
AIP SUPPLEMENT MALAYSIA

PHONE : 6-03-8871 4000
TELEX : PENAWA MA 30128
FAX : 6-03-8881 0530
AFTN : WMKKYAYS
COMM : AIRCIVIL
KUALA LUMPUR

AERONAUTICAL INFORMATION SERVICES
DEPARTMENT OF CIVIL AVIATION
NO. 27, PERSIARAN PERDANA
LEVEL 1-4, PODIUM BLOCK, PRECINCT 4,
62618 PUTRAJAYA
MALAYSIA

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02 AUG

AIRAC

KUALA LUMPUR FLIGHT INFORMATION REGION

**JOHOR BAHRU/ SENAI INTERNATIONAL AIRPORT
INSTALLATION OF NEW DVOR/DME RADIO NAVIGATION AID AT NEW
LOCATION, INTRODUCTION OF NEW INSTRUMENT APPROACH PROCEDURES, SIDs,
STARs, HOLDING AREAS AND REALIGNMENT OF AIRWAYS SECTORS BASED ON NEW
DVOR/DME NAVAID LOCATED AT NEW SITE.
(This AIP Supplement replaces AIP Supplement 09/2012)**

1. INTRODUCTION

- 1.1 A new DVOR/DME radio navigational aid VJB has been installed at Johor Bahru/Senai International airport and is located on a new site on the extended centerline of Runway 16 at 1000m from Threshold Runway 16.
- 1.2 The purpose of this AIP Supplement is to notify the aviation industry of the new location of the new DVOR/DME and the consequent revision of instrument approach procedures, holding areas, realignment of airways sectors anchored to the new DVOR/DME. Relevant information pertaining to the new navaid provided in this AIP Supplement is presented in similar ICAO format applicable for the Aeronautical Information Publication.
- 1.3 This AIP Supplement replaces AIP Supplement 09/2012 dated 14 June 2012 due to the following changes:
 - a) Para 4.3.1 text amended as STARs are not introduced for Runway 34
 - b) Para 4.7 line 3 "WMKJ AD2-23 AERODROME CHART - ICAO" is deleted.
 - c) Appendix A Waypoints. Coordinates for waypoint TANOL is corrected to read 014348.5N 1034319.9E
 - d) Appendix D9 - Instrument Approach Chart Rwy 16 "IF 8.5ME VJB" amended to read "IF 8.3DME VJB"

- e) Appendix D12 - Standard Departure Chart (RNAV) Rwy 16.
Chart withdrawn.
- f) Appendix D14 - Standard Departure Chart Rwy 34 (RNAV) Rwy 34.
Chart withdrawn.

2. LOCATION AND DETAILS OF NEW RADIO NAVIGATION AID

- 2.1 The new location and details of the DVOR/DME VJB that will replace the existing DVOR/DME VJR are as follows:-

Type of aid	ID	Frequency	Hours of operation	Co-ordinates WGS 84	DME Elevation
DVOR/DME	VJB	112.5 Mhz Ch. 72 x	H24	013950.4N 1033939.2E	DME antenna Elevation : 43.07m

3. REVISION OF TERMINAL AREA BOUNDARY AND REALIGNMENT OF AIR ROUTES IN TERMINAL AREA, CONTROL ZONE AND ADJUSTMENT OF HOLDING AREAS AND ATC SURVEILLANCE MINIMUM ALTITUDE AREAS

- 3.1 The northern boundary of the Terminal area is revised and the existing end sectors of air routes anchored on the existing DVOR/DME VJR are realigned to the new DVOR/DME VJB.
- 3.2 The existing VOR/DME fix holding areas remain at current positions with holding radials and distances adjusted to the new DVOR/DME. A new overhead VJB holding area is established over the new DVOR/DME position.

Details are as follows:-

Holding Areas	INBD TR (° MAG)	Direction	Max IAS (kts)	MNM/MAX HLDG LVL (FT MSL)	TIME
KARTU 015400.3N 1033431.8E RDL 340/15DME VJB	160	Left	220	10,000 5000	1 min
LAPUG 014109.2N 1032443.8E RDL 275/15DME VJB	095	Left	220	10,000 5000	1 min
VJB VOR/DME 013950.4N 1033939.2E (Rwy 16 / Rwy 34)	160	Left	190	4500 3500	1min

- 3.3 The enroute holding area on air route W534 anchored on VJB is also adjusted as follows:-

HLDG ID / FIX / WPT COORDINATES	INBD TR (° MAG)	Direction Of PTN	MAX IAS (KTS)	MNM-MAX HLDG LVL FL/FT(MSL)	TIME (MIN) DIST OUBD	Controlling unit and frequency
1	2	3	4	5	6	7
TOPOR 014412N 1025330E R-275/46.5DME VJB	095	Left	220	FL 140 7000FT	1min	Lumpur Control 123.75MHz 132.75MHz

- 3.4 Details of the changes to Terminal area, ATC Surveillance Minimum Altitude areas, Control zone and holding areas charts and realignment of airway tracks are shown as follows:-

- APPENDIX B1 - Johor Terminal Area
- APPENDIX D1 - Enroutes and Terminal Areas Holdings
- APPENDIX D2 - Johor Control Zone
- APPENDIX D3 - Johor TMA and Holding Areas
- APPENDIX D4 - ATC Surveillance Minimum Altitude

4. INSTRUMENT FLIGHT PROCEDURES

4.1 REVISION OF INSTRUMENT APPROACH PROCEDURES

- 4.1.1 The existing instrument approach procedures are revised and based on the new position of the new DVOR/DME and are shown as follows:-

- APPENDIX D5 - ILS z / LOC z RWY 16 (From STAR)
- APPENDIX D6 - ILS y / LOC y RWY 16
- APPENDIX D7 - ILS x / LOC x RWY 16 (From Overhead VJB VOR)
- APPENDIX D8 - ILS w / LOC w RWY 16 (From Overhead JR NDB)
- APPENDIX D9 - VOR z RWY 16
- APPENDIX D10 - VOR y RWY 16 (From Overhead VJB VOR)
- APPENDIX D11 - NDB z RWY 16 (From Overhead JR NDB)

4.2 REVISION OF STANDARD INSTRUMENT DEPARTURE (SIDs)

- 4.2.1 The existing SIDs for both Rwy 34 and Rwy 16 are revised and adjusted to the new DVOR/DME. New SIDs based on RNAV are introduced.

These are shown as follows:-

- APPENDIX D12 - SID (VOR/DME RWY 16)
- APPENDIX D13 - SID (VOR/DME RWY 34)
- APPENDIX D14 - JOHOR RADAR TWO DEPARTURE RWY16/34

4.3 REVISION OF STANDARD ARRIVAL ROUTE (STARs)

4.3.1 New Standard Arrival routes (STARs) based on the new DVOR/DME and RNAV for Rwy 16 are introduced.

These are shown as follows:-

APPENDIX D15 - STAR (RNAV) RWY 16

APPENDIX D16 - STAR (VOR/DME) RWY 16

4.4 REVISION OF VFR LANES

4.4.1 The VFR Lanes C and D to the east via Kota Tinggi have been revised. This is shown as follows:

APPENDIX B7 and B8 – VFR LANES

4.5 WITHDRAWAL OF AIR ROUTE W404 AND INTRODUCTION OF NEW AIR ROUTE W651

4.5.1 Air route W404 from JR NDB to KONG KONG NDB has been withdrawn and a new air route from VJB VOR to KONG KONG NDB is introduced.

Details are as follows:

Route Designator Significant Points Coordinates	Track (MAG) DISTANCE (NM)	Upper Limits Lower Limits Minimum Flight Altitude	Lateral Limits (NM)
W 651			
▲ JOHOR BAHRU DVOR/DME (VJB) 013950.4N 1033939.2E	<u>114°</u> 294°	<u>FL 200</u> 2 500 FT ALT	3
▲ KONG KONG NDB 013118N 1035924E	21.4 NM	MNM 3 000 FT	

4.6 REALIGNMENT OF SECTORS OF AIR ROUTES R325, B466 A457, W534, A224

4.6.1 Significant changes to Terminal area, airways route designator points, tracks and distances, and VFR Lanes are shown in tables APPENDIX B-1 to B-8.

4.7 The following charts pertaining to Johor Bahru/Senai International airport in AIP Malaysia are superseded and withdrawn :

WMKJ AD 2 - 47 JOHOR CONTROL ZONE

WMKJ AD 2 - 47.1 JOHOR TMA AND HOLDING AREAS

WMKJ AD 2 - 49 ATC SURVEILLANCE MINIMUM ALTITUDE CHART
JOHOR BAHRU

WMKJ AD 2 - 51 STANDARD DEPARTURE CHART INSTRUMENT
(SID) – ICAO RWY 16

WMKJ AD 2 - 52 STANDARD DEPARTURE CHART INSTRUMENT
(SID) – ICAO RWY 34

WMKJ AD 2 - 53	STANDARD DEPARTURE CHART INSTRUMENT (SID) – ICAO STANDARD RADAR DEPARTURES RWY 16 / 34
WMKJ AD 2 - 60	STANDARD ARRIVAL CHART INSTRUMENT(STAR) - ICAO RNAV (VOR/DME) RWY 16
WMKJ AD 2 - 61	STANDARD ARRIVAL CHART INSTRUMENT(STAR) - ICAO RWY 16
WMKJ AD 2 - 62	STANDARD ARRIVAL CHART INSTRUMENT(STAR) - ICAO RNAV (VOR/DME) RWY 34
WMKJ AD 2 - 63	STANDARD ARRIVAL CHART INSTRUMENT(STAR) - ICAO VOR/DME RWY 34
WMKJ AD 2 - 80	INSTRUMENT APPROACH CHART – ICAO ILS z / LOC RWY 16 (FROM STAR)
WMKJ AD 2 - 81	INSTRUMENT APPROACH CHART – ICAO ILS y / LOC
WMKJ AD 2 - 82	INSTRUMENT APPROACH CHART-ICAO VOR RWY 16 CAT A/B/C/D
WMKJ AD 2 - 84	INSTRUMENT APPROACH CHART- ICAO VOR RWY 34 (From Radar Vector)

4.8 The following affected charts in AIP Malaysia will be updated through AIP Amendment :

ENR 2.1 – 17	AIRSPACE DIVISION KUALA LUMPUR/ SINGAPORE AREAS CONTROL CENTRES
ENR 2.1 – 29	JOHOR BAHRU TMA
ENR 3.6 – 3	ENROUTES AND TERMINAL AREA HOLDINGS
ENR 6 - 3	AIR TRAFFIC SERVICES – INDEX CHART
ENR 6 - 3.1	AIR TRAFFIC SERVICES ROUTES (KUALA LUMPUR SOUTH)
ENR 6 – 5	PROHIBITED , RESTRICTED, AND DANGER AREAS – KUALA LUMPUR

5. WAYPOINTS

5.1 New waypoints and changes to waypoint radials / distances and coordinates are shown in APPENDIX A

6. IMPLEMENTATION

6.1 This AIP Supplement replaces AIP Supplement 09/2012 dated 14 June 2012. This replacement AIP Supplement and relevant Charts and tables will become effective on 23 August 2012 when the new DVOR/DME VJB radio navigational aid is commissioned for operations. A trigger NOTAM will be issued notifying the effective date of implementation of the new NAVAID and cessation of operation of the old VJR VOR/DME.

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

1. LIST OF WAYPOINTS

1.1 The following list contains the waypoints related to SID, RNAV, STAR and IAP Procedures at Johor Bahru / Senai International airport:-

NO	ID	REFERENCE FM VJB DVOR/DME	LATITUDE(N)	LONGITUDE(E)	REMARKS
1	MIKIR	RDL319/25DME	015848.0N	1032316.3E	
2	SABKA	RDL296/25DME	015051.1N	1031712.7E	
3	LAPUG	RDL275/15DME	014109.2N	1032443.8E	
4	GOBOX	RDL309/11.9DME	014723.1N	1033023.5E	
5	KARTU	RDL340/15DME	015400.3N	1033431.8E	
6	RURIM	RDL308/25DME	015518.3N	1031958.6E	
7	UBKOG	RDL114/10.1DME	013542.7N	1034852.0E	
8	MARNO	RDL010/11.8DME	015133.5N	1034142.4E	
9	IGRIM	RDL016/25DME	020359.4N	1034632.2E	
10	GITOR	RDL275/21.6DME	014143.8N	1031809.5E	
11	LAGEG	RDL263/16.1DME	013752.0N	1032341.7E	
12	GITUN	RDL 104/6.2DME	013819.8N	1034540.3E	
13	ASENA	RDL322/14.9DME	015141.2N	1033027.3E	
14	AKUNI	RDL210/10.4DME	013049.4N	1033428.8E	
15	DABMO	RDL160/8.6DME	013143.1N	1034235.4E	
16	MARNU	RDL260/5.0DME	013858.0N	1033444.2E	
17	SABUS	RDL340/10.3DME	014931.9N	1033608.9E	
18	ADKEV	RDL340/5.3DME	014450.7N	1033750.6E	
19	BIDRO	RDL340/5.3DME	014448.0N	1033750.8E	
20	TANOL	RDL-043/5.4DME	014348.5N	1034319.9E	
21	MASBO	RDL-296/52.1DME	020247.9N	1025250.7E	
22	MESOG	RDL-308/34.3DME	020102.7N	1031240.3E	
23	REDUK	RDL-319/52.9DME	021957.3N	1030458.9E	
24	AROSO	RDL-332/32.8DME	020846.0N	1032421.0E	
25	THR 16	RDL160/0.54DME	013919.8N	1033950.3E	DER 34
26	THR 34	RDL160/2.59DME	013723.6N	1034032.6E	DER 16

ENR 2.1 - 2

Name and Lateral Limits	Vertical Limits	Unit Providing Services	Call Sign	FREQ	Remarks
	Class of Airspace (see ENR 1.4-1)		Languages	Purposes	
			HR		
1		2	3	4	5
JOHOR TERMINAL AREA Area bounded by 013022N 1033437E, 014404N 1031507E, thence along the arc 25NM radius centred on VJB, thence along western bdry of B469, thence along northern bdry W401 to 013022N 1034337E.	Within lateral limits of CTR: 3 000FT Alt-FL245 Elsewhere: 1 500ft Alt-FL 245	Johor Approach	Johor Approach English 2230-1600	124.7MHz	Also the controlling authority for Airspace below SECT 1 and 2 (Ref ENR 3.1) i) Away W401, II) South of 50 DME SJ and Iii) South of VMR DVOR/DME

ENR 3.1 - 1

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper Limits	Lateral Limits (NM)	Cruising levels		Remarks Controlling Units
		Lower limits Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)		Odd	Even	
1	2	3	4	5		6
A224						
▲ JOHORE BAHRU DVOR/DME (VJB) 013950.4N 1033939.2E ▲ MERSING DVOR/DME (VMR) 022318N 1035218E	<u>016°</u> 196° 45.3NM	<u>FL 460</u> 5 500 FT ALT MNM 6 000FT	10			Controlling Authority: Johore Approach: 124.7Mhz

CHANGES : Air route A224 track alignment from VJR to VMR has been realigned from VJB to VMR. New track is 016° / 196° and distance 45.3 NM.

ENR 3.1-8

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	<u>Upper Limits</u> Lower limits Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)	Lateral Limits (NM)	Cruising levels		Remarks Controlling Units
				Odd	Even	
1	2	3	4	5		6
G579						
▲ JOHORE BAHRU DVOR/DME (VJB) 013950.4N 1033939.2E ▲ JAYBEE NDB 013000N 1034242E ▲ SINJON DVOR/DME (SJ) 011323.9N 1035117.8E	<u>343°</u> 163° 10.3NM <u>332°</u> 152° 18.6NM	<u>FL 460</u> 6 500 FT ALT MNM 7 000FT <u>FL 460</u> 2 000 FT ALT MNM 3 000 FT	3			Controlling Authority: Within Johor Bahru TMA - Johor Approach 124.7Mhz

CHANGES : Air route G 579 track alignment from VJR to JAYBEE NDB realigned from VJB to JAYBEE NDB. New track is 343° / 163° and distance 10.3 NM.

ENR 3.1 - 2

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper Limits/Lower limits Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)	Lateral Limits (NM)	Cruising levels		Remarks Controlling Units	
				Odd	Even		
1	2	3	4	5		6	
A457							
▲ TAMOS 063146N 1002341E ▲ ALOR STAR DVOR/DME (VAS) 061108.4N 1002349.2E ▲ PENANG DVOR/DME (VPG) 051646.7N 1001537.4E △ TEPUS 041013N 1004533E △ SUKAT 033525N 1010112E △ BILIK 032043N 1010739E △ AGOSA 030841N 1011309E ▲ KUALA LUMPUR DVOR/DME (VKL) 024328.0N 1014417.0E △ SAPAT 023210N 1020230E △ ENKOL 022222N 1021816E △ GUPTA 020948N 1023830E △ MASBO 020247.9N 1025250.7E ▲ JOHORE BAHRU DVOR/DME (VJB) 013950.4N 1033939.2E	360° 180° 21NM	FL 460 6 500 FT ALT MNM 7 000FT	20	↓	↑	Flight planning guide and Uni-Directional Routing System (Refer ENR 1.9-9 - Enr 1.9-15) Controlling Authority: VJB –VKL: Kuala Lumpur ACC (P) 123.75 MHz (S) 132.75 MHz VKL-TAMOS:Kuala Lumpur ACC (P)132.8MHz (S) 133.55MHz (Within Butterworth TMA – Butterworth Approach (P) 125.8MhZ, (S) 128.5MHz.	
	009° 189°						
	55NM	335° 73NM 335° 38NM 335° 16NM 335° 13NM 309° 40NM 302° 21NM 302° 19NM 302° 24NM	20				Tolerances of Airways infringe WMD 222 Asahan (activated by NOTAM) – Military activities.
	335° 73NM						
	335° 38NM						
	335° 16NM						
	335° 13NM						
	309° 40NM						
	302° 21NM						
	302° 19NM						
	302° 24NM						
	296° 15.7NM	FL 460 4 500 FT ALT MNM 5 000 FT					
	296° 52.1NM						
						↑	

CHANGES: Air route A457 track alignment from sector GUPTA to VJB has been realigned from GUPTA to VJB. New waypoint MASBO replaced KASRI. New track is 296° and distance GUPTA to MASBO 15.7NM , MASBO to VJB 52.1NM.

ENR 3.1 - 5

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper Limits Lower limits Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)	Lateral Limits (NM)	Cruising levels		Remarks Controlling Units	
				Odd	Even		
1	2	3	4	5		6	
B466							
▲ JOHORE BAHRU DVOR/DME (VJB) 013950.4N 1033939.2E △ MESOG 020102.7N 1031240.3E △ GEMAS 023200N 1023150E ▲ BATU ARANG DVOR/DME (VBA) 031929.3N 1012724.9E △ SUKAT 033525N 1010112E ▲ GUNIP 042953N 0993150E ▲ TASEK (FIR BDRY) 051529N 0981756E △ BOSTI 055059N 0971957E ▲ TOSOK (FIR BDRY) 055959N 0965957E ▲ ANOKO (FIR BDRY) 070810N 0942458E	308 ° 34.3 NM	<u>FL 460</u> 4 500 FT ALT MNM 5 000FT	20		↓	10 min longitudinal separation: Flight Planning : Westbound flight planning permitted subject to Uni- Directional Routing System.(Refer ENR 1.9 -9 - ENR 1.9-15) Flight planning not permitted between route segment VJB and GEMAS	
	308° 51.2NM	<u>FL 460</u> 11 500 FT ALT MNM FL 130					
	306° 79.9NM						
	<u>301°</u> 121° 30.6NM	<u>FL 460</u> 8 500 FT ALT MNM 9 000 FT	*		↓	East bound flight planning from VBA to VJB not permitted. Controlling Authority : VJB - A/VKL-Kuala Lumpur ACC (P) 123.75 MHz (S) 132.75 MHz (below FL 190 within Kuala Lumpur TMA – Lumpur Approach North 124.2 MHz) A/VKL – GUNIP- Kuala Lumpur ACC (P) 132.8MHz, (S) 133.55 MHz GUNIP – ANOKO : Kuala Lumpur ACC (P) 133.4MHz, (S) 132.55 MHz	
	<u>301°</u> 121° 104.5NM						
	<u>302°</u> 122° 86.6NM						
	<u>302°</u> 122° 68NM	<u>FL 275</u> 8 500 FT ALT HIGHEST USABLE LEVEL FL 270 MNM 9 000 FT	100	↑		* 5NM from overhead VBA DVOR/DME funneling out at 5° either side of centreline to BOSTI, then 50 NM either side of centreline until Kuala Lumpur / Chennai FIR BDRY	
	<u>294°</u> 144° 21.8NM						
	<u>294°</u> 144° 168.5N						

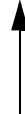
CHANGES: Air route B466 track alignment from sector VJR to GEMAS has been realigned from VJB to Gemas. New waypoint MESOG replace TERUS. New track is 308° and distance VJB to MESOG 34.3NM, MESOG to GEMAS 51.2NM.

ENR 3.1-11

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper Limits Lower limits Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)	Lateral Limits (NM)	Cruising levels		Remarks Controlling Units
				Odd	Even	
1	2	3	4	5		6
R 325						
▲ DUBAX (FIR BDRY) 062548N 1000749E ▲ ALOR STAR DVOR/DME (VAS) 061108.4N 1002349.2E △ IPOH DVOR/DME (VIH) 043422.9N 1010537.0E △ ANSON 040424N 1013219E △ LATUK 025516N 1023346E △ REDUK 021957.3N 1030458.9E ▲ JOHOR BAHRU DVOR/DME (VJB) 013950.4N 1033939.2E	<u>133°</u> 313°	<u>FL 460</u> 9 500FT ALT	20			10 min longitudinal separation Between RNAV-equipped aircraft applying Mach Number Technique. Other aircraft – 15 min longitudinal separation. No Pre Departure Coordination (No PDC) arrangement: Flights departing from WMSA / WMKK via A457/R325 or A457/ B579 will be cleared to FL 280. Flight planning not allowed on R325 route segment between VIH and VJB Controlling Authority: DUBAX-ANSOM-Kuala Lumpur ACC : (P) 132.8 MHz, (S) 133.55MHz. ANSOM-A/VBA-Kuala Lumpur ACC: (P) 134.25MHz, (S) 129.75MHz. A/VBA-LATUK-Kuala Lumpur ACC: (P) 132.6MHz, (S) 133.65MHz, Latuk-VJB : Kuala Lumpur ACC (P) 123.75MHz, (S) 132.75MHz (Within Butterworth Approach (P) 125.8 MHz, (S) 128.5MHz, within Johor Bahru TMA – Johor Approach 124.7 MHz)
	22NM	MNM 10 000 FT				
	<u>157°</u> 337°	<u>FL 460</u> 8 500FT ALT				
	105NM	MNM 9 000 FT				
	<u>138°</u> 318°	<u>FL 460</u> 9 500 FT ALT				
	40NM	MNM 10 000 FT				
	<u>138°</u> 318°					
	92NM					
	<u>139°</u> 319°	<u>FL 460</u> 11 500 FT ALT				
	46.9NM	MNM FL 130				
<u>139°</u> 319°	<u>FL 460</u> 5 500 FT ALT					
52.9NM	MNM 6 000 FT					

CHANGES : Air route R325 track from sector VJR to LATUK has been realigned from VJB to LATUK. New waypoint REDUK replaces DAMAL. New track is 139° / 319° and distance VJB to REDUK 52.9NM, REDUK to LATUK 46.9NM.

ENR 3.1-13

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	<u>Upper Limits</u> Lower limits Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)	Lateral Limits (NM)	Cruising levels		Remarks Controlling Units
				Odd	Even	
1	2	3	4	5		6
W 651						
▲ JOHORE BAHRU DVOR/DME (VJB) 013950.4N 1033939.2E ▲ KONG KONG NDB 013118N 1035924E	114° 294° 21.4NM	FL 200 2 500 FT ALT MNM 3 000FT	3			

CHANGES: Air route W404 withdrawn. New air route W651 aligned from VJB to KONG KONG. New track is 114° / 294° and distance 21.4 NM.

ENR 3.1-19

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper Limits Lower limits Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)	Lateral Limits (NM)	Cruising levels		Remarks Controlling Units
				Odd	Even	
1	2	3	4	5		6
W534						
△ TOPOR 014412N 1025330E ▲ JOHORE BAHRU DVOR/DME (VJB) 013950.4N 1033939.2E	<u>095°</u> 275° 46.5NM	<u>FL 460</u> 4 500 FT ALT MNM 5 000FT	8	↓		Controlling Authority: Kuala Lumpur ACC : (P) 123.75MHz (S) 132.75MHz (Within Johor Bahru TMA- Johor Approach124.7Mhz)

CHANGES : Air route W534 track alignment from VJR to TOPOR has been realigned from VJB to TOPOR. New track is 095° / 275° and distance 46.5 NM.

9. VFR LANE SYSTEM – JOHOR BAHRU CONTROL ZONE AND TMA

Lane Description

VFR LANE ALPHA : Coastal – not above 3000FT – Benut – 1500FT – Kulai Tol Plaza – University Technology Malaysia (UTM)

VFR LANE BRAVO: Inland – not above 3000 FT – Simpang Renggam – 1500 FT – Kulai Tol Plaza – University Technology Malaysia (UTM)

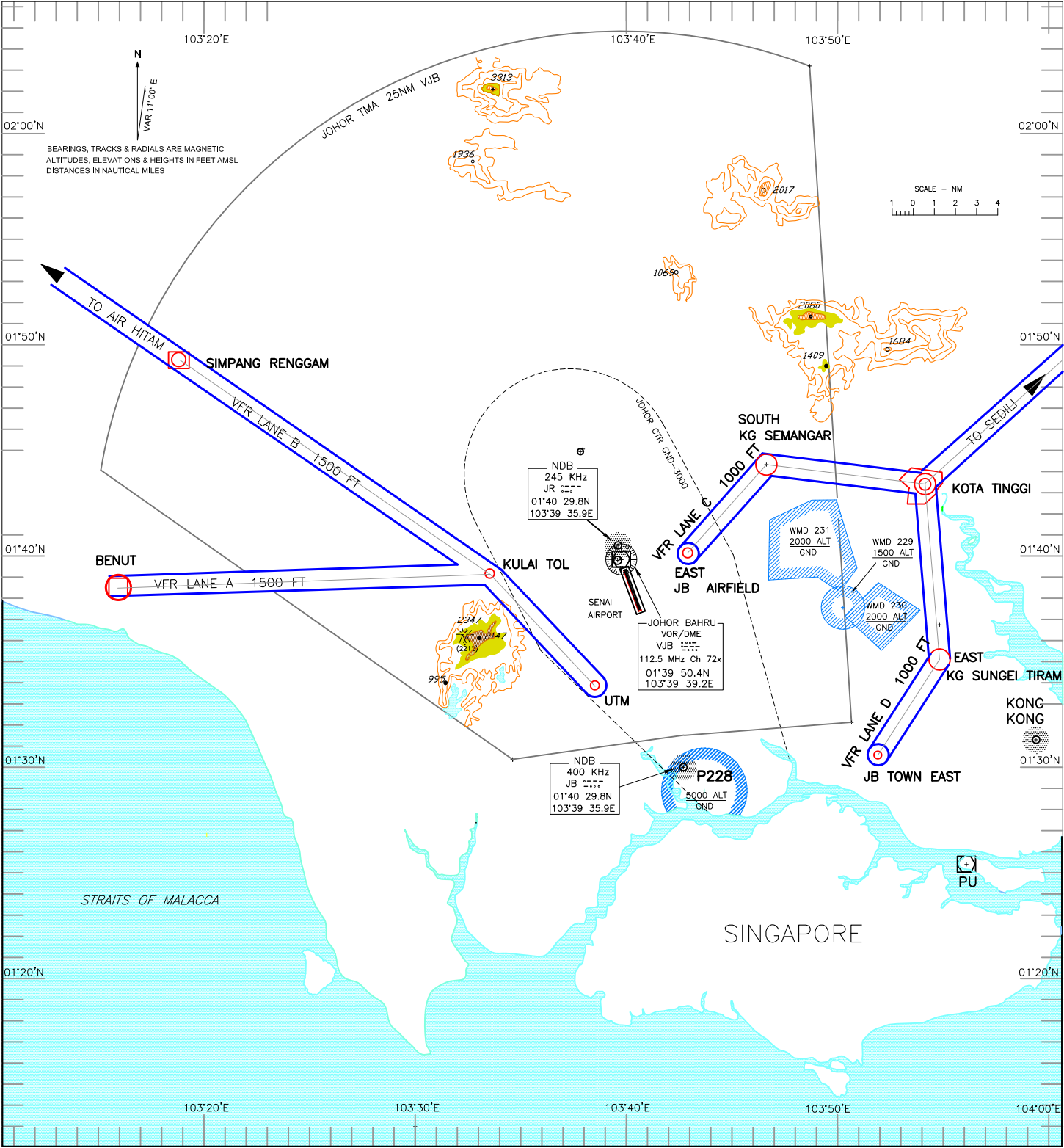
VFR LANE CHARLIE: Kpg. Kuala Sedili Besar – 1000 FT – Kota Tinggi- 1000 FT – Kg. Semangor – 1000FT- East of Johor Bahru airfield.

VFR LANE DELTA: JB Town East – 1000 FT – East Kg. Sg. Tiram- 1000 FT – Kota Tinggi – 1000 FT – East of Johor Bahru Airfield.

VFR Routes Coordinates

	Geographical Position	Coordinates (WGS 84)
I	UTM Mosque	013333N 1033815E
li	Benut	013839N 1031534E
lii	Kulai Tol Plaza	013900N 1033318E
Iv	East of Johor Bahru Airfield	014005N 1034259E
V	Kota Tinggi Bridge	014344N 1035406E
Vi	East of Kg. Sg. Tiram	013500N 1035500E
Vii	East of Johor Bahru Town	013014N 1035154E
Viii	South of Kg. Semangar	014430N 1034700E
Ix	Kpg. Sedili Besar	015536N 1040658E
X	Spg. Renggam Town	014940N 1031834E
Xi	Air Hitam	015552N 1031033E
xii	Yong Peng	020102N 1030347E

JOHOR TMA VISUAL FLIGHT RULE (VFR) LANES



ENR 3.6-2

HLDG ID/FIX/WPT COORDINATES	INBD TR (ú MAG)	Direction Of PTN	MAX IAS (KTS)	MNM – MAX HLDG LVL FL/FT(MSL)	TIME(MIN) DIST OUBD	Controlling unit and frequency
1	2	3	4	5	6	7
TOPOR R-275 / 46.5DME VJB 014412N 1025330E	095°	Left	220	7 000FT-FL140	1 min	Lumpur Control 123.75MHz 132.75MHz

CHANGES : TOPOR LO holding fix name changed to TOPOR. Inbound track changed to 095° .Holding IAS 220 KTS.

ENR 4.1-1

Name of Station (VOR/VAR)	ID	Frequency	HOURS of Operation	Coordinates	ELEV DME Antenna	Remarks
1	2	3	4	5	6	7
KUALA LUMPUR FIR						
JOHOR BAHRU DVOR/DME	VJB	112.5 MHz CH 72 X	H 24	013950.4N 1033939.2E	43.07M	

WMKJ AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid	ID	Frequency	Hours of operation	Coordinates	DME Elevation	Remarks
1	2	4	5	6	7	8
RWY 16 ILS/LOC GP/DME	IJB	109.9 MHz 333.8 MHz CH 36 X	H24	013714.8N 1034035.8E 013909.7N 1033958.1E	- -	Hgt of aerial 3.2M. Back beam not flyable Hgt of aerial 14.5M. Glide Slope 3°.
NDB	JR	245 KHz		014024.5N 1033927.8E	-	168° MAG / 1.2NM from THR RWY 16.
NDB	BP	276 KHz		015159.8N 1025600.2E	-	80W
NDB	JB	400KHz		012959.8N 1034241.8E	-	80W
NDB	KK	286KHz		013117.9N 1035923.7E	-	80W
DVOR/DME	VJB	112.5 MHz CH 72 X		013950.4N 1033939.2E	43.07M	1000M from THR RWY 16.

WMKJ AD 2.22 FLIGHT PROCEDURES

1. DME Arrival Procedures for Johor Bahru / Senai International airport

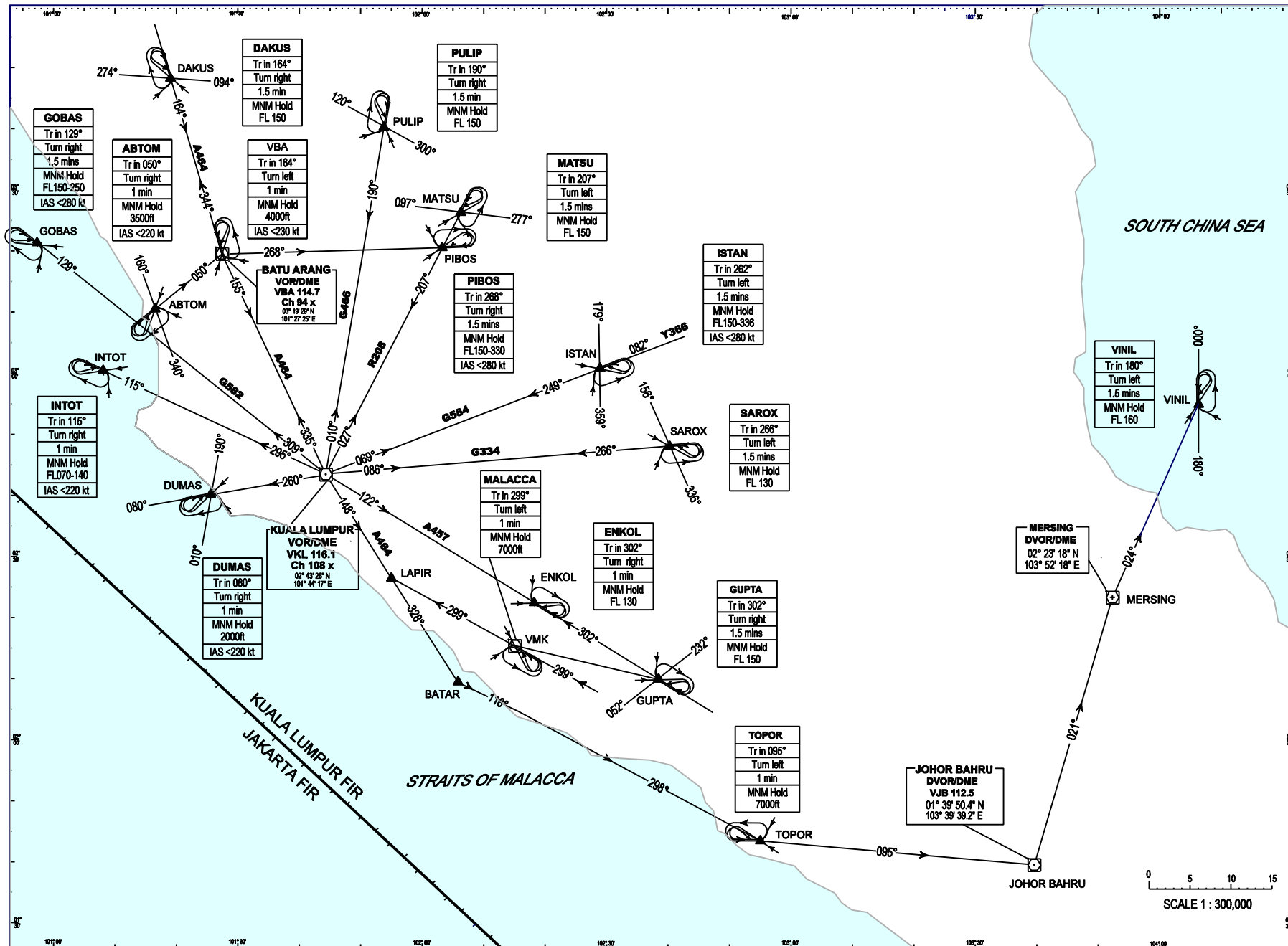
RADIAL/TRACK	NAVAID	DME CHECKPOINT	MNM IFR ALTITUDE	AFTER Passing...DME/VJB DESCEND TOFT on QNH	REMARKS
R-275/095	VJB	Not Required	5000 FT	14 ↓ 3500	From overhead VJB VOR make Standard Instrument Approach or as directed by ATC. Note: Level Restriction to cross 25DME VJB North 6000FT or below for arrivals on W534, A457 and R325
R-297/117°	VJB	Not Required	5000 FT	8 ↓ 3500	
R-016 /196°	VJB	Not Required	6000 FT	20 8 ↓ ↓ 5000 3500	
R-319/139°	VJB	Not Required	6000 FT	20 8 ↓ ↓ 5000 3500	

WMKJ AD 2.24 CHARTS RELATED TO JOHOR BAHRU / SENAI INTERNATIONAL AIRPORT

CHART NAME	Page
AERODROME/HELIPORT CHART-ICAO	WMKJ AD 2-23
RUNWAY /TAXIWAY MARKING CHART	WMKJ AD 2-23.1
AERODROME GROUND LIGHTING CHART	WMKJ AD 2-23.2
PARKING APRONS AND AIRCRAFT STAND NUMBERS	WMKJ AD 2-25
AERODROME OBSTACLE CHART-ICAO-TYPE A	WMKJ AD 2-31
VFR FLIGHT RULES (VFR) LANES	APPENDIX B-8
EN-ROUTE AND TERMINAL AREA HOLDINGS	APPENDIX D 1
JOHOR CONTROL ZONE	APPENDIX D 2
JOHOR TMA AND HOLDING AREAS	APPENDIX D 3
JOHOR BAHRU ATC SURVEILLANCE MINIMUM ALTITUDE (SMA)	APPENDIX D 4
INSTRUMENT APPROACH CHART-ICAO-RWY 16 ILS z / LOC z (FROM STAR)	APPENDIX D 5
INSTRUMENT APPROACH CHART-ICAO-RWY 16 ILS y / LOC y	APPENDIX D 6
INSTRUMENT APPROACH CHART-ICAO-RWY 16 ILS x / LOC x (FROM OVERHEAD VJB VOR)	APPENDIX D 7
INSTRUMENT APPROACH CHART-ICAO-RWY 16 ILS w / LOC w (FROM OVERHEAD JR NDB)	APPENDIX D 8
INSTRUMENT APPROACH CHART-ICAO-RWY 16 VOR z	APPENDIX D 9
INSTRUMENT APPROACH CHART-ICAO-RWY 16 VOR y (FROM OVERHEAD VJB VOR)	APPENDIX D 10
INSTRUMENT APPROACH CHART-ICAO-RWY 16 NDB z (FROM OVERHEAD JR NDB)	APPENDIX D 11
STANDARD DEPARTURE CHART INSTRUMENT (SID)-ICAO-VOR/DME -RWY 16 MASBO 2E, MERSING 2E, KONG KONG 2E, PIMOK 2E	APPENDIX D 12
STANDARD DEPARTURE CHART INSTRUMENT(SID)-ICAO-VOR/DME-RWY 34 MASBO 2F, MERSING 2F, KONG KONG 2 F , PIMOK 2F	APPENDIX D 13
STANDARD DEPARTURE CHART INSTRUMENT (SID)-ICAO JOHOR RADAR TWO DEPARTURE RWY 16/34.	APPENDIX D 14
STANDARD ARRIVAL CHART INSTRUMENT (STAR) –ICAO (RNAV)-RWY 16 PIMOK 2C, TOPOR 2C, MASBO 2C, MESOG 2C, REDUK 2C, MERSING 2C, KONG KONG 2C	APPENDIX D 15
STANDARD ARRIVAL CHART INSTRUMENT (STAR) –ICAO (VOR/DME) -RWY 16 PIMOK 2A, TOPOR 2A, MASBO 2A, MESOG 2A, REDUK 2A, MERSING 2A, KONG KONG 2A	APPENDIX D 16

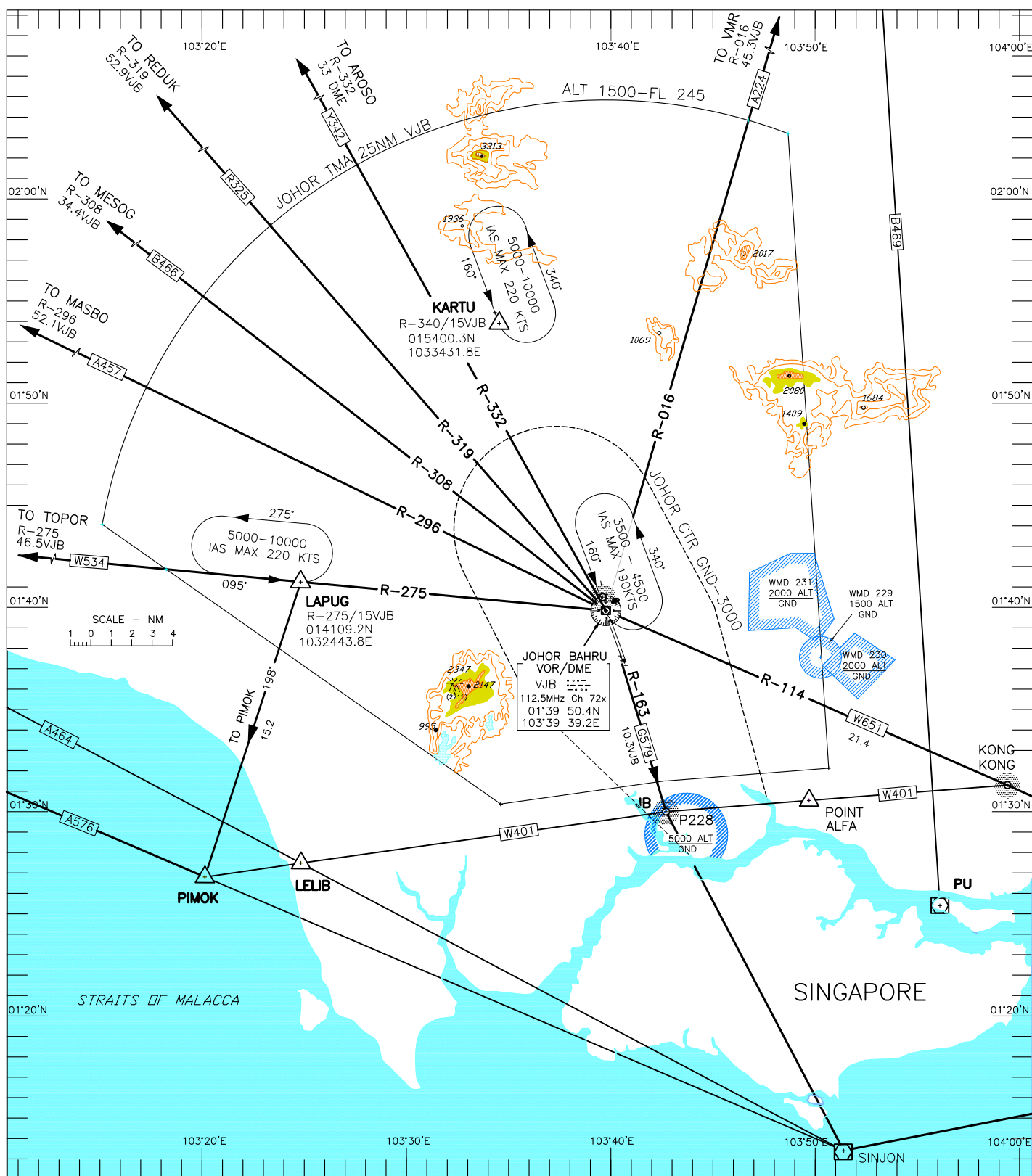
EN-ROUTES & TERMINAL AREA HOLDINGS

APPENDIX D1



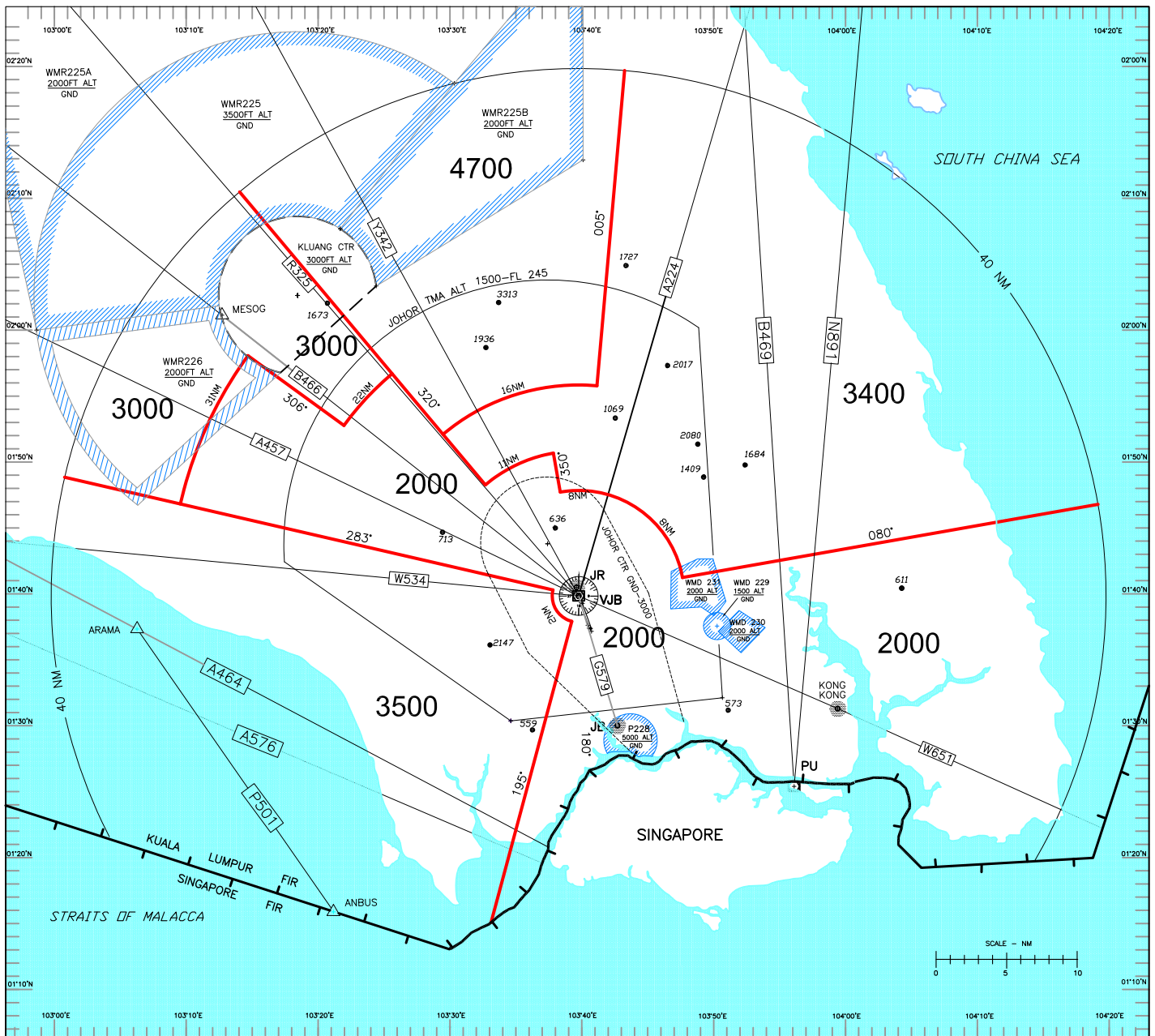
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JOHOR TMA HOLDING AREAS AND AIR ROUTES



02 AUG 2012
AIP SUPP 17/2012

ATC SURVEILLANCE MINIMUM ALTITUDE CHART JOHOR BAHRU



PROCEDURES FOR LOSS OF RADIO COMMUNICATION

1. SET TRANSPONDER TO 7600
2. A) IN VMC
CONTINUE APPROACH VISUALLY FOR THE DUTY RUNWAY AND LAND ; OR
B) IN IMC
MAINTAIN LAST ASSIGNED ALTITUDE; OR CLIMB TO MSA IF THE ASSIGNED ALTITUDE IS BELOW MSA AND TRACK DIRECT TO VJB VOR
3. AT THE HOLDING FACILITY VJB, CARRY OUT THE STANDARD RADIO COMMUNICATION FAILURE PROCEDURE

NOTE :

THE ATC SMA COMPRISES AN AREA OF 40 NAUTICAL MILES OF VJB VOR/DME STATION. RADAR VECTORING SERVICES SHALL BE PROVIDED WITHIN JOHOR TMA AND JOHOR CTR

ALL BEARINGS ARE MAGNETIC AND TAKEN FROM VJB. ONLY SIGNIFICANT OBSTRUCTIONS AND SPOT HEIGHTS ARE SHOWN. THESE ARE BASED ON QNH.

ALTITUDES SHOWN PROVIDE 1000 FEET OF CLEARANCE OVER ALL OBSTACLES WITHIN 3 NM OF THE BOUNDARY WHEN UP TO 20 NM FROM THE RADAR ANTENNA, OR WITHIN 5 NM OF THE BOUNDARY AT DISTANCE GREATER THAN 20 NM FROM THE RADAR ANTENNA.

WMP 228 - FROM GROUND TO 5000 FT 2 NM RADIUS.

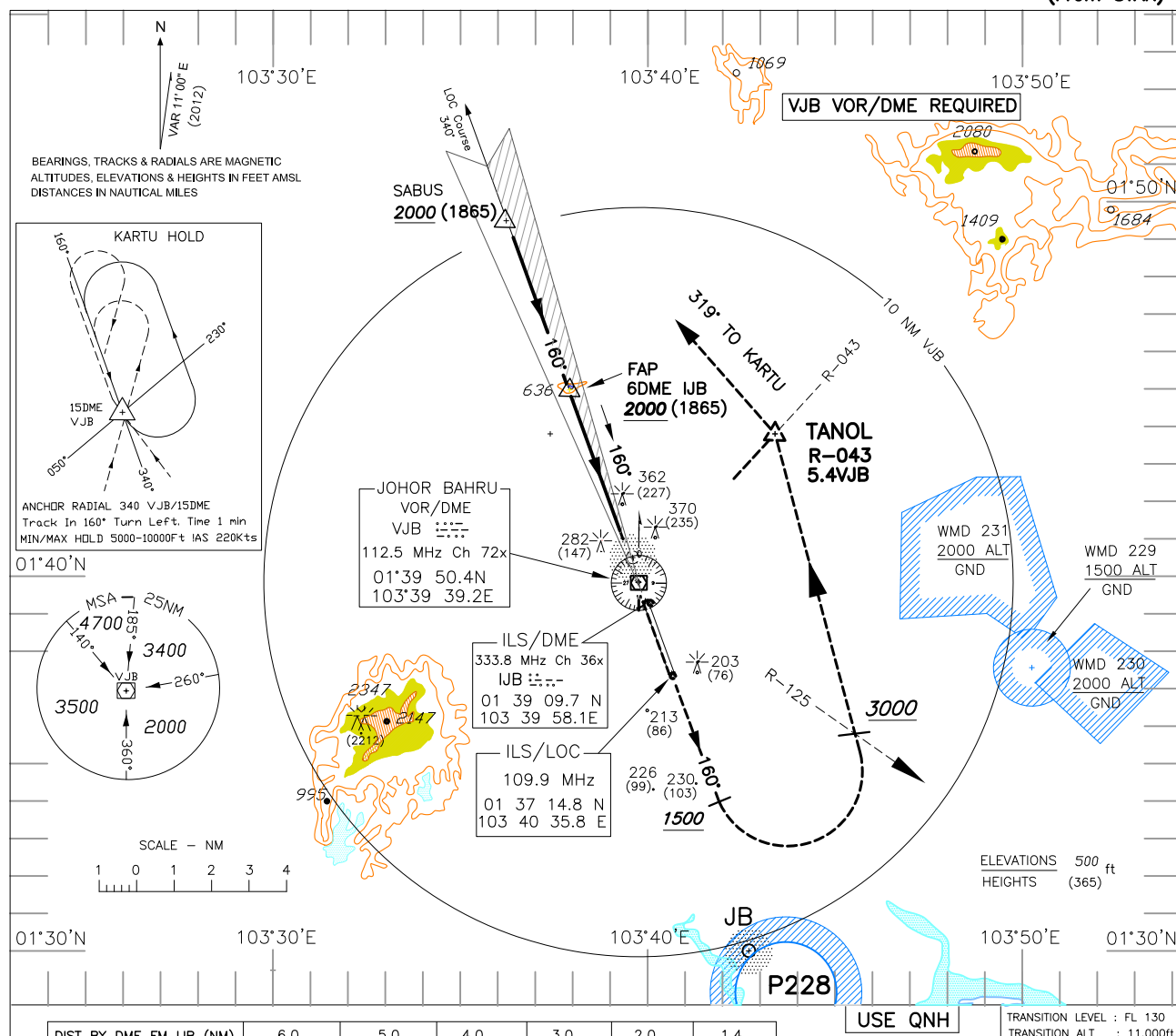
**INSTRUMENT
APPROACH
CHART-ICAO**

AD ELEV 135ft
HEIGHTS RELATED TO
THR RWY 16 ELEV 135ft
ILS RDH 59 FT

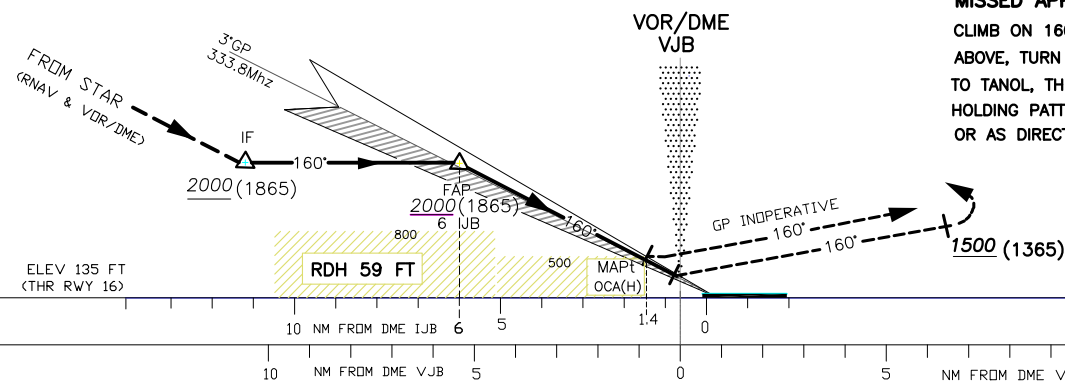
TWR - 118.15
APP - 124.7
121.05
GMC - 121.8
ATIS - 123.05

**JOHOR BAHRU /
SENAI INTERNATIONAL AIRPORT**

ILS z/LOC z
RWY 16
(From STAR)


MISSED APPROACH

CLIMB ON 160° TO 1500 FT OR
ABOVE, TURN LEFT, TRACK DIRECT
TO TANOL, THEN TO KARTU
HOLDING PATTERN AT 5000FT
OR AS DIRECTED BY ATC.


OCA (H) FT.

AIRCRAFT CAT.	A	B	C	D
STRAIGHT-IN CAT 1. Pressure Alt	465 (330)	477 (342)	485 (350)	496 (361)
APPROACH LOC/DME (GP INOP.)	585 (450) / 1.4 DME IJB			
CIRCLING (Visual Manoeuvring)	700 (565)		1100 (965)	
& MIN Visibility-KM (NM)	1.9 (1.0)	2.8 (1.5)	3.7 (2.0)	4.6 (2.5)

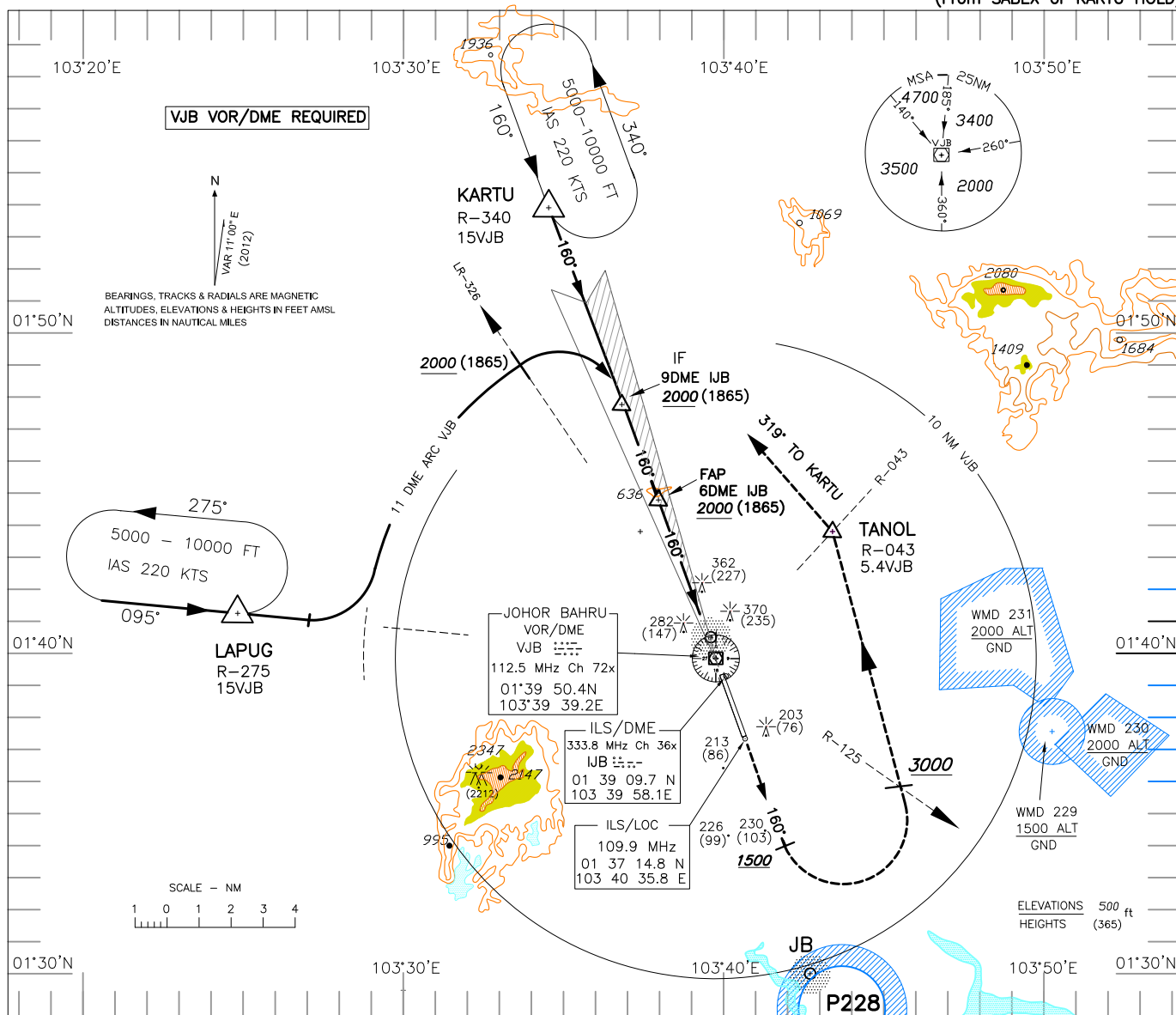
GROUND SPEED (KTS)		70	90	120	150	180
FAP-THR 16 = 5.9 nm	MIN:SEC	4:55	3:56	3:57	2:22	1:58
RATE OF DESCENT: 3' (5.2%)	FT/MIN	379	474	632	790	947

**INSTRUMENT
APPROACH
CHART-ICAO**

AD ELEV 135ft
HEIGHTS RELATED TO
THR RWY 16 ELEV 135ft
ILS RDH 59 FT

TWR - 118.15
APP - 124.7
121.05
GMC - 121.8
ATIS - 123.05

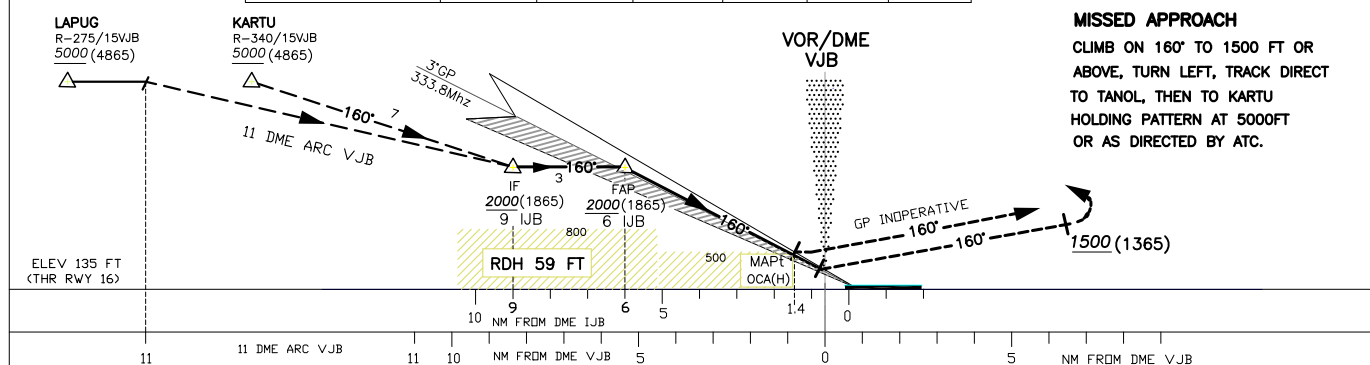
JOHOR BAHRU /
SENAI INTERNATIONAL AIRPORT
ILS y/LOC y
RWY 16
(From SABEX or KARTU HOLD)



DIST BY DME FM IJB (NM)	6.0	5.0	4.0	3.0	2.0	1.4
ALT 3' APCH PATH (FT)	2000(1865)	1682(1547)	1364(1229)	1046(911)	728(593)	585(450)

USE QNH

TRANSITION LEVEL : FL 130
TRANSITION ALT : 11,000ft


MISSED APPROACH

CLIMB ON 160° TO 1500 FT OR ABOVE, TURN LEFT, TRACK DIRECT TO TANOL, THEN TO KARTU HOLDING PATTERN AT 5000FT OR AS DIRECTED BY ATC.

OCA (H) FT.				
AIRCRAFT CAT.	A	B	C	D
STRAIGHT-IN CAT 1. Pressure Alt	465 (330)	477 (342)	485 (350)	496 (361)
APPROACH LOC/DME (GP INOP.)	585 (450) / 1.4 DME IJB			
CIRCLING (Visual Manoeuvring)	700 (565)		1100 (965)	
& MIN Visibility-KM (NM)	1.9 (1.0)	2.8 (1.5)	3.7 (2.0)	4.6 (2.5)

GROUND SPEED (KTS)	70	90	120	150	180
FAP-THR 16 = 5.9 nm	MIN:SEC 4:55	3:56	3:57	2:22	1:58
RATE OF DESCENT: 3' (5.2%)	FT/MIN 379	474	632	790	947

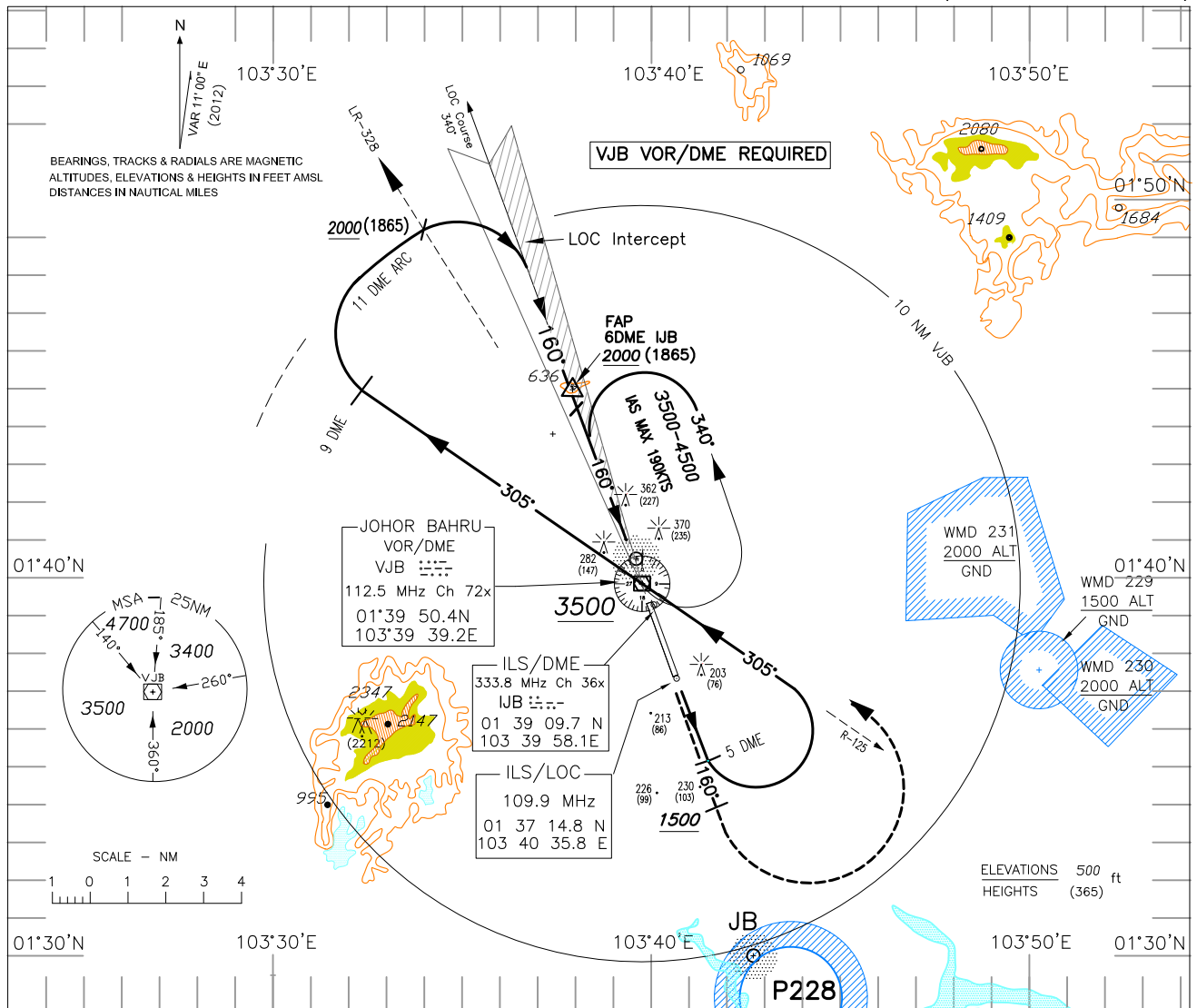
**INSTRUMENT
APPROACH
CHART-ICAO**

AD ELEV 135ft
HEIGHTS RELATED TO
THR RWY 16 ELEV 135ft
ILS RDH 59 FT

TWR - 118.15
APP - 124.7
121.05
GMC - 121.8
ATIS - 123.05

**JOHOR BAHRU /
SENAI INTERNATIONAL AIRPORT**
ILS x/LOC x
RWY 16

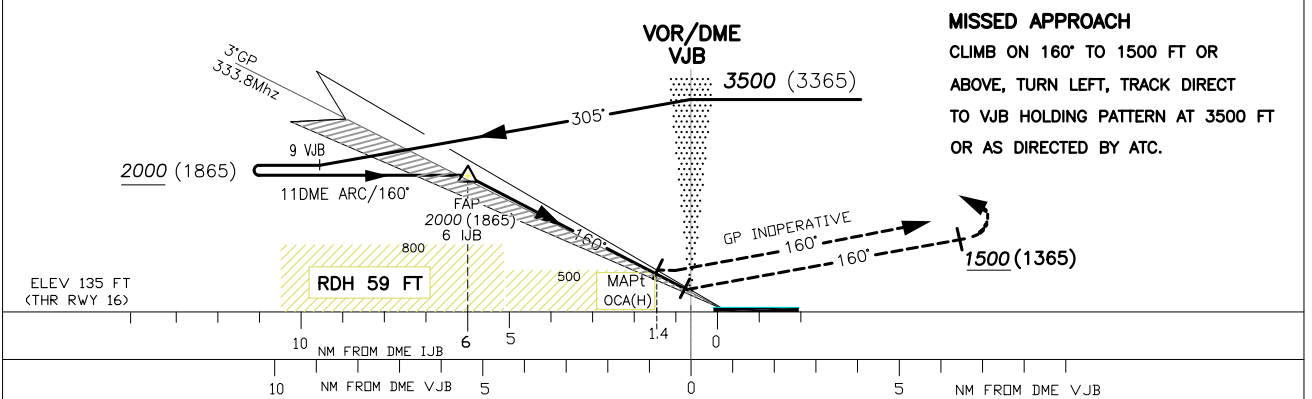
(From Overhead VJB VOR)



DIST BY DME FM IJB (NM)	6.0	5.0	4.0	3.0	2.0	1.4
ALT 3' APCH PATH (FT)	2000(1865)	1682(1547)	1364(1229)	1046(911)	728(593)	585(450)

USE QNH

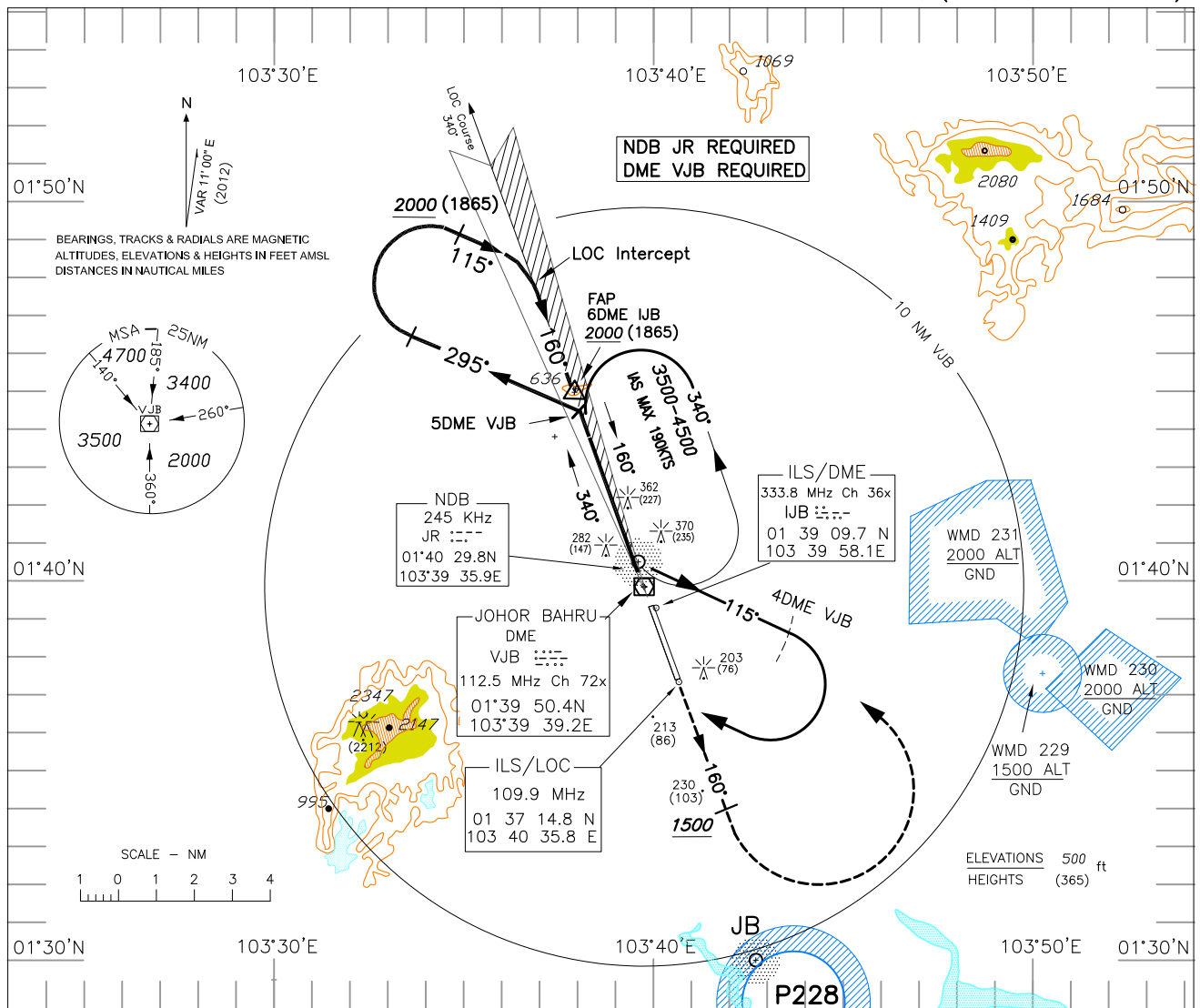
TRANSITION LEVEL : FL 130
TRANSITION ALT : 11,000ft



OCA (H) FT.					
AIRCRAFT CAT.		A	B	C	D
STRAIGHT-IN	CAT 1. Pressure Alt	465 (330)	477 (342)	485 (350)	496 (361)
APPROACH	LOC/DME (GP INOP.)	585 (450) / 1.4 DME IJB			
CIRCLING (Visual Manoeuvring)		700 (565)		1100 (965)	
& MIN Visibility-KM (NM)		1.9 (1.0)	2.8 (1.5)	3.7 (2.0)	4.6 (2.5)

GROUND SPEED (KTS)		70	90	120	150	180
FAP-THR 16 = 5.9 nm	MIN:SEC	4:55	3:56	3:57	2:22	1:58
RATE OF DESCENT: 3' (5.2%)	FT/MIN	379	474	632	790	947

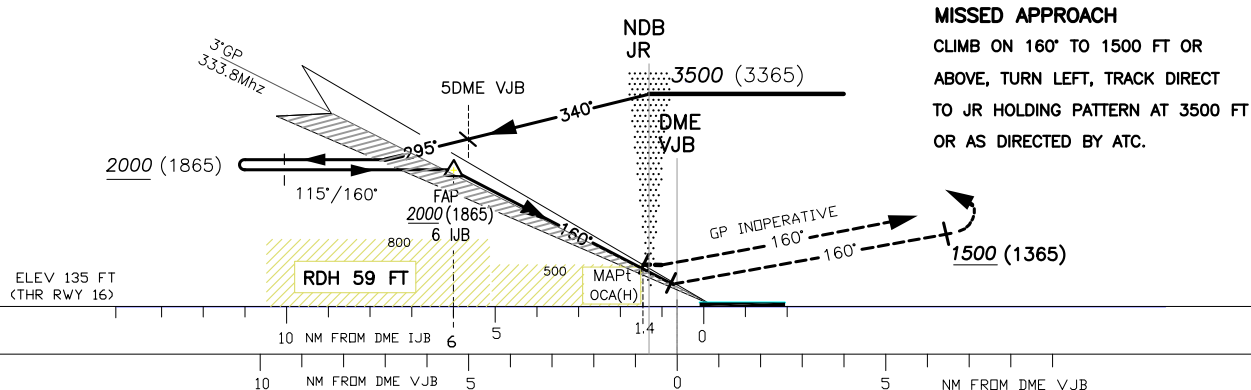
JOHOR BAHRU /
 SENAI INTERNATIONAL AIRPORT
 ILS w/LOC w
 RWY 16
 (From Overhead JR NDB)



DIST BY DME FM IJB (NM)	6.0	5.0	4.0	3.0	2.0	1.4
ALT 3' APCH PATH (FT)	2000(1865)	1682(1547)	1364(1229)	1046(911)	728(593)	585(450)

USE QNH

TRANSITION LEVEL : FL 130
TRANSITION ALT : 11,000ft



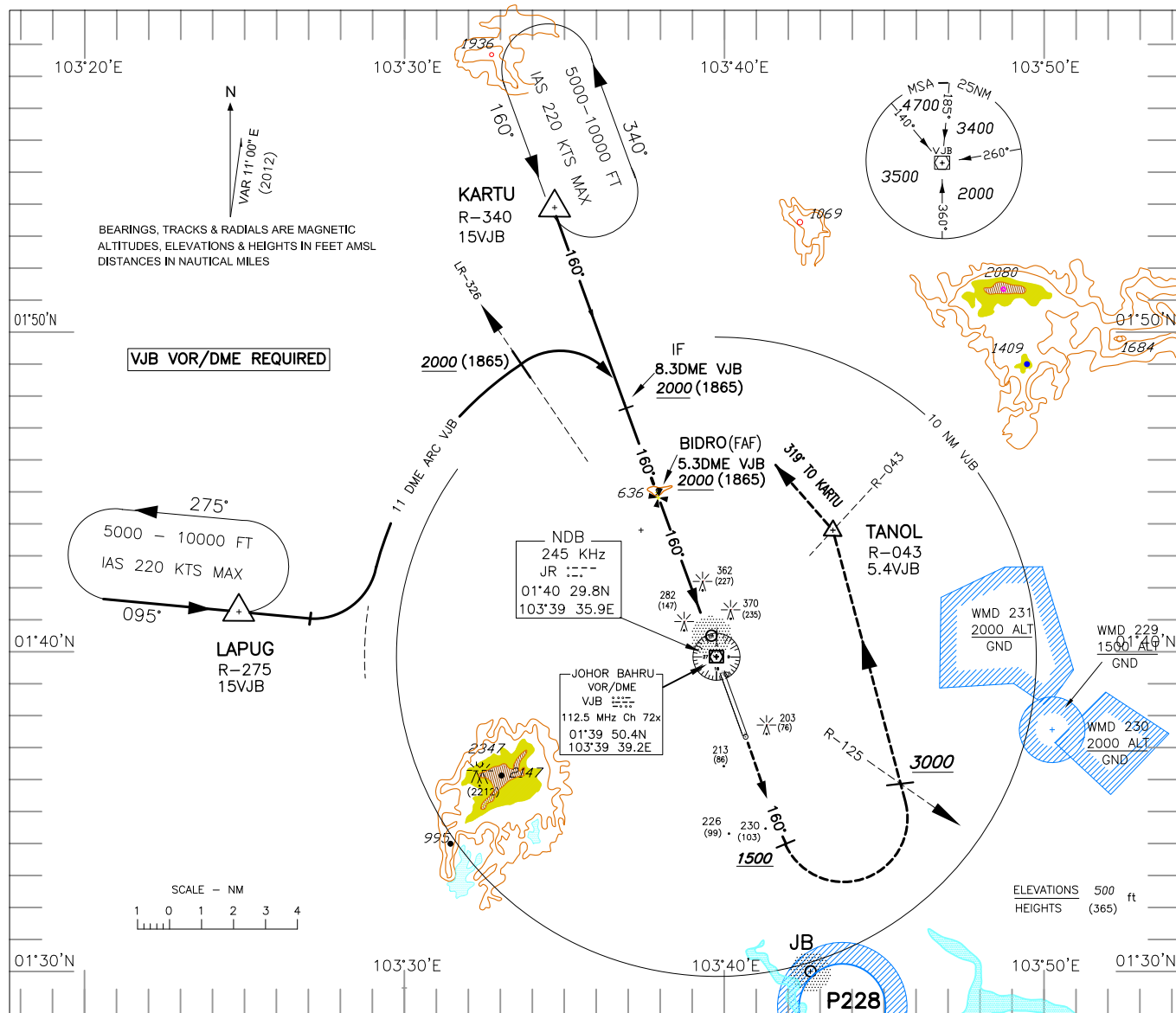
OCA (H) FT.					NOT FOR DME USE							
AIRCRAFT CAT.		A	B	C	D	GROUND SPEED (KTS)		70	90	120	150	180
STRAIGHT-IN APPROACH	CAT 1. Pressure Alt	465 (330)	477 (342)	485 (350)	496 (361)	FAP-THR 16 = 5.9 nm	MIN:SEC	4:55	3:56	3:57	2:22	1:58
	LOC/DME (GP INOP.)	585 (450) / 1.4 DME IJ8				RATE OF DESCENT: 3* (5.2%)	FT/MIN	379	474	632	790	947
CIRCLING (Visual Manoeuvring)		700 (565)		1100 (965)								
& MIN Visibility—KM (NM)		1.9 (1.0)	2.8 (1.5)	3.7 (2.0)	4.6 (2.5)							

**INSTRUMENT
APPROACH
CHART—ICAO**

AD ELEV 135ft
HEIGHTS RELATED TO
THR RWY 16 ELEV 135ft

TWR 118.15
APP 124.7
121.05
GMC-121.8
ATIS - 123.05

JOHOR BAHRU /
 SENAI INTERNATIONAL AIRPORT
 VOR z
 RWY 16

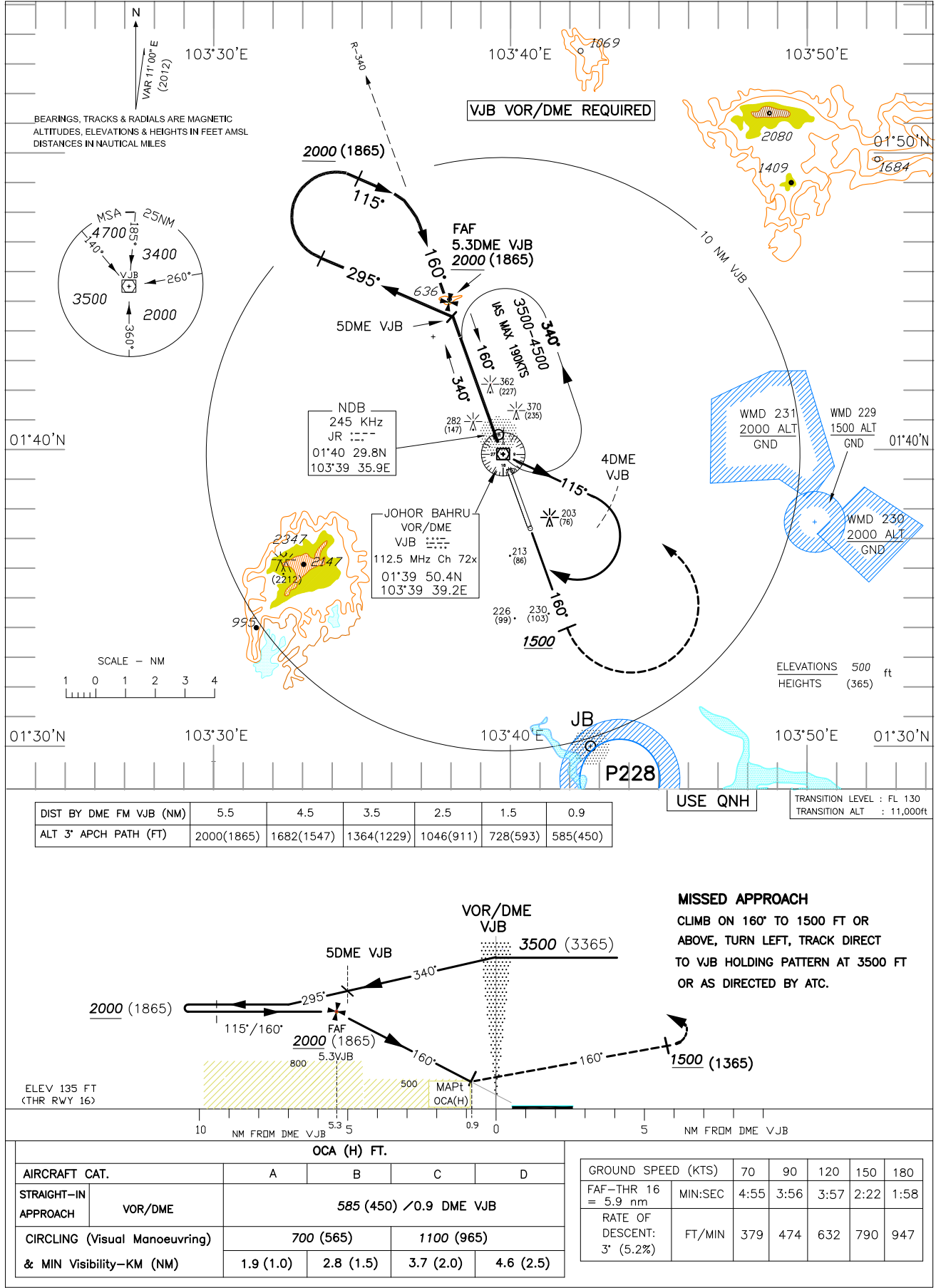


INSTRUMENT
APPROACH
CHART-ICAO

AD ELEV 135ft
HEIGHTS RELATED TO
THR RWY 16 ELEV 135ft

TWR - 118.15
APP - 124.7
121.05
GMC - 121.8
ATIS - 123.05

JOHOR BAHRU /
SENAI INTERNATIONAL AIRPORT
VOR y
RWY 16
(From Overhead VJB VOR)



JOHOR BAHRU /
 SENAI INTERNATIONAL AIRPORT
 NDB z
 RWY 16
 (From Overhead JR NDB)

