AD 2 AERODROMES

VRXX AD 2.1 AERODROME LOCATION INDICATOR AND NAME

VRMM – VELANA INTERNATIONAL AIRPORT

VRMM AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	*ARP coordinates and site at AD*	041130N 0733145E TWY C centre point.
2	*Direction and distance from City*	051° 2.8 KM from Male'
3	*Elevation / Reference temperature/Mean low temperature*	2.3M (7.5FT)/ 31.9°C
4	*Geoid undulation at AD ELEV PSN*	-97.5M
5	*MAG VAR / Annual change*	3° W (2020)
6	*AD Operator* *Address* *Telephone* *E- mail Address* *Website:*	Maldives Airports Company Ltd Velana International Airport Hulhule' 22000 Republic of Maldives Tel: (+960) 3325511 Fax: (+960) 333 1515 VRMMYDYX info@macl.aero www.macl.aero
7	*Types of traffic permitted (IFR/VFR)*	IFR/ VFR
8	*Remarks*	NIL

VRMM AD 2.3 OPERATIONAL HOURS

1	*AD Operator*	H24
2	*Customs and Immigration*	H24
3	*Health and sanitation*	H24
4	*AIS Briefing office*	H24
5	*ATS Reporting Office (ARO)*	H24
6	*Met Briefing Office*	H24
7	*ATS*	H24
8	*Fuelling*	H24
9	*Handling*	H24
10	*Security*	H24
11	*De-Icing*	Not Applicable
12	*Remarks*	Prior permission required for non-scheduled traffic.

VRMM AD 2.4 HANDLING SERVICES AND FACILITIES

1	*Cargo handling facilities*	All modern facilities handling weights up to 20 tons
2	*Fuel/oil types*	Jet A1
3	*Fuelling facilities/capacity*	06 tanks / 15 million liters
4	*De- icing facilities*	Not Applicable
5	*Hangar space for visiting aircraft*	Nil
6	*Repair facilities for visiting aircraft*	Nil
7	*Remarks*	Nil

VRMM AD 2.5 PASSENGER FACILITIES

1	*Hotels*	At AD and in the city
2	*Restaurants*	At AD and in the city
3	*Transportation*	Taxis & Bus Services for Land transportation and Launches & Ferry Service for Sea transportation can be hired from the AD
4	*Medical facilities*	First Aid/ Paramedic at AD, and Hospitals in the city
5	*Bank/post*	At AD and open during operational Hours and in the city
6	*Tourist Office*	Airport information counter at AD. Office in the city
7	*Remarks*	Nil

VRMMAD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	*AD category for fire fighting*	CAT 9
2	*Rescue equipment*	Adequately provided as recommended by ICAO
3	*Capabilities for removal of disabled aircraft*	Able to remove aircraft type: DO228, DHC-8
4	*Remarks*	Nil

VRMM AD 2.7 SEASONAL AVAILABILITY – CLEARING

1	*Types of clearing equipment*	Nil
2	*Clearance priorities*	Nil
3	*Remarks*	AD Serviceable throughout the year

VRMM AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	*Apron designation, surface and strength*	Main Apron Surface: Concrete Strength: PCN95/R/B/W/T (for code C & above) East Apron Surface: Concrete Strength: PCN95/R/B/W/T North Apron Surface: Concrete Strength PCN95/R/B/W/T
2	*Taxiway designation, width, surface and strength*	Width: 24M for Taxi lane A, 23M for TWY F and G, 35M for TWY B3 and B4, 55M for TWY B5 and B6, 63M for TWY B7 and B8, 43M for TWY B9, 45M for TWY C, 32M for TWY D1, D2, D3, D5, D6 and D7, 18M for D4, 27.5M for TWY E, 35M for Taxi lane F Surface: TWY F and G, Taxi lane A and F – Concrete TWY B3- B9, C, D1– D7– Asphalt Strength: PCN 95/R/B/W/T for Taxi lane A and F PCN 73/F/A/W/T for TWY B3–B9 and TWY E PCN 73/F/A/W/T for TWY D1, D2, D3, D5 D6 and D7 PCN 70/F/B/W/T for TWY F and G PCN 64/F/A/W/T for TWY C PCN 60/F/A/W/T for TWY D4
3	*Altimeter Checkpoint Location and Elevation*	Location: N/A Elevation: 2.3m (7.5ft)
4	*VOR checkpoints*	VOR: Frequency 114.7 MHz Location: TWY B9
5	*INS checkpoints*	Nil
6	*Remarks*	Nil

VRMM AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	*Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands*	Main Apron A12,A11,A10,9L,9,9R,8L,8,8R,7L,7,7R,6L,6,6R,5L,5,5R 4L,4,4R,3L,3,3R,2L,2,2R,A9,A8,A7,A6,A5,A4,A3,A2,A1 East Apron F1L,F1,F1R,F2L,F2,F2R,F3L,F3,F3R,F4L,F4,F4R
2	*RWY/TWY markings and LGT*	RWY: Threshold, Designation, Centerline, Edge line, Aiming Point, Touchdown Zone and Blast Pad Marked and lighted TWY: Holding Position, Intermediate Holding Position, Center Line, Edge line marked and lighted
3	*Stop bars and RWY guard lights (if any)*	Stop bars NA RWY Guard lights available
4	*Other runway protection measures; (if any)*	Nil
5	*Remarks*	Lead-in line provided and Pilot to follow marshaller.

VRMM AD 2.10 AERODROME OBSTACLES

1- In Approach/TKOF Areas					
RWY/Area affected	*Obstacle type*	*Coordinates*	*Elevation*	*Markings /LGT*	*Remarks*
NIL					
In Area 2					
Obstacle ID/ Designation	*OBST type*	*Obstacle position*	*Elevation /Height*	*Markings /LGT*	*Remarks*
G1	Apron Mast	041043.1N 0733138.8E	25		Not penetrating OLS
G2	Apron Mast	041045.1N 0733138.8E	25		Not penetrating OLS
G3	Apron Mast	041047.5N 0733138.8E	25		Not penetrating OLS
G4	Apron Mast	041050.6N 0733138.7E	25		Not penetrating OLS
G5	Apron Mast	041053.3N 0733138.7E	25		Not penetrating OLS
G6	Apron Mast	041056.0N 0733138.6E	25		Not penetrating OLS
G21	Apron Mast	041104.9N 0733202.4E	25		Not penetrating OLS
G22	Apron Mast	041107.7N 0733202.4E	25		Not penetrating OLS
G23	Apron Mast	041110.6N 0733202.4E	25		Not penetrating OLS
G24	Apron Mast	041113.5N 0733202.4E	25		Not penetrating OLS
	Radar (New)	041100.5N 0733206.1E	34		Not penetrating OLS
	VOM Antenna (Male - West)	041021.7N 0733011.2E	76		Not penetrating OLS
ILS GP36	GP Antenna (RWY36)	041116.6N 0733155.6E	15	MARKED /LIGHTED	On RWY Strip 120M East from centreline
ILS GP18	GP Antenna (RWY18)	041221.0N 0733155.5E	15	MARKED /LIGHTED	On RWY Strip 120M East from centreline
	Powerhouse chimney	041120.0N 0733204.3E	30		Not penetrating OLS
	Ooredoo Antenna (Hulhumale')	041316.6N 0733241.1E	40		Not penetrating OLS
	Dhiraagu Antenna (Hulhumale')	041312.5N 0733245.7E	45		Not penetrating OLS
	ATC Tower	041124.7N 0733203.8E	40		Not penetrating OLS
	TVM antenna (Male)	041017.3N 0733038.1E	76		Not penetrating OLS
ILS LLZ36	ILS localizer antenna (RWY18 end)	041255.1N 0733151.6E	3	MARKED /LIGHTED	On RWY Strip 120M East from centreline
ILS LLZ18	ILS localizer antenna (RWY36 end)	041044.9N 0733151.7E	3	MARKED /LIGHTED	On RWY Strip 120M East from centreline
WDI 18	Windsock	041219.6N 0733148.0E	3	MARKED /LIGHTED	On RWY Strip
WDI 36	Windsock	041117.8N 733148.1E	3	MARKED /LIGHTED	On RWY Strip

VRMM AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	*Associated MET Office*	National Meteorological Centre
2	*Hours of Service* *MET Office outside hours*	H24
3	*Office responsible for TAF preparation* *Periods of validity*	National Meteorological Centre 9, 24
4	*Type of landing forecast* *Interval of issuance*	TREND 2 HR
5	*Briefing / consultation provided*	Personal Consultation
6	*Flight documentation* *Language(s) used*	Charts, abbreviated plain language text English
7	*Charts and other INFO AVBL*	S, U_{85}, U_{50}, U_{25}, SWH, SWM, T
8	*Supplementary EQPT AVBL for INFO for briefing or consultation*	Telefax:
9	*ATS Units Provided with information*	Maldives Air Traffic Control Centre/ Male' TWR
10	*Additional Information*	

VRMM AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	*True BRG*	*Dimensions of RWY (M)*	*Strength (PCN) and surface of RWY and SWY*	*THR coordinates*
1	2	3	4	5
18	179.95	3400 X 60	PCN 80/F/B/W/T	041231.00N 0733151.59E
36	359.95	3400 X 60		041106.45N 0733151.67E

Designation RWY NR	*THR elevation and highest elevation of TDZ of precision APP RWY*	Slope of RWY/SWY	*SWY Dimensions (M)*	*CWY Dimensions (M)*
1	*6*	*7*	*8*	*9*
18	THR 2.3M	0%	300M	120M
36	THR 2.3M	0%	300M	120M

1	10	11	12	13	14
Designation RWY NR	Dimension of strips (M)	Dimension of RESA (M)	Location and description of arresting system	OBST free zone	Remarks
18	3520 X 280	240 X 120	NA	NA	
36	3520 X 280	240 X 120	NA	NA	

VRMM AD 2.13 DECLARED DISTANCES

RWY Designator	*TORA(M)*	*TODA(M)*	*ASDA(M)*	*LDA(M)*	*Remarks*
1	2	3	4	5	6
18	3400	3700	3520	2960	THR DISPLACED BY 440M
	3035	3335	3155	NA	D2
	2413	2713	2533	NA	D3
	1660	1960	1780	NA	D4
	0910	1210	1030	NA	D5
36	3400	3700	3520	3035	THR DISPLACED BY 365M
	3035	3335	3155	NA	D6
	2486	2786	2606	NA	D5
	1740	2040	1860	NA	D4

VRMM AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	*APP LGT type LEN INTST*	*THR LGT color WBAR*	*VASIS (MEHT) PAPI*	*TDZ LGT LEN*	*RWY center line LGT Length spacing color INTST*	*RWY edge LGT LEN spacing color INTST*	*RWY End LGT Color WBAR*	*SWY LGT LEN (M) color*	*Remarks*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
18	WHITE Barrettes 30m 900m INTST 1-5 Steps	Green	PAPI on left side 03°	Nil	spacing 30M WHITE 900M RED/WHITE 600M RED 300M INTST 1-5 steps	spacing 60M RED 360M WHITE 2440M YELLOW 600M INTST 1-5 steps	Red ---	NA	

36	CAT I precision APP LGT-L/H WHITE Barrettes 30m 900m INTST 1-5 Steps	Green	PAPI on left side 03°	Nil	Spacing 30M WHITE 900M RED/WHITE 600M RED 300M INTST 1-5 steps.	Spacing 60M RED 440M WHITE 1960M YELLOW 600M INTST 1-5 steps	Red ---	NA	

VRMM AD 2.15 OTHER LIGHTING AND SECONDARY POWER SUPPLY

1	*ABN/IBN location, characteristics and hours of operation*	ABN: At Tower Building, ALTN W/G EV 5 SEC/IBN: Nil HN
2	*LDI location and LGT / Anemometer location and LGT*	NIL Anemometer: Both side of parallel TWY C
3	*TWY edge and taxiway centre line lights*	Blue/Green
4	*Secondary power supply / switch-overtime*	15 seconds
5	*Remarks*	RWY center light, THR lights and APCH lights will not have any disruption during switch over time. TWY D1– D7, center line lights are provided.

VRMM AD 2.16 HELICOPTERLANDING AREAS

Nil

VRMM AD 2.17 ATS AIRSPACE

1	*Designation and lateral limits*	MALE' CTR A circle, radius 20 NM centred at 041223.4N 0733139.4E (VOR)
2	*Vertical limits*	SFC to 3 500 FT AMSL
3	*Airspace classification*	D
4	*ATS Unit call sign* *Language(s)*	Male' Tower English
5	*Transition Altitude*	11 000 FT AMSL
6	*Hours of Applicability*	H24
7	*Remarks*	Nil

VRMM AD 2.18 ATS COMMUNICATION FACILITIES

Service Designation	*Call sign*	*Channel (s)*	*SATVOICE number (s), If available*	*Logon address, as appropriate*	*Hours of operation*	*Remarks*
1	*2*	*3*	*4*	*5*	*6*	*7*
AREA NORTH	Male' Control	123.9 MHz			H24	Subj to TFC density
APP	Male' Approach	119.7 MHz			H24	
TWR	Male' TWR	118.1 MHz			H24	
	Male' Ground	121.6 MHz			H24	For Pre-flight information and ATC clearance
ATIS	Male' Information	125.5 MHz			H24	

VRMM AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
DVOR	MLE	114.7 MHz	H24	041223.4N 0733139.4E	6.3 M	Counterpoise 5M
VOR/DME	MLE	CH 36X	H2	041223.4N 0733139.4E	8.05 M	
LLZ 36 ILS CAT I	IMM	109.9 MHz	H24	041255.1N 0733151.6E	3 M	Nil
ILS GP 36	IMM	333.80 MHz	H24	041116.6N 0733155.6E	Ant1 4.28 M Ant2 8.59 M	3°, RDH 50FT
ILS DME 36	IMM	CH 36X	H24	041116.6N 0733155.6E	3.5 M	Nil
LLZ 18 ILS CAT I	IMN	109.7 MHz	H24	041044.9N 0733151.7E	3 M	Nil
ILS GP 18	IMN	333.20 MHz	H24	041221.0N 0733155.5E	Ant1 4.28 M Ant2 8.59 M	3°, RDH 50 FT
ILS DME 18	IMN	CH 34X	H24	041221.0N 0733155.5E	3.5 M	Nil

VRMM AD 2.20 LOCAL AERODROME REGULATIONS

1. Parking

1.1 Details of parking stands

Stand Nr	Coordinates		Aircraft Type	Bearing Strength
A1	04° 11’ 26.31” N	073° 31’ 40.34” E	Code C	PCN 95/R/B/W/T
A2	04° 11’ 24.99” N	073° 31’ 40.26” E	Code C	PCN 95/R/B/W/T
A3	04° 11’ 23.67” N	073° 31’ 40.15” E	Code C	PCN 95/R/B/W/T
A4	04° 11’ 22.35” N	073° 31’ 40.07” E	Code C	PCN 95/R/B/W/T
A5	04° 11’ 21.03” N	073° 31’ 40.09” E	Code C	PCN 95/R/B/W/T
A6	04° 11’ 19.31” N	073° 31’ 40.12” E	Code C	PCN 95/R/B/W/T
A7	04° 11’ 17.99” N	073° 31’ 40.14” E	Code C	PCN 95/R/B/W/T
A8	04° 11’ 16.67” N	073° 31’ 40.16” E	Code C	PCN 95/R/B/W/T
A9	04° 11’ 15.35” N	073° 31’ 40.18” E	Code C	PCN 95/R/B/W/T
R4	04° 11’ 03.73” N	073° 31’ 39.79” E	Code C	PCN 95/R/B/W/T
4	04° 11’ 03.14” N	073° 31’ 39.79” E	Code E	PCN 95/R/B/W/T
L4	04° 11’ 03.14” N	073° 31’ 39.86” E	Code C	PCN 95/R/B/W/T
R5	04° 11’ 01.84” N	073° 31’ 39.86” E	Code C	PCN 95/R/B/W/T
5	04° 11’ 00.57” N	073° 31’ 39.83” E	Code E	PCN 95/R/B/W/T
L5	04° 11’ 00.51” N	073° 31’ 39.90” E	Code C	PCN 95/R/B/W/T
R6	04° 10’ 59.20” N	073° 31’ 39.90” E	Code C	PCN 95/R/B/W/T
6	04° 10’ 58.00” N	073° 31’ 39.87” E	Code E	PCN 95/R/B/W/T
L6	04° 10’ 57.87” N	073° 31’ 39.93” E	Code C	PCN 95/R/B/W/T
7	04° 10’ 55.61” N	073° 31’ 38.92” E	Code E	PCN 95/R/B/W/T
7R	04° 10’ 55.84” N	073° 31’ 39.24” E	Code C	PCN 95/R/B/W/T
7L	04° 10’ 55.06” N	073° 31’ 39.92” E	Code C	PCN 95/R/B/W/T

8	04° 10’ 52.88” N	073° 31’ 38.97” E	Code E	PCN 95/R/B/W/T
8R	04° 10’ 53.10” N	073° 31’ 39.29” E	Code C	PCN 95/R/B/W/T
8L	04° 10’ 52.32” N	073° 31’ 39.97” E	Code C	PCN 95/R/B/W/T
9	04° 10’ 50.14” N	073° 31’ 39.01” E	Code E	PCN 95/R/B/W/T
9R	04° 10’ 50.37” N	073° 31’ 39.34” E	Code C	PCN 95/R/B/W/T
9L	04° 10’ 49.59” N	073° 31’ 40.01” E	Code C	PCN 95/R/B/W/T
A-10	04° 10’ 47.00” N	073° 31’ 39.06” E	Code E	PCN 95/R/B/W/T
A-11	04° 10’ 44.64” N	073° 31’ 39.10” E	Code E	PCN 95/R/B/W/T
A-12	04° 10’ 42.77” N	073° 31’ 40.04” E	Code C	PCN 95/R/B/W/T

2. Scope of Change

2.1 The newly constructed runway will become fully operation and the current runway serves as a full-length Parallel Taxiway, designated TWY C.

2.2 The runway and Parallel Taxiway are connected by entry and exit intersection taxiways D3, D4, D5, D6 and D7.

2.3 The taxiways D1 and D2, at the end of RWY36, are not connected to the parallel taxiway [current runway] and serves as a turning loop for Heavy aircraft.

a) In case aircraft is unable to vacate via TWY D3, after landing RWY36, should continue the roll, vacate via TWY D1 [at the end] and hold at TWY D2 runway holding position.

b) Departure on RWY18, if full length of runway is required, aircraft should enter the loop via TWY D2 and hold at TWY D1 runway holding position until ATC clearance received for line-up.

3. Landing

3.1 Runway 36

3.1.1 After landing, Heavy and Medium (jet) aircraft should vacate the runway via TWY D3. ATC will issue specific taxi instructions to its assigned aircraft stand.

3.1.2 If unable to vacate via TWY D3, Heavy aircraft should continue the roll, vacate via TWY D1 [at the end] and hold at TWY D2 runway holding position. ATC will issue specific taxi route instructions (which includes entering the runway and vacating via TWY D3) to its assigned aircraft stand.

3.1.3 After landing, Medium (turboprop) and Light aircraft should vacate the runway by the shortest suitable route (preferably TWY D4). ATC will issue specific taxi instructions to its assigned aircraft stand.

3.2 Runway 18

3.2.1 After landing, Heavy and Medium (jet) aircraft should vacate the runway via D6 or D7. ATC will issue specific taxi instructions to its assigned aircraft stand.

3.2.2 After landing, Medium (turboprop) aircraft should vacate the runway via D5. ATC will issue specific taxi instructions to its assigned aircraft stand.

3.2.3 Aircraft vacating the runway-in-use should not stop on the exit taxiway until the entire aircraft has passed the runway holding point.

3.3 Parking

3.3.1 No visual docking guidance system available.

3.3.2 ATC is to issue parking instruction.
Sample Phraseology by ATC: Enter apron via B7 and taxi to Stand 9, follow the marshaller for parking

3.3.3 Pilot is to follow the lead-in line until marshaller is in sight, and then follow the marshaller for parking.

3.3.4 If the marshaller is not in-sight, after vacating the parallel taxiway, pilot may contact Male Ground on 121.6 MHz

4. Departure

4.1 Start-up and pushback

4.1.1 Pilot shall call Male Ground on 121.6MHz for ATC clearance, pushback and startup. Pilot should inform the current position / parking stand.

4.1.2 When the pilot is ready for start-up and pushback, he shall seek confirmation from the ground crew that there is no hazard to his aircraft starting up.

4.1.3 Pilot shall only request for ATC clearance provided aircraft is ready to pushback.

4.1.4 ATC will inform pushback sequence based on scheduled time of departure, EOBT and real-time readiness of aircraft to reduce the overall delay to traffic.

Note: ATC in consultation with OCC may swap pushback sequence based on real-time readiness of aircraft, to maximise apron and runway capacity and reduce the overall delay to traffic as and when required.

4.1.5 On being told by Male Ground that pushback is approved, the pilot shall co-ordinate with the ground crew for pushback of the aircraft.

4.1.6 Ground crew must ensure that the area behind aircraft is clear of vehicles, equipment and other obstructions before or pushback of aircraft commences.

4.1.7 Aircraft shall be pushed back on to the taxi lane, positioned facing north/south, as appropriate, before tug is released.

4.1.8 ATC will issue start-up after pushback is complete. Pilot shall co-ordinate with the ground crew to ensure the area behind aircraft is clear of vehicles, equipment and other obstructions.

4.1.9 Pilot shall change from Male Ground frequency to Male Tower frequency when instructed.

4.2 Taxiing

4.2.1 Pilot shall contact Male Tower on 118.1MHz obtain taxi instructions prior to taxiing.

4.2.2 Pilots are reminded to always use minimum power when starting engines. When commencing to taxi, break-away thrusts shall be kept to an absolute minimum.

Note: The first aircraft to taxi may not necessarily be the first aircraft to take-off. An aircraft lining up at an intersection point maybe allowed to takeoff ahead of a preceding taxing aircraft using full-length of the runway.

4.2.3 Medium (Turbo prop) aircraft at runway holding positions at TWY D3, D4, D5, D6 and D7 are considered clear of aircraft taxiing on TWY C.

4.2.4 ATC shall advise while giving clearance to taxi past an aircraft at runway holding position. Pilot shall exercise caution while taxiing past an aircraft at runway holding position.

4.2.5 Pilots should arrange their taxi such that they are ready to depart without delay on reaching the runway holding point.

4.2.6 Pilots should complete cockpit checks prior to line-up for departure and keep any checks on the runway to a minimum.

4.3 Takeoff

4.3.1 **Runway 36**

4.3.1.1 On obtaining ATC clearance, aircraft shall initially taxi to a designated runway holding position, preferably:

Heavy and Medium (jet) – TWY D6 or D7

Medium (turboprop) – TWY D5

Medium (taxiing from North Apron) – D4 or D5

4.3.2 **Runway 18**

4.3.2.1 On obtaining ATC clearance, aircraft shall initially taxi to a designated runway holding position, preferably:

Heavy and Medium (jet) – TWY D3

Medium (turboprop) – TWY D4

Medium (taxiing from North Apron) – D4 or D3

4.3.2.2 The pilot shall not enter runway or take-off without ATC clearance.

4.3.2.3 Conditional line-up clearance may be used by ATC to facilitate an expeditious flow of traffic. On receipt of line-up clearance, pilots should taxi into position promptly without delay. Unless given instructions to line-up and wait, pilots should be ready and prepared to depart without stopping. On receipt of take-off clearance, pilots to commence take-off roll without delay.

4.3.2.4 **Clearance for Immediate Take-Off**

A pilot receiving the ATC instruction 'cleared for immediate take-off' is required to act as follows:

a) if at the runway holding position, taxi immediately on to the runway and begin take-off run without stopping the aircraft;
b) if already lined-up on the runway, take-off without delay;
c) if unable to comply with the instruction, inform ATC immediately.

5- Turning procedure for heavy aircraft on RWY

Heavy aircraft are prohibited from making 180deg turns on RWY18/36.

VRMM AD 2.21 NOISE ABATEMENT PROCEDURES

All departures from RWY36, shall continue runway heading until 3 DME from "MLE" VOR/DME. Due to noise sensitive area around the final approach of RWY36, jet or heavy aircraft making visual approach RWY36 shall extend downwind leg and join final beyond 7NM and shall not descend below the circuit altitude until established on the final.

VRMM AD 2.22 FLIGHT PROCEDURES

1 Operating Procedures

1.1 **Navigation Specification**

Based on RNAV 1 application and GNSS sensor. GNSS should be coupled with FD or autopilot. Lateral deviation, FSD of ≤± 1NM. The maximum FTE permitted is 0.5NM.

1.2 **ATS Surveillance**

Procedures are applicable with ATS surveillance (radar, ADS-B or combination of radar and ADS-B)

1.3 **Communication**

Direct controller-pilot communication required.

Aircraft which do not meet navigation specification mentioned in 2.1.1 should be vectored along the routes.

2 Procedures for IFR flights within Male' TMA

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

3 Procedures for VFR flights within Male' TMA

a) Before conducting any VFR flight, the following details must be submitted to ATC either in writing, or by telephone or on radio.

i. type of aircraft with call sign
ii. destination or area of operation
iii. desired altitude
iv. estimated duration of flight
v. purpose of flight
vi. total endurance
vii. number of persons on board

b) All flights engaged in public transport work in the Ari Zone (see ENR 5.3-1) operating below 3000 ft on magnetic tracks of 000 deg-179 deg shall be flown at thousands of feet, altitude.

c) All flights engaged in public transport work in the Ari Zone (see ENR 5.3-1) operating below 3000 ft on magnetic tracks of 180 deg-359 deg shall be flown at thousands five hundreds of feet altitude.

d) All other flights (eg: photography, training, aerial survey flights etc.) may be flown at any altitude or flight level below FL200, with ATC approval.

e) All flights inside or outside of controlled airspace are required to maintain a continuous listening watch on the frequencies designated for the area applicable indicated below:
A) Frequency 128.9 Radial 220 deg - 320 deg
B) Frequency 128.8 Radial 320 deg - 040 deg
C) Frequency 128.7 Radial 040 deg - 220 deg

4 VFR flight within Male' CTR

a) Overflying the islands of Male', Hulhumale', Funadhoo, Dhoonidhoo, Aarah, Villingili, Himmafushi and Girifushi is totally prohibited to all VFR flights.

VRMM AD 2.23 ADDITIONAL INFORMATION

Concentration of Birds at Velana International Airport

Concentration of birds at Velana International Airport, on and around rwy18/36 are expected. All pilots are advised to exercise caution.

VRMM AD 2.24 CHARTS RELATED TO VRMM AERODROME

INTENTIONALLY LEFT BLANK

AERODROME CHART - ICAO

04° 11' 30" N
073° 31' 45" E

ELEV 2.3M

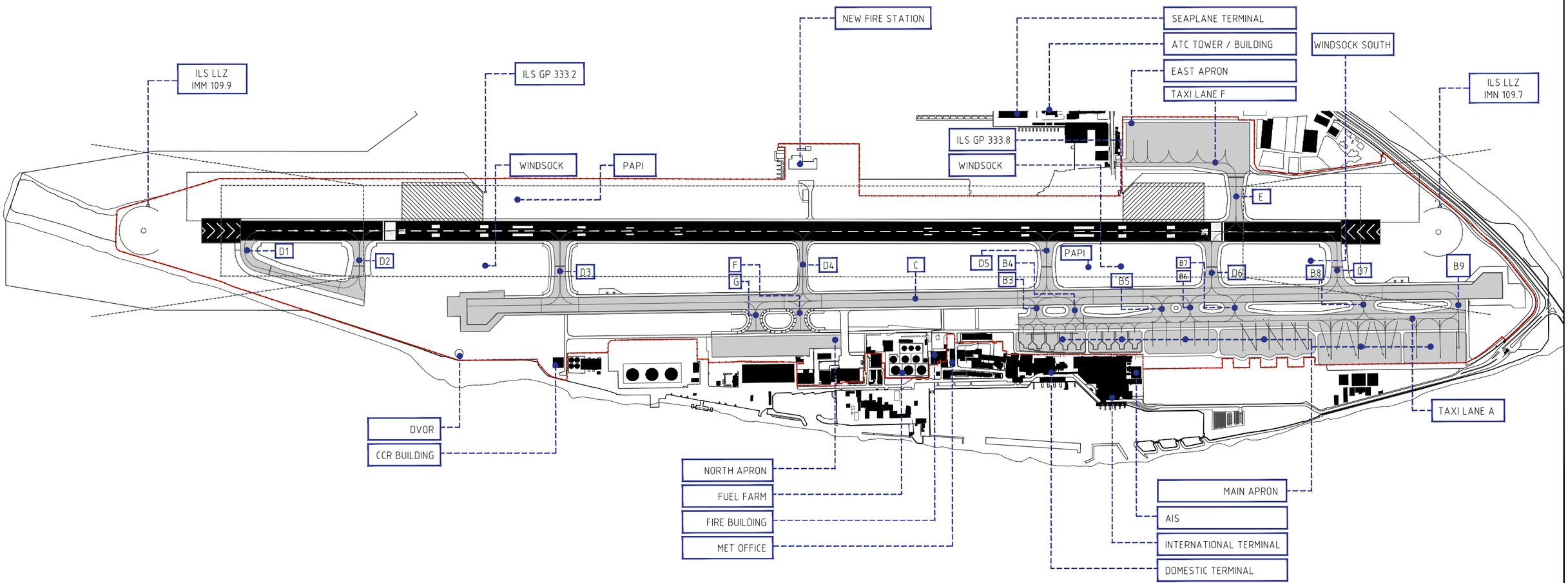
TWR 118.1
GND 121.6

MALE' / VELANA INTERNATIONAL AIRPORT

Runway	Direction	THR	Bearing strength
18	183°	04°12'31.00" N 073°31'51.59" E	PCN 80/F/B/W/T
36	003°	04°11'06.45" N 073°31'51.67" E	

0 100m 200m 300m 400m 500m 1000m

ANNUAL RATE OF CHANGE 2' E
VAR 3° W - 2020



LEGEND:
AIRSIDE LANDSIDE FENCE

ELEVATION AND DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC

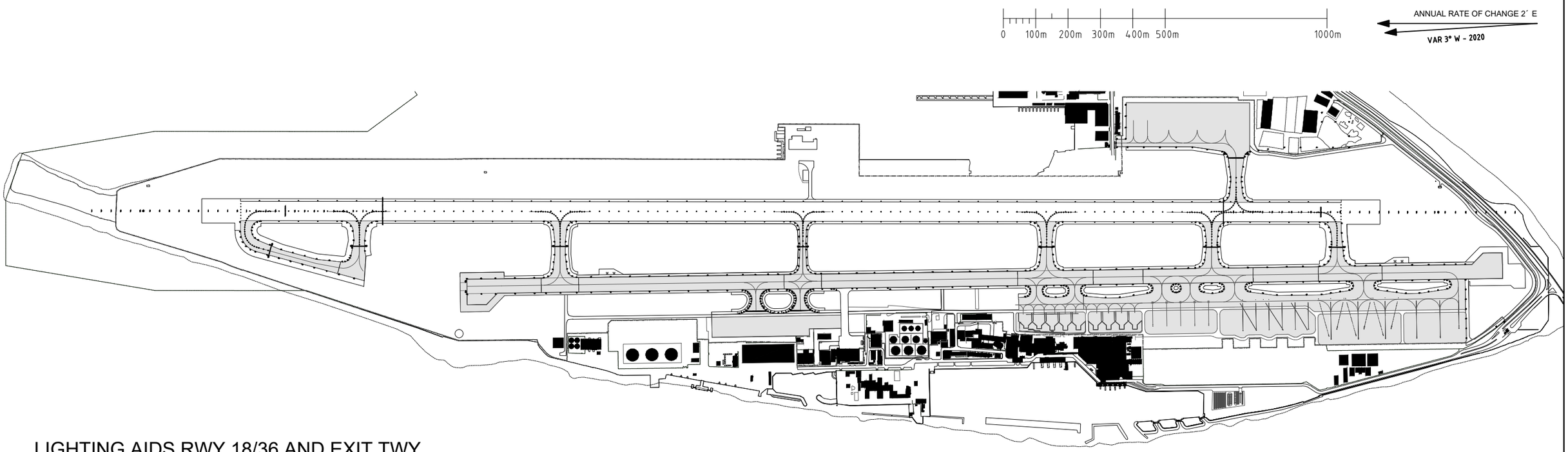
AERODROME CHART - ICAO

04° 11' 30" N
073° 31' 45" E

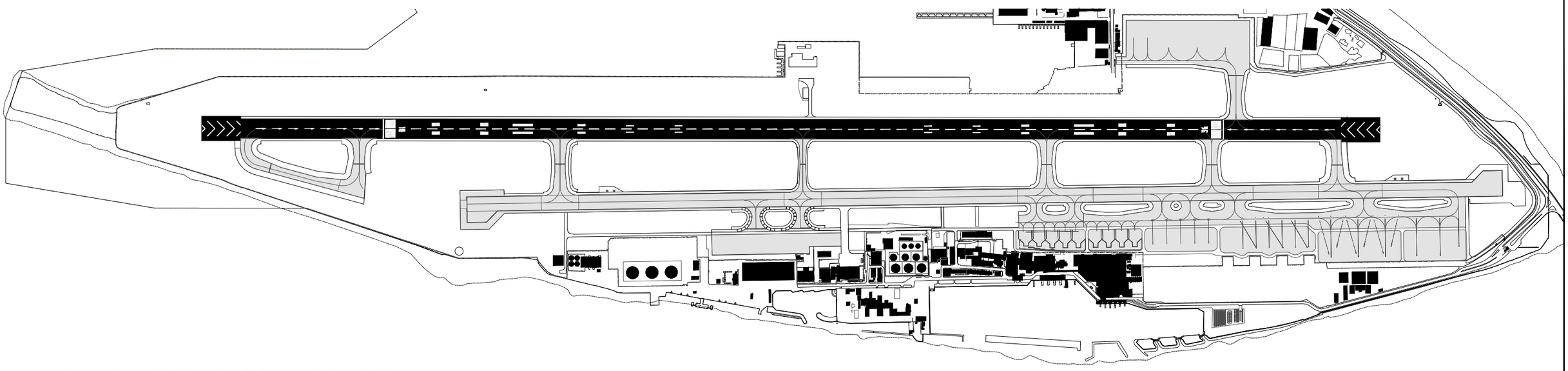
ELEV 2.3M

TWR 118.1
GND 121.6

MALE' / VELANA INTERNATIONAL AIRPORT



LIGHTING AIDS RWY 18/36 AND EXIT TWY



MARKING AIDS RWY 18/36 AND EXIT TWY

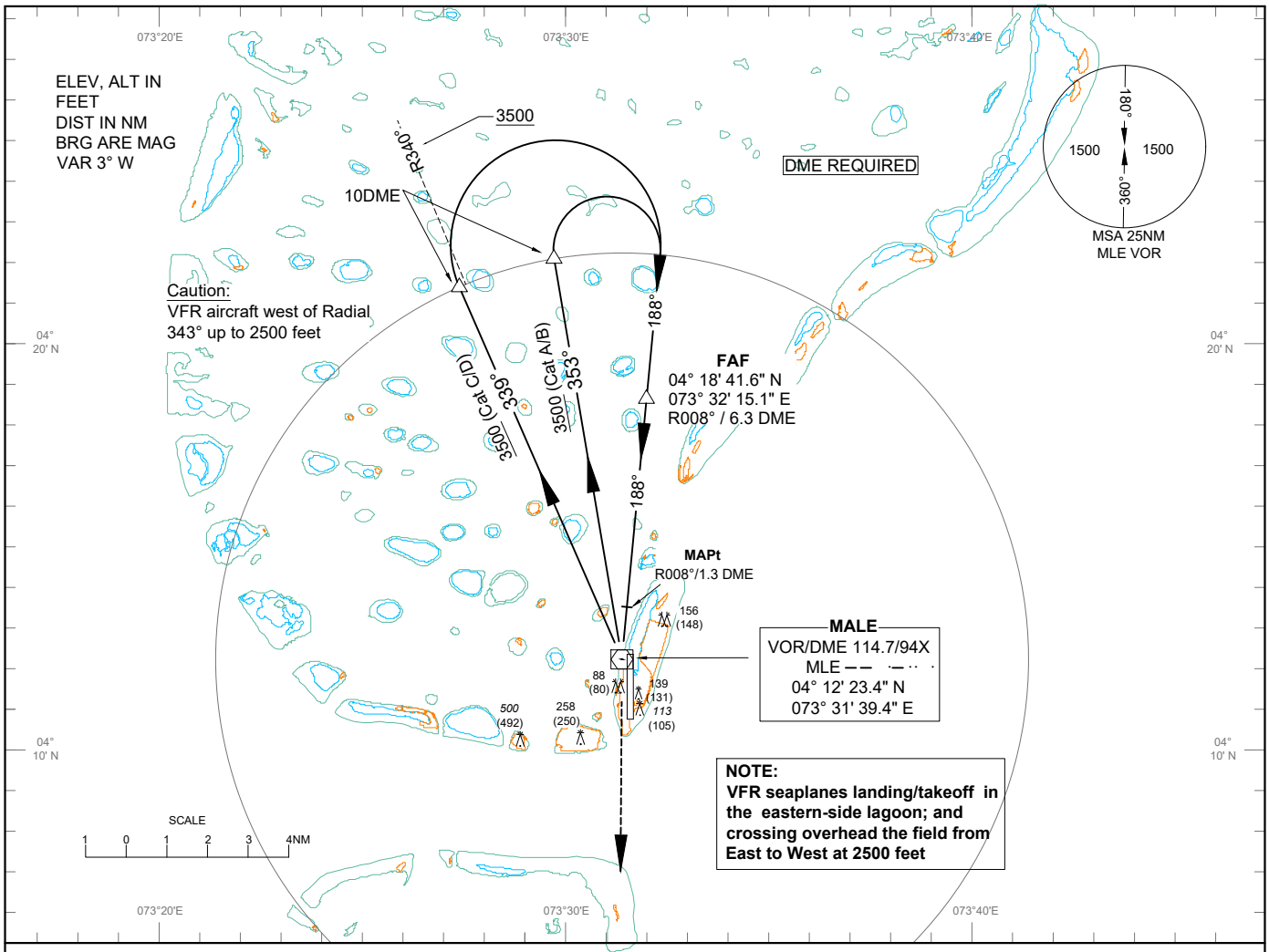
ELEVATION AND DIMENSIONS IN METRES
BEARINGS ARE MAGNETIC

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 8 FT
HEIGHT RELATED TO
THR RWY 36 - ELEV 8 FT

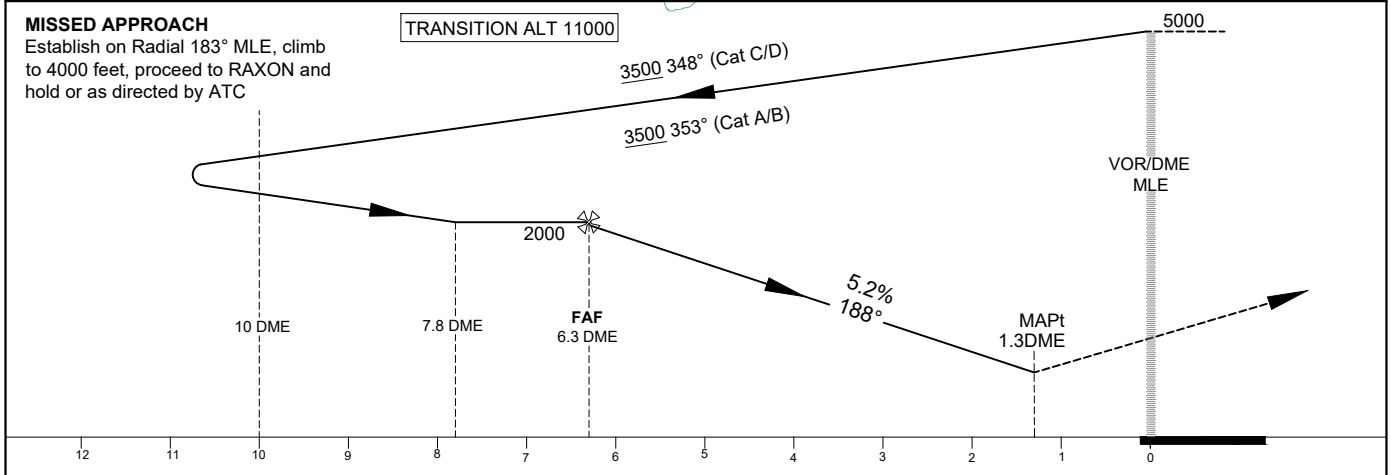
MALE TWR 118.1
MALE APP 119.7

MALE / Intl (VRMM)
VOR W RWY 18



MISSED APPROACH
Establish on Radial 183° MLE, climb to 4000 feet, proceed to RAXON and hold or as directed by ATC

TRANSITION ALT 11000



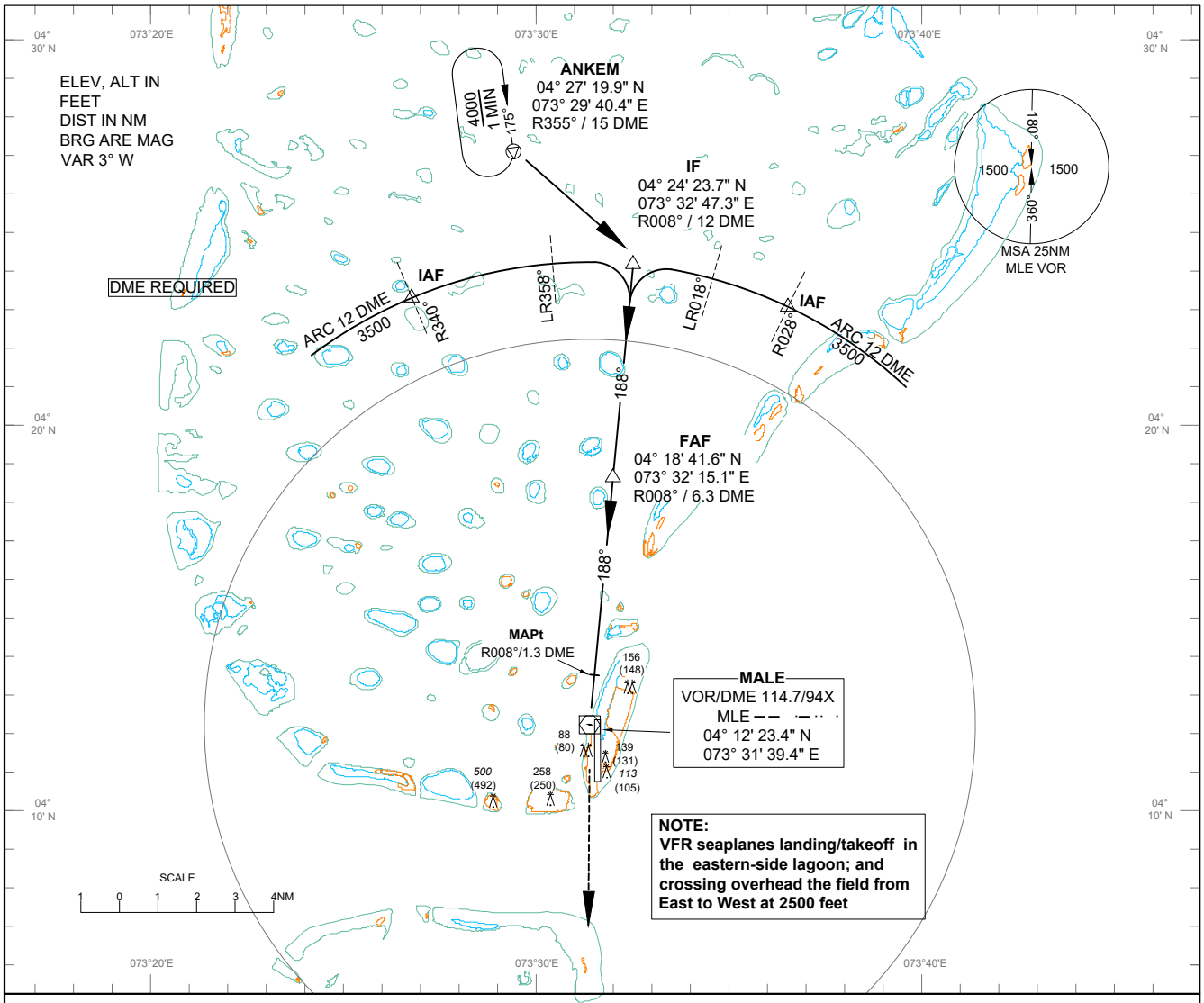
Aircraft Category	A	B	C	D
Straight-in OCA (H)	300 (292)			
Circling OCA (H)	550 (542)	Circling Not Authorised for B, C and D		
Distance (DME MLE)	5	4	3	2
Altitude (Ft)	1590	1280	960	640
Speed (KT)	70	120	150	185
Rate of Descend (ft/m)	370	635	795	980

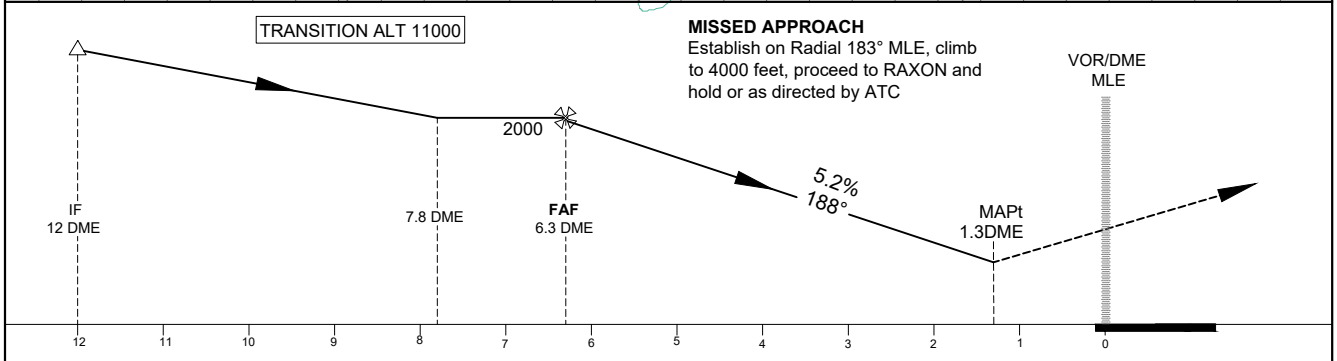
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 8 FT
HEIGHT RELATED TO
THR RWY 36 - ELEV 8 FT

MALE TWR 118.1
MALE APP 119.7

MALE / Intl (VRMM)
VOR X RWY 18





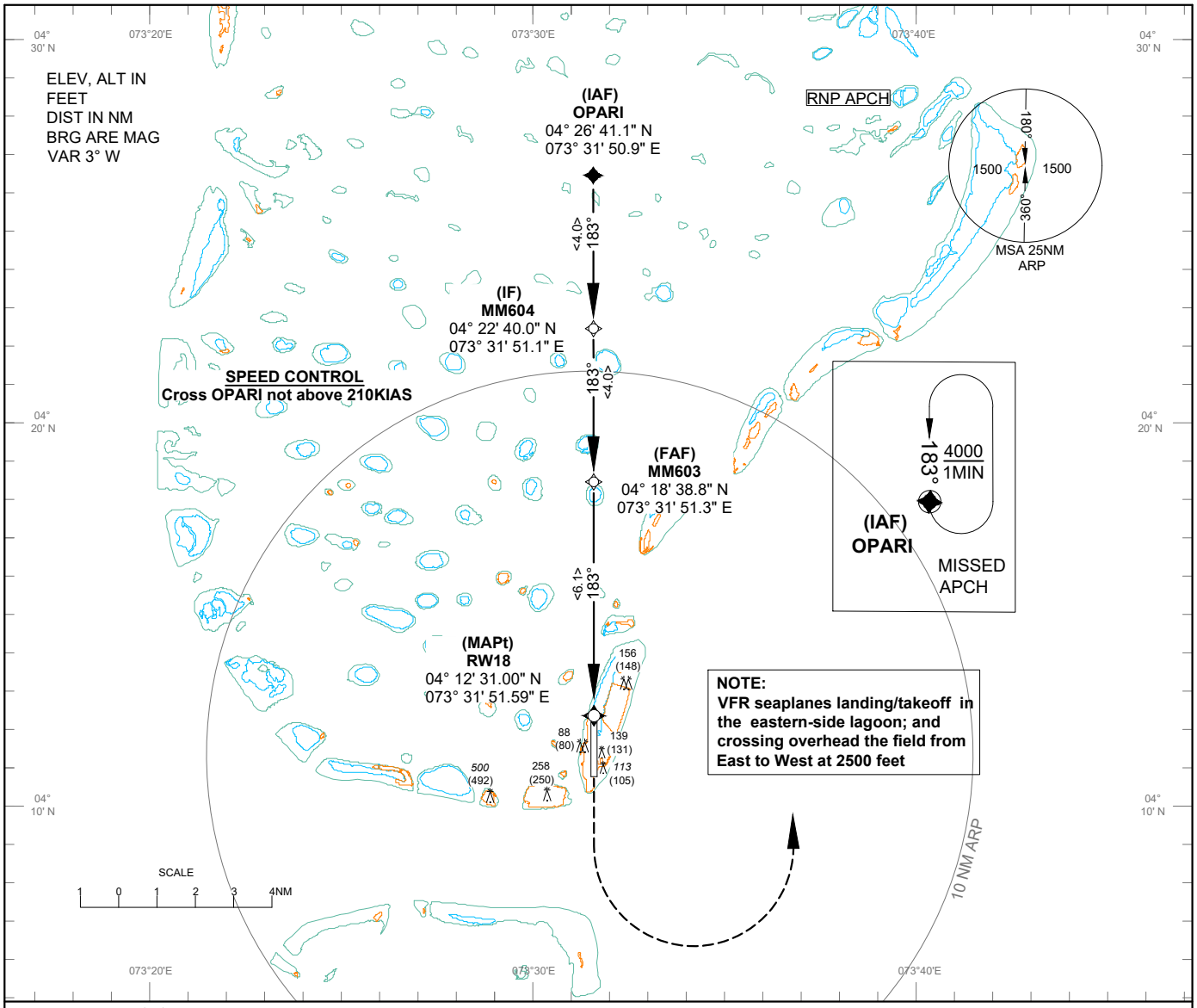
Aircraft Category	A	B	C	D
Straight-in OCA (H)	300 (292)			
Circling OCA (H)	550 (542)	Circling Not Authorised for B,C and D		
Distance (DME MLE)	5	4	3	2
Altitude (Ft)	1590	1280	960	640
Speed (KT)	70	120	150	185
Rate of Descend (ft/m)	370	635	795	980

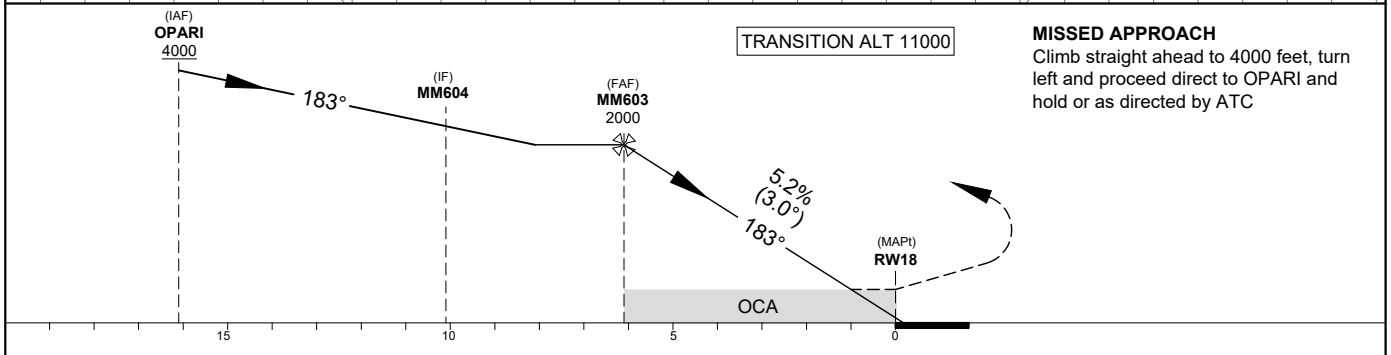
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 8 FT
HEIGHT RELATED TO
THR RWY 18 - ELEV 8 FT
MIN TEMP -15°C

MALE TWR 118.1
MALE APP 119.7

MALE / Intl (VRMM)
RNP Z RWY 18





TRANSITION ALT 11000

MISSED APPROACH
Climb straight ahead to 4000 feet, turn left and proceed direct to OPARI and hold or as directed by ATC

AIRCRAFT CATEGORY		A	B	C	D
OCA (H)	LNAV/VNAV	260 (252)			
	LNAV	390 (382)			

DISTANCE TO THRESHOLD	5	4	3	2	1
ALTITUDE (HEIGHT)	1640	1320	1000	690	380

RNP Z RWY 18

Tabular Description

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	OPARI	-	-		-	A4000+	210	RNP APCH
02	TF	MM604	-	183	4	-	-	210	RNP APCH
03	TF	MM603	-	183	4	-	@2000	-	RNP APCH
04	TF	RW18	Y	183	6.1	-	-	-	RNP APCH
05	FA	RW18	-	183	-	L	A4000+	-	RNP APCH
06	DF	OPARI	Y	-	-	-	A4000+	-	RNP APCH
07	HM	OPARI	-	183	-	-	A4000+	-	RNP APCH

Waypoint List

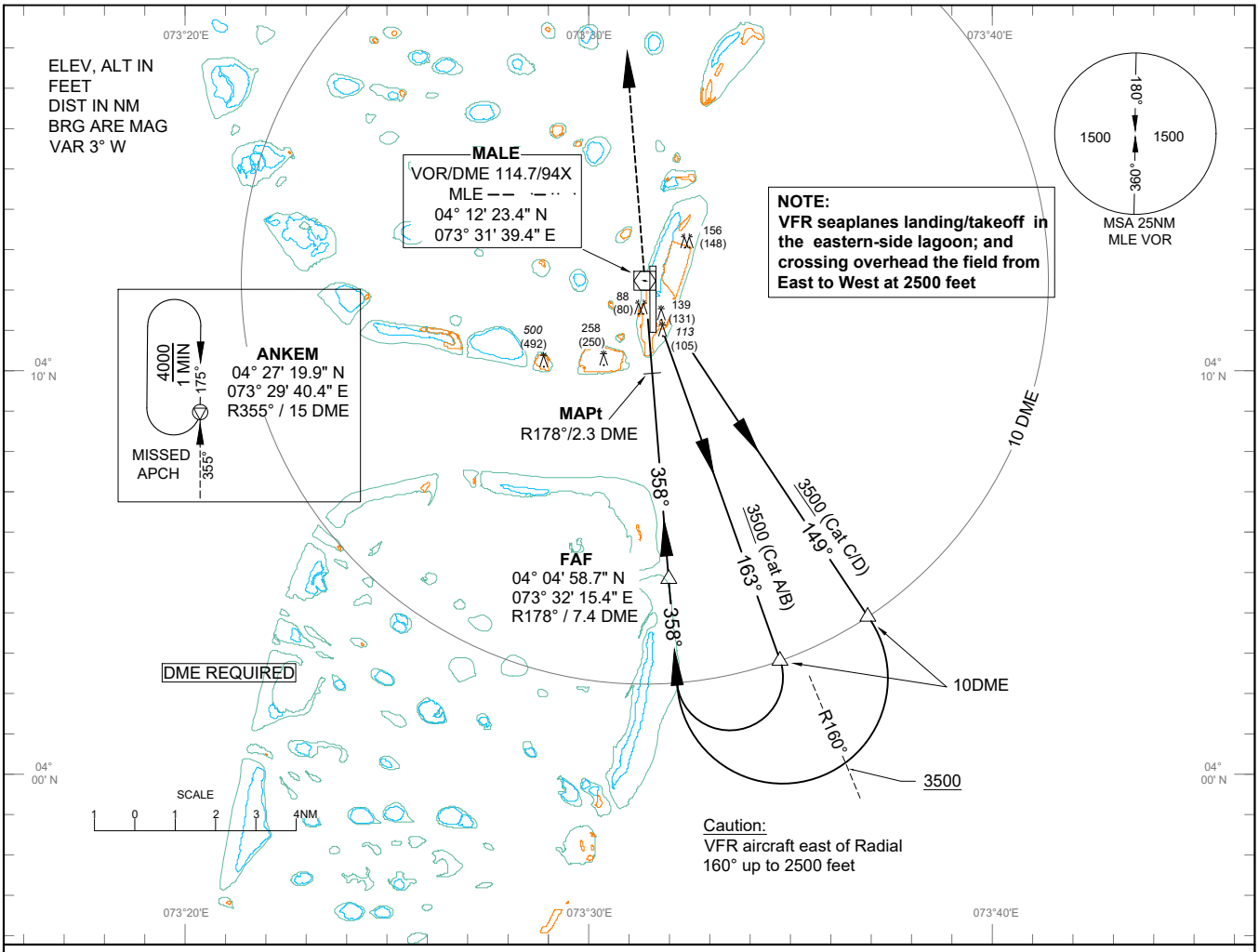
Waypoint identifier	Coordinates
OPARI	N 04°26'41.1" E 73°31'50.9”
MM604	N 04°22'40.0" E 73°31'51.1”
MM603	N 04°18'38.8" E 73°31'51.3”
RW18	N 4°12'31.00"N E 073°31'51.59"

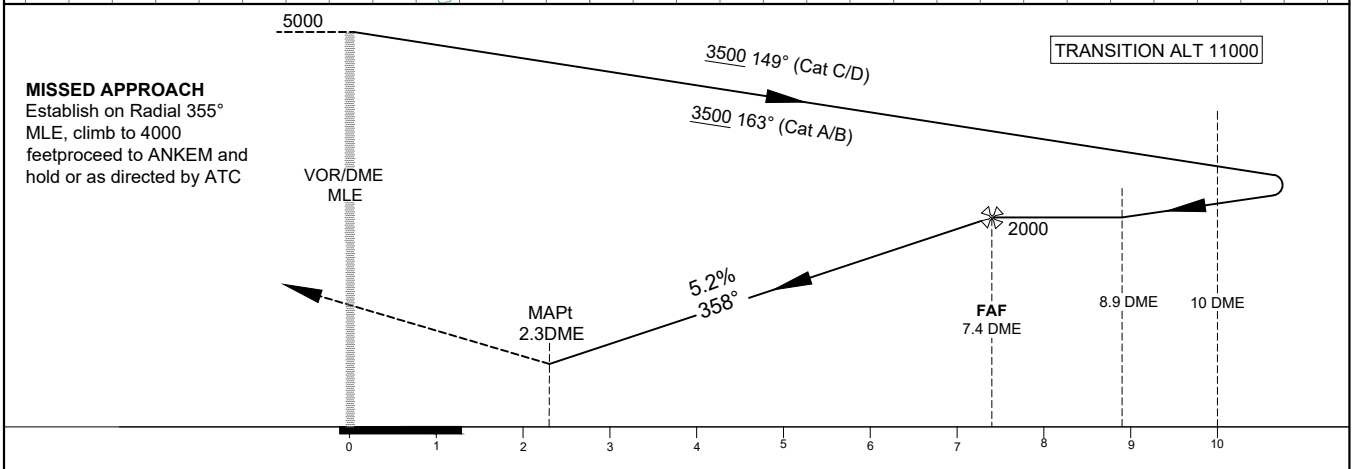
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 8 FT
HEIGHT RELATED TO
THR RWY 36 - ELEV 8 FT

MALE TWR 118.1
MALE APP 119.7

MALE / Intl (VRMM)
VOR W RWY 36





MISSED APPROACH
Establish on Radial 355° MLE, climb to 4000 feetproceed to ANKEM and hold or as directed by ATC

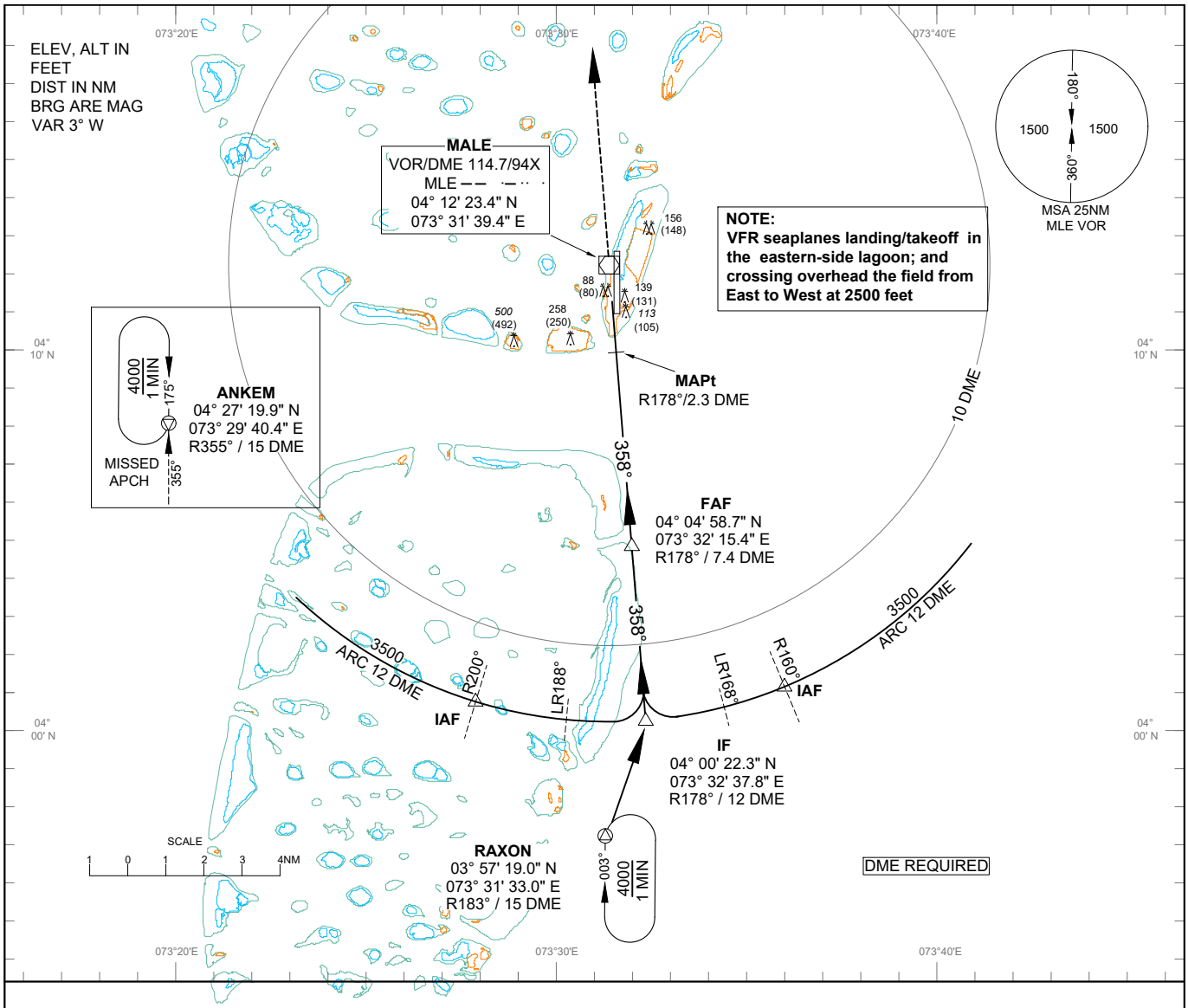
Aircraft Category	A	B	C	D
Straight-in OCA (H)	390 (382)			
Circling OCA (H)	550 (542)	Circling Not Authorised for B, C and D		
Distance (DME MLE)	3	4	5	6
Altitude (Ft)	590	910	1230	1540
Speed (KT)	70	120	150	185
Rate of Descend (ft/m)	370	635	795	980

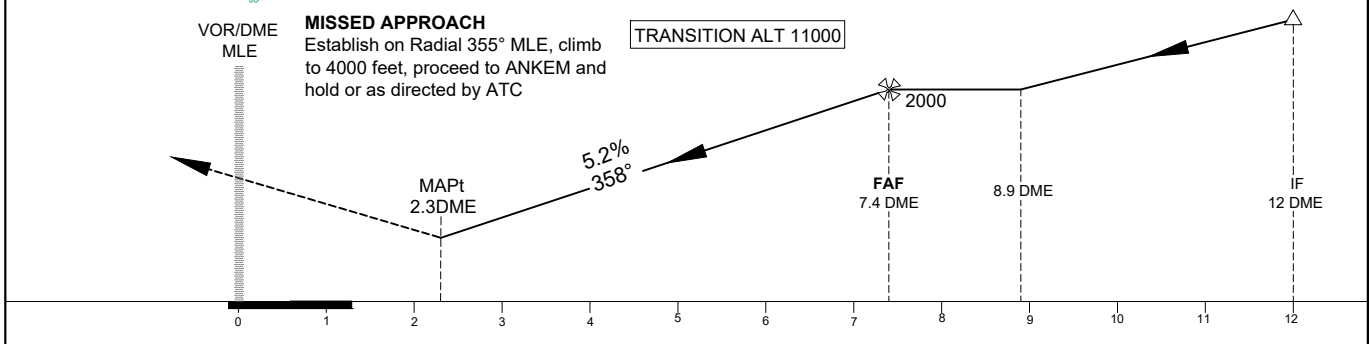
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 8 FT
HEIGHT RELATED TO
THR RWY 36 - ELEV 8 FT

MALE TWR 118.1
MALE APP 119.7

MALE / Intl (VRMM)
VOR X RWY 36





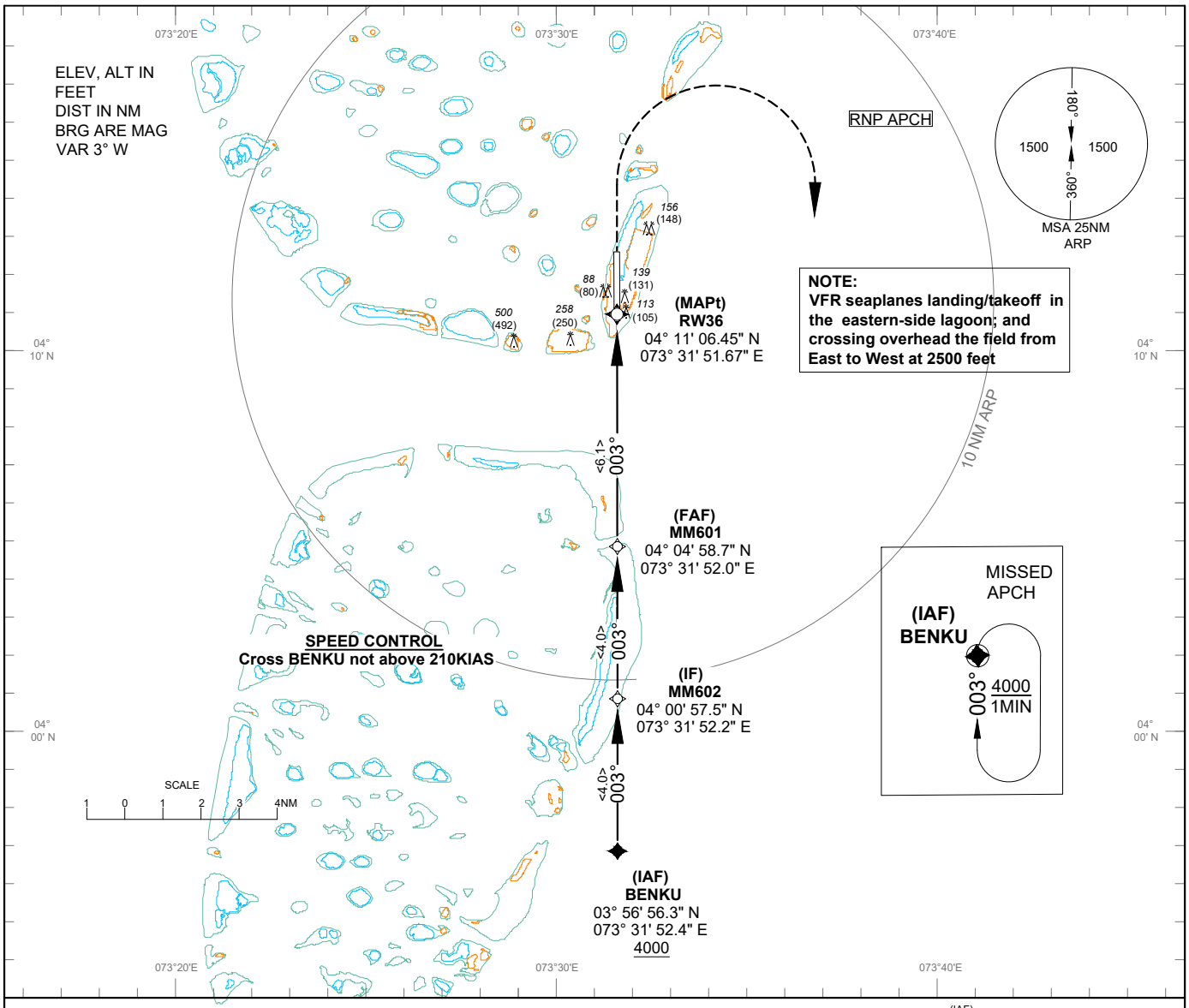
Aircraft Category	A	B	C	D
Straight-in OCA (H)	390 (382)			
Circling OCA (H)	550 (542)	Circling Not Authorised for B, C and D		
Distance (DME MLE)	3	4	5	6
Altitude (Ft)	590	910	1230	1540
Speed (KT)	70	120	150	185
Rate of Descend (ft/m)	370	635	795	980

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 8 FT
HEIGHT RELATED TO
THR RWY 36 - ELEV 8 FT
MIN TEMP -15°C

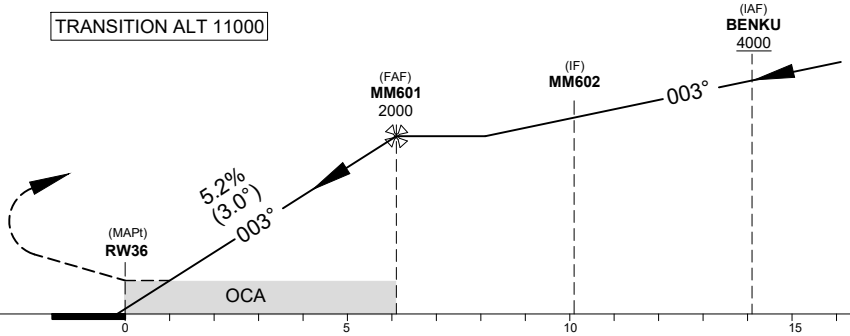
MALE TWR 118.1
MALE APP 119.7

MALE / Intl (VRMM)
RNP Z RWY 36



MISSED APPROACH
Climb straight ahead to 4000 feet, turn right and proceed direct to BENKU and hold or as directed by ATC

TRANSITION ALT 11000



AIRCRAFT CATEGORY		A	B	C	D
OCA (H)	LNAV/VNAV	280 (272)		300 (292)	
	LNAV	390 (382)			

DISTANCE TO THRESHOLD	1	2	3	4	5
ALTITUDE (HEIGHT)	380	690	1000	1320	1640

1. RNP Z RWY 36

Tabular Description

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	BENKU	-	-		-	A4000+	210	RNP APCH
02	TF	MM602	-	003	4	-	-	210	RNP APCH
03	TF	MM601	-	003	4	-	@2000	-	RNP APCH
04	TF	RW36	Y	003	6.1	-	-	-	RNP APCH
05	FA	RWY36	-	003	-	R	A4000+	-	RNP APCH
06	DF	BENKU	Y	-	-	-	A4000+	-	RNP APCH
07	HM	BENKU	-	003	-	-	A4000+	-	RNP APCH

Waypoint List

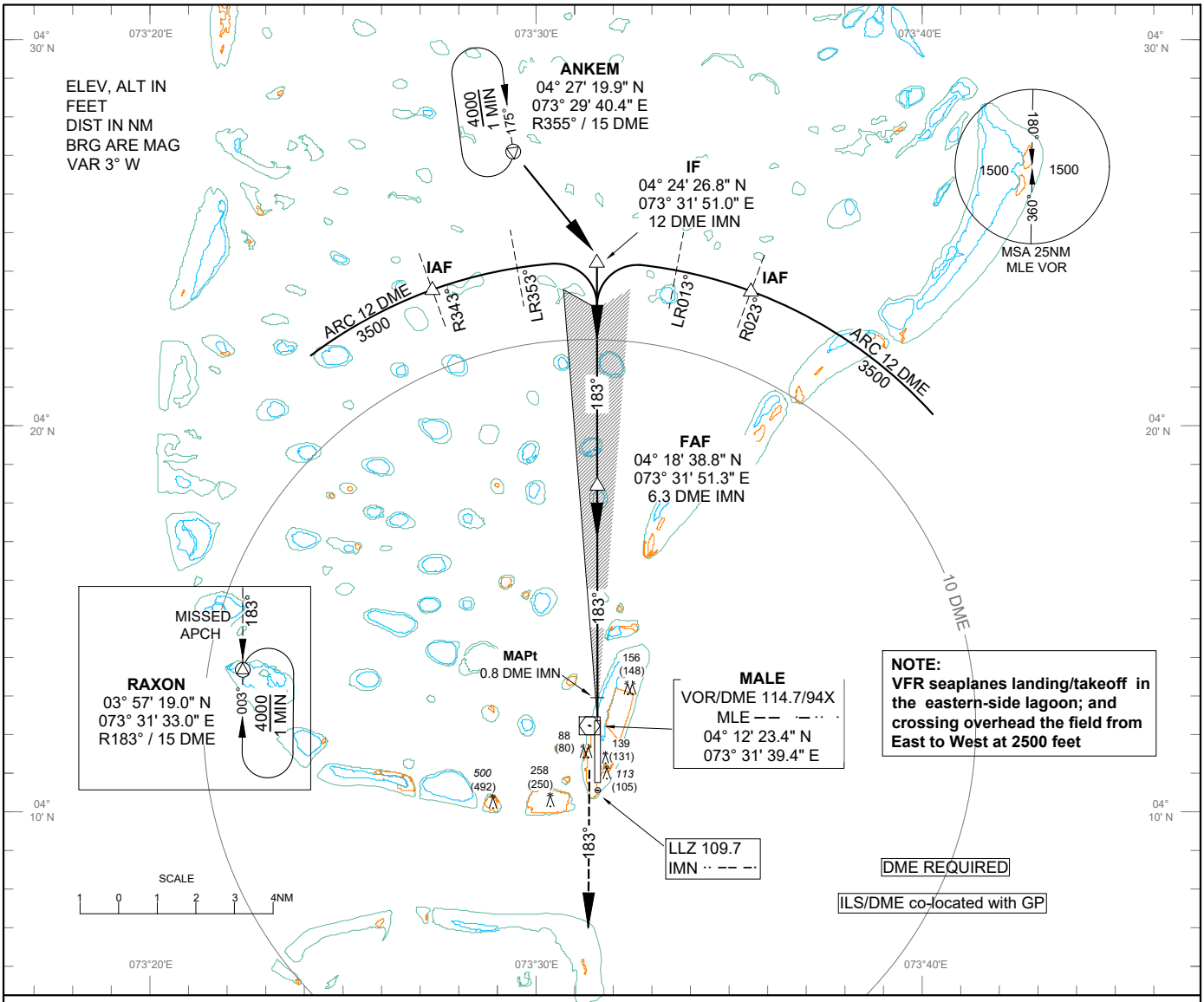
Waypoint identifier	Coordinates
BENKU	N 03°56'56.3" E 73°31'52.4”
MM602	N 04°00'57.5" E 73°31'52.2”
MM601	N 04°04'58.7" E 73°31'52.0”
RW36	N 04°11'06.45" E 073°31'51.67"

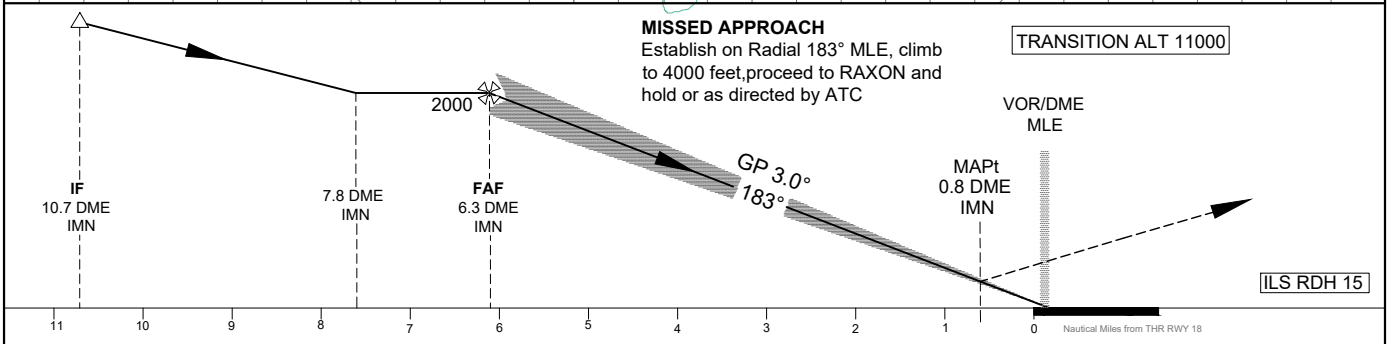
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 8 FT
HEIGHT RELATED TO
THR RWY 18 - ELEV 8 FT

MALE TWR 118.1
MALE APP 119.7

MALE / Intl (VRMM)
ILS W RWY 18





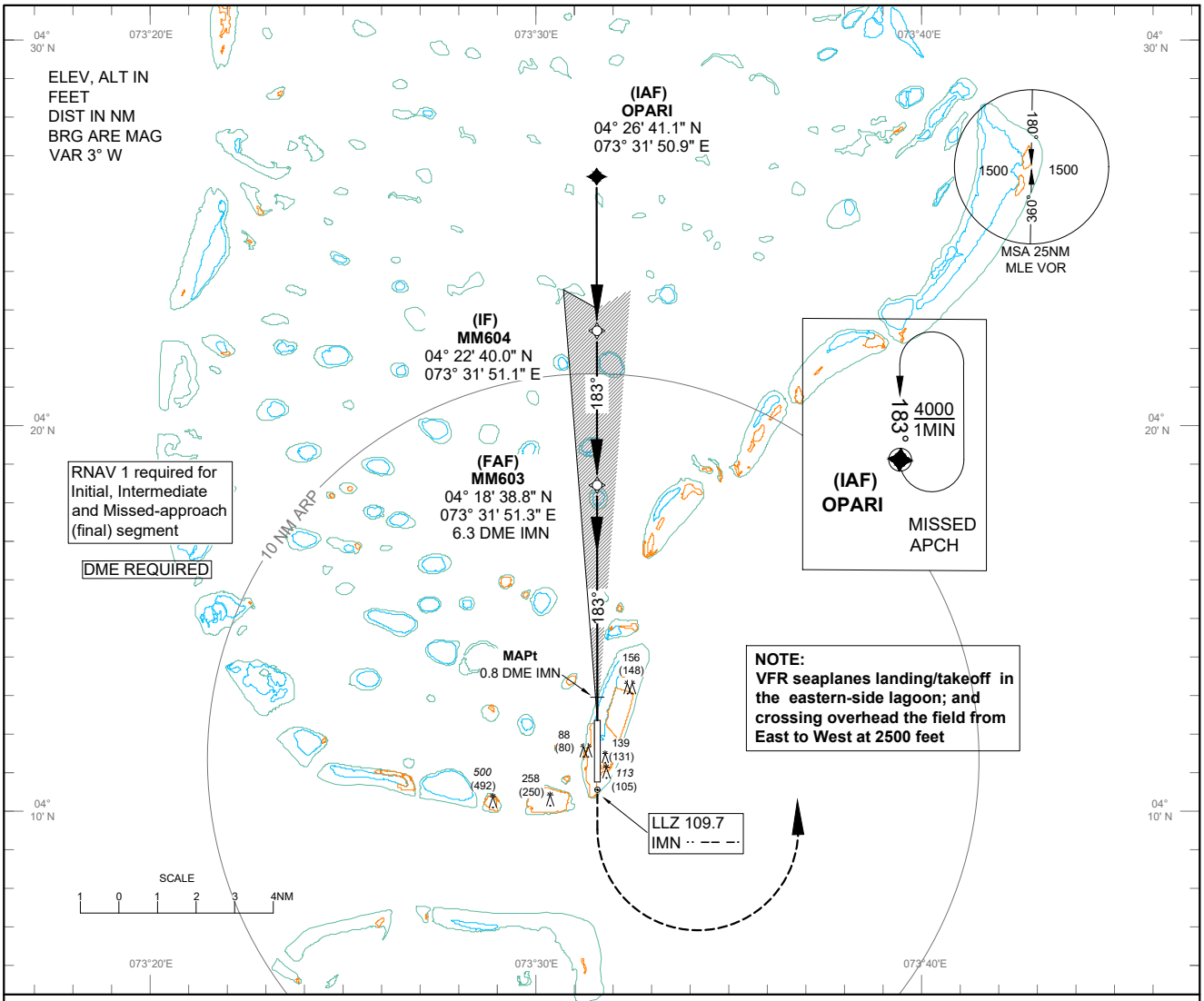
Aircraft Category			A	B	C	D
OCA (H)	Straight-in	CAT 1 ILS	220 (212)			
		GP INOP	310 (302)			
	Circling		560 (552)	Circling Not Authorised for B, C and D		
Distance (DME IMN)			5	4	3	2
Altitude (Ft)			1600	1280	960	640
Speed (KT)			70	120	150	185
Rate of Descend (ft/m)			370	635	795	980

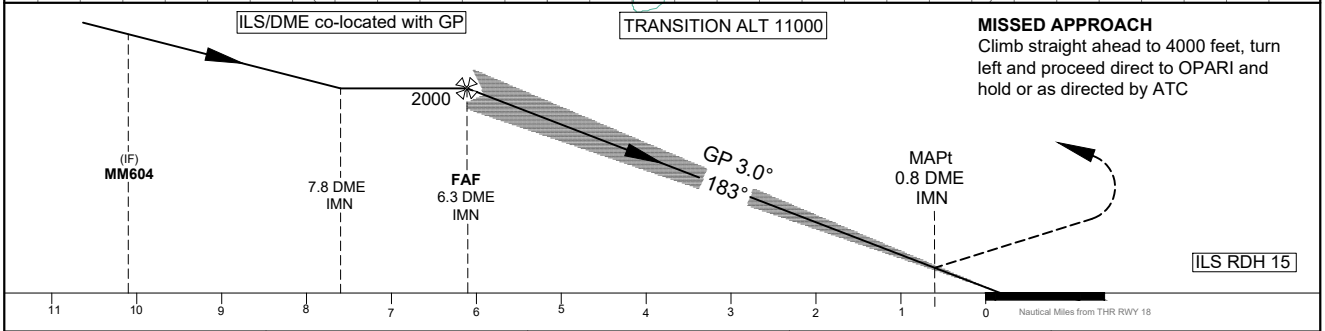
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 8 FT
HEIGHT RELATED TO
THR RWY 18 - ELEV 8 FT

MALE TWR 118.1
MALE APP 119.7

MALE / Intl (VRMM)
ILS X RWY 18





Aircraft Category			A	B	C	D
OCA (H)	Straight-in	CAT 1 ILS	220 (212)			
		GP INOP	310 (302)			
	Circling		560 (552)	Circling Not Authorised for B, C and D		
Distance (DME IMN)			5	4	3	2
Altitude (Ft)			1600	1280	960	640
Speed (KT)			70	120	150	185
Rate of Descend (ft/m)			370	635	795	980

ILS X RWY 18 (RNAV Transition)

Tabular Description

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	OPARI	-	-		-	A4000+	210	RNAV 1
02	TF	MM604	-	183	4	-	-	210	RNAV 1
03	TF	MM603	-	183	4	-	@2000	-	RNAV 1
04	CF	RW18	Y	183	6.1	-	-	-	IMN
05	FA	RW18	-	183	-	L	A4000+	-	IMN
06	DF	OPARI	Y	-	-	-	A4000+	-	RNAV 1
07	HM	OPARI	-	183	-	-	A4000+	-	RNAV 1

Waypoint List

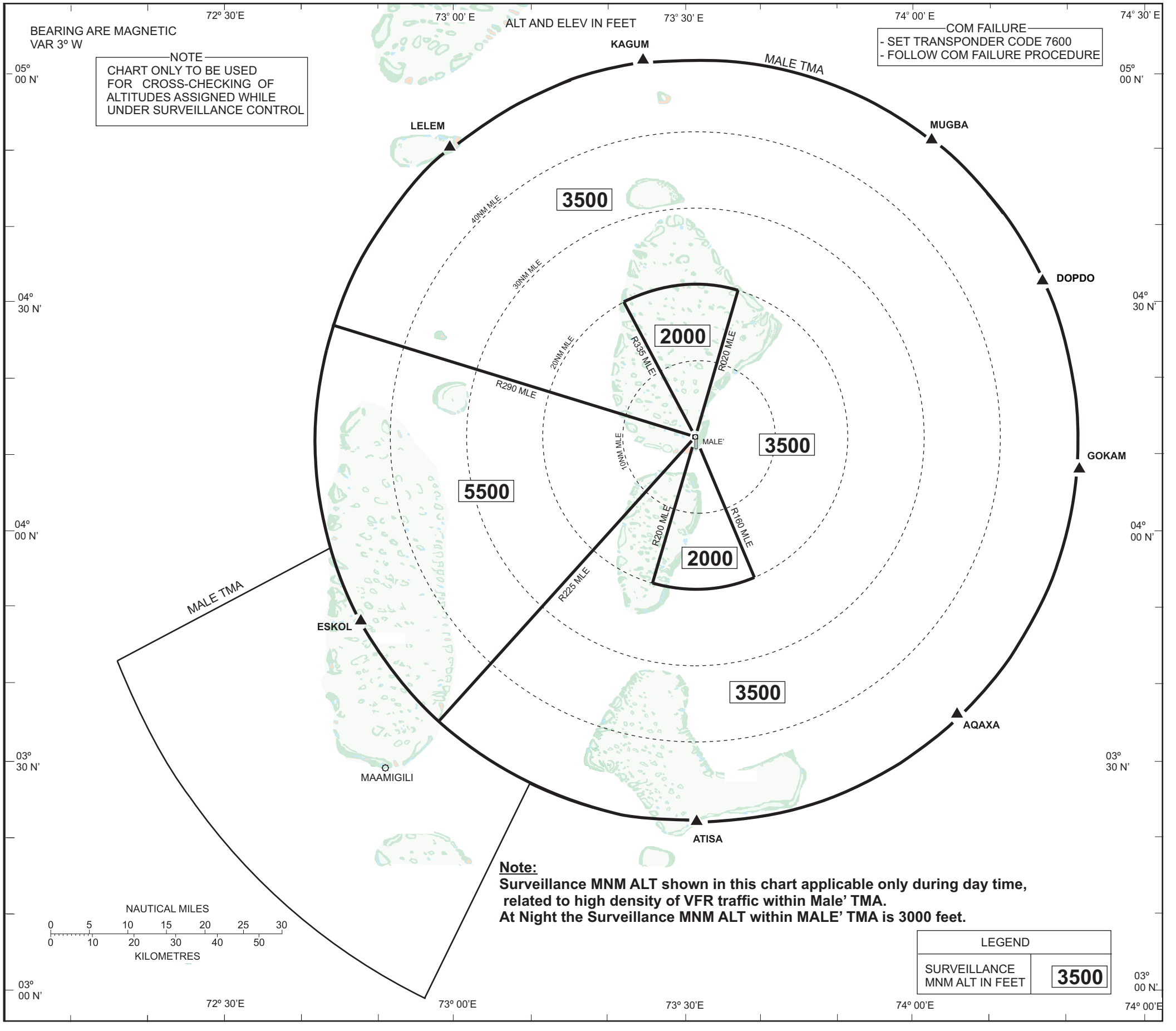
Waypoint identifier	Coordinates
OPARI (IAF)	N 04°26'41.1" E 73°31'50.9”
MM604 (IF)	N 04°22'40.0" E 73°31'51.1”
MM603 (FAP)	N 04°18'38.8" E 73°31'51.3”
RW18 (LTP)	N 4°12'31.00"N E 073°31'51.59"

ATC Surveillance Minimum Altitude Chart - ICAO

AERODROME ELEV 6 feet
TRANSITION ALT 11000 feet

APP 119.7

MALE'/ Intl (VRMM)



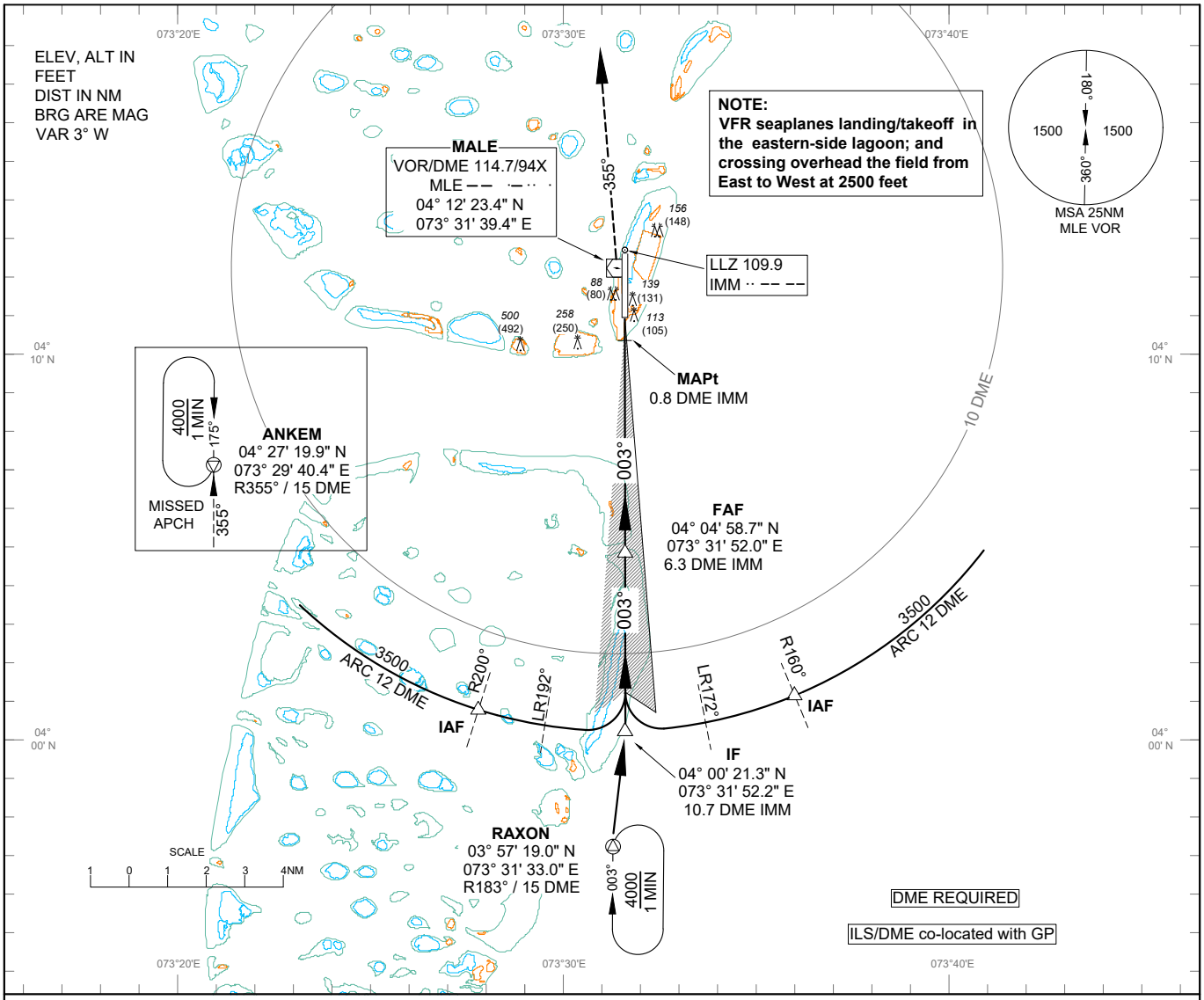
Note:
Surveillance MNM ALT shown in this chart applicable only during day time, related to high density of VFR traffic within Male' TMA.
At Night the Surveillance MNM ALT within MALE' TMA is 3000 feet.

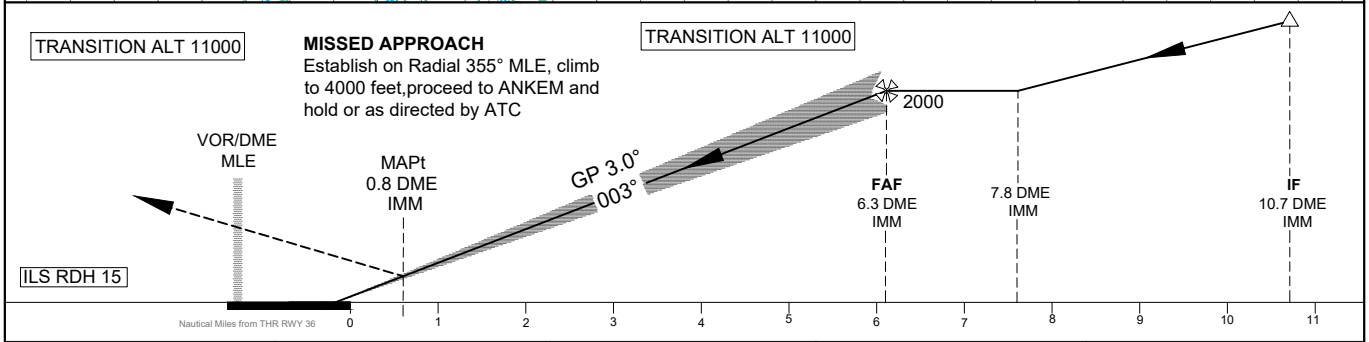
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 8 FT
HEIGHT RELATED TO
THR RWY 36 - ELEV 8 FT

MALE TWR 118.1
MALE APP 119.7

MALE / Intl (VRMM)
ILS W RWY 36





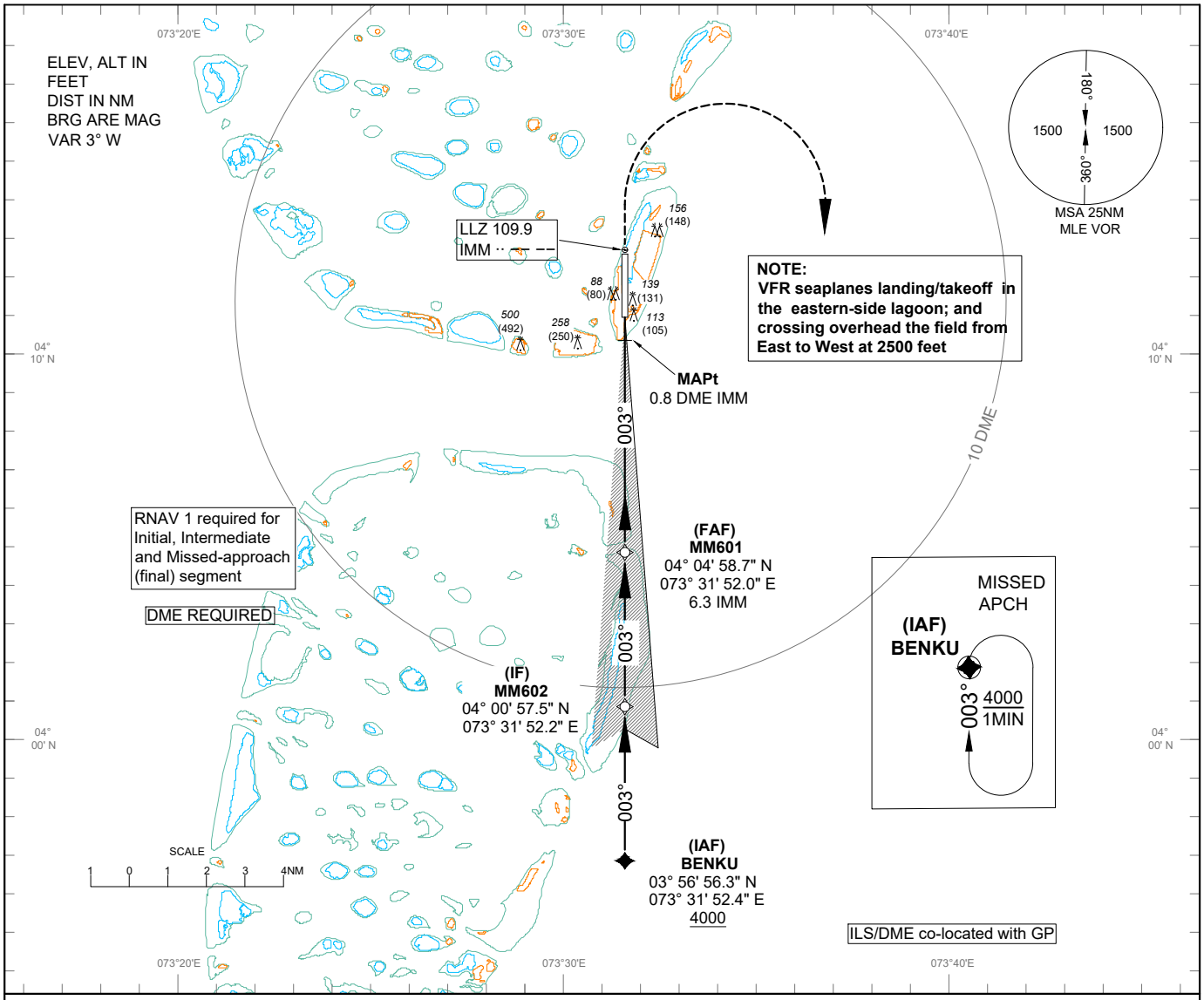
Aircraft Category			A	B	C	D
OCA (H)	Straight-in	CAT 1 ILS	220 (212)			
		GP INOP	310 (302)			
	Circling		560 (552)	Circling Not Authorised for B, C and D		
Distance (DME IMM)			2	3	4	5
Altitude (Ft)			640	960	1280	1600
Speed (KT)			70	120	150	185
Rate of Descend (ft/m)			370	635	795	980

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 8 FT
HEIGHT RELATED TO
THR RWY 36 - ELEV 8 FT

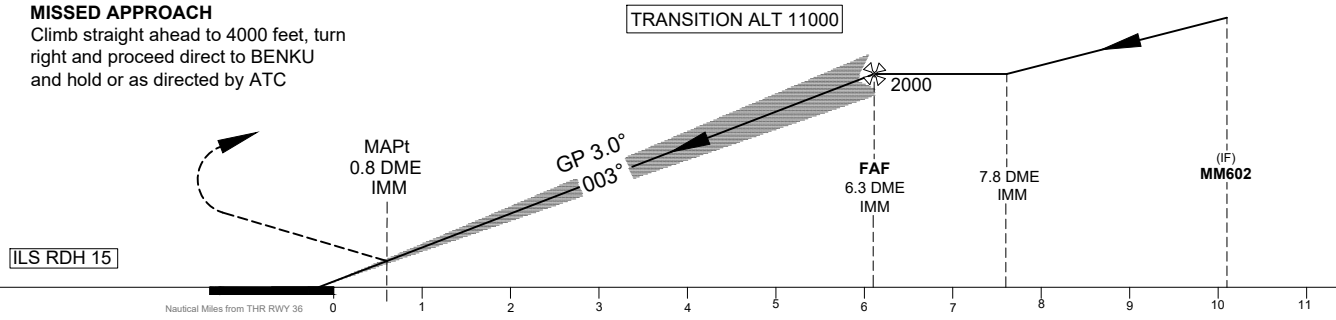
MALE TWR 118.1
MALE APP 119.7

MALE / Intl (VRMM)
ILS X RWY 36



MISSED APPROACH
Climb straight ahead to 4000 feet, turn right and proceed direct to BENKU and hold or as directed by ATC

TRANSITION ALT 11000



Aircraft Category			A	B	C	D
OCA (H)	Straight-in	CAT 1 ILS	220 (212)			
		GP INOP	310 (302)			
	Circling		560 (552)	Circling Not Authorised for B, C and D		
Distance (DME IMM)			2	3	4	5
Altitude (Ft)			640	960	1280	1600
Speed (KT)			70	120	150	185
Rate of Descend (ft/m)			370	635	795	980

ILS X RWY 36 (RNAV Transition)

Tabular Description

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	BENKU	-	-		-	A4000+	210	RNAV 1
02	TF	MM602	-	003	4	-	-	210	RNAV 1
03	TF	MM601	-	003	4	-	@2000	-	RNAV 1
04	CF	RW36	Y	003	6.1	-	-	-	IMM
05	FA	RWY36	-	003	-	R	A4000+	-	IMM
06	DF	BENKU	Y	-	-	-	A4000+	-	RNAV 1
07	HM	BENKU	-	003	-	-	A4000+	-	RNAV 1

Waypoint List

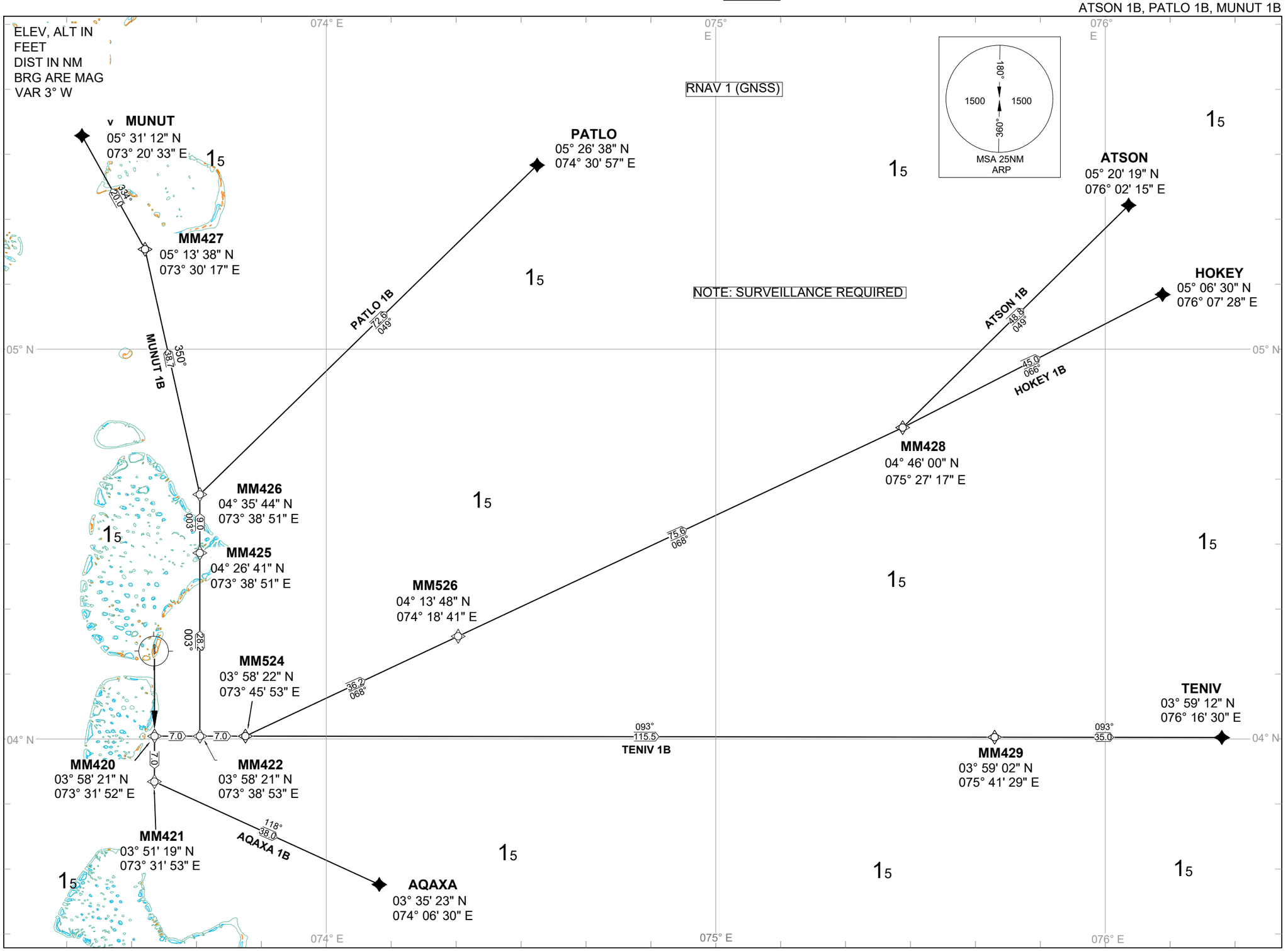
Waypoint identifier	Coordinates
BENKU (IAF)	N 03°56'56.3" E 73°31'52.4”
MM602 (IF)	N 04°00'57.5" E 73°31'52.2”
MM601 (FAP)	N 04°04'58.7" E 73°31'52.0”
RW36 (LTP)	N 04°11'06.45" E 073°31'51.67"

STANDARD DEPARTURE CHART — INSTRUMENT (SID) — ICAO

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9

MALE /INTL (VRMM)
RWY 18
AQAXA 1B, TENIV 1B, HOKEY 1B,
ATSON 1B, PATLO 1B, MUNUT 1B



TEXTUAL DESCRIPTION OF RWY 18 SID 1

1- AQAXA 1B (DEPARTURE)

1. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	-	5000+	-	RNAV 1
02	TF	MM421	-	183	7.0	L	-	-	RNAV 1
03	TF	AQAXA	-	118	38.0	-	-	-	RNAV 1

1. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM421	035119N 0733153E
AQAXA	033523N 0740630E

1. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft. To MM421, left turn. To AQAXA	MM420 [M183; A5000+]	CF	N
	MM421 [L]	TF	N
	AQAXA	TF	N

2- TENIV 1B (DEPARTURE)

2.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	L	5000+	-	RNAV 1
02	TF	MM422	-	093	7.0	-	-	-	RNAV 1
03	TF	MM524	-	093	7.0	-	-	-	RNAV 1
04	TF	MM429	-	093	115.5	-	-	-	RNAV 1
05	TF	TENIV	-	093	35.0	-	-	-	RNAV 1

2.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM422	035821N 0733853E
MM524	035822N 0734553E
MM429	035902N 0754129E
TENIV	035912N 0761630E

2.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft. To MM422. To MM524. To MM429. To TENIV	MM420 [M183; A5000+; L]	CF	N
	MM422	TF	N
	MM524	TF	N
	MM429	TF	N
	TENIV	TF	N

3- HOKEY 1B (DEPARTURE)

3.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	L	5000+	-	RNAV 1
02	TF	MM422	-	093	7.0	-	-	-	RNAV 1
03	TF	MM524	-	093	7.0	L	-	-	RNAV 1
04	TF	MM526	-	068	36.2	-	-	-	RNAV 1
05	TF	MM428	-	068	75.6	L	-	-	RNAV 1
06	TF	HOKEY	-	066	45.0	-	-	-	RNAV 1

3.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM422	035821N 0733853E
MM524	035822N 0734553E
MM526	041348N 0741841E
MM428	044600N 0752717E
HOKEY	050630N 0760728E

3.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft, turn left. To MM422. To MM524, turn left. To MM526. To MM428, turn left. To HOKEY	MM420 [M183; A5000+; L]	CF	N
	MM422	TF	N
	MM524 [L]	TF	N
	MM526	TF	N
	MM428 [L]	TF	N
	HOKEY	TF	N

4- ATSON 1B (DEPARTURE)

4. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	L	5000+	-	RNAV 1
02	TF	MM422	-	093	7.0	-	-	-	RNAV 1
03	TF	MM524	-	093	7.0	L	-	-	RNAV 1
04	TF	MM526	-	068	36.2	-	-	-	RNAV 1
05	TF	MM428	-	068	75.6	L	-	-	RNAV 1
06	TF	ATSON	-	049	48.8	-	-	-	RNAV 1

4. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM422	035821N 0733853E
MM524	035822N 0734553E
MM526	041348N 0741841E
MM428	044600N 0752717E
ATSON	052019N 0760215E

4. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft, turn left. To MM422. To MM524, turn left. To MM526. To MM428, turn left. To ATSON	MM420 [M183; A5000+; L]	CF	N
	MM422	TF	N
	MM524 [L]	TF	N
	MM526	TF	N
	MM428 [L]	TF	N
	ATSON	TF	N

5- PATLO 1B (DEPARTURE)

5.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	L	5000+	-	RNAV 1
02	TF	MM422	-	093	7.0	L	-	-	RNAV 1
03	TF	MM425	-	003	28.2	-	-	-	RNAV 1
04	TF	MM426	-	003	9.0	R	-	-	RNAV 1
05	TF	PATLO	-	049	72.6	-	-	-	RNAV 1

5.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM422	035821N 0733853E
MM425	042641N 0733851E
MM426	043544N 0733851E
PATLO	052638N 0743057E

5.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft, turn left. To MM422, turn left. To MM425. To MM426, turn right. To PATLO	MM420 [M183; A5000+; L]	CF	N
	MM422 [L]	TF	N
	MM425	TF	N
	MM426 [R]	TF	N
	PATLO	TF	N

6- MUNUT 1B (DEPARTURE)

6.1. Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	L	5000+	-	RNAV 1
02	TF	MM422	-	093	7.0	L	-	-	RNAV 1
03	TF	MM425	-	003	28.2	-	-	-	RNAV 1
04	TF	MM426	-	003	9.0	L	-	-	RNAV 1
05	TF	MM427	-	350	38.7	L	-	-	RNAV 1
06	TF	MUNUT	-	334	20.0	-	-	-	RNAV 1

6.2. Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM422	035821N 0733853E
MM425	042641N 0733851E
MM426	043544N 0733851E
MM427	051338N 0733017E
MUNUT	053112N 0732033E

6.3. Formal and abbreviated descriptions

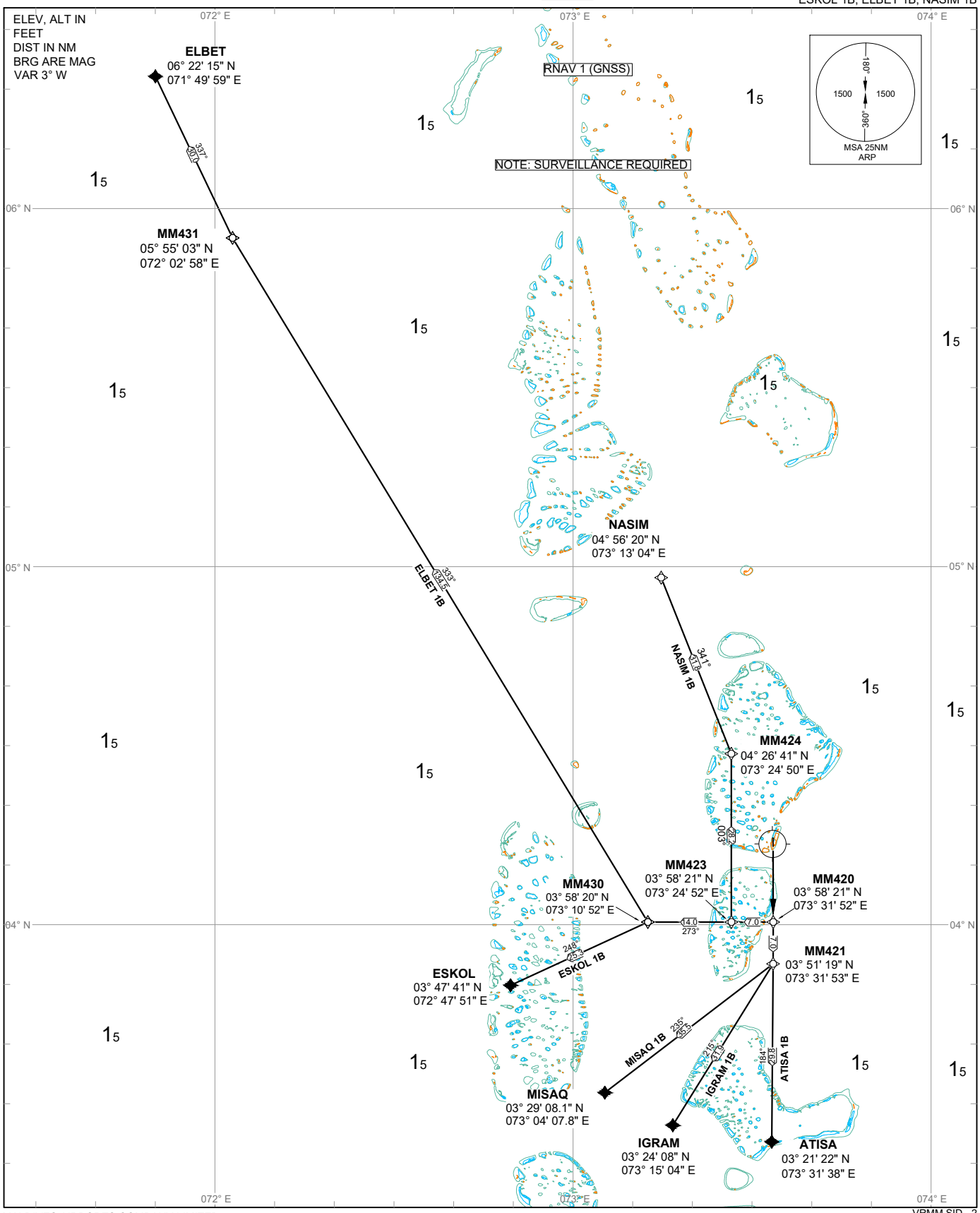
Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft, turn left. To MM422, turn left. To MM425. To MM426, turn left. To MM427, turn left. To MUNUT	MM420 [M183; A5000+; L]	CF	N
	MM422 [L]	TF	N
	MM425	TF	N
	MM426 [L]	TF	N
	MM427 [L]	TF	N
	MUNUT	TF	N

STANDARD DEPARTURE CHART – INSTRUMENT (SID) – ICAO

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9

MALE /INTL (VRMM)
RWY 18
ATISA 1B, IGRAM 1B, MISAQ 1B,
ESKOL 1B, ELBET 1B, NASIM 1B



TEXTUAL DESCRIPTION OF RWY 18 SID 2

1- ATISA 1B (DEPARTURE)

1.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	-	5000+	-	RNAV 1
02	TF	MM421	-	183	7.0	-	-	-	RNAV 1
03	TF	ATISA	-	184	29.8	-	-	-	RNAV 1

1.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM421	035119N 0733153E
ATISA	032122N 0733138E

1.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft. To MM421. To ATISA	MM420 [M183; A5000+]	CF	N
	MM421	TF	N
	ATISA	TF	N

2- IGRAM 1B (DEPARTURE)

2.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	-	5000+	-	RNAV 1
02	TF	MM421	-	183	7.0	R	-	-	RNAV 1
03	TF	IGRAM	-	215	31.9	-	-	-	RNAV 1

2.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM421	035119N 0733153E
IGRAM	032408N 0731504E

2.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft. To MM421, right turn. To IGRAM	MM420 [M183; A5000+]	CF	N
	MM421 [R]	TF	N
	IGRAM	TF	N

3- MISAQ 1B (DEPARTURE)

3.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	-	5000+	-	RNAV 1
02	TF	MM421	-	183	7.0	R	-	-	RNAV 1
03	TF	MISAQ	-	235	35.5	-	-	-	RNAV 1

3.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM421	035119N 0733153E
MISAQ	032908.1N 0730407.8E

3.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft. To MM421, turn right. To MISAQ	MM420 [M183; A5000+]	CF	N
	MM421 [R]	TF	N
	MISAQ	TF	N

4- ESKOL 1B (DEPARTURE)

4. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	R	5000+	-	RNAV 1
02	TF	MM423	-	273	7.0	-	-	-	RNAV 1
03	TF	MM430	-	273	14.0	L	-	-	RNAV 1
04	TF	ESKOL	-	248	25.3	-	-	-	RNAV 1

4. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM423	035821N 0732452E
MM430	035820N 0731052E
ESKOL	034741N 0724751E

4. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft, turn right. To MM423. To MM430, turn left. To ESKOL	MM420 [M183; A5000+; R]	CF	N
	MM423	TF	N
	MM430 [L]	TF	N
	ESKOL	TF	N

5- ELBET 1B (DEPARTURE)

5.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	R	5000+	-	RNAV 1
02	TF	MM423	-	273	7.0	-	-	-	RNAV 1
03	TF	MM430	-	273	14.0	R	-	-	RNAV 1
04	TF	MM431	-	333	134.5	-	-	-	RNAV 1
05	TF	ELBET		337	30.0	-	-	-	RNAV 1

5.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM423	035821N 0732452E
MM430	035820N 0731052E
MM431	055503N 0720258E
ELBET	062215N 0714959E

5.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft, turn right. To MM423. To MM430, turn right. To MM431. To ELBET	MM420 [M183; A5000+; R]	CF	N
	MM423	TF	N
	MM430 [R]	TF	N
	MM431	TF	N
	ELBET	TF	N

6- NASIM 1B (DEPARTURE)

6.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM420	-	183	-	R	5000+	-	RNAV 1
02	TF	MM423	-	273	7.0	R	-	-	RNAV 1
03	TF	MM424	-	003	28.2	L	-	-	RNAV 1
04	TF	NASIM	-	341	31.8	-	-	-	RNAV 1

6.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM420	035821N 0733152E
MM423	035821N 0732452E
MM424	042641N 0732450E
NASIM	045620N 0731304E

6.3 Formal and abbreviated descriptions

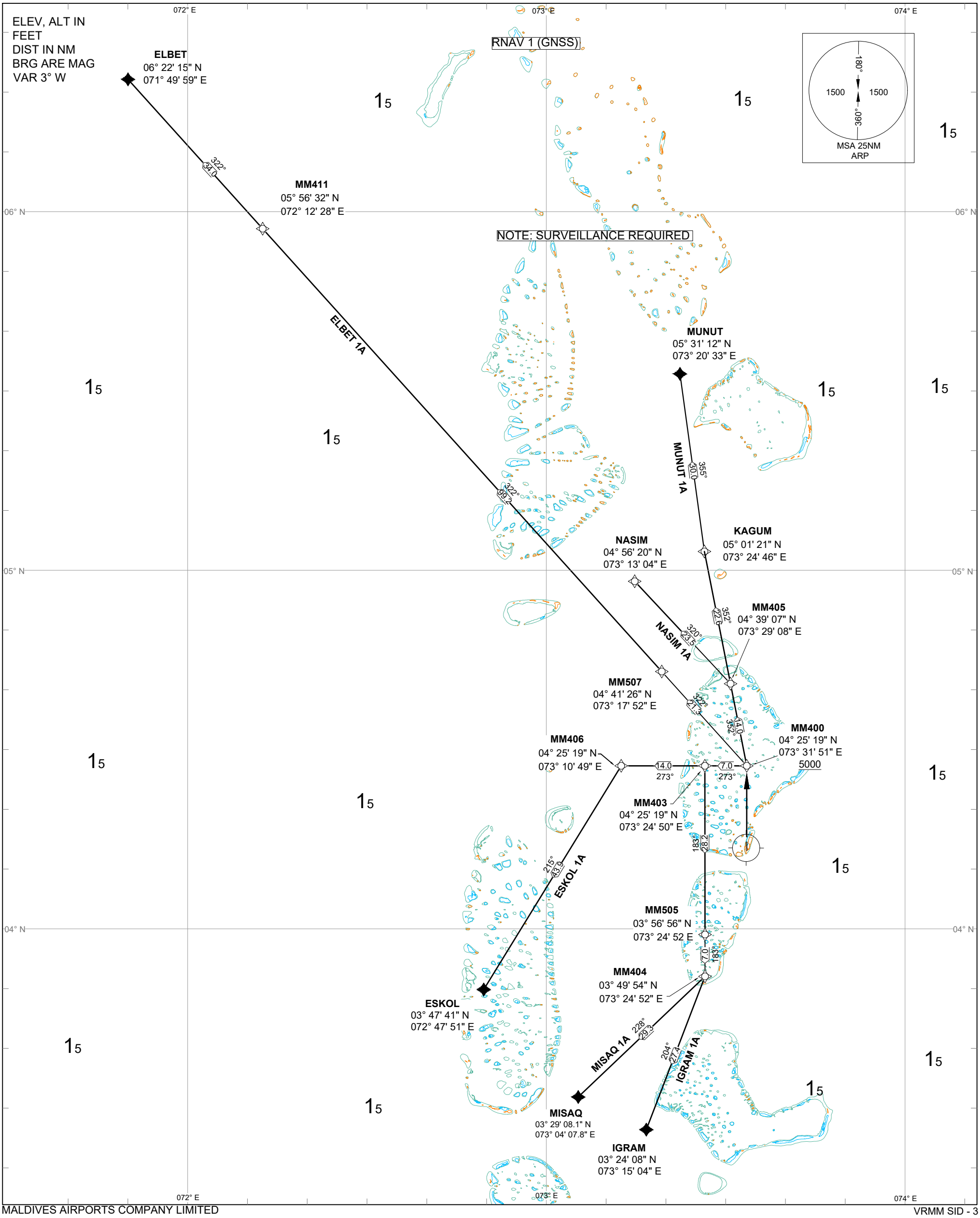
Formal description	Abbreviated description	Path terminator	Flyover required
To MM420 on course 183°, above 5000ft, turn right. To MM423, turn right. To MM424, turn left. To NASIM	MM420 [M183; A5000+; R]	CF	N
	MM423 [R]	TF	N
	MM424 [L]	TF	N
	NASIM	TF	N

STANDARD DEPARTURE CHART – INSTRUMENT (SID) – ICAO

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9

MALE /INTL (VRMM)
RWY 36
ELBET 1A, ESKOL 1A, MISAQ 1A,
IGRAM 1A, MUNUT 1A, NASIM 1A



TEXTUAL DESCRIPTION OF RWY36 SID 2

1- ELBET 1A (DEPARTURE)

1. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	L	5000+	-	RNAV 1
02	TF	MM507	-	322	21.3	-	-	-	RNAV 1
03	TF	MM411	-	322	99.2	-	-	-	RNAV 1
04	TF	ELBET	-	322	34.0	-	-	-	RNAV 1

1. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM507	044126N 0731752E
MM411	055632N 0721228E
ELBET	062215N 0714959E

1. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn left. To MM507. To MM411. To ELBET	MM400 [M003; A5000+; L]	CF	N
	MM507	TF	N
	MM411	TF	N
	ELBET	TF	N

2- ESKOL 1A (DEPARTURE)

2.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	L	5000+	-	RNAV 1
02	TF	MM403	-	273	7.0	-	-	-	RNAV 1
03	TF	MM406	-	273	14.0	L	-	-	RNAV 1
04	TF	ESKOL	-	215	43.9	-	-	-	RNAV 1

2.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM403	042519N 0732450E
MM406	042519N 0731049E
ESKOL	034741N 0724751E

2.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn left. To MM403. To MM406, turn left. To ESKOL	MM400 [M003; A5000+; L]	CF	N
	MM403	TF	N
	MM406 [L]	TF	N
	ESKOL	TF	N

3- MISAQ 1A (DEPARTURE)

3.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	L	5000+	-	RNAV 1
02	TF	MM403	-	273	7.0	L	-	-	RNAV 1
03	TF	MM505	-	183	28.2	-	-	-	RNAV 1
04	TF	MM404	-	183	7.0	R	-	-	RNAV 1
05	TF	MISAQ	-	228	29.3	-	-	-	RNAV 1

3.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM403	042519N 0732450E
MM505	035656N 0732452E
MM404	034954N 0732452E
MISAQ	032908.1N 0730407.8E

3.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn left. To MM403, turn left. To MM505. To MM404, turn right. To MISAQ	MM400 [M003; A5000+; L]	CF	N
	MM403 [L]	TF	N
	MM505	TF	N
	MM404 [R]	TF	N
	MISAQ	TF	N

4- IGRAM 1A (DEPARTURE)

4. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	L	5000+	-	RNAV 1
02	TF	MM403	-	273	7.0	L	-	-	RNAV 1
03	TF	MM505	-	183	28.2	-	-	-	RNAV 1
04	TF	MM404	-	183	7.0	R	-	-	RNAV 1
05	TF	IGRAM	-	204	27.4	-	-	-	RNAV 1

4. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM403	042519N 0732450E
MM505	035656N 0732452E
MM404	034954N 0732452E
IGRAM	032408N 0731504E

4. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn left. To MM403, turn left. To MM505. To MM404, turn right. To IGRAM	MM400 [M003; A5000+; L]	CF	N
	MM403 [L]	TF	N
	MM505	TF	N
	MM404 [R]	TF	N
	IGRAM	TF	N

5- MUNUT 1A (DEPARTURE)

5.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	L	5000+	-	RNAV 1
02	TF	MM405	-	352	14.0	-	-	-	RNAV 1
03	TF	KAGUM	-	352	22.6	-	-	-	RNAV 1
04	TF	MUNUT	-	355	30.0	-	-	-	RNAV 1

5.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM405	043907N 0732908E
KAGUM	050121N 0732446E
MUNUT	053112N 0732033E

5.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn left. To MM405. To KAGUM. To MUNUT.	MM400 [M003; A5000+; L]	CF	N
	MM405	TF	N
	KAGUM	TF	N
	MUNUT	TF	N

6- NASIM 1A (DEPARTURE)

6.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	L	5000+	-	RNAV 1
02	TF	MM405	-	352	14.0	L	-	-	RNAV 1
03	TF	NASIM	-	320	23.5	-	-	-	RNAV 1

6.2 Waypoint coordinates

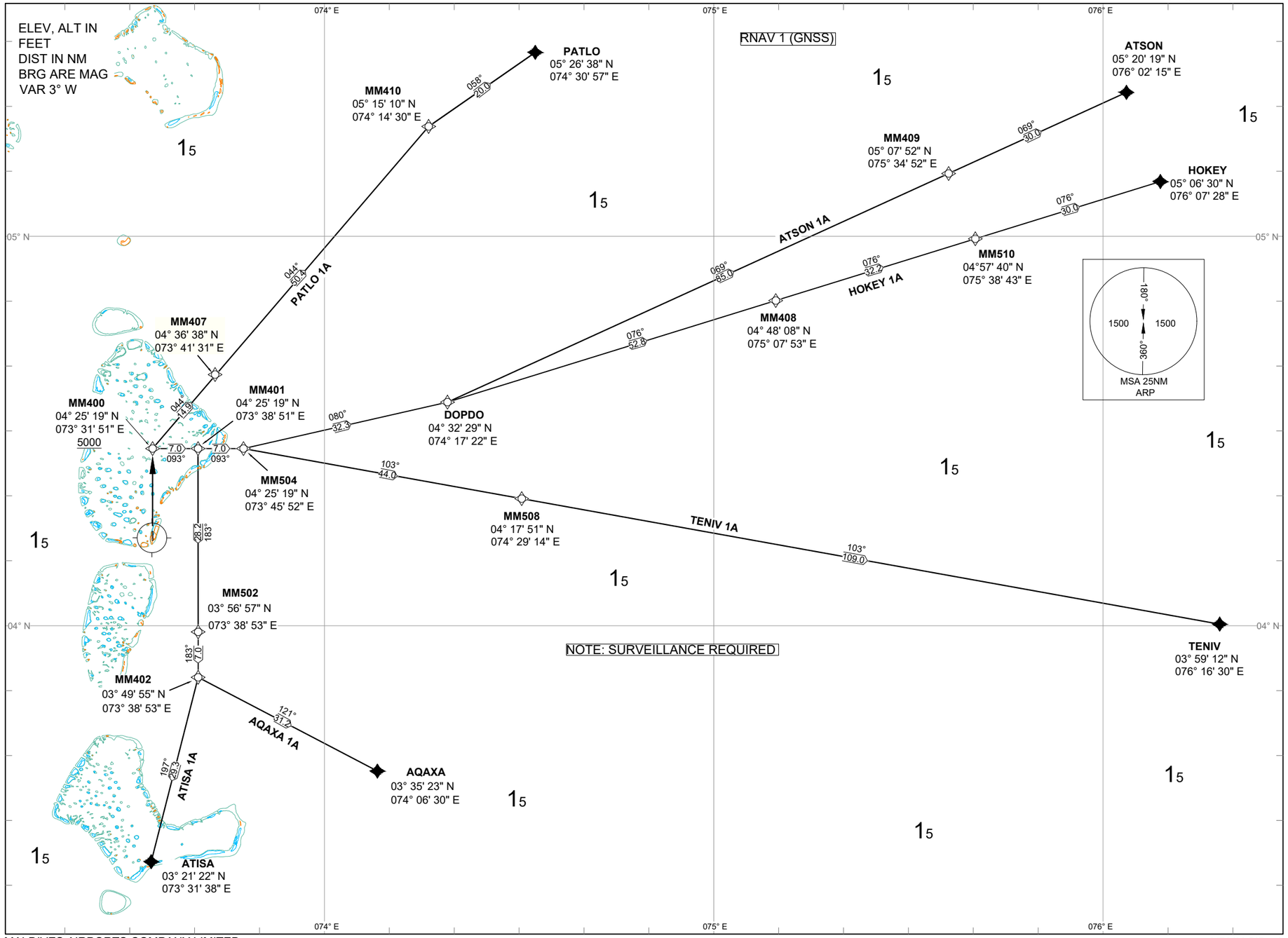
Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM405	043907N 0732908E
NASIM	045620N 0731304E

6.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn left. To MM405, turn left to NASIM.	MM400 [M003; A5000+; L]	CF	N
	MM405[L]	TF	N
	NASIM	TF	N

STANDARD DEPARTURE CHART – INSTRUMENT (SID) – ICAO

MALE /INTL (VRMM)
RWY 36
PATLO 1A, ATSON 1A, HOKEY 1A,
TENIV 1A, AQAXA 1A, ATISA 1A



TEXTUAL DESCRIPTION OF RWY36 SID 1

1- PATLO 1A (DEPARTURE)

1.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	R	5000+	-	RNAV 1
02	TF	MM407	-	44	14.9	-	-	-	RNAV 1
03	TF	MM410	-	44	50.4	R	-	-	RNAV 1
04	TF	PATLO	-	58	20.0	-	-	-	RNAV 1

1.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM407	043638N 0734131E
MM410	051510N 0741430E
PATLO	052638N 0743057E

1.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn right. To MM410. To PATLO	MM400 [M003; A5000+; R]	CF	N
	MM410 [R]	TF	N
	PATLO	TF	N

2- ATSON 1A (DEPARTURE)

2.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	R	5000+	-	RNAV 1
02	TF	MM401	-	093	7.0	-	-	-	RNAV 1
03	TF	MM504	-	093	7.0	L	-	-	RNAV 1
04	TF	DOPDO	-	80	32.3	L	-	-	RNAV 1
05	TF	MM409	-	69	85.0	-	-	-	RNAV 1
06	TF	ATSON	-	69	30.0	-	-	-	RNAV 1

2.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM401	042519N 0733851E
MM504	042519N 0734552E
DOPDO	043229N 0741722E
MM409	050752N 0753452E
ATSON	052019N 0760215E

2.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn right. To MM401. To MM504, turn left. To DOPDO. To MM409.To ATSON	MM400 [M003; A5000+; R]	CF	N
	MM401	TF	N
	MM504 [L]	TF	N
	DOPDO [L]	TF	N
	MM409	TF	N
	ATSON	TF	N

3- HOKEY 1A (DEPARTURE)

3.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	R	5000+	-	RNAV 1
02	TF	MM401	-	093	7.0	-	-	-	RNAV 1
03	TF	MM504	-	093	7.0	L	-	-	RNAV 1
04	TF	DOPDO	-	80	32.3	L	-	-	RNAV 1
05	TF	MM408	-	76	52.8	-	-	-	RNAV 1
06	TF	MM510	-	76	32.2	-	-	-	RNAV 1
07	TF	HOKEY	-	76	30.0	-	-	-	RNAV 1

3.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM401	042519N 0733851E
MM504	042519N 0734552E
DOPDO	043229N 0741722E
MM408	044808N 0750753E
MM510	045740N 0753843E
HOKEY	050630N 0760728E

3.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn right. To MM401. To MM504, turn left. To DOPDO, turn left. To MM408. To MM510.To HOKEY.	MM400 [M003; A5000+; R]	CF	N
	MM401	TF	N
	MM504 [L]	TF	N
	DOPDO [L]	TF	N
	MM408	TF	N
	MM510	TF	N
	HOKEY	TF	N

4- TENIV 1A (DEPARTURE)

4. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	R	5000+	-	RNAV 1
02	TF	MM401	-	093	7.0	-	-	-	RNAV 1
03	TF	MM504	-	093	7.0	R	-	-	RNAV 1
04	TF	MM508	-	103	44.0	-	-	-	RNAV 1
05	TF	TENIV	-	103	109	-	-	-	RNAV 1

4. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM401	042519N 0733851E
MM504	042519N 0734552E
MM508	041751N 0742914E
TENIV	035912N 0761630E

4. 1 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn right. To MM401. To MM504, turn right. To MM508. To TENIV.	MM400 [M003; A5000+; R]	CF	N
	MM401	TF	N
	MM504 [R]	TF	N
	MM508	TF	N
	TENIV	TF	N

5- AQAXA 1A (DEPARTURE)

5.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	R	5000+	-	RNAV 1
02	TF	MM401	-	093	7.0	R	-	-	RNAV 1
03	TF	MM502	-	183	28.2	-	-	-	RNAV 1
04	TF	MM402	-	183	7.0	L	-	-	RNAV 1
05	TF	AQAXA	-	121	31.2	-	-	-	RNAV 1

5.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM401	042519N 0733851E
MM502	035657N 0733853E
MM402	034955N 0733853E
AQAXA	033523N 0740630E

5.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn right. To MM401, turn right. To MM502. To MM402, turn left. To AQAXA	MM400 [M003; A5000+; R]	CF	N
	MM401 [R]	TF	N
	MM502	TF	N
	MM402 [L]	TF	N
	AQAXA	TF	N

6- ATISA 1A (DEPARTURE)

6.1. Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	CF	MM400	-	003	-	R	5000+	-	RNAV 1
02	TF	MM401	-	093	7.0	R	-	-	RNAV 1
03	TF	MM502	-	183	28.2	-	-	-	RNAV 1
04	TF	MM402	-	183	7.0	R	-	-	RNAV 1
05	TF	ATISA	-	197	29.3	-	-	-	RNAV 1

6.2. Waypoint coordinates

Waypoint	WGS84 Coordinates
MM400	042519N 0733151E
MM401	042519N 0733851E
MM502	035657N 0733853E
MM402	034955N 0733853E
ATISA	032122N 0733138E

6.3. Formal and abbreviated descriptions

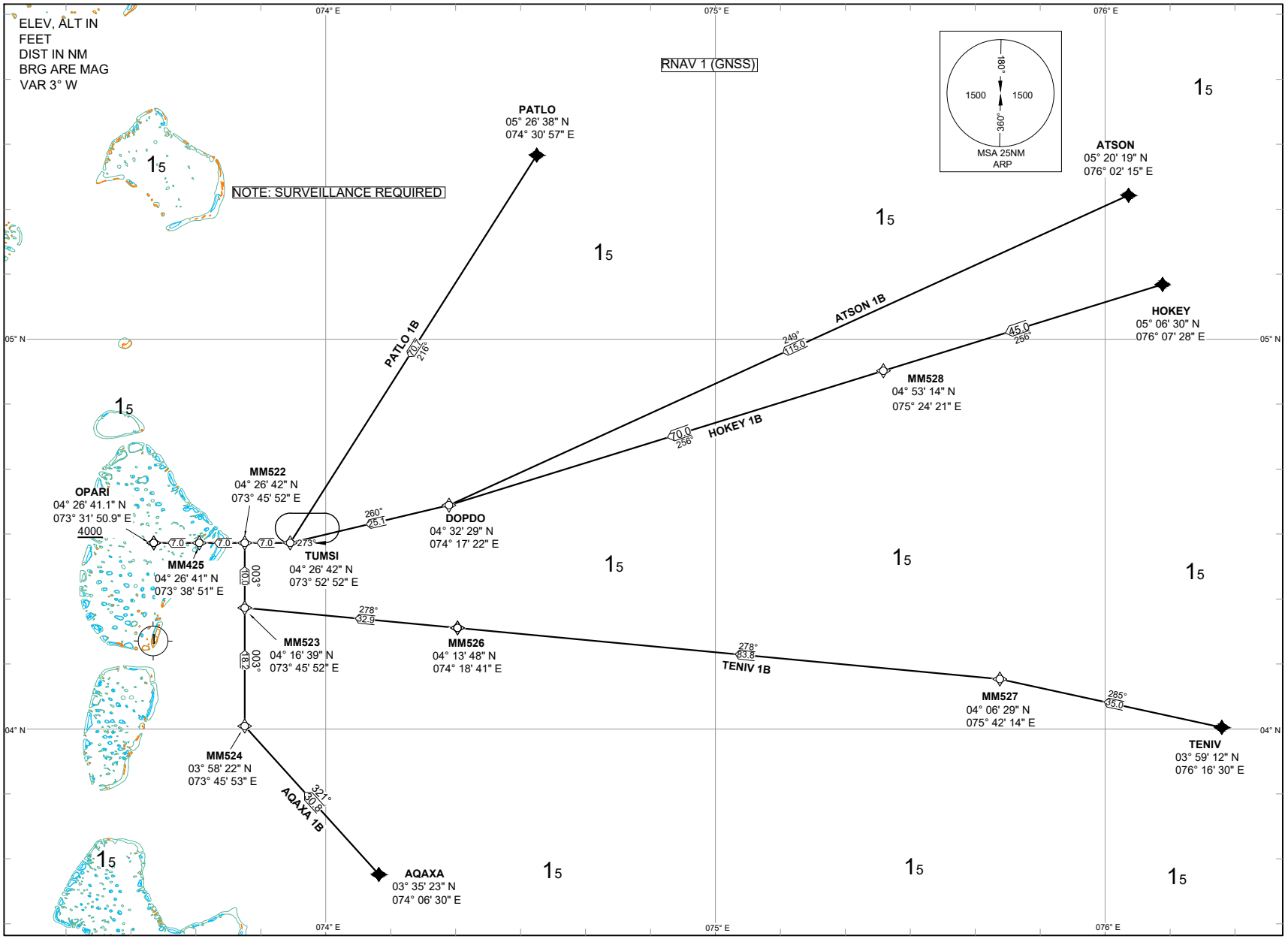
Formal description	Abbreviated description	Path terminator	Flyover required
To MM400 on course 003° above 5000ft, turn right. To MM401, turn right. To MM502. To MM402, turn right. To ATISA	MM400 [M003; A5000+; R]	CF	N
	MM401 [R]	TF	N
	MM502	TF	N
	MM402 [R]	TF	N
	ATISA	TF	N

STANDARD ARRIVAL CHART – INSTRUMENT (STAR) – ICAO

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9

MALE /INTL (VRMM)
RWY 18
AQAXA 1B, TENIV 1B, HOKEY 1B,
ATSON 1B, PATLO 1B



TEXTUAL DESCRIPTION RWY18 (STAR)

1- AQAXA 1B (ARRIVAL)

1. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	AQAXA	-	-	-	-	-	-	RNAV 1
02	TF	MM524	-	321	30.8	R	-	-	RNAV 1
03	TF	MM523	-	003	18.2	-	-	-	RNAV 1
04	TF	MM522	-	003	10.0	L	-	-	RNAV 1
05	TF	MM425	-	273	7.0	-			RNAV 1
06	TF	OPARI	-	273	7.0	L	A4000+	210	RNAV 1

1. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
AQAXA	033523N 0740630E
MM524	035822N 0734553E
MM523	041639N 0734552E
MM522	042642N 0734552
MM425	042641N 0733851E
OPARI	042641.1N 0733150.9E

1. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From AQAXA. To MM524, turn right. To MM523. To MM522, turn left. To MM425. To OPARI, at or above 4000ft, speed 210kts, turn left	AQAXA	IF	N
	MM524 [R]	IF	N
	MM523	TF	N
	MM522 [L]	TF	N
	MM425	TF	N
	OPARI [A4000+ ; K210 ; L]	TF	N

1. 4 **Radio communications failure procedure**

1	Set transponder to Mode A/C Code 7600
2	If clearance received from Male ATC a) Maintain last assigned flight level or altitude and proceed to the clearance limit b) Commence descent and carry out appropriate landing procedure for RWY 18 as close as possible to EAT or ETA
3	No clearance or instruction received from Male ATC - Refer to Male AIP for radio communications failure procedure

2- TENIV 1B (ARRIVAL)

2.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	TENIV	-	-	-	-	-	-	RNAV 1
02	TF	MM527	-	285	35.0	L	-	-	RNAV 1
03	TF	MM526	-	278	83.8	-	-	-	RNAV 1
04	TF	MM523	-	278	32.9	R	-	-	RNAV 1
05	TF	MM522	-	003	10.0	L	-	-	RNAV 1
06	TF	MM425	-	273	7.0	-			RNAV 1
07	TF	OPARI	-	273	7.0	L	A4000+	210	RNAV 1

2.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
TENIV	035912N 0761630E
MM527	040629N 0754214E
MM526	041348N 0741841E
MM523	041639N 0734552E
MM522	042642N 0734552E
MM425	042641N 0733851E
OPARI	042641.1N 0733150.9E

2.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From TENIV. To MM527, turn left. To MM526. To MM523, turn right. To MM522, turn left. To MM425. To OPARI, at or above 4000ft, speed 210kts, turn left	TENIV	IF	N
	MM527 [L]	IF	N
	MM526	TF	N
	MM523 [R]	TF	N
	MM522 [L]	TF	N
	MM425	TF	N
	OPARI [A4000+ ; K210 ; L]	TF	N

3- HOKEY 1B (ARRIVAL)

3.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	HOKEY	-	-	-	-	-	-	RNAV 1
02	TF	MM528	-	256	45.0	-	-	-	RNAV 1
03	TF	DOPDO	-	256	70.0	R	-	-	RNAV 1
04	TF	TUMSI	-	260	25.1	R	-	-	RNAV 1
05	TF	MM522	-	273	7.0	-	-	-	RNAV 1
06	TF	MM425	-	273	7.0	-			RNAV 1
07	TF	OPARI	-	273	7.0	L	A4000+	210	RNAV 1

3.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
HOKEY	050630N 0760728E
MM528	045314N 0752421E
DOPDO	043229N 0741722E
TUMSI	042642N 0735252E
MM522	042642N 0734552E
MM425	042641N 0733851E
OPARI	042641.1N 0733150.9E

3.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From HOKEY. To MM528.To DOPDO, turn right. To TUMSI, turn right. To MM522. To MM425. To OPARI, at or above 4000ft, speed 210kts, turn left	HOKEY	IF	N
	MM528	IF	N
	DOPDO [R]	TF	N
	TUMSI [R]	TF	N
	MM522	TF	N
	MM425	TF	N
	OPARI [A4000+ ; K210 ; L]	TF	N

4- ATSON 1B (ARRIVAL)

4. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	ATSON	-	-	-	-	-	-	RNAV 1
02	TF	DOPDO	-	249	115.0	R	-	-	RNAV 1
03	TF	TUMSI	-	260	25.1	R	-	-	RNAV 1
04	TF	MM522	-	273	7.0	-	-	-	RNAV 1
05	TF	MM425	-	273	7.0	-			RNAV 1
06	TF	OPARI	-	273	7.0	L	A4000+	210	RNAV 1

4. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
ATSON	052019N 0760215E
DOPDO	043229N 0741722E
TUMSI	042642N 0735252E
MM522	042642N 0734552E
MM425	042641N 0733851E
OPARI	042641.1N 0733150.9E

4. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From ATSON. To DOPDO, turn right. To TUMSI, turn right. To MM522. To MM425. To OPARI, at or above 4000ft, speed 210kts, turn left	ATSON	IF	N
	DOPDO [R]	TF	N
	TUMSI [R]	TF	N
	MM522	TF	N
	MM425	TF	N
	OPARI [A4000+ ; K210 ; L]	TF	N

5- PATLO 1B (ARRIVAL)

5.1 2.3.1.7.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	PATLO	-	-	-	-	-	-	RNAV 1
02	TF	TUMSI	-	216	70.7	R	-	-	RNAV 1
03	TF	MM522	-	273	7.0	-	-	-	RNAV 1
04	TF	MM425	-	273	7.0	-			RNAV 1
05	TF	OPARI	-	273	7.0	L	A4000+	210	RNAV 1

5.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
PATLO	052638N 0743057E
TUMSI	042642N 0735252E
MM522	042642N0734552E
MM425	042641N 0733851E
OPARI	042641.1N 0733150.9E

5.3 Formal and abbreviated descriptions

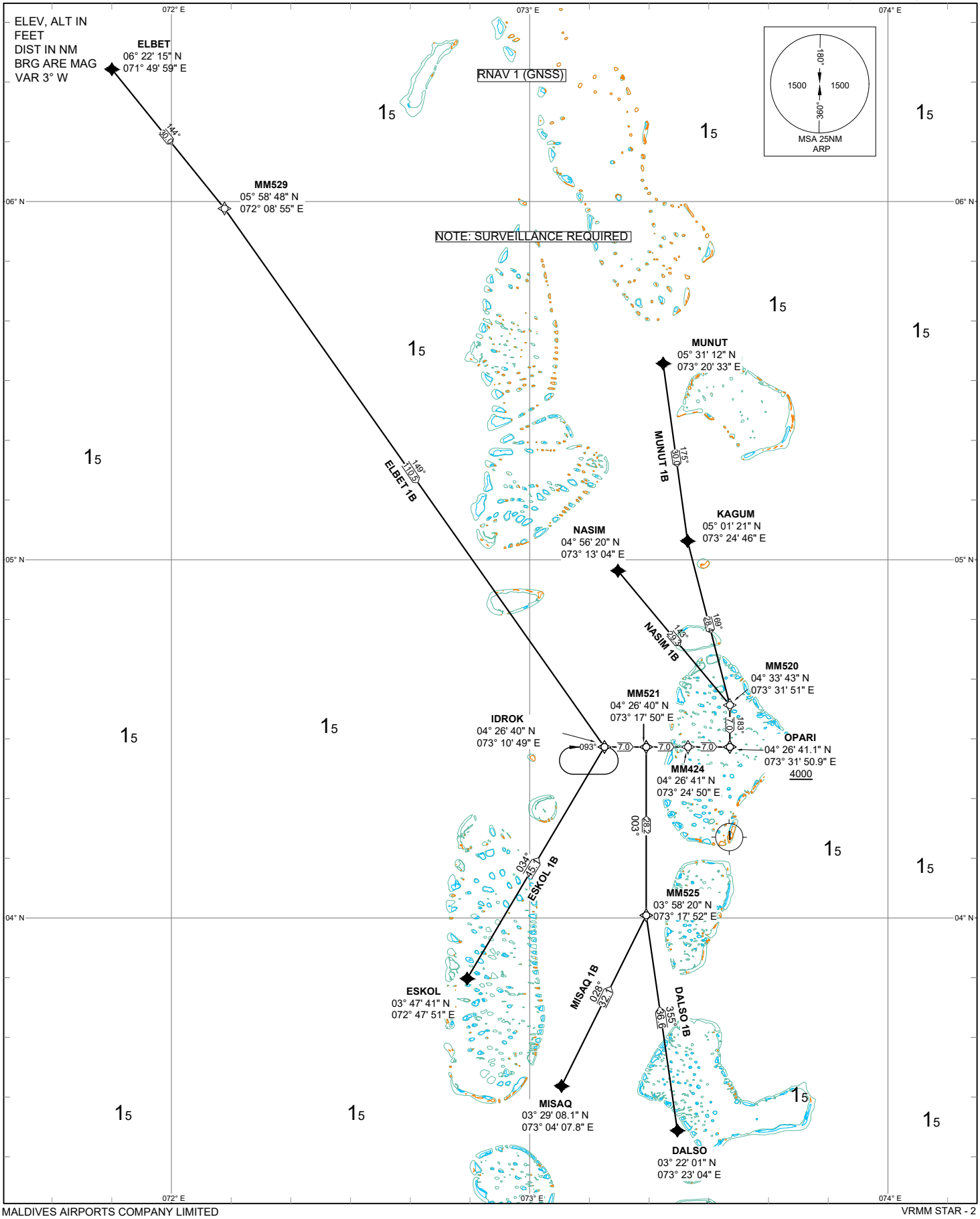
Formal description	Abbreviated description	Path terminator	Flyover required
From PATLO. To TUMSI, turn right. To MM522. To MM425. To OPARI, at or above 4000ft, speed 210kts, turn left	PATLO	IF	N
	TUMSI [R]	TF	N
	MM522	TF	N
	MM425	TF	N
	OPARI [A4000+ ; K210 ; L]	TF	N

STANDARD ARRIVAL CHART – INSTRUMENT (STAR) – ICAO

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9

MALE /INTL (VRMM)
RWY 18
ELBET 1B, ESKOL 1B, MISAQ 1B,
DALSO 1B, MUNUT 1B, NASIM 1B



TEXTUAL DESCRIPTION OF STAR RWY18

1- ELBET 1B (ARRIVAL)

1.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	ELBET	-	-	-	-	-	-	RNAV 1
02	TF	MM529	-	144	30.0	-	-	-	RNAV 1
03	TF	IDROK	-	149	110.5	L	A5500+		RNAV 1
04	TF	MM521	-	093	7.0	-	A5500+	-	RNAV 1
05	TF	MM424	-	093	7.0	-	A4000+	-	RNAV 1
06	TF	OPARI	-	093	7.0	R	A4000+	210	RNAV 1

1.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
ELBET	062215N0714959E
MM529	055848N 0720855E
IDROK	042640N 0731049E
MM521	042640N 0731750E
MM424	042641N 0732450E
OPARI	042641.1N 0733150.9E

1.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From ELBET. To MM529. To IDROK, at or above 5500ft, turn left. To MM521, at or above 5500ft. To MM424, at or above 4000ft. To OPARI, at or above 4000ft, speed 210kts, turn right	ELBET	IF	N
	MM529	TF	N
	IDROK [A5500+ ; L]	TF	N
	MM521 [A5500+]		
	MM424 [A4000+]	TF	N
	OPARI [A4000+ ; K210 ; R]	TF	N

2- ESKOL 1B (ARRIVAL)

2.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	ESKOL	-	-	-	-	A7000+	-	RNAV 1
02	TF	IDROK	-	034	45.1	R	A5500+		RNAV 1
03	TF	MM521	-	093	7.0	-	A5500+	-	RNAV 1
04	TF	MM424	-	093	7.0	-	A4000+	-	RNAV 1
05	TF	OPARI	-	093	7.0	R	A4000+	210	RNAV 1

2.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
ESKOL	034741N 0724751E
IDROK	042640N 0731049E
MM521	042640N 0731750E

MM424	042641N 0732450E
OPARI	042641.1N 0733150.9E

2.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From ESKOL, at or above 7000. To IDROK, at or above 5500ft, turn right. To MM521, at or above 5500ft. To MM424, at or above 4000ft. To OPARI, at or above 4000ft, speed 210kts, turn right	ESKOL [A7000+]	IF	N
	IDROK [A5500+ ; R]	TF	N
	MM521 [A5500+]	TF	N
	MM424 [A4000+]	TF	N
	OPARI [A4000+ ; K210 ; R]	TF	N

3- MISAQ 1B (ARRIVAL)

3.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	MISAQ	-	-	-	-	-	-	RNAV 1
02	TF	MM525	-	028	32.1	L	A5500+		RNAV 1
03	TF	MM521	-	003	28.2	R	A5500+	-	RNAV 1
04	TF	MM424	-	093	7.0	-	A4000+	-	RNAV 1
05	TF	OPARI	-	093	7.0	R	A4000+	210	RNAV 1

3.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MISAQ	032908.1N 0730407.8E
MM525	035820N 0731752E
MM521	042640N 0731750E
MM424	042641N 0732450E
OPARI	042641.1N 0733150.9E

3.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From MISAQ. To MM525, at or above 5500ft, turn left. To MM521, at or above 5500ft, turn right. To MM424, at or above 4000ft. To OPARI, at or above 4000ft, speed 210kts, turn right	MISAQ	IF	N
	MM525 [A5500+ ; L]	TF	N
	MM521 [A5500+ ; R]	TF	N
	MM424 [A4000+]	TF	N
	OPARI [A4000+ ; K210 ; R]	TF	N

4- DALSO 1B (ARRIVAL)

4.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	DALSO	-	-	-	-	A7000+	-	RNAV 1
02	TF	MM525	-	355	36.6	R	A5500+		RNAV 1
03	TF	MM521	-	003	28.2	R	A5500+	-	RNAV 1
04	TF	MM424	-	093	7.0	-	A4000+	-	RNAV 1

05	TF	OPARI	-	093	7.0	R	A4000+	210	RNAV 1

4.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
DALSO	032201N 0732304E
MM525	035820N 0731752E
MM521	042640N 0731750E
MM424	042641N 0732450E
OPARI	042641.1N 0733150.9E

4.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From DALSO, at or above 7000ft. To MM525, at or above 5500ft, turn right. To MM521, at or above 5500ft, turn right. To MM424, at or above 4000ft. To OPARI, at or above 4000ft, speed 210kts, turn right	DALSO [A7000+]	IF	N
	MM525 [A5500+ ; R]	TF	N
	MM521 [A5500+ ; R]	TF	N
	MM424 [A4000+]	TF	N
	OPARI [A4000+ ; K210 ; R]	TF	N

5- MUNUT 1B (ARRIVAL)

5.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	MUNUT	-	-	-	-	-	-	RNAV 1
02	TF	KAGUM	-	175	30.0	L	A7000+		
03	TF	MM520	-	169	28.4	R	-	-	RNAV 1
04	TF	OPARI	-	183	7.0	-	A4000+	210	RNAV 1

5.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MUNUT	053112N 0732033E
KAGUM	050121N 0732446E
MM520	043343N 0733151E
OPARI	042641.1N 0733150.9E

5.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From MUNUT. To KAGUM, at or above 7000ft, turn left. To MM520,	MUNUT	IF	N
	KAGUM [A7000+ ; L]	TF	N

turn right. To OPARI, at or above 4000ft, speed 210kts.	MM520 [R]	TF	N
	OPARI [A4000+ ; K210]	TF	N

6- NASIM 1B (ARRIVAL)

6.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	NASIM	-	-	-	-	-	-	RNAV 1
02	TF	MM520	-	143	29.3	R	-	-	RNAV 1
03	TF	OPARI	-	183	7.0	-	A4000+	210	RNAV 1

6.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
NASIM	045620N 0731304E
MM520	043343N 0733151E
OPARI	042641.1N 0733150.9E

6.3 Formal and abbreviated descriptions

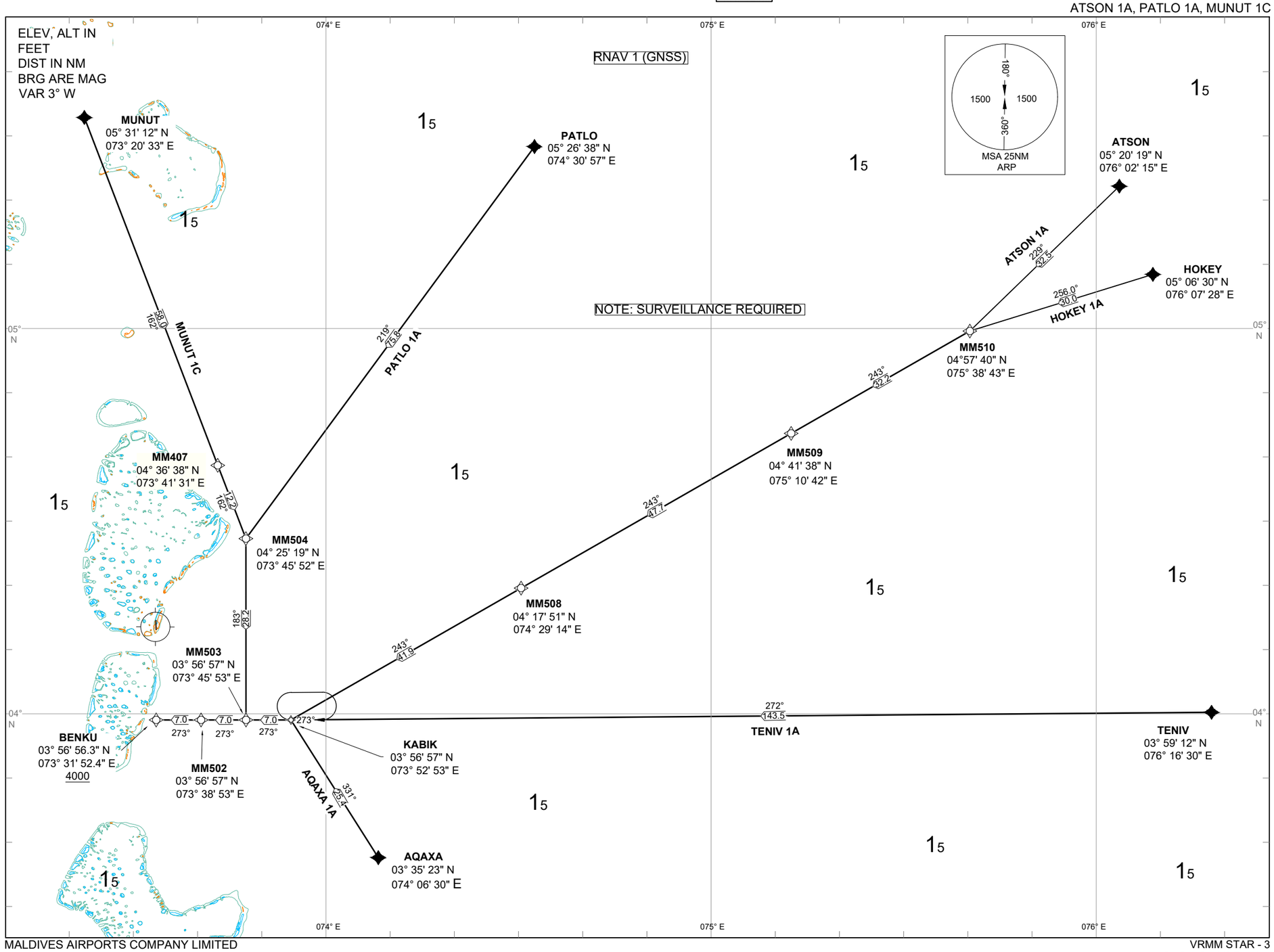
Formal description	Abbreviated description	Path terminator	Flyover required
From NASIM. To MM520, turn right. To OPARI, at or above 4000ft, speed 210kts.	NASIM	IF	N
	MM520 [R]	TF	N
	OPARI [A4000+ ; K210]	TF	N

STANDARD ARRIVAL CHART – INSTRUMENT (STAR) – ICAO

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9

MALE /INTL (VRMM)
RWY 36
AQAXA 1A, TENIV 1A, HOKEY 1A,
ATSON 1A, PATLO 1A, MUNUT 1C



TEXTUAL DESCRIPTION OF RWY36 STAR

1- AQAXA 1A (ARRIVAL)

1. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	AQAXA	-	-	-	-	-	-	RNAV 1
02	TF	KABIK	-	331	25.4	L	A5500+		RNAV 1
03	TF	MM503	-	273	7.0	-	A4000+	-	RNAV 1
04	TF	MM502	-	273	7.0	-	A4000+	-	RNAV 1
05	TF	BENKU	-	273	7.0	R	A4000+	210	RNAV 1

1. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
AQAXA	033523N 0740630E
KABIK	035657N 0735253E
MM503	035657N 0734553E
MM502	035657N 0733853E
BENKU	035656.3N 0733152.4E

1. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From AQAXA. To KABIK, at or above 5500ft, turn left. To MM503, at or above 4000ft. To MM502, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn right.	AQAXA	IF	N
	KABIK [A5500+; L]	TF	N
	MM503 [A4000+]	TF	N
	MM502 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; R]	TF	N

2- TENIV 1A (ARRIVAL)

2.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	TENIV	-	-	-	-	-	-	RNAV 1
02	TF	KABIK	-	272	143.5	-	A5500+		RNAV 1
03	TF	MM503	-	273	7.0	-	A4000+	-	RNAV 1
04	TF	MM502	-	273	7.0	-	A4000+	-	RNAV 1
05	TF	BENKU	-	273	7.0	R	A4000+	210	RNAV 1

2.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
TENIV	035912N 0761630E
KABIK	035657N 0735253E
MM503	035657N 0734553E
MM502	035657N 0733853E
BENKU	035656.3N 0733152.4E

2.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From TENIV. To KABIK, at or above 5500ft. To MM503, at or above 4000ft. To MM502, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn right.	TENIV	IF	N
	KABIK [A5500+; L]	TF	N
	MM503 [A4000+]	TF	N
	MM502 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; R]	TF	N

3- HOKEY 1A (ARRIVAL)

3.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	HOKEY	-	-	-	-	-	-	RNAV 1
02	TF	MM510	-	256	30.0	L	-	-	RNAV 1
03	TF	MM509	-	243	32.2	-	-	-	RNAV 1
04	TF	MM508	-	243	47.7	-	-	-	RNAV 1
05	TF	KABIK	-	243	41.9	R	A5500+	-	RNAV 1
06	TF	MM503	-	273	7.0	-	A4000+	-	RNAV 1
07	TF	MM502	-	273	7.0	-	A4000+	-	RNAV 1
08	TF	BENKU	-	273	7.0	R	A4000+	210	RNAV 1

3.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
HOKEY	050630N 0760728E
MM510	045740N 0753843E
MM509	044138N 0751042E
MM508	041751N 0742914E
KABIK	035657N 0735253E
MM503	035657N 0734553E
MM502	035657N 0733853E
BENKU	035656.3N 0733152.4E

3.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From HOKEY. To MM510, turn left. To MM509. To MM508. To KABIK, at or above 5500ft, turn right. To MM503, at or above 4000ft. To MM502, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn right.	HOKEY	IF	N
	MM510 [L]	TF	N
	MM509	TF	N
	MM508	TF	N
	KABIK [A5500+ ; R]	TF	N
	MM503 [A4000+]	TF	N
	MM502 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; R]	TF	N

4- ATSON 1A (ARRIVAL)

4. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	ATSON	-	-	-	-	-	-	RNAV 1
02	TF	MM510	-	229	32.5	R	-	-	RNAV 1
03	TF	MM509	-	243	32.2	-	-	-	RNAV 1
04	TF	MM508	-	243	47.7	-	-	-	RNAV 1
05	TF	KABIK	-	243	41.9	R	A5500+	-	RNAV 1
06	TF	MM503	-	273	7.0	-	A4000+	-	RNAV 1
07	TF	MM502	-	273	7.0	-	A4000+	-	RNAV 1
08	TF	BENKU	-	273	7.0	R	A4000+	210	RNAV 1

4. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
ATSON	052019N 0760215E
MM510	045740N 0753843E
MM509	044138N 0751042E
MM508	041751N 0742914E
KABIK	035657N 0735253E
MM503	035657N 0734553E
MM502	035657N 0733853E
BENKU	035656.3N 0733152.4E

4. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From ATSON. To MM510, turn right. To MM509. To MM508. To KABIK, at or above 5500ft, turn right. To MM503, at or above 4000ft. To MM502, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn right.	ATSON	IF	N
	MM510 [R]	TF	N
	MM509	TF	N
	MM508	TF	N
	KABIK [A5500+ ; R]	TF	N
	MM503 [A4000+]	TF	N
	MM502 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; R]	TF	N

5- PATLO 1A (ARRIVAL)

5.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	PATLO	-	-	-	-	-	-	RNAV 1
02	TF	MM504	-	219	75.8	L	A5500+	-	RNAV 1
03	TF	MM503	-	183	28.2	R	A4000+	-	RNAV 1
04	TF	MM502	-	273	7.0	-	A4000+	-	RNAV 1
05	TF	BENKU	-	273	7.0	R	A4000+	210	RNAV 1

5.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
PATLO	052638N 0743057E
MM504	042519N 0734552E
MM503	035657N 0734553E
MM502	035657N 0733853E
BENKU	035656.3N 0733152.4E

5.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From PATLO. To MM504, at or above 5500ft, turn left. To MM503, at or above 4000ft, right turn. To MM502, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn right.	PATLO	IF	N
	MM504 [A5500+ ; L]	TF	N
	MM503 [A4000+ ; R]	TF	N
	MM502 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; R]	TF	N

6- MUNUT 1C (ARRIVAL)

6.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	MUNUT	-	-	-	-	-	-	RNAV 1
02	TF	MM407	-	162	58.0	R	A5500+	-	RNAV 1
03	TF	MM504	-	162	12.2	-	A5500+	-	RNAV 1
04	TF	MM503	-	183	28.2	R	A4000+	-	RNAV 1
05	TF	MM502	-	273	7.0	-	A4000+	-	RNAV 1
06	TF	BENKU	-	273	7.0	R	A4000+	210	RNAV 1

6.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MUNUT	053112N 0732033E
MM407	043638N 0734131E
MM504	042519N 0734552E
MM503	035657N 0734553E
MM502	035657N 0733853E
BENKU	035656.3N 0733152.4E

6.3 Formal and abbreviated descriptions

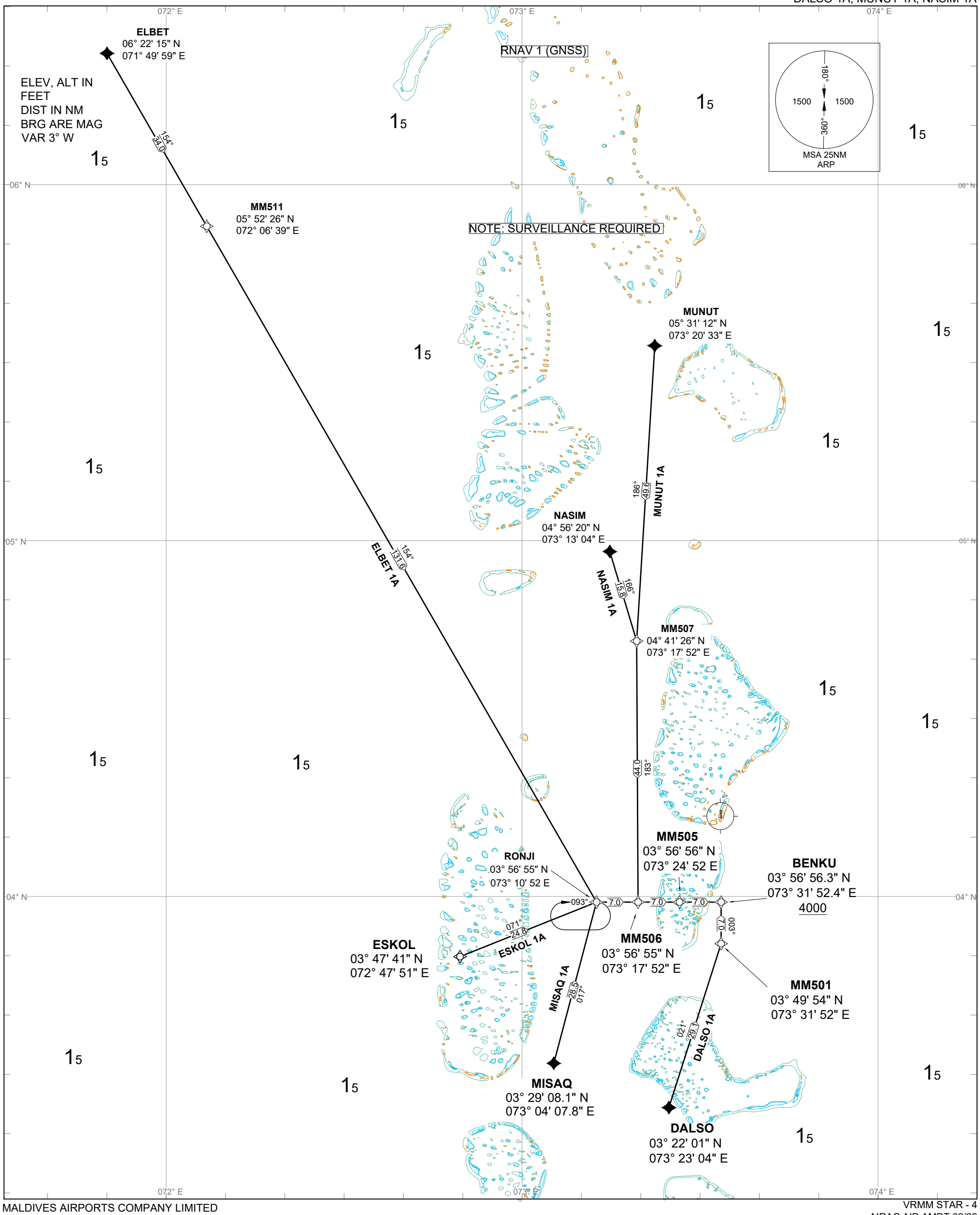
Formal description	Abbreviated description	Path terminator	Flyover required
From MUNUT. To MM407, at or above 5500 feet. To MM504, at or above 5500ft, turn right. To MM503, at or above 4000ft, turn right. To MM502, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn right.	MUNUT	IF	N
	MM407 [A5500+]	IF	N
	MM504 [A5500+ ; R]	TF	N
	MM503 [A4000+ ; R]	TF	N
	MM502 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; R]	TF	N

STANDARD ARRIVAL CHART – INSTRUMENT (STAR) – ICAO

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9

MALE /INTL (VRMM)
RWY 36
ELBET 1A, ESKOL 1A, MISAQ 1A,
DALSO 1A, MUNUT 1A, NASIM 1A



TEXTUAL DESCRIPTION OF RWY 36

1- ELBET 1A (ARRIVAL)

1. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	ELBET	-	-	-	-	-	-	RNAV 1
02	TF	MM511	-	154	34.0	-	-		RNAV 1
03	TF	RONJI	-	154	131.6	L	A5500+	-	RNAV 1
04	TF	MM506	-	093	7.0	-	A5500+	-	RNAV 1
05	TF	MM505	-	093	7.0	-	A4000+	-	RNAV 1
06	TF	BENKU	-	093	7.0	L	A4000+	210	RNAV 1

1. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
ELBET	062215N 0714959E
MM511	055226N 0720639E
RONJI	035655N 0731052E
MM506	035655N 0731752E
MM505	035656N 0732452E
BENKU	035656.3N 0733152.4E

1. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From ELBET. To MM511. To RONJI, turn left. To MM506, at or above 5500ft. To MM505, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn left	ELBET	IF	N
	MM511	TF	N
	RONJI[L]	TF	N
	MM506 [A5500+]	TF	N
	MM505 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; L]	TF	N

2- ESKOL 1A (ARRIVAL)

2.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	ESKOL	-	-	-	-	-	-	RNAV 1
02	TF	RONJI	-	071	24.8	R	-		RNAV 1
03	TF	MM506	-	093	7.0	-	A5500+	-	RNAV 1
04	TF	MM505	-	093	7.0	-	A4000+	-	RNAV 1
05	TF	BENKU	-	093	7.0	L	A4000+	210	RNAV 1

2.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
ESKOL	034741N 0724751E
RONJI	035655N 0731052E
MM506	035655N 0731752E

MM505	035656N 0732452E
BENKU	035656.3N 0733152.4E

2.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From ESKOL. To RONJI, turn right. To MM506, at or above 5500ft. To MM505, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn left	ESKOL	IF	N
	RONJI [R]	TF	N
	MM506 [A5500+]	TF	N
	MM505 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; L]	TF	N

3- MISAQ 1A (ARRIVAL)

3.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	MISAQ	-	-	-	-	-	-	RNAV 1
02	TF	RONJI	-	017	28.5	R	-		RNAV 1
03	TF	MM506	-	093	7.0	-	A5500+	-	RNAV 1
04	TF	MM505	-	093	7.0	-	A4000+	-	RNAV 1
05	TF	BENKU	-	093	7.0	L	A4000+	210	RNAV 1

3.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MISAQ	032908N 0730407E
RONJI	035655N 0731052E
MM506	035655N 0731752E
MM505	035656N 0732452E
BENKU	035656.3N 0733152.4E

3.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From MISAQ. To RONJI, turn right. To MM506, at or above 5500ft. To MM505, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn left	MISAQ	IF	N
	RONJI [R]	TF	N
	MM506 [A5500+]	TF	N
	MM505 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; L]	TF	N

4- DALSO 1A (ARRIVAL)

4. 1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M))	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	DALSO	-	-	-	-	-	-	RNAV 1
04	TF	MM501	-	021	29.1	L	A4000+	-	RNAV 1
05	TF	BENKU	-	003	7.0	-	A4000+	210	RNAV 1

4. 2 Waypoint coordinates

Waypoint	WGS84 Coordinates
DALSO	032201N 0732304E
MM501	034954N 0733152E
BENKU	035656.3N 0733152.4E

4. 3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From DALSO. To MM501, at or above 4000ft, turn left. To BENKU, at or above 4000ft, speed 210kts.	DALSO	IF	N
	MM501 [A4000+; L]	TF	N
	BENKU [A4000+]	TF	N

5- MUNUT 1A (ARRIVAL)

5.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	MUNUT	-	-	-	-	-	-	RNAV 1
02	TF	MM507	-	186	49.6	-	-		RNAV 1
03	TF	MM506	-	183	44.0	L	A5500+	-	RNAV 1
04	TF	MM505	-	093	7.0	-	A4000+	-	RNAV 1
05	TF	BENKU	-	093	7.0	L	A4000+	210	RNAV 1

5.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
MUNUT	053112N 0732033E
MM507	044126N 0731752E
MM506	035655N 0731752E
MM505	035656N 0732452E
BENKU	035656.3N 0733152.4E

5.3 Formal and abbreviated descriptions

Formal description	Abbreviated description	Path terminator	Flyover required
From MUNUT. To MM507. To MM506, at or above 5500ft, turn left. To MM505, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn left	MUNUT	IF	N
	MM507	TF	N
	MM506 [A5500+ ; L]	TF	N
	MM505 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; L]	TF	N

6- NASIM 1A (ARRIVAL)

6.1 Tabular description for database coding

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course (°M)	Distance (NM)	Turn	Altitude	Speed (KT)	Nav Spec
01	IF	NASIM	-	-	-	-	-	-	RNAV 1
02	TF	MM507	-	166	15.8	R	-		RNAV 1
03	TF	MM506		183	44.0	L	A5500+	-	RNAV1
04	TF	MM505	-	093	7.0	-	A4000+	-	RNAV 1
05	TF	BENKU	-	093	7.0	L	A4000+	210	RNAV 1

6.2 Waypoint coordinates

Waypoint	WGS84 Coordinates
NASIM	045620N 0731304E
MM507	044126N 0731752E”
MM506	035655N 0731752E
MM505	035656N 0732452E
BENKU	035656.3N 0733152.4E

6.3 Formal and abbreviated descriptions

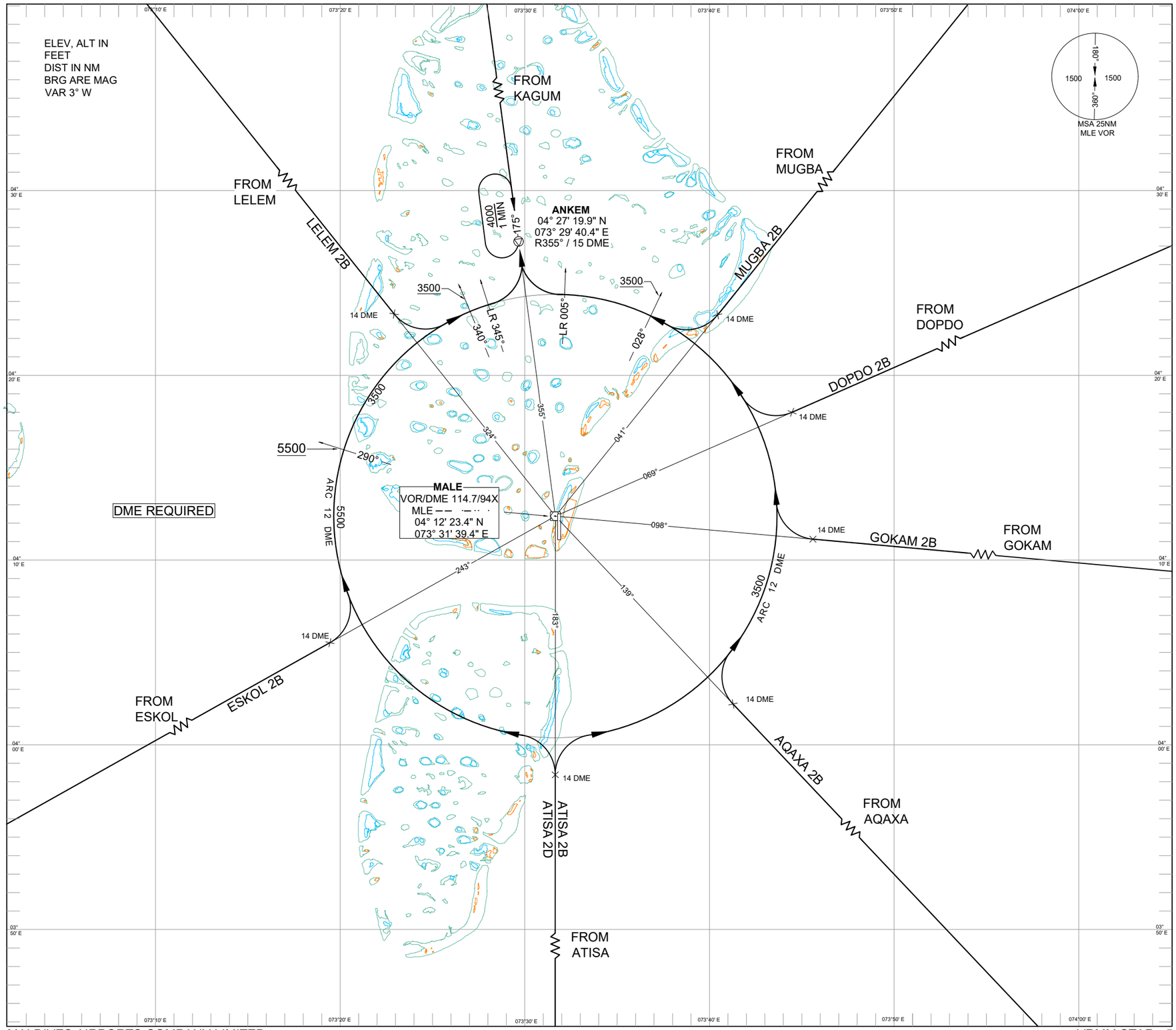
Formal description	Abbreviated description	Path terminator	Flyover required
From NASIM. To MM507, turn right. To MM506, at or above 5500ft, turn left. To MM505, at or above 4000ft. To BENKU, at or above 4000ft, speed 210kts, turn left	NASIM	IF	N
	MM507 [R]	TF	N
	MM506 [A5500+ ; L]	TF	N
	MM505 [A4000+]	TF	N
	BENKU [A4000+ ; K210 ; L]	TF	N

STANDARD ARRIVAL CHART – INSTRUMENT (STAR) – ICAO

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9

MALE /INTL (VRMM)
RWY 18
LELEM 2B, MUGBA 2B, DOPDO 2B, GOKAM 2B,
AQAXA 2B, ATSIA 2B, ATISA 2D, ESKOL 2B



Standard Arrival Routes – Instrument **Male International Airport**

(STAR) **RWY18**

Designator	Route	Restriction	Descend	Clearance Limit
LELEM 2B (LELEM 2 BRAVO ARRIVAL)	From LELEM proceed on R-324 MLE. At 14 DME MLE turn left to proceed on ARC DME 12 MLE. When passing R-345 MLE turn left to ANKEM Note: If cleared VOR APCH before passing R-340 MLE, turn right at R-358 MLE to intercept 188° (R-008 MLE)	Cross LELEM at or above 7000 feet. Cross R-340 at or above 3500 feet.	As cleared by ATC	ANKEM
ESKOL 2B (ESKOL 2 BRAVO ARRIVAL)	From ESKOL proceed on R-243 MLE. At 14 DME MLE turn left to proceed on ARC DME 12 MLE. When passing R-345 MLE turn left to ANKEM Note: If cleared VOR APCH before passing R-340 MLE, turn right at R-358 MLE to intercept 188° (R-008 MLE)	Cross R-290 MLE at or above 5500 feet. Cross R-340 at or above 3500 feet.	As cleared by ATC	ANKEM
ATISA 2D (ATISA 2 DELTA ARRIVAL)	From ATSIA proceed on R-183 MLE. At 14 DME MLE turn left to proceed on ARC DME 12 MLE. When passing R-345 MLE turn left to ANKEM Note: If cleared VOR APCH before passing R-340 MLE, turn right at R-358 MLE to intercept 188° (R-008 MLE)	Cross ATISA at or above 7000 feet. Cross R-290 MLE at or above 5500 feet. Cross R-340 at or above 3500 feet.	As cleared by ATC	ANKEM

Designator	Route	Restriction	Descend	Clearance Limit
ATISA 2B (ATISA 2 BRAVO ARRIVAL)	From ATSIA proceed on R-183 MLE. At 14 DME MLE turn right to proceed on ARC DME 12 MLE. When passing R-005 MLE turn right to ANKEM Note: If cleared VOR APCH before passing R-340 MLE, turn right at R-358 MLE to intercept 188° (R-008 MLE	Cross ATISA at or above 7000 feet. Cross R-028 at or above 3500 feet.	As cleared by ATC	ANKEM
AQAXA 2B (AQAXA2 BRAVO ARRIVAL)	From AQAXA proceed on R-139 MLE. At 14 DME MLE turn right to proceed on ARC DME 12 MLE. When passing R-005 MLE turn right to ANKEM Note: If cleared VOR APCH before passing R-340 MLE, turn right at R-358 MLE to intercept 188° (R-008 MLE	Cross R-028 at or above 3500 feet.	As cleared by ATC	ANKEM
GOKAM 2B (GOKAM 2 BRAVO ARRIVAL)	From GOAKM proceed on R-098 MLE. At 14 DME MLE turn right to proceed on ARC DME 12 MLE. When passing R-005 MLE turn right to ANKEM Note: If cleared VOR APCH before passing R-340 MLE, turn right at R-358 MLE to intercept 188° (R-008 MLE	Cross R-028 at or above 3500 feet.	As cleared by ATC	ANKEM

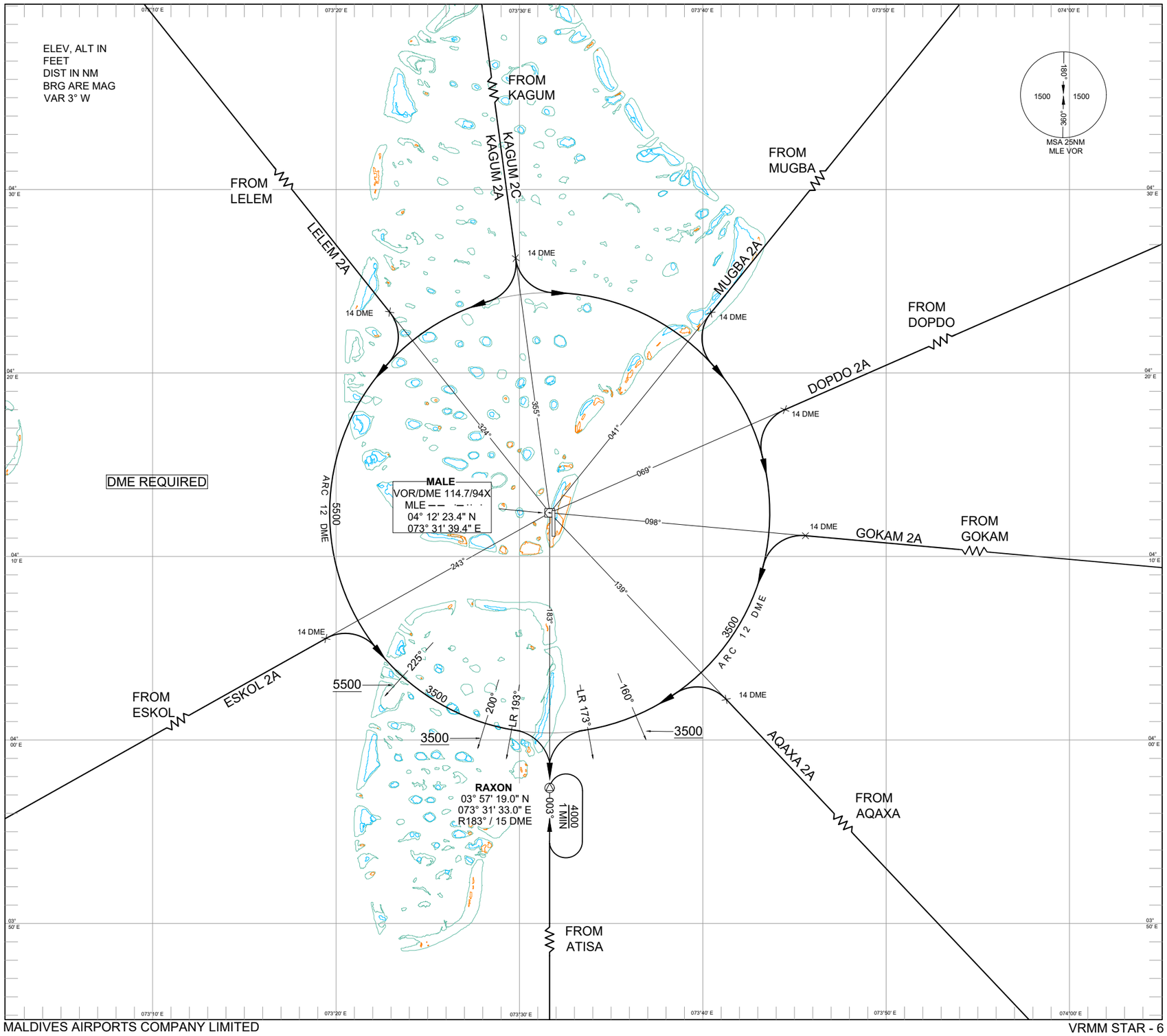
Designator	Route	Restriction	Descend	Clearance Limit
DOPDO 2B (DOPDO 2 BRAVO ARRIVAL)	From DOPDO proceed on R-069 MLE. At 14 DME MLE turn right to proceed on ARC DME 12 MLE. When passing R-005 MLE turn right to ANKEM Note: If cleared VOR APCH before passing R-340 MLE, turn right at R-358 MLE to intercept 188° (R-008 MLE	Cross R-028 at or above 3500 feet.	As cleared by ATC	ANKEM
MUGBA 2B (MUGBA 2 BRAVO ARRIVAL)	From MUGBA proceed on R-041 MLE. At 14 DME MLE turn right to proceed on ARC DME 12 MLE. When passing R-005 MLE turn right to ANKEM Note: If cleared VOR APCH before passing R-340 MLE, turn right at R-358 MLE to intercept 188° (R-008 MLE	Cross R-028 at or above 3500 feet.	As cleared by ATC	ANKEM

STANDARD ARRIVAL CHART – INSTRUMENT (STAR) – ICAO

MALE /INTL (VRMM)
RWY 36
LELEM 2A, KAGUM 2A, KAGUM 2C, MUGBA 2A, DOPDO 2A, GOKAM 2A, AQAXA 2A, ESKOL 2A

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9



Standard Arrival Routes – Instrument (STAR)

Male International Airport RWY36

Designator	Route	Restriction	Descend	Clearance Limit
LELEM 2A (LELEM 2 ALPHA ARRIVAL)	From LELEM proceed on R-324 MLE. At 14 DME MLE turn right to proceed on ARC DME 12 MLE. When passing R-193 MLE turn right to RAXON Note: If cleared VOR/ILS APCH before passing R-200 MLE, turn left at R-188 MLE to intercept 358° (R-178 MLE)	Cross LELEM at or above 7000 feet. Cross R-225 MLE at or above 5500 feet. Cross R-200 at or above 3500 feet	As cleared by ATC	RAXON
KAGUM 2A (KAGUM 2 ALPHA ARRIVAL)	From KAGUM proceed on R-355 MLE. At 14 DME MLE turn right to proceed on ARC DME 12 MLE. When passing R-193 MLE turn right to RAXON Note: If cleared VOR/ILS APCH before passing R-200 MLE, turn left at R-188 MLE to intercept 358° (R-178 MLE)	Cross KAGUM at or above 7000 feet. Cross R-225 MLE at or above 5500 feet. Cross R-200 at or above 3500 feet.	As cleared by ATC	RAXON
KAGUM 2C (KAGUM 2 CHALI ARRIVAL)	From KAGUM proceed on R-355 MLE. At 14 DME MLE turn left to proceed on ARC DME 12 MLE. When passing R-173 MLE turn left to RAXON Note: If cleared VOR/ILS APCH before passing R-160 MLE, turn right at R-168 MLE to intercept 358° (R-178 MLE)	Cross KAGUM at or above 7000 feet. Cross R-160 at or above 3500 feet	As cleared by ATC	RAXON

Designator	Route	Restriction	Descend	Clearance Limit
MUGBA 2A (MUGBA 2 ALPHA ARRIVAL)	From MUGBA proceed on R-042 MLE. At 14 DME MLE turn left to proceed on ARC DME 12 MLE. When passing R-173 MLE turn left to RAXON Note: If cleared VOR/ILS APCH before passing R-160 MLE, turn right at R-168 MLE to intercept 358° (R-178 MLE)	Cross R-160 at or above3500 feet	As cleared by ATC	RAXON
DOPDO 2A (DOPSO 2 ALPHA ARRIVAL)	From DOPDO proceed on R-069 MLE. At 14 DME MLE turn left to proceed on ARC DME 12 MLE. When passing R-173 MLE turn left to RAXON Note: If cleared VOR/ILS APCH before passing R-160 MLE, turn right at R-168 MLE to intercept 358° (R-178 MLE)	Cross R-160 at or above 3500 feet	As cleared by ATC	RAXON
GOKAM 2A (GOKAM 2 ALPHA ARRIVAL)	From GOKAM proceed on R-098 MLE. At 14 DME MLE turn left to proceed on ARC DME 12 MLE. When passing R-173 MLE turn left to RAXON Note: If cleared VOR/ILS APCH before passing R-160 MLE, turn right at R-168 MLE to intercept 358° (R-178 MLE)	Cross R-160 at or above 3500 feet	As cleared by ATC	RAXON

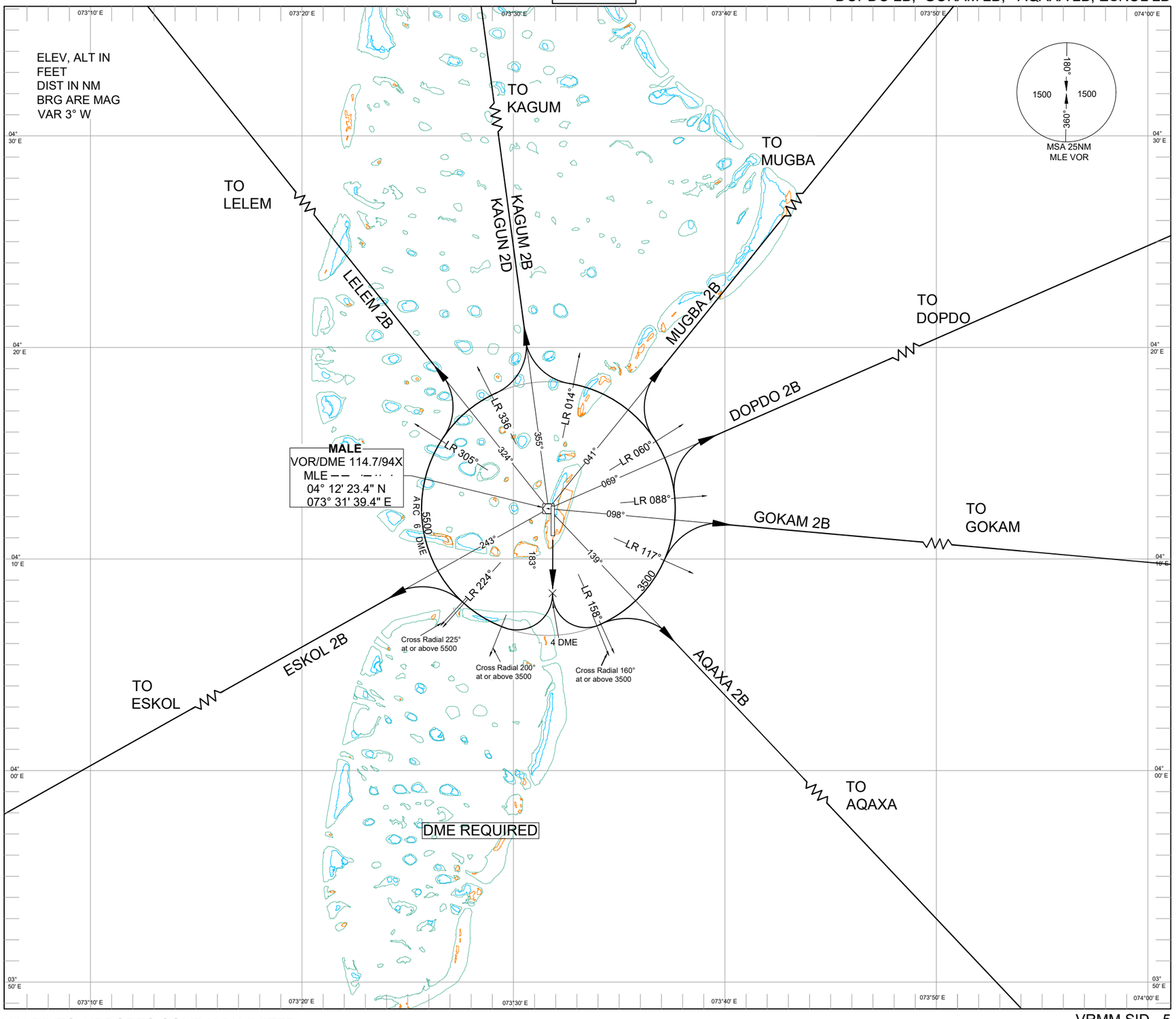
Designator	Route	Restriction	Descend	Clearance Limit
AQAXA 2A (AQAXA 2 ALPHA ARRIVAL)	From AQAXA proceed on R-142 MLE. At 14 DME MLE turn left to proceed on ARC DME 12 MLE. When passing R-173 MLE turn left to RAXON Note: If cleared VOR/ILS APCH before passing R-160 MLE, turn right at R-168 MLE to intercept 358° (R-178 MLE)	Cross R-160 at or above 3500 feet	As cleared by ATC	RAXON
ESKOL 2A (ESKOL 2 ALPHA ARRIVAL)	From ESKOL proceed on R-246 MLE. At 14 DME MLE turn right to proceed on ARC DME 12 MLE. When passing R-193 MLE turn right to RAXON Note: If cleared VOR/ILS APCH before passing R-200 MLE, turn left at R-188 MLE to intercept 358° (R-178 MLE)	Cross R-225 at or above 5500 feet. Cross R-160 at or above 3500 feet	As cleared by ATC	RAXON

STANDARD DEPARTURE CHART – INSTRUMENT (SID) – ICAO

MALE /INTL (VRMM)
RWY 18
LELEM 2B, KAGUM 2B, KAGUM 2D, MUGBA 2B, DOPDO 2B, GOKAM 2B, AQAXA 2B, ESKOL 2B

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9



Standard Departure Routes – Instrument (SID)

Male International Airport RWY18

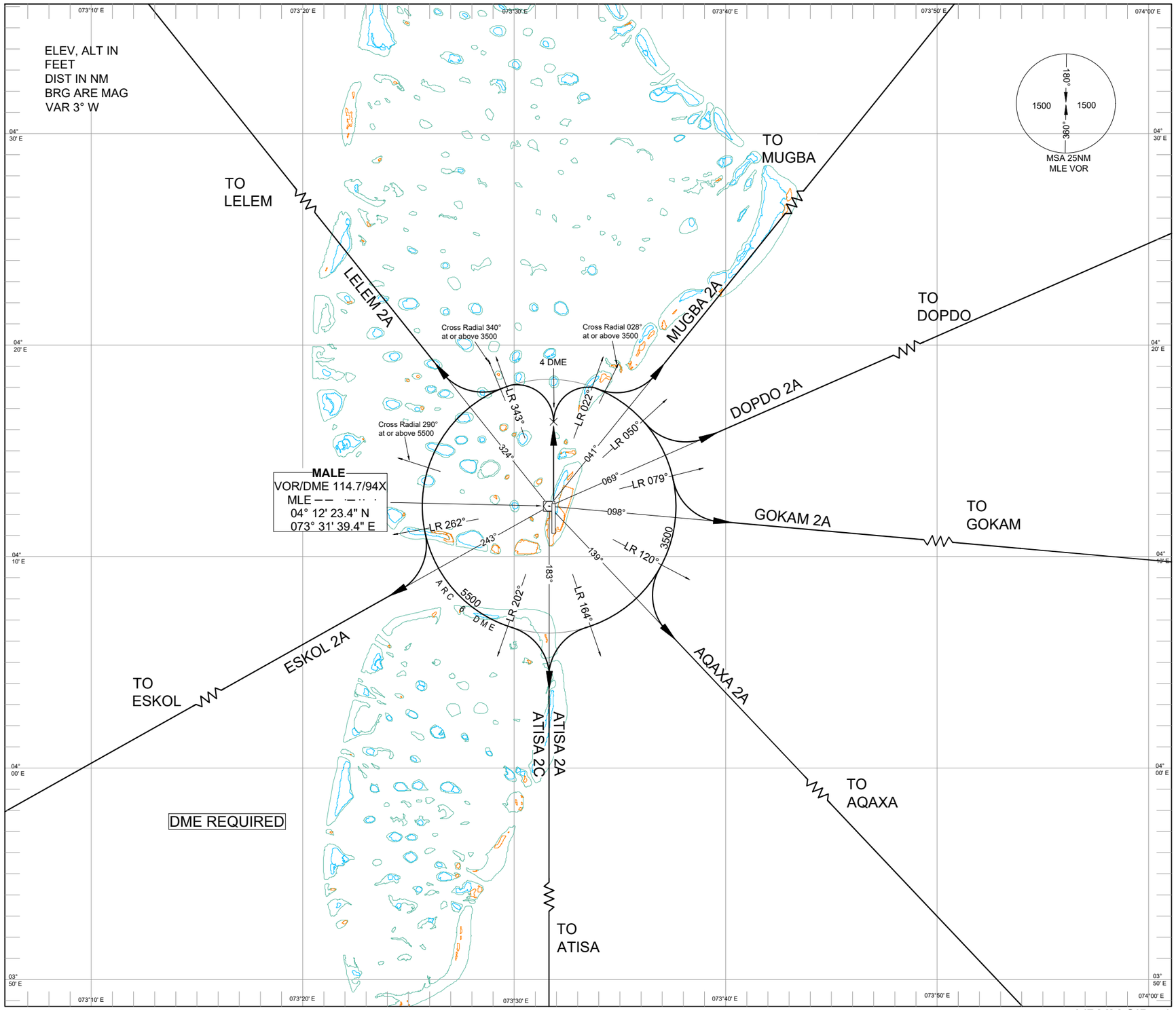
Designator	Route	Restriction	Climb	Clearance Limit
LELEM 2B (LELEM 2 BRAVO Departure)	Climb on runway heading. At 4DME MLE turn right to proceed on ARC DME 6 MLE. When passing R-305 turn left to proceed on R-324	Cross R-200 MLE at or above 3500 feet. Cross R-225 at or above 5500 feet.	As cleared by ATC	LELEM
ESKOL 2B (ESKOL 2 BRAVO Departure)	Climb on runway heading. At 4DME MLE turn right to proceed on ARC DME 6 MLE. When passing R-224 turn left to proceed on R-243	Cross R-200 MLE at or above 3000 feet. Cross R-225 at or above 5500 feet.	As cleared by ATC	ESKOL
KAGUM 2D (KAGUM 2 DELTA Departure)	Climb on runway heading. At 4DME MLE turn right to proceed on ARC DME 6 MLE. When passing R-336 turn left to proceed on R-355	Cross R-200 MLE at or above 3000 feet. Cross R-225 at or above 5500 feet.	As cleared by ATC	KAGUM
KAGUM 2B (KAGUM 2 BRAVO Departure)	Climb on runway heading. At 4DME MLE turn left to proceed on ARC DME 6 MLE. When passing R-014 turn left to proceed on R-355	Cross R-160 MLE at or above 3500 feet.	As cleared by ATC	KAGUM
AQAXA 2B (AQAXA 2 BRAVO Departure)	Climb on runway heading. At 4DME MLE turn left to proceed on ARC DME 6 MLE. When passing R-158 turn right to proceed on R-139	Cross R-160 MLE at or above 3500 feet.	As cleared by ATC	AQAXA
GOAKM 2B (GOKAM 2 BRAVO Departure)	Climb on runway heading. At 4DME MLE turn left to proceed on ARC DME 6 MLE. When passing R-117 turn right to proceed on R-098	Cross R-160 MLE at or above 3500 feet.	As cleared by ATC	GOKAM
DOPDO 2B (DOPDO 2 BRAVO Departure)	Climb on runway heading. At 4DME MLE turn left to proceed on ARC DME 6 MLE. When passing R-088 turn right to proceed on R-069	Cross R-160 MLE at or above 3500 feet.	As cleared by ATC	DOPDO
MUGBA 2B (MUGBA 2 BRAVO Departure)	Climb on runway heading. At 4DME MLE turn left to proceed on ARC DME 6 MLE. When passing R-060 turn right to proceed on R-041	Cross R-160 MLE at or above 3500 feet.	As cleared by ATC	MUGBA

STANDARD DEPARTURE CHART – INSTRUMENT (SID) – ICAO

TRANSITIONAL ALTITUDE
11,000 FEET

TWR 118.1
APP 119.7
ACC 123.9

MALE /INTL (VRMM)
RWY 36
LELEM 2A, MUGBA 2A, DOPDO 2A, GOKAM 2A,
AQAXA 2A, ATISA 2A, ATISA 2C ESKOL 2A



Standard Departure Routes – Instrument **Male International Airport**

(SID) **RWY36**

Designator	Route	Restriction	Climb	Clearance Limit
LELEM 2A (LELEM 2 ALPHA Departure)	Climb on runway heading. At 4DME MLE turn left to proceed on ARC DME 6 MLE. When passing R-343 turn right to proceed on R-324	Cross R-340 MLE at or above 3500 feet.	As cleared by ATC	LELEM
ESKOL 2A (ESKOL 2 ALPHA Departure)	Climb on runway heading. At 4DME MLE turn left to proceed on ARC DME 6 MLE. When passing R-262 turn right to proceed on R-243	Cross R-340 MLE at or above 3500 feet. Cross R-290 at or above 5500 feet.	As cleared by ATC	ESKOL
ATISA 2C (ATISA 2 CHALI Departure)	Climb on runway heading. At 4DME MLE turn left to proceed on ARC DME 6 MLE. When passing R-202 turn right to proceed on R-183	Cross R-340 MLE at or above 3500 feet. Cross R-290 at or above 5500 feet.	As cleared by ATC	ATISA
ATISA 2A (ATISA 2 ALPHA Departure)	Climb on runway heading. At 4DME MLE turn right to proceed on ARC DME 6 MLE. When passing R-164 turn left to proceed on R-183	Cross R-028 MLE at or above 3500 feet.	As cleared by ATC	ATISA
AQAXA 2A (AQAXA 2 ALPHA Departure)	Climb on runway heading. At 4DME MLE turn right to proceed on ARC DME 6 MLE. When passing R-120 turn left to proceed on R-139	Cross R-028 MLE at or above 3500 feet.	As cleared by ATC	AQAXA
GOAKM 2A (GOKAM 2 ALPHA Departure)	Climb on runway heading. At 4DME MLE turn right to proceed on ARC DME 6 MLE. When passing R-079 turn left to proceed on R-098	Cross R-028 MLE at or above 3500 feet.	As cleared by ATC	GOKAM
DOPDO 2A (DOPDO 2 ALPHA Departure)	Climb on runway heading. At 4DME MLE turn right to proceed on ARC DME 6 MLE. When passing R-050 turn left to proceed on R-069	Cross R-028 MLE at or above 3500 feet.	As cleared by ATC	DOPDO
MUGBA 2A (MUGBA 2 ALPHA Departure)	Climb on runway heading. At 4DME MLE turn right to proceed on ARC DME 6 MLE. When passing R-022 turn right to proceed on R-041	Cross R-028 MLE at or above 3500 feet.	As cleared by ATC	MUGBA