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AIRAC

KUALA LUMPUR FLIGHT INFORMATION REGION

KOTA BHARU / SULTAN ISMAIL PETRA AIRPORT INTRODUCTION OF INSTRUMENT FLIGHT PROCEDURES, IFR HOLDING AREAS, REVISION OF ATS ROUTES AND AERODROME DATA.

1. INTRODUCTION

- 1.1 The upgrading works for Kota Bharu Airport together with facilities and procedures to accommodate full Code C aircraft operation are expected to be completed by September 2011.
- 1.2 The purpose of this AIP Supplement is to notify the aviation industry of the manoeuvring and movement areas, navigational and visual aids, and aeronautical ground lightings that will be made available at the upgraded Kota Bharu Airport. New instrument approach procedures are designed to facilitate approach and landing on to the relocated threshold of Runway 28 and also to the existing Runway 10.
- 1.3 The information provided in this AIP Supplement is presented in similar ICAO format applicable for the Aeronautical Information Publication.

2. NAVIGATION AND VISUAL AIDS

2.1 ILS GLIDE PATH / LOCALIZER

- 2.1.1 The Glide Path with co-located DME remain at the existing site while the ILS Localizer has been shifted to a new site 300M from threshold Runway 28.

2.2 APPROACH LIGHTING SYSTEM

- 2.2.1 The Simple Approach Lighting System for Runway 28 has been relocated at new position for the extended Runway.

2.3 PAPI

- 2.3.1 PAPI are located on both left and right sides for Runway 10 and left side for Runway 28.

3. MOVEMENT AREAS AND AERODROME DATA

- 3.1 The movement areas that will be available when the extended Runway and new Taxiway are opened for operations are shown on aerodrome Chart in Appendix B.

- 3.1.1 The full Runway length of 2400M will be available for landing and take-off operations. To improve aircraft movement from parking apron to Threshold Runway 28, a partial parallel Taxiway is provided with two (2) connecting taxiways and at the Threshold 28 itself.

- 3.1.2 The existing VDGS at Bay 1, 2 and 3 have been repositioned to meet separation distance requirement Code C aircraft.

- 3.1.3 All new aerodrome data and information pertaining to the upgraded airport are listed in APPENDIX A -1 to APPENDIX A -14

- 3.1.4 Aerodrome Obstacle Chart -Type A (Operating Limitations) is shown in APPENDIX C.

- 3.1.5 Aeronautical ground lighting and visual markings for Runway and Taxiways are shown in APPENDIX D, APPENDIX E and APPENDIX E-1 respectively.

4. PROCEDURES, CHARTS AND THE ESTABLISHMENT OF NEW REPORTING POINTS FOR ATS ROUTES B219, G466 AND W540

4.1 IFR HOLDING AREAS

- 4.1.1 IFR Holding areas are established for arrival transition, instrument approach and missed approach procedures as follows:

Position	:	ARALI (RDL190/15D VKB 05°54'57.30"N 102°16'21.5" E)
Turn	:	Right Hand
Track outbound	:	190°
IAS	:	230KTS max
Altitude	:	MNM 5500FT

Position	:	DAGON (RDL100/10D VKB 06°08'06.5"N 102°28'44.1"E)
Turn	:	Right Hand
Track outbound	:	100°
IAS	:	230KTS max
Altitude	:	MNM 2000FT

Position : VKB VOR/DME
Turn : Right Hand
Track outbound : 100°
IAS : 230KTS max
Altitude : Alt 2500FT - 6000FT

Position : KB NDB
Turn : Left Hand
Track outbound : 072°
IAS : 190KTS max
Altitude : 2500FT - 6000FT
Aircraft Cat : A and B

See Appendix F - Holding Areas Chart

4.2 ESTABLISHMENT OF NEW REPORTING POINTS FOR ATS ROUTE B219, G466 AND W540

4.2.1 Three new reporting points along the ATS routes B219, G466 and W540 for RNAV arrival into Kota Bharu are introduced. Three new reporting points are established as follows:

- (a) LOSLO (054321N 1011713 E; VKB R-247 / D67)
- (b) RUPOS (053214.4 N 1021233.2 E; VKB R-190 / D38)
- (c) GUGIT (053232.5 N 1023345.9 E; VKB R-158 / D40)

Details of these new reporting points with the ATS Routes are illustrated in the APPENDIX F-1.

4.3 IFR REPORTING POINTS

4.3.1 To facilitate the use of the conventional and RNAV, discrete Five Letter Name Code are allocated to reporting points with reference to ground navigational aid and RNAV Waypoint with coordinates WGS84 datum. Details are as in WMKC AD 2.23 Additional Information

4.4 ATS Routes details is shown in the Table 1

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper limits Lower limits Minimum flight alti- tude	Lateral Limits (NM)	Cruising levels		Remarks Controlling Units
				Odd	Even	
1	2	3	4	5		6
B219						
<p>▲ PENANG DVOR/ DME (VPG) 051646.7N 1001537.4E</p> <p>△ LOSLO 67DME VPG 054321N 1011713E</p> <p>▲ KOTA BHARU DVOR/DME (VKB) 060948.3N 1021851.1E</p>	<p><u>066°</u> 246°</p> <p>67NM</p> <p><u>066°</u> 246°</p> <p>67NM</p>	<p><u>FL 460</u> FL135</p>	20		<p>↓</p> <p>↑</p>	Kuala Lumpur ACC
G466						
<p>▲ KUALA LUMPUR DVOR/DME (VKL) 024328.0N 1014417.0E</p> <p>△ PULIP 034024N 1015348E</p> <p>△ RUPOS 38DME VKB 053214.4N 1021233.2E</p> <p>▲ KOTA BHARU DVOR/DME (VKB) 060948.3N 1021851.1E</p>	<p><u>010°</u> 190°</p> <p>58NM</p> <p><u>010°</u> 190°</p> <p>113NM</p> <p><u>010°</u> 190°</p> <p>38NM</p>	<p><u>FL460</u> 10 500FT</p> <p><u>FL460</u> 7 500FT</p>	20		<p>↓</p> <p>↑</p>	Kuala Lumpur ACC



Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper limits Lower limits Minimum flight altitude	Lateral Limits (NM)	Cruising levels		Remarks Controlling Units
				Odd	Even	
1	2	3	4	5		6
W540						
▲ KOTA BHARU DVOR/DME (VKB) 060948.3N 1021851.1E △ GUGIT 40DME VKB 053233N 1023346E ▲ PEKAN DVOR/DME (VPK) 032259N 1032524E	<u>158°</u> 338° 40NM <u>158°</u> 338° 145NM	<u>FL235</u> 7 500FT MNM 8000FT	20	 	Kuala Lumpur ACC	

Table 1

4.5 New Charts related to Kota Bharu Airport are listed in WMKC AD 2. 24 Appendix A-14 to supplement

5. NOTIFICATION OF THE CHARTS WITHDRAWAL

5.1 The following Charts pertaining to Kota Bharu are superseded and withdrawn from publications. They are as following:

Chart Name	AIP Page
AERODROME CHART - ICAO	WMKC AD2 – 23
STANDARD DEPARTURE CHART – INSTRUMENT – ICAO DEPARTURES SOUTH RWY 10	WMKC AD2 – 51
STANDARD DEPARTURE CHART – INSTRUMENT – ICAO DEPARTURES SOUTH RWY 10 / 28	WMKC AD2 – 52
INSTRUMENT APPROACH CHART – ICAO – RWY 10 VOR / DME	WMKC AD2 – 81
INSTRUMENT APPROACH CHART – ICAO – RWY 10 VOR (CAT A & B)	WMKC AD2 – 83
INSTRUMENT APPROACH CHART – ICAO – RWY 10 VOR (CAT C & D)	WMKC AD2 – 85
INSTRUMENT APPROACH CHART – ICAO – RWY 10 NDB (CAT A & B)	WMKC AD2 – 87
INSTRUMENT APPROACH CHART – ICAO – RWY 10 NDB (CAT C & D)	WMKC AD2 – 89
INSTRUMENT APPROACH CHART – ICAO – RWY 28 VOR / DME	WMKC AD2 – 91
INSTRUMENT APPROACH CHART – ICAO – RWY 28 VOR (CAT A & B)	WMKC AD2 – 93
INSTRUMENT APPROACH CHART – ICAO – RWY 28 VOR (CAT C & D)	WMKC AD2 – 95
INSTRUMENT APPROACH CHART – ICAO – RWY 10 (VOR / DME ARC)	WMKC AD2 – 97
INSTRUMENT APPROACH CHART – ICAO – RWY 28 (VOR / DME ARC)	WMKC AD2 – 99
INSTRUMENT APPROACH CHART – ICAO – RWY 10 ILS DME ARC	WMKC AD2 – 101
INSTRUMENT APPROACH CHART – ICAO – RWY 10 ILS VOR / DME	WMKC AD2 – 103
INSTRUMENT APPROACH CHART – ICAO – RWY 10 ILS NDB (CAT A / B)	WMKC AD2 – 105
INSTRUMENT APPROACH CHART – ICAO – RWY 10 ILS NDB (CAT C / D)	WMKC AD2 – 107

6. IMPLEMENTATION

- 6.1 This AIP Supplement and relevant charts will be effective on 22 September 2011 at 0000 UTC. A Trigger NOTAM will be issued notifying the effective date of implementation.

7. CANCELLATION

- 7.1 This AIP Supplement will remain current until the information is published in AIP Malaysia.

DATO' AZHARUDDIN ABDUL RAHMAN
Director General
Department of Civil Aviation
Malaysia

WMKC - KOTA BHARU/SULTAN ISMAIL PETRA

WMKC AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	LAT 060958N LONG 1021733E
2	Direction and distance from city	Brg 059°, dist 8 KM.
3	Elevation / Reference temperature	16 FT (4.9 M) / 26.3° C
4	GEOID Undulation (ARP)	-6.221 M
5	MAG VAR / Annual change	9 min West (2011)
6	AD Administration, address, telephone telefax, telex, AFS	Operator : Malaysia Airports Sdn. Bhd. Sultan Ismail Petra Airport Pengkalan Chepa 16100 Kota Bharu Kelantan Darul Naim Tel : 09-7737400 / 7737402 09-7737403 Fax : 09-7732852 / 7732325 ATC Services : Department of Civil Aviation Malaysia Sultan Ismail Petra Airport Pengkalan Chepa 16100 Kota Bharu Kelantan Darul Naim. Tel : 09-7734197 / 7739026 Fax : 09-7730046
7	Types of traffic permitted (IFR/VFR)	(IFR / VFR)
8	Remarks	Nil

WMKC AD 2.3 OPERATIONAL HOURS

1	AD Administration	2200 – 1600 Daily
2	Customs and immigration	Customs: 2200 – 1530
3	Health and sanitation	Nil
4	AIS Briefing Office	Nil
5	ATS Reporting Office (ARO)	2200 - 1600
6	MET Briefing Office	H24
7	ATS	2200 – 1630
8	Fuelling	Not available
9	Handling	Prior Arrangement
10	Security	H24
11	De-icing	Nil
12	Remarks	CTR and AD closed to all training flights every Fri between 0430 – 0600

WMKC AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	By Airline (MAS & Air Asia)
2	Fuel / Oil types	Nil
3	Fuelling facilities / capacity	Nil
4	De-icing facilities	Nil
5	Hangar space available for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

WMKC AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotels in town
2	Restaurants	Restaurant in Terminal Building
3	Transportation	Bus / coach, limousine and taxi services.
4	Medical facilities	Health Clinic Pengkalan Chepa - 2KM. Raja Perempuan Zainab II Hospital, Kota Bharu - 8KM. U.S.M. Hospital, Kubang Krian - 8KM.
5	Bank and Post Office	Bank - ATM in Terminal Building and Kota Bharu town - 8KM from airport. Post Office – Pengkalan Chepa - 2KM and Kota Bharu town - 8KM from airport.
6	Tourist Office	Kota Bharu town - 8KM from airport.
7	Remarks	Nil

WMKC AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	Available : CAT VI Trained personnel: Minimum 7 per shift.
2	Rescue equipment	Type of vehicle : a) Multi Purpose Tender b) Ultra Large Foam Tender IX c) Mini Rapid Intervention Vehicle.
3	Capability for removal of disabled aircraft	By arrangement (Airline - MAS & Air Asia)
4	Remarks	Nil

WMKC AD 2.7 SEASONAL AVAILABILITY - CLEARING

NOT APPLICABLE

WMKC AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface : Strength :	Concrete Rigid Bay 1, 2, 3, 4, 5 Bay 1 - PCN 105 R /A/W/T Bay 2 - PCN 115 R/A/W/T Bay 3 - PCN 120 R/A/W/T Bay 4 - PCN 85 R/A/W/T Bay 4A - PCN 85 R/A/W/T Bay 5 - PCN 98 R/A/W/T Bay 5A - PCN 98 R/A/W/T
2	Taxiway width, surface and strength	Width : Surface : Strength :	18M except TWY C TBN Asphalt Flexible PCN 51 F/A/W/T Except TWY C TBN
3	ACL location and elevation	Location : Elevation :	Terminal Apron 16FT
4	VOR / INS checkpoint	VOR : INS	Nil At aircraft parking stand Bay 1 – 061010.3 N 1021734.0 E Bay 2 – 061010.5 N 1021732.7 E Bay 3 – 061010.7 N 1021731.3 E Bay 4 – 061011.0 N 1021729.5 E Bay 4A – 061011.3 N 1021729.2 E Bay 5 – 061011.4 N 1021727.4 E Bay 5A – 061011.7 N 1021727.1 E
5	Remarks	Line of sight from Control Tower to all parking aprons and partial of TWY ' B ' are obstructed by Terminal Building	

WMKC 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	RWY – WHITE TWY – YELLOW
2	RWY and TWY markings and LGT	Nil
3	Stop bars	Marking only
4	Remarks	Nil

WMKC AD 2.10 AERODROME OBSTACLES

RWY/ Area effected	Obstacle Type Elevation Markings / LGT	Coordinates
a	b	c
	Bcn (KB) Mast, hgt 176FT (53M) AGL, 2NM on extended centerline Rwy 28. Lgtd.	061028.5N 1021512.4E
	Telecom Aerial Mast, hgt 416FT AMSL. Painted and lighted at night	060743.6N 1021414.5E
	Aerial Mast at Kg. Patek, hgt 424FT AMSL. Painted and lighted at night.	060120.6N 1021740.4E
	Aerial Mast, brg 230°, dist 1050M ARP, hgt 146FT. Marked and lighted at night.	060926.5N 1021825.3 E
	Aerial Mast at Pengkalan Kubor, hgt 180FT, Painted and lighted at night.	061325.5N 1020622.5E
	Aerial Mast at Kubang Kerian, hgt 200FT , Painted and lighted at night.	060613.6N 1021620.4E
	Aerial Mast at Bukit Jawa, hgt 250FT , Painted and lighted at night.	055421.6N 1021957.4E
	Aerial Mast at Gunung Bachok, hgt 216FT , Painted and lighted at night.	060047.6N 1022226.4E
	Aerial Mast at Kg. Pauh, hgt 216FT , Painted and lighted at night.	060705.6N 1021736.4E
	Aerial Mast at Wakaf Bahru, hgt 223FT , Painted and lighted at night.	060733.6N 1021238.5E
	Aerial Mast at PCB ,hgt 134FT , Painted and lighted at night.	061131.5N 1021632.4E
	Lamp pole at Machang, hgt 308.40FT , Painted and lighted at night	054759.6N 1021510.8E
	Lamp pole at Binjai, hgt 141.08FT , Painted and lighted at night	060338.4N 1021750.3E
	Lamp pole at Universiti Malaysia Kelantan, hgt 131.23FT , Painted and lighted at night	060948.4N 1021702.2E
	Aerial Mast at Jalan Sultanah Zainab, hgt 124.68FT , Painted and lighted at night	060703.4N 1021406.7E
	Concrete structure. Elev 17.4FT painted and lighted	061001.0N 1021755.9E

WMKC AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	KOTA BHARU / Sultan Ismail Petra Airport
2	Hours of service	MET Office outside hours H24
3	Office responsible for TAF preparation Periods of validity	KL International Airport, Sepang 0012, 0618, 1224 & 1806
4	Type of landing forecast Interval of issuance	METAR, through Control Tower 122.5 MHZ Validity 1 hour
5	Briefing consultations provided	Nil
6	Flight documentation Language(s) used	CR, TB English
7	Charts and other information available for briefing or consultation	Nil
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	KOTA BHARU TOWER Tel : 09 - 7734198
10	Additional information	Tel : 09 - 7737490

WMKC AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY NR	TRUE and MAG BRG	Dimension of RWY (M)	Strength (PCN) Surface of RWY and SWY	THR Coordinates	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
10	099.622° T 099.832° M	2400 x 45	PCN 51/F/A/W/T Asphalt	061005.62N 1021705.50E	17 FT (5.052M)
28	279.622° T 279.832° M	2400 x 45	PCN 51/F/A/W/T Asphalt	060952.52N 1021822.45E	15 FT (4.535M)

APPENDIX A-6

Slope of SWY - RWY	SWY Dimensions (M)	CWY Dimensions (M)	Strips Dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
Nil	Nil	Nil	2520 x 300	Nil	Turning loops closed and marked
Nil	Nil	Nil	2520 x 300	Nil	

WMKC AD 2.13 DECLARED DISTANCES

RWY	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
10	2400	2400	2400	2400	RESA 90 M x 90 M
28	2400	2400	2400	2400	RESA 90 M x 90 M

WMKC AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH Lgt	THR Lgt	VASIS (MEHT) PAPI	TDZ Lgt	RWY Centre Line Lgt	RWY Edge Lgt	RWY End Lgt WBAR	SWY Lgt	Remarks
1	2	3	4	5	6	7	8	9	10
10	Precision Approach Cat 1 Lighting System High intensity variable	Green	PAPI	Nil	Nil	Variable high intensity lgts white/yellow on the last 600M.	Red	Nil	Nil
28	Simple Approach Single White High Intensity Variable brilliance control High intensity wing bar	Green	PAPI	Nil	Nil	Variable high intensity lgts white/yellow on the last 600M.	Red	Nil	Nil

WMKC AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN / IBN location, characteristics and hours of operation	ABN: Available on top of Control Tower, rotating and flashing green/white. Sunset to 1600
2	LDI location and LGT Anemometer location and LGT	WDI RWY 28 - 347 M port of THR. WDI RWY 10 - 347 M port of THR Anemometer : 100 M North of RWY centreline, approx. 1/2 of RWY length. Marked and lighted. Elevation : 16 FT (5 M)
3	TWY edge and centreline lighting	TWY Alpha - Edge - Blue / Centreline Green / Yellow TWY Bravo - Edge - Blue / Centreline Green / Yellow TWY Delta - Edge - Blue / Centreline Green / Yellow TWY Echo - Edge - Blue / Centreline Green / Yellow
4	Secondary power supply / switch-over time	Available / 12 seconds
5	Remarks	Nil

2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO	061001.1 N 1021804.3 E
2	TLOF and / or FATO elevation M / FT	3.60 M / 11.81 FT
3	TLOF and FATO Area dimensions Surface Strength Marking	Letter H, 3 M by 6 M within a Circle Radius 7 M ASPHALT PCN 51 F / A / W / T White Edges and White Letter H
4	True and MAG BRG of FATO	Nil
5	Declared distance available	Nil
6	APP and FATO lighting	Nil
7	Remarks	Nil

WMKC AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	Kota Bharu CTR. Commencing from 055605N 1021238E clockwise along an arc of 15NM radius centered from VKB VOR/DME (060948.3N 1021851.1E) to 055752N 1022801E thence a straight line to 055605N 1021238E thence along Malaysia - Thai FIR boundary to 055605N 1021238E
2	Vertical limits	Gnd / Sea Level – 4500FT
3	Airspace classification	C
4	Unit Providing Service Language(s)	Kota Bharu Approach 2500FT - 4500FT Kota Bharu Tower GL/SL - 1500FT English
5	Designation and lateral limits	Kota Bharu TMA. Area bounded from 062810N 1022700E clockwise an arc of 20NM radius from VKB DVOR/DME (060949N 1021851E) to 061710N 1023732E to 054500N 1025025E thence along an arch of 40NM radius from VKB DVOR/DME to join Malaysia – Thai FIR boundary at 054501N 1014713E thence along FIR boundary to 062810N 1022700E.
6	Vertical limits	A030 to FL245
7	Airspace classification	A FL150 - FL250 B 10000FT - FL150 C 3000FT - 10000 FT
8	Unit Providing Service Language(s)	Kota Bharu Approach 3000FT - FL145 (Usable A030 - FL140)
9	Transition altitude	11,000FT
10	Remarks	Nil

WMKC AD 2.18 ATS COMMUNICATION FACILITIES

Service Designation	ID	Frequency	Hours of operation	Remarks
1	2	3	4	5
SMC	KOTA BHARU GROUND	121.6MHZ	2200 - 1600	Nil
TWR	KOTA BHARU TOWER	122.5MHZ	2200 - 1600	Nil
APP	KOTA BHARU APPROACH	120.85MHZ (P) 130.3MHZ (S)	2200 - 1600	Radar service available from 0000 - 0900 daily except Saturday and Public Holidays. Kota Bharu Tower shall be responsible for the provision of Air Traffic Services outside the above operation hours
ATIS	KOTA BHARU ATIS	128.85MHZ	2200 - 1600	Nil

WMKC AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid	ID	Frequency	Hours of operation	Coordinates	Elevation	Remarks
1	2	3	4	5	6	7
NDB	KB	240KHZ	H24	061030N 1021518E	-	100° MAG / 2NM to RWY 10. On extended centerline RWY 28. 500KW.
DVOR/DME	VKB	112.3MHZ CH 70X		060948.3N 1021851.1E	40FT	
LLZ	-	109.3MHZ		060950.9N 1021832.1E	-	Localizer Course Bearing: 279° 37' 20"T/ 279° 49' 55"M
GP/DME	IKB	332.0MHZ CH 30X		061000.1N 1021714.6E	-	

WMKC AD 2.20 LOCAL TRAFFIC REGULATIONS

NIL

WMKC AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

WMKC AD 2.22 FLIGHT PROCEDURES

DME Arrival Procedures For Kota Bharu / Sultan Ismail Petra Airport

RADIAL/ TRACK	NAVAID	DME CHECK POINT	MNM IFR ALTITUDE	AFTER PassingDME/VKB DESCEND toFT on QNH		REMARKS
RDL 190 (GOLF 466)	VKB	Not Required	11000FT	38 ↓ 5500	11 ↓ 3000	make Standard Instrument Approach from VKB VOR or join 10DME arc VKB or as directed by ATC
RDL 158 (W540)	VKB	Not Required	8000FT	40 ↓ 5500	11 ↓ 3000	
RDL 213 (OPOMO)	VKB	Not Required	FL140	41 ↓ 5500	11 ↓ 3000	

WMKC AD 2.23 ADDITIONAL INFORMATION

1. Kite Flying in the Vicinity Of the Airport

- 1.1 Kite flying around the airfield. Pilots to exercise extreme caution especially at base leg, downwind and finals.

2. List of Way-points

- 2.1 The following list contains the way-points related to SID, RNAV STAR and IAP procedures at Kota Bharu Sultan Ismail Petra Airport

Nr	5LNC	Coordinate WGS84	Reference to VKB VOR/DME	Purpose
1	RUPOS	05° 32' 14.4" N 102° 12' 33.2" E	R-190/38D	ENR/SID/STAR
2	LOSLO	05° 43' 21" N 101° 17' 13" E	R-247/67D	ENR/SID/STAR
3	GUGIT	05° 32' 32.5" E 102° 33' 45.9" E	R-158/40D	ENR/SID/STAR
4	MIMOS	06° 11' 28.7" N 102° 08' 56.9" E	R-280/10D	IAF
5	DAGON	06° 08' 06.5" N 102° 28' 44.1" E	R-100/10D	IAF
6	EPKOR	06° 05' 43.5" N 102° 07' 58.4" E	R-249/12	SID/STAR
7	ARALI	05° 54' 57.3" N 102° 16' 21.5" E	R-190/15D	SID/STAR
8	LIMVO	05° 59' 37.7" N 102° 22' 55.9" E	R-158/11.4D	SID/STAR
9	IPKIN	06° 03' 09.6" N 102° 27' 53.7" E	R-126/11D	SID/STAR
10	BIXOR	05° 59' 58.0" N 102° 12' 27.0" E	R-213/12D	SID/STAR
11	OPOMO	05° 35' 28.3" N 101° 56' 32.6" E	R-213/41D	SID/STAR
12	KC362	06° 08' 32.5" N 102° 26' 16.5" E	R-100/7.5D	SID(Fly-Over)
13	KC361	06° 10' 48.32" N 102° 12' 54.45" E	R-280/6D	SID(Fly-Over)

WMKC AD 2. 24- NEW CHARTS RELATED TO KOTA BHARU AIRPORT

Chart	Reference
AERODROME CHART	APPENDIX B
AERODROME OBSTRUCTION CHART- TYPE A	APPENDIX C
AERONAUTICAL GROUND LIGHTING	APPENDIX D
AIRCRAFT PARKING / DOCKING CHART – ICAO	APPENDIX E
TAXIWAY AND APRON MARKINGS	APPENDIX E-1
IFR HOLDING AREAS	APPENDIX F
ATS ROUTE NEW REPORTING POINTS	APPENDIX F-1
RUNWAY 10	
STANDARD ARRIVAL CHART-INSTRUMENT(STAR) – ICAO RWY 10 GUGIT A RUPOS A LOSLO A (RNAV)	APPENDIX G-1
INSTRUMENT APPROACH CHART – ICAO ILS y / LLZ RWY 10 (10 DME ARC)	APPENDIX G-2
INSTRUMENT APPROACH CHART – ICAO ILS z / LLZ RWY 10	APPENDIX G-3
INSTRUMENT APPROACH CHART – ICAO ILS x / LLZ RWY 10 (CAT C / D)	APPENDIX G-4
INSTRUMENT APPROACH CHART – ICAO ILS x / LLZ RWY 10 (CAT A / B)	APPENDIX G-5
INSTRUMENT APPROACH CHART – ICAO VOR z RWY 10	APPENDIX G-6
INSTRUMENT APPROACH CHART – ICAO VOR y RWY 10 (CAT C / D)	APPENDIX G-7
INSTRUMENT APPROACH CHART – ICAO VOR y RWY 10 (CAT A / B)	APPENDIX G-8
INSTRUMENT APPROACH CHART – ICAO NDB RWY 10 (CAT A / B)	APPENDIX G-9
STANDARD DEPARTURE CHART – INSTRUMENT (SID) – ICAO KOTA BHARU E GUGIT E RUPOS E LOSLO E	APPENDIX G-10
STANDARD DEPARTURE CHART – INSTRUMENT(SID) - ICAO GUGIT C RUPOS C LOSLO C (RNAV)	APPENDIX G-11
RUNWAY 28	
STANDARD ARRIVAL CHART - INSTRUMENT (STAR) – ICAO GUGIT B RUPOS B LOSLO B (RNAV)	APPENDIX G-12
INSTRUMENT APPROACH CHART – ICAO VOR z RWY 28 (10 DME ARC)	APPENDIX G-13
INSTRUMENT APPROACH CHART – ICAO VOR x RWY 28 (FM DAGON HOLD)	APPENDIX G-14
INSTRUMENT APPROACH CHART – ICAO NDB RWY 28 (FM DAGON HOLD)	APPENDIX G-15
STANDARD DEPARTURE CHART – INSTRUMENT(SID) - ICAO RWY 28 LOSLO D RUPOS D GUGIT D (RNAV)	APPENDIX G-16
STANDARD DEPARTURE CHART – INSTRUMENT(SID) - ICAO RWY 28 GUGIT F RUPOS F LOSLO F	APPENDIX G-17
STANDARD DEPARTURE CHART – INSTRUMENT (SRD) - ICAO KOTA BHARU RADAR 1 RWY10 / 28	APPENDIX G-18

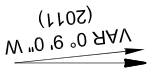
AERODROME CHART - ICAO

ARRP : 06° 09' 58" N
102° 17' 33" E

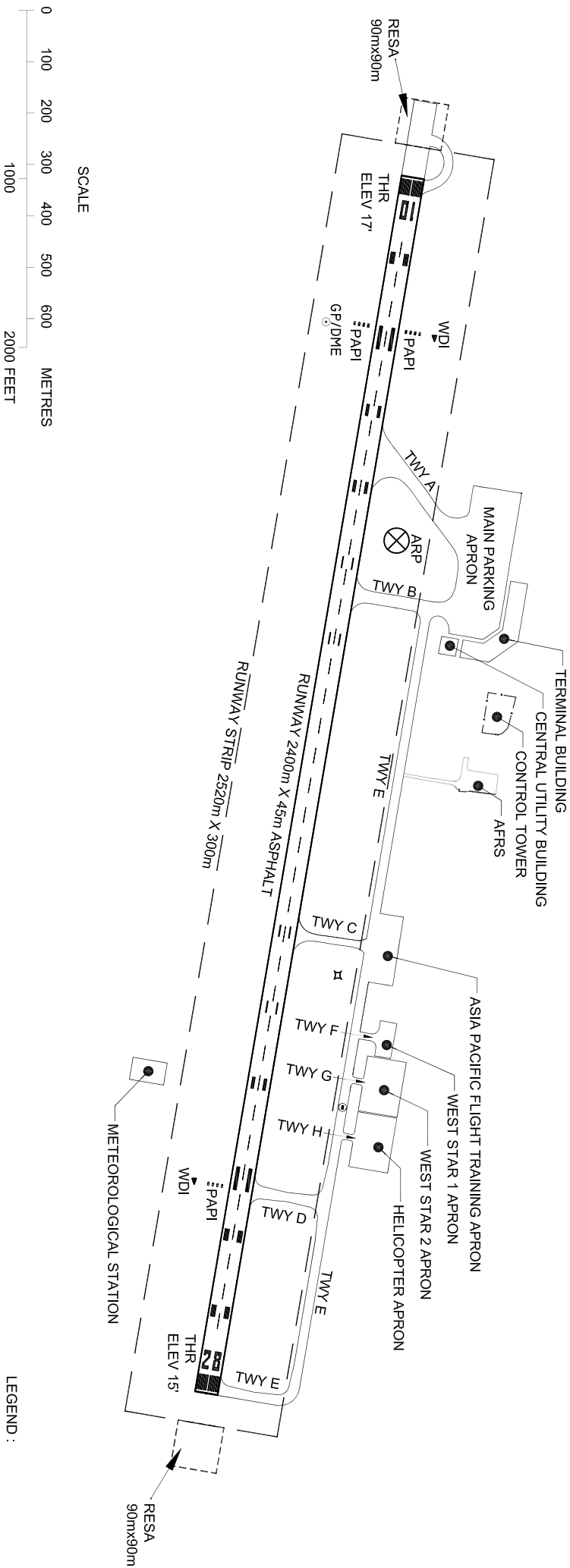
ELEV. 16FT (4.9m)

TWR - 122.5
SMC - 121.6

KOTA BHARU/
SULTAN ISMAIL PETRA
AIRPORT



RWY	DIR	THR	BEARING STRENGTH
10	099° 49' 55" M	06° 10' 05.62" N 102° 17' 05.50" E	PCN 51/F/A/W/T ASPHALT
28	279° 49' 55" M	06° 09' 52.52" N 102° 18' 22.45" E	

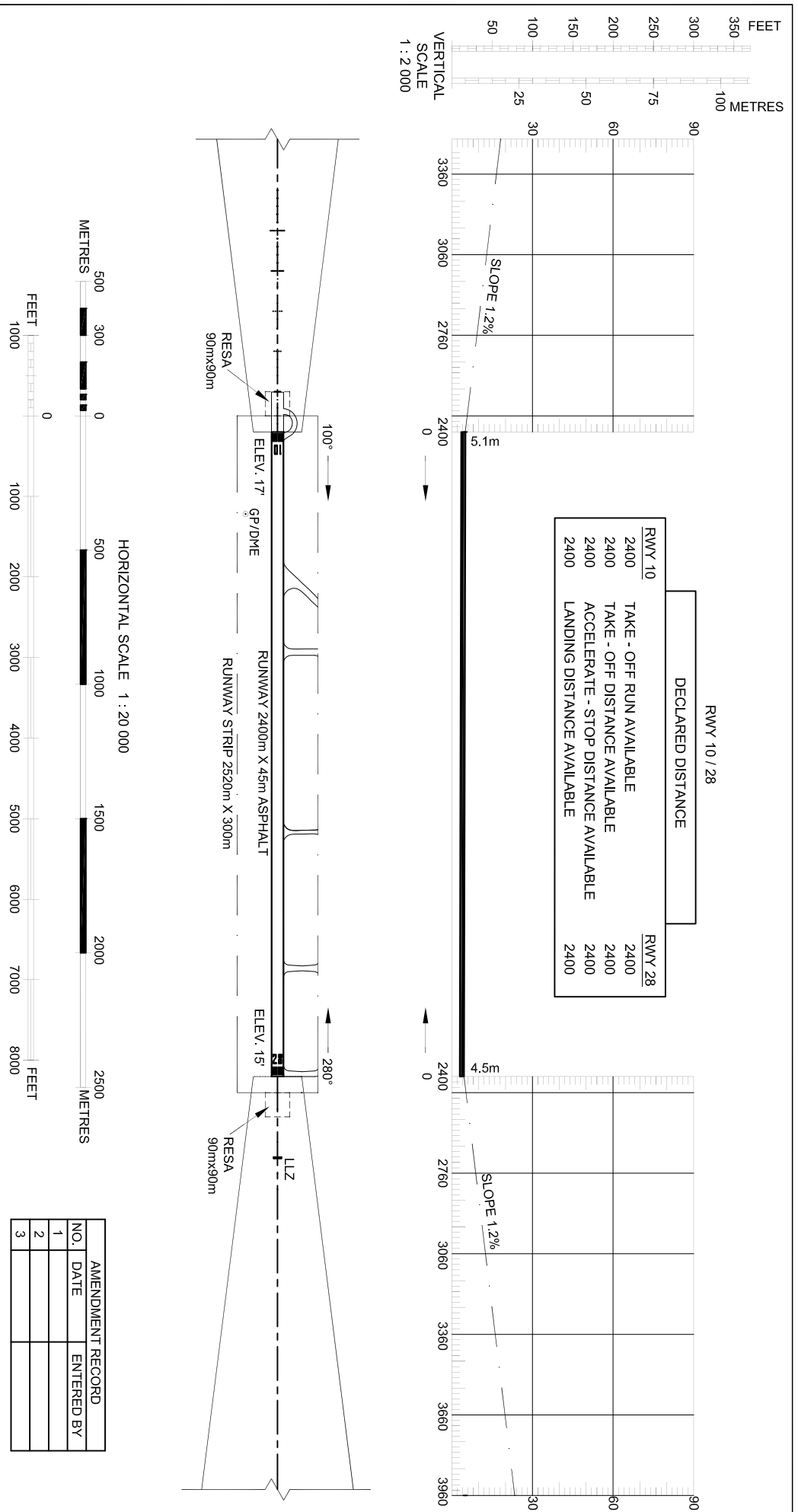


LEGEND :
▣ CONCRETE STRUCTURE

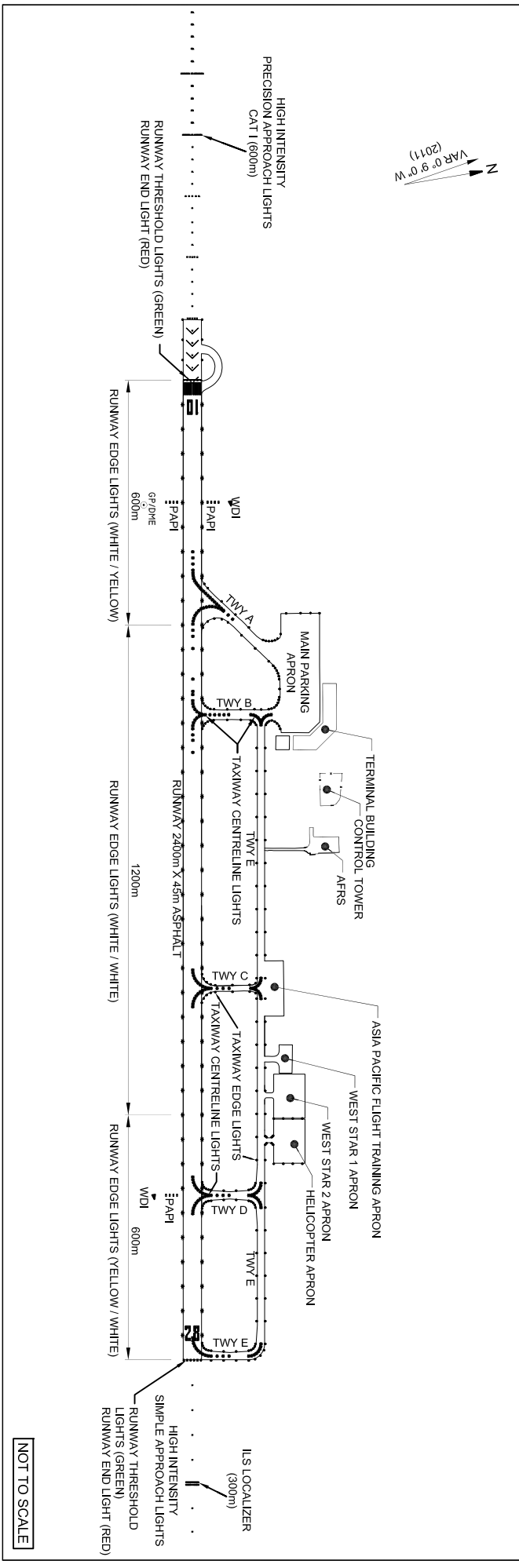
DIMENSION & ELEVATION IN METRES
MAGNETIC VARIATION : 00° 09' 00" W (2011)

AERODROME OBSTACLE CHART - ICAO
TYPE A (OPERATION LIMITATIONS)

KOTA BHARU/
SULTAN ISMAIL PETRA
AIRPORT

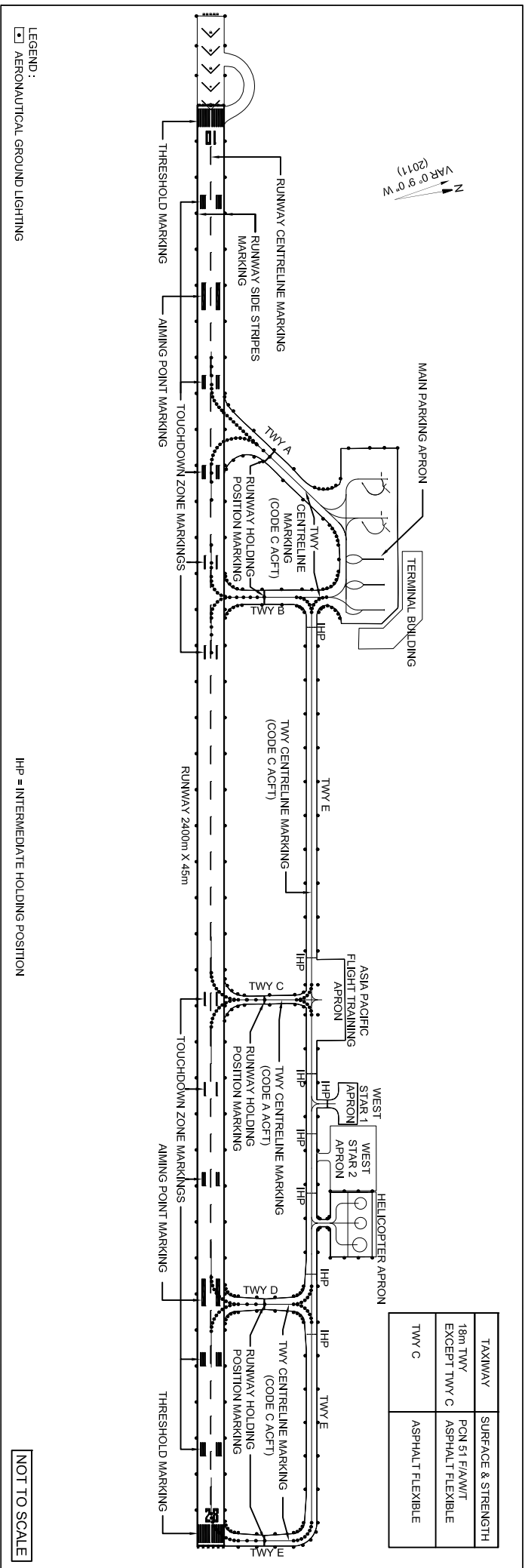


KOTA BHARU AIRPORT - AERONAUTICAL GROUND LIGHTING

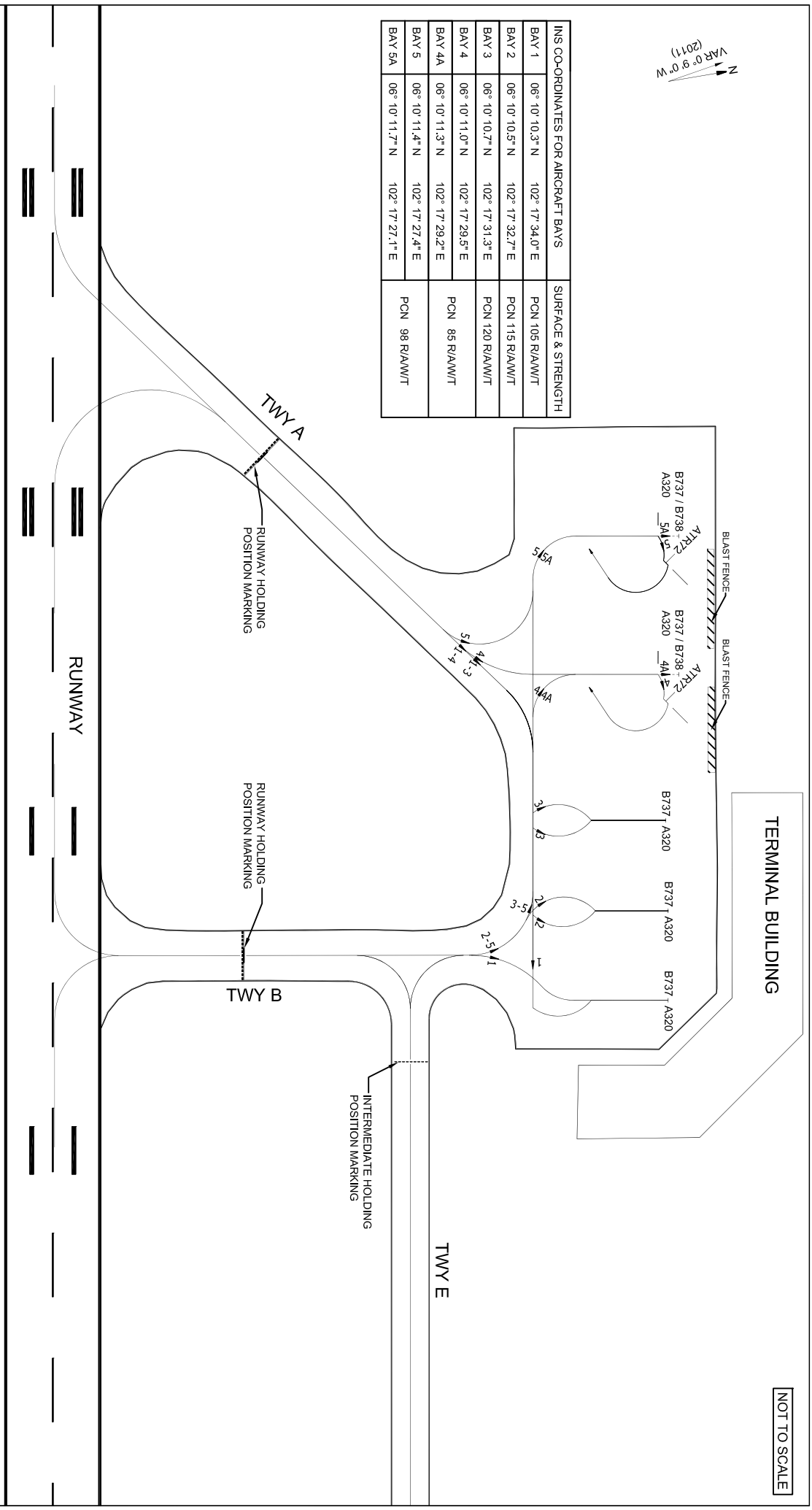


NOT TO SCALE

KOTA BHARU AIRPORT - AIRCRAFT PARKING/DOCKING CHART - ICAO



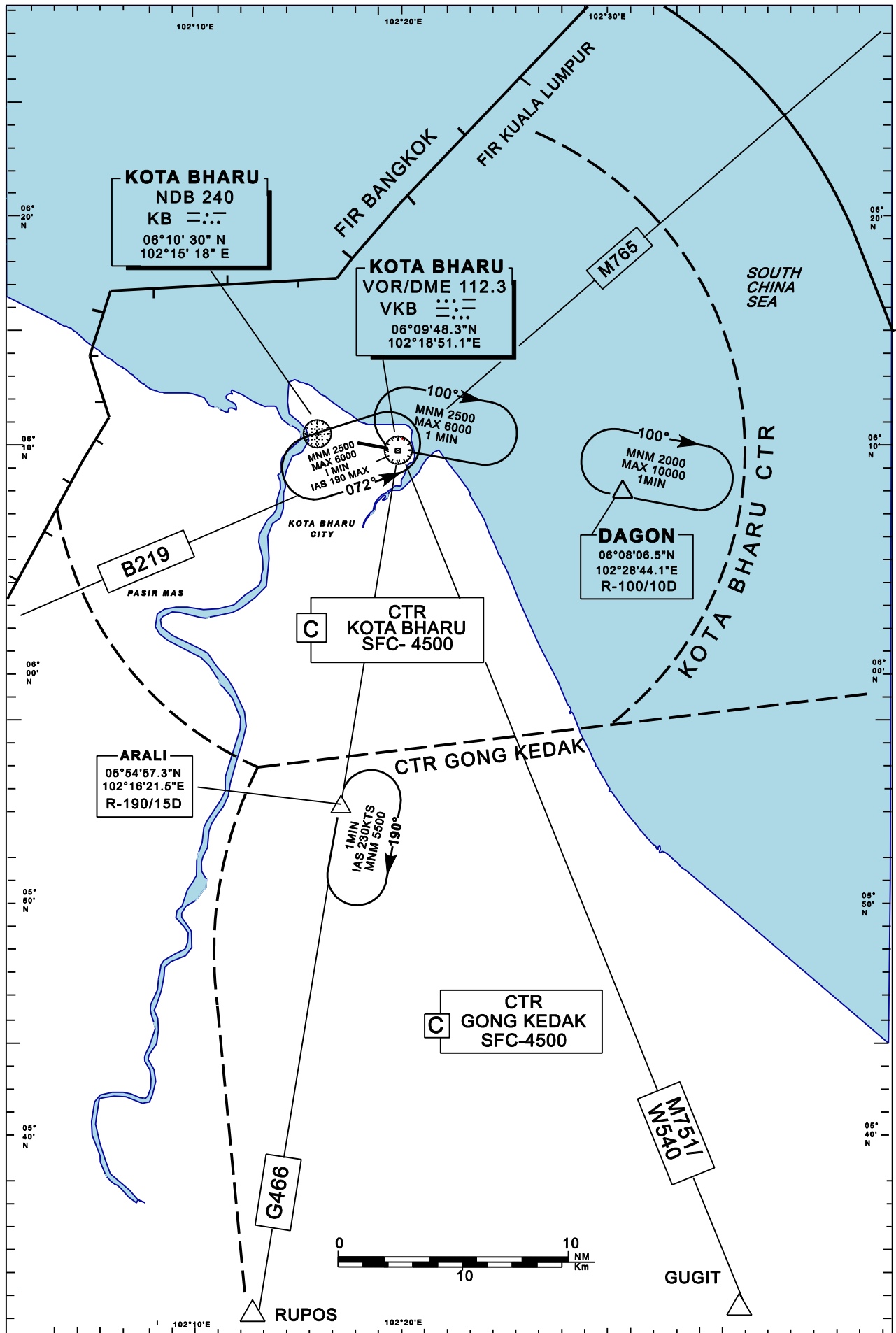
KOTA BHARU AIRPORT - TAXIWAY AND APRON MARKINGS



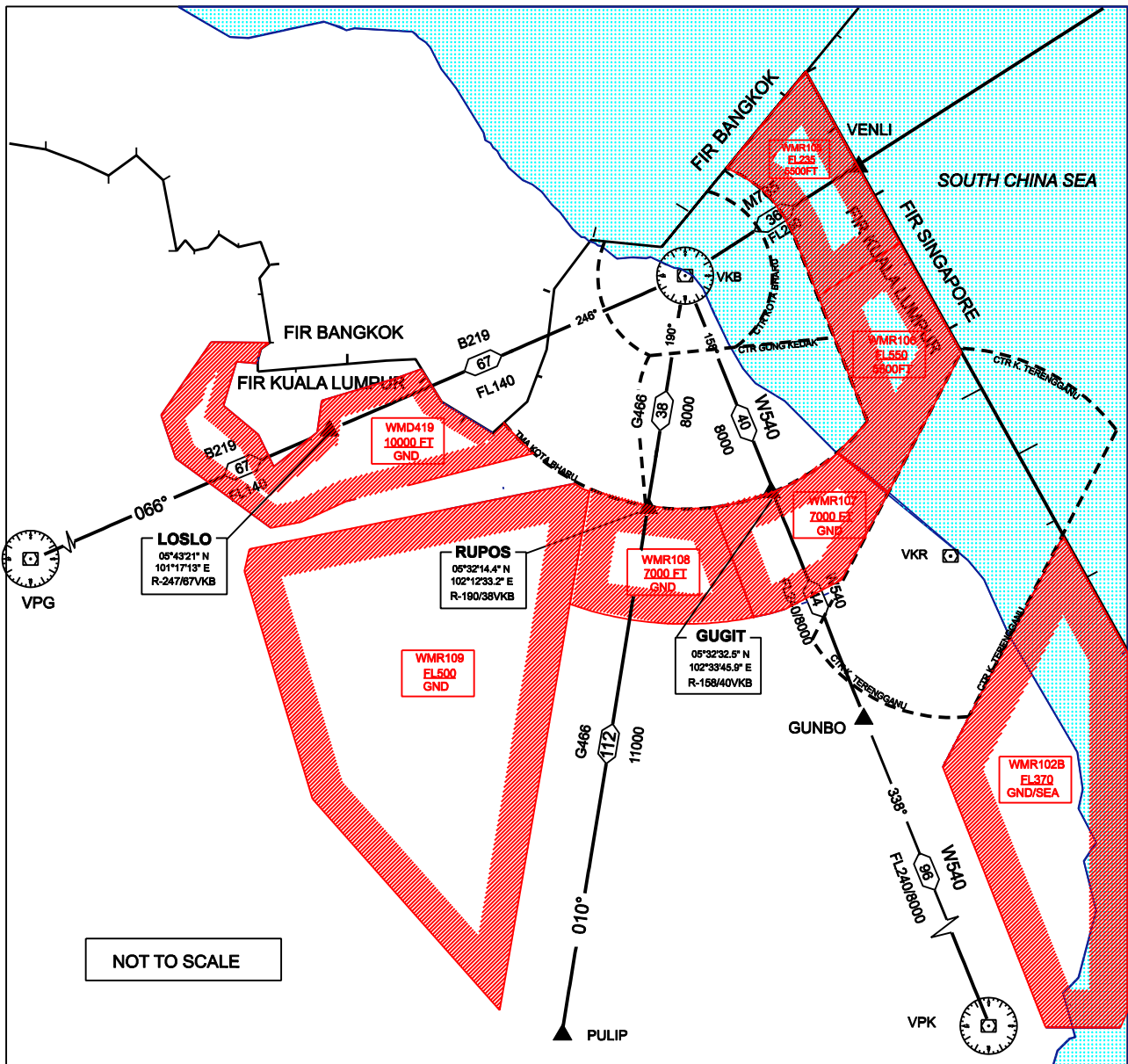
INS CO-ORDINATES FOR AIRCRAFT BAYS	SURFACE & STRENGTH
BAY 1 06° 10' 10.3" N 102° 17' 34.0" E	PCN 105 R/AW/T
BAY 2 06° 10' 10.5" N 102° 17' 32.7" E	PCN 115 R/AW/T
BAY 3 06° 10' 10.7" N 102° 17' 31.3" E	PCN 120 R/AW/T
BAY 4 06° 10' 11.0" N 102° 17' 29.5" E	PCN 85 R/AW/T
BAY 4A 06° 10' 11.3" N 102° 17' 29.2" E	PCN 85 R/AW/T
BAY 5 06° 10' 11.4" N 102° 17' 27.4" E	PCN 98 R/AW/T
BAY 5A 06° 10' 11.7" N 102° 17' 27.1" E	PCN 98 R/AW/T

NOT TO SCALE

KOTA BHARU IFR HOLDING AREAS



ESTABLISHMENT OF NEW REPORTING POINTS FOR
ATS ROUTES B219 G466 AND W540



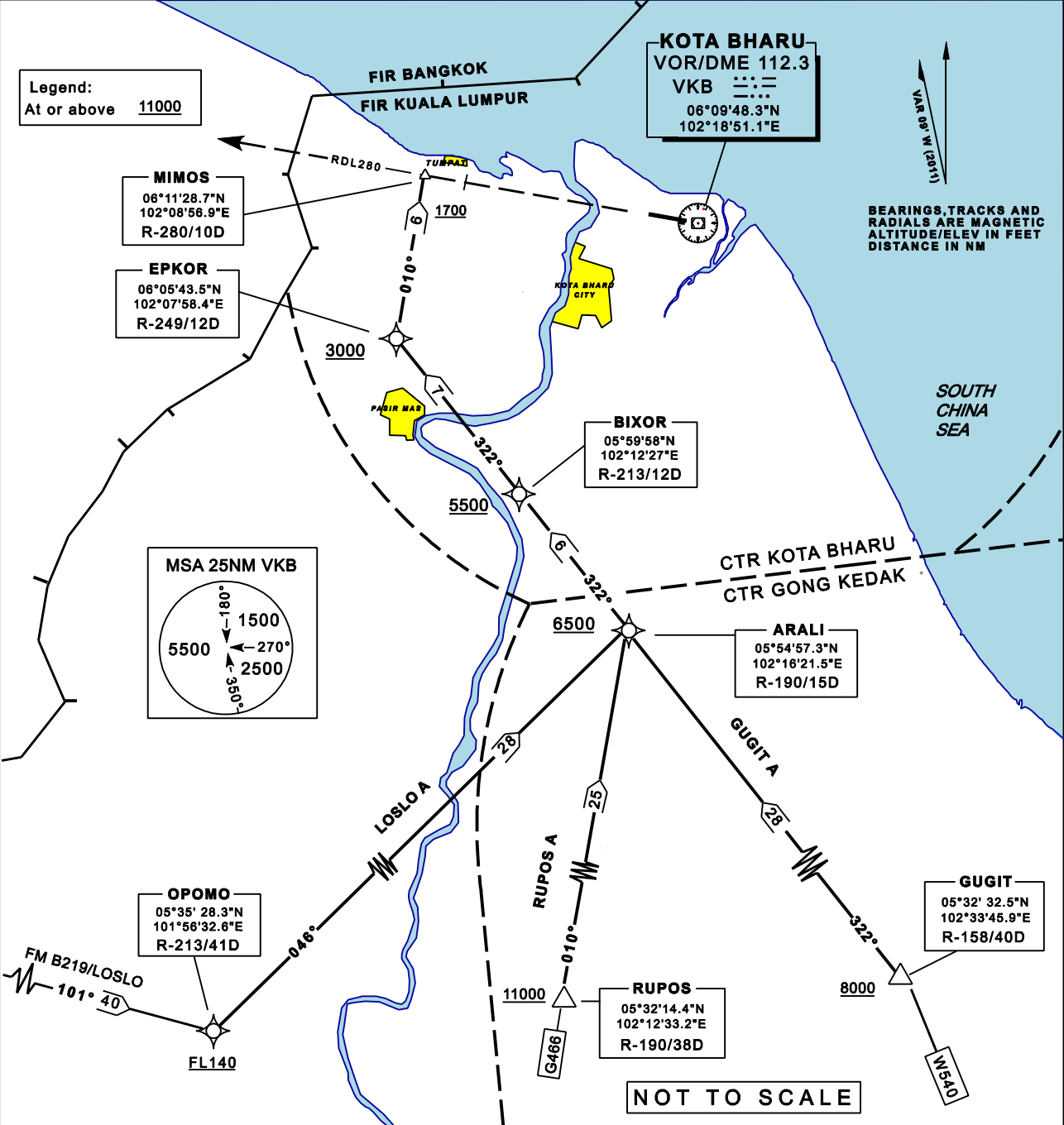
NOT TO SCALE

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

AERODROME ELEVATION 18FT
TRANSITION ALTITUDE 11000FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5MHZ
SMC 121.6MHZ

KOTA BHARU
SULTAN ISMAIL PETRA
RWY10
GUGIT A RUPOS A
LOSLO A
(RNAV)



RUPOS ALPHA ARRIVAL

- FROM G466/ RUPOS TRACK 010° TO ARALI
- TURN LEFT TRACK 322° TO BIXOR THEN EPKOR
- TRACK 010° TO MIMOS INTERCEPT LLZ OR RDL280 VKB VOR

LOSLO ALPHA ARRIVAL

- FROM B219/LOSLO 101° TO OPOMO THEN TURN LEFT 046 TO ARALI-
- TURN LEFT TRACK 322° TO BIXOR THEN TO EPKOR
- TRACK 010° TO MIMOS INTERCEPT LLZ OR RDL280 VKB VOR

GUGIT ALPHA ARRIVAL

- FROM W540/GUGIT TRACK 322° TO ARALI
- THEN TRACK 322° TO BIXOR THEN EPKOR
- TRACK 010° TO MIMOS INTERCEPT LLZ OR RDL280 VKB VOR

COM FAILURE

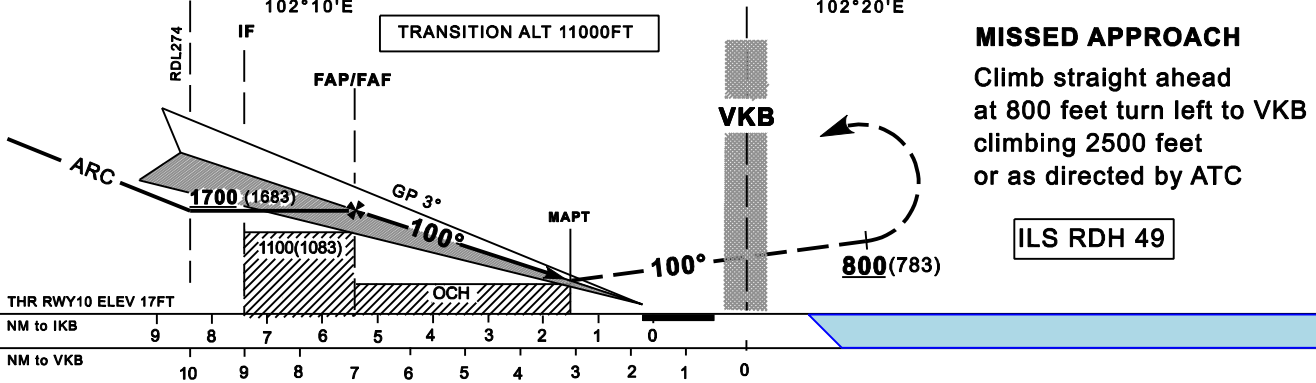
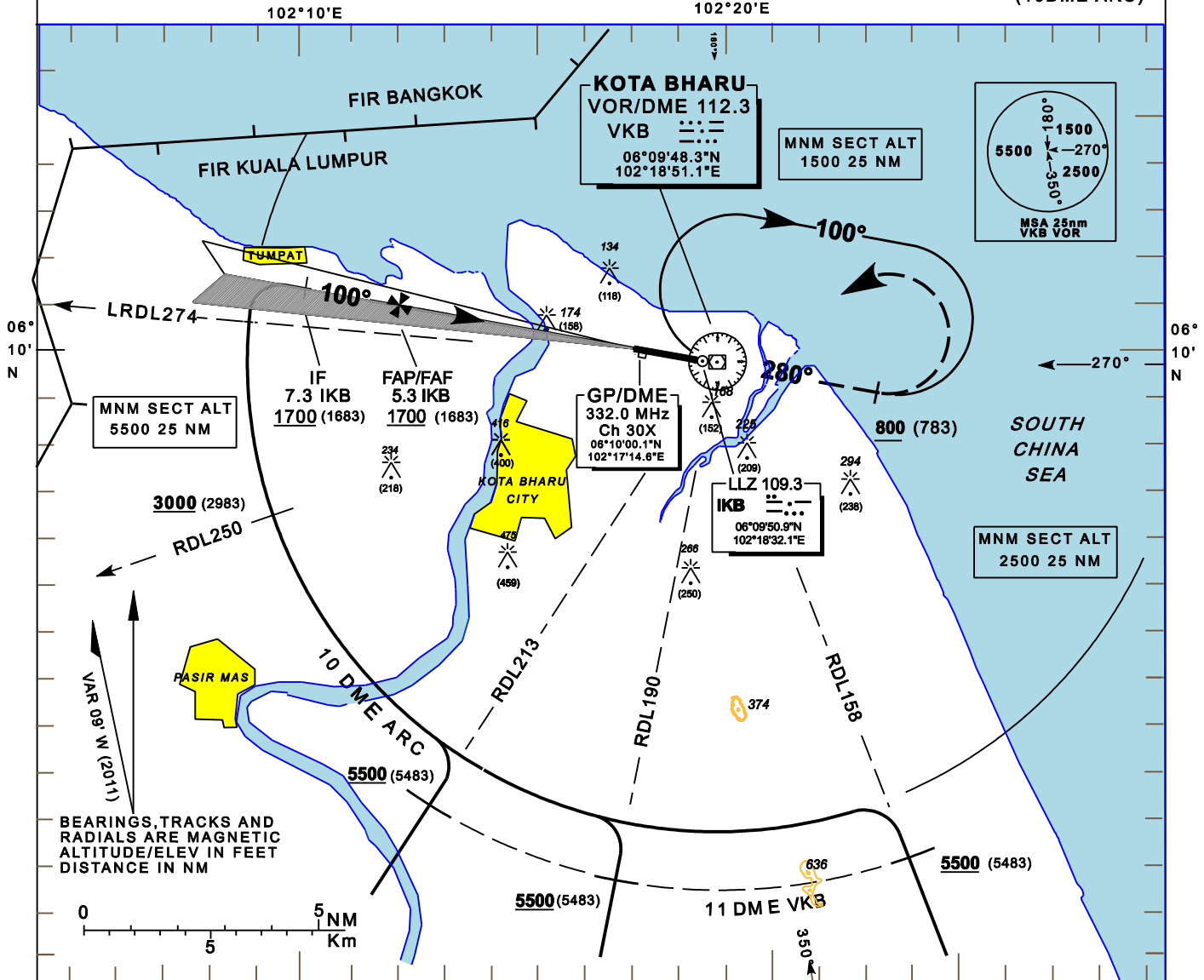
- SET TRANSPONDER CODE 7600
- IF UNDER PILOT NAVIGATION, CONTINUE ON STAR AND LAND
- IF UNDER RADAR VECTORED- MAINTAIN VECTOR FOR 1 MIN;
- IF BELOW MSA CLIMB TO MSA THEN TRACK TO INTERCEPT CLEARED OR PREVIOUSLY ASSIGNED STAR AND LAND

**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 16FT
**HEIGHT RELATED TO
THR RWY10 17FT**

APP 120.85MHZ,
130.3MHZ
TWR 122.5
SMC 121.6

**KOTA BHARU
SULTAN ISMAIL PETRA
ILS y / LLZ RWY 10
(10DME ARC)**



OCA/H	A	B	C	D						
CAT I	229(212)	241(224)	249(232)	260(243)						
GP INOP	450 (433 / 1.3D IKB(3 VKB))				KTS.	70	90	120	150	
ALTITUDE / HEIGHT ON FINAL APPROACH					FAF - MAPT min:sec	3:22	2:37	1:58	1:34	
	5.3DME	4DME	3DME	2DME	1.3DME	Rate of Descend ft/min	370	480	640	800
	1700(1683)	1290(1273)	970(953)	640(623)	450(433)					

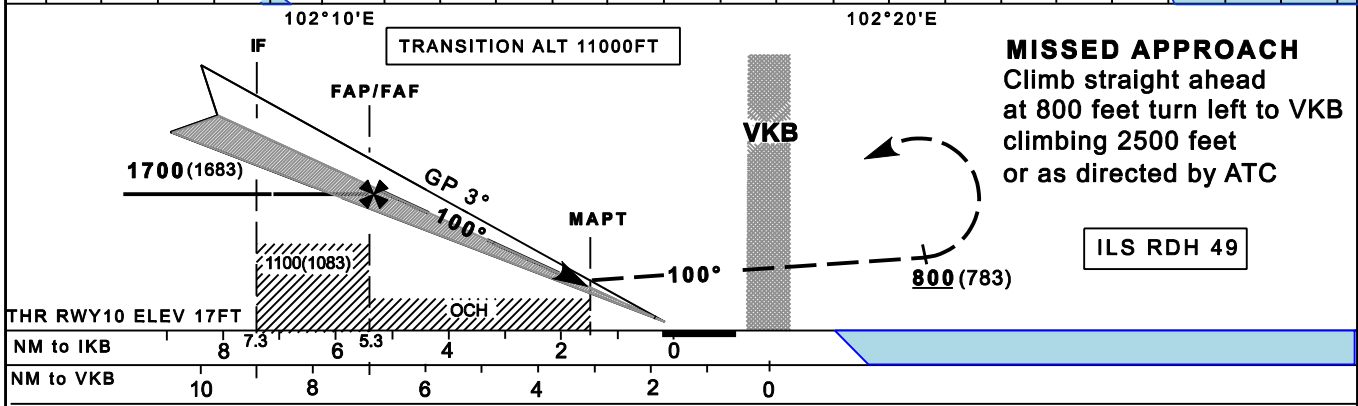
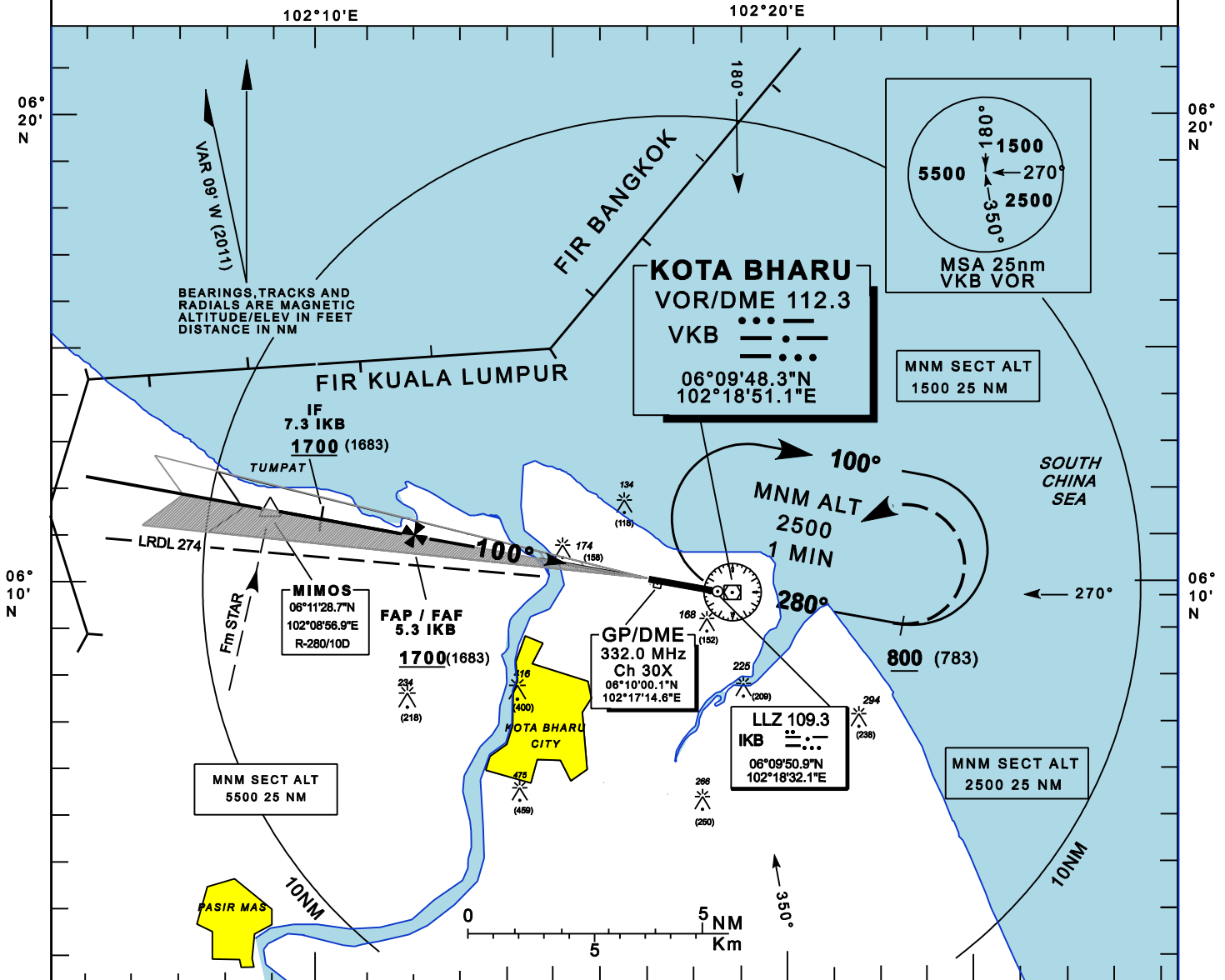
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 16FT
 HEIGHT RELATED TO
 THR RWY10 17FT

APP 120.85MHZ,
 130.3MHZ
 TWR 122.5
 SMC 121.6

KOTA BHARU
 SULTAN ISMAIL PETRA

ILS z / LLZ RWY 10



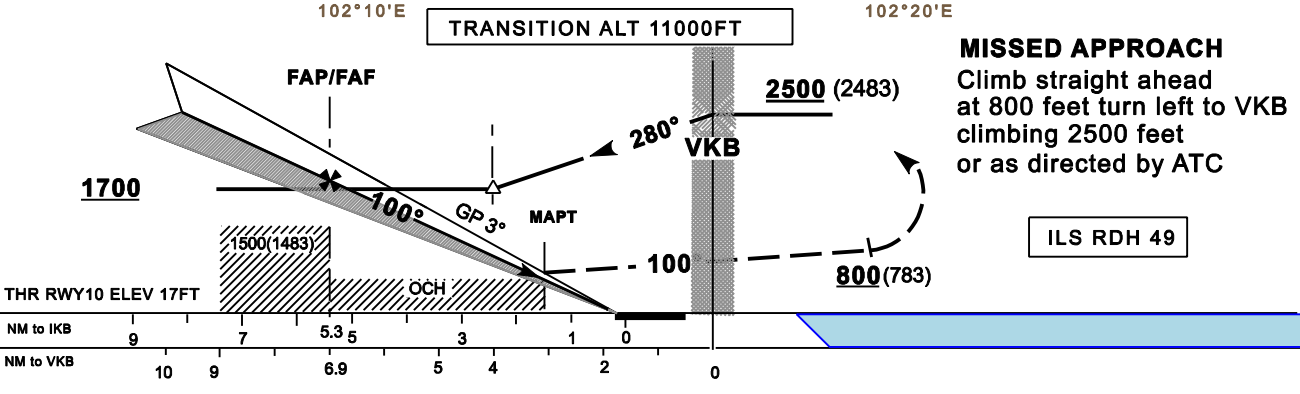
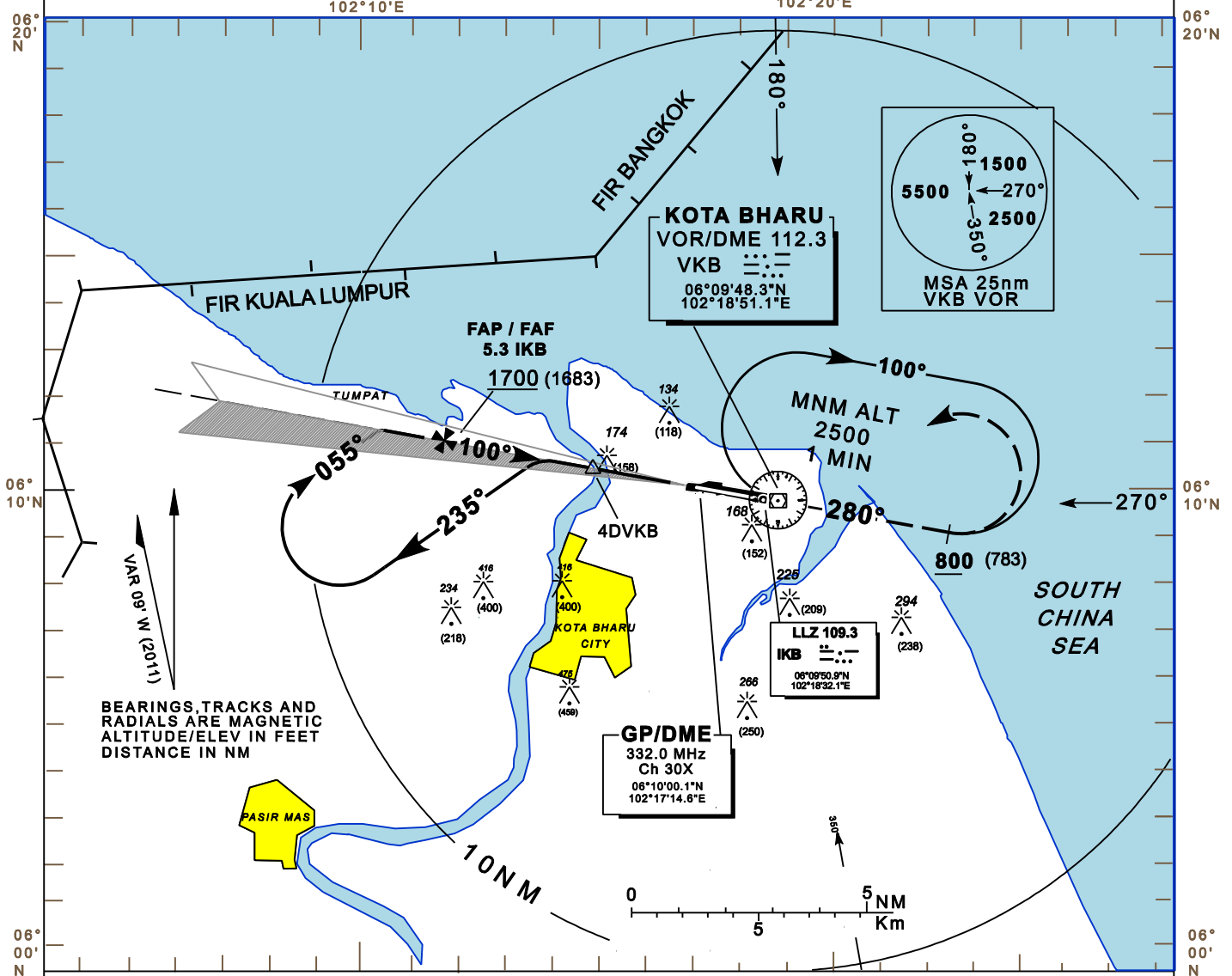
OCA/H	A	B	C	D					
CAT I	229(212)	241(224)	249(232)	260(243)					
GP INOP	450 (433 / 1.3D IKB(3 VKB))				KTS.	70	90	120	150
ALTITUDE / HEIGHT ON FINAL APPROACH					FAF - MAPT min:sec	3:22	2:37	1:58	1:34
5.3DME	4DME	3DME	2DME	1.3DME	Rate of Descend ft/min	370	480	640	800
1700(1683)	1290(1273)	970(953)	640(623)	450(433)					

**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 16FT
HEIGHT RELATED TO
THR RWY10 17FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5
SMC 121.6

KOTA BHARU
SULTAN ISMAIL PETRA
ILS x / LLZ RWY 10
(CAT C/D)



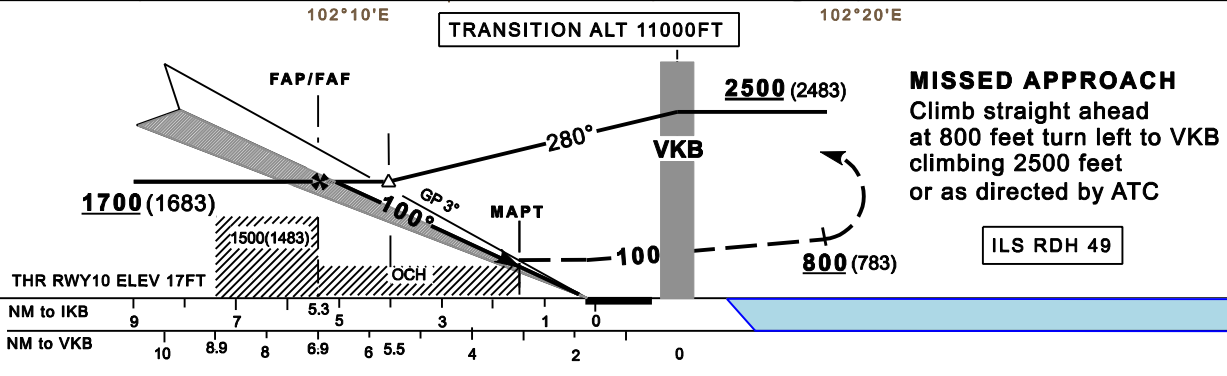
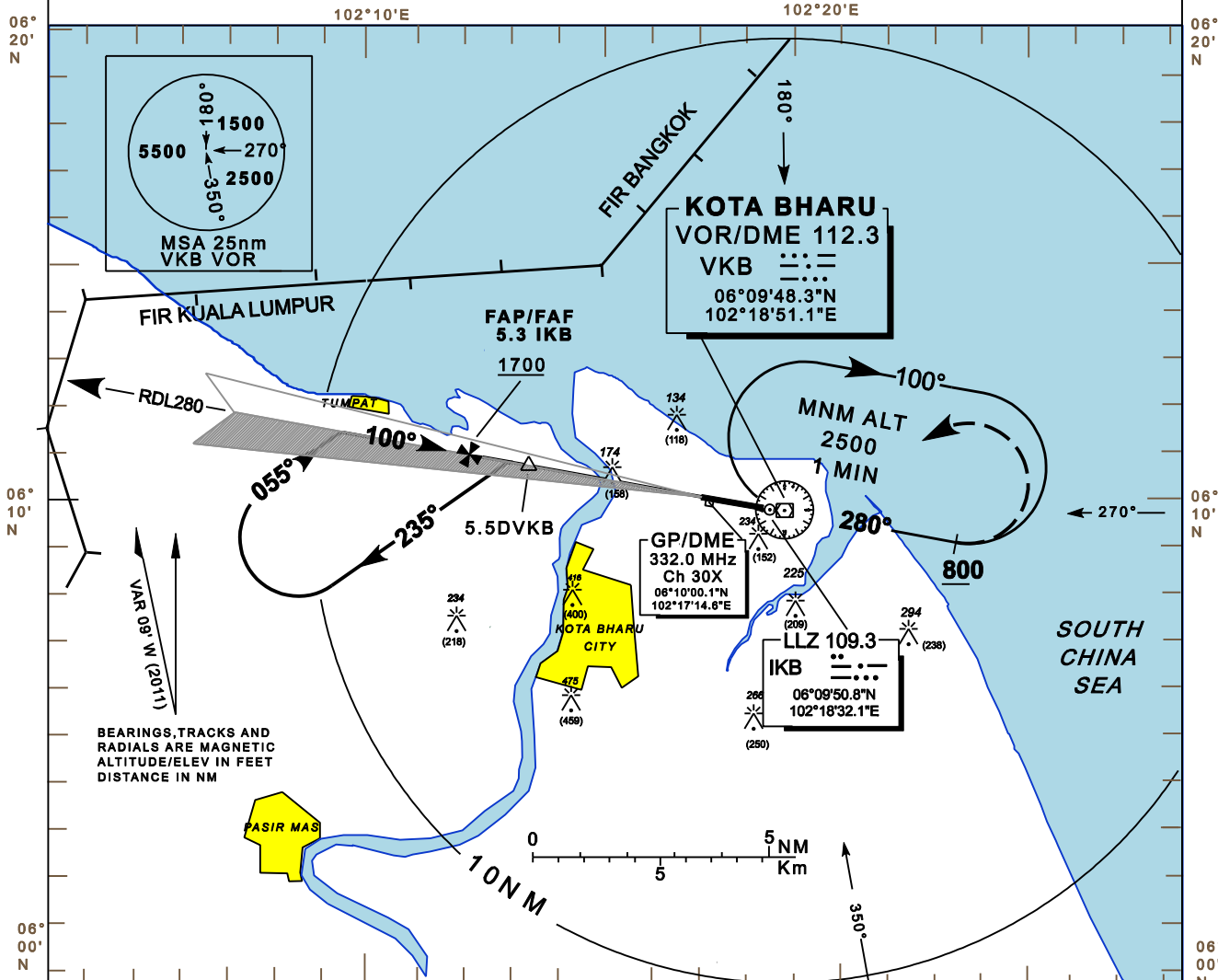
OCA/H	C		D						
CAT I	249(232)		260(243)						
GP INOP	450 (433 / 1.3D IKB(3 VKB))				KTS.	70	90	120	150
ALTITUDE / HEIGHT ON FINAL APPROACH					FAF - MAPT min:sec	3:22	2:37	1:58	1:34
5.3DME	4DME	3DME	2DME	1.3DME	Rate of Descend ft/min	370	480	640	800
1700(1683)	1290(1273)	970(953)	640(623)	450(433)					

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 16FT
 HEIGHT RELATED TO
 THR RWY10 17FT

APP 120.85MHZ
 130.3MHZ
 TWR 122.5
 SMC 121.6

KOTA BHARU
 SULTAN ISMAIL PETRA
 ILS x / LLZ RWY 10
 (CAT A/B)



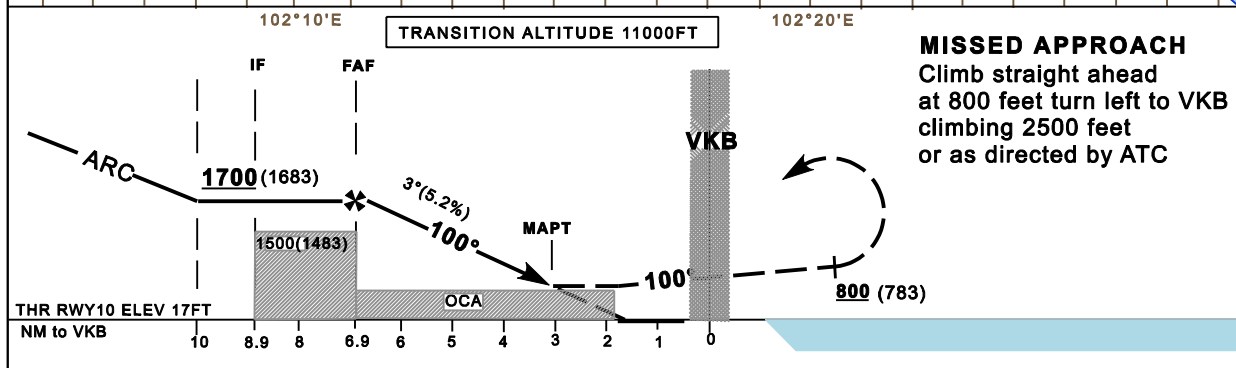
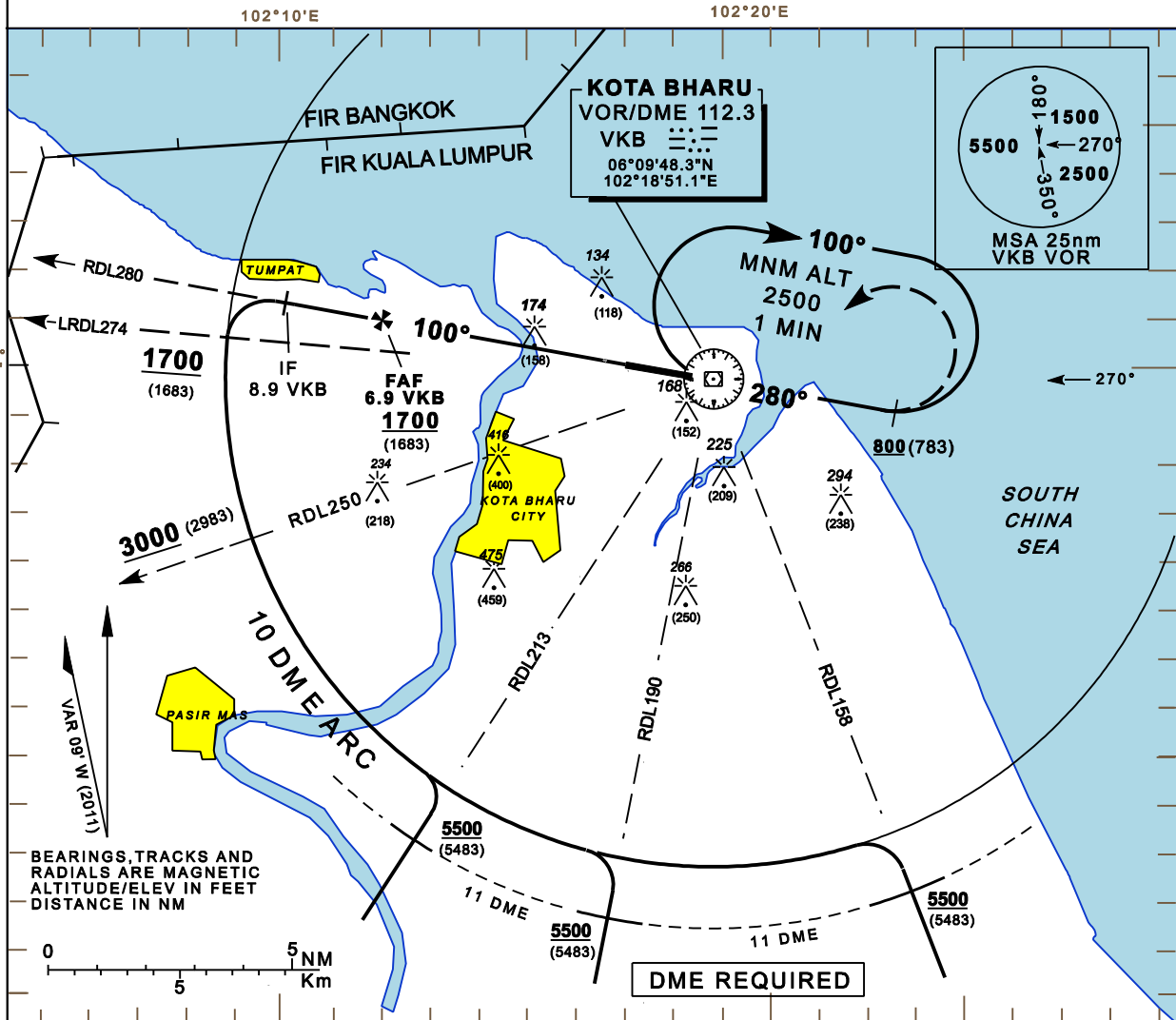
OCA/H	A		B						
CAT I	229(212)		241(224)						
GP INOP	450 (433 / 1.3D IKB(3 VKB))				KTS.	70	90	120	150
ALTITUDE / HEIGHT ON FINAL APPROACH					FAP - MAPT min:sec	3:22	3:22	1:58	1:34
5.3DME	4DME	3DME	2DME	1.3DME	Rate of Descend ft/min	370	480	640	800
1700(1683)	1290(1273)	970(953)	640(623)	450(433)					

**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 16FT
HEIGHT RELATED TO
THR RWY10 17FT

APP 120.85 Mhz,
130.3 Mhz
TWR 122.5 Mhz
SMC 121.6 Mhz

**KOTA BHARU
SULTAN ISMAIL PETRA
VOR z RWY 10**



OCA/H	A	B	C	D	
Straight-in App	450 (433)/3D				
Dist by DME	7	6	5	4	3
ALT(3° App Path)	1700(1683)	1290(1273)	970(953)	640(623)	450(433)
GS(kts)	70	90	120	150	180
5.2% Descend	366	474	631	790	964

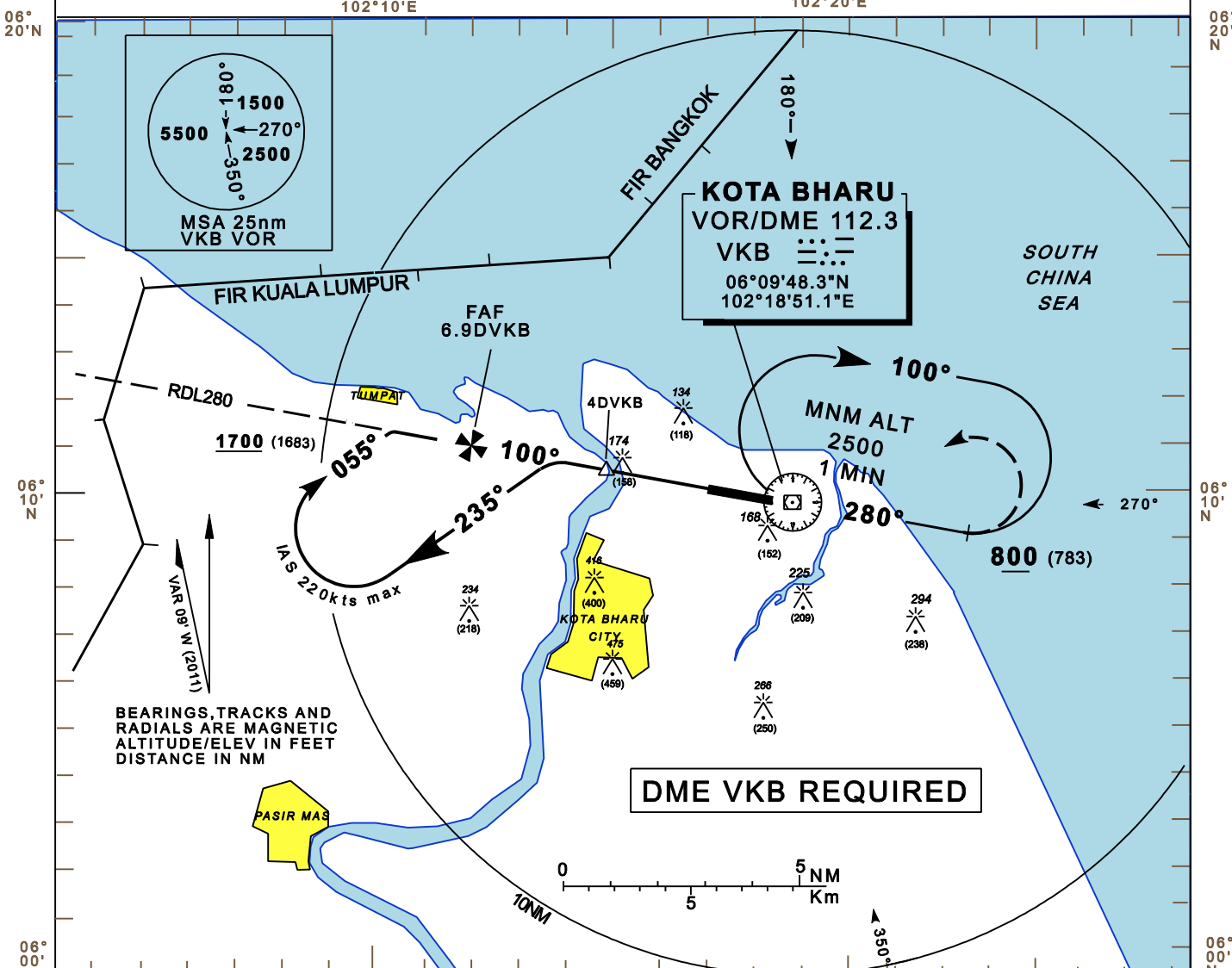
**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 16FT
HEIGHT RELATED TO
THR RWY10 17FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5
SMC 121.6

**KOTA BHARU
SULTAN ISMAIL PETRA**

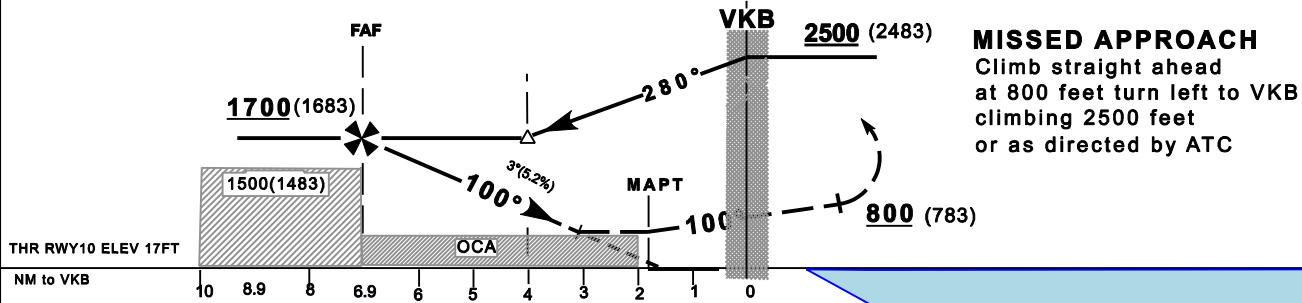
**VOR y RWY 10
(CAT C/D)**



BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDE/ELEV IN FEET
DISTANCE IN NM

DME VKB REQUIRED

TRANSITION ALT 11000FT



MISSED APPROACH
Climb straight ahead
at 800 feet turn left to VKB
climbing 2500 feet
or as directed by ATC

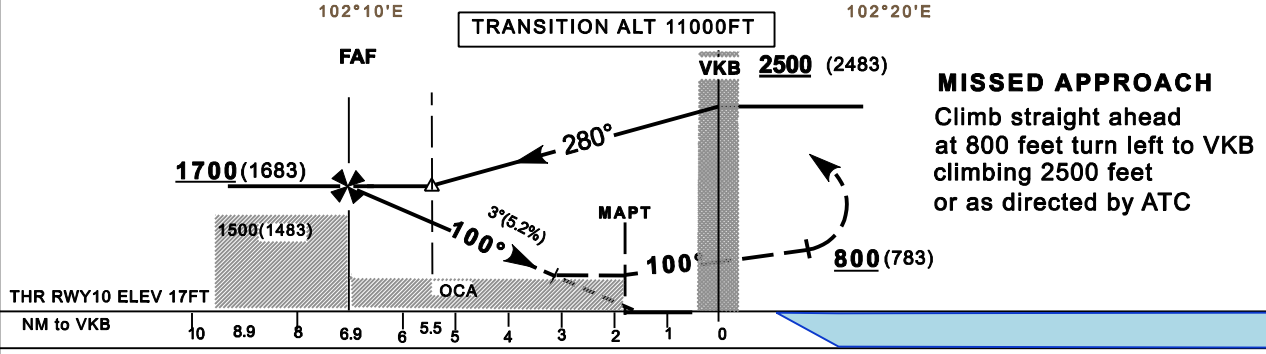
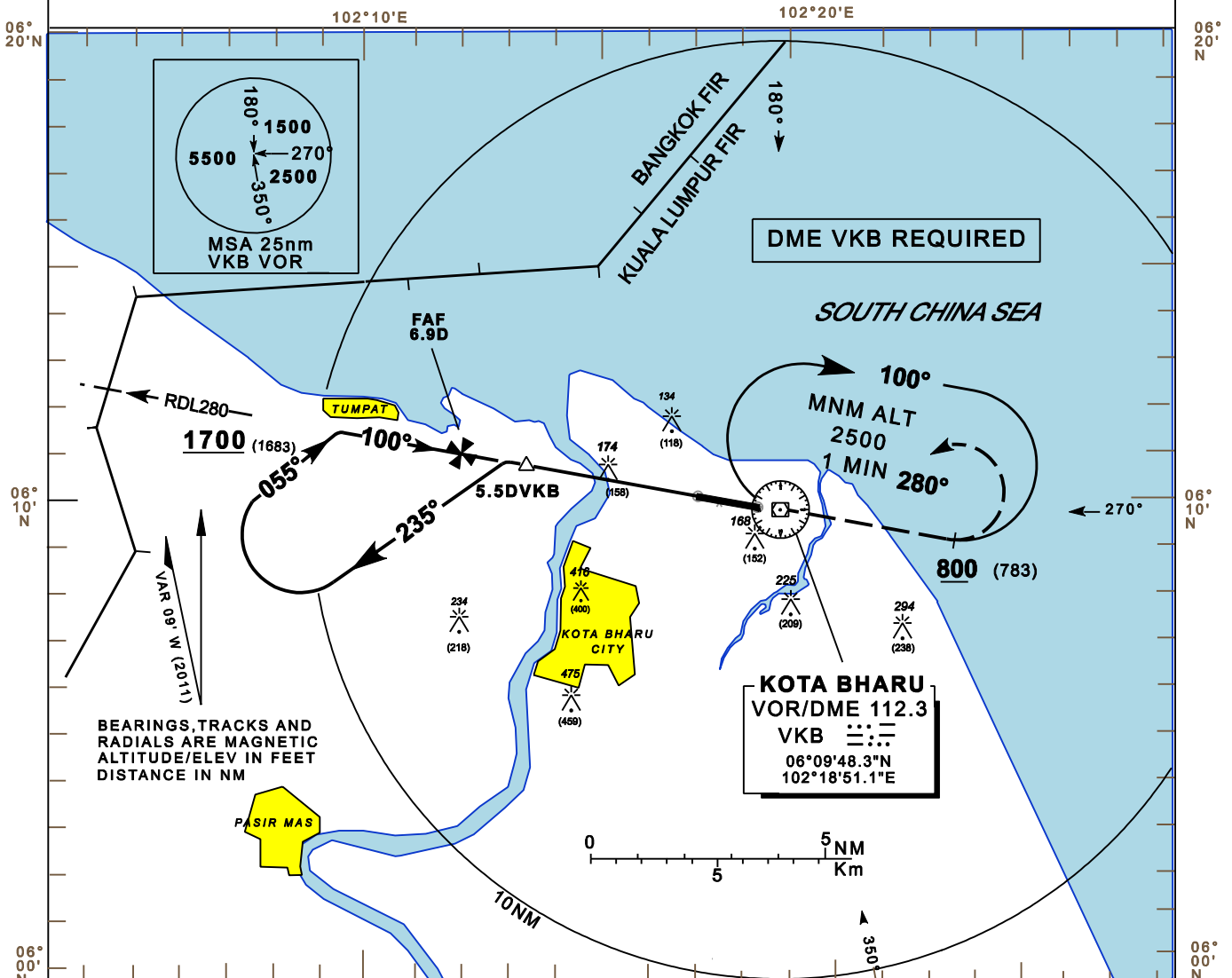
OCA/H	C		D		
Straight-in App	450 (403) / 3D				
Dist by DME	7	6	5	4	3
ALT(3° App Path)	1700(1683)	1290(1273)	970(953)	640(623)	450(433)
GS(kts)	70	90	120	150	180
5.2% Descend	366	474	631	790	964

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 16FT
HEIGHT RELATED TO THR RWY10 17FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5
SMC 121.6

KOTA BHARU
SULTAN ISMAIL PETRA
VOR y RWY 10
(CAT A/B)



OCA/H	A		B		
Straight-in App	450 (403) /3D				
Dist by DME	7	6	5	4	3
ALT(3° App Path)	1700(1683)	1290(1273)	970(953)	640(623)	450(433)
GS(kts)	70	90	120	150	180
5.2% Descend	366	474	631	790	964

**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 16FT
HEIGHT RELATED TO
THR RWY10 17FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5
SMC 121.6

**KOTA BHARU
SULTAN ISMAIL PETRA**

NDB RWY 10
(CAT A/B)

102°10'E

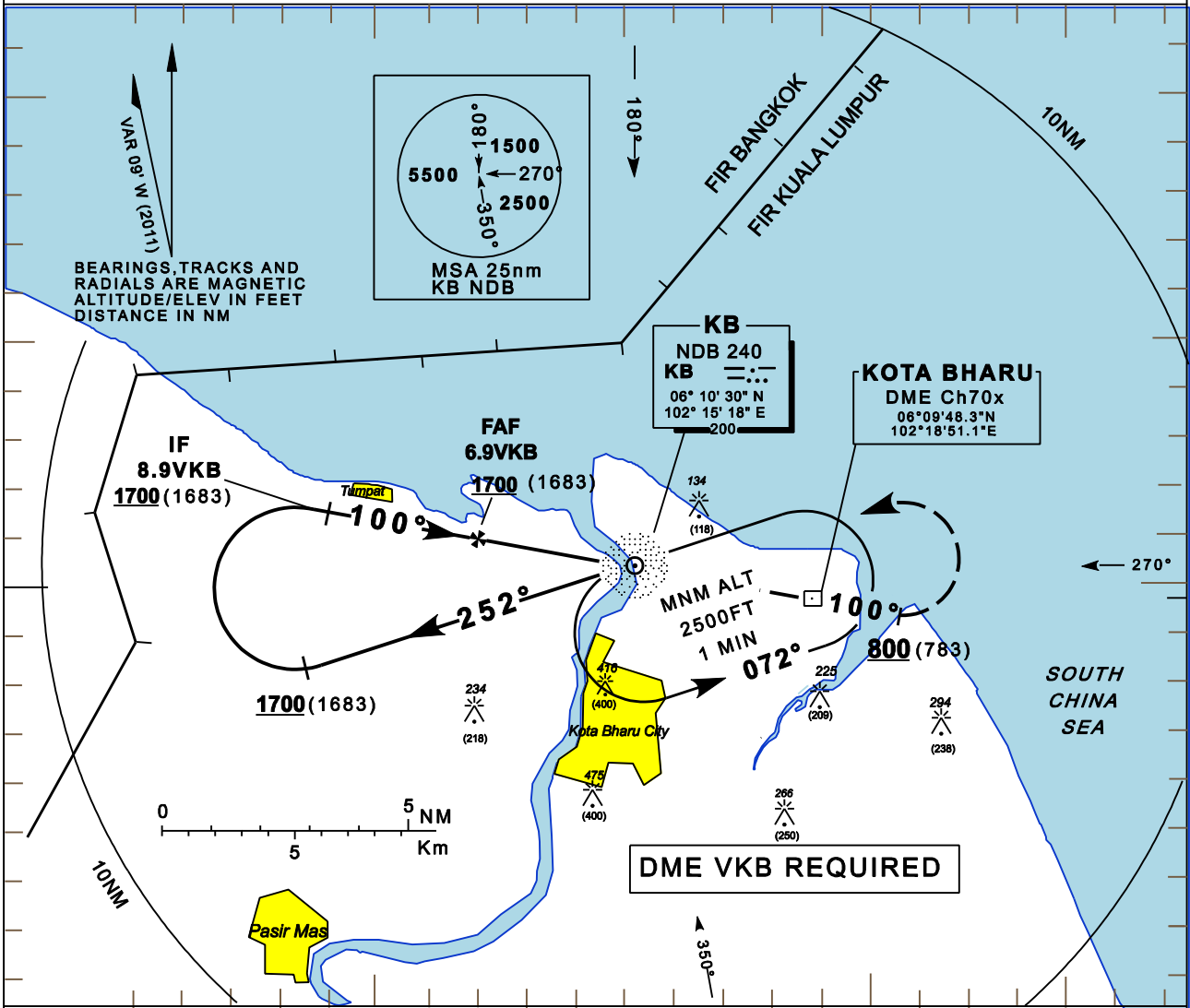
102°20'E

06°20'N

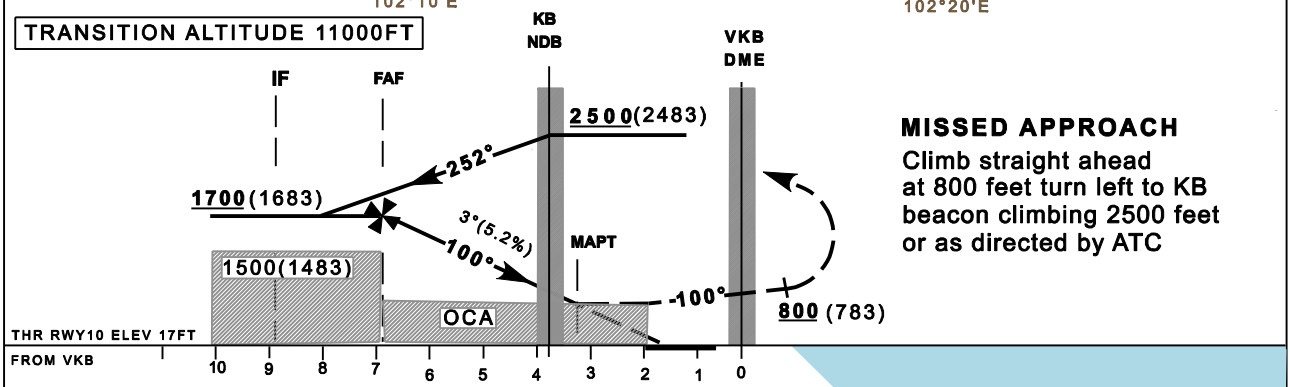
06°20'N

06°10'N

06°10'N



TRANSITION ALTITUDE 11000FT



OCA/H	A		B		
Straight-in App	450 (403)				
Dist by DME	7	6	5	4	3
ALT(3* App Path)	1700(1683)	1290(1273)	970(953)	640(623)	450(433)
GS(kts)	70	90	120	150	180
5.2% Descend	366	474	631	790	964

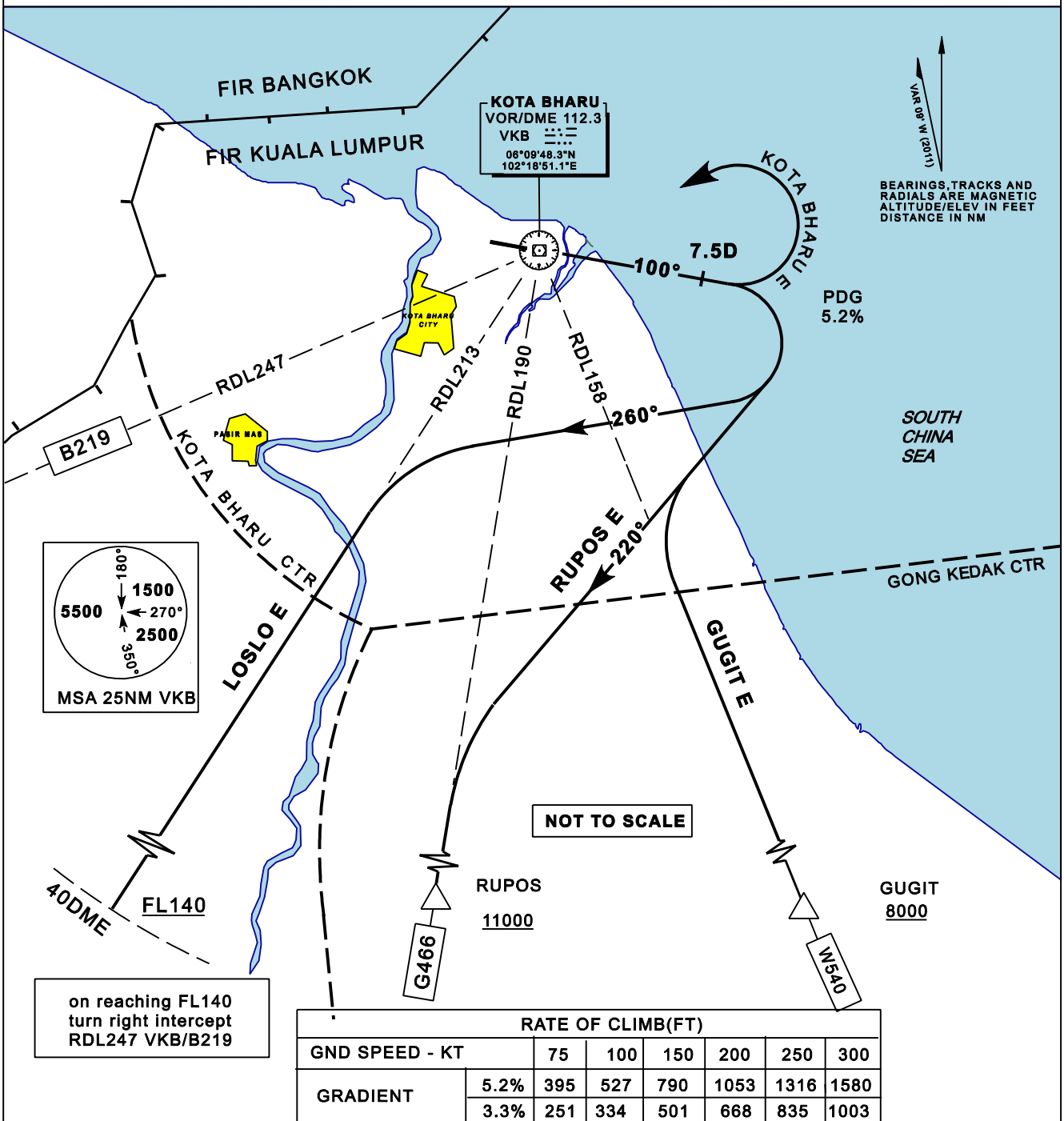
**STANDARD DEPARTURE CHART
INSTRUMENT (SID)- ICAO**

AERODROME ELEVATION 16FT
TRANSITION ALTITUDE 11 000FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5MHZ
SMC 121.6MHZ

KOTA BHARU
SULTAN ISMAIL PETRA

RWY 10
KOTA BHARU E GUGIT E
RUPOS E LOSLO E



Track 100°
PDG 5.2% up to 5500 then 3.3%
at 7.5DME

RUPOS ECHO DEPARTURE

Turn right track 220° to intercept
RDL190 VKB VOR to RUPOS/ G466

GUGIT ECHO DEPARTURE

Turn right track 220° to intercept
RDL158 VKB VOR to GUGIT/ W540

LOSLO ECHO DEPARTURE

Track 260° to intercept RDL213 VKB VOR to reach FL140
or above by 40DME then turn right to intercept RDL247
VKB VOR to LOSLO /B219

KOTA BHARU ECHO DEPARTURE

Turn left track direct to VKB VOR

Communication Failure

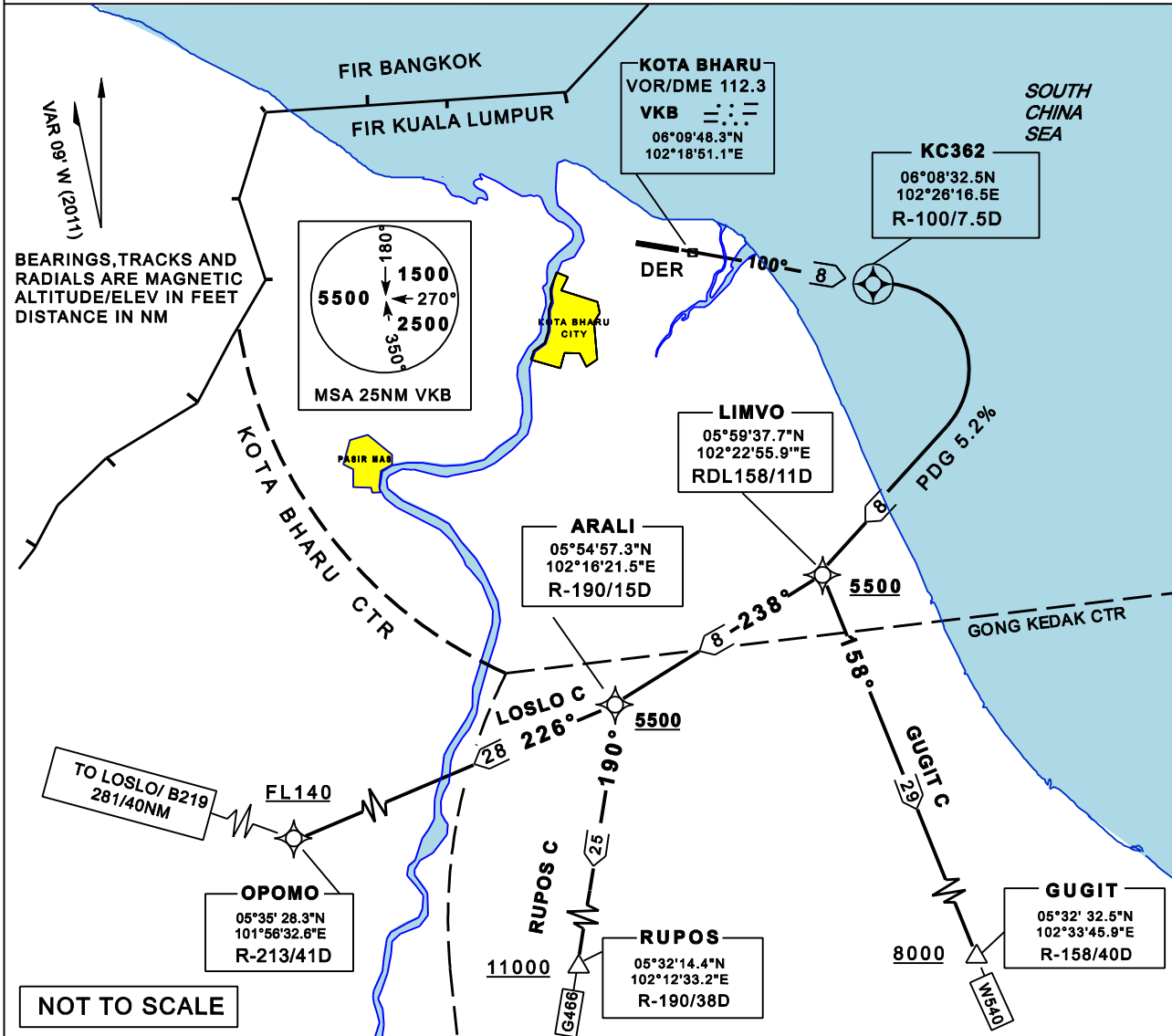
- Squawk 7600
- If under Pilot Navigation, maintain last assigned level for 3 minute, if no onward clearance is received, subsequently climb to comply with SID
- If under Radar vectoring, maintain vector for 2 minutes
- If below MSA, climb to MSA, then track to intercept cleared or previously assigned SID to destination

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

AERODROME ELEVATION 16FT
TRANSITION ALTITUDE 11 000FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5MHZ
SMC 121.6MHZ

KOTA BHARU
SULTAN ISMAIL PETRA
RWY 10
GUGIT C RUPOS C
LOSLO C
(RNAV)



RATE OF CLIMB(FT)		75	100	150	200	250	300
GRADIENT	5.2%	395	527	790	1053	1316	1580
	3.3%	251	334	501	668	835	1003

Climb on Heading 100°
PDG 5.2% up to 5500FT
At KC362 Turn Right

LOSLO CHARLIE DEPARTURE

Track Direct to LIMVO Then 238° to ARALI then 226° to OPOMO then 281° to LOSLO / B219

RUPOS CHARLIE DEPARTURE

Track Direct to LIMVO then 238° to ARALI then 190° to RUPOS/G466

GUGIT CHARLIE DEPARTURE

Track Direct to LIMVO then Turn Left 158° to GUGIT/W540

Communication Failure

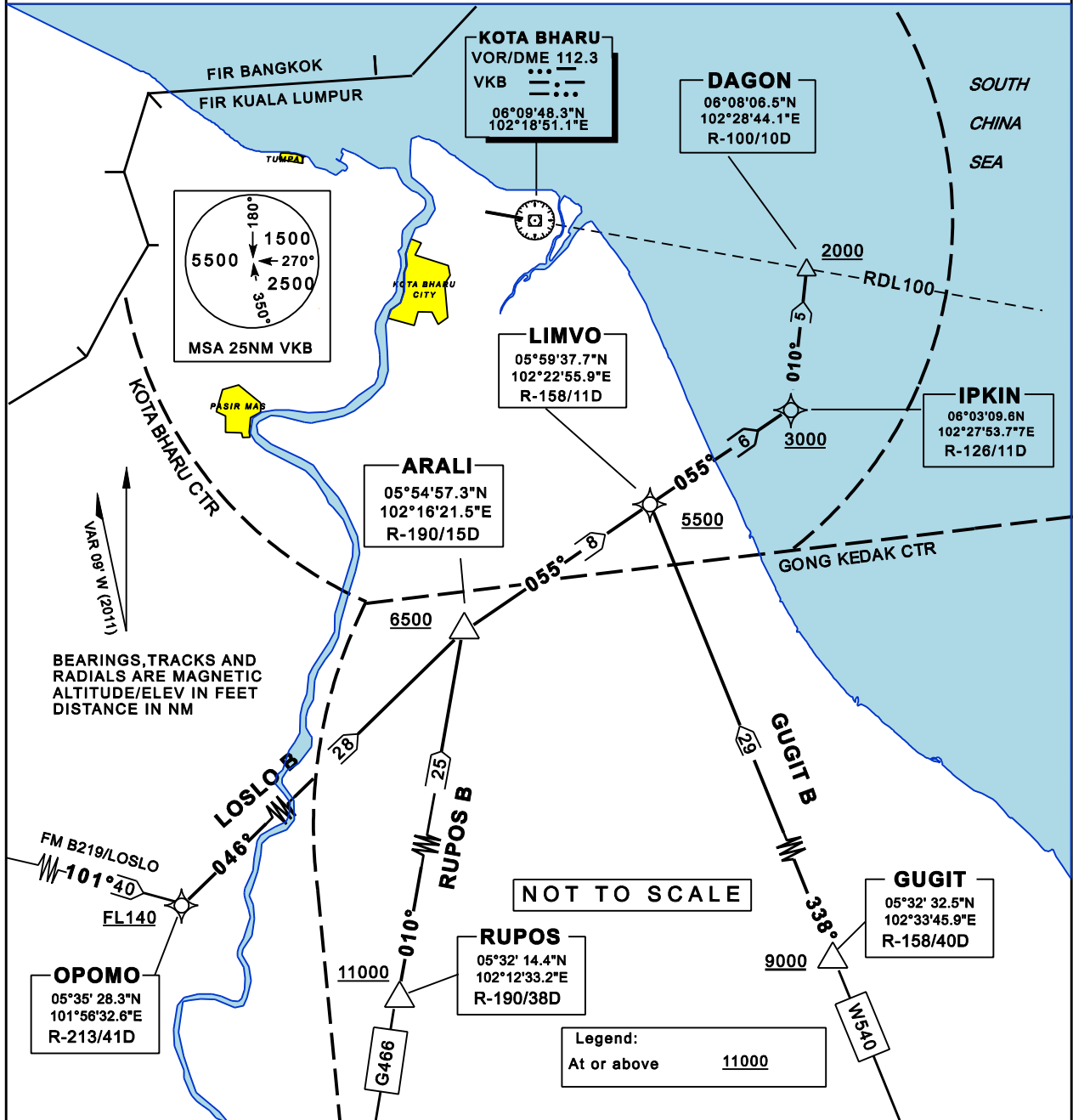
- Squawk 7600
- If under Pilot Navigation, maintain last assigned level for 3 minute, if no onward clearance is received, subsequently climb to comply with SID
- If under Radar vectoring, maintain vector for 2 minutes
- If below MSA, climb to MSA, then track to intercept cleared or previously assigned SID to destination

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

AERODROME ELEVATION 16FT
TRANSITION ALTITUDE 11000FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5MHZ
SMC 121.6MHZ

KOTA BHARU
SULTAN ISMAIL PETRA
RWY 28
GUGIT B RUPOS B
LOSLO B
(RNAV)



LOSLO BRAVO ARRIVAL

- FROM B219/LOSLO TRACK 101° TO OPOMO
- TURN LEFT 046° TO ARALI
- THEN 055° TO LIMVO THEN IPKIN
- TURN LEFT 010° TO INTERCEPT RDL100 VKB VOR

GUGIT BRAVO ARRIVAL

- FROM W540/GUGIT TRACK 338° TO LIMVO
- TURN RIGHT 055° TO IPKIN
- TURN LEFT 010° TO INTERCEPT RDL100 VKB VOR

RUPOS BRAVO ARRIVAL

- FROM G466/RUPOS TRACK 010° TO ARALI
- TURN RIGHT 055° TO LIMVO THEN TO IPKIN
- TURN LEFT 010° TO INTERCEPT RDL100 VKB VOR

COM FAILURE

- SET TRANSPONDER CODE 7600
- IF UNDER PILOT NAVIGATION, CONTINUE ON STAR AND LAND
- IF UNDER RADAR VECTORING- MAINTAIN VECTOR FOR 1 MIN;
- IF BELOW MSA CLIMB TO MSA THEN TRACK TO INTERCEPT CLEARED OR PREVIOUSLY ASSIGNED STAR AND LAND

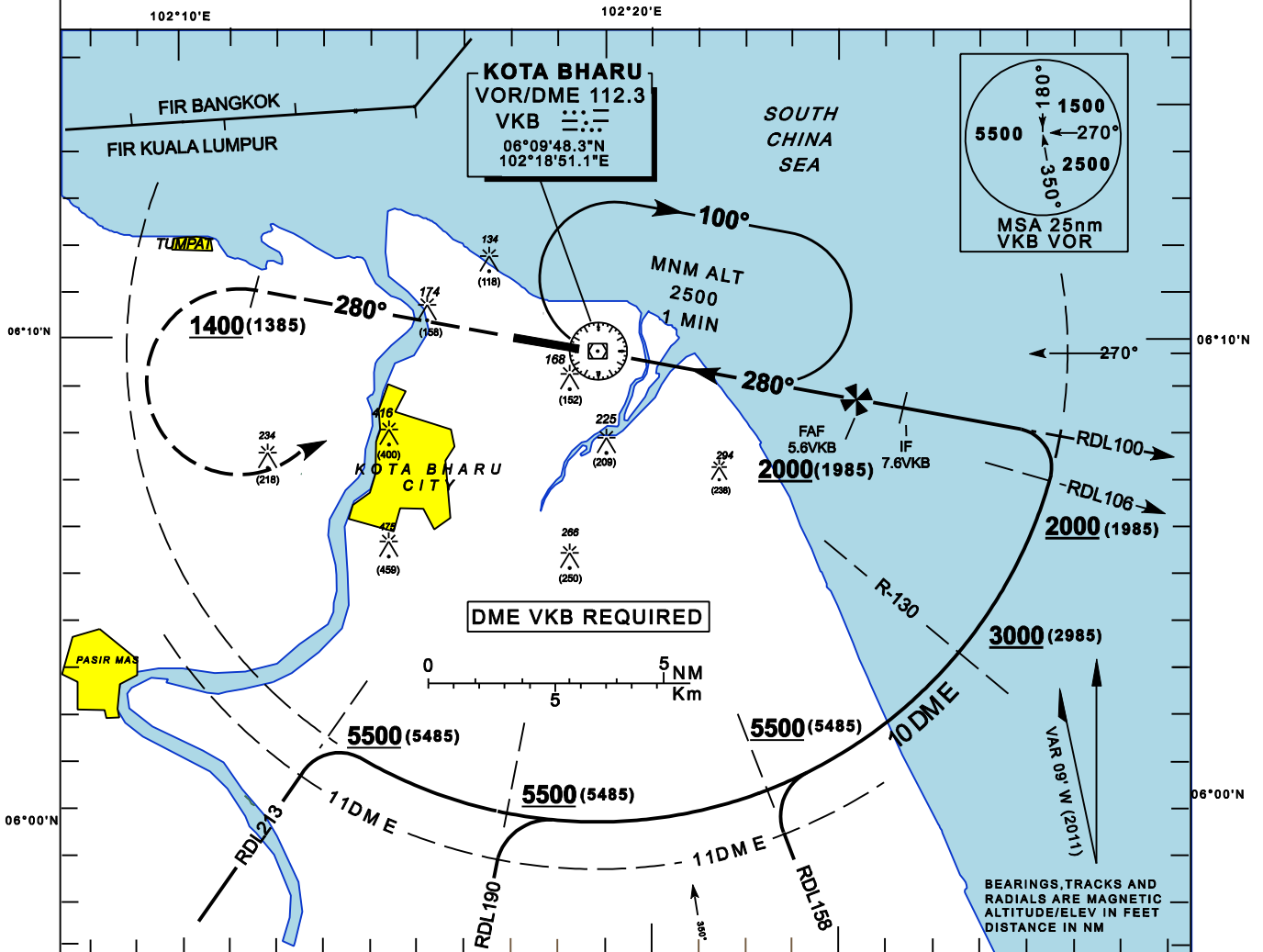
**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 16FT
HEIGHT RELATED TO
THR RWY 28 15FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5
SMC 121.6

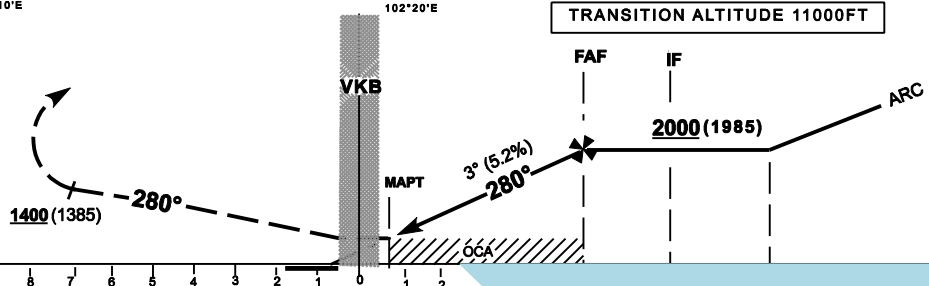
**KOTA BHARU
SULTAN ISMAIL PETRA**

**VOR z RWY28
(10 DME ARC)**



MISSED APPROACH
Climb straight ahead at 1400 feet turn left to VKB climbing 2500 feet or as directed by ATC

THR RWY28 ELEV 15FT
FROM VKB



OCA/H	A	B	C	D	
Straight-in App	420 (405) / 0.6D				
Dist by DME	5.6	4	3	2	1 0.6
ALT(3* App Path)	2000(1985)	1490(1475)	1175(1160)	860(845)	540(525) 420(405)
GS(kts)	70	90	120	150	180 210
5.2% Descend	366	474	631	790	964 1106

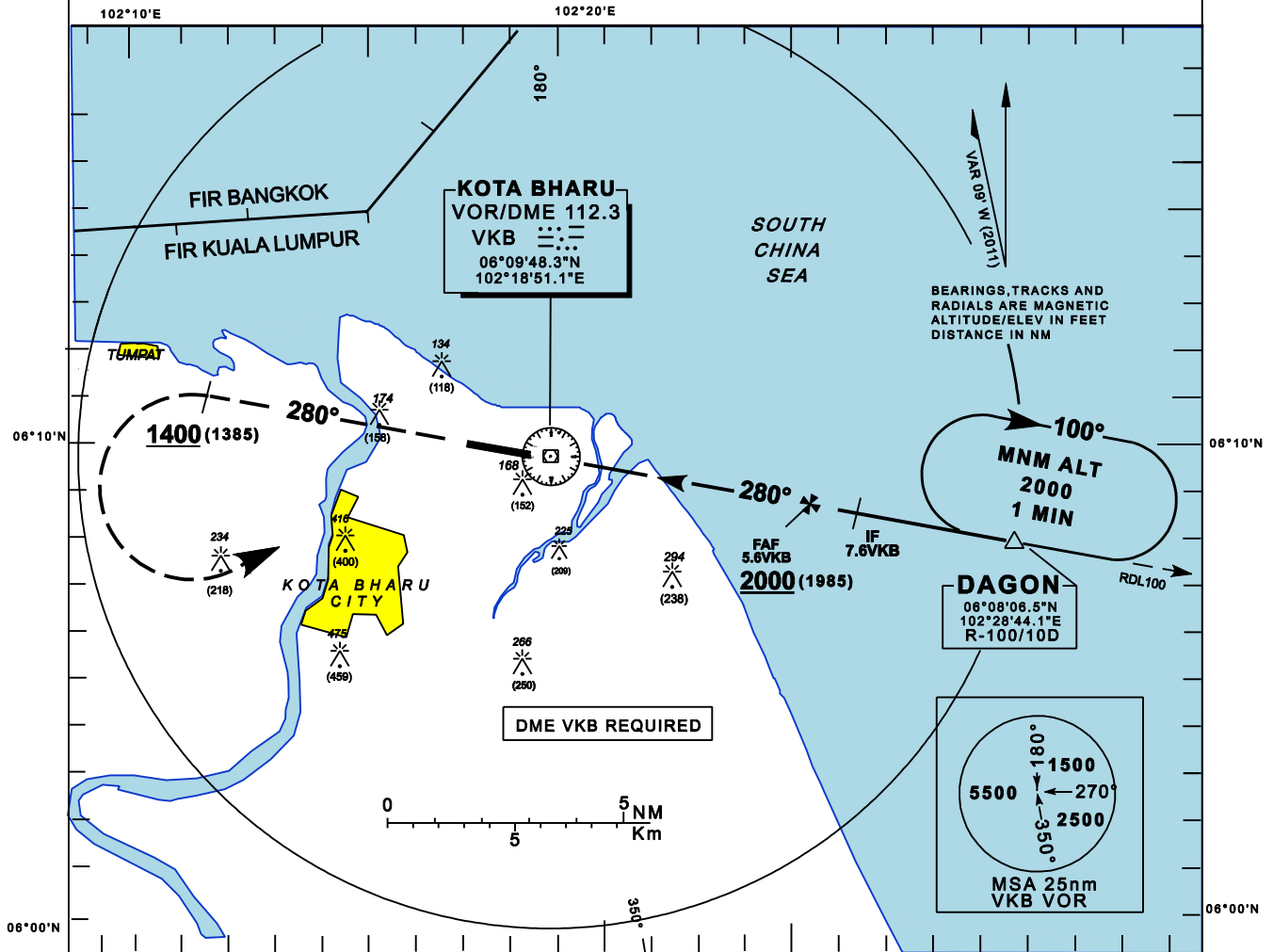
**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 16FT
HEIGHT RELATED TO
THR RWY 28 15FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5
SMC 121.6

KOTA BHARU
SULTAN ISMAIL PETRA

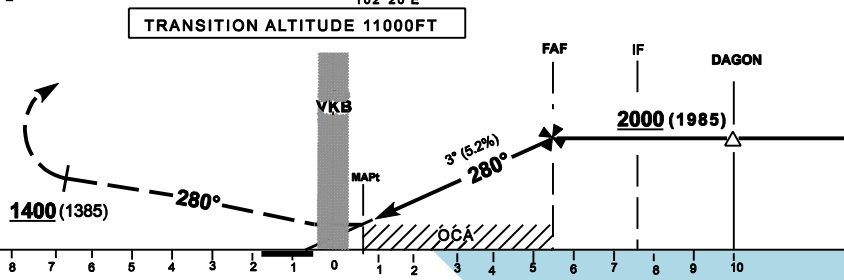
VOR X RWY28
(fm DAGON HOLD)



MISSED APPROACH
Climb straight ahead
at 1400 feet turn left to
DAGON HOLD
climbing 2000 feet
or as directed by ATC

THR RWY28 ELEV 15FT

FROM VKB



OCA/H	A	B	C	D		
Straight-in App	420 (405) / 0.6D					
Dist by DME	5.6	4	3	2	1	0.6
ALT(3° App Path)	2000(1985)	1490(1475)	1175(1160)	860(845)	540(525)	420(405)
GS(kts)	70	90	120	150	180	210
5.2% Descend	366	474	631	790	964	1106

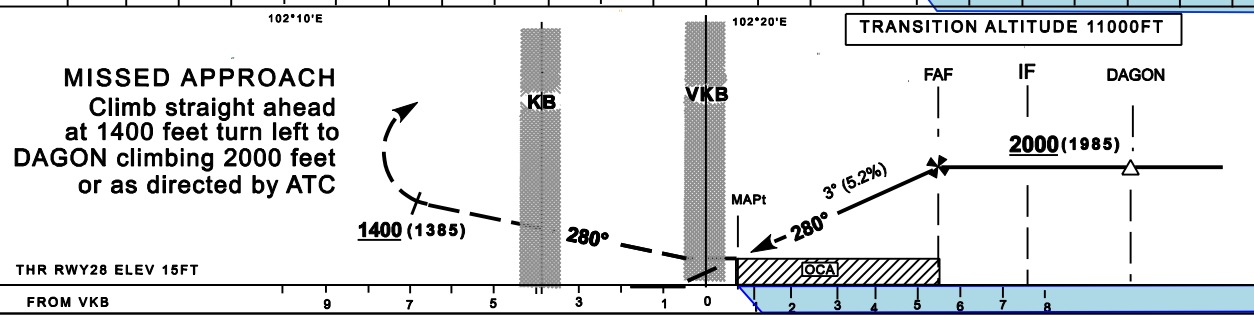
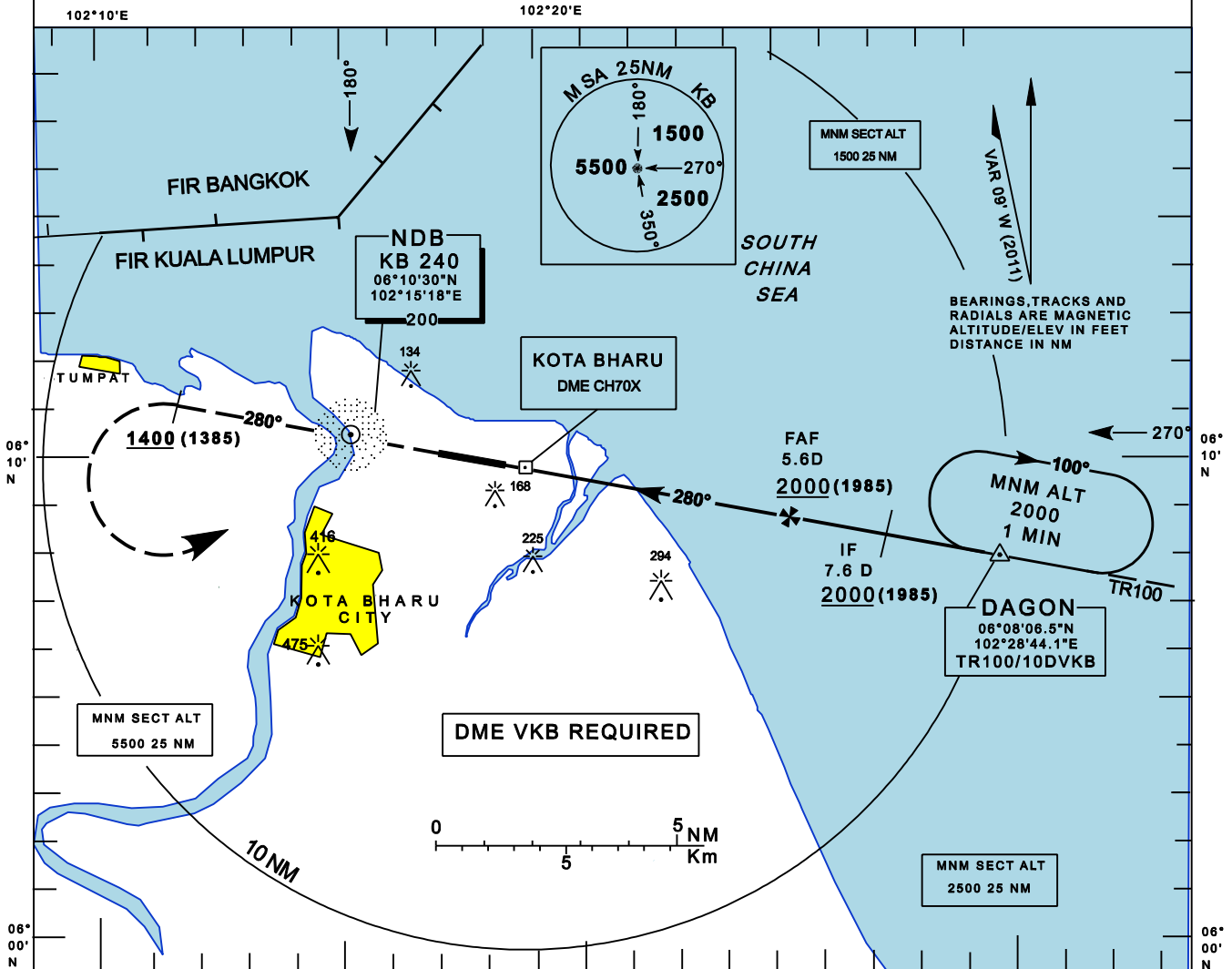
**INSTRUMENT
APPROACH
CHART - ICAO**

AERODROME ELEV 16FT
HEIGHT RELATED TO
THR RWY 28 15FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5
SMC 121.6

**KOTA BHARU
SULTAN ISMAIL PETRA**

**NDB RWY28
(FM DAGON HOLD)**



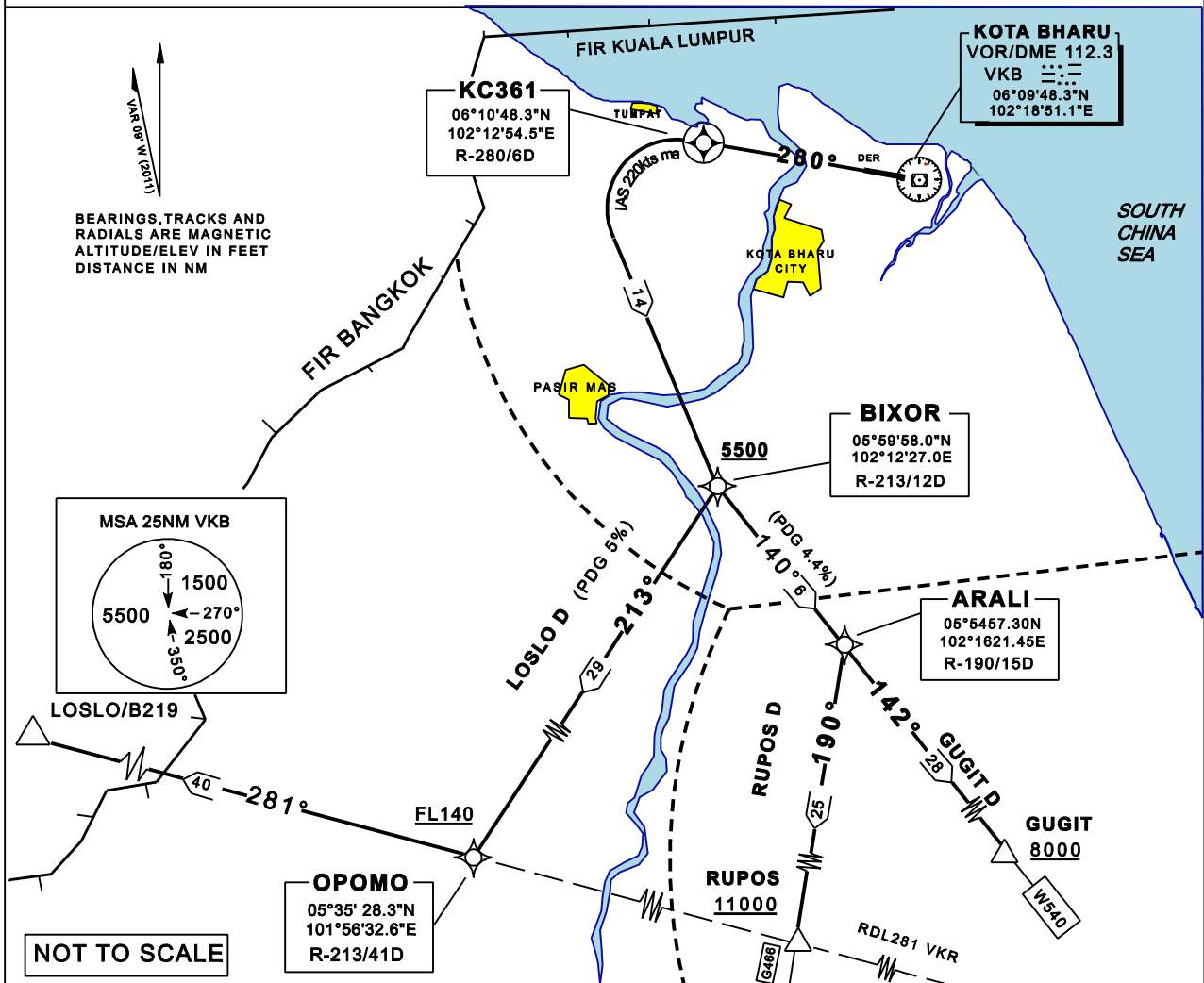
OCA/H	A	B	C	D		
Straight-in App	420 (406) / 0.6D					
Dist by DME	5.6	4	3	2	1	0.6
ALT(3° App Path)	2000(1985)	1490(1475)	1175(1160)	860(845)	540(525)	420(405)
GS(kts)	70	90	120	150	180	210
5.2% Descend	366	474	631	790	964	1106

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

AERODROME ELEVATION 16FT
TRANSITION ALTITUDE 11000FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5MHZ
SMC 121.6MHZ

KOTA BHARU
SULTAN ISMAIL PETRA
RWY 28
**LOSLO D RUPOS D
GUGIT D**
(RNAV)



RATE OF CLIMB		75	100	150	200	250	300
GND SPEED - KT							
GRADIENT	5.0%	380	506	760	1013	1266	1519
	4.4%	334	445	668	891	1114	1337

Climb on heading 280°
at KC361 Turn Left
IAS 220kts max in the initial turn

RUPOS DELTA DEPARTURE

PDG 4.4% until reaching 5500
Track Direct to BIXOR
Then 140° to ARALI then 190° to RUPOS/G466

GUGIT DELTA DEPARTURE

PDG 4.4% until reaching 5500
Track Direct to BIXOR
Then 140° to ARALI then 142° to GUGIT/
W540

LOSLO DELTA DEPARTURE

PDG 5% until reaching FL140
Track Direct to BIXOR
Then 213° to OPOMO then
Turn Right 281° to LOSLO / B219

Communication Failure

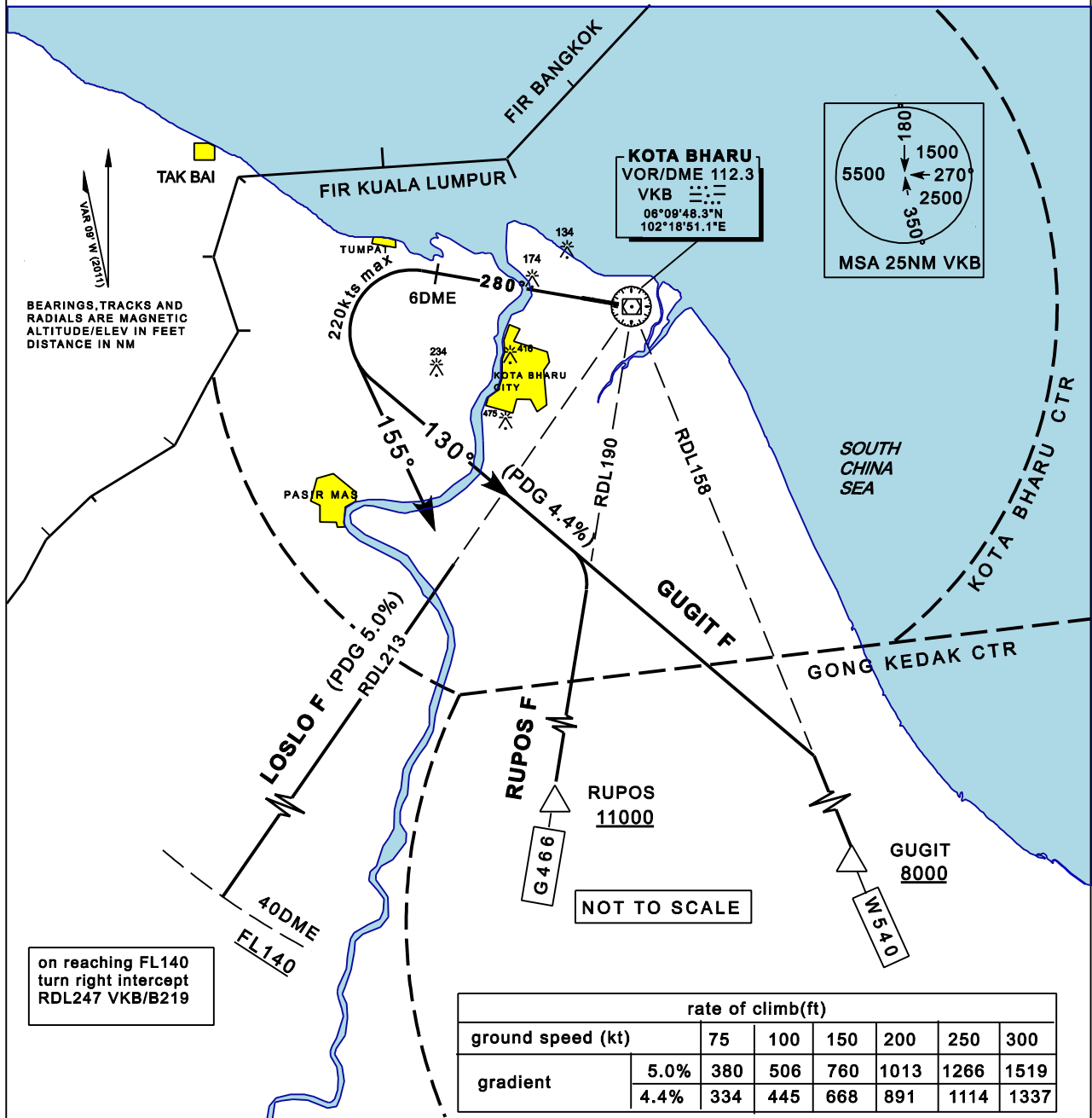
- Squawk 7600
- If under Pilot Navigation, maintain last assigned level for 3 minute, if no onward clearance is received, subsequently climb to comply with SID
- If under Radar vectoring, maintain vector for 2 minutes
- If below MSA, climb to MSA, then track to intercept cleared or previously assigned SID to destination

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

AERODROME ELEVATION 16FT
TRANSITION ALTITUDE 11000FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5MHZ
SMC 121.6MHZ

KOTA BHARU
SULTAN ISMAIL PETRA
RWY 28
GUGIT F RUPOS F
LOSLO F



on reaching FL140
turn right intercept
RDL247 VKB/B219

		rate of climb(ft)					
ground speed (kt)		75	100	150	200	250	300
gradient	5.0%	380	506	760	1013	1266	1519
	4.4%	334	445	668	891	1114	1337

Track 280° until 6DME
IAS 220kts initial turn

RUPOS FOXTROT DEPARTURE
Turn left 130° to intercept
RDL190 VKB VOR to RUPOS/ G466
PDG 4.4% until reaching 5500ft

LOSLO FOXTROT DEPARTURE
Turn left 155° to intercept RDL213 VKB VOR to reach FL140
or above by 40DME then turn right to intercept RDL247 VKB VOR to LOSLO /B219
PDG 5.0% until reaching FL140

GUGIT FOXTROT DEPARTURE
Turn left 130° to intercept
RDL158 VKB VOR to GUGIT/ W540
PDG 4.4% until reaching 5500

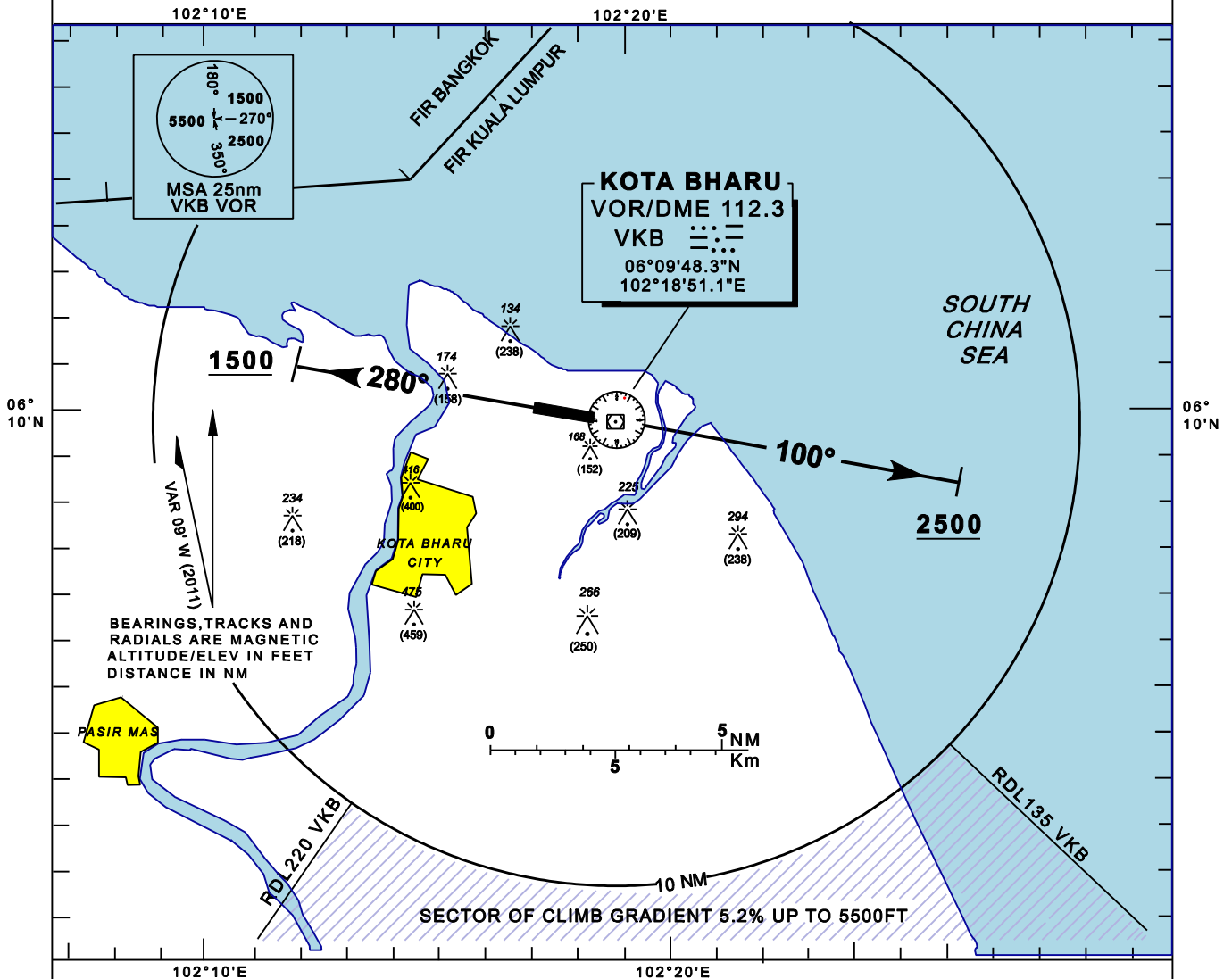
- Communication Failure
- Squawk 7600
 - If under Pilot Navigation, maintain last assigned level for 3 minute, if no onward clearance is received, subsequently climb to comply with SID
 - If under Radar vectoring, maintain vector for 2 minutes
 - If below MSA, climb to MSA, then track to intercept cleared or previously assigned SID to destination

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

AERODROME ELEV 16FT
TRANSITION ALTITUDE
11000FT

APP 120.85MHZ,
130.3MHZ
TWR 122.5
SMC 121.6

**KOTA BHARU
SULTAN ISMAIL PETRA
KOTA BHARU RADAR 1
RWY 10/28**



RATE OF CLIMB							
GND SPEED - KT	75	100	150	200	250	300	
GRADIENT	3.3%	250	334	501	668	835	1003
	5.2%	395	527	790	1053	1316	1580

RWY10

track heading 100°
on passing 2500FT turn to assigned heading
contact KOTA BHARU APPROACH when airborne

RWY28

track heading 280°
on passing 1500FT turn to assigned heading
contact KOTA BHARU APPROACH when airborne

Communication Failure:

immediately Squawk 7600
maintain assigned heading climb to MSA or last assigned level if higher
as applicable for 2 minutes, then climb to flight plan level and intercept flight plan track