

## AD 2 AERODROMES

## RJOK AD 2.1 AERODROME LOCATION INDICATOR AND NAME

## RJOK - KOCHI

## RJOK AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	333246N /1334010E 266° / 560m FM TWR
2	Direction and distance from (city)	7NM E from Kochi city
3	Elevation/ Reference temperature	29ft / 31°C (2004-2008)
4	Geoid undulation at AD ELEV PSN	120ft
5	MAG VAR/ Annual change	7°W (2006) / 1.0°W
6	AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses	Civil Aviation Bureau, Kochi Airport Office Monobe, Nankoku - shi, Kochi Pref. TEL: 088(863)2620, FAX: 088(863)2956
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Nil

## RJOK AD 2.3 OPERATIONAL HOURS

1	AD Administration	2200 - 1200
2	Customs and immigration	On request Customs: 088-832-6131 Immigration: 088-871-7030
3	Health and sanitation	On request Quarantine(human): 0877-46-4279 Quarantine(animal): 087-879-4654 Quarantine(plant): 088-832-3690
4	AIS Briefing Office	Nil
5	ATS Reporting Office(ARO)	Nil
6	MET Briefing Office	H24 (KANSAI)
7	ATS	2200 - 1200
8	Fuelling	2200 - 1200
9	Handling	2200 - 1200
10	Security	2200 - 1200
11	De-icing	Nil
12	Remarks	Nil

**RJOK AD 2.4 HANDLING SERVICES AND FACILITIES**

1	Cargo-handling facilities	AVBL up to B777-200 ACFT
2	Fuel/ oil types	JET A-1, AVGAS 100
3	Fuelling facilities/ capacity	Fuel Truck Refueling
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

**RJOK AD 2.5 PASSENGER FACILITIES**

1	Hotels	In Nankoku City
2	Restaurants	At airport
3	Transportation	Buses and Taxi
4	Medical facilities	In Nankoku City
5	Bank and Post Office	ATM in airport
6	Tourist Office	At airport
7	Remarks	Nil

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

1	AD category for fire fighting	CAT 9
2	Rescue equipment	Chemical fire fighting truck x 3, Water-supply truck x 1 Lighting power supply truck x 1 Emergency medical equipment conveyance truck x 1
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

**RJOK AD 2.7 SEASONAL AVAILABILITY-CLEARING**

1	Types of clearing equipment	Motor grader x 7
2	Clearance priorities	1) RWY, 2) TWY T1 T6 A1-A5, 3) TWY T2-T5 and APRON
3	Remarks	Snow removal will be commenced when the RWY and TWY are covered with snow its depth 5cm or more

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

1	Apron surface and strength	SPOT NR 0-5 Surface: Cement-Concrete, Strength: PCR 1132/R/B/W/T SPOT NR 6 Surface: Cement-Concrete, Strength: PCR 785/R/B/W/T
2	Taxiway width, surface and strength	T2 THRU T5 Width: 34m, Surface: Asphalt-concrete, Strength: PCR 754/F/A/X/T T1, T6 Width: 28.5m, Surface: Asphalt-concrete, Strength: PCR 754/F/A/X/T A1 THRU A5 Width: 23m, Surface: Asphalt-concrete, Strength: PCR 754/F/A/X/T
3	ACL and elevation	Not available
4	VOR checkpoints	Not available
5	INS checkpoints	Spot NR 0: 333253.60N/1334019.95E 1: 333251.95N/1334021.08E 2: 333251.32N/1334023.49E 3: 333250.05N/1334025.25E 4: 333248.79N/1334027.02E 5: 333247.49N/1334028.75E
6	Remarks	Nil

## RJOK 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	Aircraft stand ID signs: Spot NR2-4
2	RWY and TWY markings and LGT	RWY 14/32: (Marking): RWY designation, RWY CL, RWY THR, RWY middle point, Aiming point, TDZ, RWY side stripe (LGT): RCLL, REDL, RENL, RTHL, RTZL(RWY32), WBAR(RWY32) TWY: All TWY (Marking): TWY CL, RWY HLDG PSN, TWY side stripe (LGT): TWY edge LGT, TWY CL LGT, Taxiing guidance sign(T1-T6), RWY guard LGT(T1-T6)
3	Stop bars	Nil
4	Remarks	(Marking): Overrun area (LGT): Apron flood LGT

## RJOK AD 2.10 AERODROME OBSTACLES

In Area2 See Obstacle data

Other obstacles

OBST ID/ designation	Obstacle type	Coordinates	Elevation	Markings/ LGT	Remarks
RJOK1	Mountain	333401.1N/1333838.6E	182ft	-/LIM	Under APCH SFC
RJOK2	Pole	333328.3N/1333919E	62ft	-/LIL	Under APCH SFC
RJOK3	Pole	333318.3N/1333923E	53ft	-/LIL	Under APCH SFC
RJOK4	Dike	333210.1N/1334059.6E	38ft	-/LIL	Under APCH SFC
RJOK5	Tower	333257N/1333936E	104ft	-/LIL	Under transitional SFC

In Area3 To be developed

## RJOK AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	KANSAI
2	Hours of service MET Office outside hours	H24 (KANSAI)
3	Office responsible for TAF preparation Periods of validity	KANSAI 30 Hours
4	Trend forecast Interval of issuance	Nil
5	Briefing/ consultation provided	Briefing is available upon inquiry at KANSAI
6	Flight documentation Language(s) used	C En
7	Charts and other information available for briefing or consultation	S <sub>6</sub> , U <sub>85</sub> , U <sub>7</sub> , U <sub>5</sub> , U <sub>3</sub> , U <sub>25</sub> , U <sub>2</sub> /T <sub>r</sub> , P <sub>s</sub> , P <sub>5</sub> , P <sub>3</sub> , P <sub>25</sub> , P <sub>SWE</sub> , P <sub>SWF</sub> , P <sub>SWG</sub> , P <sub>SWI</sub> , P <sub>SWM</sub> , P <sub>SW</sub> (domestic), E, C, W <sub>E</sub> , W <sub>F</sub> , W <sub>G</sub> , W <sub>I</sub> , W, N
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	TWR, APP, ATIS
10	Additional information (limitation of service, etc.)	Nil

RJOK AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength(PCR) and surface of RWY	THR coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
14	130.51°	2500 × 45	PCR 754/F/A/X/T Asphalt Concrete	333312.04N 1333932.98E 120.4ft	THR ELEV: 42ft
32	310.51°	2500 × 45	PCR 754/F/A/X/T Asphalt Concrete	333219.33N 1334046.67E 120.3ft	THR ELEV: 17.8ft TDZ ELEV: 23ft

Slope of RWY	Strip Dimensions (M)	RESA (Overrun) Dimensions(M)	Remarks
7	10	11	14
See below figure	2620 × 300  2620 × 300	40 × (MNM:242 MAX:300)*  180 × (MNM:127 MAX:300)* *For detail, ask airport administrator	RWY Grooving 2500x30m

RWY14

42FT

37FT

32FT

29FT

23FT

21FT

20FT

18FT

18FT

RWY32

-0.55

-0.69

-0.10

-060

-0.15

-0.34

-0.03

0m

275m

511.5m

1240m

1540m

1940m

2000m

2400m

2500m

RJOK AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
14	2500	2500	2500	2500	Nil
32	2500	2500	2500	2500	Nil

RJOK AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	RTHL Color WBAR	PAPI (VASIS) Angle DIST FM THR MEHT	RTZL LEN	RCLL LEN Spacing Color INTST	REDL LEN Spacing Color INTST	RENL Color WBAR	STWL LEN Color
1	2	3	4	5	6	7	8	9
14	SALS 420m (*1) LIH	Green -	PAPI 3.0°/Left 583.5m 84ft	-	2500m 30m Coded color (White/Red) LIH	2500m 60m Coded color (White/Yellow) LIH	Red	Nil (*2)
32	PALS (CAT I) 420m LIH	Green Green	PAPI 3.0°/Left 404.4m 66ft	900m	2500m 30m Coded color (White/Red) LIH	2500m 60m Coded color (White/Yellow) LIH	Red	Nil (*2)
Remarks								
10								
SALS with APCH LGT beacon (589.358m and 952.287m FM RWY 14 THR)(*1) Overrun area edge LGT(LEN:60m Color:Red) (*2) CGL for RWY 14								

RJOK AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: 333255N/1334030E, White/Green EV4.3sec, HO
2	LDI location and LGT Anemometer location and LGT	LDI:Nil Anemometer : 430m FM RWY 14 THR, LGTD 430m FM RWY 32 THR, LGTD
3	TWY edge and centerline lighting	TWY edge and center line lights installed, see AD2.9
4	Secondary power supply/ switch-over time	Within 1 sec : REDL, RENL, RTHL, WBAR, RCLL, Overrun area edge LGT Within 15 sec : Other LGT
5	Remarks	WDI LGT

RJOK AD 2.16 HELICOPTER LANDING AREA

Nil
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## RJOK AD 2.17 ATS AIRSPACE

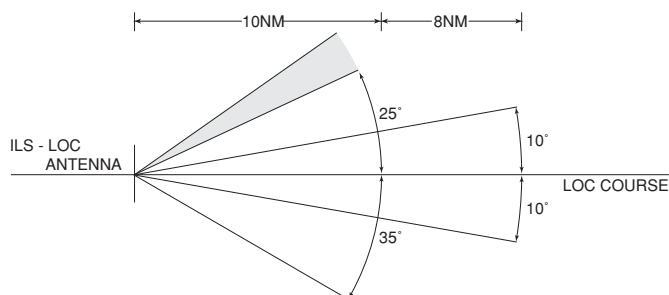
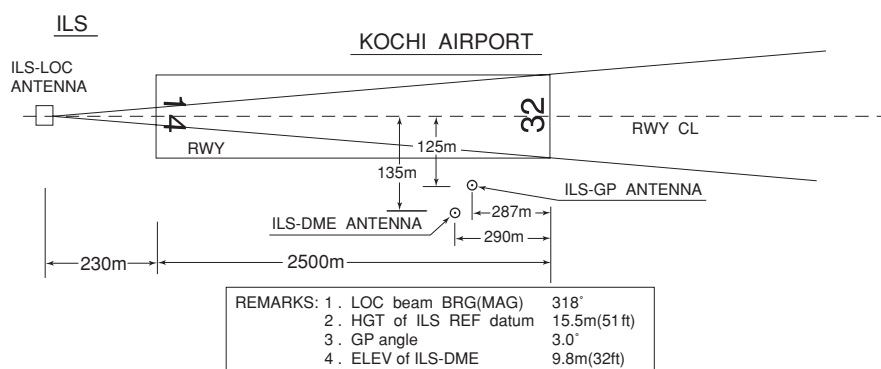
Designation and lateral limits		Vertical limits (ft)	Airspace classification	ATS unit call sign Language	Remarks
1		2	3	4	6
Kochi CTR	Area within a radius of 5nm of KOCHI ARP (33° 33'N/133° 40'E ).	3000 or below	D	Kochi TOWER En	
Kansai ACA	See RJBB attached chart		E	Kansai APP Kansai DEP Kansai RADAR En	

## RJOK AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP/ASR	Kansai Approach / Kansai Radar	125.0 MHz 124.8 MHz  121.5 MHz(E) 243.0 MHz(E)	2200 - 1200	APP service provided by KANSAI APP.
DEP	Kansai Departure	124.8 MHz(1) 125.0 MHz  121.5 MHz(E) 243.0 MHz(E)	2200 - 1200	(1)Primary
TWR	Kochi Tower	118.75 MHz(1) 126.2 MHz  121.5 MHz(E) 243.0 MHz(E)	2200 - 1200	(1)Primary
ATIS	Kochi Airport	126.45MHz	2200 - 1200	

## RJOK AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid (VOR declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
VOR (7°W / 2008)	KRE	113.7MHz	H24	333230.42N/ 1334048.57E		VOR/DME Unusable: 010°-040° beyond 30nm BLW 8,000ft.
DME	KRE	1171MHz (CH-84X)	H24	333230.42N/ 1334048.57E	16.3m (54ft)	040°-060° beyond 30nm BLW 9,000ft. 340°-010° beyond 30nm BLW 9,000ft.
ILS-LOC 32	IKR	110.9MHz	2200 -1200	333316.90N/ 1333926.24E		LOC: 230m (755ft) away FM RWY 14 THR, BRG (MAG) 318°. Unusable : beyond 25° NE Side of course due to Terrain.
ILS-GP 32	-	330.8MHz	2200-1200	333222.28N/ 1334035.09E		GP: 287m (942ft) inside FM RWY 32 THR, 125m (410ft) SW of RCL. Angle 3.0°, HGT of ILS REF datum 15.5m(51ft).
ILS-DME 32	IKR	1007MHz	2200-1200	333222.10N/ 1334034.73E	9.8m (32ft)	DME: 290m (951ft) inside FM RWY 32 THR, 135m (443ft) SW of RCL.
MSAS		1575.42MHz	H24			Transmitting antennas are satellite based



UNUSABLE : BEYOND 25DEG NORTH EAST(150Hz) SIDE OF COURSE DUE TO TERRAIN.



**RJOK AD 2.20 LOCAL TRAFFIC REGULATIONS**

## 1. Airport regulations

Aircraft operations other than scheduled flights or in an emergency.  
Prior permission required for transient aircraft.  
Call : 088-863-2620(OPS)

## 2. Taxiing to and from stands

Nil

## 3. Parking area for small aircraft(General aviation)

Nil

## 4. Parking area for helicopters

Nil

## 5. Apron - taxiing during winter conditions

Nil

## 6. Taxiing - limitations

**Wing tip clearance at the TWY intersection (REF AD1.1.6.8)**

Wing tip clearance at the TWY intersection between the aircraft holding at the stop marking on the TWY and the other aircraft taxiing behind it are as follows.

When B772 holding at the stop marking on TWY T2 or T5

Wing Span (WS) of aircraft taxiing on TWY A1-A2 or A4-A5	WS ≤35.4m	35.4m <WS ≤52.4m	WS >52.4m
Wing tip clearance	*A	*B	*C

Legend:

\*A : wing tip clearance ≥ 15m

\*B : 6.5m ≤ wing tip clearance < 15m

\*C : wing tip clearance < 6.5m

## 7. School and training flights - technical test flights - use of runways

Nil

## 8. Helicopter traffic - limitation

Nil

## 9. Removal of disabled aircraft from runways

Nil

## RJOK AD 2.21 NOISE ABATEMENT PROCEDURES

<p>1. 騒音軽減運航方式</p> <p>すべてのジェット機に対して、空港周辺における航空機騒音軽減のため、運航の安全に支障のない範囲で、以下の方式が適用される。</p> <p>ただし、これらの方式によることができない航空機は実効的にこれらと同等と認められる代替方式を実施するものとする。</p> <p>(1) 離陸について（滑走路 32） 急上昇方式</p> <p>(2) 着陸について（滑走路 14） ディレイド・フラップ進入方式及び 低フラップ角着陸方式</p> <p>(3) リバース・スラストについて なし</p> <p>2. 優先滑走路方式 なし</p> <p>3. 優先飛行経路 なし</p>	<p>1. Noise Abatement Operating Procedures</p> <p>For all jet aircraft, in order to reduce aircraft noise in the vicinity of airport, the following procedures shall be applied unless compliance of the procedures adversely affects the safety of aircraft operations.</p> <p>In case that the aircraft is unable to take these procedures, pilots should execute alternative procedures which are considered to be practically equivalent.</p> <p>(1) For take-off from RWY32 Steepest Climb Procedure</p> <p>(2) For landing to RWY14 Delayed Flap Approach Procedure and Reduced Flap Setting Procedure</p> <p>(3) Reverse Thrust Nil</p> <p>2. Preferential Runways Procedures Nil</p> <p>3. Noise Preferential Routes Nil</p>
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## RJOK AD 2.22 FLIGHT PROCEDURES

## 1. TAKE OFF MINIMA

	RWY	ACFT CAT	REDL & RCLL		REDL or RCLL or RCL Marking		NIL (DAYTIME ONLY)	
			RVR	VIS	RVR	VIS	RVR	VIS
Multi-Engine ACFT with TKOF ALTN AP FILED	14	A,B,C,D	-	400m	-	400m	-	500m
	32	A,B,C,D	400m	400m	400m	400m	-	500m
OTHER	14	A,B,C,D	AVBL LDG MINIMA					
	32	A,B,C,D						

## 2. Lost communication procedures for arrival aircraft under radar navigational guidance

If radio communications with Kansai Approach/Radar are lost for 1 minute, squawk Mode A/3 Code 7600 and:

1. Contact Kochi Tower.
2. If unable, proceed in accordance with Visual Flight Rules.
3. If unable,
  - A) When assigned altitude at or above 5,000 feet, proceed to KRE VOR/DME maintaining last assigned altitude and execute instrument approach.
  - B) When assigned altitude below 5,000 feet,
    - a) If established on a segment of the Instrument Approach Procedure, execute that Instrument Approach.
    - b) If not yet established on a segment of the Instrument Approach Procedure, climb and maintain 5,000 feet and proceed to KRE VOR/DME and execute instrument approach.

NOTE: Procedures other than above will be issued when situation required.

## RJOK AD 2.23 ADDITIONAL INFORMATION

Nil
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**RJOK AD 2.24 CHARTS RELATED TO AN AERODROME**

Aerodrome/Heliport Chart  
Standard Departure Chart-Instrument (SHIMIZU)  
Standard Departure Chart-Instrument (KOCHI REVERSAL)  
Standard Departure Chart-Instrument (URADO REVERSAL)

Standard Departure Chart-Instrument (KAIFU-RNAV)  
Standard Departure Chart-Instrument (MUROT-RNAV)  
Standard Departure Chart-Instrument (OMOGO-RNAV)  
Standard Departure Chart-Instrument (RUSEV-RNAV)  
Standard Arrival Chart-Instrument (YOSAKOI NORTH-RNAV)  
Standard Arrival Chart-Instrument (YOSAKOI EAST-RNAV)  
Standard Arrival Chart-Instrument (YOSAKOI SOUTH-RNAV)  
Standard Arrival Chart-Instrument (YOSAKOI WEST-RNAV)  
Instrument Approach Chart (ILS Z or LOC Z RWY32)  
Instrument Approach Chart (ILS Y or LOC Y RWY32)  
Instrument Approach Chart (VOR RWY32)  
Instrument Approach Chart (RNP Z RWY14 (AR))  
Instrument Approach Chart (RNP Y RWY14 (AR))  
Other Chart (Visual REP)  
Other Chart (LDG CHART)  
Other Chart (MVA CHART)

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## AD CHART

**KOCHI AP**

TRUE NORTH

TOWER

ABN

WIND SPEED METER

VOR/DME(KRE)

A-1 A-2 A-3 A-4 A-5

RUNWAY GUARD LIGHTS T-1

RVR WDI

CEILOMETER

T-2 TAXIING GUIDANCE SIGNS

ARP

CIRCLING GUIDANCE LIGHTS T-5

WDI T-6

PAPI Angle 3.0° MEHT 25.5m(84ft)

OVERRUN LIGHTS

583.5m

WIND SPEED METER

PAPI Angle 3.0° MEHT 20m(66ft)

404.4m

REMARKS: RUNWAY GROOVING 2500m x 30m  
WIDTH OF TAXIWAY  
T-2, T-3, T-4 & T-5 34m  
T-1 & T-6 28.5m  
A-1, A-2, A-3, A-4 & A-5 23m

APPROACH LIGHTING SYSTEM

SIMPLE APPROACH LIGHTING SYSTEM

APPROACH LIGHT BEACONS

SEQUENCED FLASHING LIGHT (SFL-V)

420m

LONGITUDINAL PROFILE OF RUNWAY

RWY 14

42ft (12.77m)

-0.55%

37ft (11.26m)

-0.69%

32ft (9.63m)

-0.10%

29ft (8.92m)

-0.60%

23ft (7.12m)

-0.15%

21ft (6.54m) (6.13m)

-0.34%

18ft (5.46m)

-0.20%

18ft (5.43m)

-0.03%

0m 275m 511.5m 1240m 1540m 1940m 2060m 2400m 2500m

RWY 32

STANDARD DEPARTURE CHART - INSTRUMENT

RJOK / KOCHI

SID

SHIMIZU SEVEN DEPARTURE

RWY 14 : Climb RWY HDG to 500FT, turn right HDG 268°...

RWY 32 : Climb RWY HDG to 800FT, turn right...

...to intercept and proceed via KRE R223/SUC R043 to SUC VORTAC.

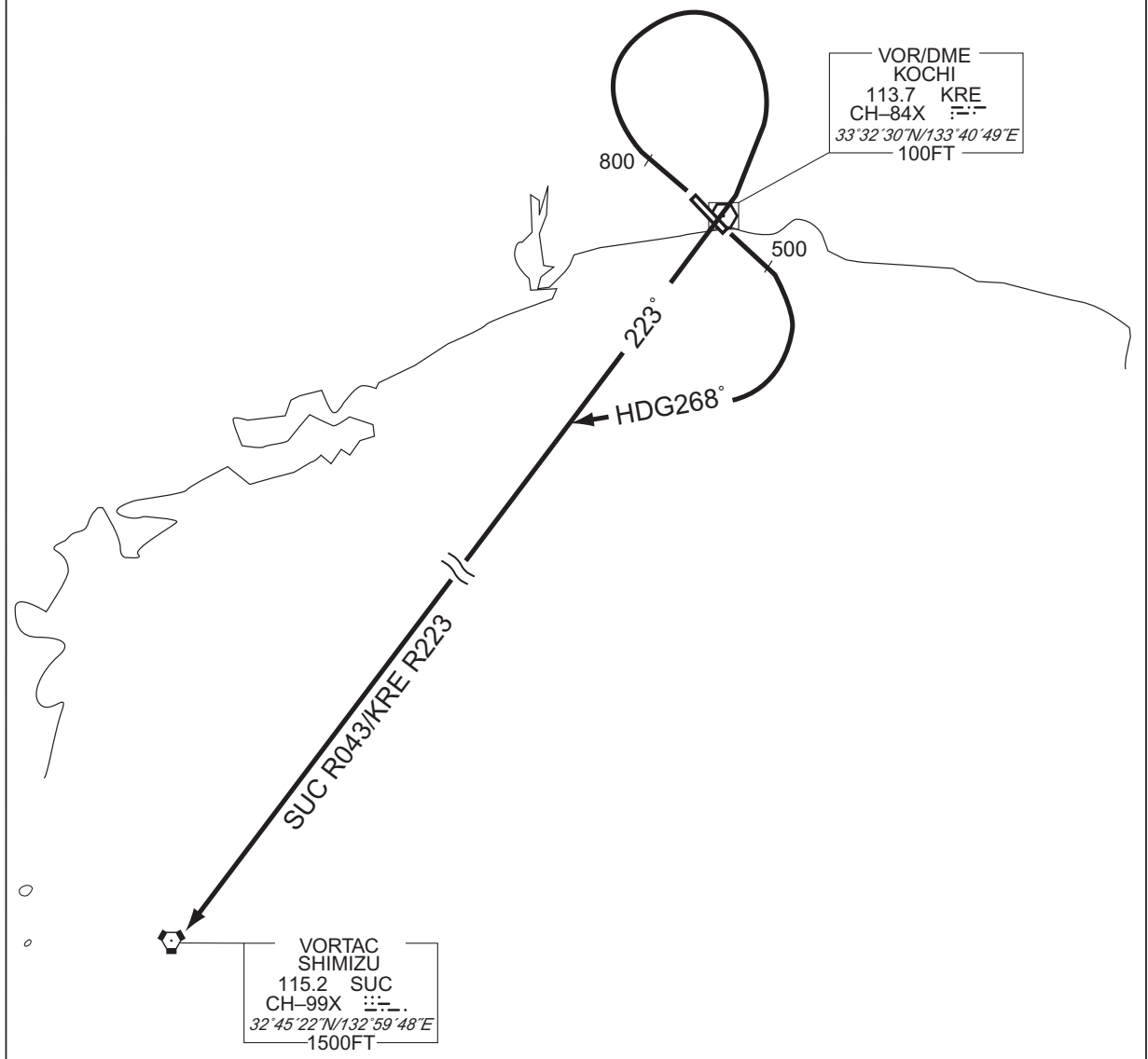
Note RWY14 : 5.0% climb gradient required up to 500FT.

OBST ALT 61FT located at 0.2NM 179° FM end of RWY14.

RWY32 : 6.0% climb gradient required up to 2500FT.

OBST ALT 2165FT located at 6.6NM 359° FM end of RWY32.

CHANGE : PROC renamed. Note RWY14 added.



## STANDARD DEPARTURE CHART - INSTRUMENT

RJOK / KOCHI

SID

KOCHI REVERSAL SIX DEPARTURE

RWY 14 : Climb RWY HDG to 500FT, turn right...

RWY 32 : Climb RWY HDG to 800FT, turn right HDG 205°...

...to intercept and proceed via KRE R160 to KRE 10.0DME, turn left  
proceed to KRE VOR/DME.

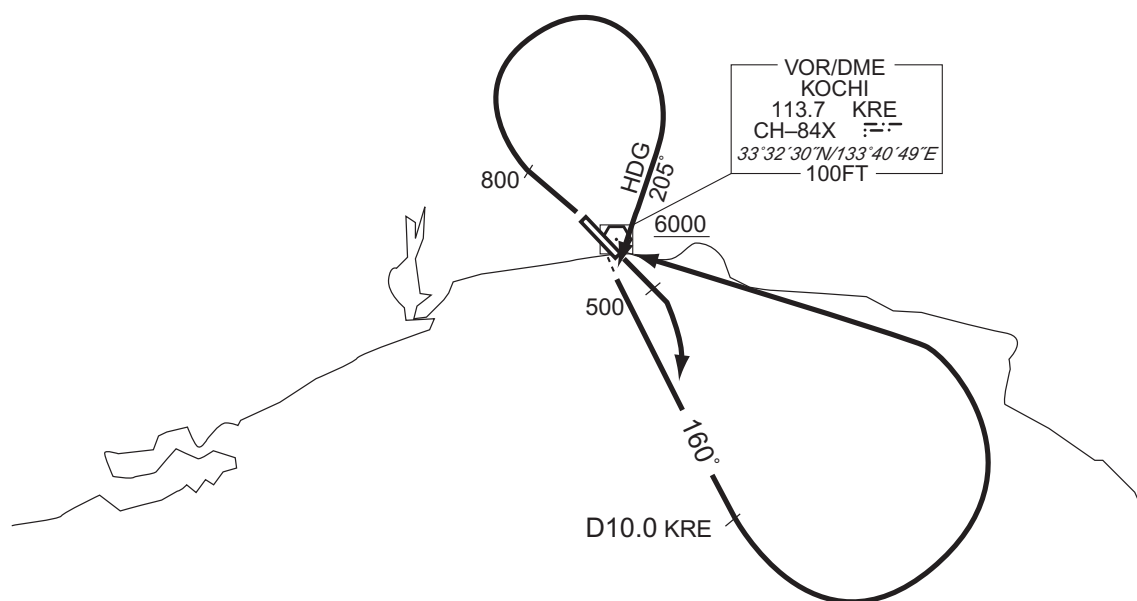
Cross KRE VOR/DME at or above 6000FT.

Note RWY14 : 5.0% climb gradient required up to 500FT.

OBST ALT 61FT located at 0.2NM 179° FM end of RWY14.

RWY32 : 6.0% climb gradient required up to 2500FT.

OBST ALT 2165FT located at 6.6NM 359° FM end of RWY32.



CHANGE : PROC renamed. Note RWY14 added.

STANDARD DEPARTURE CHART - INSTRUMENT

RJOK / KOCHI

SID

URADO REVERSAL FOUR DEPARTURE

RWY 14 : Climb RWY HDG to 500FT, turn right HDG 255°...

RWY 32 : Climb RWY HDG to 800FT, turn right...

...to intercept and proceed via KRE R210 to KRE 15.0DME, turn right  
proceed to KRE VOR/DME.

Cross KRE VOR/DME at or above 6000FT.

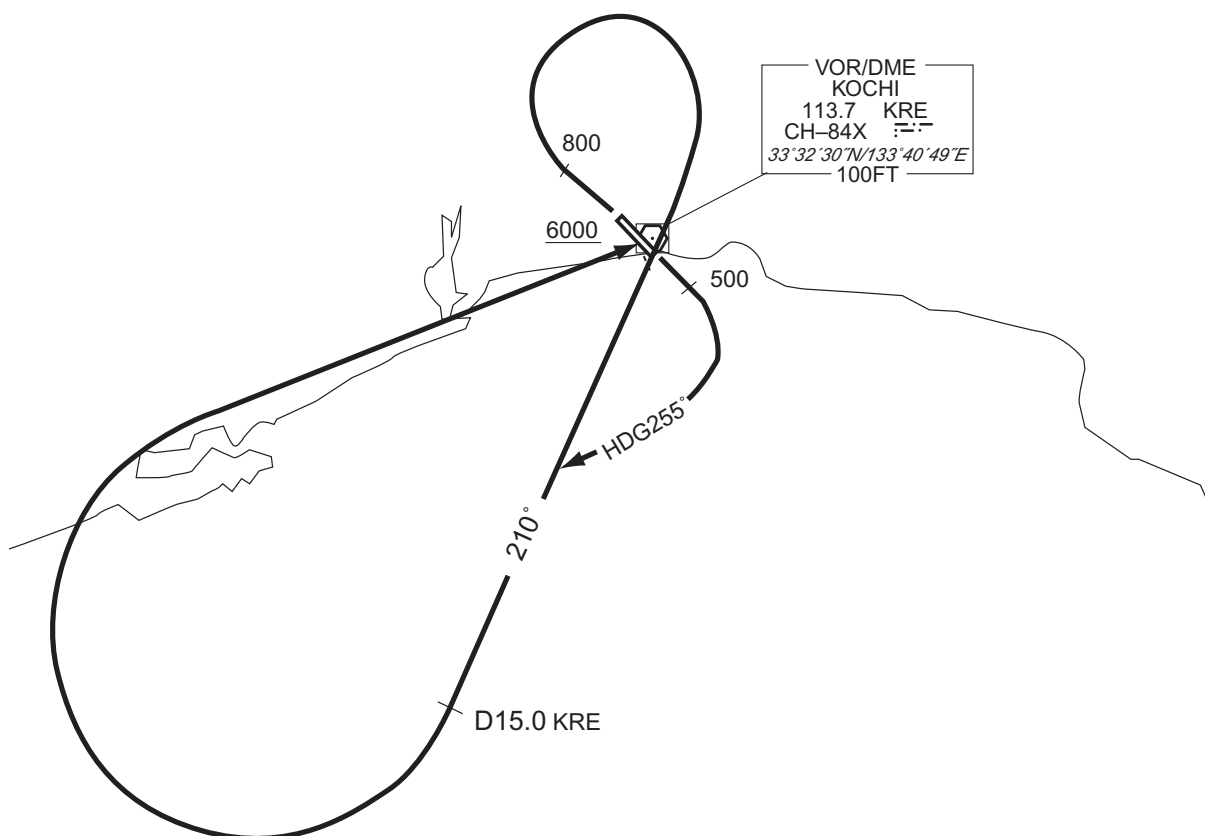
Note RWY14 : 5.0% climb gradient required up to 500FT.

OBST ALT 61FT located at 0.2NM 179° FM end of RWY14.

RWY32 : 6.0% climb gradient required up to 2500FT.

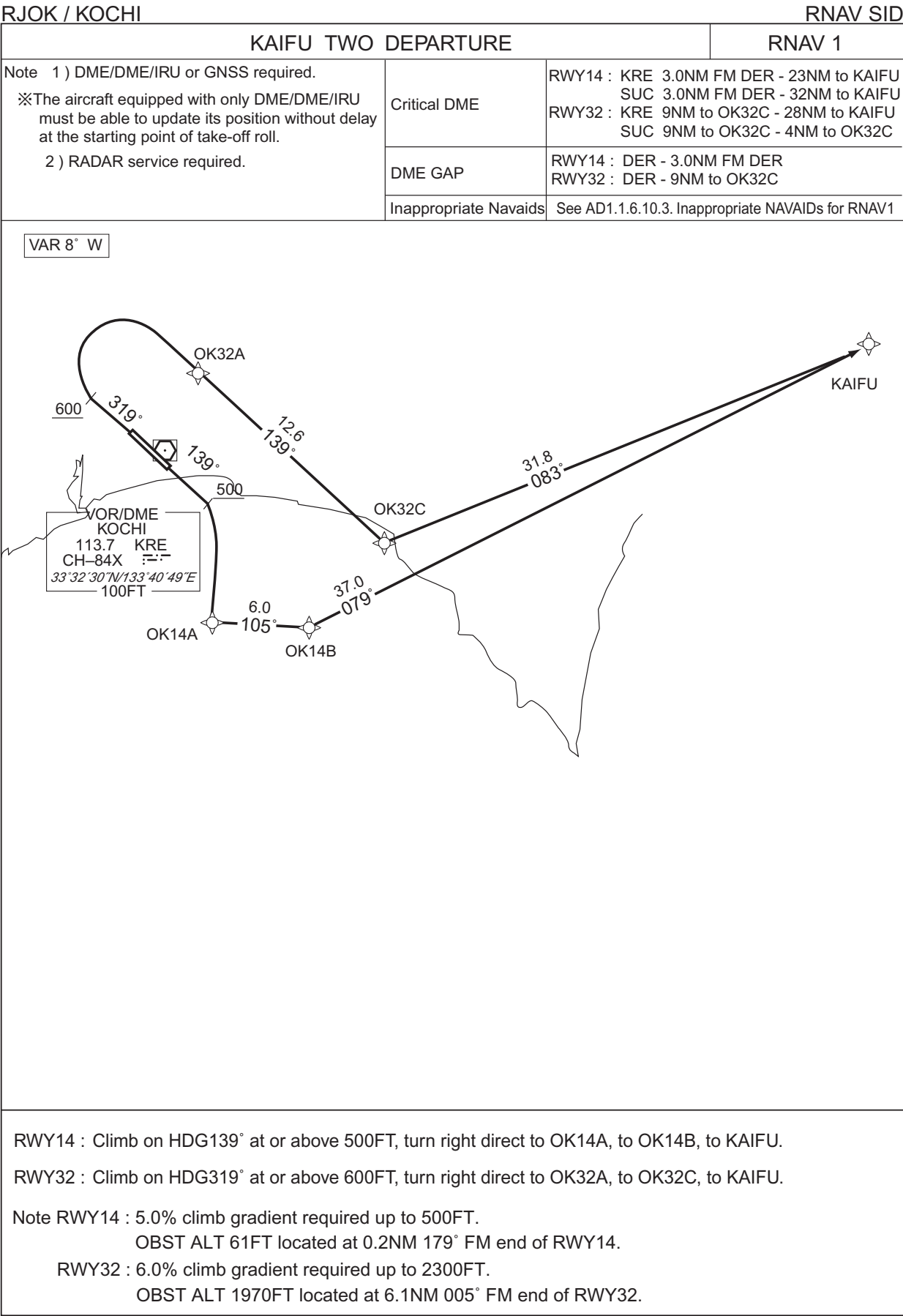
OBST ALT 2165FT located at 6.6NM 359° FM end of RWY32.

CHANGE : PROC renamed. Note RWY14 added.





STANDARD DEPARTURE CHART -INSTRUMENT



CHANGE : PROC renamed. VAR. PROC course. Note RWY14 added.

STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI

RNAV SID

KAIFU TWO DEPARTURE

RWY14

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	139 (130.6)	-7.9	—	—	+500	—	—	RNAV1
002	DF	OK14A	—	—	-7.9	—	R	—	—	—	RNAV1
003	TF	OK14B	—	105 (097.5)	-7.9	6.0	—	—	—	—	RNAV1
004	TF	KAIFU	—	079 (070.7)	-7.9	37.0	—	—	—	—	RNAV1

RWY32

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	319 (310.6)	-7.9	—	—	+600	—	—	RNAV1
002	DF	OK32A	—	—	-7.9	—	R	—	—	—	RNAV1
003	TF	OK32C	—	139 (130.7)	-7.9	12.6	—	—	—	—	RNAV1
004	TF	KAIFU	—	083 (075.0)	-7.9	31.8	—	—	—	—	RNAV1

Waypoint Coordinates

Waypoint Identifier	Coordinates	Waypoint Identifier	Coordinates
OK14A	332450.3N / 1334334.2E	KAIFU	333610.0N / 1343231.2E
OK14B	332402.9N / 1335040.3E		
OK32A	333615.7N / 1334417.5E		
OK32C	332804.1N / 1335542.6E		

CHANGE : PROC renamed. PROC course. VAR added. Navigation Specification. Waypoint Coordinates added.

RJOK / KOCHI

## RNAV SID and TRANSITION

KOCHI  
113.7 KRE  
CH-84X  
33°32'30"N/133°40'49"E  
100FT

OK32A

379°

139°

20.9

139°

500

600

OK14A

OK14A-MUROT  
30.9  
105°

OK32D

(For RWY32 Only)

14.3  
106°

MUROT

19.0  
101°

MIYAT

12.3  
090°

MERID

42.3  
090°

KUSHIMOTO (KEC)

VORTAC  
KUSHIMOTO  
112.9 KEC  
CH-76X  
33°26'52"N/135°47'40"E  
200FT

KUSHIMOTO TRANSITION

MUROT TWO DEPARTURE

RWY14 : Climb on HDG139° at or above 500FT, turn right direct to OK14A, to MUROT.  
 RWY32 : Climb on HDG319° at or above 600FT, turn right direct to OK32A, to OK32D, to MUROT.  
 Note RWY14 : 5.0% climb gradient required up to 500FT.  
                   OBST ALT 61FT located at 0.2NM 179° FM end of RWY14.  
 RWY32 : 6.0% climb gradient required up to 2300FT.  
                   OBST ALT 1970FT located at 6.1NM 005° FM end of RWY32.

From MUROT, to MIYAT, to MERID, to KEC.

CHANGE : PROC renamed. Critical DME, VAR, Note RWY14 added. PROC course.

## STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI

RNAV SID and TRANSITION

MUROT TWO DEPARTURE

## RWY14

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	139 (130.6)	-7.9	—	—	+500	—	—	RNAV1
002	DF	OK14A	—	—	-7.9	—	R	—	—	—	RNAV1
003	TF	MUROT	—	105 (097.6)	-7.9	30.9	—	—	—	—	RNAV1

## RWY32

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	319 (310.6)	-7.9	—	—	+600	—	—	RNAV1
002	DF	OK32A	—	—	-7.9	—	R	—	—	—	RNAV1
003	TF	OK32D	—	139 (130.7)	-7.9	20.9	—	—	—	—	RNAV1
004	TF	MUROT	—	106 (097.7)	-7.9	14.3	—	—	—	—	RNAV1

KUSHIMOTO TRANSITION

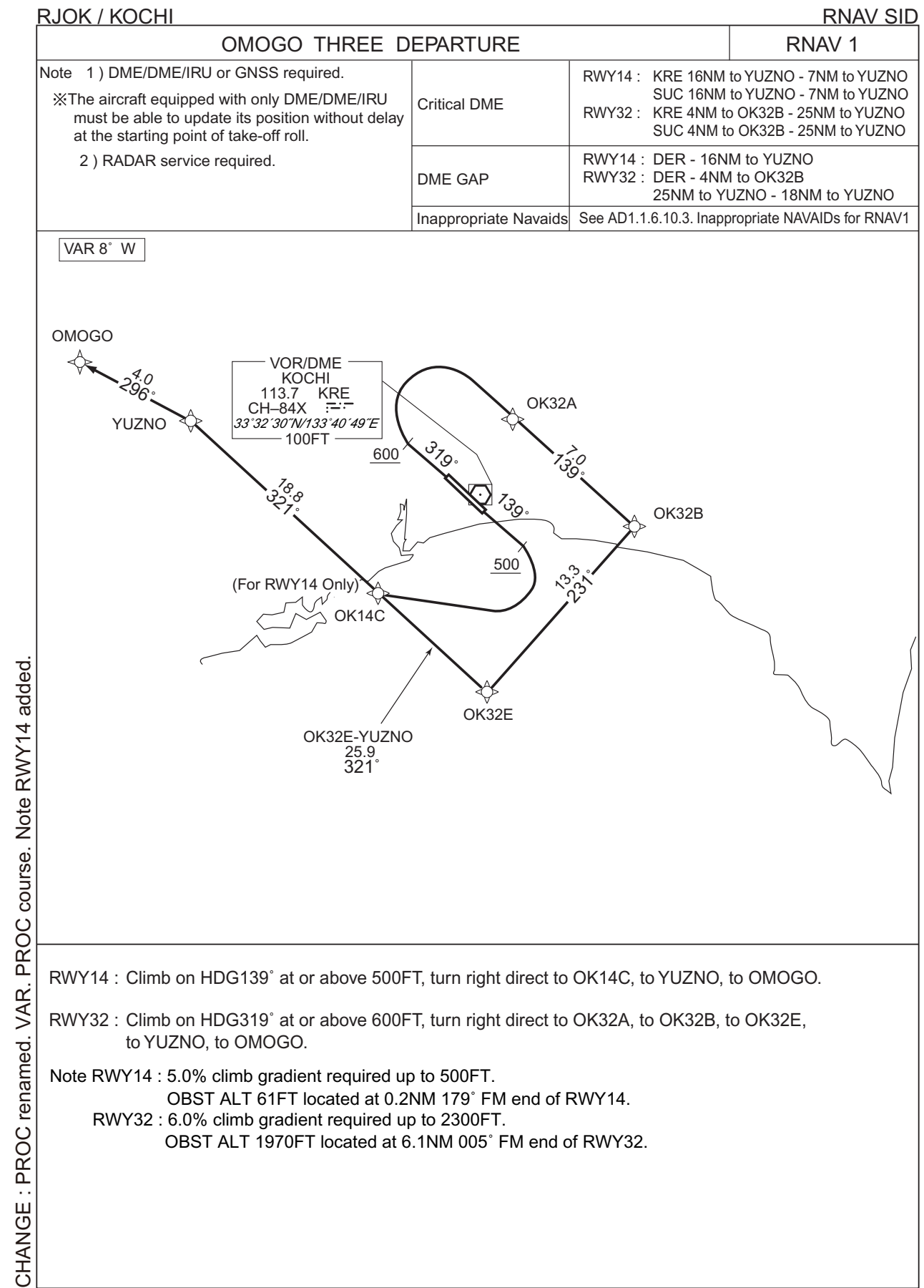
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	MUROT	—	—	-7.9	—	—	—	—	—	RNAV1
002	TF	MIYAT	—	101 (093.3)	-7.9	19.0	—	—	—	—	RNAV1
003	TF	MERID	—	090 (082.0)	-7.9	12.3	—	—	—	—	RNAV1
004	TF	KEC	—	090 (082.2)	-7.9	42.3	—	—	—	—	RNAV1

Waypoint Coordinates

Waypoint Identifier	Coordinates	Waypoint Identifier	Coordinates
OK14A	332450.3N / 1334334.2E	MIYAT	331934.3N / 1344250.9E
OK32A	333615.7N / 1334417.5E	MERID	332115.9N / 1345728.1E
OK32D	332238.0N / 1340314.9E	KEC	332651.9N / 1354740.2E
MUROT	332041.6N / 1342010.7E		

CHANGE : PROC renamed. PROC course. VAR added. Navigation Specification. Waypoint Coordinates added.

STANDARD DEPARTURE CHART -INSTRUMENT



STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI

RNAV SID

OMOGO THREE DEPARTURE

RWY14

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	139 (130.6)	-7.9	—	—	+500	—	—	RNAV1
002	DF	OK14C	—	—	-7.9	—	R	—	—	—	RNAV1
003	TF	YUZNO	—	321 (312.9)	-7.9	18.8	—	—	—	—	RNAV1
004	TF	OMOGO	—	296 (288.5)	-7.9	4.0	—	—	—	—	RNAV1

RWY32

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	319 (310.6)	-7.9	—	—	+600	—	—	RNAV1
002	DF	OK32A	—	—	-7.9	—	R	—	—	—	RNAV1
003	TF	OK32B	—	139 (130.7)	-7.9	7.0	—	—	—	—	RNAV1
004	TF	OK32E	—	231 (222.8)	-7.9	13.3	—	—	—	—	RNAV1
005	TF	YUZNO	—	321 (312.9)	-7.9	25.9	—	—	—	—	RNAV1
006	TF	OMOGO	—	296 (288.5)	-7.9	4.0	—	—	—	—	RNAV1

Waypoint Coordinates

Waypoint Identifier	Coordinates	Waypoint Identifier	Coordinates
OK14C	332650.1N / 1333334.8E	YUZNO	333934.0N / 1331704.7E
OK32A	333615.7N / 1334417.5E	OMOGO	334049.7N / 1331233.1E
OK32B	333143.9N / 1335036.8E		
OK32E	332159.2N / 1333949.8E		

CHANGE : PROC renamed. PROC course. VAR: Waypoint Coordinates added.

## STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI

RNAV SID

## RUSEV ONE DEPARTURE

## RNAV 1

Note 1) DME/DME/IRU or GNSS required.

※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.

2) RADAR service required.

Critical DME

RWY14 : KRE 3.0NM FM DER - 10.0NM to OK400  
SUC 3.0NM FM DER - 10.0NM to OK400  
5.0NM to OK400 - 13.0NM to RUSEV  
RWY32 : KRE 9.0NM to OK32C - OK32C  
SUC 9.0NM to OK32C - 4.0NM to OK32C  
5.0NM to OK400 - 13.0NM to RUSEV

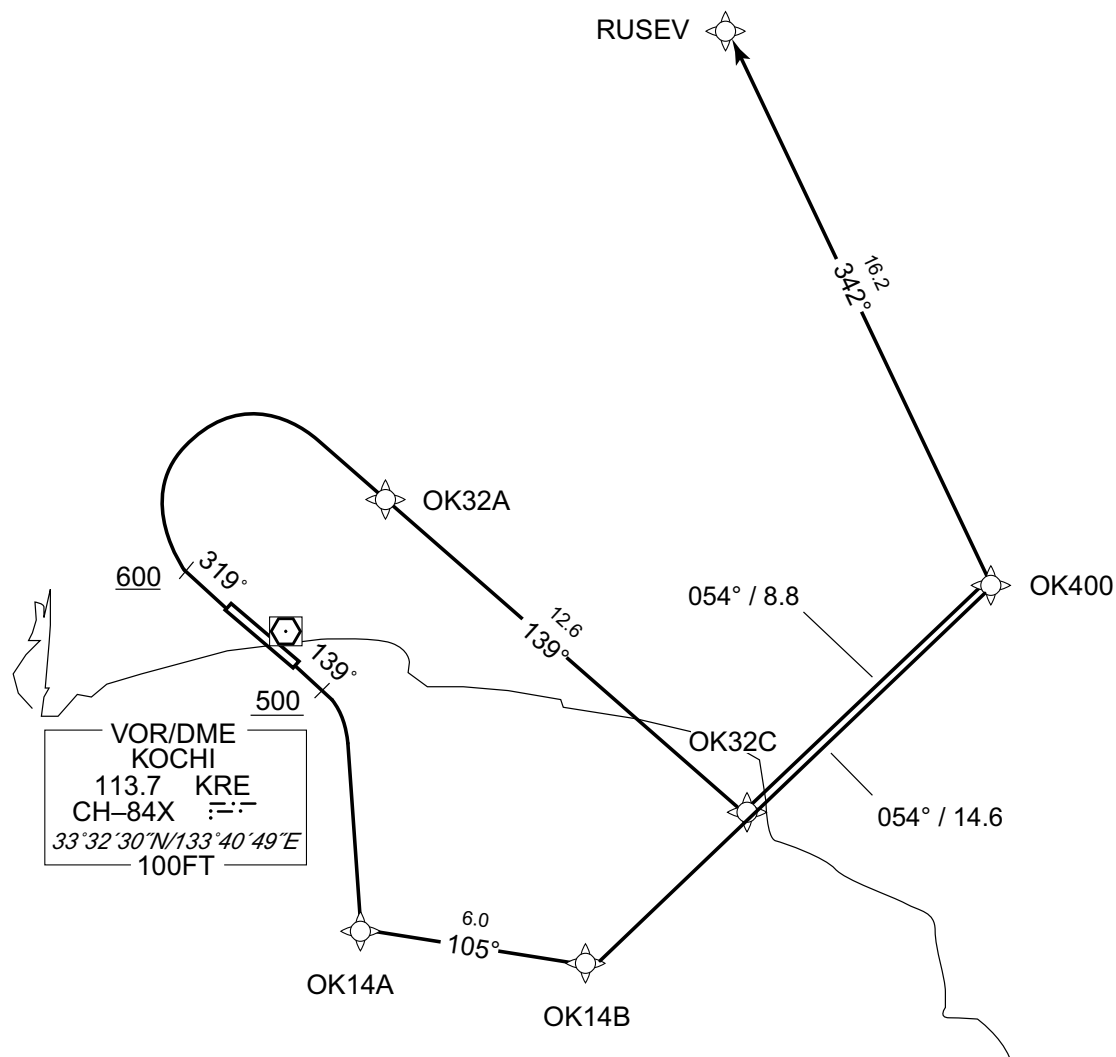
DME GAP

RWY14 : DER - 3.0NM FM DER  
RWY32 : DER - 9.0NM to OK32C

Inappropriate Navaids

See AD1.1.6.10.3. Inappropriate NAVAIDS for RNAV1

VAR 8° W



RWY14 : Climb on HDG139° at or above 500FT, turn right direct to OK14A, to OK14B, to OK400, to RUSEV.

RWY32 : Climb on HDG319° at or above 600FT, turn right direct to OK32A, to OK32C, to OK400, to RUSEV.

Note RWY14 : 5.0% climb gradient required up to 1200FT.

OBST ALT 61FT located at 0.2NM 179° FM end of RWY14.

OBST ALT 4560FT located at 16.9NM 068° FM end of RWY14.

RWY32 : 6.0% climb gradient required up to 2300FT.

OBST ALT 1970FT located at 6.1NM 005° FM end of RWY32.

CHANGE : New PROC.

STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI

RNAV SID

RUSEV ONE DEPARTURE

RWY14

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	139 (130.6)	-7.9	—	—	+500	—	—	RNAV1
002	DF	OK14A	—	—	-7.9	—	R	—	—	—	RNAV1
003	TF	OK14B	—	105 (097.5)	-7.9	6.0	—	—	—	—	RNAV1
004	TF	OK400	—	054 (046.3)	-7.9	14.6	—	—	—	—	RNAV1
005	TF	RUSEV	—	342 (334.2)	-7.9	16.2	—	—	—	—	RNAV1

RWY32

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	319 (310.6)	-7.9	—	—	+600	—	—	RNAV1
002	DF	OK32A	—	—	-7.9	—	R	—	—	—	RNAV1
003	TF	OK32C	—	139 (130.7)	-7.9	12.6	—	—	—	—	RNAV1
004	TF	OK400	—	054 (046.3)	-7.9	8.8	—	—	—	—	RNAV1
005	TF	RUSEV	—	342 (334.2)	-7.9	16.2	—	—	—	—	RNAV1

Waypoint Coordinates

Waypoint Identifier	Coordinates	Waypoint Identifier	Coordinates
OK14A	332450.3N / 1334334.2E	OK400	333408.5N / 1340320.6E
OK14B	332402.9N / 1335040.3E	RUSEV	334844.3N / 1335450.3E
OK32A	333615.7N / 1334417.5E		
OK32C	332804.1N / 1335542.6E		

CHANGE : New PROC.



STANDARD ARRIVAL CHART -INSTRUMENT

RJOK / KOCHI

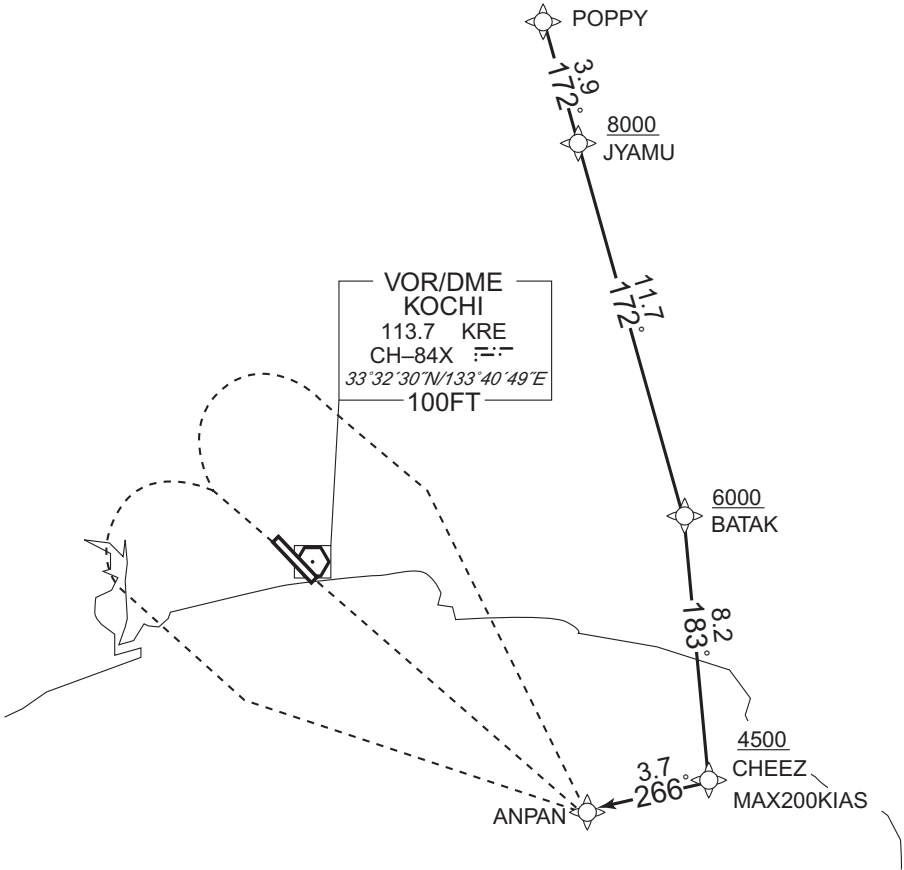
RNAV STAR

YOSAKOI NORTH ARRIVAL

RNAV 1

Note 1 ) DME/DME/IRU or GNSS required.  
2 ) RADAR service required.

VAR 8° W



From POPPY, to JYAMU at or above 8000FT, to BATAK at or above 6000FT, to CHEEZ at or above 4500FT, to ANPAN.

Critical DME	SUC	BATAK - ANPAN
	KRE	BATAK - ANPAN
DME GAP	-	
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1	

CHANGE : VAR. PROC course.

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course [°M(°T)]	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	POPPY	-	-	-7.9	-	-	-	-	-	RNAV1
002	TF	JYAMU	-	172 (164.2)	-7.9	3.9	-	+8000	-	-	RNAV1
003	TF	BATAK	-	172 (164.2)	-7.9	11.7	-	+6000	-	-	RNAV1
004	TF	CHEEZ	-	183 (175.5)	-7.9	8.2	-	+4500	-200	-	RNAV1
005	TF	ANPAN	-	266 (257.6)	-7.9	3.7	-	-	-	-	RNAV1

STANDARD ARRIVAL CHART -INSTRUMENT

RJOK / KOCHI

RNAV STAR

Waypoint Coordinates

Waypoint Identifier	Coordinates	Waypoint Identifier	Coordinates
POPPY	334905.1N / 1334915.3E	CHEEZ	332555.0N / 1335507.1E
JYAMU	334518.9N / 1335032.4E	ANPAN	332507.5N / 1335048.5E
BATAK	333404.3N / 1335421.3E		

CHANGE : Waypoint Coordinates added.

STANDARD ARRIVAL CHART -INSTRUMENT

RJOK / KOCHI

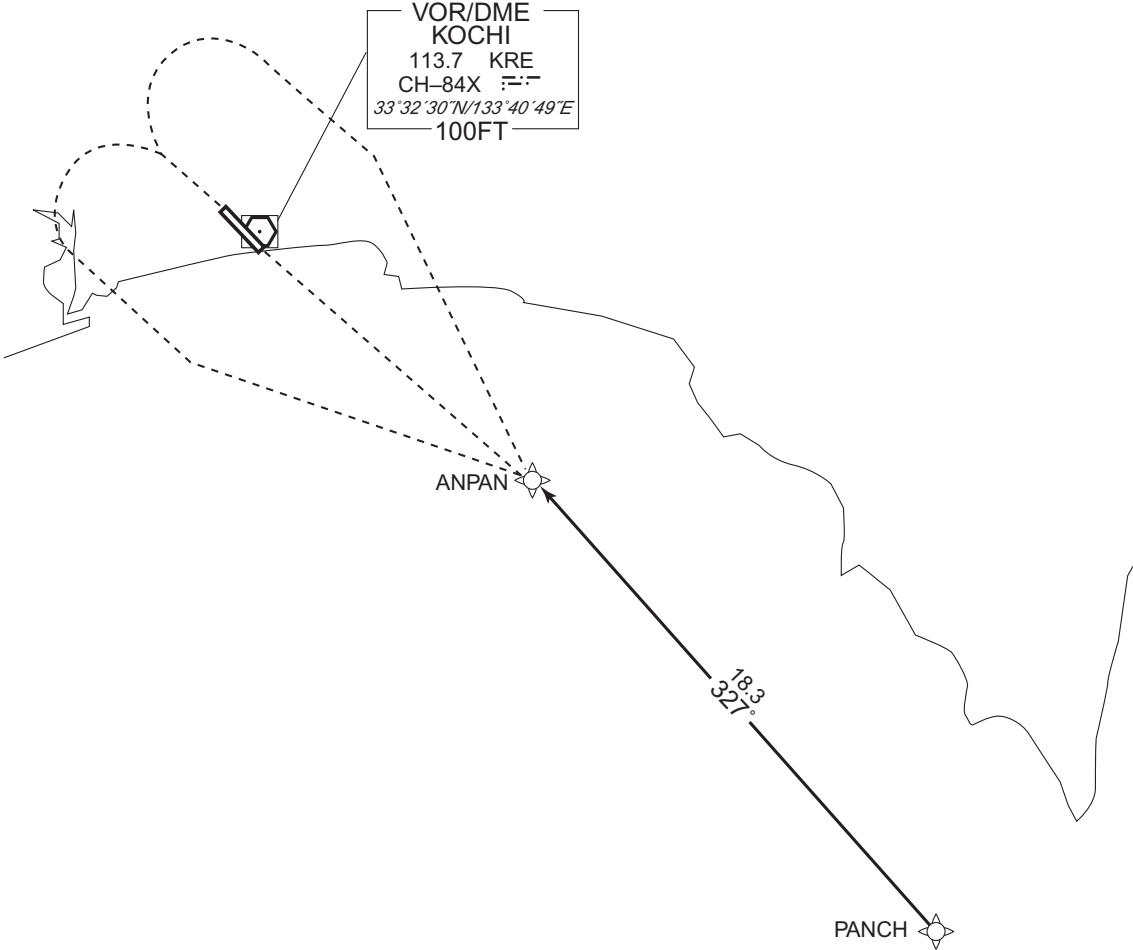
RNAV STAR

YOSAKOI EAST ARRIVAL

RNAV 1

Note 1 ) DME/DME/IRU or GNSS required.  
2 ) RADAR service required.

VAR 8° W



From PANCH, to ANPAN.

Critical DME	KRE	PANCH - ANPAN
	SUC	8NM to ANPAN - ANPAN
DME GAP	-	
Inappropriate NavAids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1	

CHANGE : VAR, PROC course.

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course [°M(°T)]	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	PANCH	-	-	-7.9	-	-	-	-	-	RNAV1
002	TF	ANPAN	-	327 (318.7)	-7.9	18.3	-	-	-	-	RNAV1

STANDARD ARRIVAL CHART -INSTRUMENT

RJOK / KOCHI

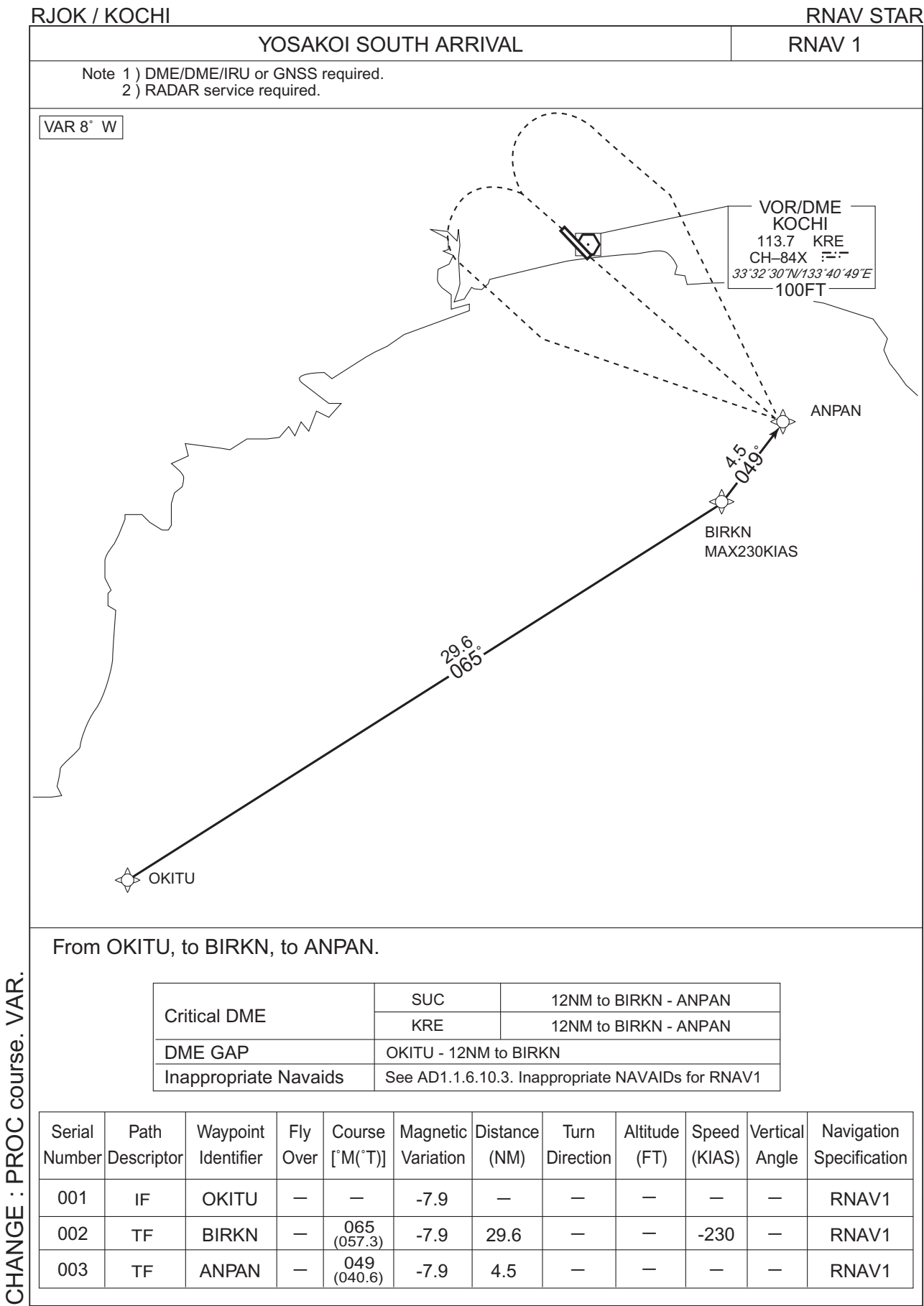
RNAV STAR

Waypoint Coordinates

Waypoint Identifier	Coordinates	Waypoint Identifier	Coordinates
PANCH	331121.3N / 1340517.6E	ANPAN	332507.5N / 1335048.5E

CHANGE : Waypoint Coordinates added.

STANDARD ARRIVAL CHART -INSTRUMENT



STANDARD ARRIVAL CHART -INSTRUMENT

RJOK / KOCHI

RNAV STAR

Waypoint Coordinates

Waypoint Identifier	Coordinates	Waypoint Identifier	Coordinates
OKITU	330547.5N / 1331731.5E	ANPAN	332507.5N / 1335048.5E
BIRKN	332142.6N / 1334717.9E		

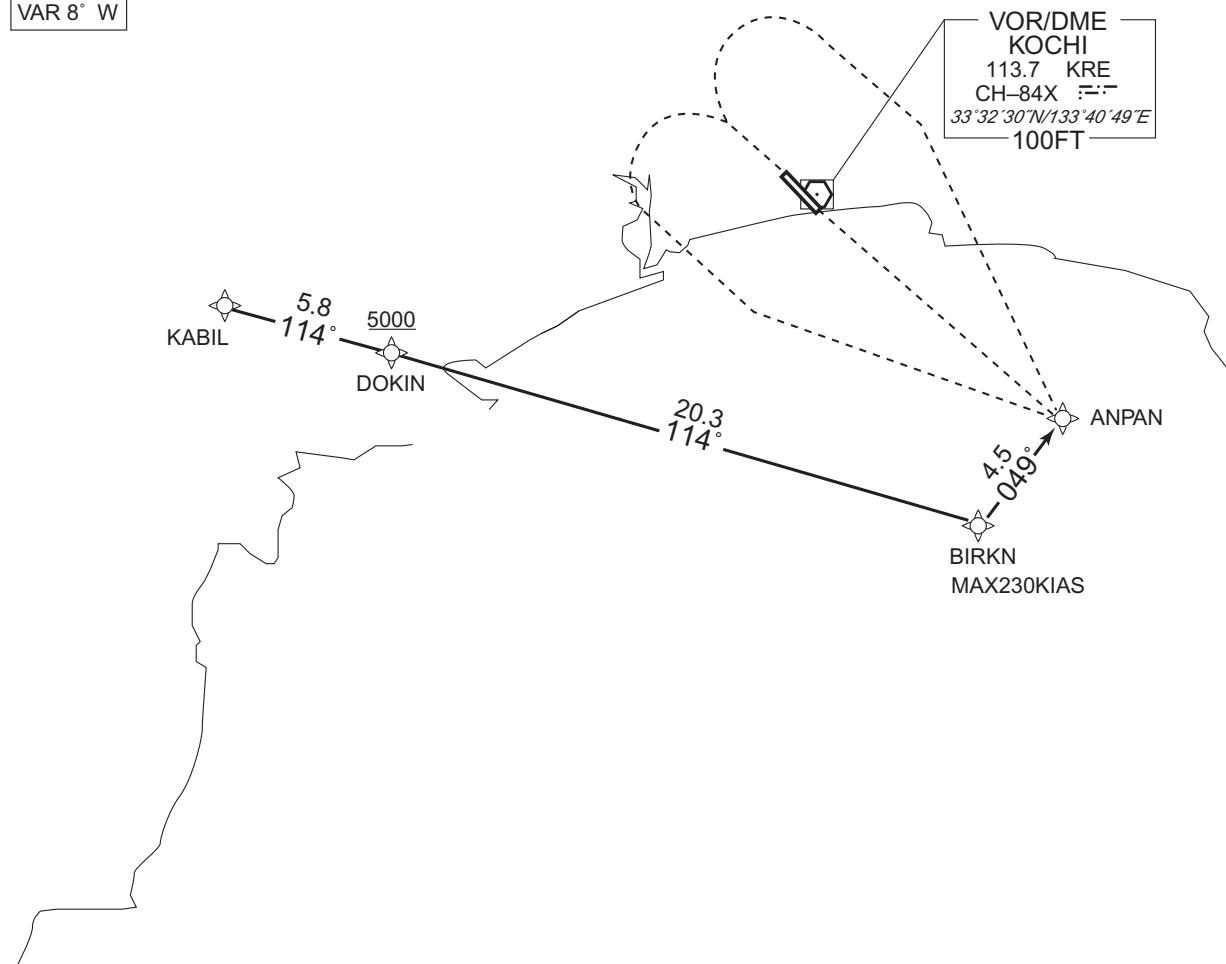
CHANGE : Waypoint Coordinates added.

## RJOK / KOCHI

## RNAV STAR

## RNAV 1

VAR 8° W



Critical DME	KRE	1NM to DOKIN - 16NM to BIRKN 7NM to BIRKN - ANPAN
	SUC	1NM to DOKIN - 16NM to BIRKN 7NM to BIRKN - ANPAN
DME GAP	16NM to BIRKN - 7NM to BIRKN	
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDS for RNAV1	

CHANGE : PROC course. VAR.

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course [°M(°T)]	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	KABIL	—	—	-7.9	—	—	—	—	—	RNAV1
002	TF	DOKIN	—	114 (105.9)	-7.9	5.8	—	+5000	—	—	RNAV1
003	TF	BIRKN	—	114 (105.9)	-7.9	20.3	—	—	-230	—	RNAV1
004	TF	ANPAN	—	049 (040.6)	-7.9	4.5	—	—	—	—	RNAV1

STANDARD ARRIVAL CHART -INSTRUMENT

RJOK / KOCHI

RNAV STAR

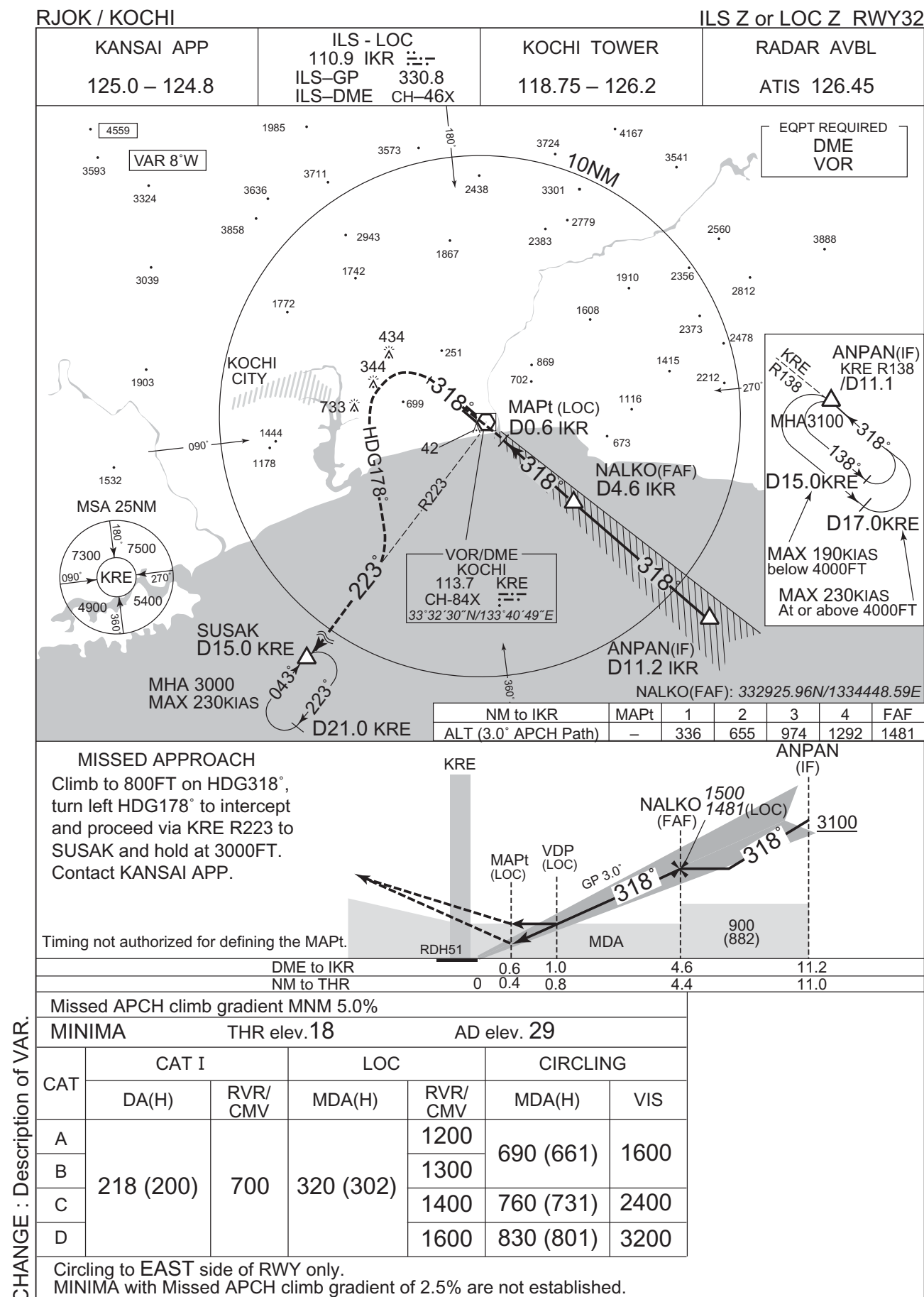
Waypoint Coordinates

Waypoint Identifier	Coordinates	Waypoint Identifier	Coordinates
KABIL	332854.0N / 1331717.4E	BIRKN	332142.6N / 1334717.9E
DOKIN	332718.9N / 1332357.6E	ANPAN	332507.5N / 1335048.5E

CHANGE : Waypoint Coordinates added.



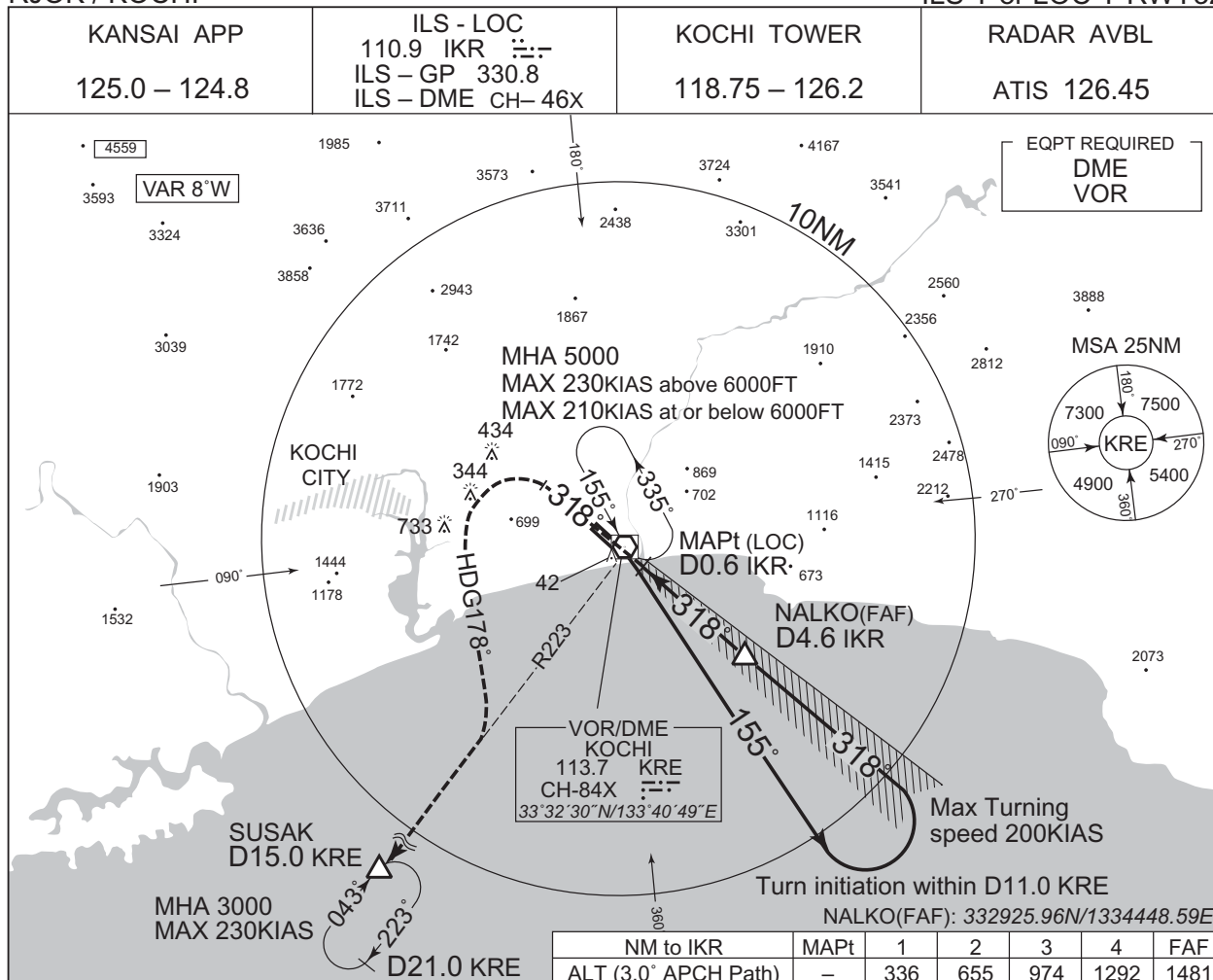
## INSTRUMENT APPROACH CHART



## INSTRUMENT APPROACH CHART

RJOK / KOCHI

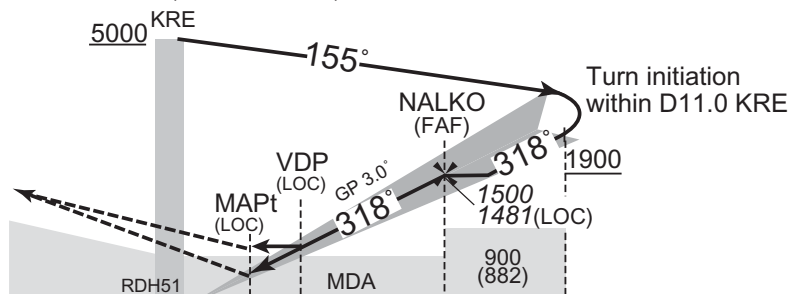
ILS Y or LOC Y RWY32



## MISSED APPROACH

Climb to 800FT on HDG318°, turn left HDG178° to intercept and proceed via KRE R223 to SUSAK and hold at 3000FT. Contact KANSAI APP.

Timing not authorized for defining the MAPt.



DME to IKR	0.6	1.0	4.6	
NM to THR	0	0.4	0.8	4.4

Missed APCH climb gradient MNM 5.0%

MINIMA THR elev. 18 AD elev. 29

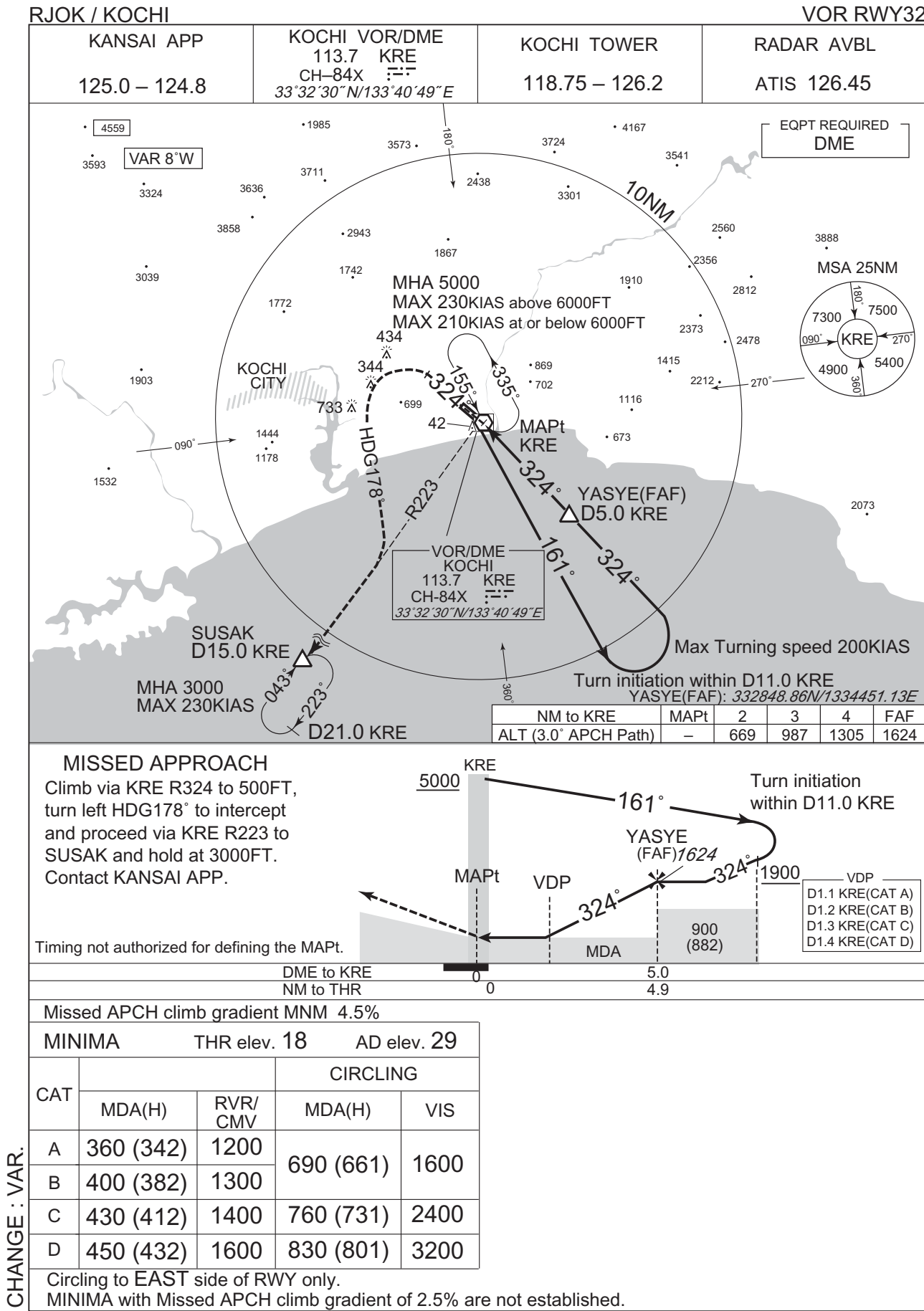
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/CMV	MDA(H)	RVR/CMV	MDA(H)	VIS
A	218 (200)	700	320 (302)	1200	690 (661)	1600
B				1300		
C				1400	760 (731)	2400
D				1600	830 (801)	3200

Circling to EAST side of RWY only.

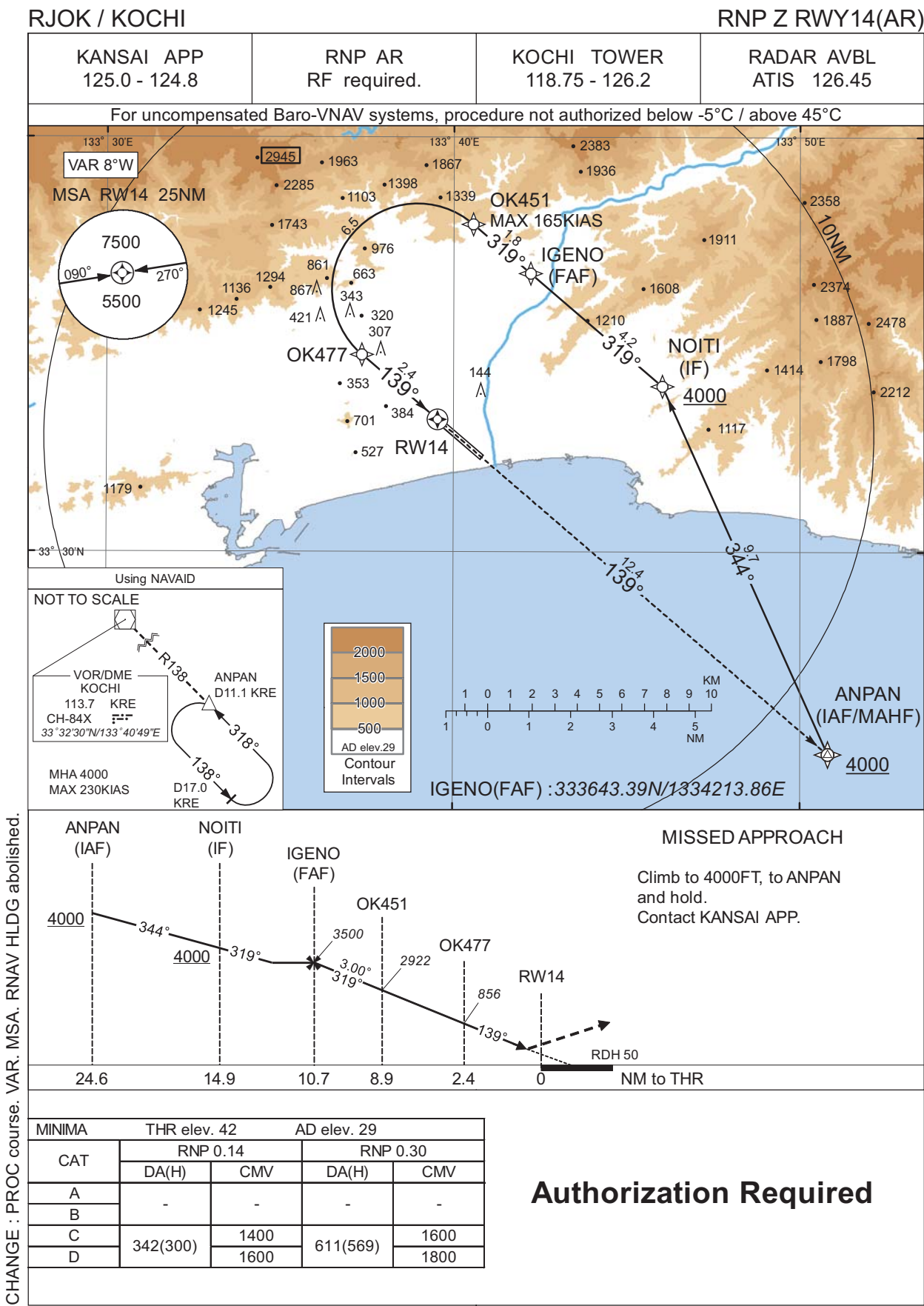
MINIMA with Missed APCH climb gradient of 2.5% are not established.

CHANGE : Description of VAR.

INSTRUMENT APPROACH CHART



INSTRUMENT APPROACH CHART



INSTRUMENT APPROACH CHART

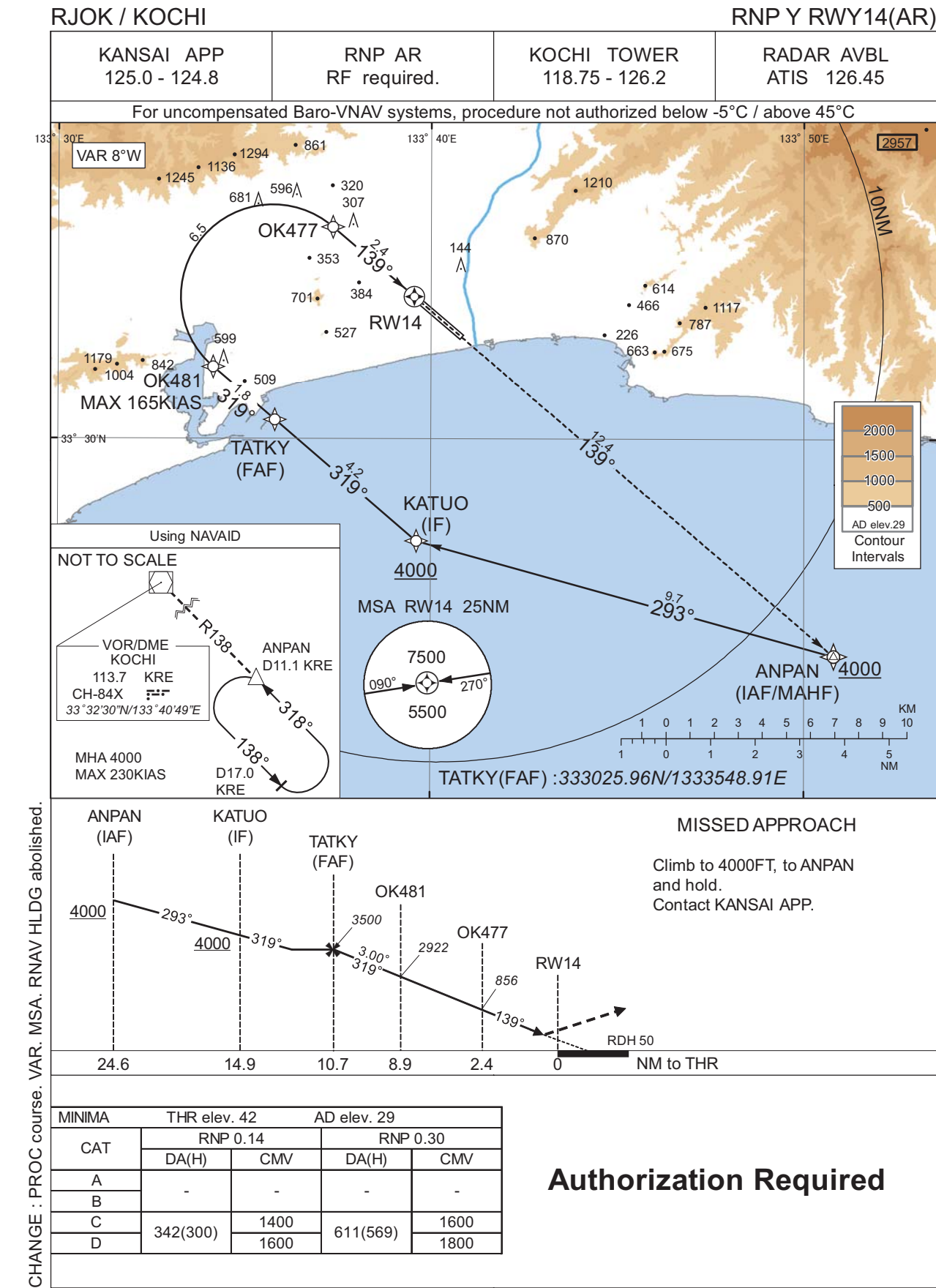
RJOK / KOCHI

RNP Z RWY14(AR)

Coding Table											
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	ANPAN	-	-	-7.9	-	-	+4000	-	-	-
002	TF	NOITI	-	344 (335.9)	-7.9	9.7	-	+4000	-	-	1.0
003	TF	IGENO	-	319 (310.7)	-7.9	4.2	-	3500	-	-	1.0
004	TF	OK451	-	319 (310.7)	-7.9	1.8	-	2922	-165	-3.00	0.14 0.30
005	RF Center: OKRF1 r=2.07NM	OK477	-	-	-7.9	6.5	L	856	-	-3.00	0.14 0.30
006	TF	RW14	Y	139 (130.6)	-7.9	2.4	-	92	-	-3.00/50	0.14 0.30
007	TF	ANPAN	-	139 (130.6)	-7.9	12.4	-	4000	-	-	1.0
Waypoint Coordinates											
Waypoint Identifier		Coordinates		RF Arc Center Identifier		Coordinates					
ANPAN		332507.54N / 1335048.52E		OKRF1		333620.13N / 1333858.11E					
NOITI		333400.03N / 1334602.07E									
IGENO		333643.39N / 1334213.86E									
OK451		333754.48N / 1334034.43E									
OK477		333445.76N / 1333721.85E									
RW14		333312.04N / 1333932.98E									

CHANGE : PROC course. VAR.

INSTRUMENT APPROACH CHART



INSTRUMENT APPROACH CHART

RJOK / KOCHI

RNP Y RWY14(AR)

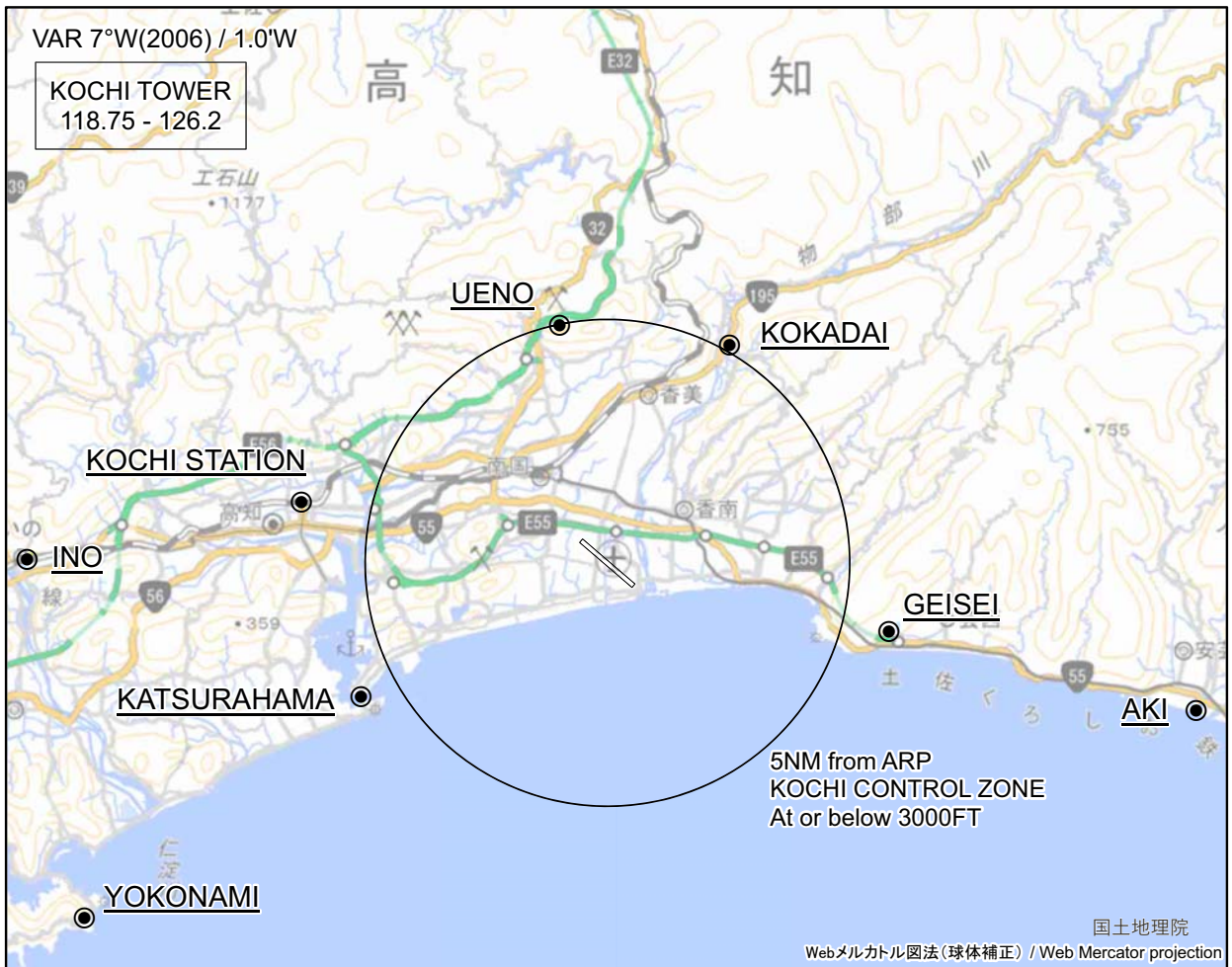
Coding Table											
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	ANPAN	-	-	-7.9	-	-	+4000	-	-	-
002	TF	KATUO	-	293 (285.5)	-7.9	9.7	-	+4000	-	-	1.0
003	TF	TATKY	-	319 (310.6)	-7.9	4.2	-	3500	-	-	1.0
004	TF	OK481	-	319 (310.6)	-7.9	1.8	-	2922	-165	-3.00	0.14 0.30
005	RF Center: OKRF2 r=2.07NM	OK477	-	-	-7.9	6.5	R	856	-	-3.00	0.14 0.30
006	TF	RW14	Y	139 (130.6)	-7.9	2.4	-	92	-	-3.00/50	0.14 0.30
007	TF	ANPAN	-	139 (130.6)	-7.9	12.4	-	4000	-	-	1.0
Waypoint Coordinates											
Waypoint Identifier		Coordinates		RF Arc Center Identifier		Coordinates					
ANPAN		332507.54N / 1335048.52E		OKRF2		333311.37N / 1333545.65E					
KATUO		332742.79N / 1333937.02E									
TATKY		333025.96N / 1333548.91E									
OK481		333136.96N / 1333409.51E									
OK477		333445.76N / 1333721.85E									
RW14		333312.04N / 1333932.98E									

CHANGE : PROC course. VAR.



RJOK / KOCHI

Visual REP



※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

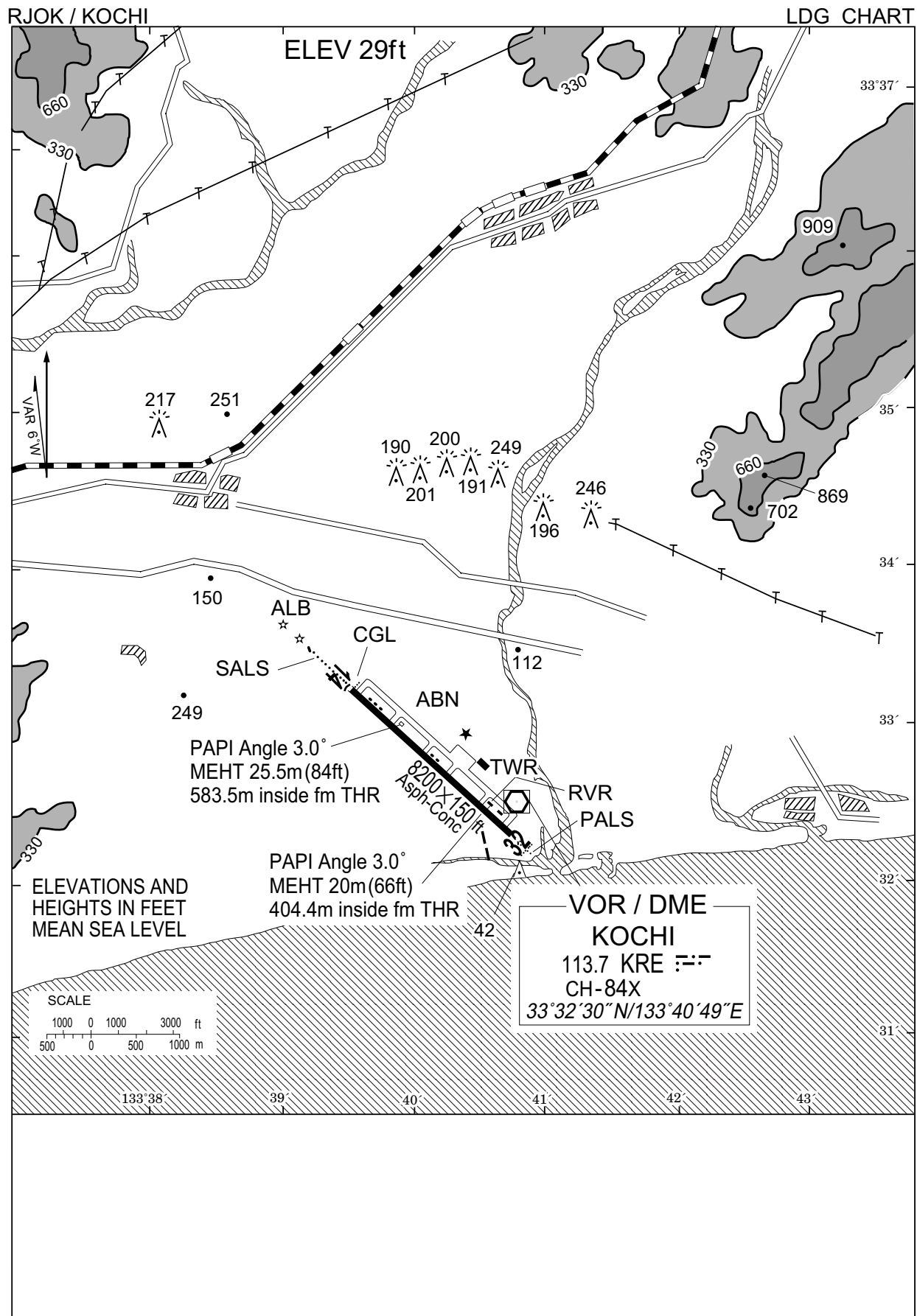
Call sign	BRG / DIST from ARP	Remarks
植野 Ueno	349°T / 5.0NM	ゴルフ場 Golf Course
工科大 Kokadai	029°T / 5.2NM	高知工科大学 Kochi University of Technology
高知駅 Kochi Station	281°T / 6.4NM	JR高知駅 Station
伊野 Ino	270°T / 10.2NM	JR伊野駅 Station
芸西 Geisei	104°T / 6.0NM	ホテル Hotel
桂浜 Katsurahama	242°T / 5.8NM	浦戸大橋 Bridge
安芸 Aki	104°T / 12.5NM	安芸川河口 River mouth
横浪 Yokonami	236°T / 13.0NM	ホテル Hotel

CHANGE : Call sign(Ino), Note established.

注: 有視界飛行方式により高知空港に着陸しようとする航空機又は高知航空交通管制圏を通過しようとする航空機は、競合する航空機の交通情報の提供を早期に受けるため、特に北西～北東方向から進入する場合、飛行場標点から10NM以遠で、高知タワーと通信設定することが推奨される。

NOTE: When VFR flight is going to enter the control zone for landing or passing through, the pilot is recommended to contact the control tower before passing 10NM from ARP especially in case of coming from northwest to northeast in order to be provided related traffic information as soon as possible.

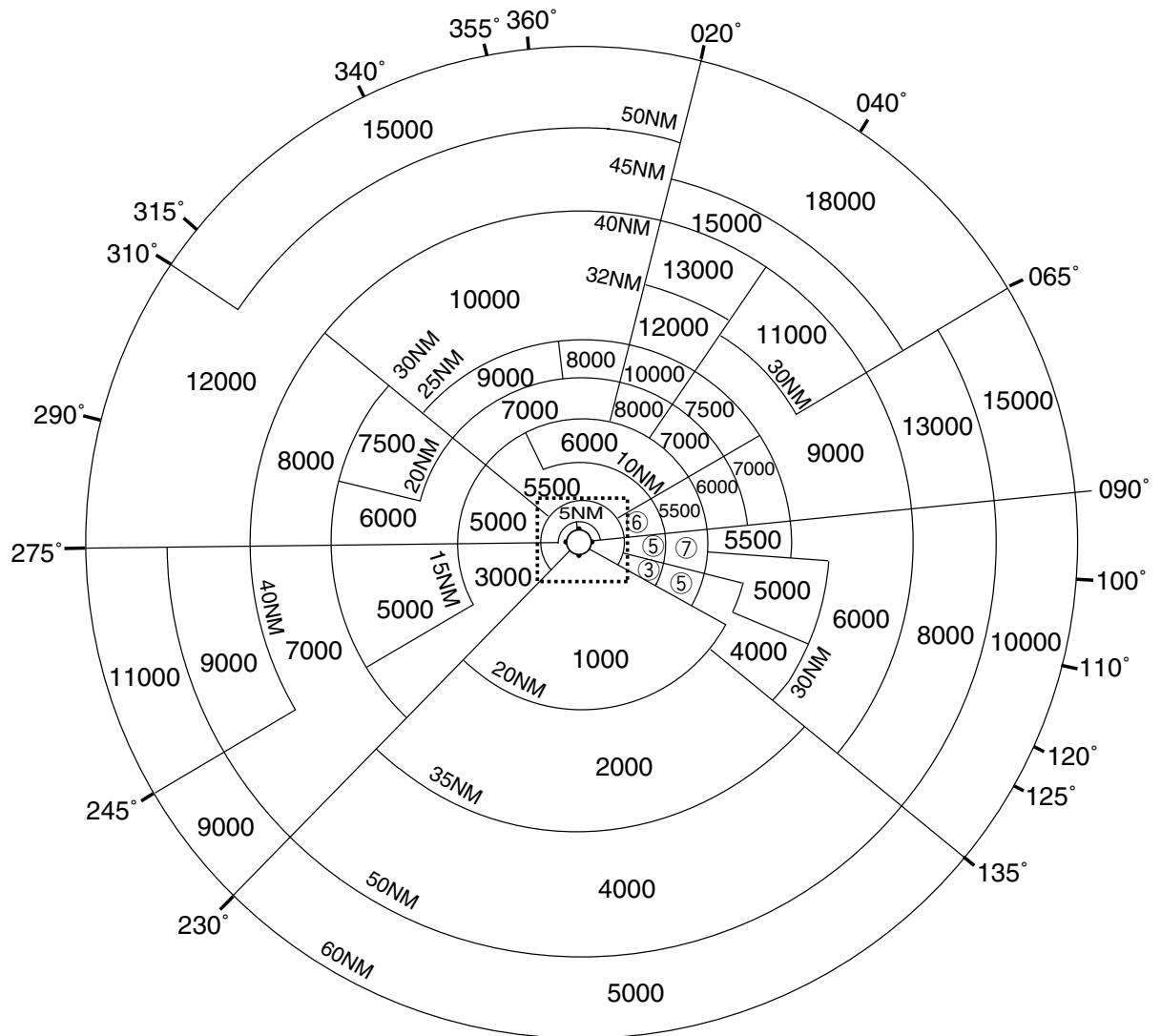




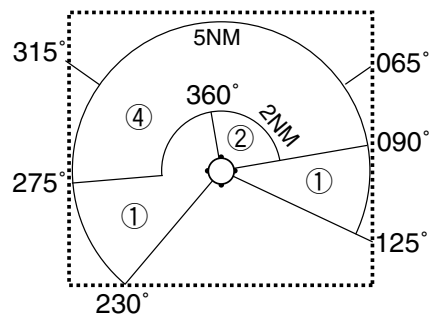
RJOK / KOCHI

Minimum Vectoring Altitude CHART

VAR 7°W (2009)



- ① 2000
- ② 2300
- ③ 2500
- ④ 3000
- ⑤ 3500
- ⑥ 4000
- ⑦ 4500



CENTER : 333245N/1334039E (RADAR SITE)