 E 028 06 15.3
RW28	S 15 19 56.58 E 028 28 15.53

INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 3780 FT  
HEIGHTS RELATED TO  
THR RWY 10 - ELEV 3780 FT

APP 121.300  
TWR 118.100

KENNETH KAUNDA INTL/Lusaka  
(FLKK)  
ILS Z RWY 10



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	EGRAN	-	-	-	-	+6500	-	-	RNP APCH
020	TF	KK115	-	191 / (185.8)	7.5	-	+5500	-	-	RNP APCH
030	TF	ATULI	-	191 / (185.8)	5.0	-	+5500	-	-	RNP APCH
010	IF	APRAS	-	-	-	-	+6500	-	-	RNP APCH
020	TF	KK114	-	019 / (014.0)	10.2	-	+5500	-	-	RNP APCH
030	TF	ATULI	-	019 / (014.0)	5.0	-	+5500	-	-	RNP APCH
010	IF	AXADO	-	-	-	-	+6500	-	-	RNP APCH
020	TF	ATULI	-	095 / (089.4)	7.8	-	+5500	-	-	RNP APCH
040	IF	ATULI	-	-	-	-	+5500	-	-	RNP APCH
050	CF	FAP	Y	100 / (095.2)	5.8	-	+5500	-	-	-
060	CF	RW10	Y	100 / (095.2)	5.2	-	@3830	-	-3.00 / 50	-
070	CA	-	-	100 / (095.2)	15.2	-	+6100	-	-	RNP APCH
080	DF	XUGIL	Y	-	11.9	-	+6100	-	-	RNP APCH
090	HM	XUGIL	Y	086 / (080.7)	6.0	L	+6100	-230	-	RNP APCH

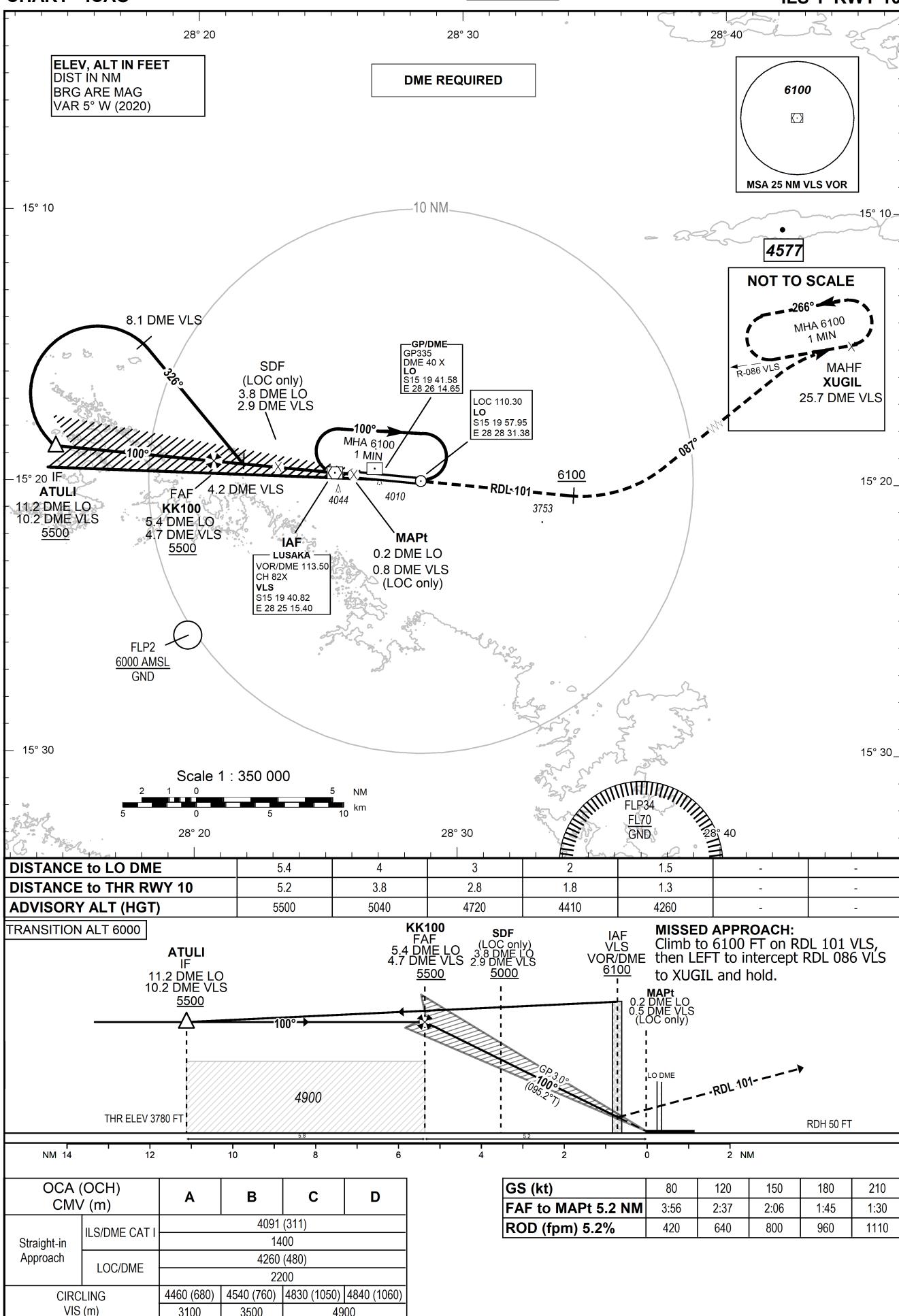
<i>Waypoint Identifier</i>	<i>Coordinates</i>
RW10	S 15 19 44.82 E 28 26 03.25
APRAS	S 15 33 33.8 E 028 10 55.0
ATULI	S 15 18 45.2 E 028 14 43.6
AXADO	S 15 18 50.6 E 028 06 36.8
EGRAN	S 15 06 15.1 E 028 16 01.4
FAP	S 15 19 16.0 E 028 20 39.1
XUGIL	S 15 15 28.0 E 028 51 32.5
KK114	S 15 23 37.5 E 028 13 28.4
KK115	S 15 13 45.5 E 028 15 14.7

INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 3780 FT  
HEIGHTS RELATED TO  
THR RWY 10 - ELEV 3780 FT

APP	121.300
	120.100
TWR	118.100

KENNETH KAUNDA INTL/Lusaka  
(FLKK)  
ILS Y RWY 10



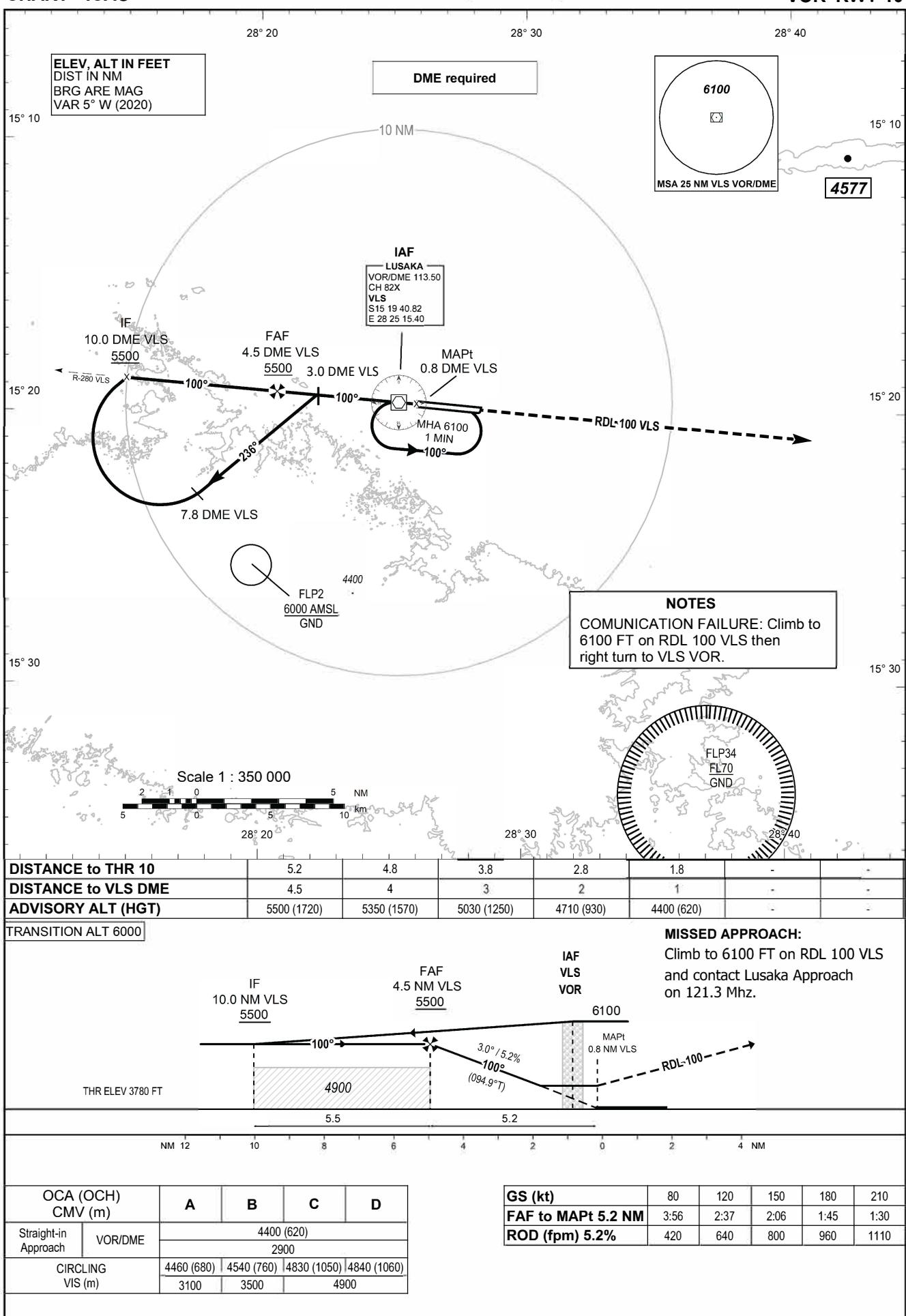
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APPROACH  
CHART - ICAO

AERODROME ELEV 3780 FT  
HEIGHTS RELATED TO  
AD ELEV

APP 121.300  
120.100  
TWR 118.100

KENNETH KAUNDA INTL/Lusaka  
(FLKK)  
VOR RWY 10



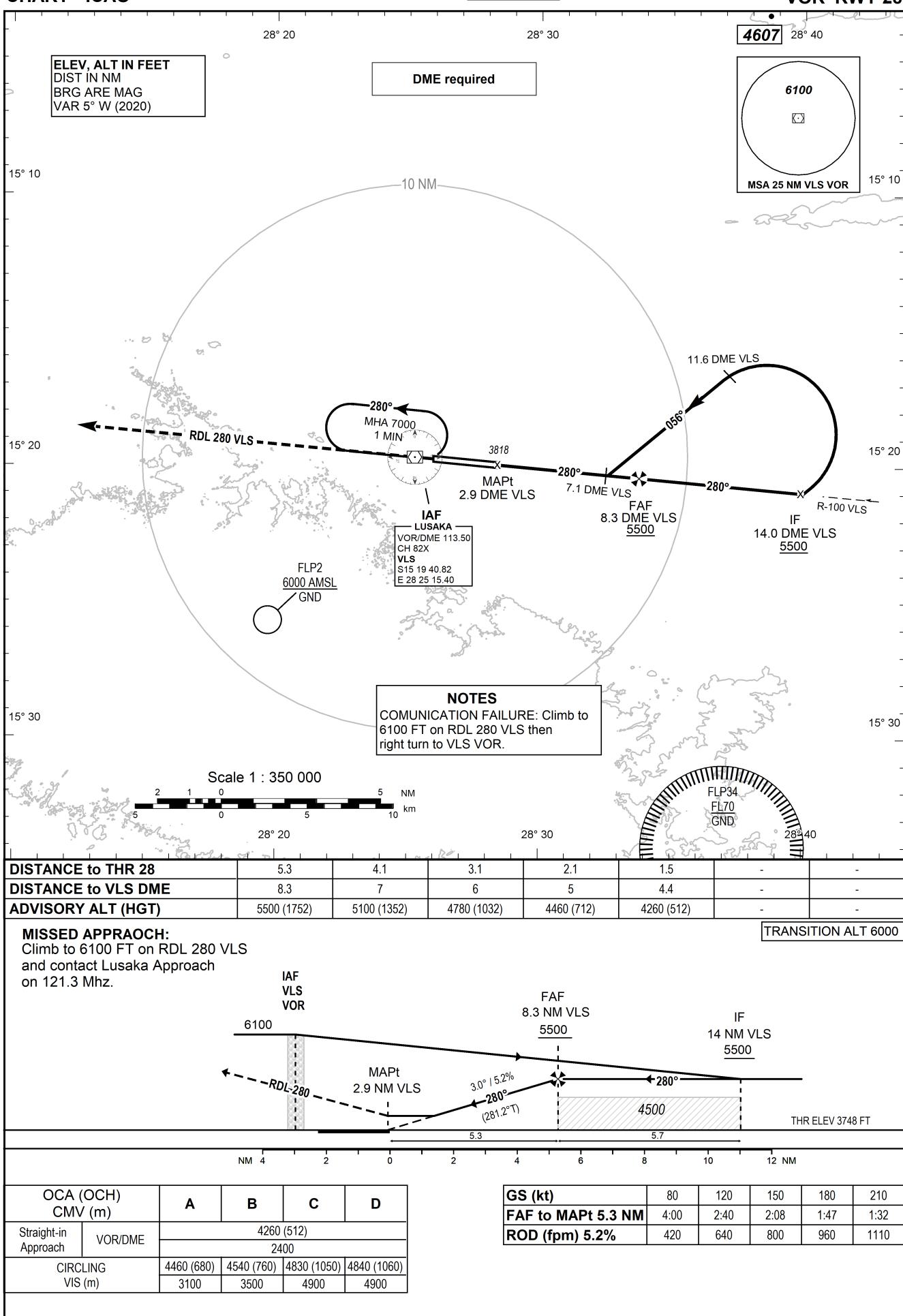
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APPROACH  
CHART - ICAO

AERODROME ELEV 3780 FT  
HEIGHTS RELATED TO  
THR RWY 28 - ELEV 3748 FT

APP	121.300
	120.100
TWR	118.100

KENNETH KAUNDA INTL/Lusaka  
(FLKK)  
VOR RWY 28



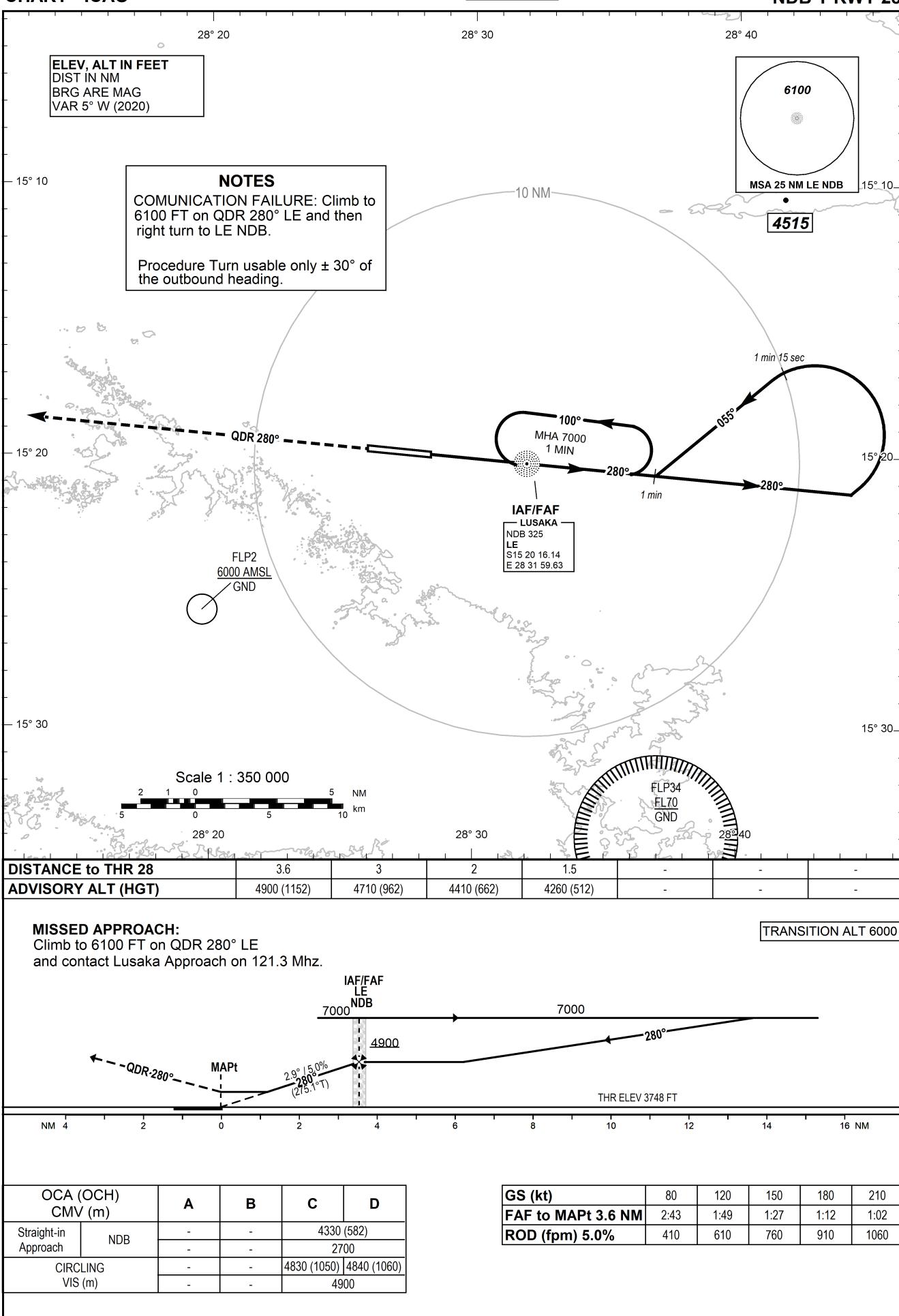
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INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 3780 FT  
HEIGHTS RELATED TO  
THR RWY 28 - ELEV 3748 FT

APP	121.300
	120.100
TWR	118.100

KENNETH KAUNDA INTL/Lusaka  
(FLKK)  
NDB Y RWY 28



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**FLKS AD 2.1 AERODROME LOCATION INDICATOR AND NAME**  
**FLKS - KASAMA**

**FLKS AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

1	<i>ARP coordinates and site at AD</i>	S 10°13'07.00" E 031°08'06.60" Nil
2	<i>Direction and distance from (city)</i>	Nil
3	<i>Elevation/Reference temperature</i>	Elev: 4576.8 FT (1395 M) / T: Nil
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	2° W ( 2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited 410189 Kasama Tel: +260 -950- 707407 AFS: FLKSZPZX
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

**FLKS AD 2.3 OPERATIONAL HOURS**

1	<i>AD Administration</i>	0600-1500
2	<i>Customs and immigration</i>	On Request
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	Nil
8	<i>Fuelling</i>	Nil
9	<i>Handling</i>	Nil
10	<i>Security</i>	Nil
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

**FLKS AD 2.4 HANDLING SERVICES AND FACILITIES**

**FLKS AD 2.5 PASSENGER FACILITIES**

**FLKS AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	<i>AD category for fire fighting</i>	Within AD HR : CAT 4
2	<i>Rescue equipment</i>	YES; 2 fire tenders, 1 Ambulance, 9 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

**FLKS AD 2.7 SEASONAL AVAILABILITY**

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

**FLKS AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA**

**FLKS AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS**

**FLKS AD 2.10 AERODROME OBSTACLES**

<i>In circling area and at AD</i>		
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c
NOTE: Nil		

**FLKS AD 2.11 METEOROLOGICAL INFORMATION PROVIDED**

1	<i>Associated MET Office</i>	Kasama
2	<i>Hours of service MET Office outside hours</i>	0600-1500
3	<i>Office responsible for TAF preparation Period of validity</i>	Kenneth Kaunda International Airport As required by flights
4	<i>Trend forecast Interval of issuance</i>	Metar - Speci 2 HR
5	<i>Briefing/consultation provided</i>	Prior notice required
6	<i>Flight documentation Language(s) used</i>	Nil
7	<i>Charts and other information available for briefing or consultation</i>	Provided in tabular form for domestic flights only
8	<i>Supplementary equipment available for providing information</i>	Nil
9	<i>ATS units provided with information</i>	Kasama FIS
10	<i>Additional information (limitation of service, etc.)</i>	Nil

**FLKS AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS**

<i>Designations RWY</i>	<i>TRUE &amp; MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
13	128°(True) 130°(Mag)	2008 x 24	SIWL 9500 KG SWY: Nil	S 10°12'08.00" E 031°07'07.00" GUND: Nil	THR 4498 FT (1371 M)	
31	308°(True) 310°(Mag)	2008 x 24	SIWL 9500 KG SWY: Nil	S 10°13'00.00" E 031°08'16.00" GUND: Nil	THR 4536 FT (1383 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 13: Nil	Nil	240 x 250	2650 x 250	Nil	Nil	Nil
For Rwy 31: Nil	Nil	240 x 250	2650 x 250	Nil	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
13						
31						

**FLKS AD 2.13 DECLARED DISTANCES**

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
13	1874	2114	1874	1874	

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
31	1874	2114	1874	1874	

### FLKS AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
13	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
31	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

### FLKS AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

### FLKS AD 2.16 HELICOPTER LANDING AREA

As guided by AFIS

### FLKS AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	KASAMA ATZ Circular area centered on S 10°12'30" E 031°08'25" (NDB KS) within a 10NM radius.
2	Vertical limits	GND to 6000 FT AMSL
3	Airspace classification	G
4	ATS unit call sign Language(s)	Kasama Radio, English
5	Transition altitude	6000 FT (1829 M)
6	Hours of applicability	0600-1500
7	Remarks	Nil

### FLKS AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
AFIS	Kasama Radio	118.3 MHZ 6952.0 KHZ	HJ	Nil	Nil	Primary Freq. Secondary Freq.

### FLKS AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB (03° W)	KS	367.00 KHZ	H24	S 10°12'59.10" E 031°08'22.14"	—	Power output 100w Coverage 50NM

### FLKS AD 2.20 LOCAL AERODROME REGULATIONS

#### FLKS 2.20.1 Aerodrome Regulations

At Kasama Airport a number of local regulations apply.

The regulations are listed below:

- a. Information about aircraft stands including visual docking guidance systems;

- b. Information about taxiing from aircraft stands including taxi clearance;
- c. Limitations in the operation of large aircraft including limitations in the use of the aircraft own power for taxiing;
- d. Towing assistance;
- e. Use of engine power exceeding idle power;
- f. Engine start-up and use of APU;
- g. Fuel spillage;

When a local regulation is of importance for the safe operation of aircraft on the apron, the information will be given by the TWR (AFIS).

"Local Regulations" may be requested , in writing from:

Officer in Charge  
Kasama Airport

### **FLKS AD 2.21 NOISE ABATEMENT PROCEDURES**

### **FLKS AD 2.22 FLIGHT PROCEDURES**

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules.

Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

### **FLKS AD 2.23 ADDITIONAL INFORMATION**

### **FLKS AD 2.24 CHARTS RELATED TO AN AERODROME**

**FLMA AD 2.1 AERODROME LOCATION INDICATOR AND NAME**  
**FLMA - MANSA**

**FLMA AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

1	<i>ARP coordinates and site at AD</i>	S 11°08'19.60" E 028°52'40.50" Nil
2	<i>Direction and distance from (city)</i>	Nil
3	<i>Elevation/Reference temperature</i>	Elev: 4106.28 FT (1252 M) / T: 30.9° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	8° W ( 2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited Tel: +260 - 950-707423 AFS: FLMAZPZX
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

**FLMA AD 2.3 OPERATIONAL HOURS**

1	<i>AD Administration</i>	0600-1500
2	<i>Customs and immigration</i>	On Request
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	Nil
8	<i>Fuelling</i>	Nil
9	<i>Handling</i>	Nil
10	<i>Security</i>	Nil
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

**FLMA AD 2.4 HANDLING SERVICES AND FACILITIES**

**FLMA AD 2.5 PASSENGER FACILITIES**

**FLMA AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	<i>AD category for fire fighting</i>	Within AD HR: CAT 4
2	<i>Rescue equipment</i>	YES; 1 fire tender, 1 Ambulance, 9 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

**FLMA AD 2.7 SEASONAL AVAILABILITY**

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

**FLMA AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA**

**FLMA AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS**

**FLMA AD 2.10 AERODROME OBSTACLES**

<i>In circling area and at AD</i>		
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c
NOTE: Nil		

**FLMA AD 2.11 METEOROLOGICAL INFORMATION PROVIDED**

1	<i>Associated MET Office</i>	Mansa
2	<i>Hours of service MET Office outside hours</i>	0600-1500
3	<i>Office responsible for TAF preparation Period of validity</i>	Kenneth Kaunda International Airport As required by flights
4	<i>Trend forecast Interval of issuance</i>	Metar - Speci 2 HR
5	<i>Briefing/consultation provided</i>	Prior notice required
6	<i>Flight documentation Language(s) used</i>	Nil
7	<i>Charts and other information available for briefing or consultation</i>	Provided in tabular form for domestic flights only
8	<i>Supplementary equipment available for providing information</i>	Nil
9	<i>ATS units provided with information</i>	Mansa FIS
10	<i>Additional information (limitation of ser- vice, etc.)</i>	Nil

**FLMA AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS**

<i>Designa- tions RWY</i>	<i>TRUE &amp; MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of preci- sion APP RWY</i>	
1	2	3	4	5	6	
10	099°(True) 000°(Mag)	1616 x 18	SIWL 9500 KG SWY: Nil	S 11°08'17.46" E 028°52'03.00" GUND: Nil	THR 4106.89 FT (1252 M)	
28	279°(True) 000°(Mag)	1616 x 18	SIWL 9500 KG SWY: Nil	S 11°08'17.31" E 028°52'56.25" GUND: Nil	THR 4105.66 FT (1251 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimen- sions (M)</i>	<i>CWY dimen- sions (M)</i>	<i>Strip dimen- sions (M)</i>	<i>RESA dimen- sions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 10: Nil	Nil	Nil	Nil	Nil	Nil	Nil
For Rwy 28: Nil	Nil	Nil	Nil	Nil	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
10						
28						

**FLMA AD 2.13 DECLARED DISTANCES**

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
10	1616	1616	1616	1616	

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
28	1616	1616	1616	1616	

### FLMA AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
10	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
28	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

### FLMA AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

### FLMA AD 2.16 HELICOPTER LANDING AREA

As guided by ATC

### FLMA AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	MANSA ATZ Circular area centered on S 11°08'20" E 028°52'41" within a 10NM radius.
2	Vertical limits	GND to 6000 FT AMSL
3	Airspace classification	G
4	ATS unit call sign Language(s)	Mansa Radio, English
5	Transition altitude	6000 FT (1829 M)
6	Hours of applicability	0600 - 1500
7	Remarks	Nil

### FLMA AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
AFIS	Mansa Radio	118.3 MHZ 6952.0 KHZ	0600 - 1500	Nil	Nil	Primary Freq. Secondary Freq

### FLMA AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB (04° W)	MA	316.00 KHZ	H24	S 11°07'27.00" E 028°51'46.20"	—	Power output 1kw Coverage 200NM

### FLMA AD 2.20 LOCAL AERODROME REGULATIONS

#### FLMA 2.20.1 Aerodrome Regulations

At Mansa Airport a number of local regulations apply.

The regulations are listed below:

- a. Information about aircraft stands including visual docking guidance systems;

- b. Information about taxiing from aircraft stands including taxi clearance;
- c. Limitations in the operation of large aircraft including limitations in the use of the aircraft own power for taxiing;
- d. Towing assistance;
- e. Use of engine power exceeding idle power;
- f. Engine start-up and use of APU;
- g. Fuel spillage;

When a local regulation is of importance for the safe operation of aircraft on the apron, the information will be given by the TWR (AFIS).

"Local Regulations" may be requested , in writing from:  
 Officer in Charge  
 Mansa Airport

### **FLMA AD 2.21 NOISE ABATEMENT PROCEDURES**

### **FLMA AD 2.22 FLIGHT PROCEDURES**

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules.

Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

### **FLMA AD 2.23 ADDITIONAL INFORMATION**

### **FLMA AD 2.24 CHARTS RELATED TO AN AERODROME**

<i>Charts</i>	<i>Pages</i>
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 10-28	AD 2 FLMA 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLMA 6 - 1

**FLMF AD 2.1 AERODROME LOCATION INDICATOR AND NAME**  
**FLMF - MFUWE**

**FLMF AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

1	<i>ARP coordinates and site at AD</i>	S 13°15'29.90" E 031°56'23.30" Nil
2	<i>Direction and distance from (city)</i>	North-West of Chipata Town/119Km
3	<i>Elevation/Reference temperature</i>	Elev: 1844 FT (562 M) / T: 36.3° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	8° W ( 2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited Mfuwe P.O. Box 2 Mfuwe Zambia Tel: 260-216-245006, 245083, 245142 Fax: 260-216-245029 AFS: FLMFZPZX eMail: zaclmf@zacl.aero Website: www.zacl.co.zm
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

**FLMF AD 2.3 OPERATIONAL HOURS**

1	<i>AD Administration</i>	0500-1600 and O/R
2	<i>Customs and immigration</i>	As AD Administration
3	<i>Health and sanitation</i>	First aid as AD Administration
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	As AD Administration
9	<i>Handling</i>	As AD Administration
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

**FLMF AD 2.4 HANDLING SERVICES AND FACILITIES**

1	<i>Cargo-handling facilities</i>	Nil
2	<i>Fuel/oil types</i>	Fuel : A1 , AVGAS_LL , AVTUR Oil : All types normally available.
3	<i>Fuelling facilities/capacity</i>	Two(2) fixed containers
4	<i>De-icing facilities</i>	Nil
5	<i>Hangar space for visiting aircraft</i>	Nil
6	<i>Repair facilities for visiting aircraft</i>	Nil
7	<i>Remarks</i>	Nil

**FLMF AD 2.5 PASSENGER FACILITIES**

1	<i>Hotels</i>	Lodges and rest rooms near by
2	<i>Restaurants</i>	Restaurant/Cafe at AD
3	<i>Transportation</i>	Buses by tour operations to the National park
4	<i>Medical facilities</i>	First aid at AD
5	<i>Bank and Post Office</i>	In Terminal Building
6	<i>Tourist Office</i>	At AD
7	<i>Remarks</i>	Nil

### FLMF AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	Within AD HR: CAT 4
2	<i>Rescue equipment</i>	YES, 1 Tender, 1 Ambulance, 9 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

### FLMF AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

### FLMF AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>
		FLMF Apron	Concrete	PCN 48/F/A/W/T
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Designator of TWY</i>	<i>Width</i>	<i>Surface</i>
		FLMF Twy	23 M	PCN 45/F/A/W/T
3	<i>Altimeter checkpoint location and elevation</i>	Location: At apron Elevation: 1847 feet		
4	<i>VOR/INS checkpoints</i>	VOR: Holding Bay INS: Apron THR RWY 09/27		
5	<i>Remarks</i>	Nil		

### FLMF AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	Taxiing guidance signs at all intersections with TWY and RWY AND at all holding positions. Guide lines at apron. Nose- in guidance at aircraft stands
2	<i>RWY and TWY markings and LGT</i>	RWY: Designation, THR, TDZ, centre line, edge runway end as appropriate, marked. TWY: Centre line, holding positions and at all TWY/RWY intersections marked.
3	<i>Stop bars</i>	NIL
4	<i>Remarks</i>	Nil

### FLMF AD 2.10 AERODROME OBSTACLES

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
09/APCH	FLMF_2195 Elev: 1925 FT (586.604 M) Unlighted	S 13°15'38.94" E 031°55'24.93"	Nil
09/APCH	FLMF_2647 Elev: 573.798 m Unlighted	S 13°15'34.89" E 031°55'22.88"	Nil
09/TKOF	FLMF_895 Elev: 589.087 m Unlighted	S 13°15'24.07" E 031°57'55.73"	Nil

In approach/TKOF areas			
RWY/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Remarks
a	b	c	d
09/TKOF	FLMF_977 Elev: 584.358 m Unlighted	S 13°15'17.58" E 031°57'35.84"	Nil
27/APCH	FLMF_1080 Elev: 2018 FT (615.086 M) Unlighted	S 13°15'25.89" E 031°57'18.51"	Nil
27/APCH	FLMF_1347 Elev: 575.262 m Unlighted	S 13°15'22.08" E 031°57'08.21"	Nil
27/APCH	FLMF_1402 Elev: 578.863 m Unlighted	S 13°15'19.08" E 031°57'01.60"	Nil
27/APCH	FLMF_1529 Elev: 573.166 m Unlighted	S 13°15'29.17" E 031°56'59.90"	TotalAreaofObjectis100334.139m <sup>2</sup> _asthe-maximumsizeoftheObstacle_withthispointtheHighestPointofObject
27/APCH	FLMF_1530 Elev: 576.595 m Unlighted	S 13°15'23.54" E 031°56'56.67"	TotalAreaofObjectis53282.387m <sup>2</sup> _asthe-maximumsizeoftheObstacle_withthispointtheHighestPointofObject
27/APCH	FLMF_3358 Elev: 568.35 m Unlighted	S 13°15'29.34" E 031°56'49.59"	Nil
27/APCH	FLMF_3373 Elev: 570.719 m Unlighted	S 13°15'24.81" E 031°56'49.49"	TotalAreaofObjectis123.621m <sup>2</sup> _asthe-maximumsizeoftheObstacle_withthispointtheHighestPointofObject
27/APCH	FLMF_968 Elev: 584.624 m Unlighted	S 13°15'28.79" E 031°57'22.54"	Nil
27/TKOF	FLMF_2887 Elev: 577.395 m Unlighted	S 13°15'39.03" E 031°54'55.52"	Nil
In circling area and at AD			
Obstacle type Elevation Markings/LGT	Coordinates		Remarks
a	b	c	
NOTE: Nil			

#### FLMF AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Mfuwe
2	Hours of service MET Office outside hours	0400 –1600
3	Office responsible for TAF preparation Period of validity	Mfuwe 2 HR

4	<i>Trend forecast Interval of issuance</i>	TREND METAR, SPECI 2 HR
5	<i>Briefing/consultation provided</i>	Personal briefing and consultation
6	<i>Flight documentation Language(s) used</i>	Charts, abbreviated plain language text English
7	<i>Charts and other information available for briefing or consultation</i>	Cross section form of forecasts, charts and tables of documentation for both international and domestic flights.
8	<i>Supplementary equipment available for providing information</i>	Self briefing terminal
9	<i>ATS units provided with information</i>	FLMF MET Briefing Office
10	<i>Additional information (limitation of service, etc.)</i>	Nil

**FLMF AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS**

<i>Designations RWY</i>	<i>TRUE &amp; MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
09	083°(True) 088°(Mag)	2189 x 30	PCN 45/F/A/W/T SWY: Nil	S 13°15'36.73" E 031°55'35.08" GUND: Nil	THR 1841 FT (561 M)	
27	263°(True) 268°(Mag)	2189 x 30	PCN 45/F/A/W/T SWY: Nil	S 13°15'27.67" E 031°56'47.22" GUND: Nil	THR 1844 FT (562 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 09: +1.2%	Nil	900 x 400	2459 x 140	Nil	Nil	Nil
For Rwy 27: +1.2%	150 x 30	748 x 400	2459 x 140	Nil	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1				14		
09						
27						

**FLMF AD 2.13 DECLARED DISTANCES**

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
09	2189	3089	2189	2189	
27	2189	2937	2339	2189	

**FLMF AD 2.14 APPROACH AND RUNWAY LIGHTING**

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
09	Nil	Green nil wbar	PAPI	Nil	Nil	60 M White	Red	Nil	Nil
27	Nil	Green nil wbar	Nil	Nil	Nil	60 M White	Red	Nil	Nil

### FLMF AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

### FLMF AD 2.16 HELICOPTER LANDING AREA

As guided by ATC

### FLMF AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	MFUWE CTR Circular area centered on S 13°15'37" E 031°54'54" within a 25NM radius.
2	Vertical limits	GND to FL75
3	Airspace classification	C
4	ATS unit call sign Language(s)	Mfuwe Approach, English Mfuwe TWR, English
5	Transition altitude	5000 FT (1524 M)
6	Hours of applicability	
7	Remarks	Secondary power supply available with 15seconds changeover time

### FLMF AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
Approach Control	Mfuwe Approach	120.7 MHZ	0500 - 1600	Nil	Nil	VDF available
Tower Control	Mfuwe TWR	118.3 MHZ	0500 - 1600	Nil	Nil	

### FLMF AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB (04° W)	MF	401.00 KHZ	H24	S 13°15'48.09" E 031°54'05.12"	—	Power output 125w Coverage 60NM
VOR/DME (04° W)	VMF	112.90 MHZ (CH76X)	H24	S 13°15'42.79" E 031°54'48.72"	1851 FT	co-axially co-located with DME

### FLMF AD 2.20 LOCAL AERODROME REGULATIONS

#### FLMF AD 2.20.1 Airport regulations

At Mfuwe Airport a number of local regulations apply. The regulations are listed below:

- a. Information about aircraft stands including visual docking guidance systems;
- b. Information about taxiing from aircraft stands including taxi clearance;
- c. Marshaller assistance and towing assistance;
- d. Use of engine power exceeding idle power;
- e. Engine start-up and use of APU
- f. Fuel spillage; and
- g. Precautions during extreme weather conditions.

Marshaller assistance can be requested and further information about the regulations can be obtained from the Airport Manager. When a local regulation is of importance for the safe operation of aircraft on the apron, the information may be given by Approach. "Local regulations" may be requested, in writing from:

The Airport Manager  
Mfuwe Airport

#### **FLMF AD 2.20.2 Taxiing to and from stands**

Arriving aircraft will be allocated a stand number by the approach. General Aviation aircraft will have to use the general aviation parking area. Departing IFR flight shall contact the Approach to obtain ATC clearance before commencing taxiing. Request for ATC clearance may take place at the earliest 10 minutes prior to engine to engine start-up. Tower FREQ 118.300MHZ shall be used during aerodrome hour of operation. Departing aircraft shall obtain departure clearance and taxi instruction from Mfuwe Approach.

#### **FLMF AD 2.20.3 Parking for small aircraft (General Aviation)**

General Aviation aircraft shall be guided by marshallers to the parking area for small aircraft.

#### **FLMF AD 2.20.4 Parking area for helicopters**

Helicopters parking on the apron will be guided by marshaller or Tower.

#### **FLMF AD 2.20.5 Apron-taxiing during Winter conditions**

Not applicable

#### **FLMF AD 2.20.6 Taxiing-limitation**

Nil

#### **FLMF AD 2.20.7 School and training flights -Technical test flights- Use of runways**

School and training must only be made after permission has been obtained from ATS. Permission will only be granted for such flights subject to departing and arriving traffic.

#### **FLMF AD 2.20.8 Helicopter traffic-limitation**

Non scheduled public air traffic with helicopter is permitted only after prior approval from Mfuwe ATSU. Any contact concerning the above shall be made via the handing or directly to the Airport Office during the hours of service and ,if possible, not later than the day before is to be carried out.

Any request for approval of traffic shall contain the following information:

- a. Owner/operator
- b. Type of helicopter, registration/call sign
- c. Date. Arrival time/departure time, destination(s).
- d. Requested flight altitude
- e. ATS routes to be flown
- f. ATS serviceable communications equipment.

#### **FLMF AD 2.20.9 Removal of disabled aircraft form runways**

When an aircraft is disabled on the runway, it is the duty of the owner or user of such aircraft to have it removed as soon as possible after prior approval from Director General Civil Aviation Authority. If a disabled aircraft is not removed from the runway as quickly as possible by the owner or user, the aircraft will be removed by the aerodrome authority or at the owner's or user's expense.

## FLMF AD 2.21 NOISE ABATEMENT PROCEDURES

TO BE DEVELOPED.

## FLMF AD 2.22 FLIGHT PROCEDURES

### FLMF AD 2.22.1 GENERAL

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules. Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

### FLMF AD 2.22.2 Procedures for IFR flight within Mfuwe TMA and CTR.

The inbound, transit and outbound routes shown on the charts may be varied at the discretion of ATS. If necessary, in case of congestion, inbound aircraft may also be instructed to hold at one of the designated airways, reporting points.

### FLMF AD 2.22.3 Missed approach

Missed approach procedures to be followed in the absence of other ATS instructions are as detailed on the Instrument Approach Chart.

### FLMF AD 2.22.4 Communication failure

In the event of communication failure, the pilot shall act in accordance with the communication failure procedures in ICAO Annex 2.

### FLMF AD 2.22.5 Procedures for VFR flights within Mfuwe TMA and CTR

Provided traffic and weather conditions so permit, ATC clearance for VFR flights will be given under the conditions described below:

- a. A flight plan requesting ATC clearance, containing item 7 to 18 and indicating the purpose of the flight, shall be submitted.
- b. ATC clearance shall be obtained 5 minutes before the aircraft enters the controlled airspace concerned.
- c. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2.
- d. Deviation from the ATC clearance may only be made when prior permission has been obtained.
- e. The flight shall be conducted with Vertical Visual Reference to the ground unless the flight be conducted in accordance the Instrument flight rules.
- f. Two-way radio communication shall be maintained on the frequency prescribed.
- g. The pilot-in-command shall be the holder of an International VHF Licence.

**NOTE:** ATC clearance is intended only to provide separation between IFR and VFR flights.

## FLMF AD 2.23 ADDITIONAL INFORMATION

### FLMF AD 2.23.1 Wildlife Concentration in the vicinity of the Airport

Mfuwe International Airport lies within the Luangwa valley in the Lupande Game Management area. Wild animals are sometimes spotted in the vicinity of the airport but excluded from the airfield by a fence. Bird migration usually occurs during the wet season between November and April when many of the birds are in breeding plumage. As far as practicable aerodrome control will inform pilots of this bird activity and the heights AGL. The aircraft engine noise is not always effective in the clearing of the birds from the landing area, pilots shall exercise extreme caution. Prominent birds around the airport are as tabulated below.

SPECIES	STATUS
Lapwing	Resident
Guinea fowl	Resident
Roller	Resident
Southern ground hornbill	Resident
Black stork	Migrant
Little bee eater	Migrant
White stork	Migrant
Swallow	Migrant
Black headed heron	Migrant

Black stork

Migrant

**FLMF AD 2.23.2 Local flying restrictions**

Departing east-bound IFR aircraft on the A406 Air route must be at FL080 or above by 25NM from Mfuwe VOR. Arriving IFR aircraft on the A406 Air route shall maintain FL080 or above until 25NM to Mfuwe VOR within the terminal area and during take-off, approach-to-land and climb and descent procedures. During the above periods pilots of aircrafts are advised, where the design limitations of aircraft installations permit, to operate landing lights in flight.

**FLMF AD 2.24 CHARTS RELATED TO AN AERODROME**

<i>Charts</i>	<i>Pages</i>
Aerodrome Chart — ICAO	AD 2 FLMF 2 - 1
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 27-09	AD 2 FLMF 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLMF 6 - 1
Standard Departure Chart — In- strument — ICAO RNP RWY 09	AD 2 FLMF 10 - 1
Standard Departure Chart — In- strument — ICAO RNP RWY 27	AD 2 FLMF 10 - 5
Standard Arrival Chart — In- strument — ICAO RNP RWY 09	AD 2 FLMF 12 - 1
Standard Arrival Chart — In- strument — ICAO RNP RWY 27	AD 2 FLMF 12 - 5
Instrument Approach Chart — ICAO RNP RWY 09	AD 2 FLMF 14 - 1
Instrument Approach Chart — ICAO RNP RWY 27	AD 2 FLMF 14 - 3
Instrument Approach Chart — ICAO VOR RWY 09	AD 2 FLMF 14 - 5
Instrument Approach Chart — ICAO VOR RWY 27	AD 2 FLMF 14 - 7

STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO

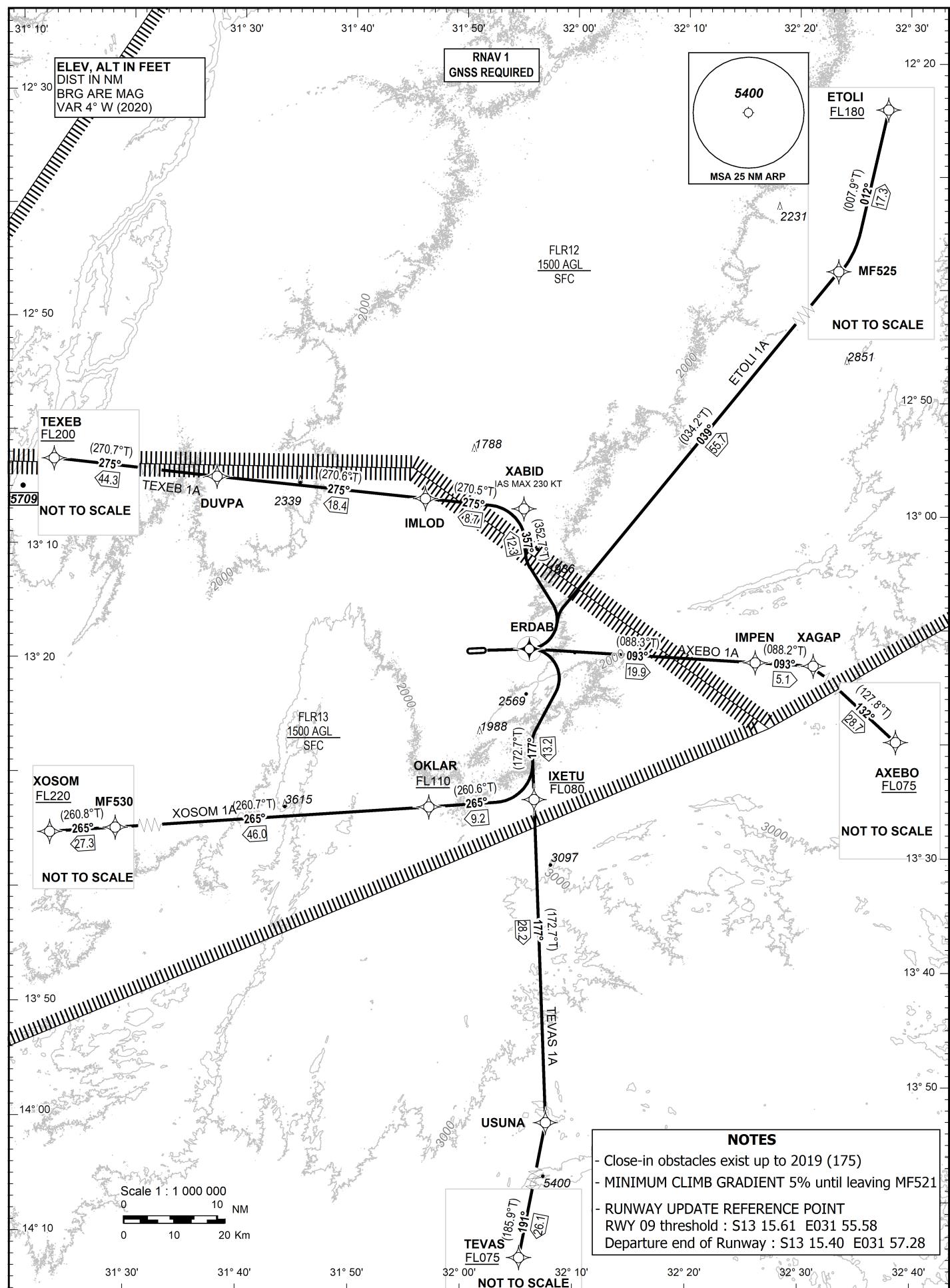
TRANSITION ALTITUDE  
5000

APP 120.700  
TWR 118.300

MFUWE/Mfuwe  
(FLMF)

**RNAV SID RWY 09**

AXEBO 1A, ETOLI 1A, TEVAS 1A, TEXEB 1A, XOSOM 1A



**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**MFUWE/Mfuwe**

(FLMF)

**RNAV SID RWY 09**

AXEBO 1A, ETOLI 1A, TEVAS 1A, TEXEB 1A, XOSOM 1A

**TABULAR DESCRIPTION**

**RNAV SID RWY 09**

**AXEBO 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	ERDAB	Y	087 (082.7)	-4.3	-	-	-	-	5.0	-	RNAV 1
020	TF	IMPEN	-	093 (088.3)	-	19.9	-	-	-	-	-	RNAV 1
030	TF	XAGAP	-	093 (088.2)	-	5.1	-	-	-	-	-	RNAV 1
040	TF	AXEBO	-	132 (127.8)	-	28.7	-	+FL075	-	-	-	RNAV 1

**ETOLI 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	ERDAB	Y	087 (082.7)	-4.3	-	-	-	-	5.0	-	RNAV 1
020	TF	MF525	-	039 (034.2)	-	55.7	-	-	-	-	-	RNAV 1
030	TF	ETOLI	-	012 (007.9)	-	17.3	-	+FL180	-	-	-	RNAV 1

**TEVAS 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	ERDAB	Y	087 (082.7)	-4.3	-	-	-	-	5.0	-	RNAV 1
020	TF	IXETU	-	177 (172.7)	-	13.2	-	-FL080	-	-	-	RNAV 1
030	TF	USUNA	-	177 (172.7)	-	28.2	-	-	-	-	-	RNAV 1
040	TF	TEVAS	-	191 (185.9)	-	26.1	-	+FL075	-	-	-	RNAV 1

**TEXEB 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	ERDAB	Y	087 (082.7)	-4.3	-	-	-	-	5.0	-	RNAV 1
020	TF	XABID	-	357 (352.7)	-	12.3	-	-	-230	-	-	RNAV 1
030	TF	IMLOD	-	275 (270.5)	-	8.7	-	-	-	-	-	RNAV 1
040	TF	DUVPA	-	275 (270.6)	-	18.4	-	-	-	-	-	RNAV 1
050	TF	TEXEB	-	275 (270.7)	-	44.3	-	+FL200	-	-	-	RNAV 1

**XOSOM 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	ERDAB	Y	087 (082.7)	-4.3	-	-	-	-	5.0	-	RNAV 1
020	TF	IXETU	-	177 (172.7)	-	13.2	-	-FL080	-230	-	-	RNAV 1
030	TF	OKLAR	-	265 (260.6)	-	9.2	-	+FL110	-	-	-	RNAV 1
040	TF	MF530	-	265 (260.7)	-	46.0	-	-	-	-	-	RNAV 1
050	TF	XOSOM	-	265 (260.8)	-	27.3	-	+FL220	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO****MFUWE/Mfuwe****(FLMF)****RNAV SID RWY 09**

AXEBO 1A, ETOLI 1A, TEVAS 1A, TEXEB 1A, XOSOM 1A

**WAYPOINT LIST****RNAV SID RWY 09**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
AXEBO	S 13 31 48.0	E 032 49 42.0	MF530	S 13 37 02.5	E 031 06 36.3
ETOLI	S 12 11 30.0	E 032 35 18.0	TEVAS	S 14 22 18.0	E 032 03 30.0
IMLOD	S 13 02 36.4	E 031 50 18.4	TEXEB	S 13 01 48.3	E 030 46 01.2
IMPEN	S 13 14 20.1	E 032 21 14.3	XOSOM	S 13 41 22.9	E 030 38 54.0
ERDAB	S 13 14 57.1	E 032 00 50.4			
XABID	S 13 02 41.3	E 031 59 14.0			
DUVPA	S 13 02 24.0	E 031 31 25.6			
MF525	S 12 28 41.2	E 032 32 52.2			
XAGAP	S 13 14 10.3	E 032 26 27.6			
IXETU	S 13 28 06.7	E 032 02 34.2			
USUNA	S 13 56 12.7	E 032 06 16.3			
OKLAR	S 13 29 37.1	E 031 53 13.3			

**ROUTING**

NAME	TEXT
AXEBO 1A	Minimum climb gradient 5.0% until ERDAB. After take-off climb on course 087° to ERDAB, track 093° to IMPEN, track 093° to XAGAP then track 132° to AXEBO.  MCA/MCL: AXEBO AT or ABOVE FL075.
ETOLI 1A	Minimum climb gradient 5.0% until ERDAB. After take-off climb on course 087° to ERDAB, track 039° to MF525, then track 012° to ETOLI.  MCA/MCL: ETOLI AT or ABOVE FL180.
TEVAS 1A	Minimum climb gradient 5.0% until ERDAB. After take-off climb on course 087° to ERDAB, track 177° to IXETU, track 177° to USUNA, then track 191° to TEVAS.  MCA/MCL: IXETU AT or BELOW FL080, TEVAS AT or ABOVE FL075.
TEXEB 1A	Minimum climb gradient 5.0% until ERDAB. After take-off climb on course 087° to ERDAB, track 357° to XABID, track 275° to IMLOD, track 275° to DUVPA, then track 275° to TEXEB. IAS MAX 230 KT until XABID.  MCA/MCL: TEXEB AT or ABOVE FL200.
XOSOM 1A	Minimum climb gradient 5.0% until ERDAB. After take-off climb on course 087° to ERDAB, track 177° to IXETU, track 265° to OKLAR, track 265° to MF530, then track 265° to XOSOM. IAS MAX 230 KT until IXETU.  MCA/MCL: IXETU AT or BELOW FL080, OKLAR AT or ABOVE FL110, XOSOM AT or ABOVE FL220.

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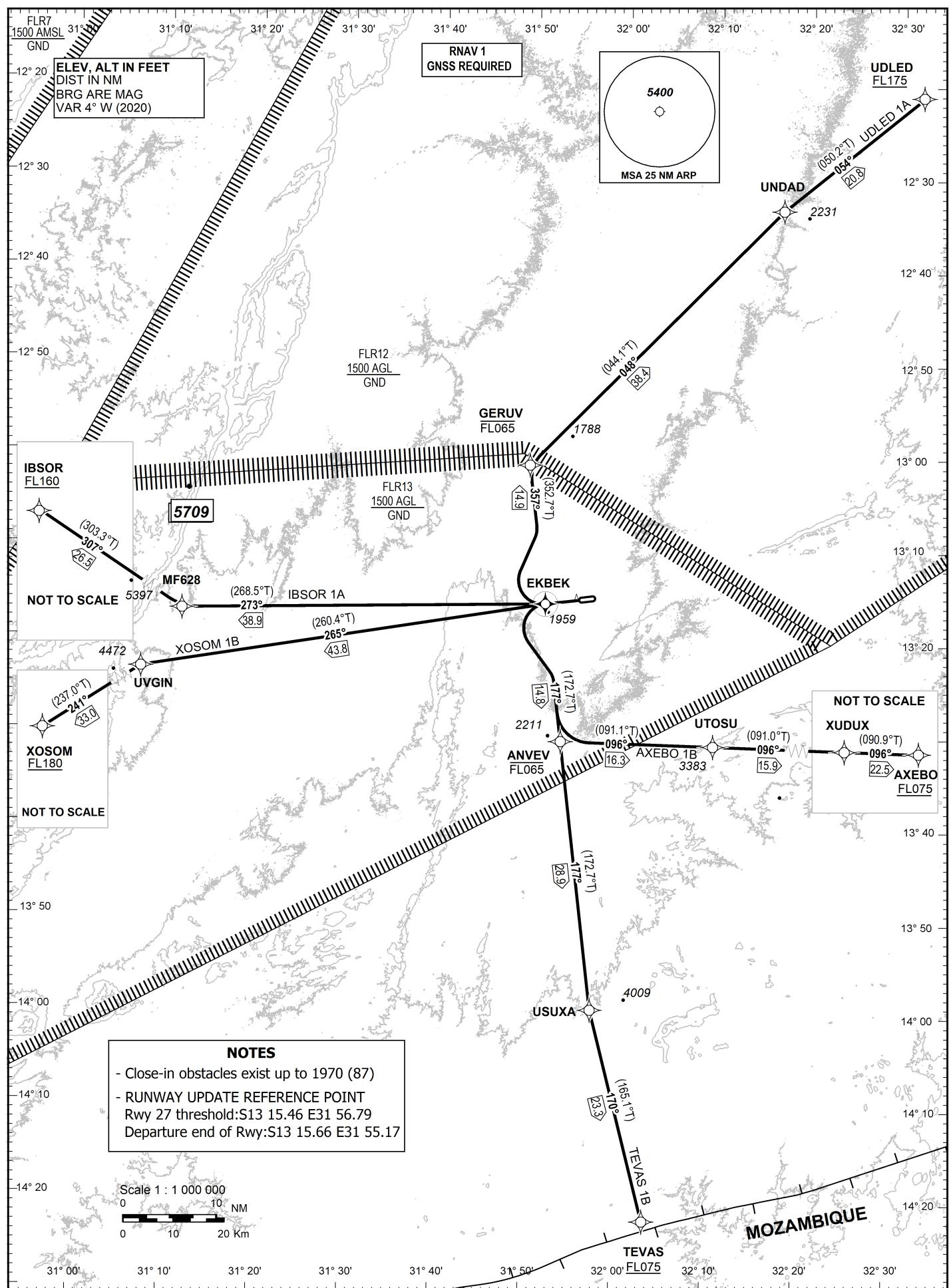
STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAOTRANSITION ALTITUDE  
5000APP 120.700  
TWR 118.300

MFUWE/Mfuwe

(FLMF)

RNAV SID RWY 27

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B



**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**MFUWE/Mfuwe**

**(FLMF)**

**RNAV SID RWY 27**

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B

**TABULAR DESCRIPTION**

**RNAV SID RWY 27**

**AXEBO 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	EKBEK	Y	267 (262.7)	-4.3	3.9	-	-	-	-	-	RNAV 1
020	TF	ANVEV	-	177 (172.7)	-	14.8	-	-FL065	-	-	-	RNAV 1
030	TF	UTOSU	-	096 (091.1)	-	16.3	-	-	-	-	-	RNAV 1
040	TF	XUDUX	-	096 (091.0)	-	15.9	-	-	-	-	-	RNAV 1
050	TF	AXEBO	-	096 (090.9)	-	22.5	-	+FL075	-	-	-	RNAV 1

**IBSOR 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	EKBEK	Y	267 (262.7)	-4.3	3.9	-	-	-	-	-	RNAV 1
020	TF	MF628	-	273 (268.5)	-	38.9	-	-	-	-	-	RNAV 1
030	TF	IBSOR	-	307 (303.3)	-	26.5	-	+FL160	-	-	-	RNAV 1

**TEVAS 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	EKBEK	Y	267 (262.7)	-4.3	3.9	-	-	-	-	-	RNAV 1
020	TF	ANVEV	-	177 (172.7)	-	14.8	-	-FL065	-	-	-	RNAV 1
030	TF	USUXA	-	177 (172.7)	-	28.9	-	-	-	-	-	RNAV 1
040	TF	TEVAS	-	170 (165.1)	-	23.3	-	-	-	-	-	RNAV 1

**UDLED 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	EKBEK	Y	267 (262.7)	-4.3	3.9	-	-	-	-	-	RNAV 1
020	TF	GERUV	-	357 (352.7)	-	14.9	-	-FL065	-	-	-	RNAV 1
030	TF	UNDAD	-	048 (044.1)	-	38.4	-	-	-	-	-	RNAV 1
040	TF	UDLED	-	054 (050.2)	-	20.8	-	+FL175	-	-	-	RNAV 1

**XOSOM 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	EKBEK	Y	267 (262.7)	-4.3	3.9	-	-	-	-	-	RNAV 1
020	TF	UVGIN	-	265 (260.4)	-	43.8	-	-	-	-	-	RNAV 1
030	TF	XOSOM	-	241 (237.0)	-	33.0	-	+FL180	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO****MFUWE/ Mfuwe****(FLMF)****RNAV SID RWY 27**

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B

**WAYPOINT LIST  
RNAV SID RWY 27**

<i>WaypointIdentifier</i>	<i>Coordinates</i>		<i>WaypointIdentifier</i>	<i>Coordinates</i>	
AXEBO	S 13 31 48.0	E 032 49 42.0	UDLED	S 12 20 06.5	E 032 33 22.3
IBSOR	S 13 02 25.2	E 030 49 02.7	XOSOM	S 13 41 22.9	E 030 38 54.0
UTOSU	S 13 31 10.2	E 032 10 16.5			
EKBEK	S 13 16 06.6	E 031 51 36.9			
GERUV	S 13 01 13.3	E 031 49 40.3			
UNDAD	S 12 33 30.9	E 032 17 00.2			
ANVEV	S 13 30 52.2	E 031 53 32.6			
XUDUX	S 13 31 26.6	E 032 26 37.7			
USUXA	S 13 59 40.1	E 031 57 19.3			
UVGIN	S 13 23 22.0	E 031 07 19.2			
MF628	S 13 17 02.9	E 031 11 45.0			
TEVAS	S 14 22 18.0	E 032 03 30.0			

**ROUTING**

<b>NAME</b>	<b>TEXT</b>
AXEBO 1B	After take-off climb on course 267° to EKBEK, track 177° to ANVEV, track 096° to UTOSU, track 096° to XUDUX, then track 096° to AXEBO.  MCA/MCL: ANVEV AT or BELOW FL065, AXEBO AT or ABOVE FL075.
IBSOR 1A	After take-off climb on course 267° to EKBEK, track 273° to MF628, then track 307° to IBSOR.  MCA/MCL: IBSOR AT or ABOVE FL160.
TEVAS 1B	After take-off climb on course 267° to EKBEK, track 177° to ANVEV, track 177° to USUXA, then track 170° to TEVAS.  MCA/MCL: ANVEV AT or BELOW FL065.
UDLED 1A	After take-off climb on course 267° to EKBEK, track 357° to GERUV, track 048° to UNDAD, then track 054° to UDLED.  MCA/MCL: GERUV AT or BELOW FL065, UDLED AT or ABOVE FL175.
XOSOM 1B	After take-off climb on course 267° to EKBEK, track 265° to UVGIN, then track 241° to XOSOM.  MCA/MCL: XOSOM AT or ABOVE FL180.

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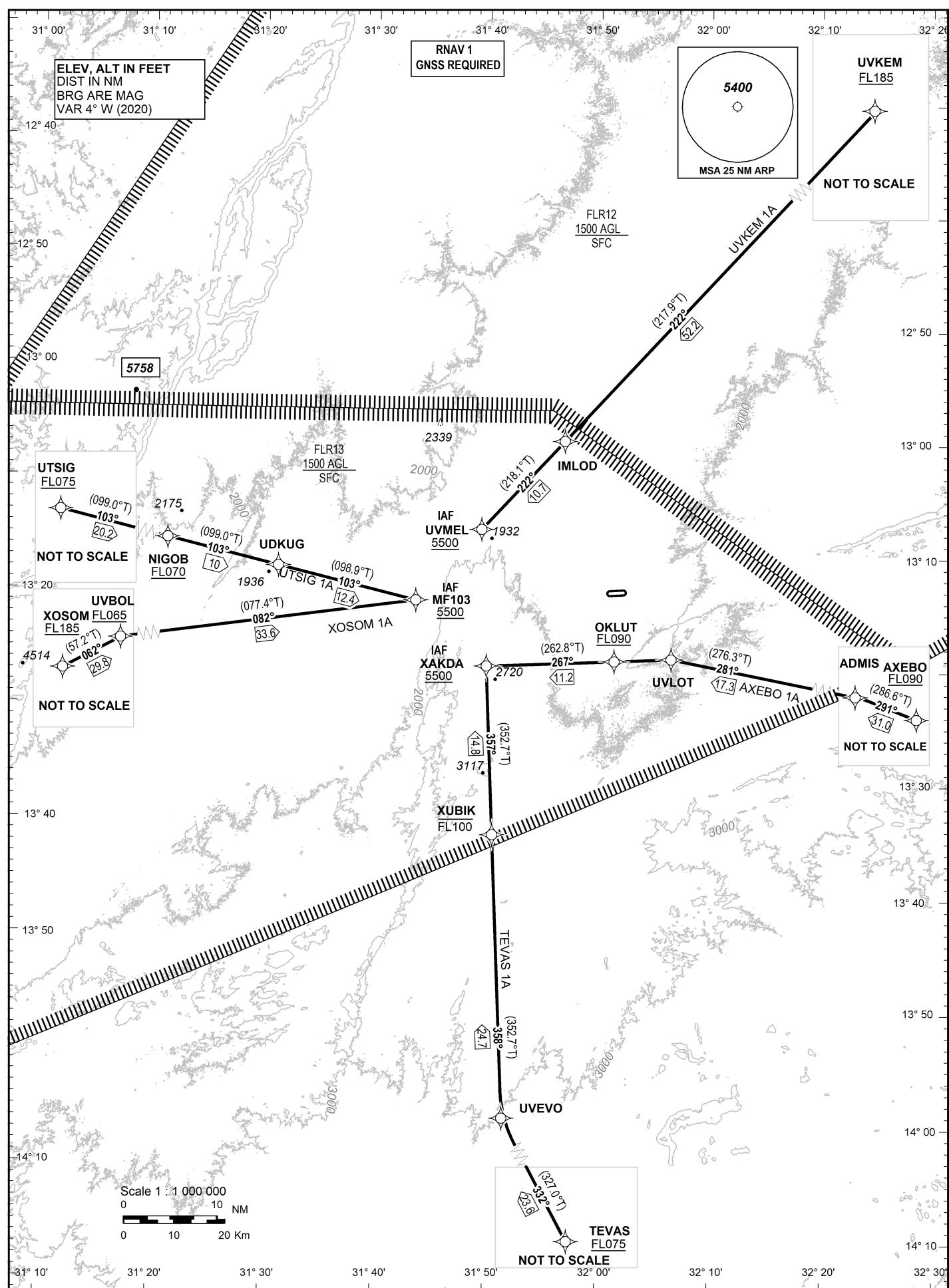
STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAOTRANSITION ALTITUDE  
5000APP 120.700  
TWR 118.300

MFUWE/Mfuiwe

(FLMF)

## RNAV STAR RWY 09

AXEBO 1A, TEVAS 1A, UTSIG 1A, UVKEM 1A, XOSOM 1A



**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

**MFUWE/Mfuwe**

**(FLMF)**

**RNAV STAR RWY 09**

AXEBO 1A, TEVAS 1A, UTSIG 1A, UVKEM 1A, XOSOM 1A

**TABULAR DESCRIPTION**

**RNAV STAR RWY 09**

**AXEBO 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AXEBO	-	-	-	-	-	+FL090	-	-	-	RNAV 1
020	TF	ADMIS	-	291 (286.6)	-	31.0	-	-	-	-	-	RNAV 1
030	TF	UVLOT	-	281 (276.3)	-	17.3	-	-	-	-	-	RNAV 1
040	TF	OKLUT	-	267 (262.7)	-	5.0	-	+FL090	-	-	-	RNAV 1
050	TF	XAKDA	-	267 (262.8)	-	11.2	-	+5500	-	-	-	RNAV 1

**TEVAS 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	TEVAS	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	UVEVO	-	332 (327.0)	-	23.6	-	-	-	-	-	RNAV 1
030	TF	XUBIK	-	358 (352.7)	-	24.7	-	-FL100	-	-	-	RNAV 1
040	TF	XAKDA	-	357 (352.7)	-	14.8	-	+5500	-	-	-	RNAV 1

**UTSIG 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UTSIG	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	NIGOB	-	103 (099.0)	-	20.2	-	+FL070	-	-	-	RNAV 1
030	TF	UDKUG	-	103 (099.0)	-	10.0	-	-	-	-	-	RNAV 1
040	TF	MF103	-	103 (098.9)	-	12.4	-	+5500	-	-	-	RNAV 1

**UVKEM 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UVKEM	-	-	-	-	-	+FL185	-	-	-	RNAV 1
020	TF	IMLOD	-	222 (217.9)	-	52.2	-	-	-	-	-	RNAV 1
030	TF	UVMEL	-	222 (218.1)	-	10.7	-	+5500	-	-	-	RNAV 1

**XOSOM 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	XOSOM	-	-	-	-	-	+FL185	-	-	-	RNAV 1
020	TF	UVBOL	-	062 (057.2)	-	29.8	-	+FL065	-	-	-	RNAV 1
030	TF	MF103	-	082 (077.4)	-	33.6	-	+5500	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO****MFUWE/Mfuwe****(FLMF)****RNAV STAR RWY 09**

AXEBO 1A, TEVAS 1A, UTSIG 1A, UVKEM 1A, XOSOM 1A

**WAYPOINT LIST  
RNAV STAR RWY 09**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
ADMIS	S 13 22 51.6	E 032 19 15.0	NIGOB	S 13 14 17.1	E 031 15 28.1
AXEBO	S 13 31 48.0	E 032 49 42.0	TEVAS	S 14 22 18.0	E 032 03 30.0
UVMEL	S 13 11 02.5	E 031 43 33.9	UTSIG	S 13 11 07.0	E 030 55 02.0
XAKDA	S 13 22 59.9	E 031 45 07.3	UVKEM	S 12 21 16.7	E 032 23 11.8
MF103	S 13 17 46.8	E 031 38 14.4	XOSOM	S 13 41 22.9	E 030 38 54.0
IMLOD	S 13 02 36.4	E 031 50 18.4			
UVLOT	S 13 20 56.8	E 032 01 37.7			
UVEVO	S 14 02 23.3	E 031 50 15.9			
XUBIK	S 13 37 43.9	E 031 47 02.5			
UDKUG	S 13 15 50.9	E 031 25 37.8			
UVBOL	S 13 25 08.6	E 031 04 38.8			
OKLUT	S 13 21 34.8	E 031 56 32.4			

**ROUTING**

NAME	TEXT
AXEBO 1A	From AXEBO track 291° to ADMIS, track 281° to UVLOT, track 267° to OKLUT, track 267° to XAKDA. MEA/MEL: AXEBO AT or ABOVE FL090, OKLUT AT or ABOVE FL090, XAKDA AT or ABOVE 5500'.
TEVAS 1A	From TEVAS track 332° to UVEVO, track 358° to XUBIK, track 357° to XAKDA. MEA/MEL: TEVAS AT or ABOVE FL075, XUBIK AT or BELOW FL100, XAKDA AT or ABOVE 5500'.
UTSIG 1A	From UTSIG track 103° to NIGOB, track 103° to UDKUG, track 103° to MF103. MEA/MEL: UTSIG AT or ABOVE FL075, NIGOB AT or ABOVE FL070, MF103 AT or ABOVE 5500'.
UVKEM 1A	From UVKEM track 222° to IMLOD, track 222° to UVMEL. MEA/MEL: UVKEM AT or ABOVE FL185, UVMEL AT or ABOVE 5500'.
XOSOM 1A	From XOSOM track 062° to UVBOL, track 082° to MF103. MEA/MEL: XOSOM AT or ABOVE FL185, UVBOL AT or ABOVE FL065, MF103 AT or ABOVE 5500'.

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**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

**TRANSITION ALTITUDE  
5000**

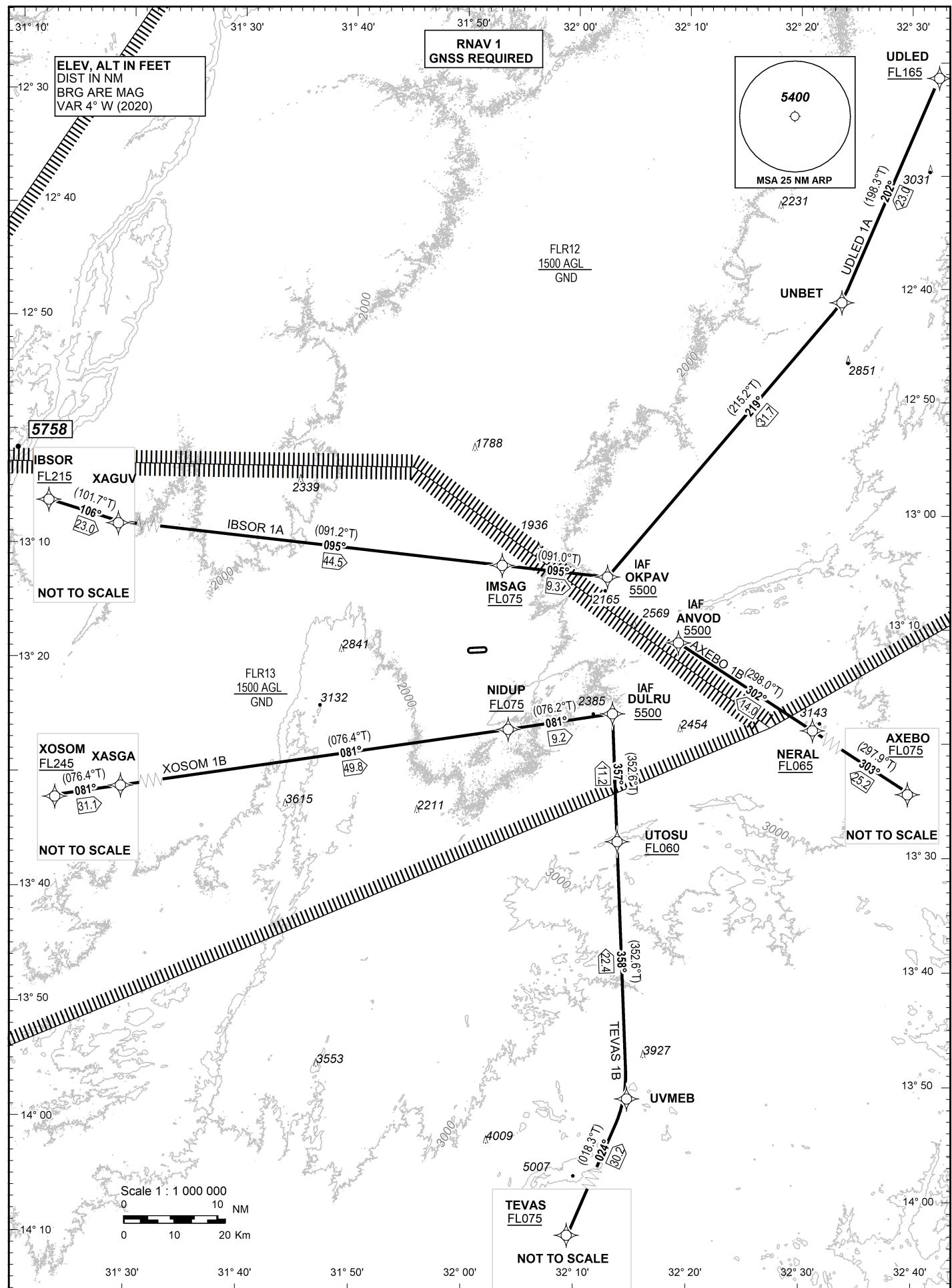
**APP 120.700  
TWR 118.300**

**MFUWE/Mfuwe**

**(FLMF)**

**RNAV STAR RWY 27**

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B



**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

**MFUWE/Mfuwe**

(FLMF)

**RNAV STAR RWY 27**

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B

**TABULAR DESCRIPTION**

**RNAV STAR RWY 27**

**AXEBO 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AXEBO	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	NERAL	-	303 (297.9)	-	25.2	-	+FL065	-	-	-	RNAV 1
030	TF	ANVOD	-	302 (298.0)	-	14.0	-	+5500	-	-	-	RNAV 1

**IBSOR 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	IBSOR	-	-	-	-	-	+FL215	-	-	-	RNAV 1
020	TF	XAGUV	-	106 (101.7)	-	23.0	-	-	-	-	-	RNAV 1
030	TF	IMSGAG	-	095 (091.2)	-	44.5	-	+FL075	-	-	-	RNAV 1
040	TF	OKPAV	-	095 (091.0)	-	9.3	-	+5500	-	-	-	RNAV 1

**TEVAS 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	TEVAS	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	UVMEB	-	024 (018.3)	-	30.2	-	-	-	-	-	RNAV 1
030	TF	UTOSU	-	358 (352.6)	-	22.4	-	+FL060	-	-	-	RNAV 1
040	TF	DULRU	-	357 (352.6)	-	11.2	-	+5500	-	-	-	RNAV 1

**UDLED 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UDLED	-	-	-	-	-	+FL165	-	-	-	RNAV 1
020	TF	UNBET	-	202 (198.3)	-	23.0	-	-	-	-	-	RNAV 1
030	TF	OKPAV	-	219 (215.2)	-	31.7	-	+5500	-	-	-	RNAV 1

**XOSOM 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	XOSOM	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	XASGA	-	081 (076.5)	-	31.1	-	-	-	-	-	RNAV 1
030	TF	NIDUP	-	081 (076.4)	-	49.8	-	+FL075	-	-	-	RNAV 1
040	TF	DULRU	-	081 (076.2)	-	9.2	-	+5500	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -  
INSTRUMENT (STAR) - ICAO****MFUWE/Mfuwe****(FLMF)****RNAV STAR RWY 27**

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B

**WAYPOINT LIST  
RNAV STAR RWY 10**

<i>WaypointIdentifier</i>	<i>Coordinates</i>		<i>WaypointIdentifier</i>	<i>Coordinates</i>	
ANVOD	S 13 13 16.4	E 032 14 07.7	TEVAS	S 14 22 18.0	E 032 03 30.0
AXEBO	S 13 31 48.0	E 032 49 42.0	XAGUV	S 13 07 04.9	E 031 12 07.6
DULRU	S 13 20 01.4	E 032 08 48.3	XASGA	S 13 34 04.2	E 031 09 57.8
IBSOR	S 13 02 25.2	E 030 49 02.7	XOSOM	S 13 41 22.9	E 030 38 54.0
IMSAG	S 13 07 54.7	E 031 57 42.1			
NERAL	S 13 19 54.2	E 032 26 49.4			
NIDUP	S 13 22 14.1	E 031 59 36.5			
OKPAV	S 13 08 04.1	E 032 07 13.8			
UDLED	S 12 20 06.5	E 032 33 22.3			
UNBET	S 12 42 02.7	E 032 25 59.8			
UTOSU	S 13 31 10.2	E 032 10 16.5			
UVMEB	S 13 53 31.1	E 032 13.9			

**ROUTING**

<b>NAME</b>	<b>TEXT</b>
AXEBO 1B	From AXEBO track 303° to NERAL, track 302 to ANVOD. MEA/MEL: AXEBO AT or ABOVE FL075, NERAL AT or ABOVE FL065, ANVOD AT or ABOVE 5500'.
IBSOR 1A	From IBSOR track 106° to XAGUV, track 095° to IMSAG, track 095° to OKPAV. MEA/MEL: IBSOR AT or ABOVE FL215, IMSAG AT or ABOVE FL075, OKPAV AT or ABOVE 5500'.
TEVAS 1B	From TEVAS track 024° to UVMEB, track 358° to UTOSU, track 357° to DULRU. MEA/MEL: TEVAS AT or ABOVE FL075, UTOSU AT or ABOVE FL060, DULRU AT or ABOVE 5500'.
UDLED 1A	From UDLED track 202° to UNBET, track 219° to OKPAV. MEA/MEL: UDLED AT or ABOVE FL165, OKPAV AT or ABOVE 5500'.
XOSOM 1B	From XOSOM track 081° to XASGA, track 081° to NIDUP, track 081° to DULRU. MEA/MEL: XOSOM AT or ABOVE FL245, NIDUP AT or ABOVE FL075, DULRU AT or ABOVE 5500'.

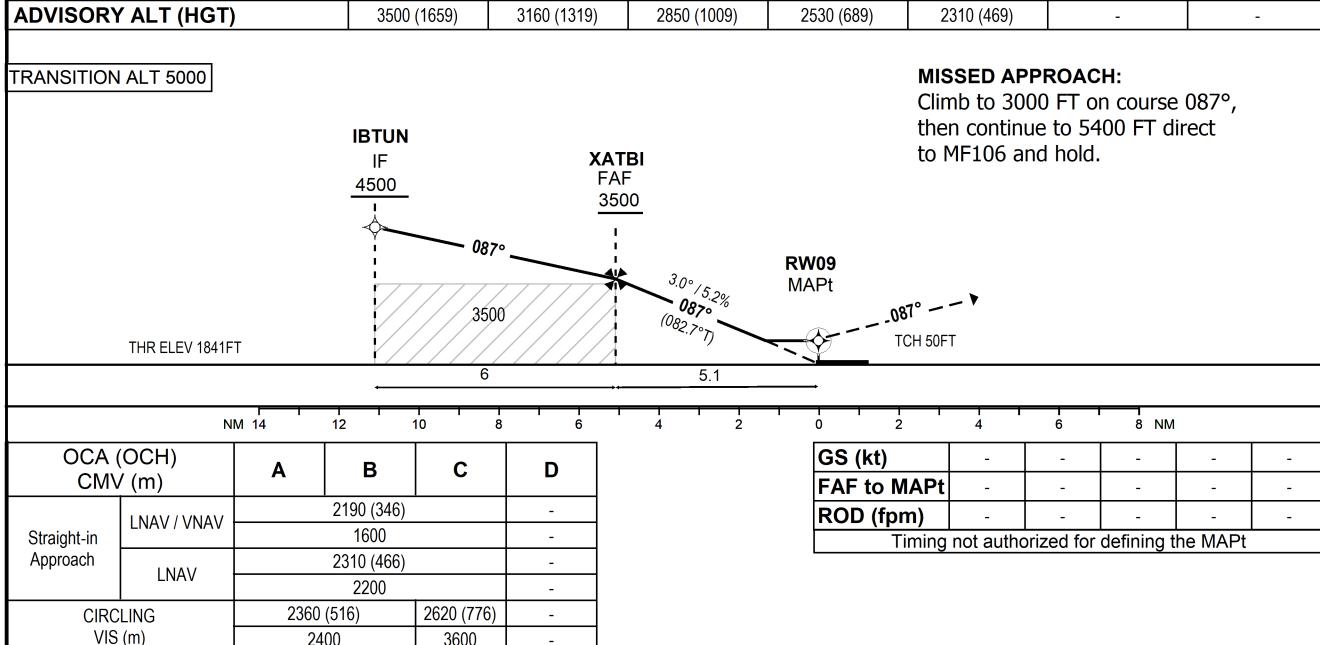
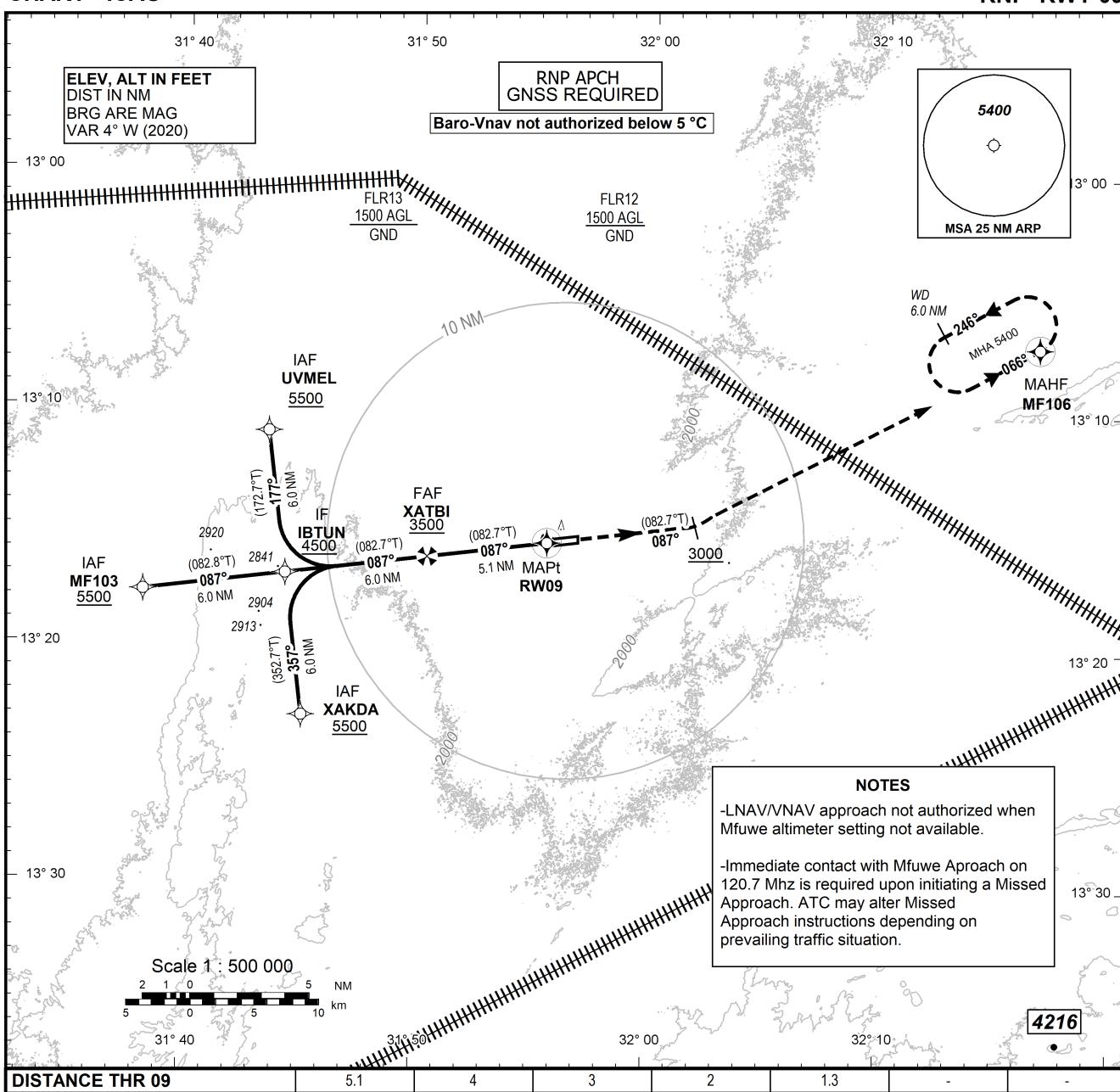
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INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 1844 FT  
HEIGHTS RELATED TO  
AD ELEVATION

APP 120.700  
TWR 118.300

MFUWE/Mfuwe  
(FLMF)  
RNP RWY 09



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	UVMEL	-	-	-	-	+5500	-	-	RNP APCH
020	TF	IBTUN	-	177 / (172.7)	6.0	-	+4500	-	-	RNP APCH
010	IF	XAKDA	-	-	-	-	+5500	-	-	RNP APCH
020	TF	IBTUN	-	357 / (352.7)	6.0	-	+4500	-	-	RNP APCH
010	IF	MF103	-	-	-	-	+5500	-	-	RNP APCH
020	TF	IBTUN	-	087 / (082.8)	6.0	-	+4500	-	-	RNP APCH
030	TF	XATBI	-	087 / (082.7)	6.0	-	+3500	-	-	RNP APCH
040	TF	RW09	Y	087 / (082.7)	5.1	-	@1891	-	-3.00 / 50	RNP APCH
050	CA	-	-	087 / (082.7)	-	-	+3000	-	-	RNP APCH
060	DF	MF106	Y	-	-	-	+5400	-	-	RNP APCH
070	HM	MF106	Y	066 / (061.8)	6.0	L	+5400	-230	-	RNP APCH

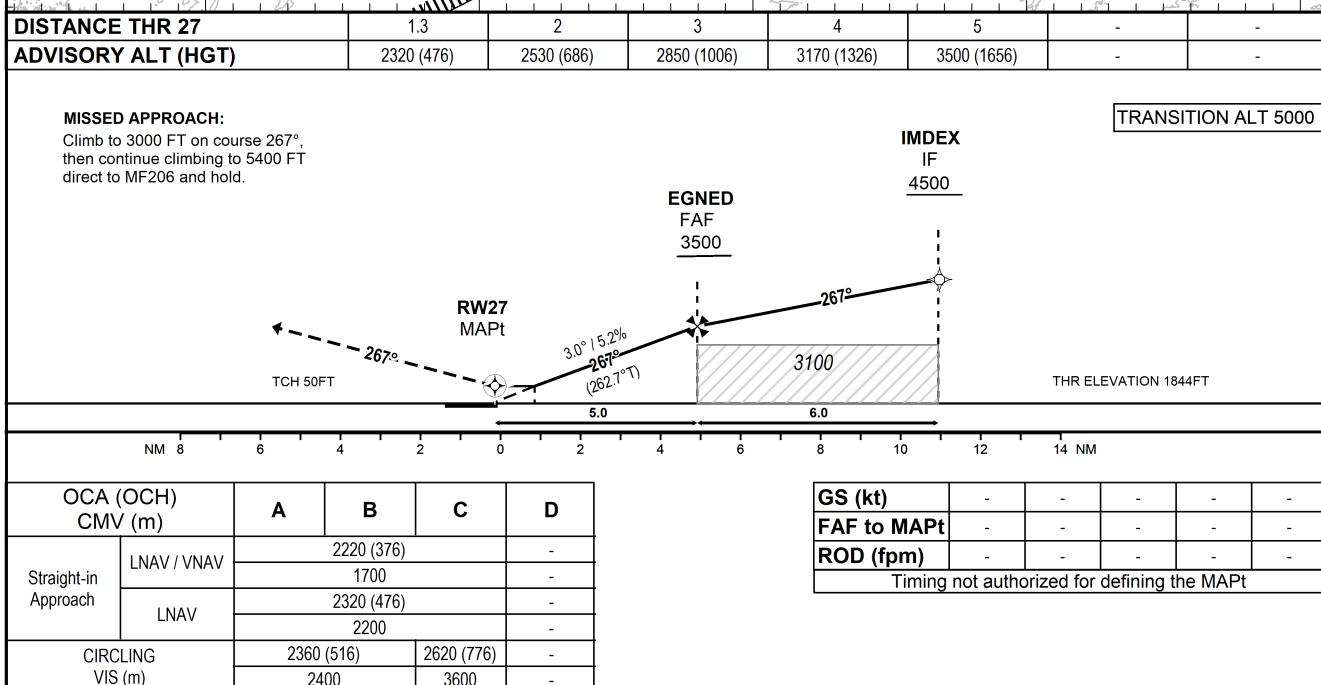
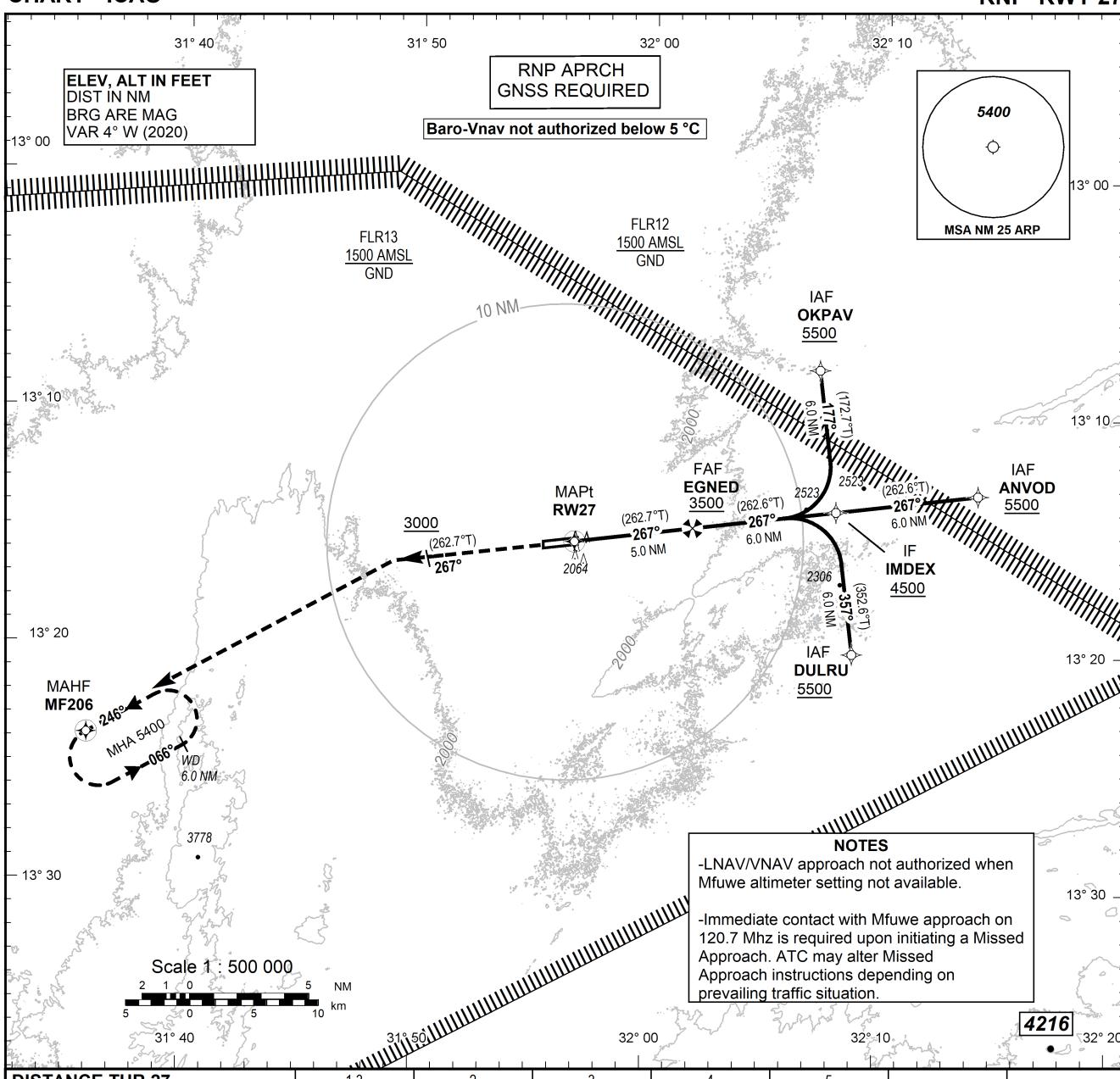
<i>Waypoint Identifier</i>	<i>Coordinates</i>
UVMEL	S 13 11 02.5 E 031 43 33.9
XAKDA	S 13 22 59.9 E 031 45 07.3
MF103	S 13 17 46.8 E 031 38 14.4
IBTUN	S 13 17 01.2 E 031 44 20.6
XATBI	S 13 16 15.4 E 031 50 26.8
MF106	S 13 07 08.1 E 032 16 38.0
RW09	S 13 15 36.73 E 031 55 35.08

**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 1844 FT  
HEIGHTS RELATED TO  
AD ELEVATION**

APP 120.700  
TWR 118.300

**MFUWE/Mfuwe  
(FLMF)  
RNP RWY 27**



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	OKPAV	-	-	-	-	+5500	-	-	RNP APCH
020	TF	IMDEX	-	177 / (172.7)	6.0	-	+4500	-	-	RNP APCH
010	IF	ANVOD	-	-	-	-	+5500	-	-	RNP APCH
020	TF	IMDEX	-	267 / (262.6)	6.0	-	+4500	-	-	RNP APCH
010	IF	DULRU	-	-	-	-	+5500	-	-	RNP APCH
020	TF	IMDEX	-	357 / (352.6)	6.0	-	+4500	-	-	RNP APCH
030	TF	EGNED	-	267 / (262.6)	6.0	-	+3500	-	-	RNP APCH
040	TF	RW27	Y	267 / (262.7)	5.0	-	@1894	-	-3.00 / 50	RNP APCH
050	CA	-	-	267 / (262.7)	-	-	+3000	-	-	RNP APCH
060	DF	MF206	Y	-	-	-	+5400	-	-	RNP APCH
070	HM	MF206	Y	246 / (241.7)	6.0	L	+5400	-230	-	RNP APCH

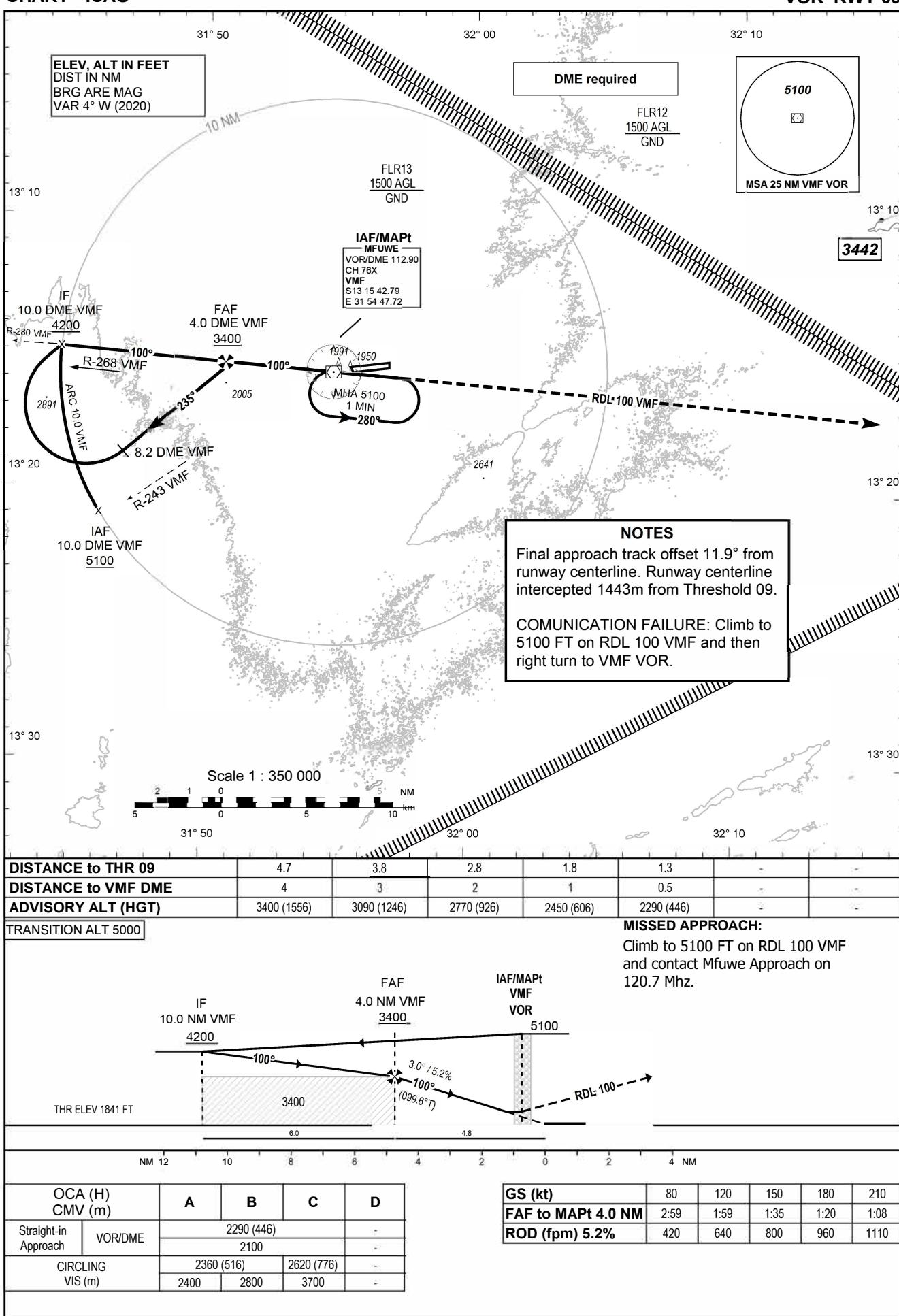
<i>Waypoint Identifier</i>	<i>Coordinates</i>
DULRU	S 13 20 01.4 E 032 08 48.3
OKPAV	S 13 08 04.1 E 032 07 13.8
ANVOD	S 13 13 16.4 E 032 14 07.0
IMDEX	S 13 14 02.8 E 032 08 01.0
EGNED	S 13 14 49.0 E 032 01 54.9
MF206	S 13 23 50.1 E 031 35 54.3
RW27	S 13 15 27.67 E 031 56 47.22

INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 1844 FT  
HEIGHTS RELATED TO  
AD ELEV

APP 120.700  
TWR 118.300

MFUWE/Mfuwe  
(FLMF)  
VOR RWY 09



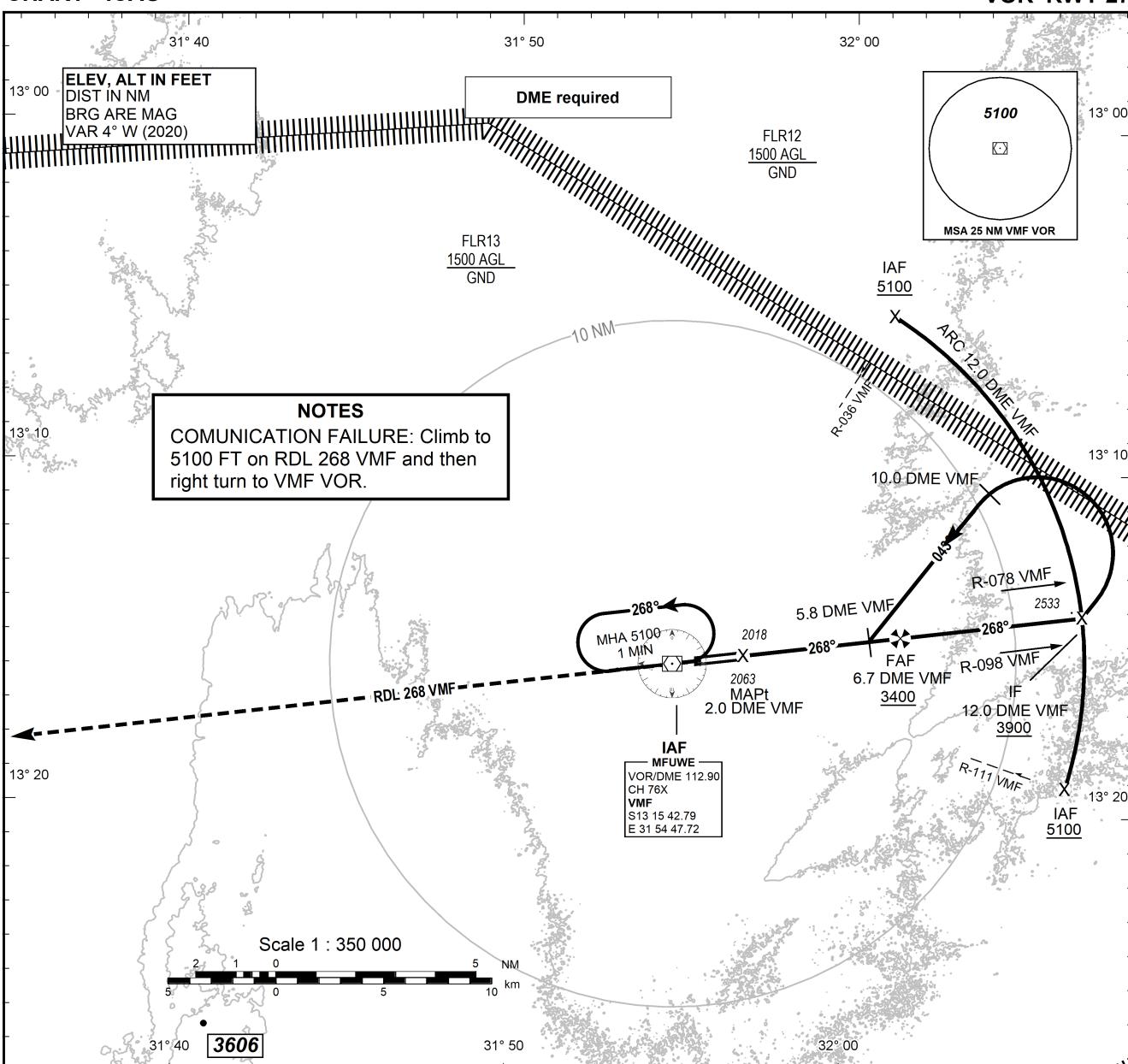
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INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 1844 FT  
HEIGHTS RELATED TO  
AD ELEV

APP 120.700  
TWR 118.300

MFUWE/Mfuwe  
(FLMF)  
VOR RWY 27



MISSED APPROACH: Climb to 5100 FT on RDL 268 VMF and contact Mfuwe Approach on 120.7 Mhz.		TRANSITION ALT 5000				
5100	MAPt 2.0 NM VMF	6.7 NM VMF 3400	IF 12.0 NM VMF 3900	THR ELEV 1844 FT		
RDL-268	268°	268°	268°	4.7	5.3	
3.0° / 5.2% (267.6° T)		3200				
NM 6 4 2 0		2 4 6 8 10 12 NM				
OCA (OCH) CMV (m)	A	B	C	D		
Straight-in Approach	VOR/DME	2320 (476)	-			
		2200	-			
CIRCLING		2360 (516)	2360 (516)	2620 (776)	-	
VIS (m)		2400	2800	3700	-	

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In circling area and at AD		
Obstacle type Elevation Markings/LGT	Coordinates	Remarks
a	b	c
NOTE: Nil		

### FLMG AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Mongu
2	Hours of service MET Office outside hours	0400 –1600
3	Office responsible for TAF preparation Period of validity	Kenneth Kaunda International Airport As required by flights.
4	Trend forecast Interval of issuance	METAR- SPECI 2 HR
5	Briefing/consultation provided	Prior notice required
6	Flight documentation Language(s) used	NIL
7	Charts and other information available for briefing or consultation	Provided in tabular form for domestic flights only.
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	FLMG MET Briefing Office
10	Additional information (limitation of ser- vice, etc.)	Nil

### FLMG AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designa- tions RWY	TRUE & MAG BRG	Dimension of RWY (M)	Strength (PCN) and surface of RWY and SWY	THR coordinates	THR elevation and highest elevation of TDZ of preci- sion APP RWY	
1	2	3	4	5	6	
10	087°(True) 094°(Mag)	1447 x 21	PCN 20 Bitumen Note: SEALED BRICK SWY: Nil	S 15°15'18.86" E 023°09'22.78" GUND: Nil	THR 3503 FT (1068 M)	
28	267°(True) 274°(Mag)	1447 x 21	PCN 20 Bitumen Note: SEALED BRICK SWY: Nil	S 15°15'15.32" E 023°10'11.15" GUND: Nil	THR 3462 FT (1055 M)	
Slope OF RWY and SWY	SWY dimen- sions (M)	CWY dimen- sions (M)	Strip dimen- sions (M)	RESA dimen- sions (M)	RAG	OFZ
7	8	9	10	11	12	13
For Rwy 10: +1.2%	Nil	183 x 150	1628 x 150	Nil	Nil	Nil
For Rwy 28: +1.2%	61 x 21	122 x 150	1628 x 150	Nil	Nil	Nil
Designations RWY	Remarks					
1	14					
10						
28						

### FLMG AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
10	1447	1630	1508	1447	
28	1447	1569	1508	1447	

**FLMG AD 2.14 APPROACH AND RUNWAY LIGHTING**

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
10	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
28	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

**FLMG AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY****FLMG AD 2.16 HELICOPTER LANDING AREA****FLMG AD 2.17 ATS AIRSPACE**

1	Designation and lateral limits	MONGU ATZ Circular area centered on S 15°13'30" E 023°09'10" ( ) within a 10NM radius.
2	Vertical limits	GND to 5000 FT AMSL
3	Airspace classification	G
4	ATS unit call sign Language(s)	MONGU Radio, English
5	Transition altitude	5000 FT (1524 M)
6	Hours of applicability	0400 - 1500
7	Remarks	Nil

**FLMG AD 2.18 ATS COMMUNICATION FACILITIES**

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
AFIS	MONGU Radio	118.3 MHZ 6952.0 KHZ	HJ	Nil	Nil	Primary Freq. Secondary Freq.

**FLMG AD 2.19 RADIO NAVIGATION AND LANDING AIDS**

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB (07° W)	MG	391.00 KHZ	H24	S 15°12'51.60" E 023°09'22.80"	—	Power output 100w Coverage 50NM
VOR/DME (07° W)	VMG	115.30 MHZ (CH100X)	H24	S 13°15'00.00" E 023°11'00.00"	3465 FT	co-axially co-located with DME

**FLMG AD 2.20 LOCAL AERODROME REGULATIONS****FLMG AD 2.20.1 Aerodrome Regulations**

At Mongu Airport a number of local regulations apply. The regulations are listed below:

- a. Information about aircraft stands including visual docking guidance systems;
- b. Information about taxiing from aircraft stands including taxi clearance;
- c. Limitations in the operation of large aircraft including limitations in the use of the aircraft own power for taxiing;
- d. Towing assistance;
- e. Use of engine power exceeding idle power;
- f. Engine start-up and use of APU;
- g. Fuel spillage;

When a local regulation is of importance for the safe operation of aircraft on the apron, the information will be given by the TWR.  
"Local Regulations" may be requested , in writing from:

Officer in Charge  
Mongu Airport

#### **FLMG AD 2.20.2 Taxiing to and from stands**

Arriving aircraft will be allocated a stand number by Mongu Radio. The General aviation aircraft will have to use the general aviation parking area.

Departing flights shall contact Mongu Radio to obtain clearance before commencing taxiing. Requesting for ATC clearance may take place at the earliest 10 minutes prior to engine start-up.

Frequency 118.1Mhz is to be used throughout the Aerodrome H.O.O departing aircraft shall obtain clearance and taxi instruction from Mongu Radio on 118.1Mhz.

#### **FLMG AD 2.20.3 Parking area for small aircraft (General Aviation)**

General aviation aircraft shall be guided by AFIS to the parking area for small aircraft.

#### **FLMG AD 2.20.4 Parking area for helicopters**

There is no specific parking area for Helicopters. Helicopters will always be guided by Mongu Radio.

#### **FLMG AD 2.20.5 Apron - taxiing during winter conditions**

Taxiways in the apron area are not ground marked with centerline and TWY edge markings. Taxiing assistance can be requested via the Mongu Radio

#### **FLMG AD 2.20.6 Taxiing -limitations**

Information will be given to each aircraft from the AFIS

#### **FLMG AD 2.20.7 School and training flights-technical test flights-use of runways**

School and training flights may be made during the Aerodrome H.O.O permission will only be granted for such flights. Subject to traffic density.

#### **FLMG AD 2.20.8 Helicopter traffic - limitation**

Non-scheduled public air traffic with helicopters is permitted only after prior notice to Mongu AFIS. Any contact concerning the above shall be made to the officer in charge during the hours of service and, if possible, not later than the day before the flight is to be carried out.

Any request for approval of traffic shall contain the following information:

- a. Owner/ operator
- b. Type of helicopter, registration/ call sign
- c. Date, arrival time/ departure time, destination(s)
- d. ATC flight plan. Further more, other details relevant to the evaluation of the request shall be given as required.

#### **FLMG AD 2.20.9 Removal of disabled aircraft from runways**

When an aircraft is wrecked on a runway, it is the duty of the owner or user of such aircraft to have it removed as soon as possible after prior approval from Director General Civil Aviation Authority. If a wrecked aircraft is not removed from runway as quickly as possible by the owner or user, the aircraft will be removed by the aerodrome authority at the owners or user's expense.

## FLMG AD 2.21 NOISE ABATEMENT PROCEDURES

TO BE DEVELOPED.

## FLMG AD 2.22 FLIGHT PROCEDURES

### FLMG AD 2.22.1 General

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules. Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

### FLMG AD 2.22.2 Procedures for flights within Lusaka Upper Control Area.

The inbound, transit and outbound routes shown on charts may be varied at the discretion of ATS. If necessary, in case of congestion, inbound aircraft may also be instructed to hold at one of the designated Airways reporting points.

### FLMG AD 2.22.3 Communication failure

In the event of communication failure, the pilot shall act in accordance with the communication failure procedures in ICAO Annex 2.

### FLMG AD 2.22.4 En route Clearance

En-route clearance will be given under the conditions described below:

- a. Flight Plan shall be submitted for the flight concerned.
- b. En-route Clearance shall be obtained from Lusaka Control
- c. Deviation from the en-route clearance may only be made when prior permission has been obtained.
- d. Two-way radio communication shall be established and maintained with Lusaka Control or ATS unit nearest to the ATS route before flight takes place in the UTA.
- e. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2.
- f. The pilot-in-command shall be the holder of an international VHF licence.

### FLMG AD 2.22.5 Procedures for flights outside the Lusaka Upper Control Area.

Unless permission has been obtained from Lusaka control:-

- a. A Flight Plan shall be submitted for the flight concerned.
- b. ATC Clearance shall be obtained from Lusaka Control and/or nearest Air Traffic Service Unit when departing from uncontrolled aerodrome.
- c. Two-way radio communication shall be maintained on the appropriate frequency prescribed by Area Control or ATS Units.
- d. En-route clearance shall be obtained from Lusaka Control or nearest ATS Unit.
- e. Deviation from the en-route clearance may only be made when prior permission has been obtained.
- f. VFR flights shall be conducted with vertical visual reference to the ground.
- g. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2. Where flying time is one hour or more between designated reporting points, pilots shall submit a half hourly "Operations Normal" report to Lusaka Control or nearest ATS unit.
- h. ATC clearance shall be obtained immediately before the aircraft enters a controlled airspace concerned.
- i. Two-way radio contact shall be established with appropriate approach control unit on the frequency prescribed before the flight takes place in the Control Zone, Control Area, Terminal or per Control Areas.
- j. The pilot-in-command shall be the holder of an international VHF Licence.

### FLMG AD 2.22.6 Procedures for flights within Mongu ATZ

Except with permission from Mongu information, All flights shall maintain two-way radio contact with Mongu information on 118.100Mhz.

If necessary in case of congestion, inbound IFR aircraft may also be instructed to hold at one of designated reporting points. Missed Approach Procedures to be followed are as detailed on Instrument Approach Chart.

**NOTE:** ATC clearance is intended only to provide separation between flights in as far as practicable below FL245.

## FLMG AD 2.23 ADDITIONAL INFORMATION

### FLMG AD 2.23.1 Bird concentrations in the vicinity of the airport

Bird activity of Abdim's Stock may take place from approximately September to May, especially in the morning and late afternoon. As far as practicable, Mongu information will inform pilots of this bird activity and the estimated heights AGL.

During the above periods pilots of aircraft are advised, where the design limitations of aircraft installations permit, to operate landing lights in flight, within the terminal area and during take off, approach-to-land and climb and descent procedures.

### FLMG AD 2.23.2 Pedestrians Cyclists and Animals

Pedestrians, cyclists and herds of domestic and/or wild animals may wonder in the vicinity at the aerodromes.

Due to the hazard of them crossing the runway, pilots must exercise caution on landing and take-off.

## FLMG AD 2.24 CHARTS RELATED TO AN AERODROME

<i>Charts</i>	<i>Pages</i>
Landing Chart - ICAO	AD 2 FLMG 2 - 1
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 10-28	AD 2 FLMG 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLMG 6 - 1
Instrument Approach Chart — ICAO NDB RWY 10	AD 2 FLMG 14 - 1

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**FLSK AD 2.1 AERODROME LOCATION INDICATOR AND NAME**  
**FLSK - SIMON MWANSA KAPWEPWE INTERNATIONAL AIRPORT**  
**FLSK AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

1	<i>ARP coordinates and site at AD</i>	S 12°57'42.46" E 028°30'58.45" From the Control Tower: 7.8° MAG / 465 Metres - From the Control Tower: 465 metres with a true bearing of 4.3° - Control Tower coordinates: S 12° 57' 57.5" E 028° 30' 57.3"
2	<i>Direction and distance from (city)</i>	7.78NM West of the Ndola Main Post Office
3	<i>Elevation/Reference temperature</i>	Elev: 4295.93 FT (1309 M) / T: 32° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	4° W ( 2019)/0°1'E increasing
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited P.O Box 70095, Ndola, Zambia. Tel: + 260 212 611193-4 Tel: +260 977 790638, +260 965 8604 Telex: + 260 212 614226 AFS: FLSKYFYX, FLSKZPZX eMail: zaclnd@zocl.aero Website: http://www.zacl.co.zm
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

**FLSK AD 2.3 OPERATIONAL HOURS**

1	<i>AD Administration</i>	0400 – 1800
2	<i>Customs and immigration</i>	As AD Administration
3	<i>Health and sanitation</i>	As AD Administration
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	As AD Administration
9	<i>Handling</i>	As AD Administration
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Not available
12	<i>Remarks</i>	Nil

**FLSK AD 2.4 HANDLING SERVICES AND FACILITIES**

1	<i>Cargo-handling facilities</i>	a) NAC 2000; with handling capability up to code C aircraft. Contact : Tel +260212611274 Email: mgr.ndola@nac2000.com.zm  b) Import and Export Cargo Transit terminal with high value hazard material and perishable goods storage capability.
2	<i>Fuel/oil types</i>	Fuel : A1 , AVGAS_LL Oil : Nil
3	<i>Fuelling facilities/capacity</i>	Jet A1 (60,000 litres) Avgas (30,000 litres)
4	<i>De-icing facilities</i>	Not Available
5	<i>Hangar space for visiting aircraft</i>	Nil
6	<i>Repair facilities for visiting aircraft</i>	Available up to code C aircrafts; Operator: ZACL
7	<i>Remarks</i>	Nil

**FLSK AD 2.5 PASSENGER FACILITIES**

1	<i>Hotels</i>	In the Ndola City
---	---------------	-------------------

2	<i>Restaurants</i>	At the Airport and in the Ndola City
3	<i>Transportation</i>	Taxis, shuttles, rental cars, buses
4	<i>Medical facilities</i>	a) First aid emergency medical centre available at the terminal building; b) Ambulance service available at the terminal building; c) Hospital in Ndola city, 15 km away
5	<i>Bank and Post Office</i>	Available in the Ndola City
6	<i>Tourist Office</i>	Available
7	<i>Remarks</i>	Nil

**FLSK AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	<i>AD category for fire fighting</i>	CAT 7
2	<i>Rescue equipment</i>	YES; Two (2) fire tenders, 1 Ambulances, 15 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

**FLSK AD 2.7 SEASONAL AVAILABILITY**

1	<i>Types of clearing equipment</i>	Airside management service – general inspections
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

**FLSK AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA**

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>
		01	Concrete	PCN 82/R/B/W/T
		01L	Concrete	PCN 82/R/B/W/T
		01R	Concrete	PCN 82/R/B/W/T
		02	Concrete	PCN 82/R/B/W/T
		03	Concrete	PCN 82/R/B/W/T
		04	Concrete	PCN 82/R/B/W/T
		05	Concrete	PCN 82/R/B/W/T
		06	Concrete	PCN 82/R/B/W/T
		07	Concrete	PCN 82/R/B/W/T
		101	Concrete	PCN 82/R/B/W/T
		102	Concrete	PCN 82/R/B/W/T
		103	Concrete	PCN 82/R/B/W/T
		104	Concrete	PCN 82/R/B/W/T
		105	Concrete	PCN 82/R/B/W/T
		106	Concrete	PCN 82/R/B/W/T
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Desig-nator of TWY</i>	<i>Width</i>	<i>Surface</i>
		TWY A	23 M	Concrete
		TWY B	23 M	Concrete and as-phalt
		TWY C	23 M	Concrete and as-phalt
				PCN 85/F/B/W/T

<i>Designations RWY</i>	<i>TRUE &amp; MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
09	089°(True) 093°(Mag)	3500 x 45	PCN 85/F/B/W/T Concrete and asphalt SWY: Nil	S 12°57'42.80" E 028°30'00.40" GUND: Nil	THR 4267 FT (1301 M)	
27	269°(True) 273°(Mag)	3500 x 45	PCN 85/F/B/W/T Concrete and asphalt SWY: Nil	S 12°57'42.12" E 028°31'56.50" GUND: Nil	THR 4277 FT (1304 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 09: +0.37%	Nil	300 x 300	3620 x 300	240 x 90	Nil	Nil
For Rwy 27: -0.204%	Nil	300 x 300	3620 x 300	240 x 90	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
09						
27						

### FLSK AD 2.13 DECLARED DISTANCES

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
09	3500	3800	3500	3500	
27	3500	3800	3500	3500	

### FLSK AD 2.14 APPROACH AND RUNWAY LIGHTING

<i>RWY Designator</i>	<i>APCH LGT type LEN INTST</i>	<i>THR LGT colour WBAR</i>	<i>VASIS (MEHT) PAPI</i>	<i>TDZ, LGT LEN</i>	<i>RWY Centre Line LGT Length, spacing, colour, INTST</i>	<i>RWY edge LGT LEN, spacing colour INTST</i>	<i>RWY End LGT colour WBAR</i>	<i>SWY LGT LEN (M) colour</i>	<i>Remarks</i>
1	2	3	4	5	6	7	8	9	10
09	CAT1 high intensity lights 900 M SALS	Green high intensity lights Wing bar: Colour: Green Intensity: High	PAPI Left side/3°	Nil	Length: 3500 m Spacing: 15 m Colour: First 900 m: white Next 1700 m: white Next 600m red/white Final 300 m: red Intensity: High	Length: 3500 m Spacing: 60 m Colour: First 600 m: white/yellow Next 2300 m: white Final 600 m: white/yellow Intensity: High	Red high intensity lights	Nil	Nil

<i>RWY Designator</i>	<i>APCH LGT type LEN INTST</i>	<i>THR LGT colour WBAR</i>	<i>VASIS (MEHT) PAPI</i>	<i>TDZ, LGT LEN</i>	<i>RWY Centre Line LGT Length, spacing, colour, INTST</i>	<i>RWY edge LGT LEN, spacing colour INTST</i>	<i>RWY End LGT colour WBAR</i>	<i>SWY LGT LEN (M) colour</i>	<i>Remarks</i>
1	2	3	4	5	6	7	8	9	10
27	high intensity lights 420 M SALS	Green high intensity lights Wing bar: Colour: Green Intensity: High	PAPI Left side/3°	Nil	Length: 3500 m Spacing: 15 m Colour: First 900 m: white Next 1700 m: white Next 600m red/white Final 300 m: red Intensity: High	Length: 3500 m Spacing: 60 m Colour: First 600 m: white/ yellow Next 2300 m: white Final 600 m: white/ yellow Intensity: High	Red high intensity lights	Nil	Nil

**FLSK AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY**

1	<i>ABN/IBN location, characteristics and hours of operation</i>	ABN : RWY 09: Above the ATC Tower Building, flashes alternately white and green colours at a Frequency of 20-26 per minute, H24  RWY 27: Situated on top of the Control Tower:
2	<i>LDI location and LGT Anemometer location and LGT</i>	LDI: RWY 09 Windsock: From the RWY west side - centre point: 360 m toward east / parallel to RW centreline; 100 m toward north / perpendicular to RW centreline  RWY 27 Windsock: From the RWY east side - centre point: 300 m toward west / parallel to RW centreline; 100 m toward north / perpendicular to RW centreline Anemometer: RWY 09: From the RWY centre point: 100 m toward north / perpendicular to RW centreline  RWY 27: From the RW centre point: 100 m toward north / perpendicular to RW centreline
3	<i>TWY edge and centre line lighting</i>	Taxiway Edge: TWY A - Blue Taxiway Edge: TWY B - Blue Taxiway Edge: TWY C - Blue

4	<i>Secondary power supply/switch-over time</i>	RWY 09: Secondary power supply: To all RWY and TWY lighting at Aerodrome.  Switch-over time: Not more than – 15 seconds  RWY 27: Secondary power supply: To all RWY and TWY lighting at Aerodrome.  Switch-over time: Not more than – 15 seconds
5	<i>Remarks</i>	Nil

### FLSK AD 2.16 HELICOPTER LANDING AREA

Apron

### FLSK AD 2.17 ATS AIRSPACE

1	<i>Designation and lateral limits</i>	NDOLA CTR Area bounded by lines joining points S 13°18'00" E 027°41'40" then along the clockwise arc of a circle of 35NM radius centred on S 13°04'59" E 028°15'11" to S 13°18'00" E 028°48'30"; S 13°18'00" E 028°31'59" to point of origin.
2	<i>Vertical limits</i>	GND to FL75
3	<i>Airspace classification</i>	C
4	<i>ATS unit call sign Language(s)</i>	Kapwepwe Tower, English Ndola Approach, English
5	<i>Transition altitude</i>	6000 FT (1829 M)
6	<i>Hours of applicability</i>	0400-1800 UTC
7	<i>Remarks</i>	Military area at the south-east of the airport D19: GND/ FL170 Activated by NOTAM

### FLSK AD 2.18 ATS COMMUNICATION FACILITIES

<i>Service designation</i>	<i>Call sign</i>	<i>Frequency</i>	<i>Hours of operation</i>	SATVOICE	Logon address	<i>Remarks</i>
1	2	3	4	5	6	7
Ndola Approach	Ndola Approach	120.0 MHZ	0400 to 1800	Nil	Nil	
ATIS (Automatic terminal information service)	Kapwepwe Information	126.6 MHZ	H24	Nil	Nil	
Kapwepwe Emergency	Kapwepwe Emergency	121.5 MHZ	0400 to 1800	Nil	Nil	Emergency frequency
Tower Control	Kapwepwe Tower	118.0 MHZ	0400-1800 and O/R	Nil	Nil	

### FLSK AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
LOC 09 ILS CAT I	CO	109.30 MHZ	H24	S 12°57'42.10" E 028°32'07.00"	—	From the RW east side - centre point: 315 m toward east / RW centreline; S 12° 57' 42.1" E 028° 32' 7.0"
GP 09 ILS CAT I	CO	332.00 MHZ	H24	S 12°57'38.80" E 028°30'10.50"	—	- Glide path 3° - Threshold crossing height: 15 m;
DME 09 ILS CAT I	CO	(CH30X)	H24	S 12°57'38.80" E 028°30'10.50"	1303 M	Height of the Tx antenna (20 metres)
VOR/DME	VCD	114.00 MHZ (CH87X)	H24	S 12°57'43.02" E 028°29'20.59"	1290 M	co-axially co-located with DME - Coverage: 150 NM;

## FLSK AD 2.20 LOCAL AERODROME REGULATIONS

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## FLSK AD 2.21 NOISE ABATEMENT PROCEDURES

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## FLSK AD 2.22 FLIGHT PROCEDURES

### FLSK AD 2.22.1 General

All flights in Lusaka FIR within and outside controlled airspace at and above FL150 shall be conducted in accordance with instrument flight rules only. Flights below FL150 within and outside controlled airspace shall be conducted in accordance with instrument/visual flight rules.

Unless permission has been obtained from an ATC Unit, all flights within Lusaka FIR shall be conducted within and in accordance with established ATS routes.

### FLSK AD 2.22.2 Procedure for IFR flights within Ndola CTR

The inbound transit and outbound routes shown on charts may be varied at the discretion of ATS, if necessary, in case of congestion, inbound aircraft may also be instructed to hold at one of the designated airways, reporting points.

### FLSK AD 2.22.3 Missed Approach

Missed approach procedures to be followed in the absence of other ATS instructions are as detailed on the instrument approach charts as attached.

### FLSK AD 2.22.4 Communication Failure

In the event of communication failure, the pilot shall act in accordance with the communication failure procedure in the Zambia Civil Aviation Requirements Part 13, 13.3.13 and ICAO Annex 2, 3.6.5.2.

### FLSK AD 2.22.5 Procedures for VFR Flights within Ndola CTR

Provided traffic and weather conditions so permit, ATC clearance for VFR Flights will be given under the conditions described below:

- a. A flight plan requesting ATC clearance, containing the items 7 to 18 and indicating the purpose of the flight, shall be submitted.
- b. ATC clearance shall be obtained immediately before the aircraft enters, the CTR.
- c. Position reports shall be submitted in accordance with Zambia Civil Aviation Requirements Part 13, 13.3.7 and ICAO Annex 2, 3.6.3.

## FLSK AD 2.23 ADDITIONAL INFORMATION

### FLSK AD 2.23.1 Bird concentrations in the vicinity of the airport

Migratory birds are usually present at the aerodrome from late October to April during the country's wet season.

As far as practicable, Aerodrome Control will inform pilots of this bird activity and the estimated heights AGL.

During the above periods pilots of aircraft are advised, where the design limitations of aircraft installations permit, to operate landing lights in flight, within the terminal area and during take-off, approach-to-land and climb and descent procedures.

The aircraft engine noise is not always effective in the clearing of the birds from the landing area, pilots should exercise extreme caution.

## FLSK AD 2.24 CHARTS RELATED TO AN AERODROME

### Chart Description

#### Kapwepwe IAC VOR Y RWY 09

For IFR flights, aircraft will arrive over the VCD VOR (114.0MHz) from which it is intended that an instrument approach procedure will be commenced, the holding and procedure turn is to the North with the right hand pattern, outbound on heading of 112° followed by westbound heading of 292° to overhead the VOR and continue heading 292° before making a base turn at 7.4 NM VCD/8.2 NM CPB (CAT A-B) and 8.8 NM VCD/9.6 NM CPB (CAT C-D) for Initial Fix (IF). The Instrument Landing System (ILS) (GP/DME 332.0MHz, LOC 109.3MHz) CAT 1 is available for landing runway 09.

#### Kapwepwe IAC VOR RWY 27 - Conventional

For IFR flights, aircraft will arrive over the VCD VOR (114.0MHz) from which it is intended that an instrument approach procedure will be commenced, the holding and procedure turn is to the North with a left hand pattern, outbound on heading of 273° followed by Eastbound heading of 093° to overhead the VOR and to intercept and maintain radial 093° VCD before making a 45° reversal procedure turn for 1 min at 8.8 DME VCD then 180° to intercept in bound track of 273° for landing runway 27. The missed approach holding procedure begins at 4.7 DME VCD with a left turn to join the right-hand holding pattern

Charts	Pages
INSTRUMENT APPROACH CHART - ICAO VOR Y RWY 09	AD 2 FLSK 14 - 1
INSTRUMENT APPROACH CHART ICAO VOR Y RWY 27	AD 2 FLSK 14 - 3

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**FLSW AD 2.1 AERODROME LOCATION INDICATOR AND NAME**  
**FLSW - SOLWEZI**

**FLSW AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

1	<i>ARP coordinates and site at AD</i>	S 12°10'25.80" E 026°22'01.20" Nil
2	<i>Direction and distance from (city)</i>	2NM NNW of Solwezi
3	<i>Elevation/Reference temperature</i>	Elev: 4553.81 FT (1388 M) / T: 30.6° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	5° W ( 1994)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited P.O Box 110005 Solwezi Tel: 260-218-821213 Tel: +260-950-707420 AFS: FLSWZPZX
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	NIL

**FLSW AD 2.3 OPERATIONAL HOURS**

1	<i>AD Administration</i>	0400 - 1600
2	<i>Customs and immigration</i>	Available on request
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	As AD Administration
9	<i>Handling</i>	N/A
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

**FLSW AD 2.4 HANDLING SERVICES AND FACILITIES**

1	<i>Cargo-handling facilities</i>	Nil
2	<i>Fuel/oil types</i>	Fuel : A1 , AVGAS Oil : All Oil types available on request
3	<i>Fuelling facilities/capacity</i>	2 mobile dispensers each at 250 litres/minute and 1 fixed dispenser at 380 litres/minute
4	<i>De-icing facilities</i>	Nil
5	<i>Hangar space for visiting aircraft</i>	Nil
6	<i>Repair facilities for visiting aircraft</i>	Nil
7	<i>Remarks</i>	Nil

**FLSW AD 2.5 PASSENGER FACILITIES**

1	<i>Hotels</i>	In town
2	<i>Restaurants</i>	In town.
3	<i>Transportation</i>	Taxis on arrangement
4	<i>Medical facilities</i>	First aid at AD, Hospital in town
5	<i>Bank and Post Office</i>	In town
6	<i>Tourist Office</i>	Within Shoprite Supermarket at Solwezi City Mall Tel 260-218-82157/3/4 Telefax: Nil
7	<i>Remarks</i>	Nil

### FLSW AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	Within AD HR: CAT 6
2	<i>Rescue equipment</i>	2 fire tenders, 1 Ambulance, 13 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

### FLSW AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

### FLSW AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>
		FLSW Apron	Bitumen	PCN 23/F
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Designator of TWY</i>	<i>Width</i>	<i>Surface</i>
		FLSW Twy	18 M	Bitumen
				PCN 23/F
3	<i>Altimeter checkpoint location and elevation</i>	Location: At Apron Elevation: Nil Info		
4	<i>VOR/INS checkpoints</i>	VOR: Nil INS: Aprons		
5	<i>Remarks</i>	Nil		

### FLSW AD 2.9 SURFACE MOVEMENT GUI-DANCE AND CONTROL SYSTEM AND MARKINGS

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	Nil
2	<i>RWY and TWY markings and LGT</i>	RWY: White centerline marking TWY: White centerline marking
3	<i>Stop bars</i>	Nil
4	<i>Remarks</i>	Nil

### FLSW AD 2.10 AERODROME OBSTACLES

<i>In circling area and at AD</i>		
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c

NOTE: Nil

### FLSW AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	<i>Associated MET Office</i>	Solwezi
2	<i>Hours of service MET Office outside hours</i>	0400 - 1600
3	<i>Office responsible for TAF preparation Period of validity</i>	Kenneth Kaunda International Airport Kenneth Kaunda International Airport as required by flights
4	<i>Trend forecast Interval of issuance</i>	Metar - SPECI 2 HR
5	<i>Briefing/consultation provided</i>	Personal briefing and consultation
6	<i>Flight documentation Language(s) used</i>	Nil

7	<i>Charts and other information available for briefing or consultation</i>	Provided in tabular form for domestic flights only.
8	<i>Supplementary equipment available for providing information</i>	Nil
9	<i>ATS units provided with information</i>	FLSW MET Briefing Office
10	<i>Additional information (limitation of service, etc.)</i>	Nil

### FLSW AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designations RWY</i>	<i>TRUE &amp; MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
08	077°(True) 079°(Mag)	2705 x 35	PCN 23 Bitumen SWY: Nil	S 12°10'36.36" E 026°21'10.86" GUND: Nil	THR 4534.12 FT (1382 M)	
26	257°(True) 259°(Mag)	2705 x 35	PCN 23 Bitumen SWY: Nil	S 12°10'16.24" E 026°22'37.98" GUND: Nil	THR 4553.81 FT (1388 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 08: Nil	Nil	Nil	2825 x 300	Nil	Nil	Nil
For Rwy 26: Nil	Nil	Nil	2825 x 300	Nil	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
08						
26						

### FLSW AD 2.13 DECLARED DISTANCES

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
08	2705	2705	2705	2705	
26	2705	2705	2705	2705	

### FLSW AD 2.14 APPROACH AND RUNWAY LIGHTING

<i>RWY Designator</i>	<i>APCH LGT type LEN INTST</i>	<i>THR LGT colour WBAR</i>	<i>VASIS (MEHT) PAPI</i>	<i>TDZ, LGT LEN</i>	<i>RWY Centre Line LGT Length, spacing, colour, INTST</i>	<i>RWY edge LGT LEN, spacing colour INTST</i>	<i>RWY End LGT colour WBAR</i>	<i>SWY LGT LEN (M) colour</i>	<i>Remarks</i>
1	2	3	4	5	6	7	8	9	10
08	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
26	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

### FLSW AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

### FLSW AD 2.16 HELICOPTER LANDING AREA

As guided by ATC

### FLSW AD 2.17 ATS AIRSPACE

1	<i>Designation and lateral limits</i>	SOLWEZI CTR
---	---------------------------------------	-------------

		Area bounded by lines joining points S 12°00'10" E 026°45'00" then along the clockwise arc of a circle of 24.89NM radius centred on S 12°10'14" E 026°21'49" (NDB SW); to S 12°00'06" E 025°58'30" to point of origin.
2	<i>Vertical limits</i>	GND to FL75
3	<i>Airspace classification</i>	C
4	<i>ATS unit call sign Language(s)</i>	Solwezi Approach, English
5	<i>Transition altitude</i>	7000 FT (2134 M)
6	<i>Hours of applicability</i>	0400 - 1600
7	<i>Remarks</i>	Nil

**FLSW AD 2.18 ATS COMMUNICATION FACILITIES**

<i>Service designation</i>	<i>Call sign</i>	<i>Frequency</i>	<i>Hours of operation</i>	SATVOICE	Logon address	<i>Remarks</i>
1	2	3	4	5	6	7
Approach Control	Solwezi Approach	123.925 MHZ 6952.0 KHZ	Nil	Nil	Nil	Approach Control Service frequency (APP-U)
Tower Control	Solwezi Tower	118.3 MHZ	0400 - 1600	Nil	Nil	Secondary Freq.

**FLSW AD 2.19 RADIO NAVIGATION AND LANDING AIDS**

<i>Type of aid MAG VAR CAT of ILS/MLS</i>	<i>ID</i>	<i>Frequency</i>	<i>Hours of operation</i>	<i>Site of transmitting antenna coordinates</i>	<i>Elevation of DME transmitting antenna</i>	<i>Remarks</i>
1	2	3	4	5	6	7
NDB (03° W)	SW	415.00 KHZ	H24	S 12°10'14.24" E 026°21'50.50"	—	Power output 100w Coverage 50NM

**FLSW AD 2.20 LOCAL AERODROME REGULATIONS****FLSW 2.20.1 Aerodrome Regulations**

At Solwezi Airport a number of local regulations apply.

The regulations are listed below:

- Information about aircraft stands including visual docking guidance systems;
- Information about taxiing from aircraft stands including taxi clearance;
- Limitations in the operation of large aircraft including limitations in the use of the aircraft own power for taxiing;
- Towing assistance;
- Use of engine power exceeding idle power;
- Engine start-up and use of APU;
- Fuel spillage;

When a local regulation is of importance for the safe operation of aircraft on the apron, the information will be given by the TWR .

"Local Regulations" may be requested , in writing from:

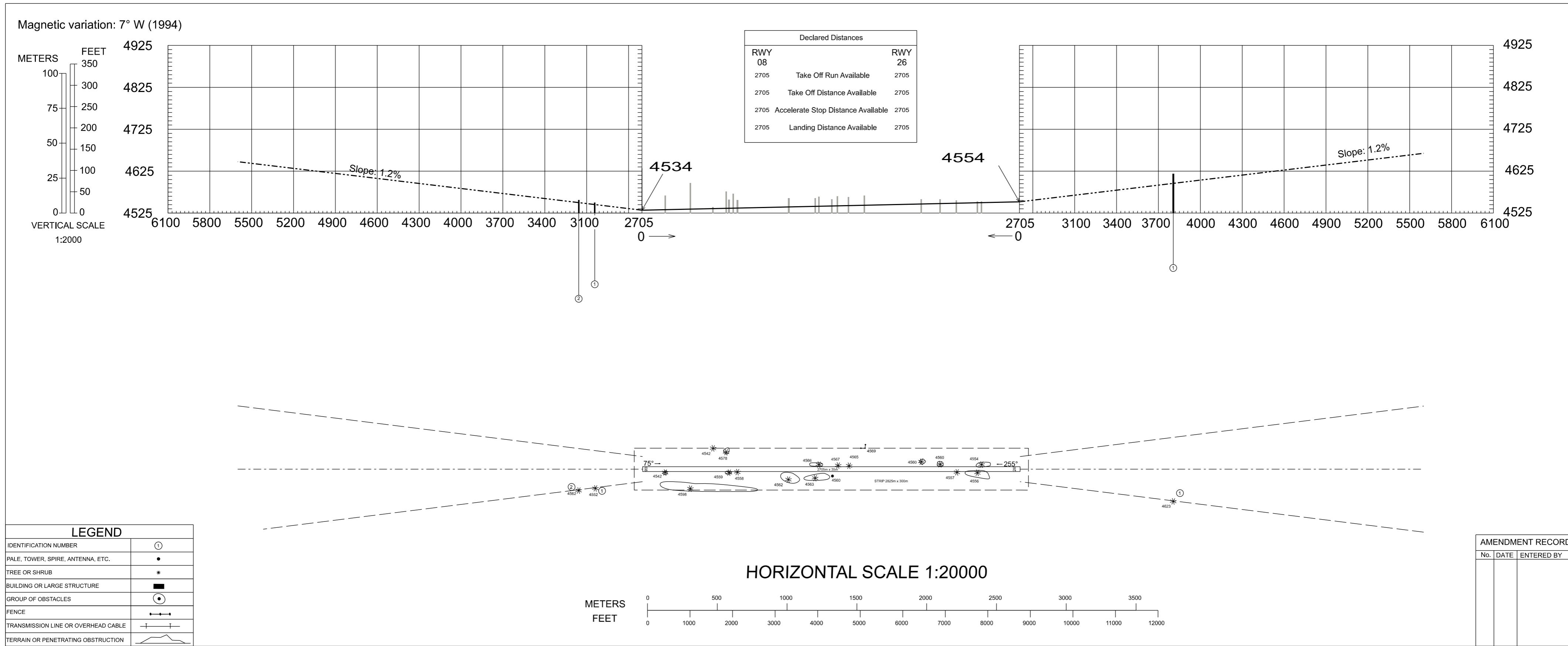
Officer in Charge  
Solwezi Airport

**FLSW AD 2.21 NOISE ABATEMENT PROCEDURES****FLSW AD 2.22 FLIGHT PROCEDURES**

Dimensions in metres  
Elevations in feet

AERODROME OBSTACLE CHART - ICAO  
TYPE A (Operating Limitations)

SOLWEZI  
RWY 08/26



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**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**TRANSITION ALTITUDE  
7000**

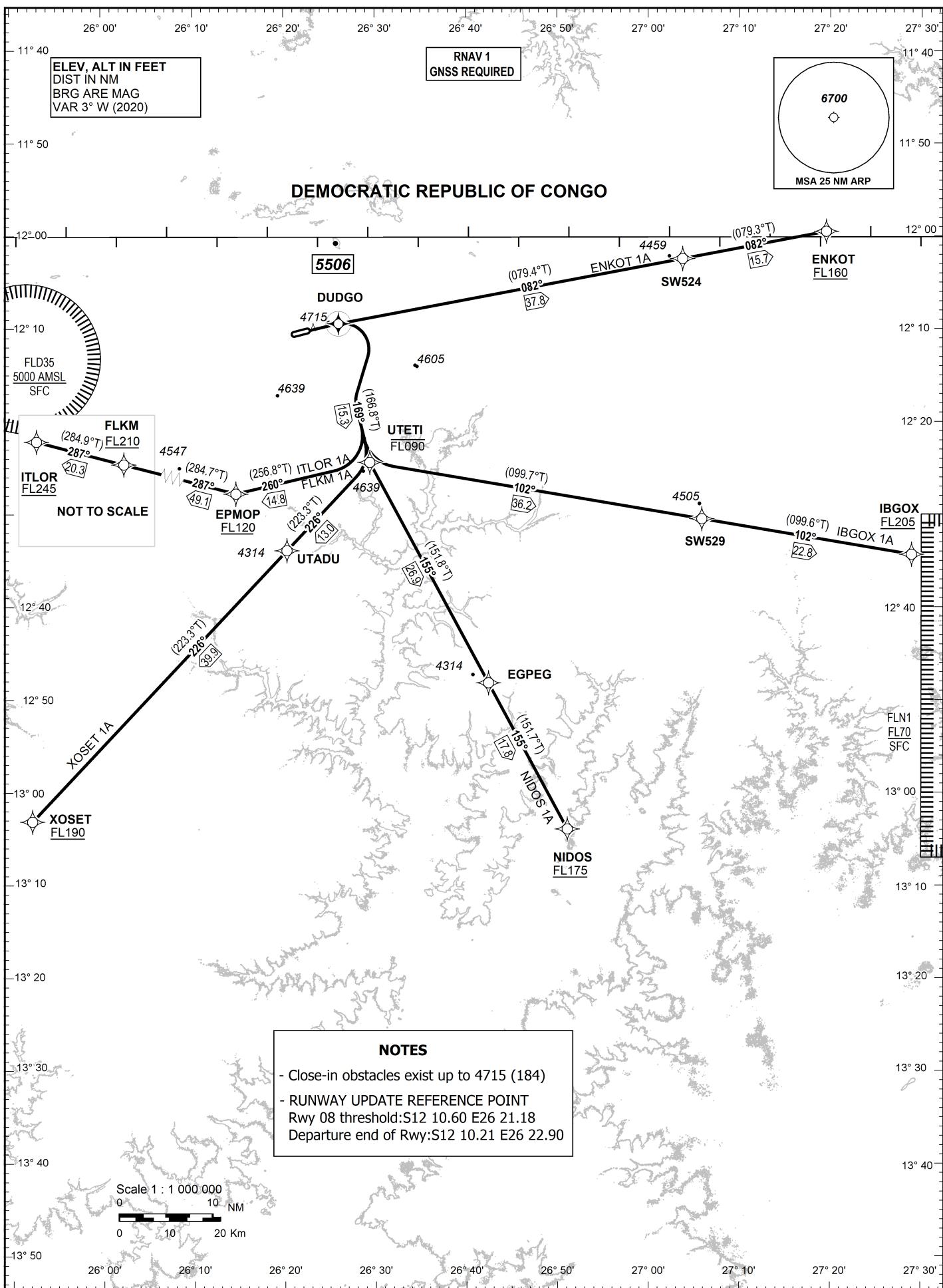
**APP 123.925  
TWR 118.300**

**SOLWEZI/Solwezi**

**(FLSW)**

**RNAV SID RWY 08**

ENKOT 1A, FLKM 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A, XOSET 1A



**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**SOLWEZI/Solwezi**

**(FLSW)**

**RNAV SID RWY 08**

ENKOT 1A, FLKM 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A, XOSET 1A

**TABULAR DESCRIPTION**

**RNAV SID RWY 08**

**ENKOT 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	DUDGO	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW524	-	082 (079.4)	-	37.8	-	-	-	-	-	RNAV 1
030	TF	ENKOT	-	082 (079.3)	-	15.7	-	+FL160	-	-	-	RNAV 1

**FLKM 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	DUDGO	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	UTETI	-	169 (166.8)	-	15.3	-	-FL090	-	-	-	RNAV 1
030	TF	EPMOP	-	260 (256.8)	-	14.8	-	+FL120	-	-	-	RNAV 1
040	TF	FLKM	-	287 (284.7)	-	49.1	-	+FL210	-	-	-	RNAV 1

**IBGOX 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	DUDGO	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	UTETI	-	169 (166.8)	-	15.3	-	-FL090	-	-	-	RNAV 1
030	TF	SW529	-	102 (099.7)	-	36.2	-	-	-	-	-	RNAV 1
040	TF	IBGOX	-	102 (099.6)	-	22.8	-	+FL205	-	-	-	RNAV 1

**ITLOR 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	DUDGO	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	UTETI	-	169 (166.8)	-	15.3	-	-FL090	-	-	-	RNAV 1
030	TF	EPMOP	-	260 (256.8)	-	14.8	-	-	-	-	-	RNAV 1
040	TF	FLKM	-	287 (284.7)	-	49.1	-	-	-	-	-	RNAV 1
050	TF	ITLOR	-	287 (284.9)	-	20.3	-	+FL245	-	-	-	RNAV 1

**NIDOS 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	DUDGO	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	UTETI	-	169 (166.8)	-	15.3	-	-FL090	-	-	-	RNAV 1
030	TF	EGPEG	-	155 (151.8)	-	26.9	-	-	-	-	-	RNAV 1
040	TF	NIDOS	-	155 (151.7)	-	17.8	-	+FL175	-	-	-	RNAV 1

**XOSET 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	DUDGO	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	UTETI	-	169 (166.8)	-	15.3	-	-FL090	-	-	-	RNAV 1
030	TF	UTADU	-	226 (223.3)	-	13.0	-	-	-	-	-	RNAV 1
040	TF	XOSET	-	226 (223.3)	-	39.9	-	+FL190	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO****SOLWEZI/Solwezi****(FLSW)****RNAV SID RWY 08**

ENKOT 1A, FLKM 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A, XOSET 1A

**WAYPOINT LIST  
RNAV SID RWY 08**

<i>WaypointIdentifier</i>	<i>Coordinates</i>		<i>WaypointIdentifier</i>	<i>Coordinates</i>	
ENKOT	S 11 59 32.0	E 027 19 33.0	XOSET	S 13 03 08.6	E 025 52 16.5
FLKM	S 12 15 15.0	E 025 26 15.0			
IBGOX	S 12 34 21.0	E 027 28 56.0			
ITLOR	S 12 10 00.2	E 025 06 13.4			
NIDOS	S 13 03 60.0	E 026 51 06.0			
UTADU	S 12 33 57.6	E 026 20 20.2			
DUDGO	S 12 09 31.2	E 026 25 53.0			
EPMOP	S 12 27 50.4	E 026 14 44.4			
SW524	S 12 02 29.1	E 027 03 47.6			
UTETI	S 12 24 26.7	E 026 29 27.1			
EGPEG	S 12 48 14.0	E 026 42 27.4			
SW529	S 12 30 32.5	E 027 05 53.9			

**ROUTING**

<b>NAME</b>	<b>TEXT</b>
ENKOT 1A	After take-off climb on course 079° to DUDGO, track 082° to SW524, then track 082° to ENKOT. MCA/MCL: ENKOT AT or ABOVE FL160.
FLKM 1A	After take-off climb on course 079° to DUDGO, track 169° to UTETI, track 260° to EPMOP, then track 2 87° to FLKM. MCA/MCL: UTETI AT or BELOW FL090, EPMOP AT or ABOVE FL120, FLKM AT or ABOVE FL210.
IBGOX 1A	After take-off climb on course 079° to DUDGO, track 169° to UTETI, track 102° to SW529, then track 1 02° to IBGOX. MCA/MCL: UTETI AT or BELOW FL090, IBGOX AT or ABOVE FL205.
ITLOR 1A	After take-off climb on course 079° to DUDGO, track 169° to UTETI, track 260° to EPMOP, track 287° to FLKM, then track 287° to ITLOR. MCA/MCL: UTETI AT or BELOW FL090, ITLOR AT or ABOVE FL245.
NIDOS 1A	After take-off climb on course 079° to DUDGO, track 169° to UTETI, track 155° to EGPEG, then track 1 55° to NIDOS. MCA/MCL: UTETI AT or BELOW FL090, NIDOS AT or ABOVE FL175.
XOSET 1A	After take-off climb on course 079° to DUDGO, track 169° to UTETI, track 226° to UTADU, then track 2 26° to XOSET. MCA/MCL: UTETI AT or BELOW FL090, XOSET AT or ABOVE FL190.

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**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**TRANSITION ALTITUDE  
7000**

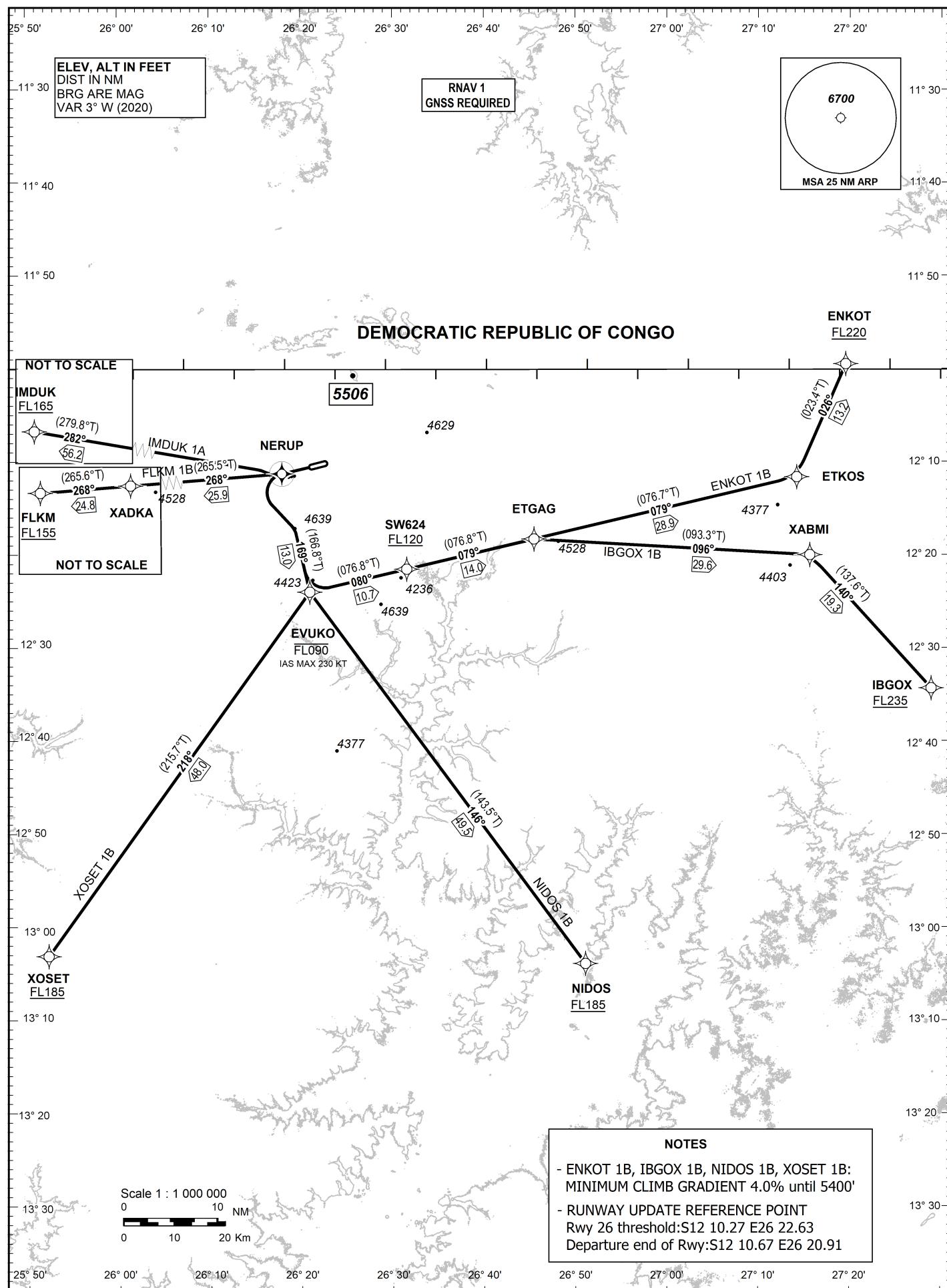
**APP 123.925  
TWR 118.300**

**SOLWEZI/Solwezi**

**(FLSW)**

**RNAV SID RWY 26**

ENKOT 1B, FLKM 1B, IBGOX 1B, IMDUK 1A, NIDOS 1B, XOSET 1B



**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**SOLWEZI/Solwezi**

**(FLSW)**

**RNAV SID RWY 26**

ENKOT 1B, FLKM 1B, IBGOX 1B, IMDUK 1A, NIDOS 1B, XOSET 1B

**TABULAR DESCRIPTION**

**RNAV SID RWY 26**

ENKOT 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	NERUP	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	EVUKO	-	169 (166.8)	-	13.0	-	-FL090	-230	-	-	RNAV 1
030	TF	SW624	-	080 (076.8)	-	10.7	-	+FL120	-	-	-	RNAV 1
040	TF	ETGAG	-	079 (076.8)	-	14.0	-	-	-	-	-	RNAV 1
050	TF	ETKOS	-	079 (076.7)	-	28.9	-	-	-	-	-	RNAV 1
060	TF	ENKOT	-	026 (023.4)	-	13.2	-	+FL220	-	-	-	RNAV 1

**FLKM 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	NERUP	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	XADKA	-	268 (265.5)	-	25.9	-	-	-	-	-	RNAV 1
030	TF	FLKM	-	268 (265.6)	-	24.8	-	+FL155	-	-	-	RNAV 1

**IBGOX 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	NERUP	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	EVUKO	-	169 (166.8)	-	13.0	-	-FL090	-230	-	-	RNAV 1
030	TF	SW624	-	080 (076.8)	-	10.7	-	+FL120	-	-	-	RNAV 1
040	TF	ETGAG	-	079 (076.8)	-	14.0	-	-	-	-	-	RNAV 1
050	TF	XABMI	-	096 (093.3)	-	29.6	-	-	-	-	-	RNAV 1
060	TF	IBGOX	-	140 (137.6)	-	19.3	-	+FL235	-	-	-	RNAV 1

**IMDUK 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	NERUP	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	IMDUK	-	282 (279.8)	-	56.2	-	+FL165	-	-	-	RNAV 1

**NIDOS 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	NERUP	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	EVUKO	-	169 (166.8)	-	13.0	-	-FL090	-230	-	-	RNAV 1
030	TF	NIDOS	-	146 (143.5)	-	49.5	-	+FL185	-	-	-	RNAV 1

**XOSET 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	NERUP	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	EVUKO	-	169 (166.8)	-	13.0	-	-FL090	-230	-	-	RNAV 1
030	TF	XOSET	-	218 (215.7)	-	48.0	-	+FL185	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO****SOLWEZI/Solwezi****(FLSW)****RNAV SID RWY 26**

ENKOT 1B, FLKM 1B, IBGOX 1B, IMDUK 1A, NIDOS 1B, XOSET 1B

**WAYPOINT LIST  
RNAV SID RWY 26**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
ENKOT	S 11 59 32.0	E 027 19 33.0	XOSET	S 13 03 08.6	E 025 52 16.5
FLKM	S 12 15 15.0	E 025 26 15.0			
IBGOX	S 12 34 21.0	E 027 28 56.0			
IMDUK	S 12 01 40.5	E 025 21 25.5			
NIDOS	S 13 03 60.0	E 026 51 06.0			
NERUP	S 12 11 21.4	E 026 17 55.8			
EVUKO	S 12 24 04.2	E 026 20 57.9			
SW624	S 12 21 37.2	E 026 31 34.0			
ETGAG	S 12 18 23.4	E 026 45 29.2			
ETKOS	S 12 11 41.3	E 027 14 12.3			
XABMI	S 12 20 03.7	E 027 15 38.6			
XADKA	S 12 13 21.9	E 025 51 31.9			

**ROUTING**

NAME	TEXT
ENKOT 1B	Minimum climb gradient of 4.0% to 5400. After take -off climb on course 259° to NERUP, track 169° to EVUKO, track 080° to SW624, track 079° to ETGAG, track 079° to ETKOS, then track 026° to ENKOT. IAS Max 230 Kts until SW623.  MCA/MCL: EVUKO AT or BELOW FL090, SW624 AT or ABOVE FL120, ENKOT AT or ABOVE FL220.
FLKM 1B	After take-off climb on course 259° to NERUP, track 268° to XADKA, then track 268° to FLKM.  MCA/MCL: FLKM AT or ABOVE FL155.
IBGOX 1B	Minimum climb gradient of 4.0% to 5400. After take -off climb on course 259° to NERUP, track 169° to EVUKO, track 080° to SW624, track 079° to ETGAG, track 096° to XABMI, then track 140° to IBGOX. IAS Max 230 Kts until EVUKO.  MCA/MCL: EVUKO AT or BELOW FL090, SW624 AT or ABOVE FL120, IBGOX AT or ABOVE FL235.
IMDUK 1A	After take-off climb on course 259° to NERUP, then track 282° to IMDUK.  MCA/MCL: IMDUK AT or ABOVE FL165.
NIDOS 1B	Minimum climb gradient of 4.0% to 5400. After take -off climb on course 259° to NERUP, track 169° to EVUKO, then track 146° to NIDOS. IAS Max 230 Kts until EVUKO.  MCA/MCL: EVUKO AT or BELOW FL090, NIDOS AT or ABOVE FL185.
XOSET 1B	Minimum climb gradient of 4.0% to 5400. After take -off climb on course 259° to NERUP, track 169° to EVUKO, then track 218° to XOSET. IAS Max 230 Kts until EVUKO.  MCA/MCL: EVUKO AT or BELOW FL090, XOSET AT or ABOVE FL185.

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**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

**TRANSITION ALTITUDE  
7000**

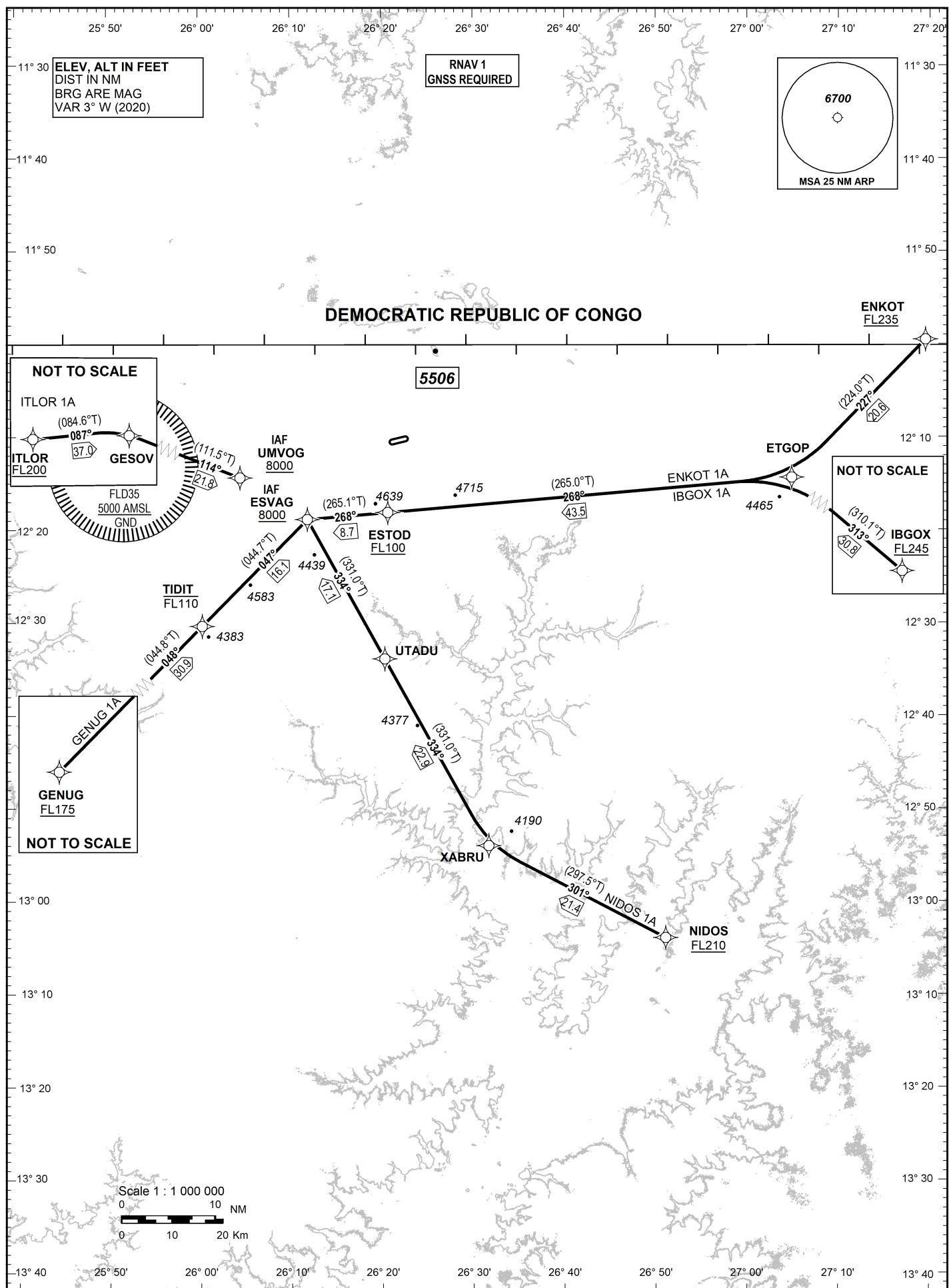
**APP 123.925  
TWR 118.300**

**SOLWEZI/Solwezi**

**(FLSW)**

**RNAV STAR RWY 08**

ENKOT 1A, GENUG 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A



**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

**SOLWEZI/Solwezi**

**(FLSW)**

**RNAV STAR RWY 08**

ENKOT 1A, GENUG 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A

**TABULAR DESCRIPTION**

**RNAV STAR RWY 08**

**ENKOT 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	ENKOT	-	-	-	-	-	+FL235	-	-	-	RNAV 1
020	TF	ETGOP	-	227 (224.0)	-	20.6	-	-	-	-	-	RNAV 1
030	TF	ESTOD	-	268 (265.0)	-	43.5	-	+FL100	-	-	-	RNAV 1
040	TF	ESVAG	-	268 (265.1)	-	8.7	-	+8000	-	-	-	RNAV 1

**GENUG 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	GENUG	-	-	-	-	-	+FL175	-	-	-	RNAV 1
020	TF	TIDIT	-	048 (044.8)	-	30.9	-	-FL110	-	-	-	RNAV 1
030	TF	ESVAG	-	047 (044.7)	-	16.1	-	+8000	-	-	-	RNAV 1

**IBGOX 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	IBGOX	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	ETGOP	-	313 (310.1)	-	30.8	-	-	-	-	-	RNAV 1
030	TF	ESTOD	-	268 (265.0)	-	43.5	-	+FL100	-	-	-	RNAV 1
040	TF	ESVAG	-	268 (265.1)	-	8.7	-	+8000	-	-	-	RNAV 1

**ITLOR 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	ITLOR	-	-	-	-	-	+FL200	-	-	-	RNAV 1
020	TF	GESOV	-	087 (084.6)	-	37.0	-	-	-	-	-	RNAV 1
030	TF	UMVOG	-	114 (111.5)	-	21.8	-	+8000	-	-	-	RNAV 1

**NIDOS 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	NIDOS	-	-	-	-	-	+FL210	-	-	-	RNAV 1
020	TF	XABRU	-	301 (297.5)	-	21.4	-	-	-	-	-	RNAV 1
030	TF	UTADU	-	334 (331.0)	-	22.9	-	-	-	-	-	RNAV 1
040	TF	ESVAG	-	334 (331.0)	-	17.1	-	+8000	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO****SOLWEZI/Solwezi****(FLSW)****RNAV STAR RWY 08**

ENKOT 1A, GENUG 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A

**WAYPOINT LIST  
RNAV STAR RWY 08**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
ENKOT	S 11 59 32.0	E 027 19 33.0	TIDIT	S 12 30 25.1	E 026 00 20.3
GENUG	S 12 52 28.9	E 025 38 04.6			
IBGOX	S 12 34 21.0	E 027 28 56.0			
ITLOR	S 12 10 00.2	E 025 06 13.4			
NIDOS	S 13 03 60.0	E 026 51 06.0			
UMVOG	S 12 14 26.7	E 026 04 31.1			
ESVAG	S 12 18 56.4	E 026 11 52.9			
GESOV	S 12 06 26.4	E 025 43 48.8			
ETGOP	S 12 14 25.1	E 027 04 55.2			
ESTOD	S 12 18 12.1	E 026 20 41.4			
XABRU	S 12 54 05.5	E 026 31 41.9			
UTADU	S 12 33 57.6	E 026 20 20.2			

**ROUTING**

NAME	TEXT
ENKOT 1A	From ENKOT track 227° to ETGOP, track 268° to ESTOD, track 268° to ESVAG. MEL/MEA: ENKOT AT or ABOVE FL235, ESTOD AT or ABOVE FL100, ESVAG AT or ABOVE 8000'.
GENUG 1A	From GENUG track 048° to TIDIT, track 047° to ESVAG. MEL/MEA: GENUG AT or ABOVE FL175, TIDIT AT or BELOW FL110, ESVAG AT or ABOVE 8000'.
IBGOX 1A	From IBGOX track 313° to ETGOP, track 268° to ESTOD, track 268° to ESVAG. MEL/MEA: IBGOX AT or ABOVE FL245, ESTOD AT or ABOVE FL100, ESVAG AT or ABOVE 8000'.
ITLOR 1A	From ITLOR track 087° to GESOV, track 114° to UMVOG. MEL/MEA: ITLOR AT or ABOVE FL200, UMVOG AT or ABOVE 8000'.
NIDOS 1A	From NIDOS track 301° to XABRU, track 334° to UTADU, track 334° to ESVAG. MEL/MEA: NIDOS AT or ABOVE FL210, ESVAG AT or ABOVE 8000'.

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INSTRUMENT (STAR) - ICAO**

TRANSITION ALTITUDE  
7000

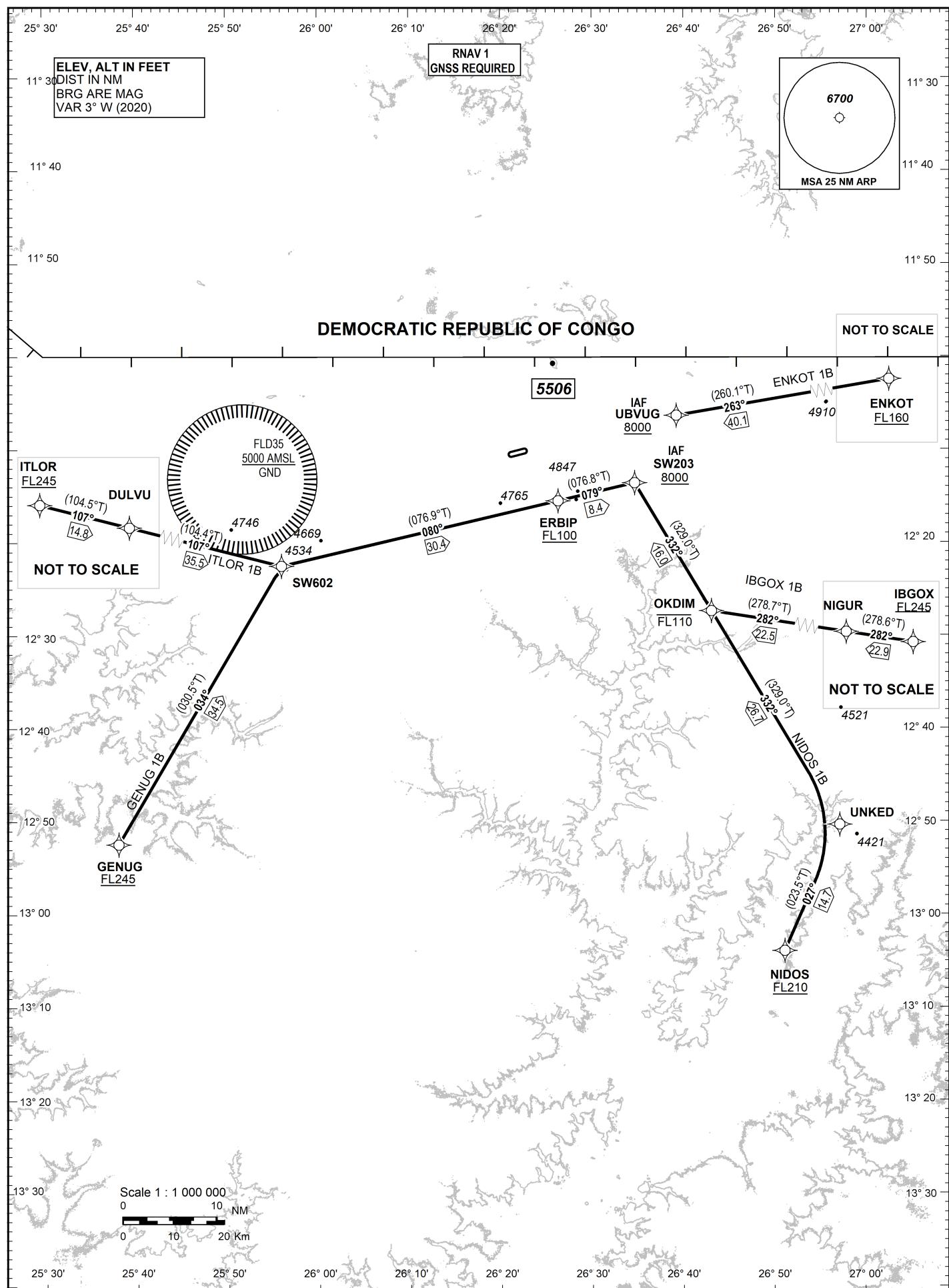
APP 123.925  
TWR 118.300

**SOLWEZI/Solwezi**

(FLSW)

**RNAV STAR RWY 26**

ENKOT 1B, GENUG 1B, IBGOX 1B, ITLOR 1B, NIDOS 1B



**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

**SOLWEZI/Solwezi**

(FLSW)

**RNAV STAR RWY 26**

ENKOT 1B, GENUG 1B, IBGOX 1B, ITLOR 1B, NIDOS 1B

**TABULAR DESCRIPTION**

**RNAV STAR RWY 26**

**ENKOT 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	ENKOT	-	-	-	-	-	+FL160	-	-	-	RNAV 1
020	TF	UBVUG	-	263 (260.1)	-	40.1	-	+8000	-	-	-	RNAV 1

**GENUG 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	GENUG	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	SW602	-	034 (030.5)	-	34.5	-	-	-	-	-	RNAV 1
030	TF	ERBIP	-	080 (076.9)	-	30.4	-	+FL100	-	-	-	RNAV 1
040	TF	SW203	-	079 (076.8)	-	8.4	-	+8000	-	-	-	RNAV 1

**IBGOX 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	IBGOX	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	NIGUR	-	282 (278.6)	-	22.9	-	-	-	-	-	RNAV 1
030	TF	OKDIM	-	282 (278.7)	-	22.5	-	-FL110	-	-	-	RNAV 1
040	TF	SW203	-	332 (329.0)	-	16.0	-	+8000	-	-	-	RNAV 1

**ITLOR 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	ITLOR	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	DULVU	-	107 (104.5)	-	14.8	-	-	-	-	-	RNAV 1
030	TF	SW602	-	107 (104.4)	-	35.5	-	-	-	-	-	RNAV 1
040	TF	ERBIP	-	080 (076.9)	-	30.4	-	+FL100	-	-	-	RNAV 1
050	TF	SW203	-	079 (076.8)	-	8.4	-	+8000	-	-	-	RNAV 1

**NIDOS 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	NIDOS	-	-	-	-	-	+FL210	-	-	-	RNAV 1
020	TF	UNKED	-	027 (023.5)	-	14.7	-	-	-	-	-	RNAV 1
030	TF	OKDIM	-	332 (329.0)	-	26.7	-	-FL110	-	-	-	RNAV 1
040	TF	SW203	-	332 (329.0)	-	16.0	-	+8000	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO****SOLWEZI/Solwezi****(FLSW)****RNAV STAR RWY 26**

ENKOT 1B, GENUG 1B, IBGOX 1B, ITLOR 1B, NIDOS 1B

**WAYPOINT LIST  
RNAV STAR RWY 26**

<i>WaypointIdentifier</i>	<i>Coordinates</i>		<i>WaypointIdentifier</i>	<i>Coordinates</i>	
ENKOT	S 11 59 32.0	E 027 19 33.0	NIGUR	S 12 30 52.6	E 027 05 45.0
GENUG	S 12 52 28.9	E 025 38 04.6			
IBGOX	S 12 34 21.0	E 027 28 56.0			
ITLOR	S 12 10 00.2	E 025 06 13.4			
NIDOS	S 13 03 60.0	E 026 51 06.0			
UBVUG	S 12 06 25.7	E 026 39 13.5			
SW203	S 12 13 40.6	E 026 34 40.1			
DULVU	S 12 13 42.9	E 025 20 50.6			
SW602	S 12 22 35.1	E 025 56 00.7			
ERBIP	S 12 15 37.0	E 026 26 17.4			
UNKED	S 12 50 25.1	E 026 57 07.0			
OKDIM	S 12 27 26.7	E 026 43 04.0			

**ROUTING**

NAME	TEXT
ENKOT 1B	From ENKOT track 263° to UBVUG. MEL/MEA: ENKOT AT or ABOVE FL160, UBVUG AT or ABOVE 8000'.
GENUG 1B	From GENUG track 034° to SW602, track 080° to ERBIP, track 079° to SW203. MEL/MEA: GENUG AT or ABOVE FL245, ERBIP AT or above FL100, SW203 AT or ABOVE 8000'.
IBGOX 1B	From IBGOX track 282° to NIGUR, track 282° to OKDIM, track 332° to SW203. MEL/MEA: IBGOX AT or ABOVE FL245, OKDIM AT or BELOW FL110, SW203 AT or ABOVE 8000'.
ITLOR 1B	From ITLOR track 107° to DULVU, track 107° to SW602, track 080° to ERBIP, track 079° to SW203. MEL/MEA: ITLOR AT or ABOVE FL245, ERBIP AT or ABOVE FL100, SW203 AT or ABOVE 8000'.
NIDOS 1B	From NIDOS track 027° to UNKED, track 332° to OKDIM, track 332° to SW203. MEL/MEA: NIDOS AT or ABOVE FL210, SW605 AT or BELOW FL110 SW203 AT or ABOVE 8000'.

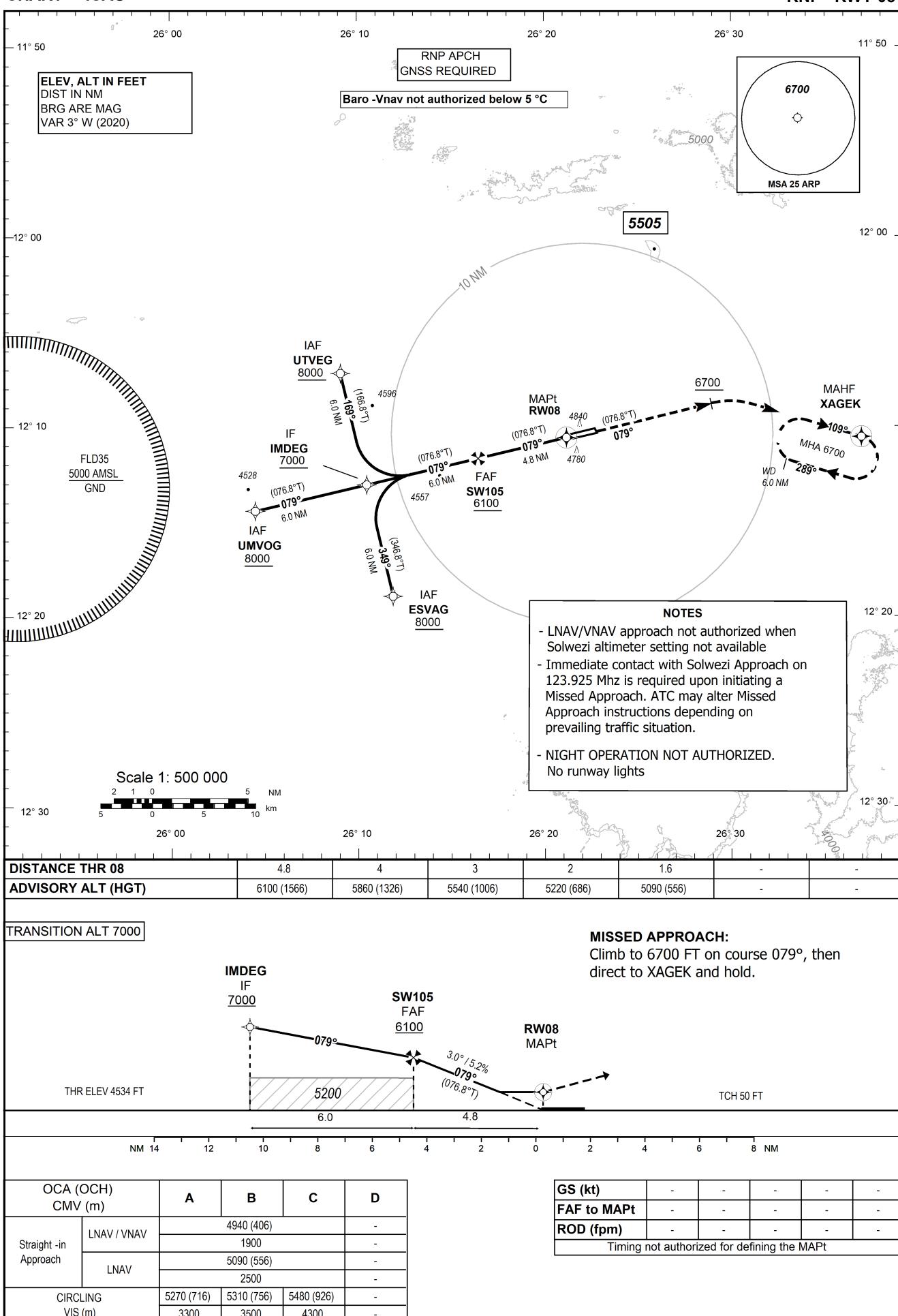
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INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 4554 FT  
HEIGHTS RELATED TO  
THR RWY 08 - ELEV 4534 FT

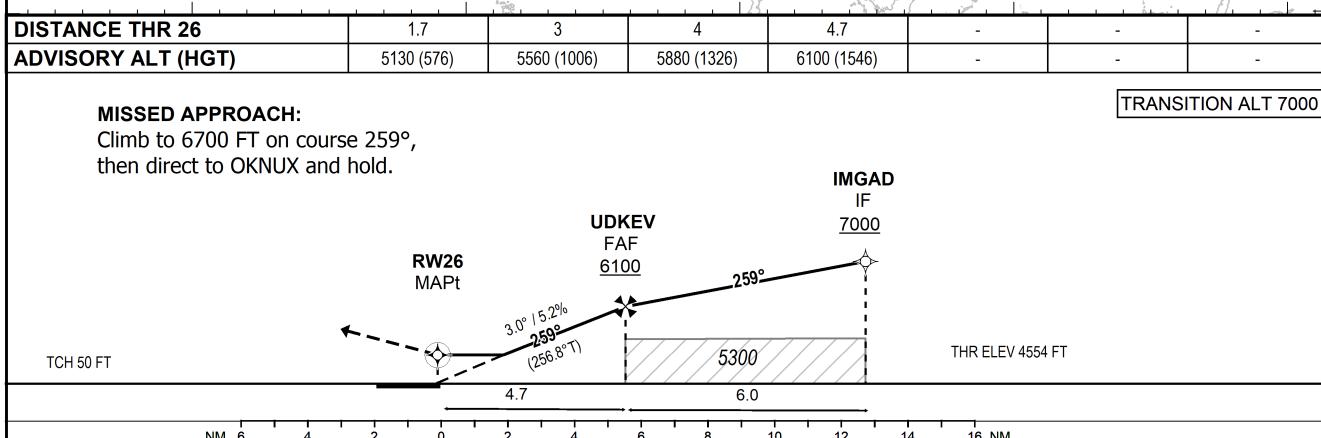
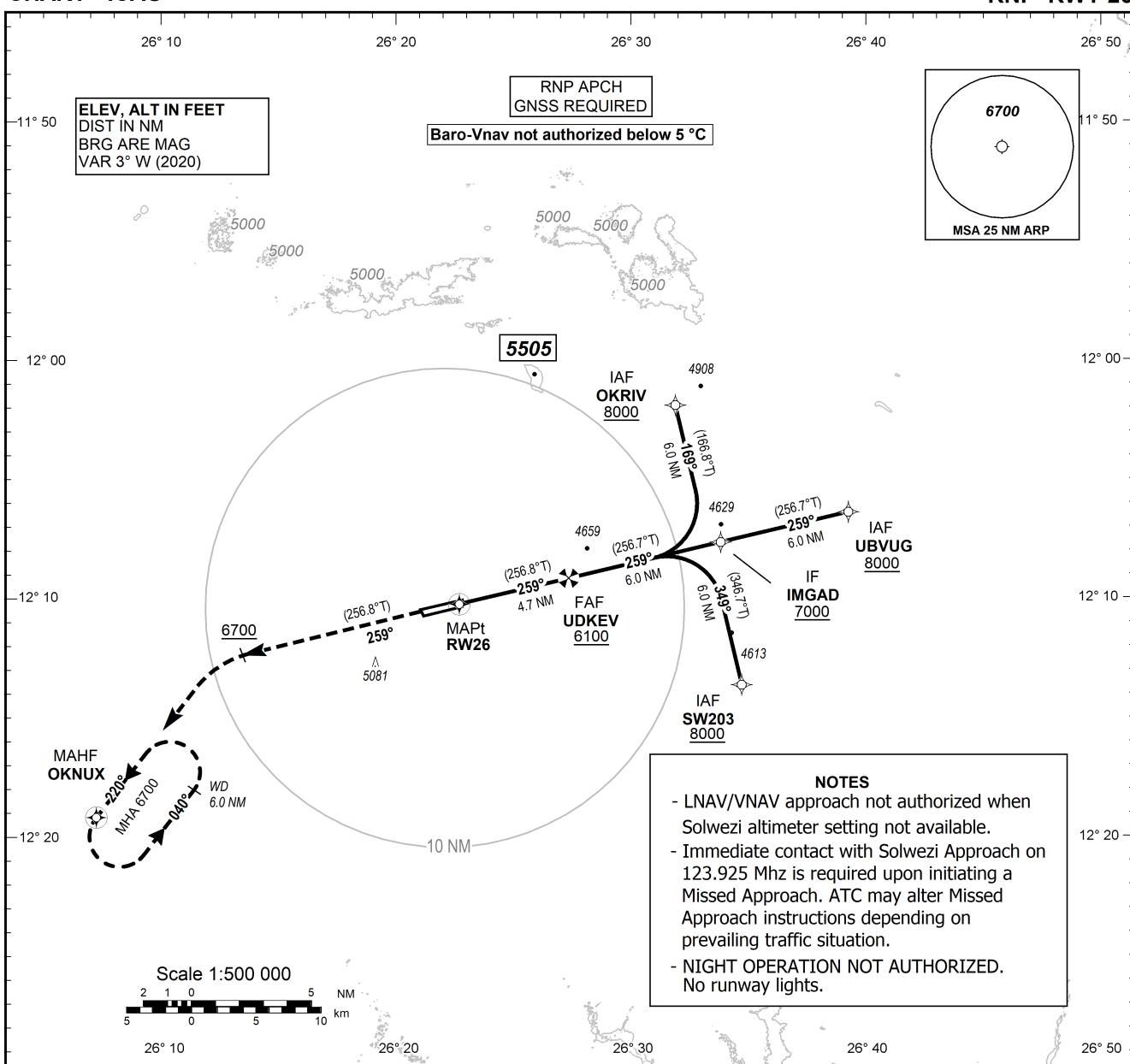
APP 123.925  
TWR 118.300

SOLWEZI/Solwezi  
(FLSW)  
RNP RWY 08



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	UTVEG	-	-	-	-	+8000	-	-	RNP APCH
020	TF	IMDEG	-	169 / (166.8)	6.0	-	+7000	-	-	RNP APCH
010	IF	ESVAG	-	-	-	-	+8000	-	-	RNP APCH
020	TF	IMDEG	-	349 / (346.8)	6.0	-	+7000	-	-	RNP APCH
010	IF	UMVOG	-	-	-	-	+8000	-	-	RNP APCH
020	TF	IMDEG	-	079 / (076.8)	6.0	-	+7000	-	-	RNP APCH
030	TF	SW105	-	079 / (076.8)	6.0	-	+6100	-	-	RNP APCH
040	TF	RW08	Y	079 / (076.8)	4.8	-	@4584	-	-3.00 / 50	RNP APCH
050	CA	-	-	079 / (076.8)	-	-	+6700	-	-	RNP APCH
060	DF	XAGEK	Y	-	-	-	+6700	-	-	RNP APCH
070	HM	XAGEK	Y	109 / (106.5)	6.0	L	+6700	-230	-	RNP APCH

<i>Waypoint Identifier</i>	<i>Coordinates</i>
RW08	S 12 10 36.36 E 26 21 10.86
ESVAG	S 12 18 56.4 E 026 11 52.9
IMDEG	S 12 13 04.4 E 026 10 29.1
SW105	S 12 11 41.9 E 026 16 27.0
UMVOG	S 12 14 26.7 E 026 04 31.1
UTVEG	S 12 07 12.2 E 026 09 05.3
XAGEK	S 12 11 22.2 E 026 46 41.7

INSTRUMENT  
APPROACH  
CHART - ICAOAERODROME ELEV 4554 FT  
HEIGHTS RELATED TO  
AD ELEVAPP 123.925  
TWR 118.300SOLWEZI/Solwezi  
(FLSW)  
RNP RWY 26

OCA (OCH) CMV (m)	A	B	C	D	GS (kt)	-	-	-	-	-		
Straight-in Approach	LNAV / VNAV	5040 (486)		-	FAF to MAPt	-	-	-	-	-		
		2300		-	ROD (fpm)	-	-	-	-	-		
	LNAV	5130 (576)		-	Timing not authorized for defining the MAPt							
		2600		-								
CIRCLING VIS (m)		5270 (716)	5310 (756)	5480 (926)	-							
		3300	3500	4300	-							

<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	SW203	-	-	-	-	+8000	-	-	RNP APCH
020	TF	IMGAD	-	349 / (346.7)	6.0	-	+7000	-	-	RNP APCH
010	IF	OKRIV	-	-	-	-	+8000	-	-	RNP APCH
020	TF	IMGAD	-	169 / (166.8)	6.0	-	+7000	-	-	RNP APCH
010	IF	UBVUG	-	-	-	-	+8000	-	-	RNP APCH
020	TF	IMGAD	-	259 / (256.7)	6.0	-	+7000	-	-	RNP APCH
030	TF	UDKEV	-	259 / (256.7)	6.0	-	+6100	-	-	RNP APCH
040	TF	RW26	Y	259 / (256.8)	4.7	-	@4604	-	-3.00 / 50	RNP APCH
050	CA	-	-	259 / (256.8)	-	-	+6700	-	-	RNP APCH
060	DF	OKNUX	Y	-	-	-	+6700	-	-	RNP APCH
070	HM	OKNUX	Y	220 / (217.8)	6.0	L	+6700	-230	-	RNP APCH

<i>Waypoint Identifier</i>	<i>Coordinates</i>
RW26	S 12 10 16.24 E 26 22 37.98
IMGAD	S 12 07 48.6 E 026 33 15.9
OKNUX	S 12 19 45.6 E 026 04 37.7
OKRIV	S 12 01 56.6 E 026 31 51.6
SW203	S 12 13 40.6 E 026 34 40.1
UBVUG	S 12 06 25.7 E 026 39 13.5
UDKEV	S 12 09 11.5 E 026 27 18.1