

**AD 2 AERODROMES**

**RORS AD 2.1 AERODROME LOCATION INDICATOR AND NAME**

**RORS - SHIMOJISHIMA**

**RORS AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

1	ARP coordinates and site at AD	244936N/1250841E 014°/1.5km from RWY 35 THR
2	Direction and distance from (city)	14km NW from Miyakojima City Office
3	Elevation/ Reference temperature	25ft / 32°C (2004-2008)
4	Geoid undulation at AD ELEV PSN	
5	MAG VAR/ Annual change	5° W(2022) / 7'W
6	AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses	Okinawa Pref. Public AP. 1739, Sawada, Irabu, Miyakojima-shi, Okinawa Pref. TEL : 0980-78-4184 FAX : 0980-78-4016
7	Types of traffic permitted(IFR/ VFR)	IFR/VFR
8	Remarks	Nil

**RORS AD 2.3 OPERATIONAL HOURS**

1	AD Administration	2300 - 1030
2	Customs and immigration	Customs: On request (0980-72-2310) Immigration: INTL SKED FLT hours only
3	Health and sanitation	Quarantine (human): On request (0980-73-5115) Quarantine (animal): On request (098-861-4370) Quarantine (plant): INTL SKED FLT hours only
4	AIS Briefing Office	Nil
5	ATS Reporting Office(ARO)	Nil
6	MET Briefing Office	H24 (NAHA)
7	ATS	2300 - 1030 Remarks : 2300 - 0000 and 0730 - 1030, AFIS provided by Naha Airport Office.
8	Fuelling	Ask AD administration
9	Handling	Ask AD administration
10	Security	Ask AD administration
11	De-icing	Nil
12	Remarks	Nil

**RORS AD 2.4 HANDLING SERVICES AND FACILITIES**

1	Cargo-handling facilities	Nil
2	Fuel/ oil types	JET A-1
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

**RORS AD 2.5 PASSENGER FACILITIES**

1	Hotels	Hotels in Miyakojima city
2	Restaurants	At airport / In Miyakojima city
3	Transportation	Buses and Taxies
4	Medical facilities	Clinic 15km from airport
5	Bank and Post Office	Bank ATM at airport / Bank in Miyakojima city / Post office in Miyakojima city
6	Tourist Office	At airport / In Miyakojima city
7	Remarks	Nil

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

1	AD category for fire fighting	Fire protection ; Scale of protection ICAO required : CAT 9 Available : CAT 9
2	Rescue equipment	Chemical fire fighting truck x 3
3	Capability for removal of disabled aircraft	Incapable
4	Remarks	Nil

**RORS AD 2.7 SEASONAL AVAILABILITY-CLEARING**

1	Types of clearing equipment	Not Applicable
2	Clearance priorities	Not Applicable
3	Remarks	Nil

**RORS AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA**

1	Apron surface and strength	Surface : Cement-concrete Strength : PCR 925/R/B/W/T
2	Taxiway width, surface and strength	Width : 30m Surface : Asphalt-concrete Strength : PCR 1000/F/B/X/T
3	ACL and elevation	Not available
4	VOR checkpoints	Not available
5	INS checkpoints	(Spot NR) S-7A-R 244927.59N,1250855.18E S-1-1 244946.83N,1250852.34E S-7A-L 244928.17N,1250855.02E S-1-2 244946.24N,1250851.63E S-7B-R 244927.75N,1250855.89E S-2-1 244944.09N,1250853.09E S-7B-L 244928.33N,1250855.73E S-2-2 244943.49N,1250852.38E S-7C-R 244927.72N,1250856.98E S-3-1 244941.35N,1250853.84E S-7C-L 244928.82N,1250856.67E S-3-2 244940.75N,1250853.13E S-5-R 244933.67N,1250853.32E S-5-L 244935.39N,1250852.85E S-6-R 244930.87N,1250855.73E S-6-L 244932.38N,1250855.32E
6	Remarks	Nil

**RORS 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	Nil
2	RWY and TWY markings and LGT	RWY: RWY17/35 (Marking) RWY designation, RWY CL, RWY THR, RWY middle point, Aiming point, TDZ, RWY side stripe (LGT) RCLL, REDL, RTHL, RENL, RTZL(RWY17)  TWY: (Marking) TWY CL, TWY side stripe (LGT) TWY edge LGT, TWY CL LGT(T1-T5), RWY guard LGT(T1-T5), Taxiing guidance sign
3	Stop bars	Nil
4	Remarks	(Marking) Overrun area (LGT) Apron flood LGT

**RORS AD 2.10 AERODROME OBSTACLES**

In Area2 See Obstacle data

In Area3 To be developed

**RORS AD 2.11 METEOROLOGICAL INFORMATION PROVIDED**

1	Associated MET Office	NAHA
2	Hours of service MET Office outside hours	H24 (NAHA)
3	Office responsible for TAF preparation Periods of validity	Nil
4	Trend forecast Interval of issuance	Nil
5	Briefing/ consultation provided	Briefing is available upon inquiry at NAHA
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 / RADIO
10	Additional information(limitation of service, etc.)	Nil

**RORS 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
17	165.50°	3000x60	PCR 1003/F/C/X/T Asphalt-Concrete	245024.16N 1250828.87E	THR ELEV : 15.1ft
35	345.50°	3000x60	Cement-Concrete(*1)	244849.55N 1250854.74E	THR ELEV : 54.4ft
Slope of RWY		Strip Dimensions(M)	RESA(Overrun) Dimensions(M)	Remarks	
7	10	11		14	
See AD2.24 AD chart	3120x300 3120x300	243x491 189x(MNM:158 MAX:299)* *For detail, ask airport administrator	RWY GROOVING 3000x40m (*1)First 900m(2955ft)of RWY 17/35-rigid RWY Strength : PCR 830/R/B/W/T		

## RORS AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
17	3000	3000	3000	3000	Nil
35	3000	3000	3000	3000	Nil

## RORS AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH type LEN INTST	LGT 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
17	PALS (CAT-I) 900m LIH	Green Green	PAPI 3.0° /LEFT 422.6m 65.6FT	900m	3000m 30m Coded color (White/Red) LIH	3000m 60m Coded color (White/Yellow) LIH	Red	Nil(*1)
35	PALS 900m LIH	Green	PAPI 3.0° /LEFT 533.8m 75.1FT	-	3000M 30m Coded color (White/Red) LIH	3000m 60m Coded color (White/Yellow) LIH	Red	Nil(*1)
Remarks								
10								
Overrun area edge LGT(LEN:60m Color:Red)(*1)								

## RORS AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN / IBN location, characteristics and hours of operation	ABN: 244848N/1250933E, White/Green EV4.3sec, HO
2	LDI location and LGT Anemometer location and LGT	LDI:Nil Anemometer: RWY 17 : 420m from RWY 17 THR, lighted RWY 35 : 357m from RWY 35 THR, lighted
3	TWY edge and center line lighting	TWY edge and center line lights installed, see AD2.9
4	Secondary power supply / switch-over time	All LGT / Within 15 sec
5	Remarks	WDI LGT

## RORS AD 2.16 HELICOPTER LANDING AREA

Nil
-----

## RORS 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
Shimojishima CTR	Area within a radius of 5nm of SHIMOJISHIMA ARP, excluding the area of MIYAKO CTR	3,000 or below	D	Shimoji TWR Shimoji RADIO(1) En	(1):2300 - 0000 0730 - 1030
Sakishima ACA	See ROMY attached chart		E	Sakishima APP Sakishima DEP Sakishima Radar En	

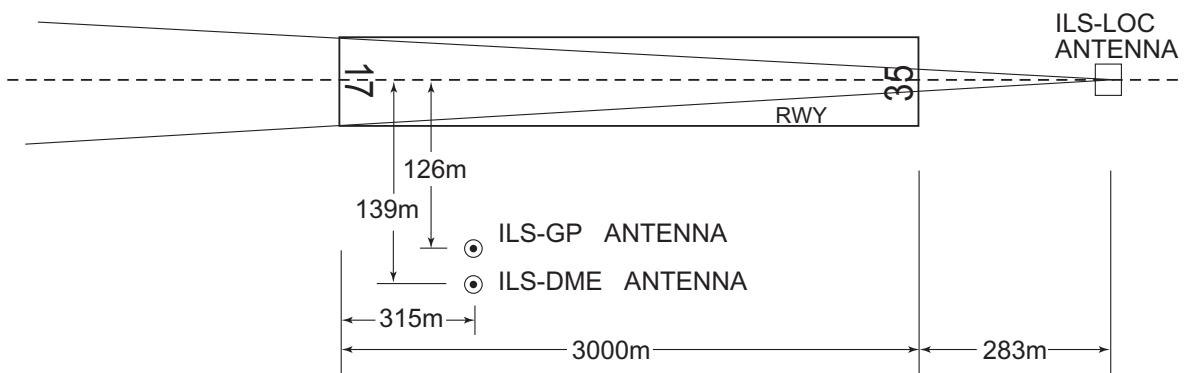
## RORS AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP/ASR	Sakishima Approach/ Sakishima Radar	125.0MHz(1) 120.3MHz 121.2MHz 133.7MHz 315.7MHz 121.5MHz(E) 243.0MHz(E)	2300 - 1030	(1)Primary APP service provided by Sakishima APP
DEP	Sakishima Departure	125.0MHz 121.5MHz(E) 243.0MHz(E)	2300 - 1030	
TWR	Shimoji Tower	118.3MHz(1) 126.2MHz 121.5MHz(E) 243.0MHz(E)	0000 - 0730(*)	
GND	Shimoji Ground	121.7MHz	0000 - 0730(*)	
AFIS	Shimoji Radio	118.3MHz	2300 - 0000 0730 - 1030(*)	Operated by Naha Airport Office.

\* Depending on air traffic situation, ATC service will be provided from 2345 to 0000 and from 0730 to 0745.

## RORS 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 (5°W/2022)	SJE	117.1MHz	2300 - 1030	244918.96N/1250837.70E		
DME	SJE	1205MHz (CH-118X)	2300 - 1030	244918.96N/1250837.70E	64FT	
ILS-LOC 17	ISB	111.5MHz	2300 - 1030	244840.60N/1250857.18E		LOC: 283m(928ft) away FM RWY 35 THR BRG 170.80°(MAG)
ILS-GP 17	-	332.9MHz	2300 - 1030	245013.23N/1250827.20E		GP: 315m(1033ft) inside FM RWY 17 THR, 126m(413ft) W of RCL. GP angle 3.0° HGT of ILS reference datum 16.5m (54ft)
ILS-DME 17	ISB	1013MHz	2300 - 1030	245012.89N/1250826.70E	29ft	DME:315m(1033ft)inside FM RWY17 THR, 139m(456ft) W of RCL.
MSAS		1575.42MHz	H24			Transmitting antennas are satellite based.

SHIMOJISHIMA APILS FOR RWY17

REMARKS :	1.LOC beam BRG(MAG)	170.80°
	2.HGT of ILS REF datum	16.5m(54ft)
	3.GP Angle	3.0°
	4.ELEV of ILS-DME	8.8m(29ft)

## RORS AD 2.20 LOCAL TRAFFIC REGULATIONS

### 1. Airport regulations

Prior notification should be required with AD Administration for the purpose of getting the permission when crossing Shimojishima CTR from 2300UTC to 0000UTC or from 0730UTC to 1030UTC.

For further information (0000UTC - 0800UTC MON - FRI EXC HOL)

Air Traffic Controller Office, Miyako Airport Branch Office and Air Route Surveillance Rader Office  
TEL: 0980-73-3764

8時00分から9時00分または16時30分から19時30分までの間、下地島管制圏を通過する場合は、当該通過の許可を得るためにあらかじめ宮古空港・航空路監視レーダー事務所へ調整すること。  
問い合わせ先

宮古空港・航空路監視レーダー事務所管制官事務室  
(月曜日から金曜日までのうち、9時00分から17時00分までの間。ただし休日を除く。)  
TEL: 0980-73-3764

### 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

Nil

### 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

## RORS AD 2.21 NOISE ABATEMENT PROCEDURES

Nil

## RORS 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	35	A,B,C,D	400m	400m	400m	400m	-	500m
	17	A,B,C,D	400m	400m	400m	400m	-	500m
OTHER	35	A,B,C,D	AVBL LDG MINIMA					
	17	A,B,C,D						

## 2. Lost Communication Procedures for Arrival Aircraft under radar navigational guidance

If radio communications with Sakishima Approach/Radar are lost for one minute, squawk Mode A/3 Code 7600 and ;

1. Contact Shimoji Tower / Shimoji Radio.
2. If unable, proceed in accordance with visual flight rules.
3. If unable, proceed to Shimojishima VOR at the last assigned altitude, or 2,000 feet whichever is higher, and execute instrument approach.

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

## RORS AD 2.23 ADDITIONAL INFORMATION

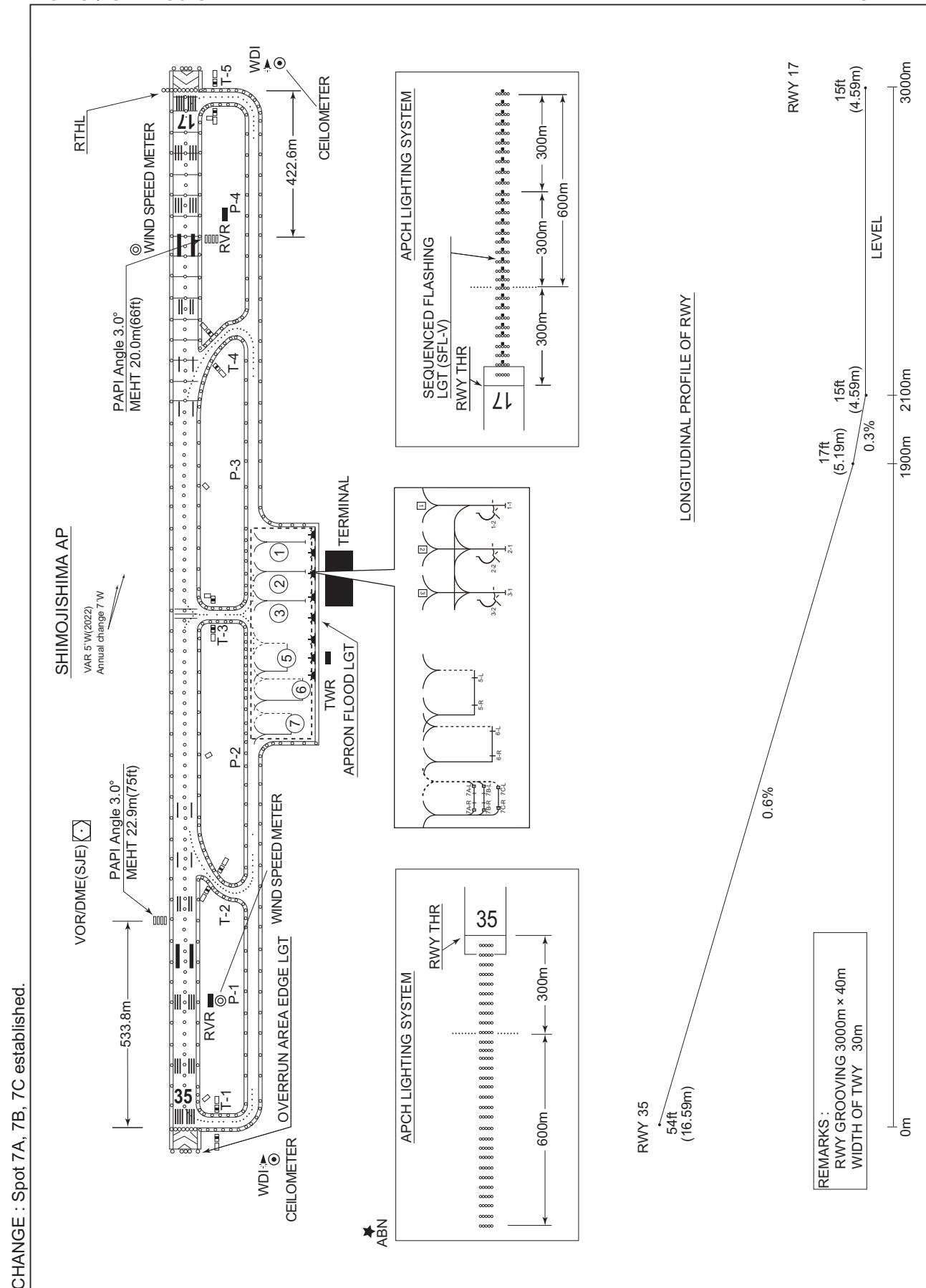
Nil
-----

## RORS AD 2.24 CHARTS RELATED TO AN AERODROME

Aerodrome/Heliport Chart Standard Departure Chart- Instrument (ANNIE) Standard Departure Chart- Instrument (BETTY) Standard Departure Chart- Instrument (MIYAKOJIMA) Standard Departure Chart- Instrument (FREED-RNAV) Standard Arrival Chart- Instrument (ANNIE, BETTY) Instrument Approach Chart (ILS Z or LOC Z RWY17) Instrument Approach Chart (ILS Y or LOC Y RWY17) Instrument Approach Chart (VOR RWY17) Instrument Approach Chart (VOR RWY35) Instrument Approach Chart (RNP RWY17) Instrument Approach Chart (RNP RWY35) Other Chart (VISUAL REP) Other Chart (LDG CHART) Other Chart (MVA CHART)
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

RORS / SHIMOJISHIMA

AD CHART



STANDARD DEPARTURE CHART - INSTRUMENT

RORS / SHIMOJISHIMA

SID

ANNIE SIX DEPARTURE

RWY17 : Climb RWY HDG to 500FT, turn right HDG037° to intercept and proceed ...

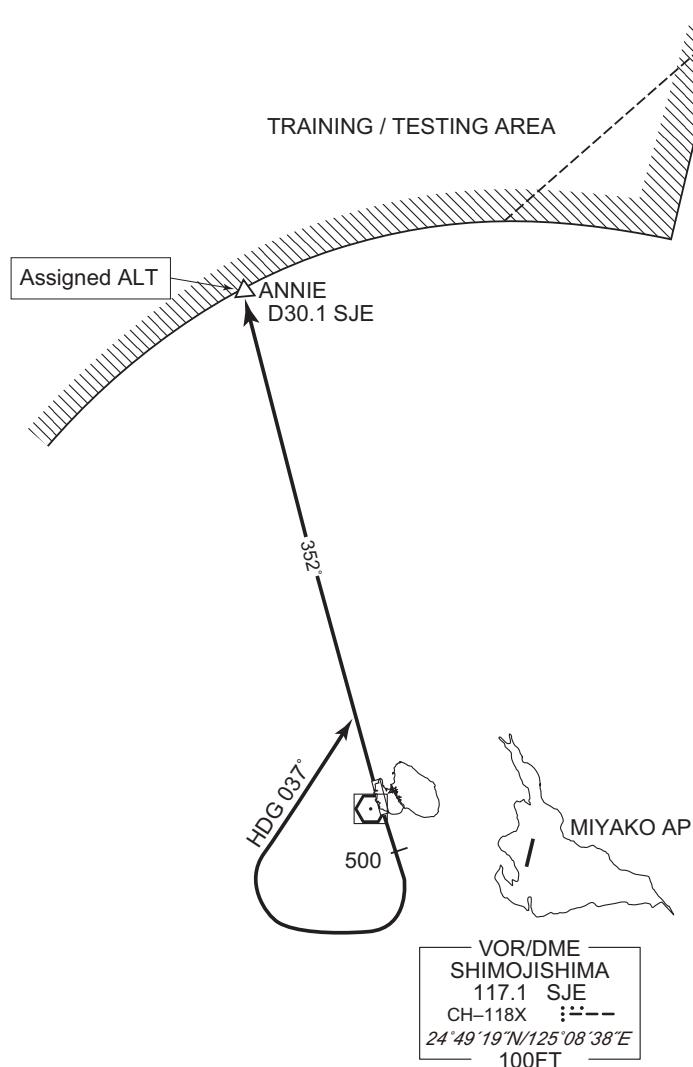
RWY35 : Climb ...

... via SJE R352 to ANNIE.

Cross ANNIE at assigned altitude.

Note RWY17 : 5.0% climb gradient required up to 500FT.

OBST ALT 93FT located at 0.2NM 162° FM end of RWY17.



CHANGE : PROC renamed. PROC course.

## STANDARD DEPARTURE CHART - INSTRUMENT

RORS / SHIMOJISHIMA

SID

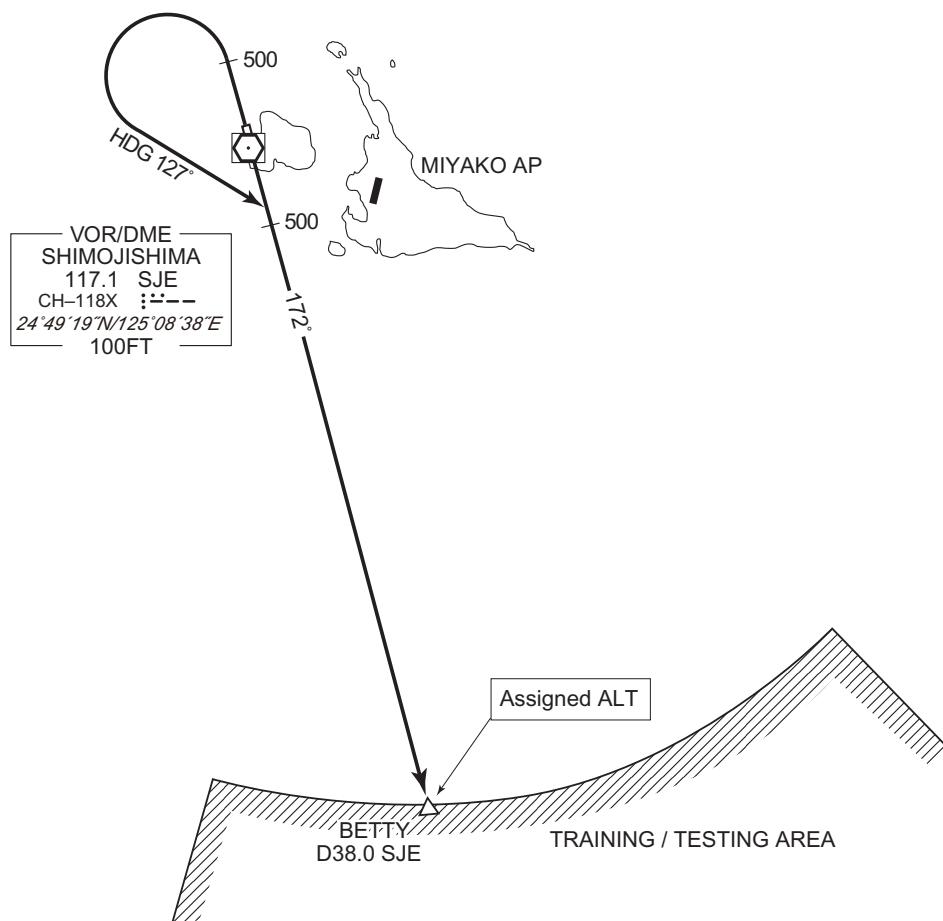
BETTY SIX DEPARTURE

RWY17 : Climb RWY HDG to 500FT ...

RWY35 : Climb RWY HDG to 500FT, turn left HDG 127° to intercept and proceed ...  
... via SJE R172 to BETTY.  
Cross BETTY at assigned altitude.

Note RWY17 : 5.0% climb gradient required up to 500FT.

OBST ALT 93FT located at 0.2NM 162° FM end of RWY17.



CHANGE : PROC renamed. PROC course.

STANDARD DEPARTURE CHART - INSTRUMENT

RORS / SHIMOJISHIMA

SID

MIYAKOJIMA FOUR DEPARTURE

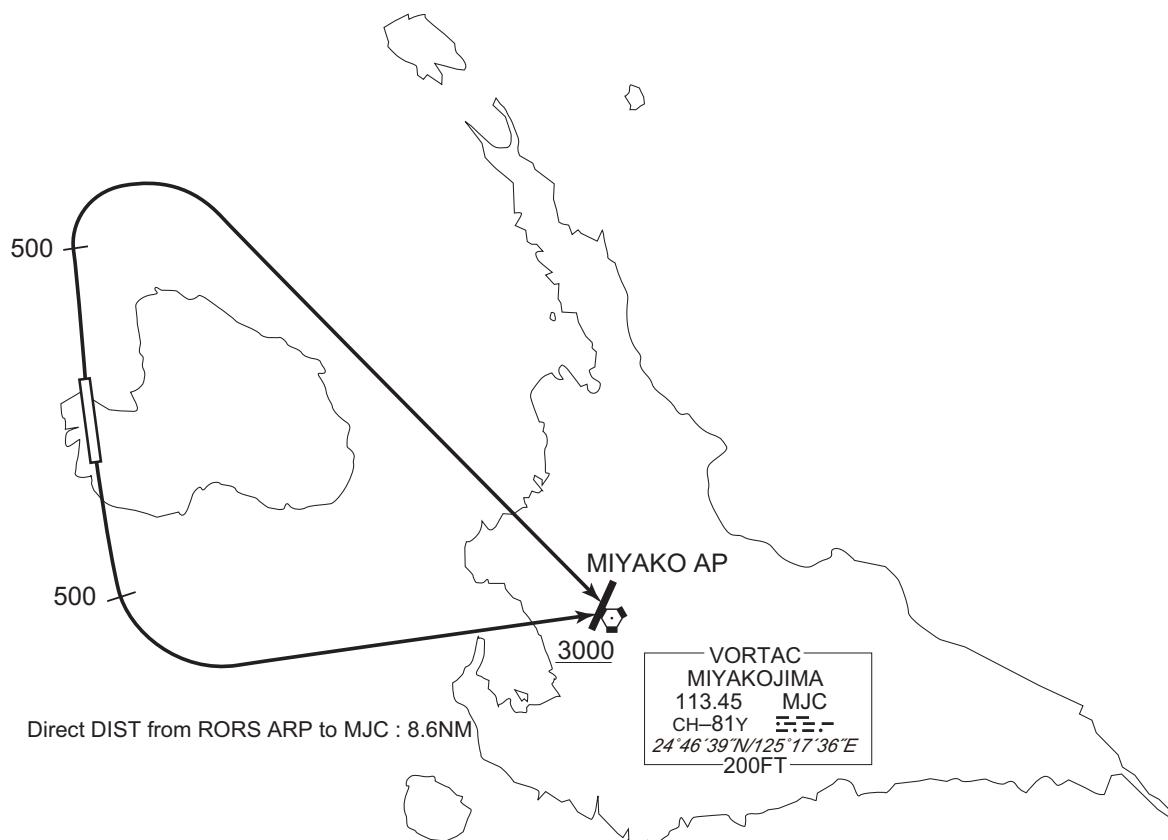
RWY17 : Climb RWY HDG to 500FT, turn left,...

RWY35 : Climb RWY HDG to 500FT, turn right,...

...direct to MJC VORTAC. Cross MJC VORTAC at or above 3000FT.

Note RWY17 : 5.0% climb gradient required up to 500FT.

OBST ALT 93FT located at 0.2NM 162° FM end of RWY17.



## STANDARD DEPARTURE CHART - INSTRUMENT

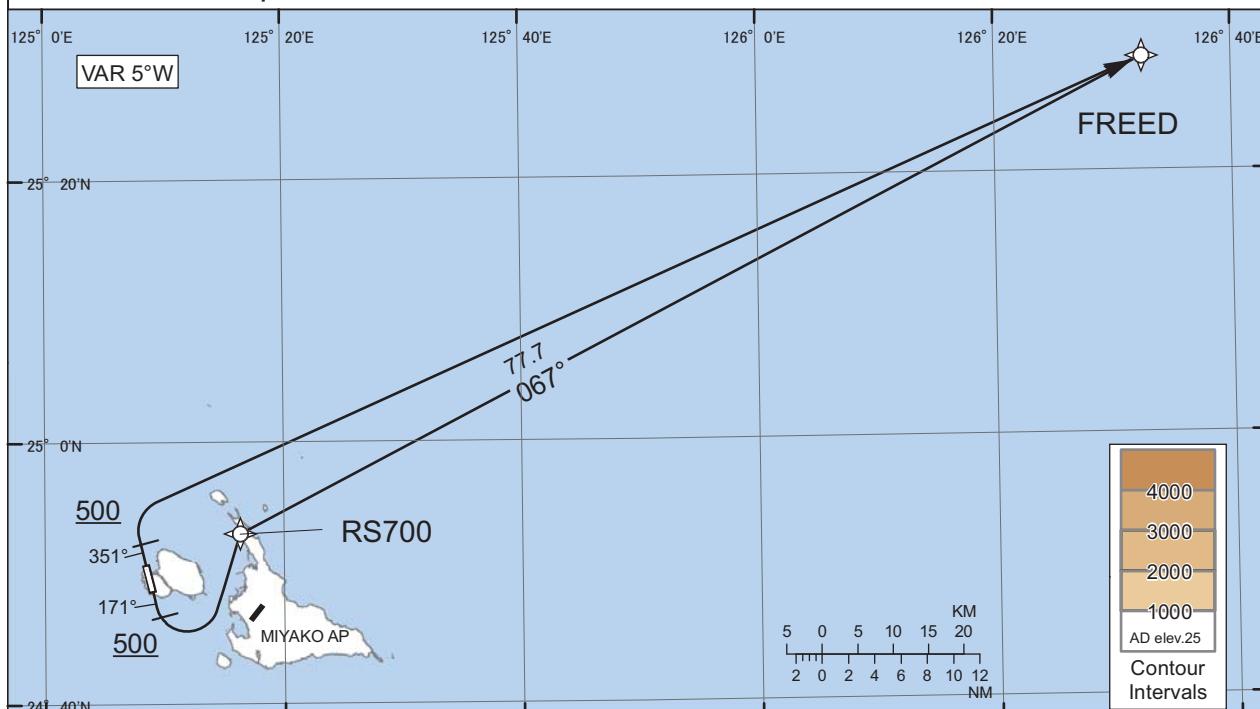
RORS / SHIMOJISHIMA

RNAV SID

FREED TWO DEPARTURE

RNP1

Note GNSS required.



RWY17 : Climb on HDG171° at or above 500FT, turn left direct to RS700, to FREED.

RWY35 : Climb on HDG351° at or above 500FT, turn right direct to FREED.

Note RWY17 : 5.0% climb gradient required up to 500FT.

OBST ALT 93FT located at 0.2NM 162° FM end of RWY17.

## RWY17

Serial Number	Path Descriptor	Way point Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	-	-	171 (166.1)	-5.1	-	-	+500	-	-	RNP1
002	DF	RS700	-	-	-5.1	-	L	-	-	-	RNP1
003	TF	FREED	-	067 (062.4)	-5.1	77.7	-	-	-	-	RNP1

## RWY35

Serial Number	Path Descriptor	Way point Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	-	-	351 (346.1)	-5.1	-	-	+500	-	-	RNP1
002	DF	FREED	-	-	-5.1	-	R	-	-	-	RNP1

## Waypoint Coordinates

Waypoint Identifier	Coordinates
RS700	245300.5N / 1251621.0E
FREED	252840.1N / 1263232.7E

CHANGE : OBST. Waypoint Coordinates added.

STANDARD ARRIVAL CHART - INSTRUMENT

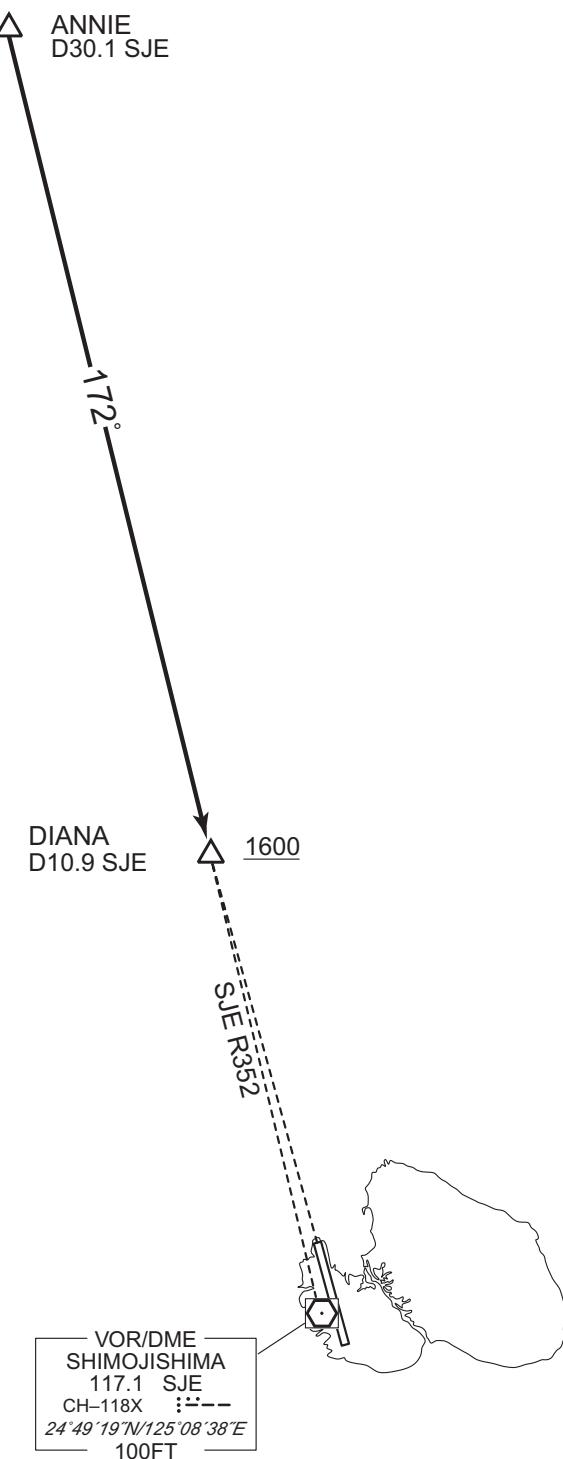
RORS / SHIMOJISHIMA

STAR

ANNIE ARRIVAL

From over ANNIE, proceed via SJE R352 to DIANA.  
Cross DIANA at or above 1600FT.

CHANGE : PROC course.



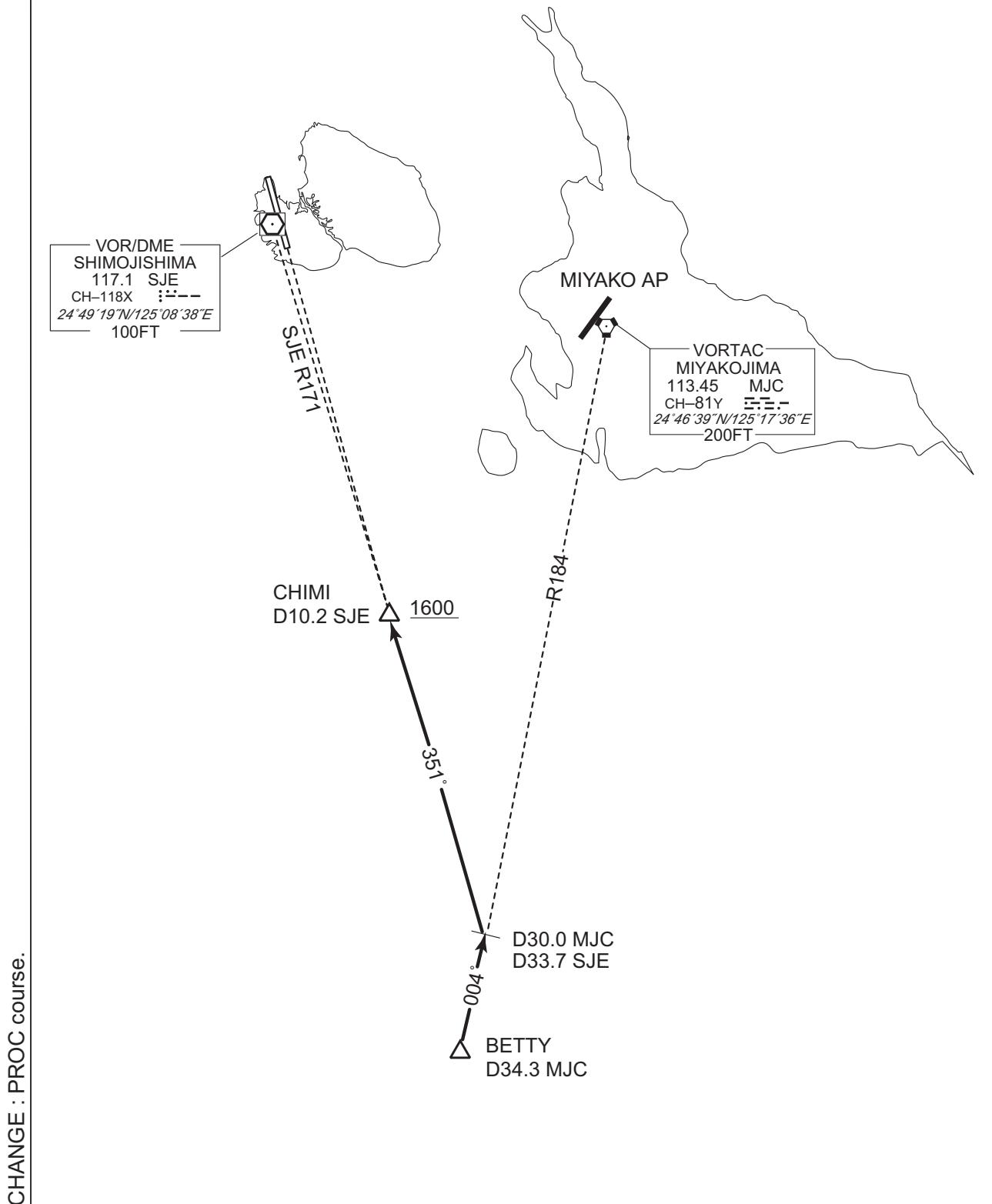
## STANDARD ARRIVAL CHART - INSTRUMENT

RORS / SHIMOJISHIMA

STAR

BETTY ARRIVAL

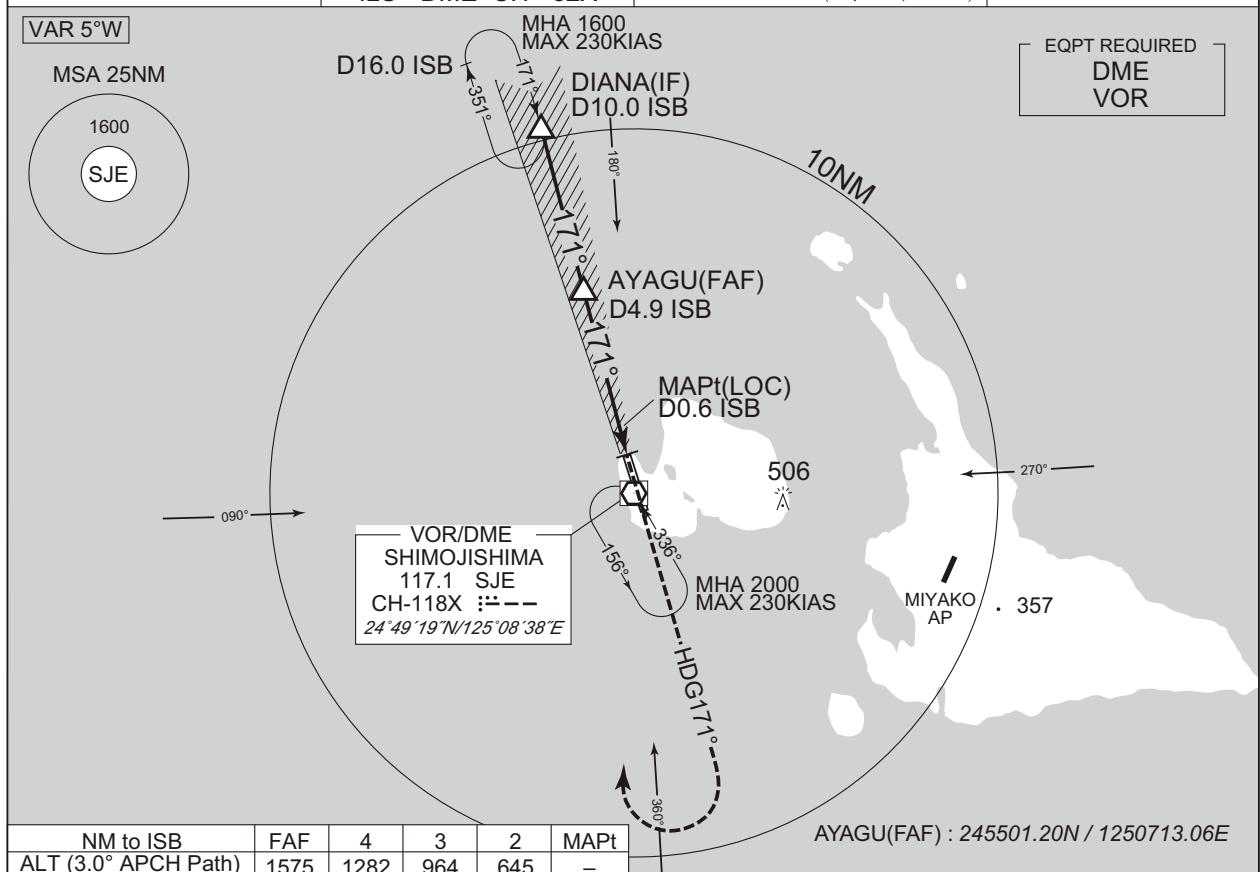
From over BETTY, proceed via MJC R184 to intercept and proceed via SJE R171 to CHIMI.  
Cross CHIMI at or above 1600FT.



## INSTRUMENT APPROACH CHART

RORS / SHIMOJISHIMA

SAKISHIMA APP 125.0 – 121.2	ILS - LOC 111.5 ISB 111... ILS - GP 332.9 ILS - DME CH - 52X	SHIMOJI TOWER 118.3 - 126.2	( 2300 – 0000(UTC) 0730 – 1030(UTC) SHIMOJI RADIO 118.3 AFIS provided by Naha Airport Office )	RADAR AVBL
--------------------------------	-----------------------------------------------------------------------	--------------------------------	---------------------------------------------------------------------------------------------------------------	------------



**MISSSED APPROACH**

Climb to 2000FT on HDG171°, turn right, direct to SJE VOR/DME and hold. Contact SAKISHIMA APP.

Timing not authorized for defining the MAPt.

Missed APCH climb gradient MNM 3.0%

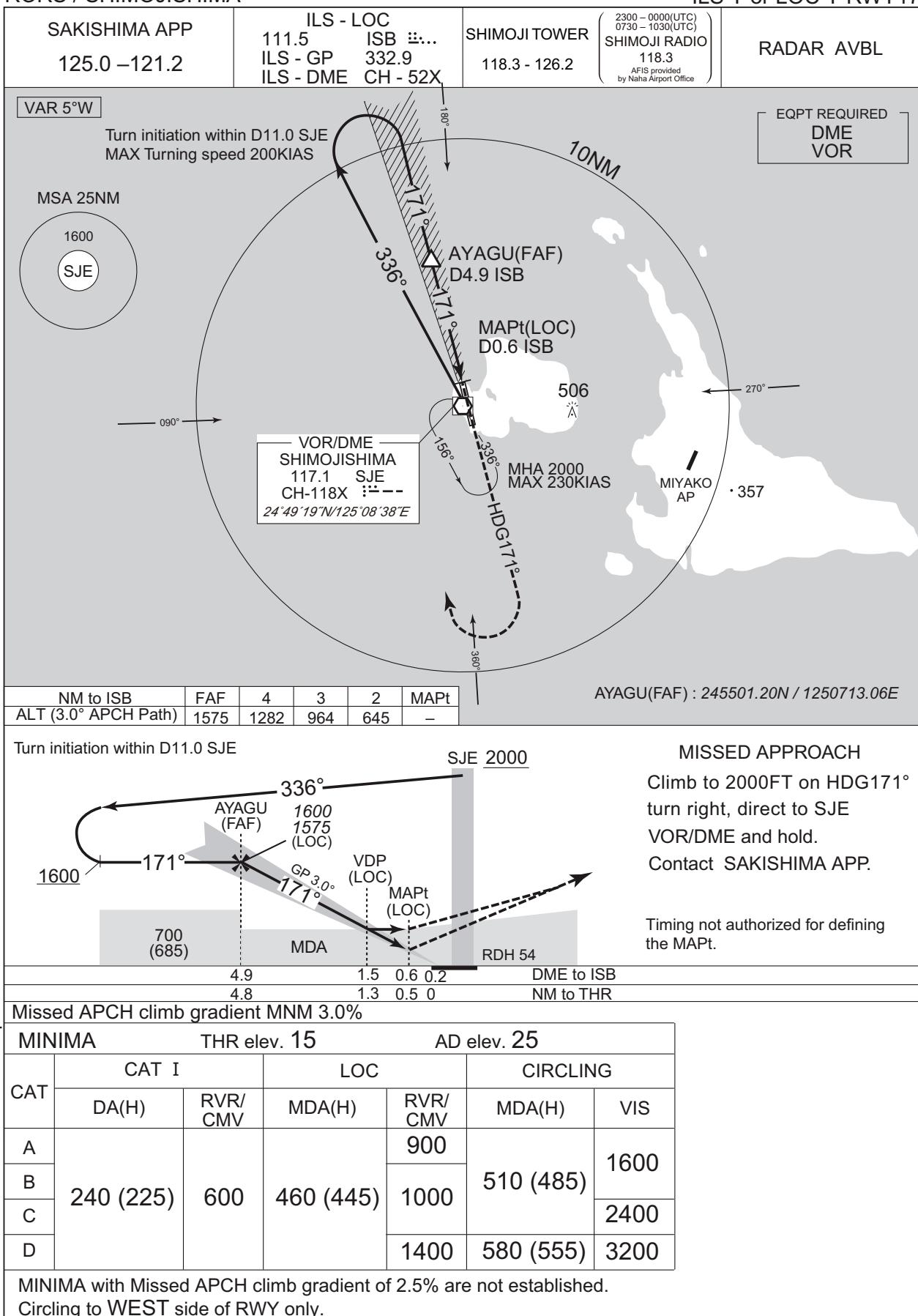
MINIMA		THR elev. 15		AD elev. 25		
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/ CMV	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	240 (225)	600	460 (445)	900	510 (485)	1600
B						
C				1000		2400
D					1400	580 (555)
						3200

MINIMA with Missed APCH climb gradient of 2.5% are not established. Circling to **WEST** side of RWY only.

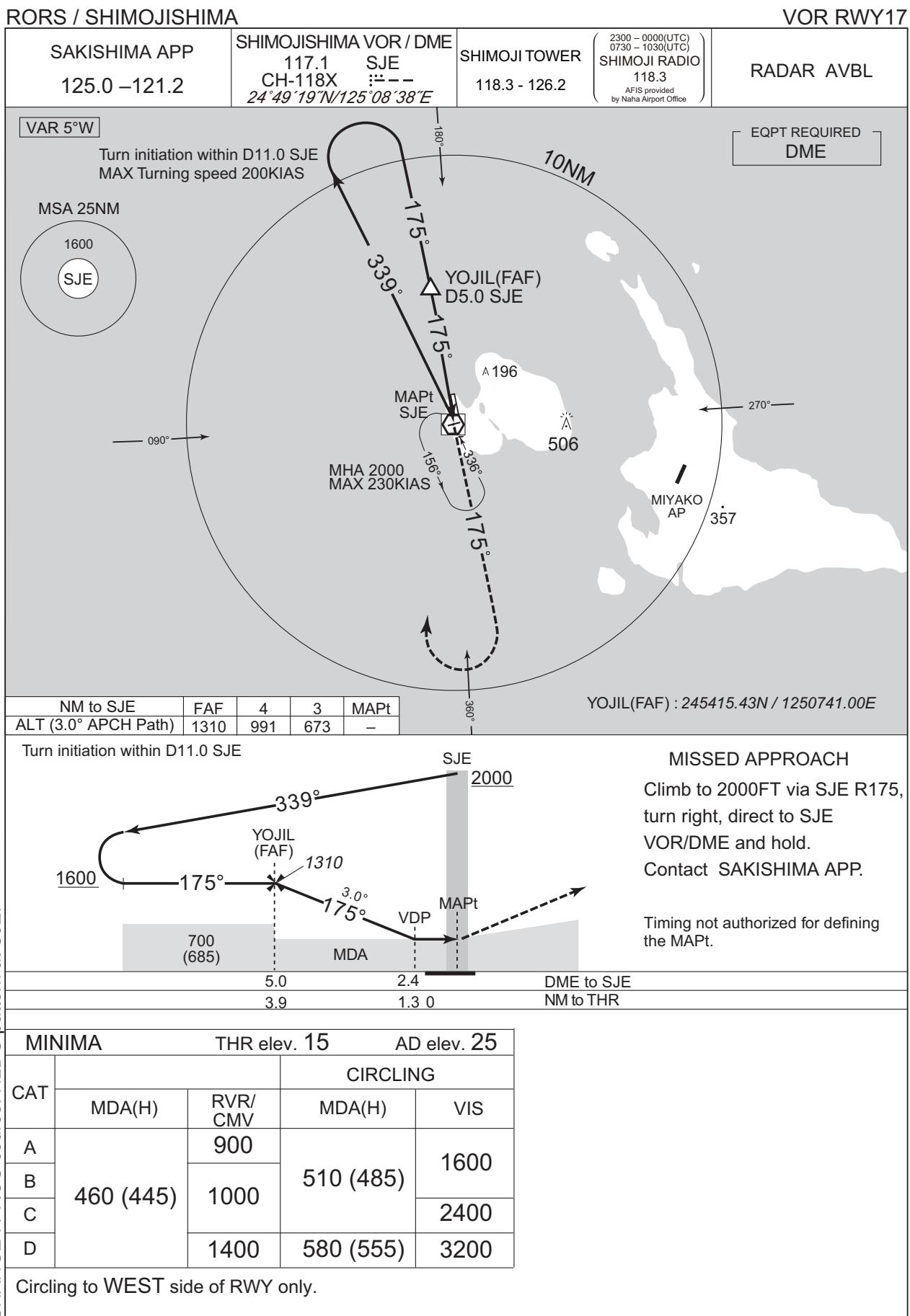
## INSTRUMENT APPROACH CHART

## RORS / SHIMOJISHIMA

## ILS Y or LOC Y RWY17



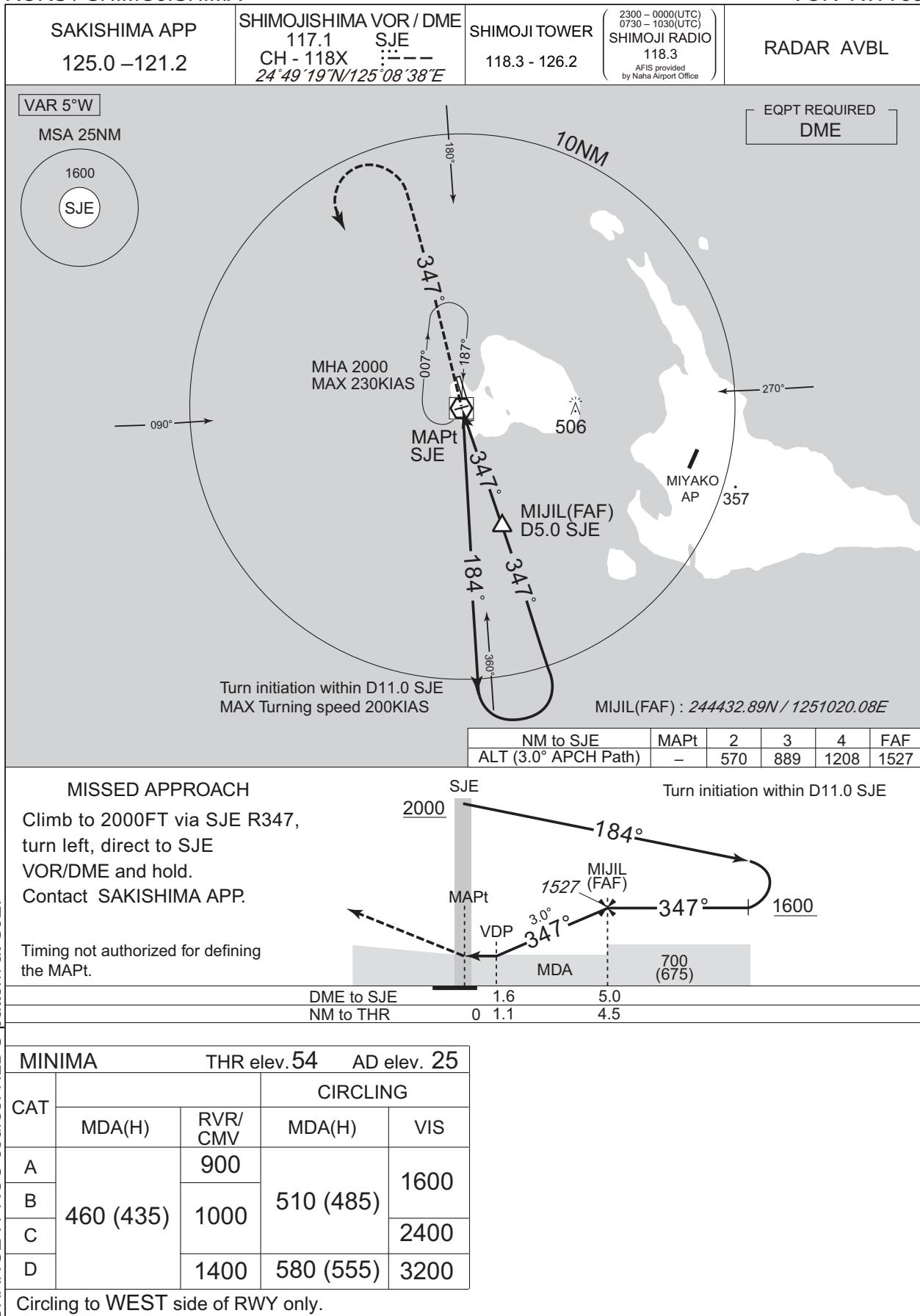
INSTRUMENT APPROACH CHART



## INSTRUMENT APPROACH CHART

## RORS / SHIMOJISHIMA

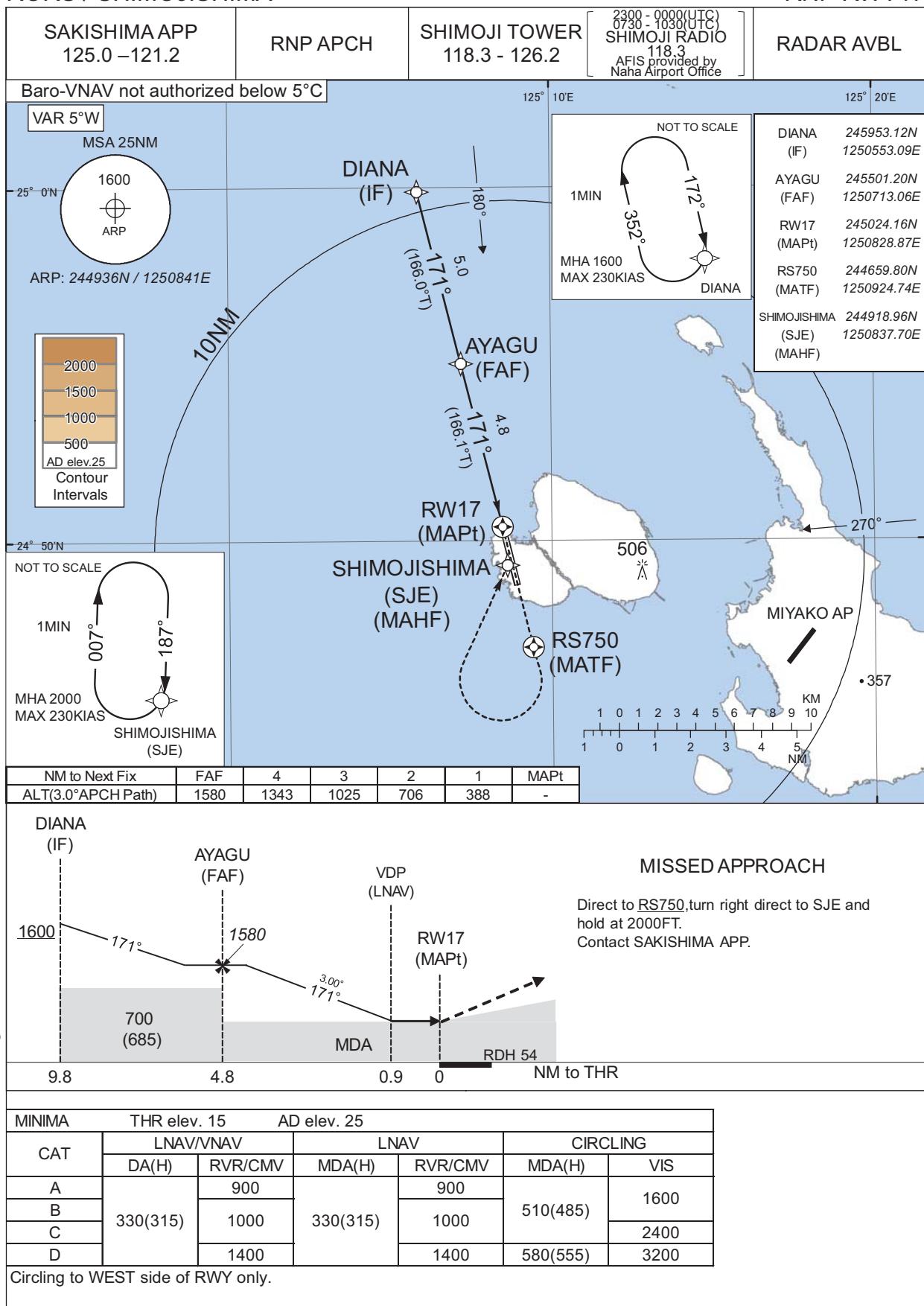
## VOR RWY35



INSTRUMENT APPROACH CHART

RORS / SHIMOJISHIMA

RNP RWY17



CHANGE : Missed APCH for using VOR/DME abolished.

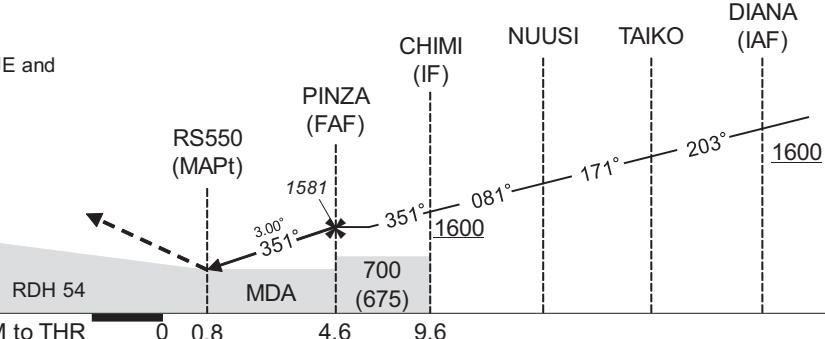
## INSTRUMENT APPROACH CHART

## RORS / SHIMOJISHIMA

RNP RWY35

## MISSED APPROACH

Direct to RS551, turn left direct to SJE and hold at 2000FT.  
Contact SAKISHIMA APP.



MINIMA		THR elev. 54	AD elev. 25	CIRCLING		
CAT	LNAV/VNAV		LNAV		CIRCLING	
	DA(H)	RVR/CMV	MDA(H)	RVR/CMV	MDA(H)	VIS
A	350(296)	800	350(325)	900	510(485)	1600
B				1000		2400
C				1400	580(555)	3200
D		1200				

Circling to WEST side of RWY only.

CHANGE : Missed APCH for using VOR/DME abolished.

RORS / SHIMOJISHIMA

Visual REP

VAR 5°W(2022) / 7°W

SHIMOJI TOWER  
118.3 - 126.2

SHIMOJISHIMA CONTROL ZONE  
At or below 3000FT  
(Excluding the area of MIYAKO CONTROL ZONE)

9NM NW

5NM from ARP

9NM SW



Webメルカトル図法(球体補正) / Web Mercator projection

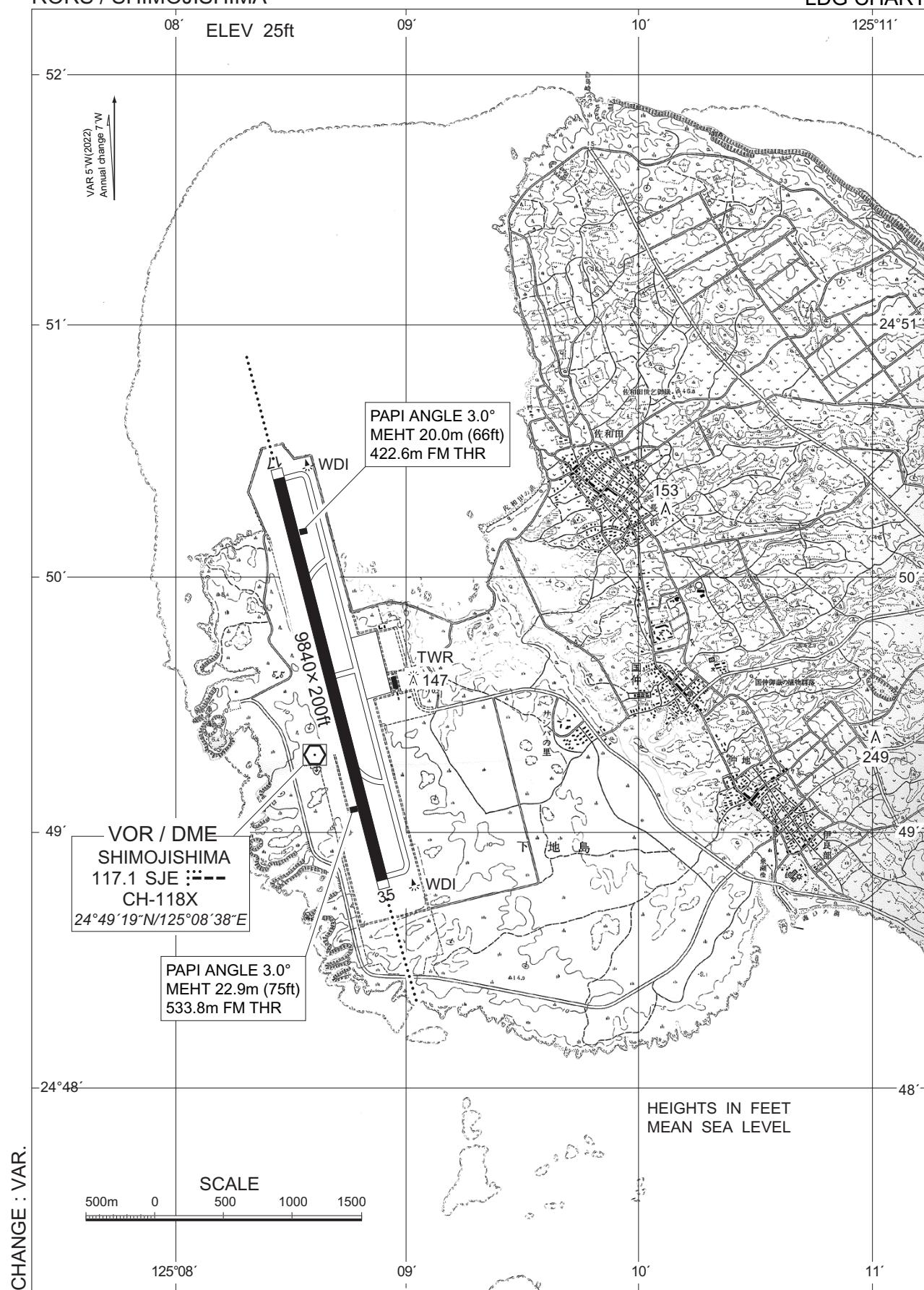
※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

CHANGE : Map updated. BRG/DIST from ARP.

Call sign	BRG / DIST from ARP	Remarks
池間島 Ikemajima	040°T / 8.2NM	島 Island
9NM NW	290°T / 9.0NM	海上 Over the sea
9NM SW	230°T / 9.0NM	海上 Over the sea

## RORS / SHIMOJISHIMA

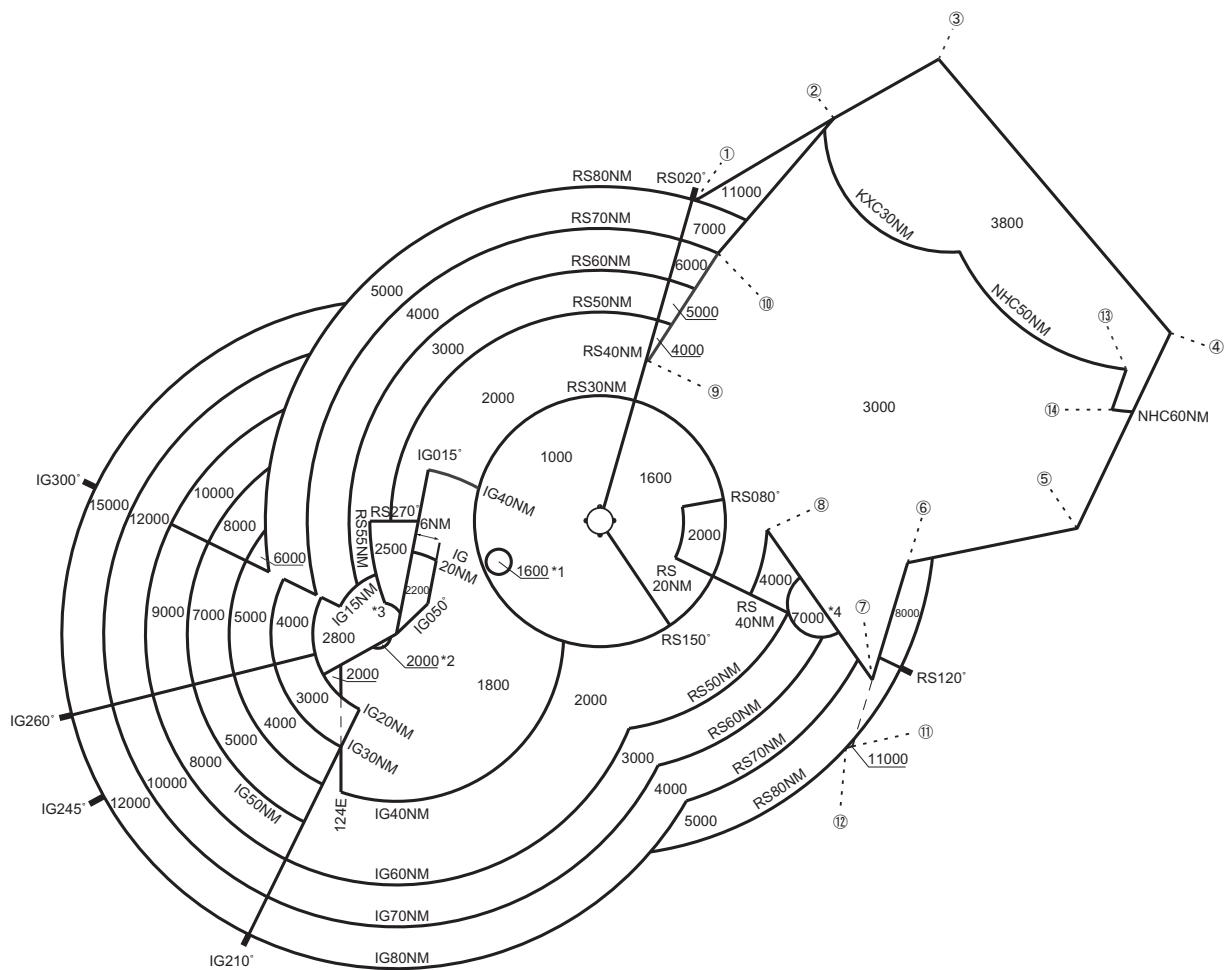
## LDG CHART



## RORS / SHIMOJISHIMA

## Minimum Vectoring Altitude CHART

VAR 5°W (2022)



- ①260606N/1253511E
- ②262504N/1261226E
- ③263831N/1264046E
- ④253118N/1273951E
- ⑤244518N/1271337E
- ⑥243809N/1262857E
- ⑦241018N/1261859E
- ⑧244643N/1255220E
- ⑨252751N/1252151E
- ⑩255321N/1254054E
- ⑪235438N/1261324E
- ⑫235414N/1261156E
- ⑬252316N/1272802E
- ⑭251400N/1272404E

CENTER : 244938N/1250827E (RORS RADAR SITE)  
CENTER : 242310N/1241441E (ROIG RADAR SITE)

\*1 : 244015N/1244143E RADIUS : 3NM  
\*2 : 242248N/1240952E RADIUS : 3NM  
\*3 : 242538N/1241100E RADIUS : 5NM  
\*4 : 242850N/1260600E RADIUS : 8NM

## CHANGE : VAR.