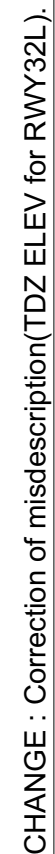
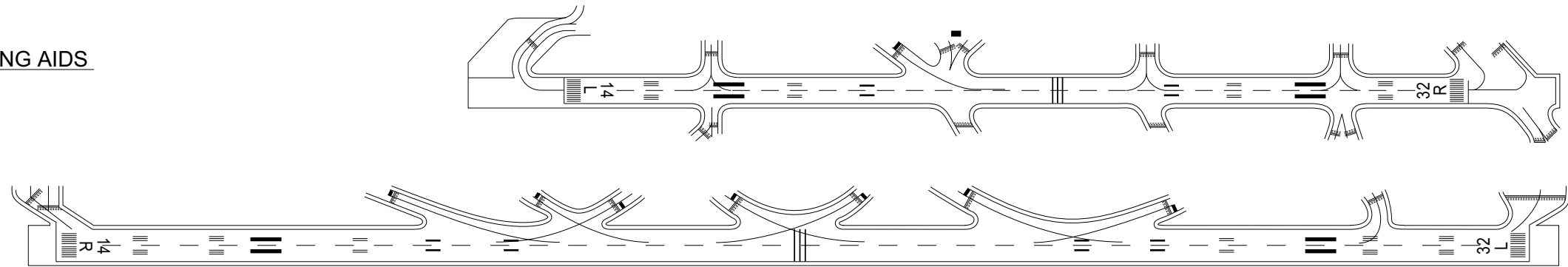
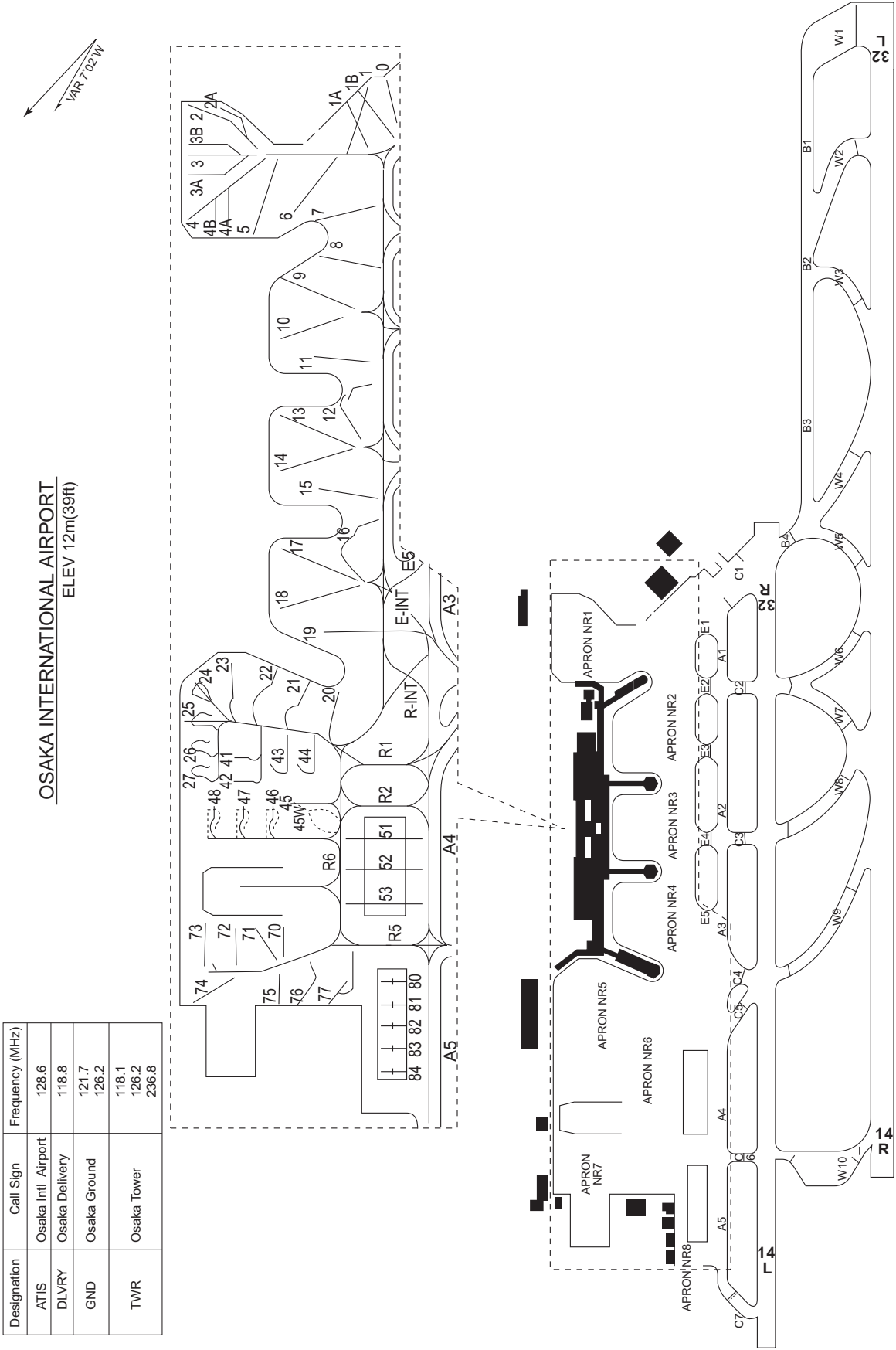


OSAKA INTERNATIONAL AIRPORT
ELEV 12m(39ft)



RJOO / OSAKA INTL

AD CHART



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DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

MAGNETIC VARIATION 8° W-FEB 2017

OSAKA INTERNATIONAL AIRPORT
RWY : 14R/32L

DECLARED DISTANCES	
RWY 14R	RWY 32L
3000m TAKE OFF RUN AVAILABLE	3000m
3000m TAKE OFF DISTANCE AVAILABLE	3000m
3000m ACCELERATE STOP DISTANCE AVAILABLE	3000m
3000m LANDING DISTANCE AVAILABLE	3000m

Vertical Scale: 0 to 400 FT

Horizontal Scale: 0 to 32000 FT

Obstacle Data (Approximate):

Distance (ft)	Obstacle Type	Height (ft)
1000	Obstacle 1	50
1100	Obstacle 2	60
1200	Obstacle 3	70
1300	Obstacle 4	80
1400	Obstacle 5	90
1500	Obstacle 6	100
1600	Obstacle 7	110
1700	Obstacle 8	120
1800	Obstacle 9	130
1900	Obstacle 10	140
2000	Obstacle 11	150
2100	Obstacle 12	160
2200	Obstacle 13	170
2300	Obstacle 14	180
2400	Obstacle 15	190
2500	Obstacle 16	200
2600	Obstacle 17	210
2700	Obstacle 18	220
2800	Obstacle 19	230
2900	Obstacle 20	240
3000	Obstacle 21	250
3100	Obstacle 22	260
3200	Obstacle 23	270

Horizontal Scale: 0 to 8000 METRES

Vertical Scale: 0 to 400 METRES

Obstacle Data (Approximate):

Distance (m)	Obstacle Type	Height (m)
300	Obstacle 1	15
330	Obstacle 2	18
360	Obstacle 3	21
390	Obstacle 4	24
420	Obstacle 5	27
450	Obstacle 6	30
480	Obstacle 7	33
510	Obstacle 8	36
540	Obstacle 9	39
570	Obstacle 10	42
600	Obstacle 11	45
630	Obstacle 12	48
660	Obstacle 13	51
690	Obstacle 14	54
720	Obstacle 15	57
750	Obstacle 16	60
780	Obstacle 17	63
810	Obstacle 18	66
840	Obstacle 19	69
870	Obstacle 20	72
900	Obstacle 21	75
930	Obstacle 22	78
960	Obstacle 23	81

Legend:

- IDENTIFICATION NUMBER
- POLE, TOWER, SPIRE, ANTENNA, ETC
- * TREE
- RAILROAD
- TRANSMISSION LINE OR OVERHEAD CABLE
- TRIANGULATION POINT
- AERONAUTICAL GROUND LIGHT
- LEVEE
- RIVER

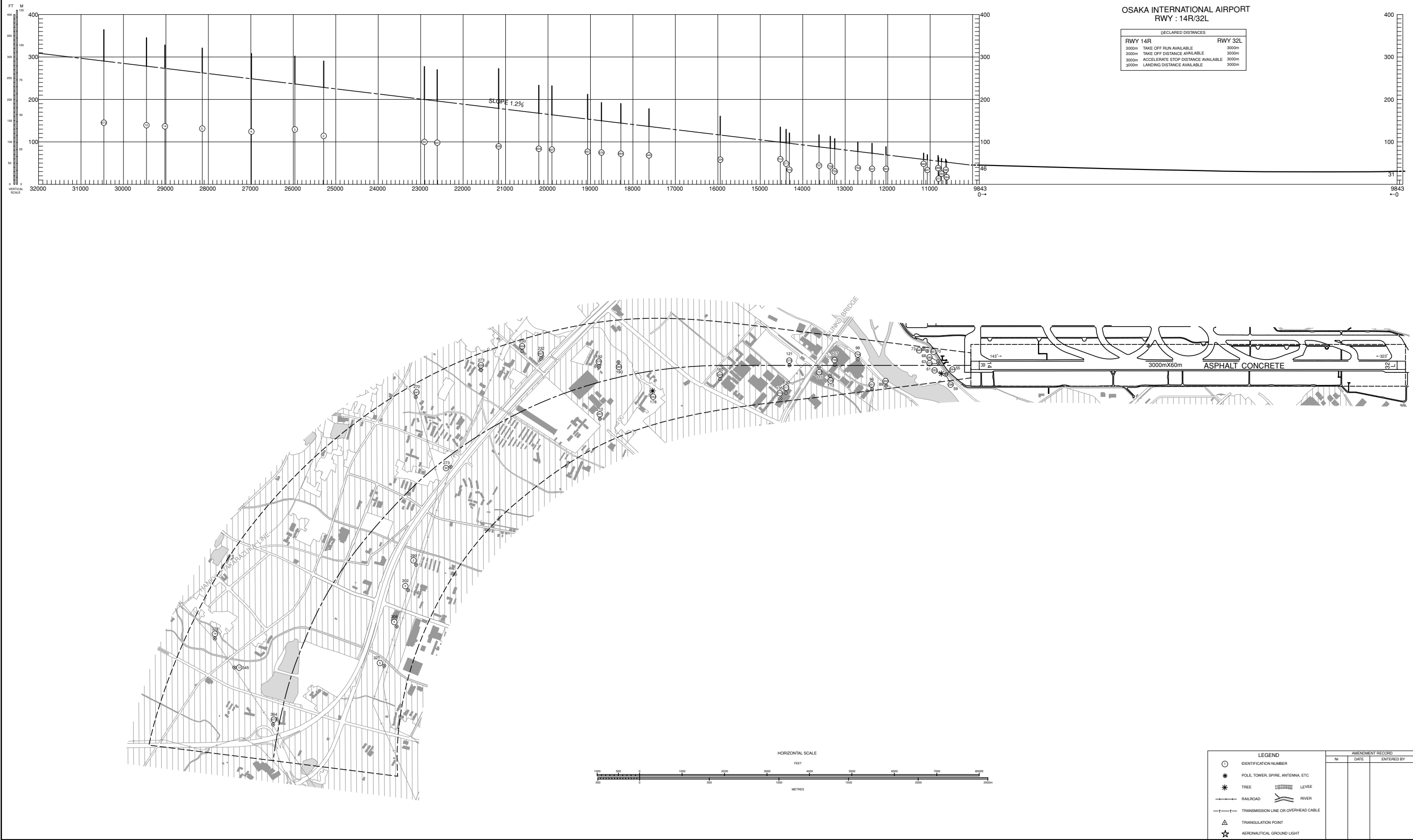
AMENDMENT RECORD

No	DATE	ENTERED BY

AERODROME OBSTACLE CHART-ICAO
TYPE A (OPERATING LIMITATIONS)

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

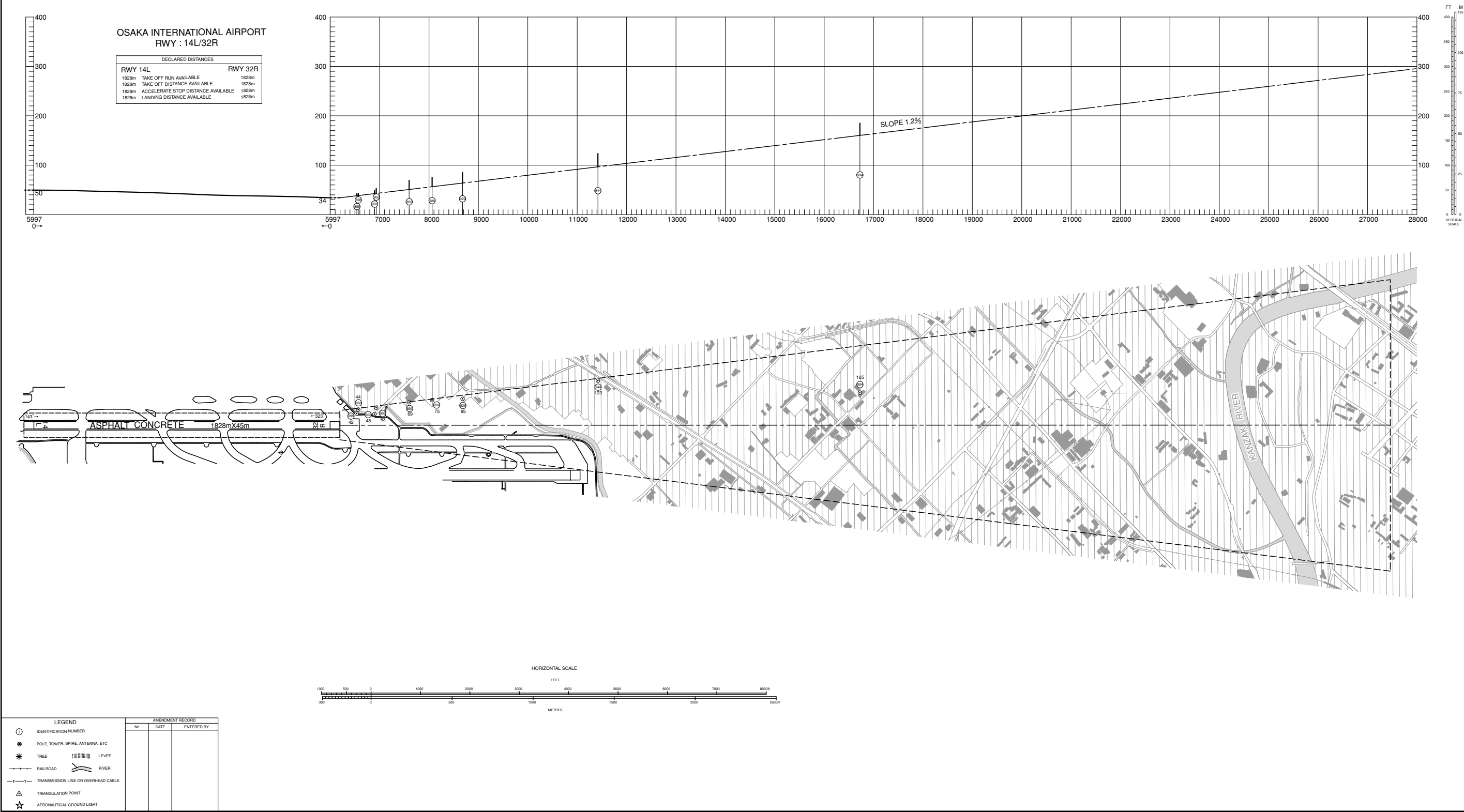
MAGNETIC VARIATION 8° W-FEB 2017



AERODROME OBSTACLE CHART-ICAO
TYPE A (OPERATING LIMITATIONS)

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

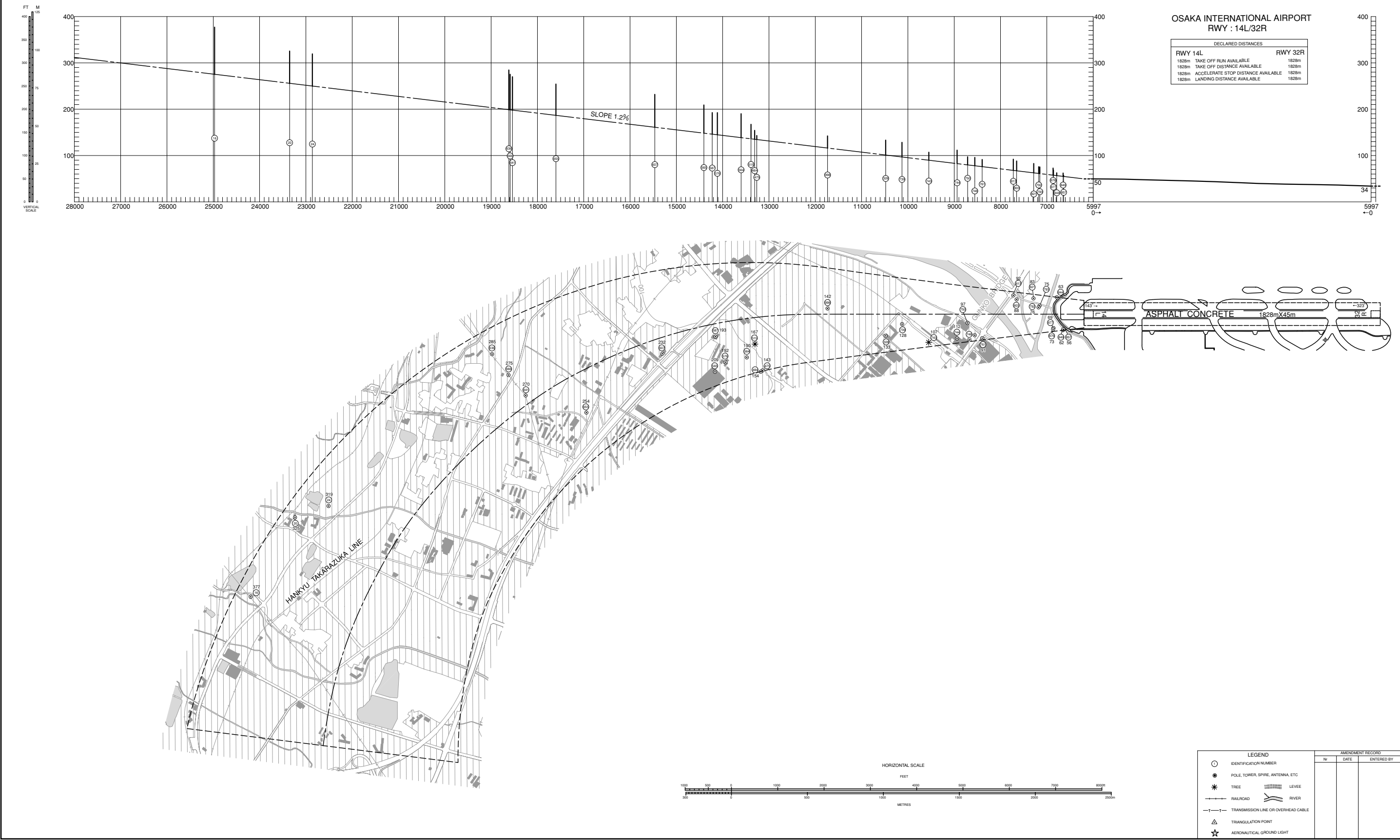
MAGNETIC VARIATION 8° W-FEB 2017



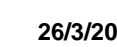
AERODROME OBSTACLE CHART-ICAO
TYPE A (OPERATING LIMITATIONS)

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

MAGNETIC VARIATION 8° W-FEB 2017



DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC



STANDARD DEPARTURE CHART -INSTRUMENT

RJOO / OSAKA INTL

SID

ASUKA FOUR DEPARTURE

RWY 32R/32L : Climb RWY HDG to 500FT or above, turn left within 4NM from RWY end/ITE 2.1DME,...

RWY 14R/14L : Climb RWY HDG to 500FT or above, turn left,...
...via ITE R101 to ASUKA.

Cross ASUKA at or above 5000FT.

Note : When take off RWY 14R/14L, following climb gradient should be maintained until 500FT.

Speed (Knots)	60	90	120	150	180	210
Rate (Feet/Min)	300	450	600	750	900	1050

PANAS ONE DEPARTURE

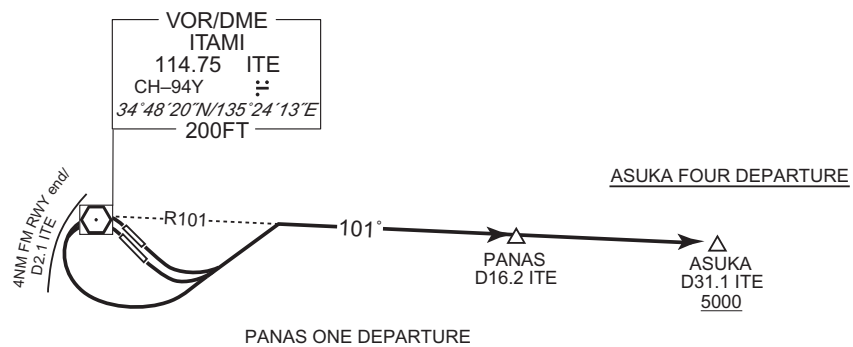
RWY 32R/32L : Climb RWY HDG to 500FT or above, turn left within 4NM from RWY end/ITE 2.1DME,...

RWY 14R/14L : Climb RWY HDG to 500FT or above, turn left,...
...via ITE R101 to PANAS.

Note : When take off RWY 14R/14L, following climb gradient should be maintained until 500FT.

Speed (Knots)	60	90	120	150	180	210
Rate (Feet/Min)	300	450	600	750	900	1050

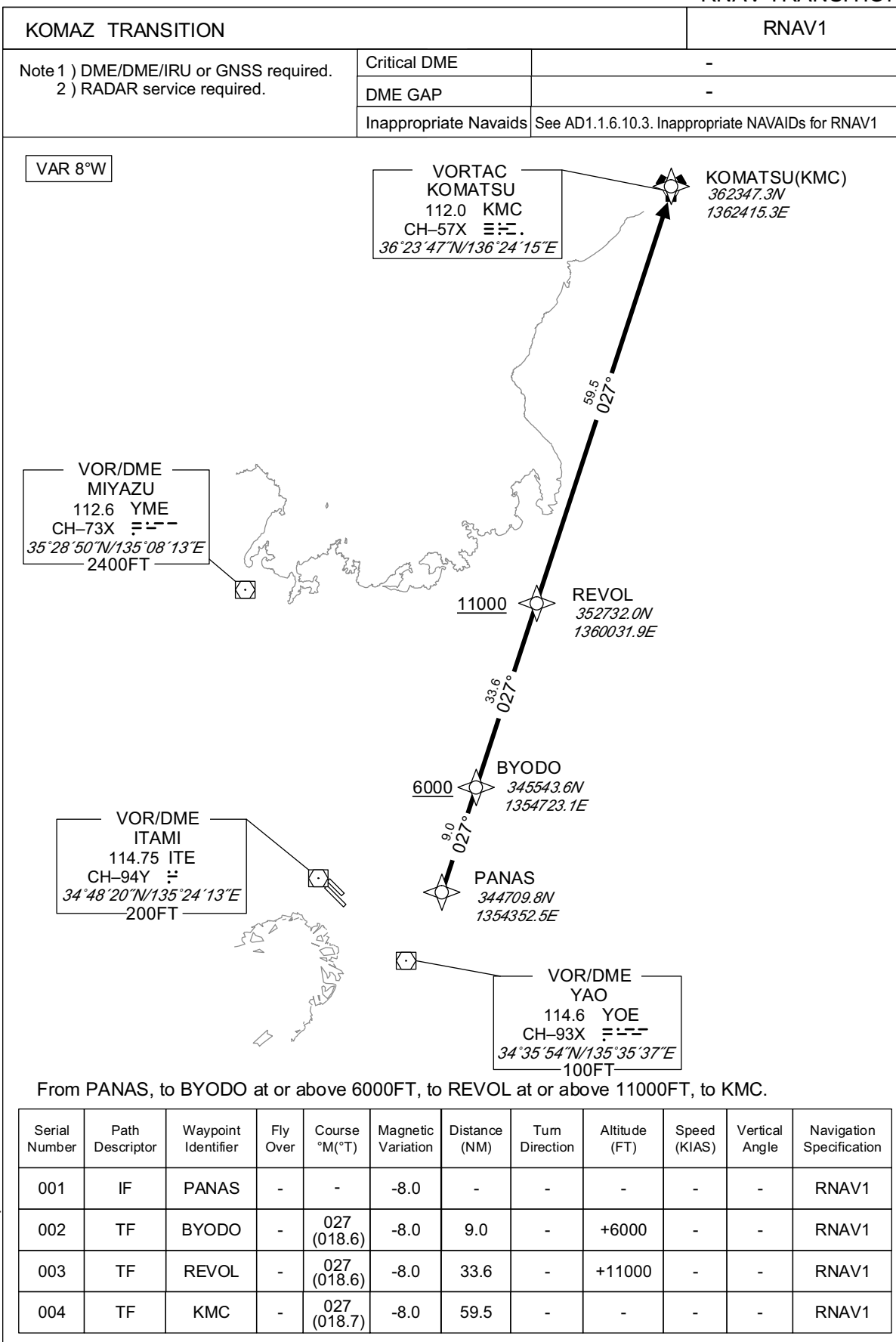
CHANGE: New PROC(PANAS ONE DEPARTURE).



STANDARD DEPARTURE CHART -INSTRUMENT

RJOO / OSAKA INTL

RNAV TRANSITION



CHANGE : Description of VAR and PROC name.

STANDARD DEPARTURE CHART -INSTRUMENT

RJOO / OSAKA INTL

SID

IZUMI ONE DEPARTURE

RWY 32R/32L : Climb RWY HDG to 500FT or above, turn left within 4NM from RWY end/ITE 2.1DME, via ITE R201 to YODOH,...

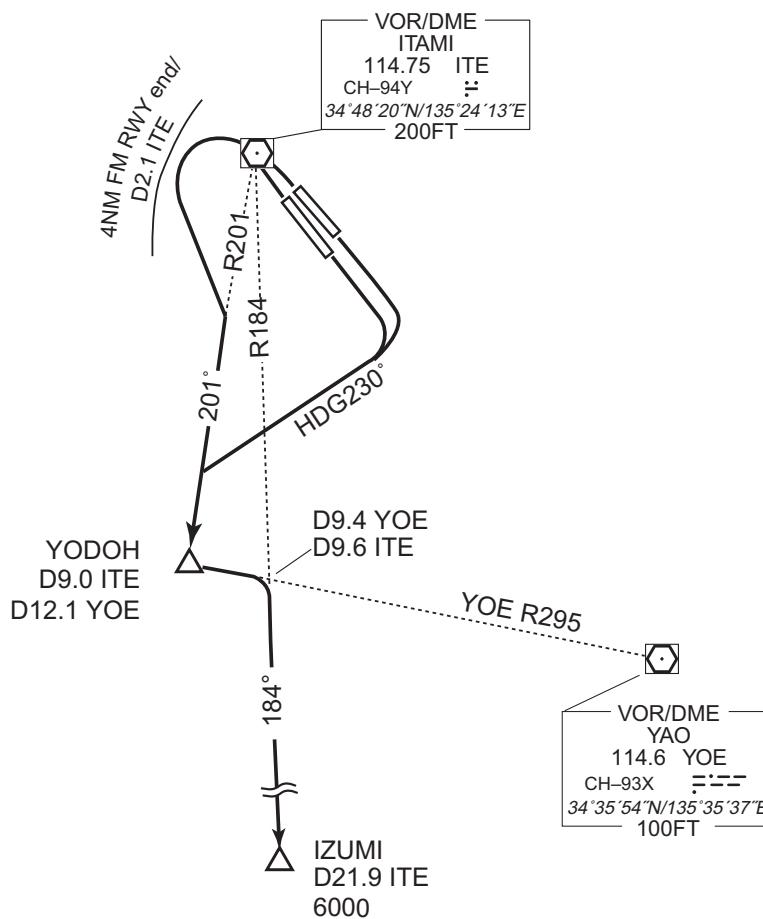
RWY 14R/14L : Climb RWY HDG to 500FT or above, turn right HDG230° to intercept and proceed via ITE R201 to YODOH,...

...turn left, via YOE R295 to intercept and proceed via ITE R184 to IZUMI.

Cross IZUMI at or above 6000FT.

Note : When take off RWY 14R/14L, following climb gradient should be maintained until 500FT.

Speed (Knots)	60	90	120	150	180	210
Rate (Feet/Min)	300	450	600	750	900	1050



CHANGE : Description of PROC name.

STANDARD DEPARTURE CHART -INSTRUMENT

RJOO / OSAKA INTL

SID

EAST REVERSAL FOUR DEPARTURE

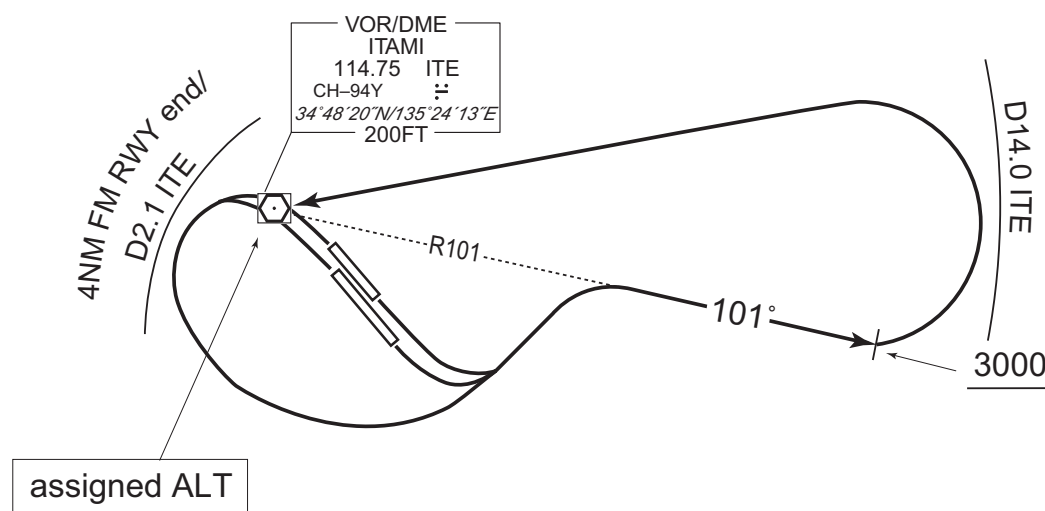
RWY 32R/32L : Climb RWY HDG to 500FT or above, turn left within 4NM from RWY end/ITE 2.1DME,...

RWY 14R/14L : Climb RWY HDG to 500FT or above, turn left,...
...via ITE R101 to 3000FT or above, turn left direct to ITE VOR/DME within ITE 14.0DME.

Cross ITE VOR/DME at assigned altitude.

Note : When take off RWY 14R/14L, following climb gradient should be maintained until 500FT.

Speed (Knots)	60	90	120	150	180	210
Rate (Feet/Min)	300	450	600	750	900	1050



CHANGE : Description of PROC name.

AIP JAPAN
RJOO / OSAKA INTL

SID

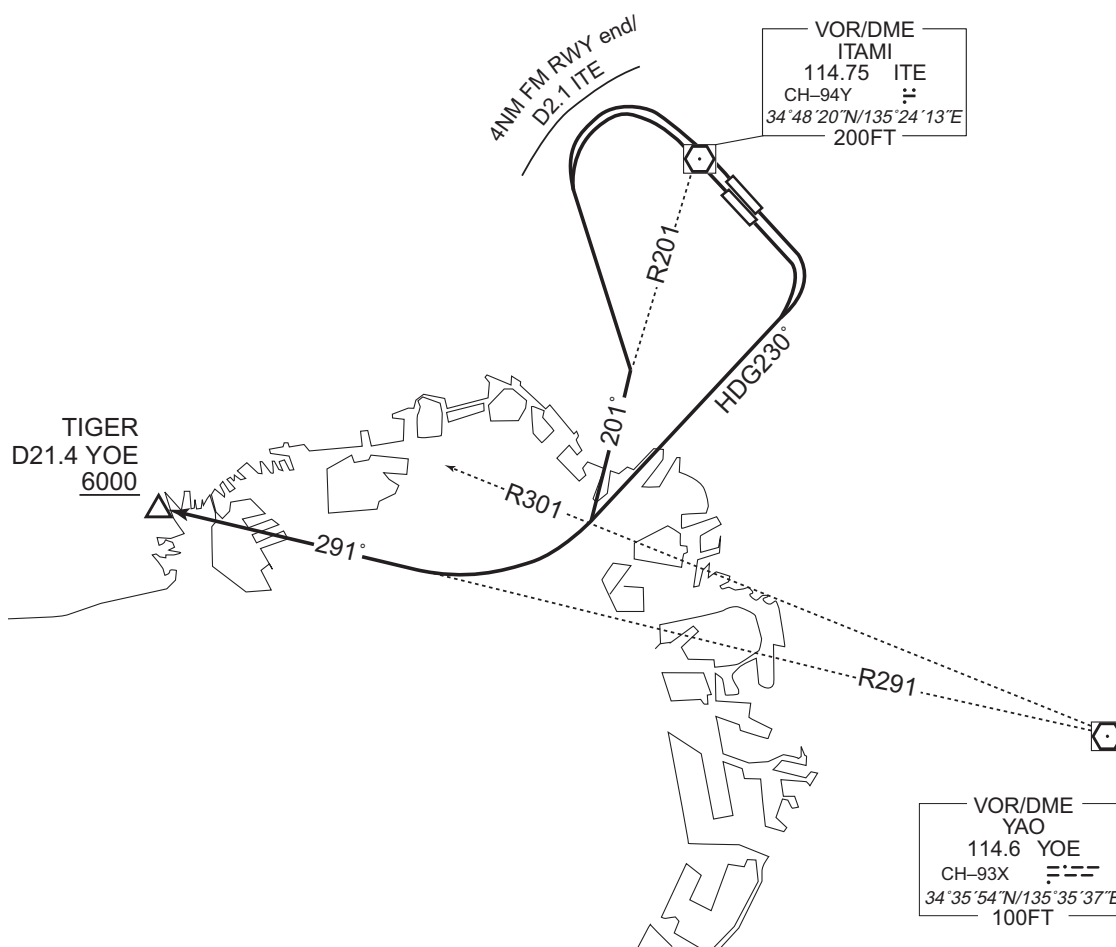
RWY 32R/32L : Climb RWY HDG to 500FT or above, turn left within 4NM from RWY end/ITE 2.1DME, via ITE R201 until crossing YOE R301...

RWY 14R/14L : Climb RWY HDG to 500FT or above, turn right HDG230° until crossing YOE R301...

...turn right to intercept and proceed via YOE R291 to TIGER.
Cross TIGER at or above 6000FT.

Note : Following climb gradient should be maintained until 2500FT.

Speed (Knots)	60	90	120	150	180	210
Rate (Feet/Min)	300	450	600	750	900	1050



STANDARD DEPARTURE CHART -INSTRUMENT

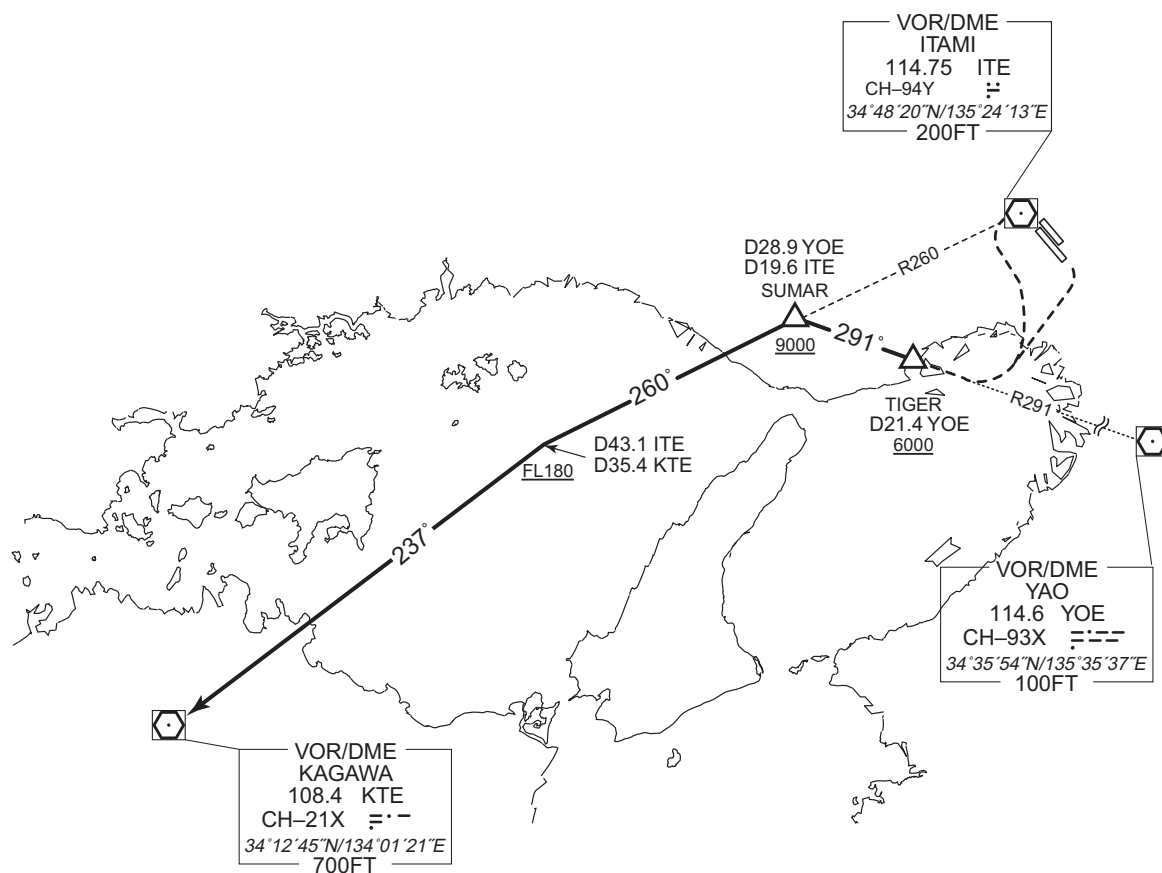
RJOO / OSAKA INTL

TRANSITION

KAGAWA TRANSITION

From over TIGER, via YOE R291 to SUMAR, via ITE R260 to intercept and proceed via KTE R057 to KTE VOR/DME.

Cross SUMAR at or above 9000FT, cross ITE R260/43.1DME at or above FL180.



CHANGE : Description of PROC name.

STANDARD DEPARTURE CHART -INSTRUMENT

RJOO / OSAKA INTL

TRANSITION

ASAGI TRANSITION

From over TIGER, via KCE R324 to ASAGI.
Cross KCE R324/22.4DME at or above 7000FT.

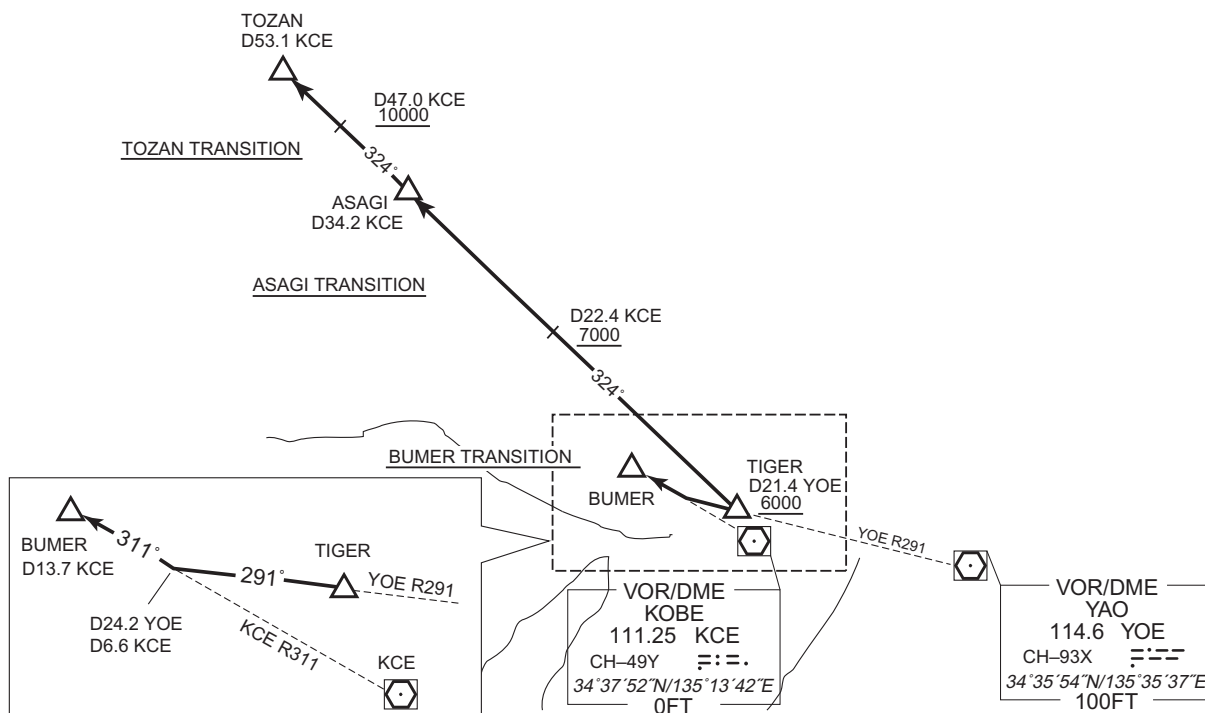
TOZAN TRANSITION

From over TIGER, via KCE R324 to TOZAN, via ASAGI.
Cross KCE R324/22.4DME at or above 7000FT, cross KCE R324/47.0DME at or above 10000FT.

BUMER TRANSITION

From over TIGER, via YO E R291 to intercept and proceed via KCE R311 to BUMER.

CHANGE : TOZAN TRANSITION. Radial FM KCE.



STANDARD DEPARTURE CHART-INSTRUMENT

RJOO / OSAKA INTL

SID and TRANSITION

MINAC FOUR DEPARTURE

RWY 32R/32L : Climb RWY HDG to 500FT or above, turn left within 4NM from RWY end/ITE 2.1DME,...

RWY 14R/14L : Climb RWY HDG to 500FT or above, turn left,...
...via ITE R101 to intercept and proceed via KCE R077 to MINAC.

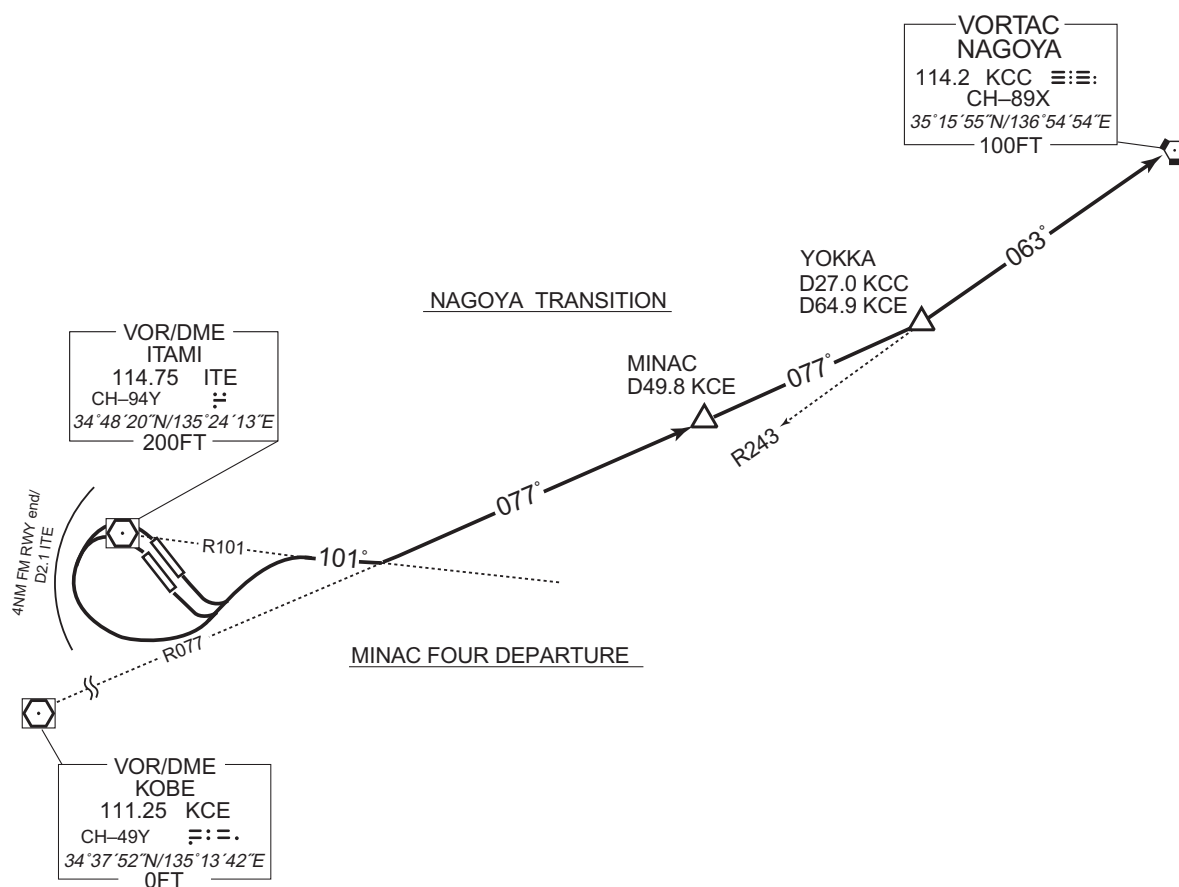
Note: When take off RWY14R/14L, following climb gradient should be maintained until 500FT.

Speed (Knots)	60	90	120	150	180	210
Rate (Feet/Min)	300	450	600	750	900	1050

NAGOYA TRANSITION

From over MINAC, via KCE R077 to YOKKA, via KCC R243 to KCC VORTAC.

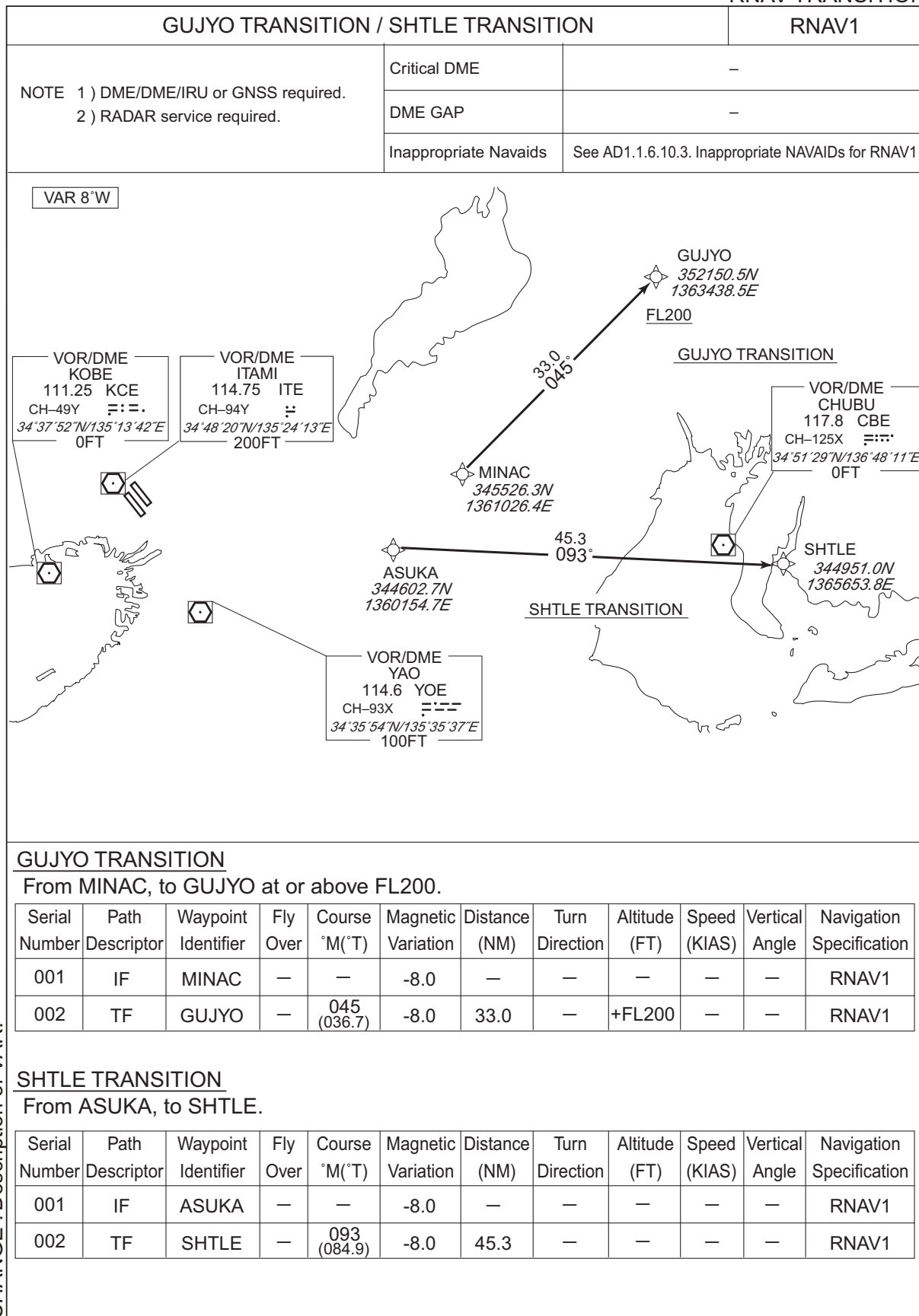
CHANGE : PROC renamed. Radial FM KCE.



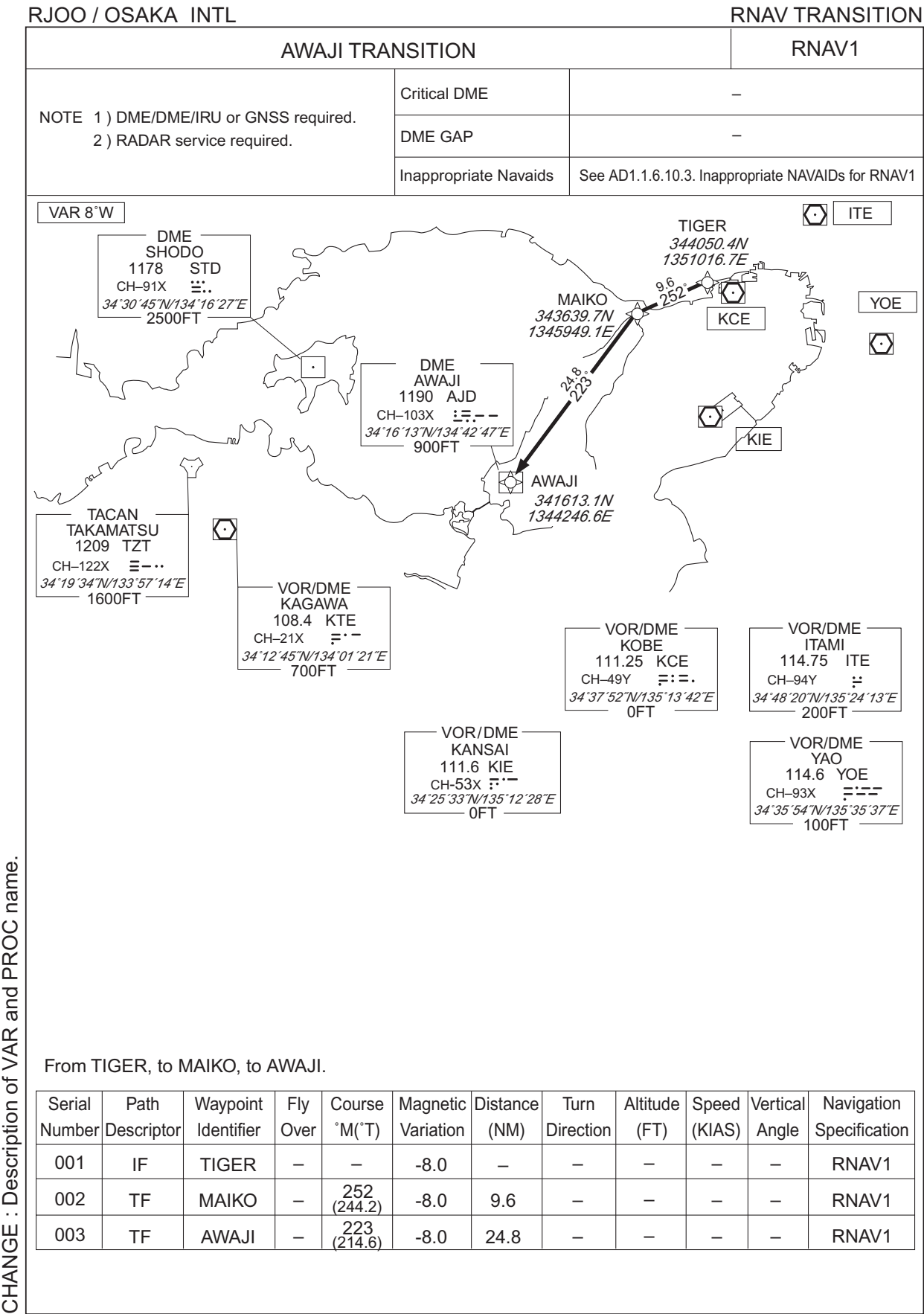
STANDARD DEPARTURE CHART-INSTRUMENT

RJOO / OSAKA INTL

RNAV TRANSITION



STANDARD DEPARTURE CHART-INSTRUMENT

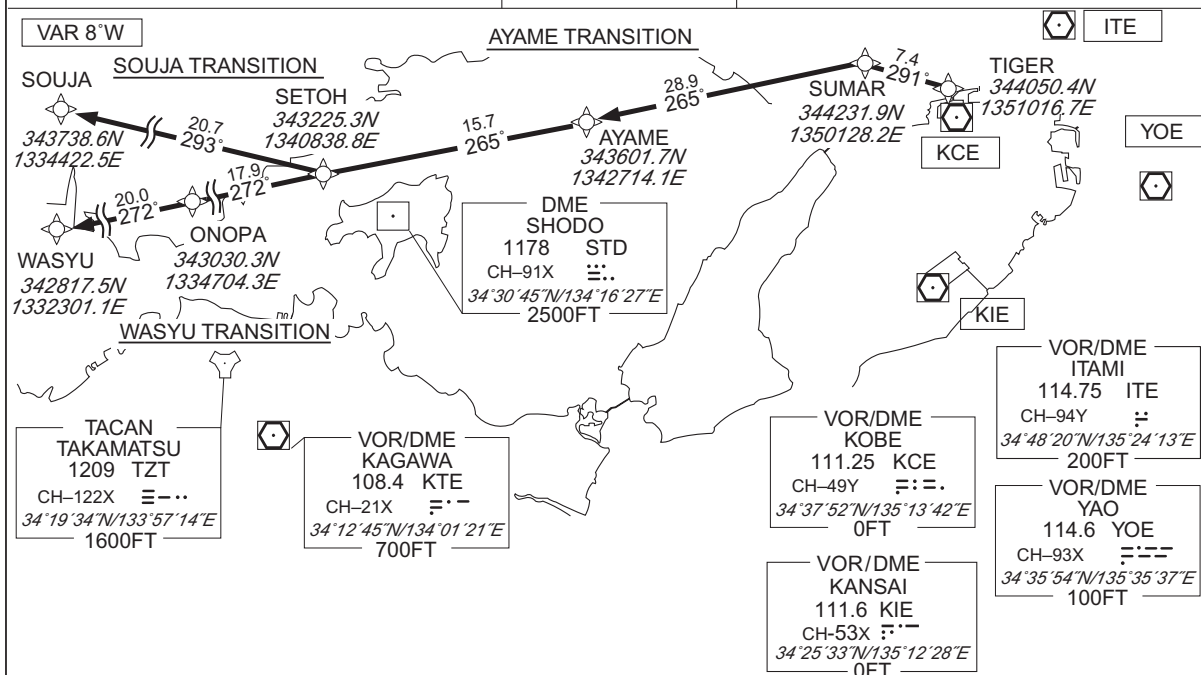


STANDARD DEPARTURE CHART-INSTRUMENT

RJOO / OSAKA INTL

RNAV TRANSITION

AYAME TRANSITION / SOUJA TRANSITION / WASYU TRANSITION			RNAV1
NOTE 1) DME/DME/IRU or GNSS required. 2) RADAR service required.	Critical DME		—
	DME GAP		—
	Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1	

**AYAME TRANSITION**

From TIGER, to SUMAR, to AYAME.

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	TIGER	—	—	-8.1	—	—	—	—	—	RNAV1
002	TF	SUMAR	—	291 (283.2)	-8.1	7.4	—	—	—	—	RNAV1
003	TF	AYAME	—	265 (257.2)	-8.1	28.9	—	—	—	—	RNAV1

SOUJA TRANSITION

From TIGER, to SUMAR, to AYAME, to SETOH, to SOUJA.

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	TIGER	—	—	-8.1	—	—	—	—	—	RNAV1
002	TF	SUMAR	—	291 (283.2)	-8.1	7.4	—	—	—	—	RNAV1
003	TF	AYAME	—	265 (257.2)	-8.1	28.9	—	—	—	—	RNAV1
004	TF	SETOH	—	265 (256.8)	-8.1	15.7	—	—	—	—	RNAV1
005	TF	SOUJA	—	293 (284.8)	-8.1	20.7	—	—	—	—	RNAV1

CHANGE : VAR. PROC course. ONOPA established.

STANDARD DEPARTURE CHART-INSTRUMENT

RJOO / OSAKA INTL

RNAV TRANSITION

WASYU TRANSITION

From TIGER, to SUMAR, to AYAME, to SETOH, to ONOPA, to WASYU.

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	TIGER	—	—	-8.1	—	—	—	—	—	RNAV1
002	TF	SUMAR	—	291 (283.2)	-8.1	7.4	—	—	—	—	RNAV1
003	TF	AYAME	—	265 (257.2)	-8.1	28.9	—	—	—	—	RNAV1
004	TF	SETOH	—	265 (256.8)	-8.1	15.7	—	—	—	—	RNAV1
005	TF	ONOPA	—	272 (263.9)	-8.1	17.9	—	—	—	—	RNAV1
006	TF	WASYU	—	272 (263.7)	-8.1	20.0	—	—	—	—	RNAV1

CHANGE : VAR. PROC course. ONOPA established.

STANDARD ARRIVAL CHART-INSTRUMENT

RJOO / OSAKA INTL

STAR

IZUMI ARRIVAL

From over IZUMI, via ITE 21.9DME counterclockwise ARC to intercept and proceed via ITE R141 to IKOMA.

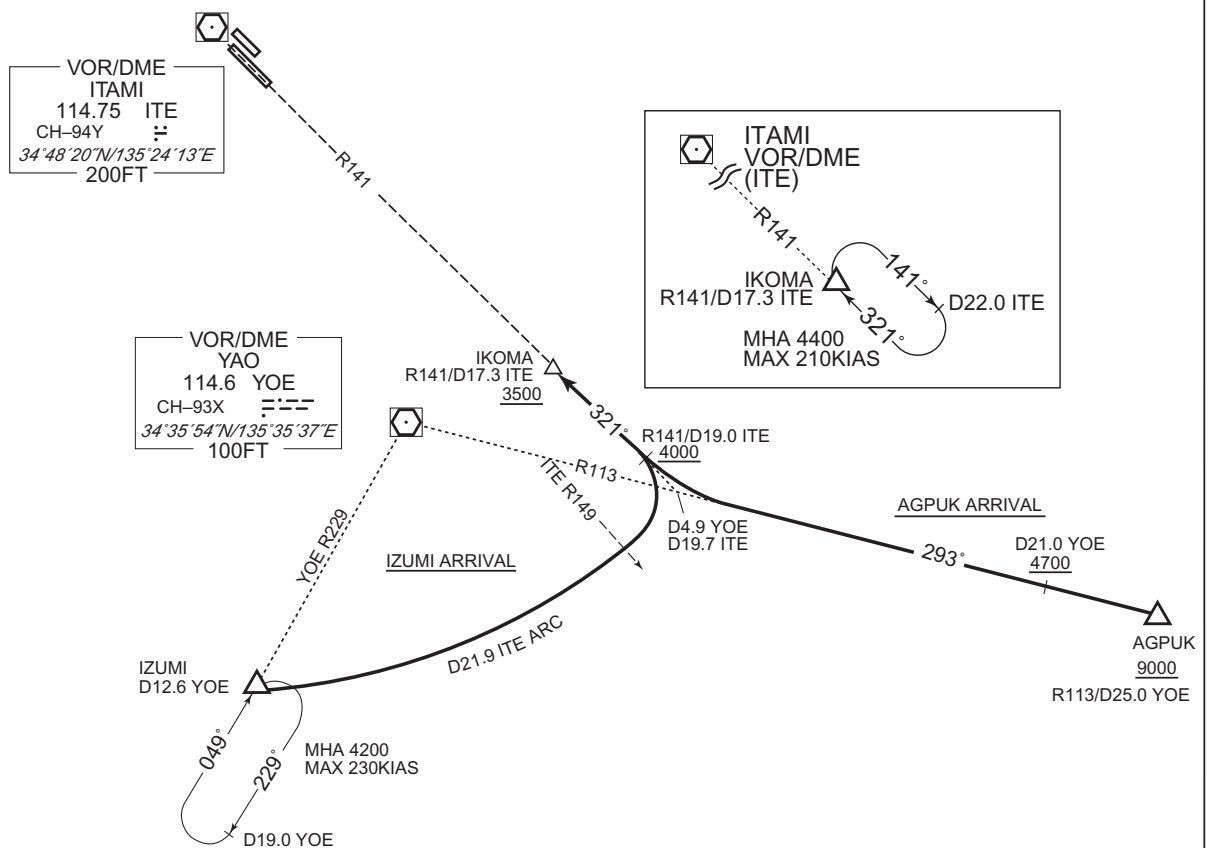
Cross ITE R141/19.0DME at or above 4000FT, cross IKOMA at or above 3500FT.

AGPUK ARRIVAL

From over AGPUK, via YOE R113 to intercept and proceed via ITE R141 to IKOMA.

Cross AGPUK at or above 9000FT, cross YOE R113/21.0DME at or above 4700FT, cross ITE R141/19.0DME at or above 4000FT, cross IKOMA at or above 3500FT.

CHANGE : AGPUK ARRIVAL established.



STANDARD ARRIVAL CHART-INSTRUMENT

RJOO / OSAKA INTL

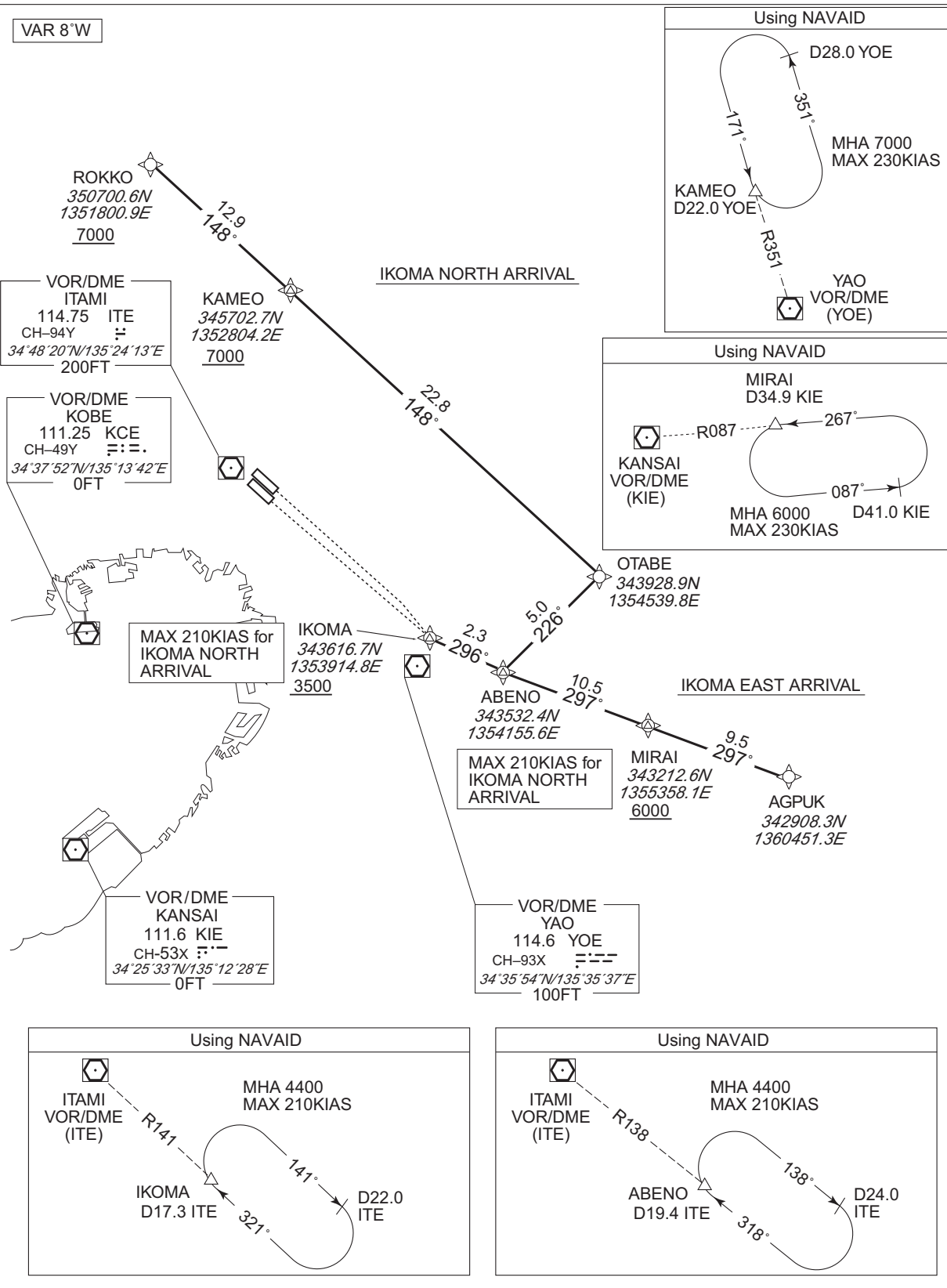
RNAV STAR RWY32L/32R

IKOMA EAST ARRIVAL / IKOMA NORTH ARRIVAL

RNAV1

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

VAR 8°W



CHANGE : Description of VAR.

STANDARD ARRIVAL CHART-INSTRUMENT

RJOO / OSAKA INTL

RNAV STAR RWY32L/32R

IKOMA EAST ARRIVAL

From AGPUK, to MIRAI at or above 6000FT, to ABENO, to IKOMA at or above 3500FT.

Critical DME	KCC : AGPUK – MIRAI
DME GAP	–
Inappropriate Nav aids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

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	AGPUK	–	–	-8.0	–	–	–	–	–	RNAV1
002	TF	MIRAI	–	297 (288.7)	-8.0	9.5	–	+6000	–	–	RNAV1
003	TF	ABENO	–	297 (288.6)	-8.0	10.5	–	–	–	–	RNAV1
004	TF	IKOMA	–	296 (288.5)	-8.0	2.3	–	+3500	–	–	RNAV1

IKOMA NORTH ARRIVAL

From ROKKO at or above 7000FT, to KAMEO at or above 7000FT, to OTABE, to ABENO, to IKOMA at or above 3500FT.

Critical DME	ITE : 9.9NM to KAMEO – KAMEO YME : 19.7NM to OTABE – 13.7NM to OTABE
DME GAP	–
Inappropriate Nav aids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

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	ROKKO	–	–	-8.0	–	–	+7000	–	–	RNAV1
002	TF	KAMEO	–	148 (140.4)	-8.0	12.9	–	+7000	–	–	RNAV1
003	TF	OTABE	–	148 (140.5)	-8.0	22.8	–	–	–	–	RNAV1
004	TF	ABENO	–	226 (218.0)	-8.0	5.0	–	–	-210	–	RNAV1
005	TF	IKOMA	–	296 (288.5)	-8.0	2.3	–	+3500	-210	–	RNAV1

CHANGE : VAR. KODAI abolished. AGPUK established. PROC course.

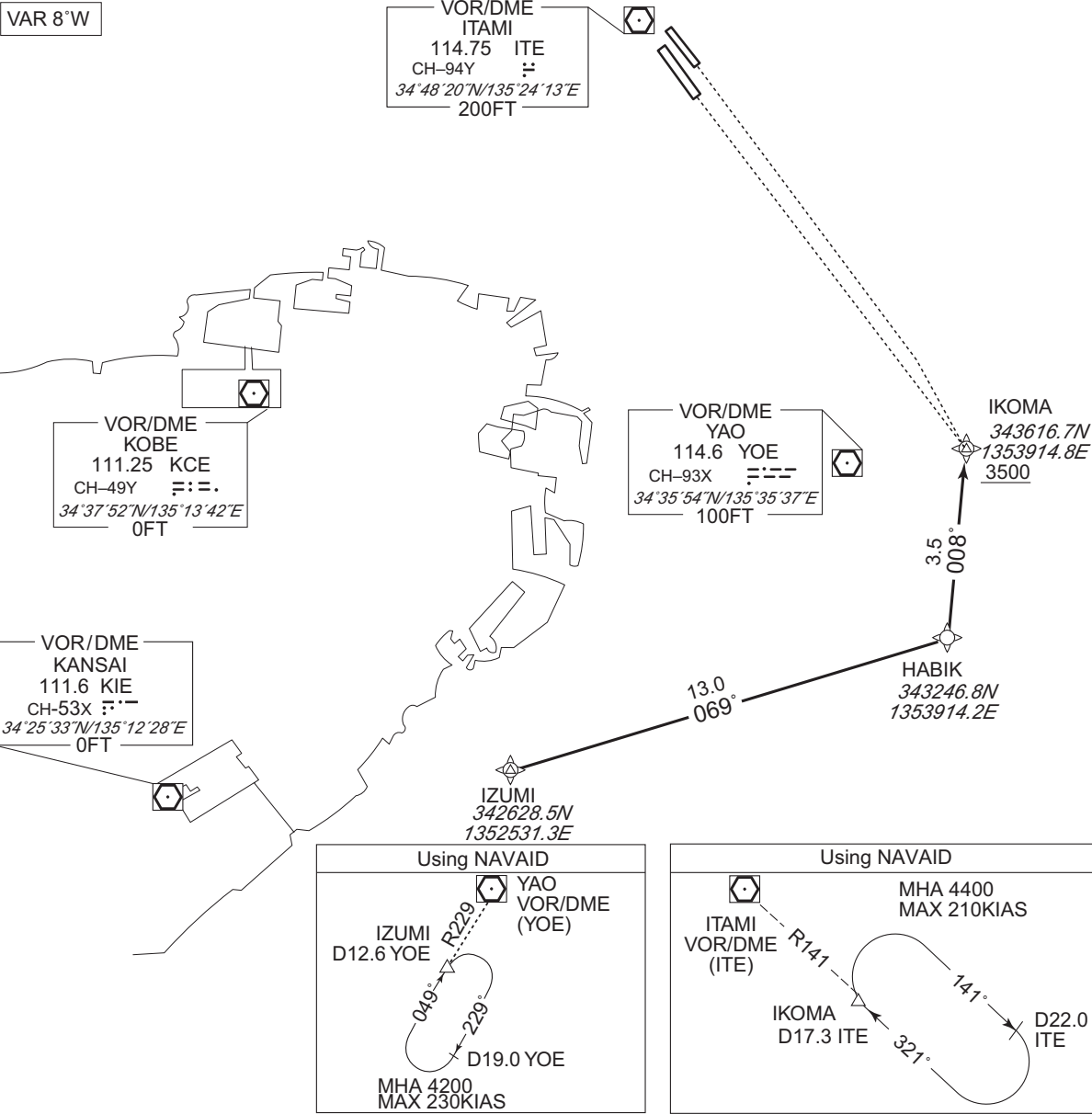
STANDARD ARRIVAL CHART-INSTRUMENT

RJOO / OSAKA INTL RNAV STAR RWY32L/32R

HABIK ARRIVAL

RNAV1

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



From IZUMI, to HABIK, to IKOMA at or above 3500FT.

Critical DME	-
DME GAP	-
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

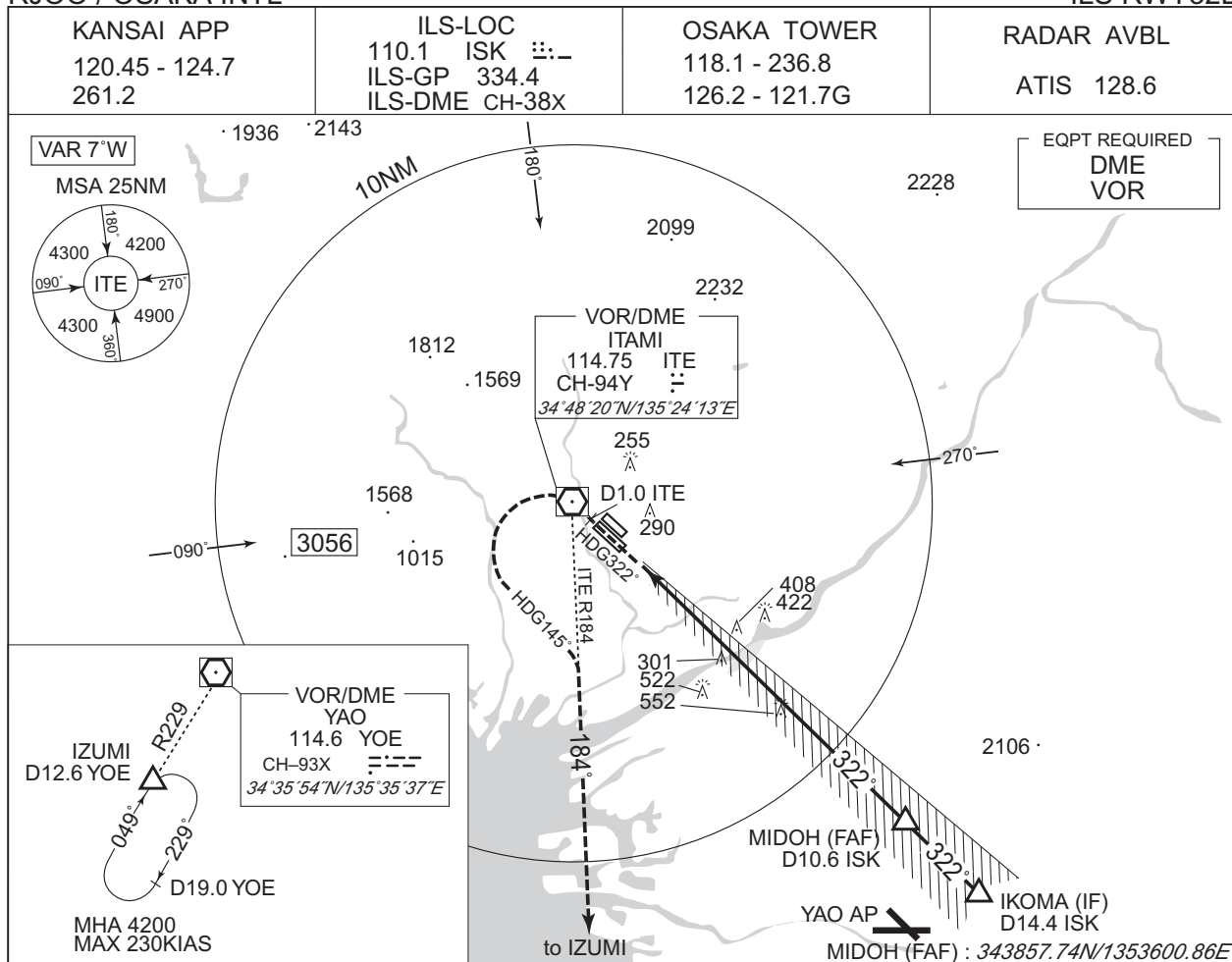
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	IZUMI	-	-	-8.0	-	-	-	-	-	RNAV1
002	TF	HABIK	-	069 (060.8)	-8.0	13.0	-	-	-	-	RNAV1
003	TF	IKOMA	-	008 (000.1)	-8.0	3.5	-	+3500	-	-	RNAV1

CHANGE : Description of VAR and PROC name.

INSTRUMENT APPROACH CHART

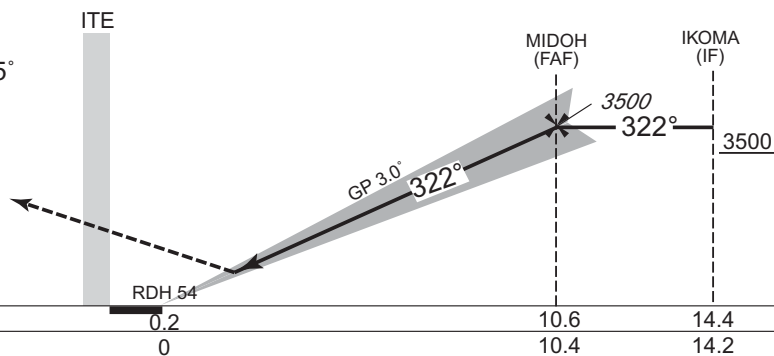
RJOO / OSAKA INTL

ILS RWY32L



MISSSED APPROACH

Climb to 5000FT on HDG322°, 1.0DME prior to ITE VOR/DME, turn left HDG145° to intercept and proceed via ITE R184 to IZUMI and hold.
Contact KANSAI APP.



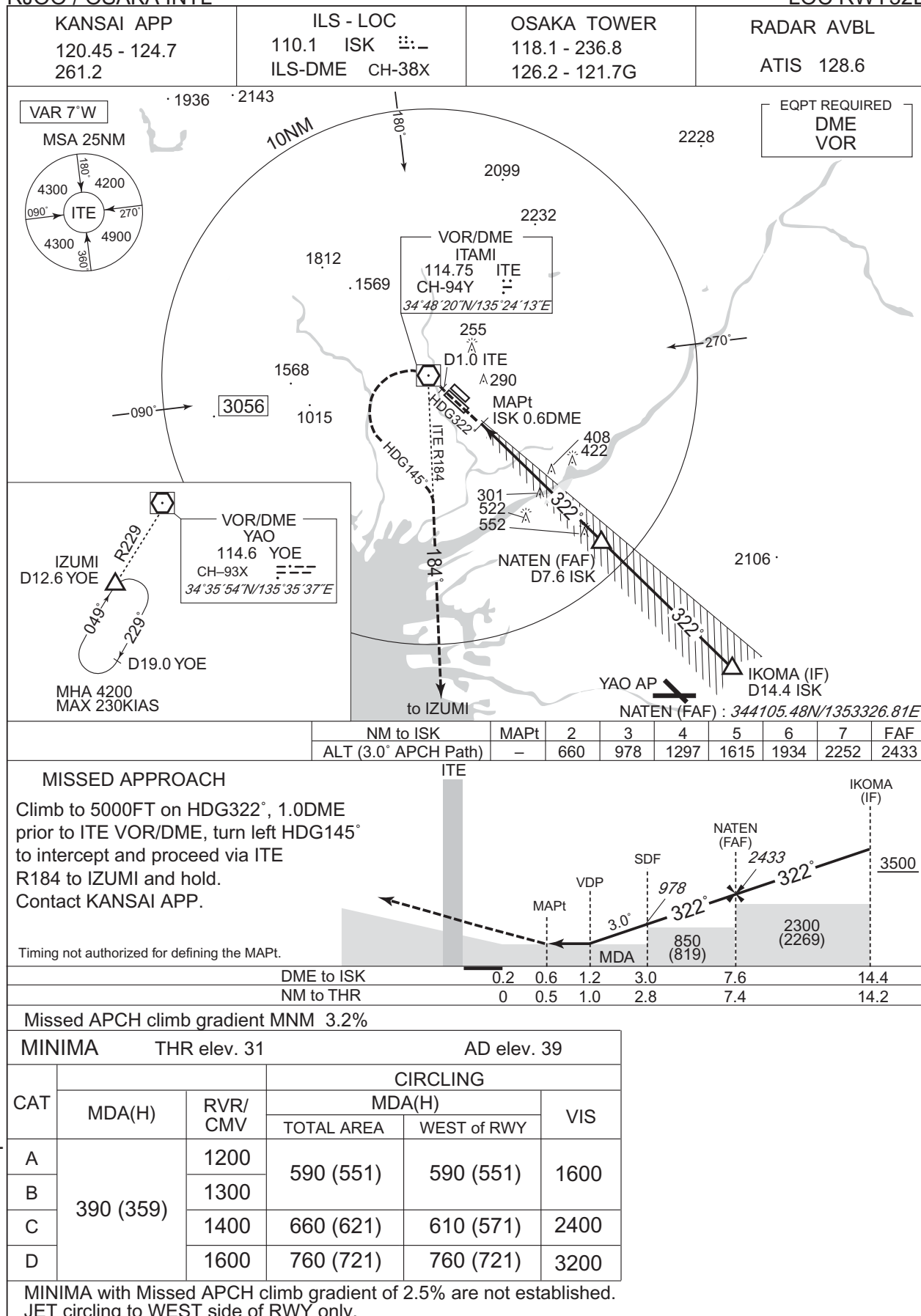
CHANGE : Description of VAR.

Missed APCH climb gradient MNM 4.0%					
MINIMA		THR elev. 31		AD elev. 39	
CAT	CAT I		CIRCLING		
	DA(H)	RVR/ CMV	MDA(H)		VIS
			TOTAL AREA	WEST of RWY	
A	281 (250)	700	590 (551)	590 (551)	1600
B					
C			660 (621)	610 (571)	2400
D			760 (721)	760 (721)	3200
MINIMA with Missed APCH climb gradient of 2.5% are not established JET circling to WEST side of RWY only.					

INSTRUMENT APPROACH CHART

RJOO / OSAKA INTL

LOC RWY32L

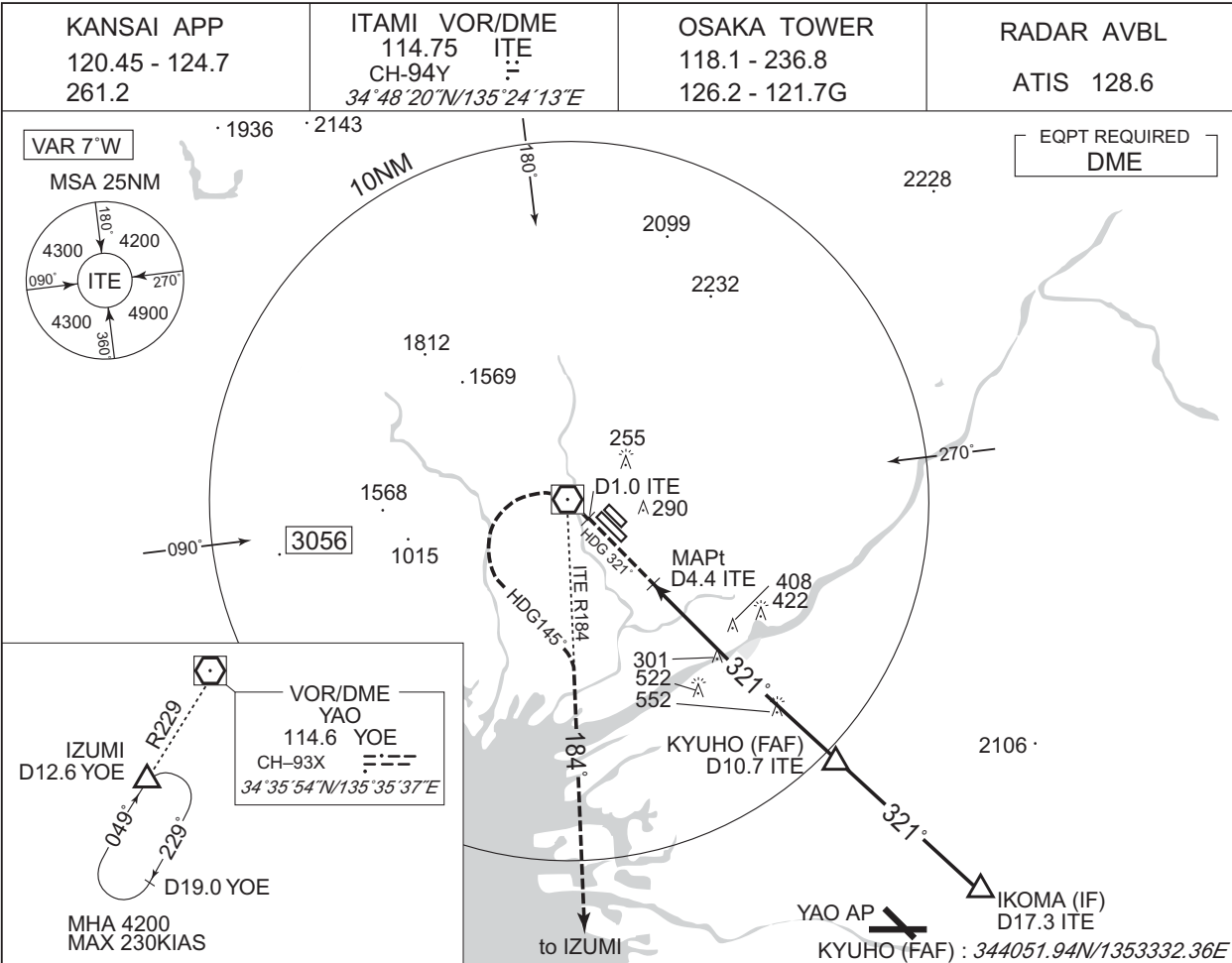


CHANGE : Description of VAR.

INSTRUMENT APPROACH CHART

RJOO / OSAKA INTL

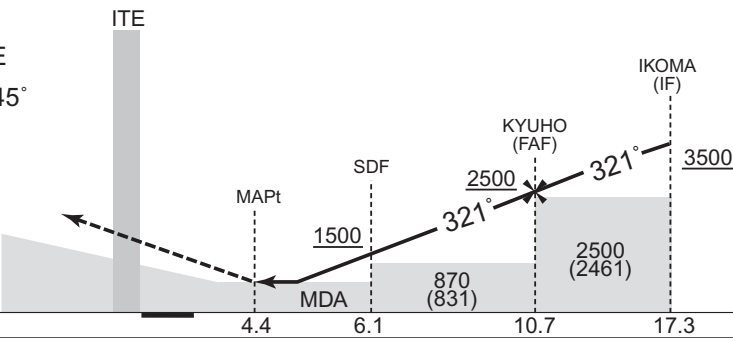
VOR A



MISSED APPROACH

Climb to 5000FT on HDG321°, 1.0DME
prior to ITE VOR/DME, turn left HDG145°
to intercept and proceed via ITE R184
to IZUMI and hold.
Contact KANSAI APP.

Timing not authorized for defining the MAPt.



MINIMA		AD elev. 39	
CAT	CIRCLING		
	MDA(H)		VIS
	TOTAL AREA	WEST of RWY	
A	590 (551)	590 (551)	1600
B			
C	660 (621)	610 (571)	2400
D	760 (721)	760 (721)	3200

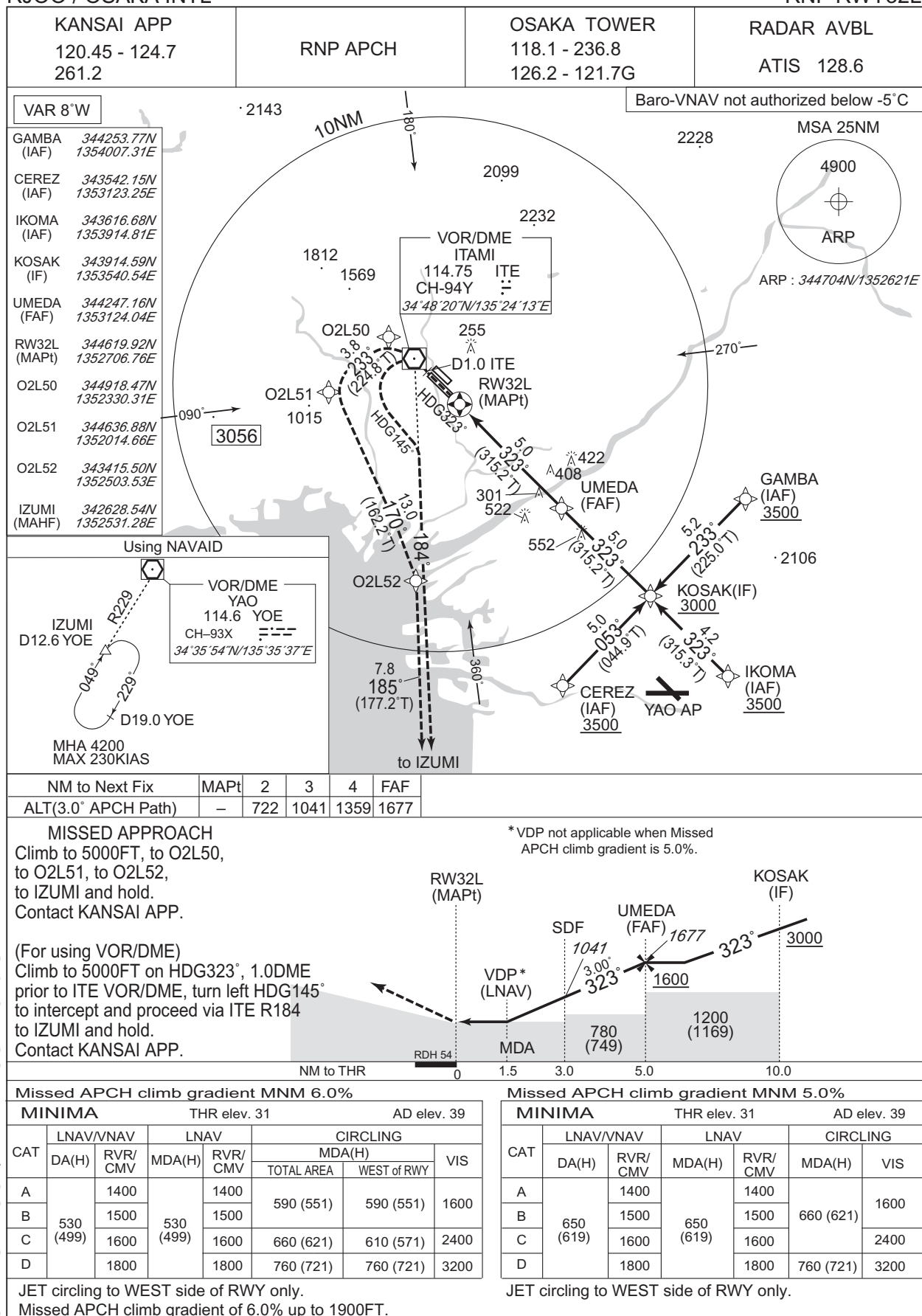
JET circling to WEST side of RWY only.

CHANGE : OCA/H BTN KYUHO and SDF.

INSTRUMENT APPROACH CHART

RJOO / OSAKA INTL

RNP RWY32L



CHANGE : OCA/H BTN KOSAK and UMEDA.

RJOO / OSAKA INTL

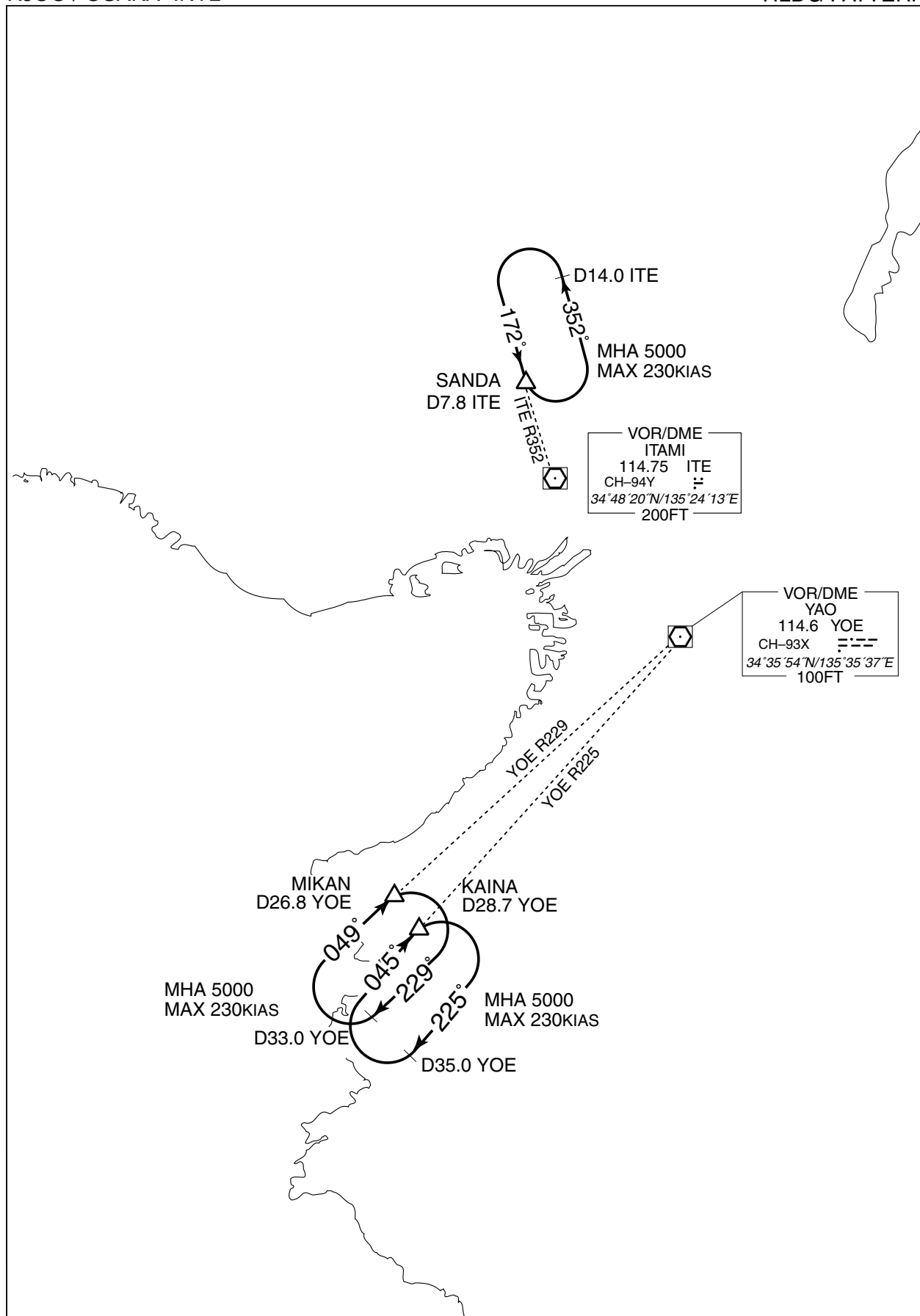
RNP RWY32R



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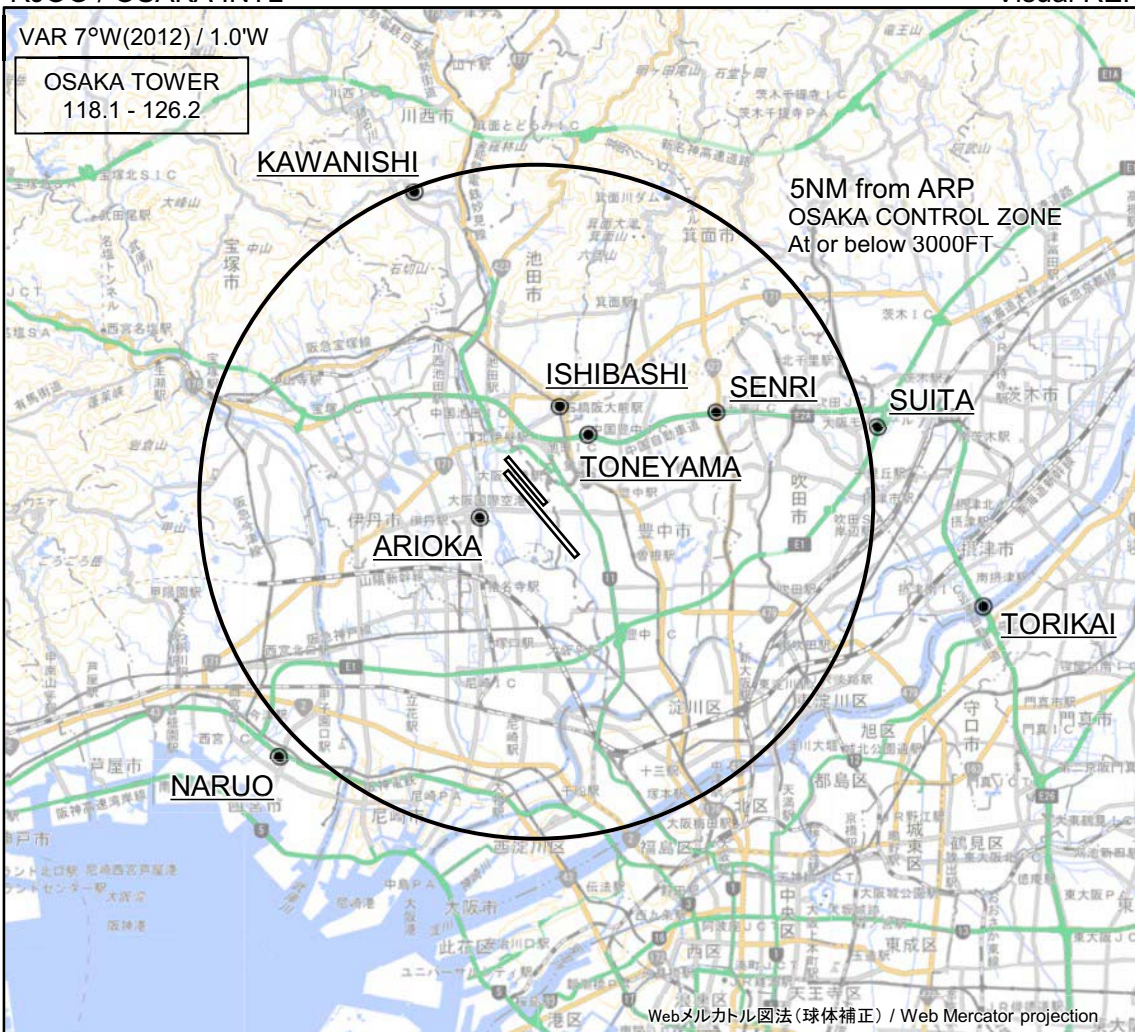
RJOO / OSAKA INTL

HLDG PATTERN



RJOO / OSAKA INTL

Visual REP

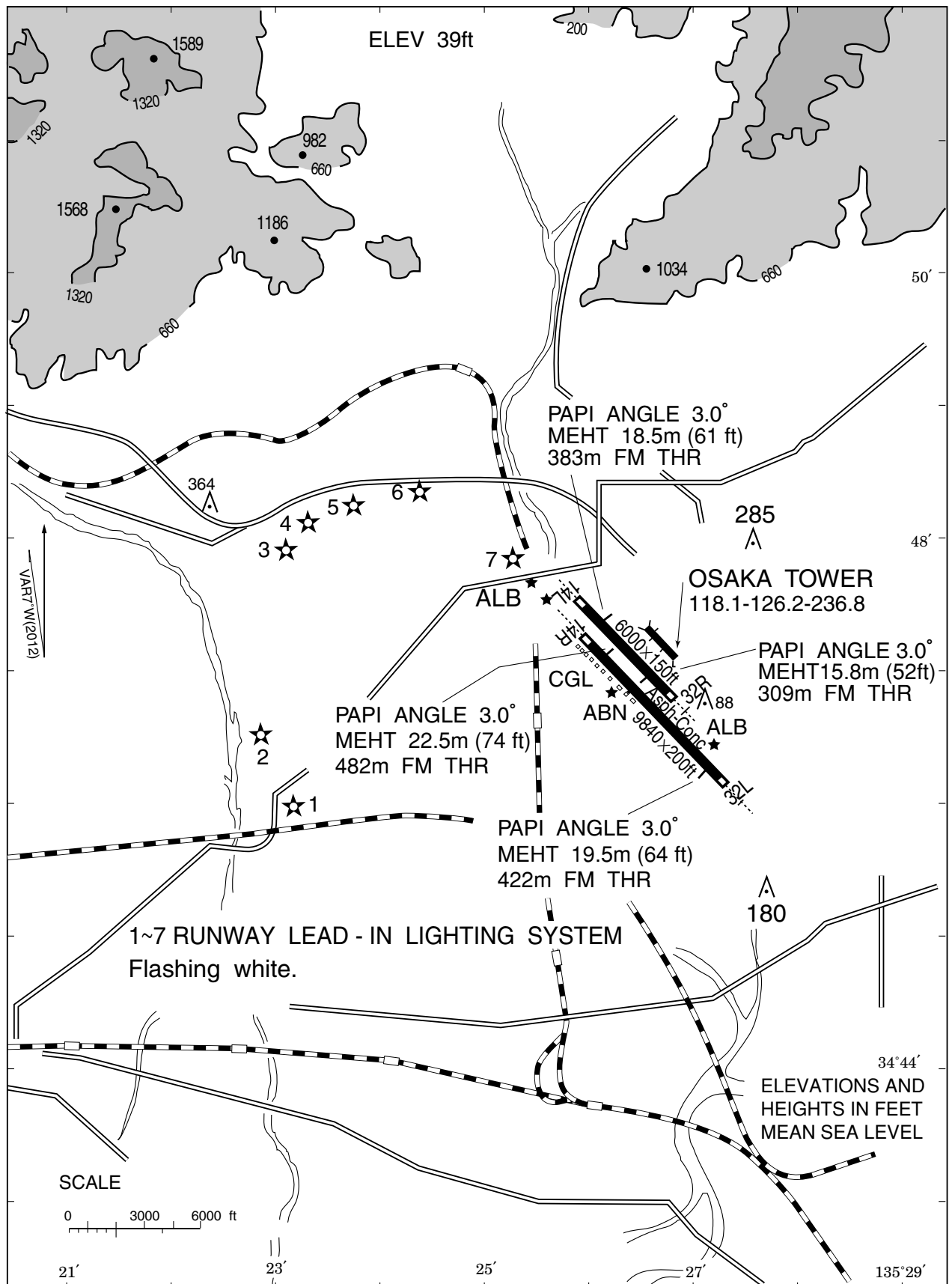


※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

Call sign	BRG / DIST from ARP	Remarks
川西 Kawanishi	339°T / 4.9NM	多田神社 Shrine
石橋 Ishibashi	013°T / 1.5NM	阪急石橋阪大前駅 Station
千里 Senri	063°T / 3.0NM	千里インターチェンジ Interchange
吹田 Suita	077°T / 5.2NM	吹田ジャンクション Junction
刀根山 Toneyama	037°T / 1.2NM	中国豊中インターチェンジ Interchange
有岡 Arioka	255°T / 0.9NM	JR伊丹駅 Station
鳥飼 Torikai	103°T / 6.8NM	鳥飼大橋 Bridge
鳴尾 Naruo	225°T / 5.4NM	甲子園球場 Baseball ground

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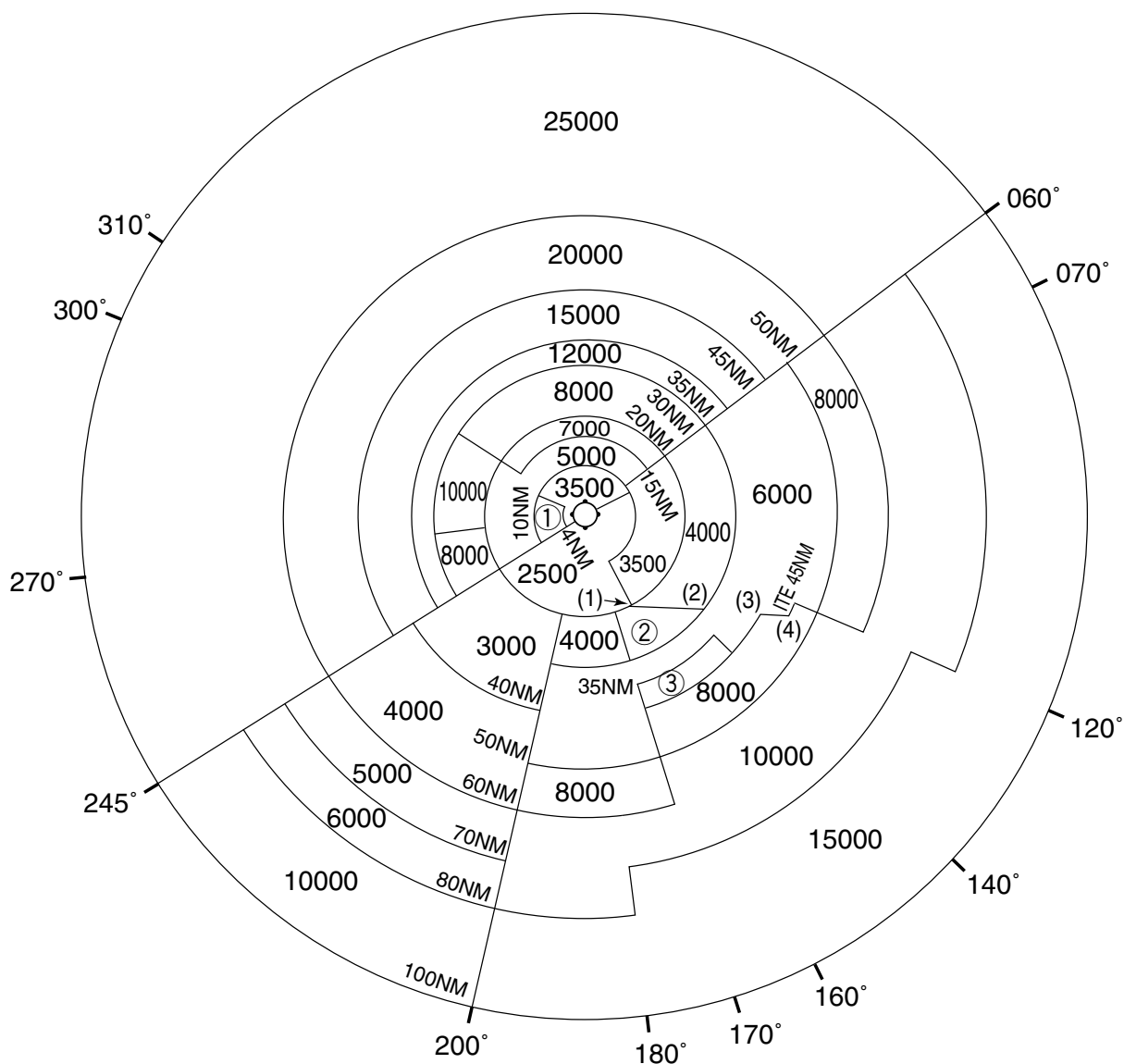
LDG CHART



RJOO / OSAKA INTL

Minimum Vectoring Altitude CHART

VAR 7°W (2011)



- | | |
|--------|----------------------|
| ① 4500 | (1) 342930N/1353527E |
| ② 5000 | (2) 342925N/1355432E |
| ③ 7000 | (3) 342918N/1360849E |
| | (4) 342924N/1361335E |

CENTER : 344752N/1352550E (No.1 RADAR SITE)
 CENTER : 344659N/1352600E (No.2 RADAR SITE)