AD 2 AERODROMES

RJSI AD 2.1 AERODROME LOCATION INDICATOR AND NAME

RJSI - HANAMAKI

RJSI AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	*392543N 1410807E* 010°/1.25km FM RWY 02 THR
2	Direction and distance from (city)	6km NNE FM Hanamaki City
3	Elevation/ Reference temperature	294ft / 30°C(2016-2020)
4	Geoid undulation at AD ELEV PSN	126ft
5	MAG VAR/ Annual change	9° W(2021) / 3’34”W
6	AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses	Hanamaki Airport office (Iwate prefectual government) 3-183-1 Kuzu Hanamaki-shi Iwate 025-0004 Japan Tel: 0198-26-2016 Fax: 0198-26-4588 e-mail: CF0003@pref.iwate.jp URL: http://www.pref.iwate.jp
7	Types of traffic permitted(IFR/ VFR)	IFR/VFR
8	Remarks	Hanamaki Airport Branch(Civil Aviation Bureau) 3-183-1 Kuzu Hanamaki-shi Iwate 025-0004 Japan Tel: 0198-26-2015 Fax: 0198-26-4804

RJSI AD 2.3 OPERATIONAL HOURS

1	AD Administration	2300 - 1030
2	Customs and immigration	Customs: On request (0193-22-3010) Immigration: INTL SKED FLT hours only
3	Health and sanitation	Quarantine (human): 2330-0815 Quarantine (animal, plant): INTL SKED FLT hours only
4	AIS Briefing Office	Nil
5	ATS Reporting Office(ARO)	Nil
6	MET Briefing Office	H24 (TOKYO)
7	ATS	2300 - 1030
8	Fuelling	2300 - 1030
9	Handling	2300 - 1030
10	Security	2330 - 1030
11	De-icing	Nil
12	Remarks	Nil

RJSI AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	All the modern institutions that deal with the weight thing to a Boeing 747 type freighter.
2	Fuel/ oil types	AVGAS 100LL JET A-1
3	Fuelling facilities/ capacity	AVGAS 100LL : Fuel truck / Ask AD administration JET A-1 : Fuel truck / 200KL x 2tank
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Ask AD Administration
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

RJSI AD 2.5 PASSENGER FACILITIES

1	Hotels	At Hanamaki City
2	Restaurants	At Airport
3	Transportation	Buses and Taxi
4	Medical facilities	Hospital in Hanamaki city 5km
5	Bank and Post Office	Post Office/Postage stamp shop and mailbox at airport
6	Tourist Office	At Airport
7	Remarks	Nil

RJSI AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 8
2	Rescue equipment	Chemical fire fighting truck x 3 , Emergency medical equipments conveyance truck
3	Capability for removal of disabled aircraft	Ask AD Administration
4	Remarks	Nil

RJSI AD 2.7 SEASONAL AVAILABILITY-CLEARING

1	Types of clearing equipment	Snow Removal Equipments: snow plough x 7 , snow sweeper x 4 , rotary snow plough x 3 , anti-freezing-agent spreader x 3
2	Clearance priorities	1.RWY , TWY 2.Apron
3	Remarks	Seasonal availability:All seasons. Snow removal will be commenced,if the RWY is covered with a depth of 3cm snow or more.

RJSI AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Spot NR 1-5 Surface:concrete, Strength:PCN 74/R/B/X/T W-Apron Surface:concrete, Strength:PCN 52/R/B/X/T Small Aircraft Apron Surface: asphalt, Strength:AUW 5700kg/0.28Mpa
2	Taxiway width, surface and strength	TWY T1, T4 Width: 28.5m, Surface:asphalt, Strength: PCN 68/F/B/X/T TWY T2, T3 Width: 34m, Surface:asphalt, Strength: PCN 67/F/B/X/T TWY T5 Width: 30m, Surface:asphalt, Strength: PCN 75/F/C/X/T TWY P1-P3 Width: 23m, Surface:asphalt, Strength: PCN 68/F/B/X/T
3	ACL and elevation	Not available
4	VOR checkpoints	Not available
5	INS checkpoints	Spot NR 1: *392521.80N 1410817.13E* 2: *392520.04N 1410815.81E* 3: *392518.26N 1410816.15E* 4: *392516.16N 1410815.68E* 5: *392514.55N 1410815.36E*
6	Remarks	Nil

RJSI 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	ACFT stand ID signs : Nil ACFT stand taxi lane : See AD2.24 AD chart Visual docking guidance system : Nil
2	RWY and TWY markings and LGT	RWY: 02/20 (Marking) RWY designation, RWY CL, RWY THR, TDZ, Aiming point, RWY side stripe (LGT) RCLL, REDL, RTHL, RENL, RTZL(RWY20), WBAR(RWY20), RWY DIST marker LGT TWY T1 THRU T5: (Marking) TWY CL, RWY HLDG PSN, TWY side stripe (LGT) TWY edge LGT, TWY CL LGT, Taxiing guidance sign, RWY guard LGT TWY P1 THRU P3: (Marking) TWY CL, TWY side stripe (LGT) TWY edge LGT, TWY CL LGT
3	Stop bars	Nil
4	Remarks	(Marking) Overrun area, Apron TWY CL (LGT) Apron flood LGT

RJSI AD 2.10 AERODROME OBSTACLES

In Area2 See Obstacle data

In Area3 To be developed

RJSI AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	TOKYO
2	Hours of service MET Office outside hours	H24 (TOKYO)
3	Office responsible for TAF preparation Periods of validity	TOKYO 30 Hours
4	Trend forecast Interval of issuance	Nil
5	Briefing/ consultation provided	Briefing is available upon inquiry at TOKYO
6	Flight documentation Language(s) used	C En
7	Charts and other information available for briefing or consultation	S_6, U_{85}, U_7, U_5, U_3, U_{25}, U_2/T_r, P_S, P_5, P_3, P_{25}, P_{SWE}, P_{SWF}, P_{SWG}, P_{SWI}, P_{SWM}, P_{SW}(domestic), E, C, W_E, W_F, W_G, W_I, W, N
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	RADIO
10	Additional information (limitation of service, etc.)	Nil

RJSI AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength(PCN) 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
02	010.73°	2500×45	PCN 68/F/A/X/T Asphalt Concrete	*392503.58N* *1410757.62E* 135ft	THR ELEV: 283ft
20	190.73°	2500×45	PCN 68/F/A/X/T Asphalt Concrete	*392623.24N* *1410817.11E* 135.5ft	THR ELEV: 297.5ft TDZ ELEV: 297.5ft

Slope of RWY	Strip Dimensions(M)	RESA (Overrun) Dimensions(M)	Remarks
7	10	11	14
SEE AD2.24 AD chart	2620×300	40 × 300	RWY grooving:2500×45m
	2620×300	193 × (MNM:166 MAX:300)* *For detail, ask airport administrator	

RJSI AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
02	2500	2500	2500	2500	Nil
20	2500	2500	2500	2500	Nil

RJSI 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
02	SALS (*1) 420m LIH	Green -	PAPI 3.0°/Left 452.4m 74ft	-	2500m 30m Coded color (White/Red) LIH	2500m 60m Coded color (White/Yellow) LIH	Red	Nil (*2)
20	PALS (CAT I) 900m LIH	Green Green	PAPI 3.0°/Left 429.0m 65.6ft	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 (596m and 930m FM RWY THR)(*1) Overrun area edge LGT(LEN:60m, color:Red) (*2)								

RJSI AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: *392547N/1410755E*, White/Green EV4.3sec, HO
2	LDI location and LGT Anemometer location and LGT	LDI: Nil Anemometer: RWY02: 350m from RWY02 THR, LGTD RWY20: 200m from RWY20 THR, LGTD
3	TWY edge and center line lighting	TWY edge and center line lights installed, see AD2.9
4	Secondary power supply/ switch-over time	Within 1sec : REDL, RTHL, WBAR, RENL, RCLL, Overrun area edge LGT Within 15sec : Other LGT
5	Remarks	WDI LGT

RJSI AD 2.16 HELICOPTER LANDING AREA

Nil

RJSI AD 2.17 ATS AIRSPACE

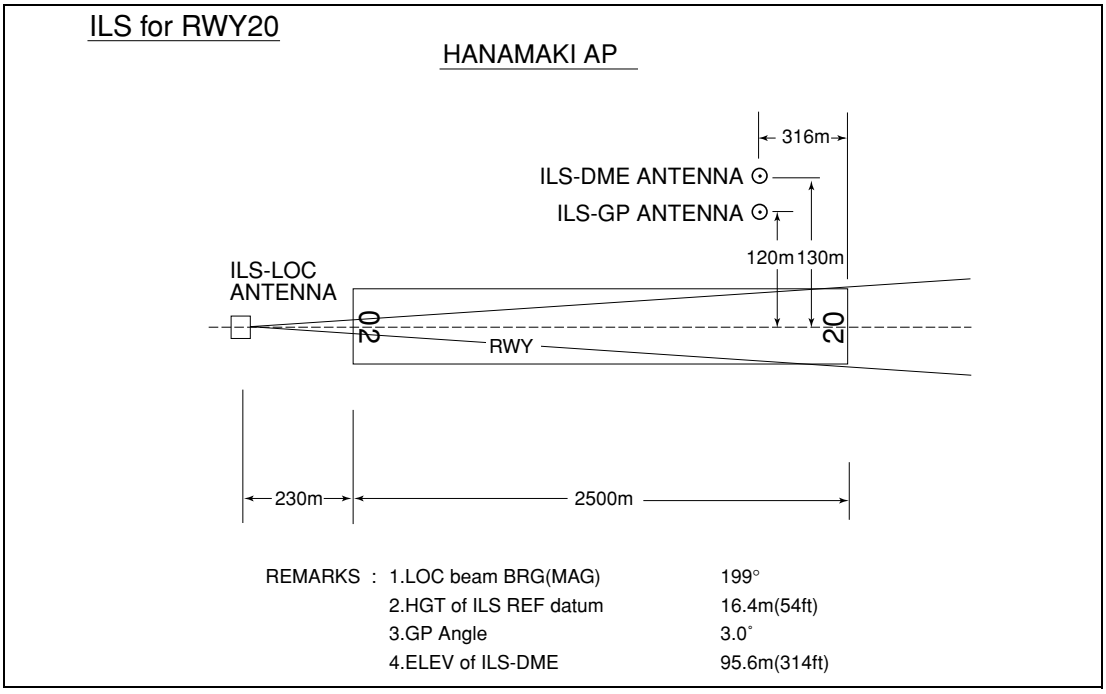
Designation and lateral limits		Vertical limits (ft)	Airspace classification	ATS unit call sign Language	Remarks
1		2	3	4	6
Hanamaki Information Zone	Area within a radius of 5nm(9km) of Hanamaki ARP	3,000	E	Hanamaki Radio En	
Shirakami ACA	See RJSK attached chart		E	Shirakami APP En	

RJSI AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP	Shirakami Approach	119.25MHz 315.3MHz 120.65MHz	2200 - 1300	
AFIS	Hanamaki Radio	118.2MHz(1) 126.2MHz	2300 - 1030	(1)Primary

RJSI 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 (8°W/2010)	HPE	112.8MHZ	H24	*392600.09N 1410800.60E*		VOR unusable : 060°-080° beyond 30nm BLW 9000ft. 280°-290° beyond 30nm BLW 9000ft. 350°-360° beyond 30nm BLW 9000ft.
DME	HPE	1162MHz (CH-75X)	H24	*392600.09N 1410800.60E*	339ft	DME unusable : 050°-090° beyond 30nm BLW 9000ft. 280°-360° beyond 30nm BLW 9000ft.
ILS-LOC 20	IHP	109.3MHz	2300 - 1030	*392456.26N 1410755.86E*		LOC : 230m (755ft) away FM RWY 02 THR, BRG (MAG)199°
ILS-GP 20	-	332.0MHz	2300 - 1030	*392613.90N 1410809.72E*		GP : 316m (1037ft) inside FM RWY 20 THR, 120m (394ft) W of RCL. Angle 3.0° HGT of ILS Ref datum16.5m (54ft).
ILS-DME 20	IHP	991MHz (CH-30X)	2300 - 1030	*392613.93N 1410809.29E*	314ft	DME:316m (1037ft) inside FM RWY 20 THR, 130m W of RCL.
MSAS		1575.42MHz	H24			Transmitting antennas are satellite based.



RJSI AD 2.20 LOCAL TRAFFIC REGULATIONS

1. Airport regulations

1. Aircraft operations other than scheduled flights or in an emergency On use of this airport, aircraft operator is required to obtain the permission of the airport authority.

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

RJSI AD 2.21 NOISE ABATEMENT PROCEDURES

Nil

RJSI 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	02	A, B, C, D	-	400m	-	400m	-	500m
	20	A, B, C, D	400m	400m	400m	400m	-	500m
OTHER	02	A, B, C, D	AVBL LDG MINIMA					
	20							

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

If radio communications with Shirakami Approach are lost for 1 minute, squawk Mode A/3 Code 7600 and;

(I) 1. Contact Hanamaki Radio.

2. If unable, proceed in accordance with visual flight rules.

3. If unable, proceed to HANAMAKI VOR/DME at last assigned altitude or 4,500 feet whichever is higher, and execute instrument approach.

(II) Procedures other than above will be issued when situation requires.

3.OTHER

For VFR aircraft intending to land at or fly around the AP, especially south and north of the AP, it is recommended to make initial contact with Hanamaki RADIO from at least further than 15nm from the AP to obtain traffic information.

当空港に着陸または空港周辺、特に空港の南及び北側を飛行しようとする VFR の航空機については、交通情報の入手のため、少なくとも 15NM 以遠からの花巻 RADIO との通信設定が推奨される。

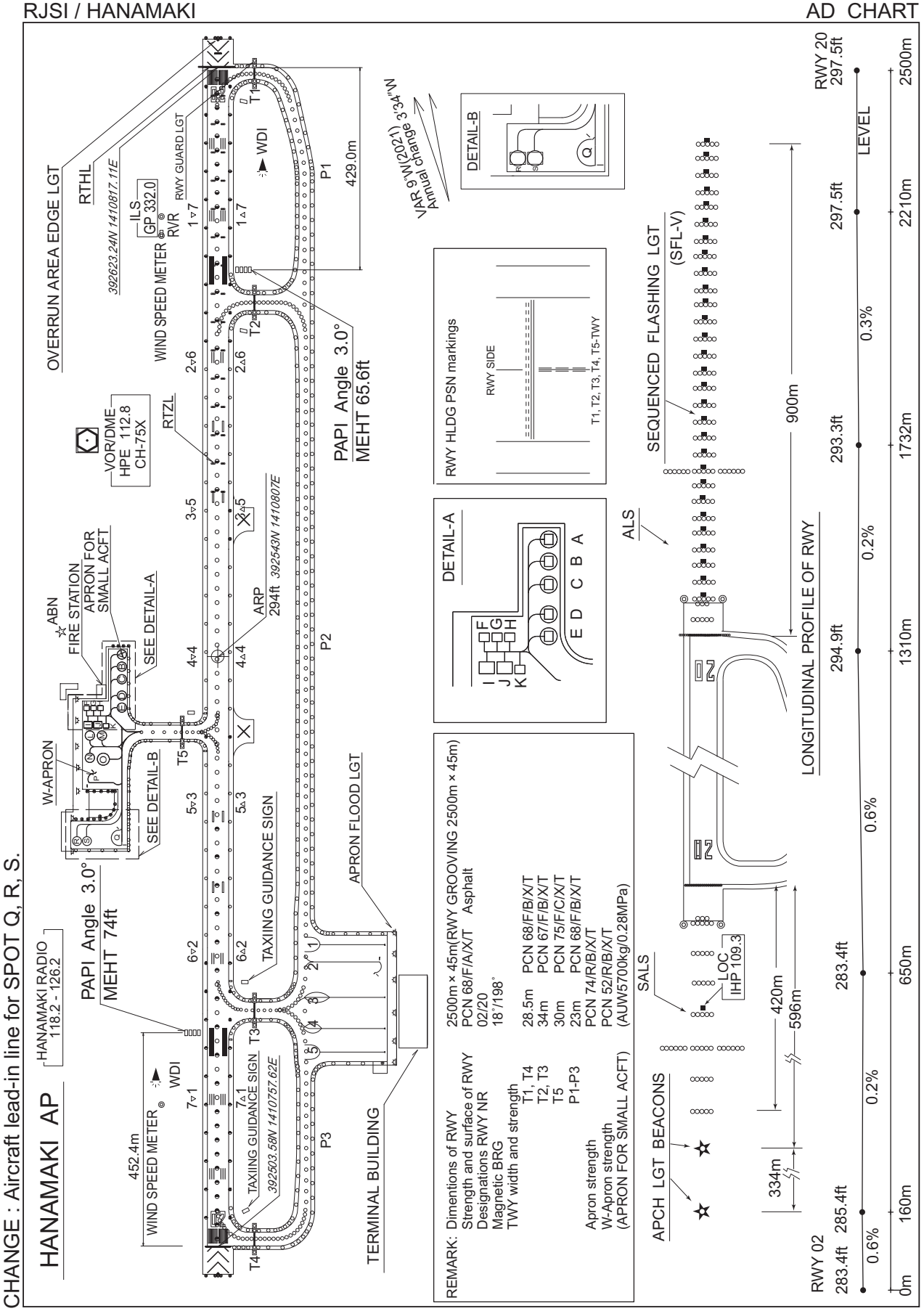
RJSI AD 2.23 ADDITIONAL INFORMATION

Nil

RJSI AD 2.24 CHARTS RELATED TO AN AERODROME

Aerodrome/Heliport Chart
Standard Departure Chart - Instrument (OHSHU)
Standard Departure Chart - Instrument (NIIGATA)
Standard Departure Chart - Instrument (HANAMAKI)
Standard Departure Chart - Instrument (SAMBO-RNAV)
Standard Departure Chart - Instrument (HANKA-RNAV)
Standard Arrival Chart - Instrument (REMEN-RNAV)
Standard Arrival Chart - Instrument (WANKO-RNAV)
Standard Arrival Chart - Instrument (SIOMO-RNAV)
Standard Arrival Chart - Instrument (SUIHO-RNAV)
Standard Arrival Chart - Instrument (REMEN WEST-RNAV)
Instrument Approach Chart (ILS Z or LOC Z RWY20)
Instrument Approach Chart (ILS Y or LOC Y RWY20)
Instrument Approach Chart (VOR RWY20)
Instrument Approach Chart (VOR RWY02)
Instrument Approach Chart (RNP Z RWY02)
Instrument Approach Chart (RNP Y RWY02(AR))
Instrument Approach Chart (RNP Z RWY20(AR))
Instrument Approach Chart (RNP Y RWY20(AR))
Other Chart (Visual REP)
Other Chart (LDG CHART)
Other Chart (MVA CHART)

RJSI / HANAMAKI AD CHART



STANDARD DEPARTURE CHART -INSTRUMENT

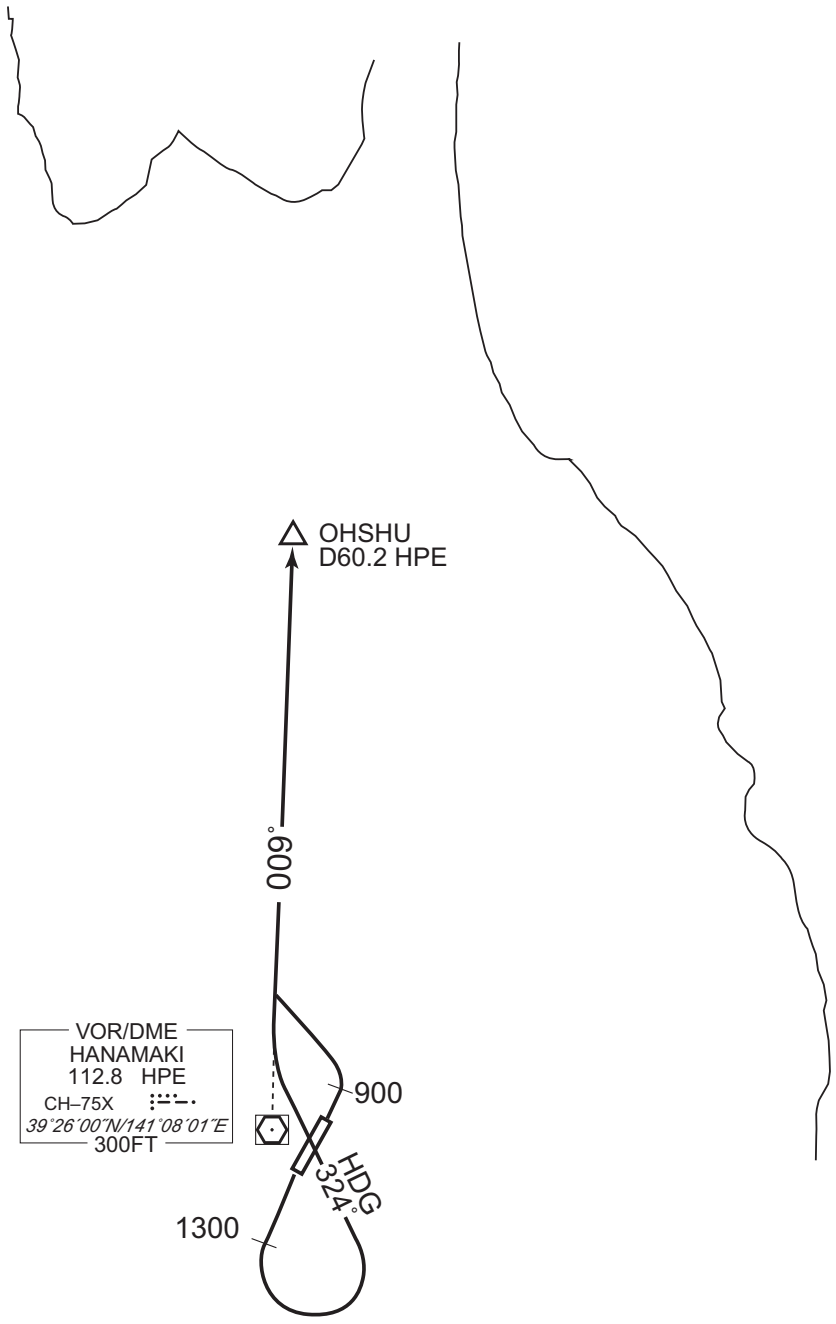
RJSI / HANAMAKI SID

OHSHU ONE DEPARTURE

RWY 02 : Climb RWY HDG to 900FT, turn left...

RWY 20 : Climb RWY HDG to 1300FT, turn left HDG 324˚...

...to intercept and proceed via HPE R009 to OHSHU.



CHANGE : Description of PROC name.

STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI SID

NIIGATA FIVE DEPARTURE

RWY 02 : Climb RWY HDG to HPE 3.5 DME, turn right...

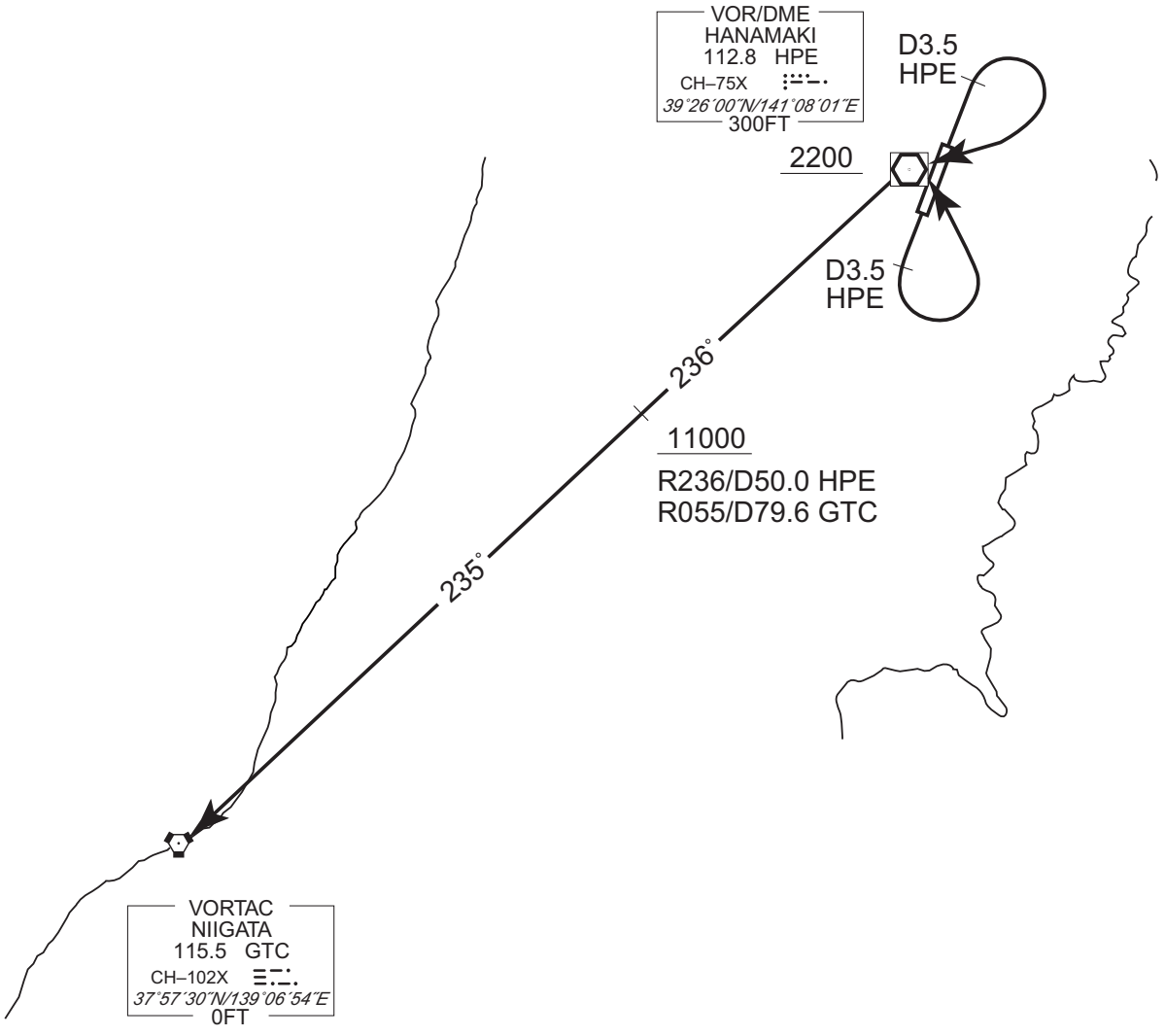
RWY 20 : Climb RWY HDG to HPE 3.5 DME, turn left...

...proceed to HPE VOR/DME, via HPE R236 to HPE 50.0DME(GTC 79.6DME), via GTC R055 to GTC.

Cross HPE VOR/DME at or above 2200 FT, cross HPE R236/50.0DME (GTC R055/79.6DME) at or above 11000 FT.

Note RWY02 : 4.5% climb gradient required up to 2400FT.
OBST ALT 1641FT located at 4.1NM 091˚ FM end of RWY02.

RWY20 : 3.9% climb gradient required up to 1100FT.
OBST ALT 722FT located at 2.8NM 166˚ FM end of RWY20.



CHANGE : PROC renamed. PROC course. ALT restriction.

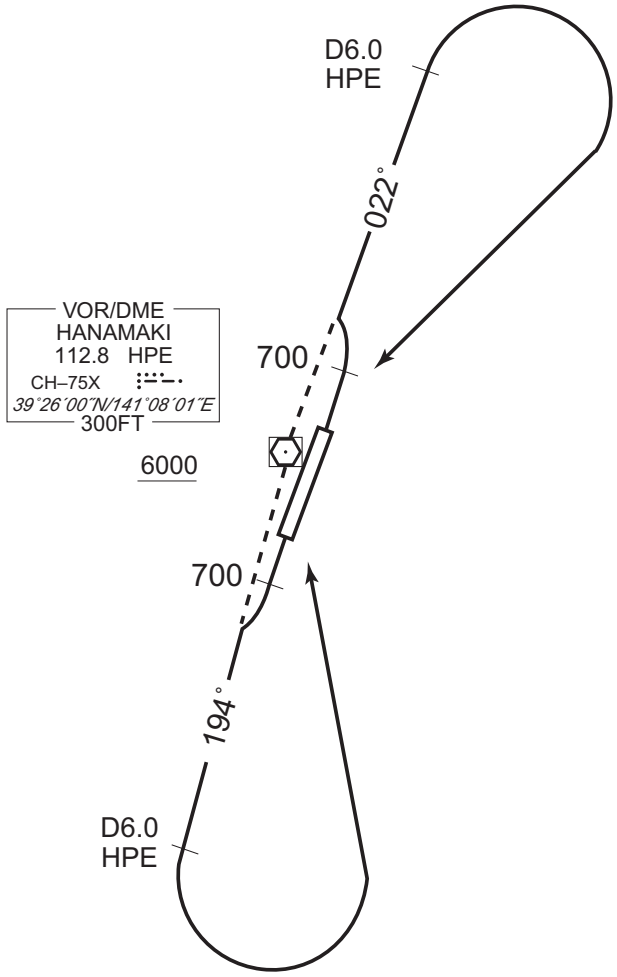
STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI SID

HANAMAKI REVERSAL TWO DEPARTURE

RWY 02 : Climb RWY HDG to 700FT, via HPE R022 to 6.0 DME, turn right...
RWY 20 : Climb RWY HDG to 700FT, via HPE R194 to 6.0 DME, turn left...
...proceed to HPE VOR/DME.
Cross HPE VOR/DME at or above 6000FT.

Note RWY02 : 5.0% climb gradient required up to 3200FT.
OBST ALT 2691FT located at 9.1NM 058˚ FM end of RWY02.

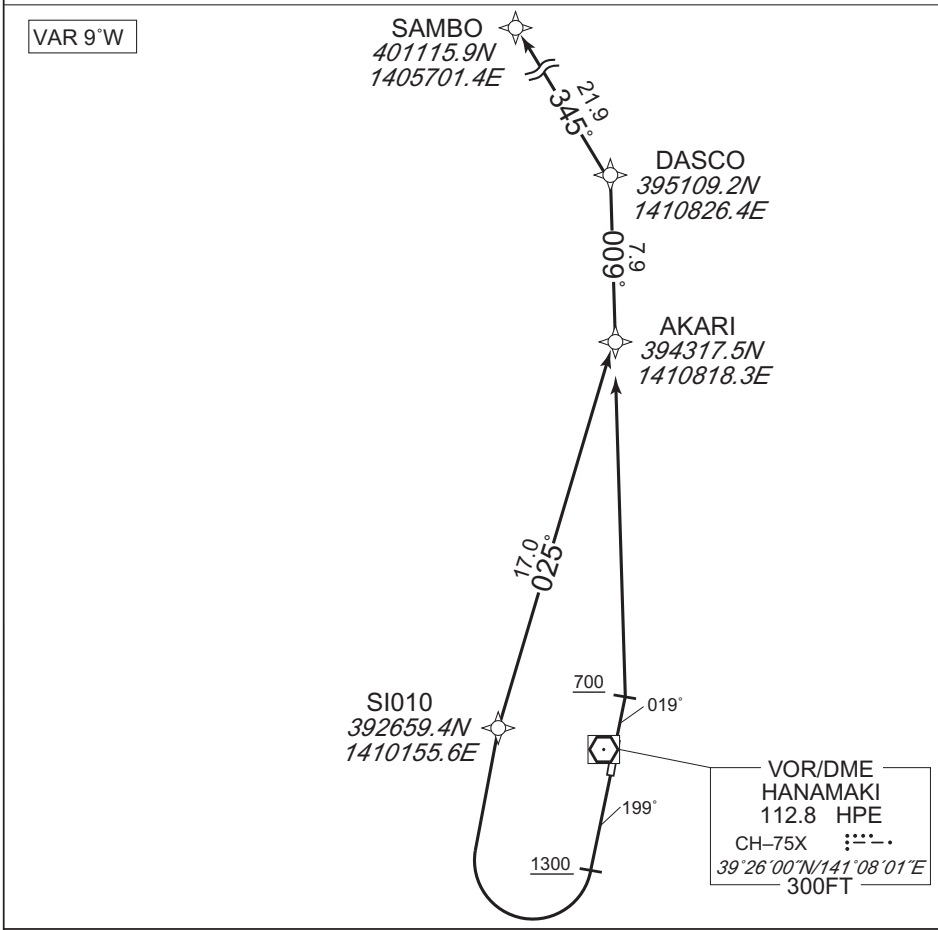


CHANGE : Description of PROC name.

STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI RNAV SID

SAMBO ONE DEPARTURE	RNP1
Note GNSS required.	



RWY02 : Climb on HDG 019˚ at or above 700FT, direct to AKARI, to DASCO to SAMBO.
RWY20 : Climb on HDG 199˚ at or above 1300FT, turn right direct to SI010, to AKARI, to DASCO to SAMBO .
Note RWY02 : 4.0% climb gradient required up to 700FT.
OBST ALT 318FT located at 0.2NM 061˚ FM end of RWY02.
RWY20 : 4.0% climb gradient required up to 2700FT.
OBST ALT 3117FT located at 10.7NM 351˚ FM end of RWY20.

RWY02

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	–	–	019 (010.7)	-8.7	–	–	+700	–	–	RNP1
002	DF	AKARI	–	–	-8.7	–	–	–	–	–	RNP1
003	TF	DASCO	–	009 (000.8)	-8.7	7.9	–	–	–	–	RNP1
004	TF	SAMBO	–	345 (336.6)	-8.7	21.9	–	–	–	–	RNP1

RWY20

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	–	–	199 (190.7)	-8.7	–	–	+1300	–	–	RNP1
002	DF	SI010	–	–	-8.7	–	R	–	–	–	RNP1
003	TF	AKARI	–	025 (016.7)	-8.7	17.0	–	–	–	–	RNP1
004	TF	DASCO	–	009 (000.8)	-8.7	7.9	–	–	–	–	RNP1
005	TF	SAMBO	–	345 (336.6)	-8.7	21.9	–	–	–	–	RNP1

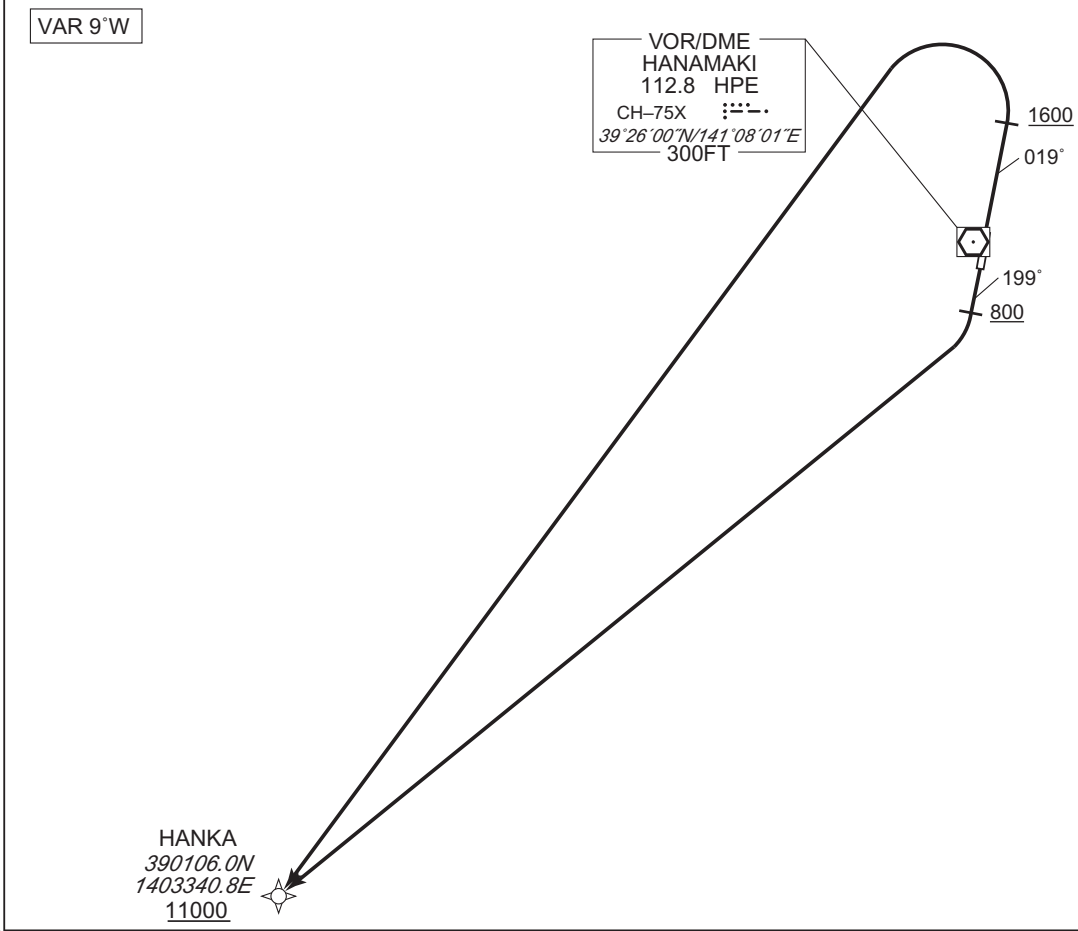
CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD DEPARTURE CHART -INSTRUMENT

RJSI / HANAMAKI — RNAV SID

HANKA ONE DEPARTURE — RNP1

Note GNSS required



CHANGE : Navigation Specification(Basic RNP1 → RNP1).

RWY02 : Climb on HDG 019˚ at or above 1600FT, turn left direct to HANKA, at or above 11000FT.
RWY20 : Climb on HDG 199˚ at or above 800FT, turn right direct to HANKA, at or above 11000FT.
Note RWY02: 5.0% climb gradient required up to 3600FT.
OBST ALT 1936FT located at 5.5NM 340˚ FM end of RWY02.
OBST ALT 3018FT located at 8.2NM 310˚ FM end of RWY02.
RWY20: 5.0% climb gradient required up to 5400FT.
OBST ALT 4593FT located at 18.2NM 227˚ FM end of RWY20.
OBST ALT 5151FT located at 20.8NM 232˚ FM end of RWY20.

RWY02

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	–	–	019 (010.7)	-8.7	–	–	+1600	–	–	RNP1
002	DF	HANKA	–	–	-8.7	–	L	+11000	–	–	RNP1

RWY20

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	–	–	199 (190.7)	-8.7	–	–	+800	–	–	RNP1
002	DF	HANKA	–	–	-8.7	–	R	+11000	–	–	RNP1

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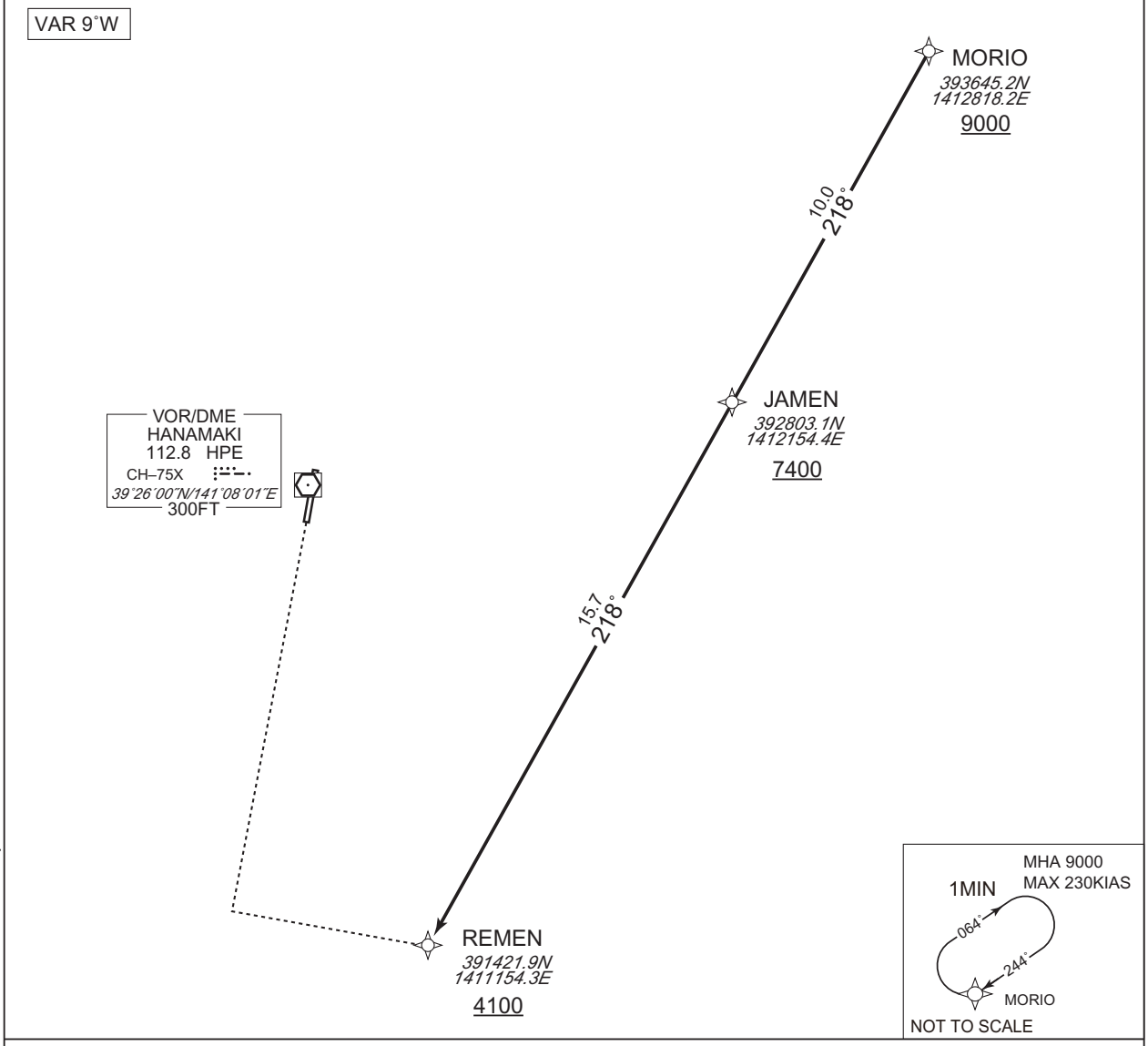
STANDARD ARRIVAL CHART - INSTRUMENT

RJSI / HANAMAKI — RNAV STAR RWY02

REMEN ARRIVAL — RNP1

Note GNSS required



From MORIO at or above 9000FT, to JAMEN at or above 7400FT, to REMEN at or above 4100FT.

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	MORIO	–	–	-8.8	–	–	+9000	–	–	RNP1
002	TF	JAMEN	–	218 (209.6)	-8.8	10.0	–	+7400	–	–	RNP1
003	TF	REMEN	–	218 (209.5)	-8.8	15.7	–	+4100	–	–	RNP1

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	MORIO	244 (235.7)	-8.8	1.0(-14000)	R	9000	FL140	-230(-14000)	RNP1

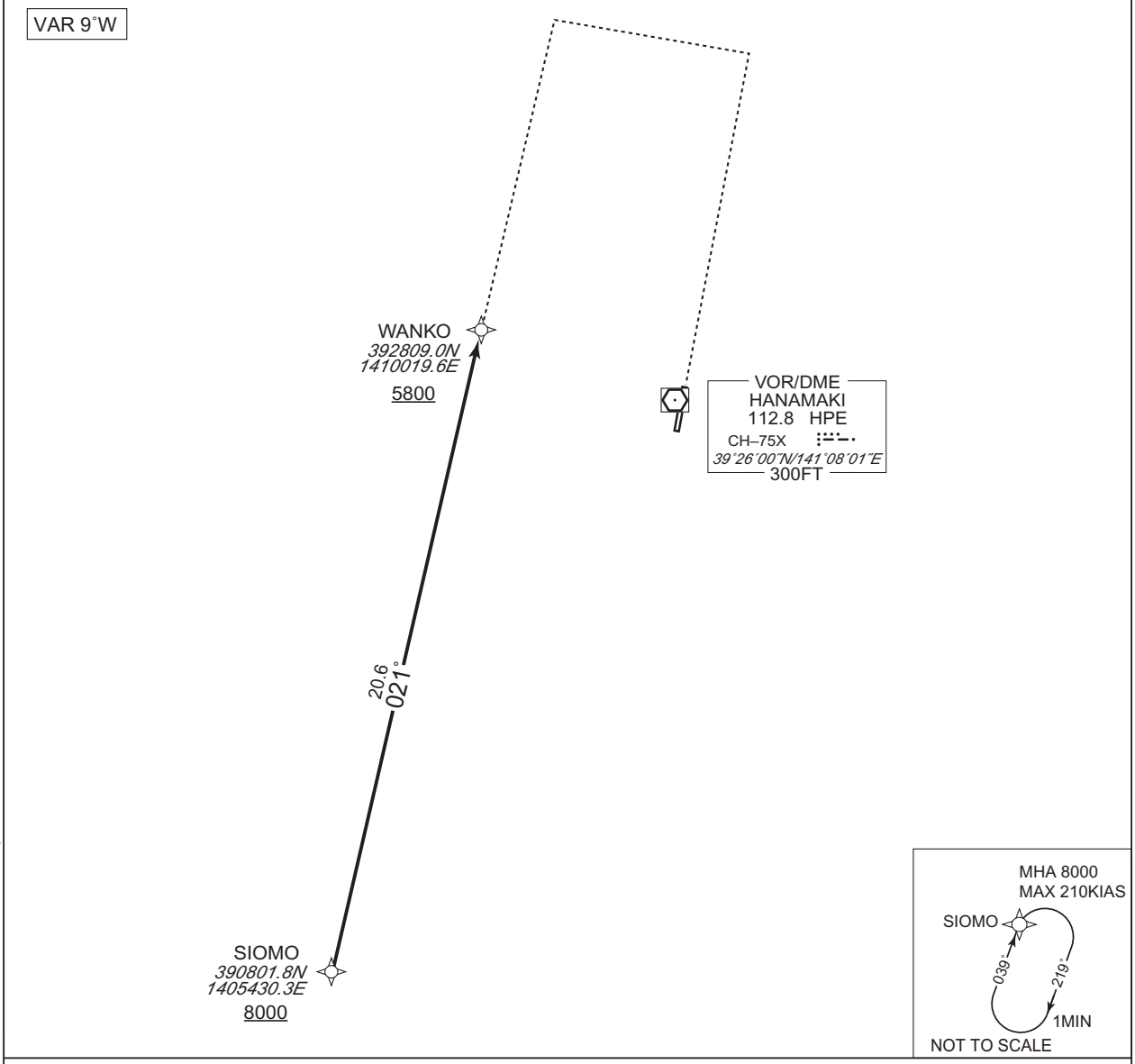
CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART - INSTRUMENT

RJSI / HANAMAKI — RNAV STAR RWY20

WANKO ARRIVAL — RNP1

Note GNSS required



From SIOMO at or above 8000FT, to WANKO at or above 5800FT.

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	SIOMO	–	–	-8.8	–	–	+8000	–	–	RNP1
002	TF	WANKO	–	021 (012.6)	-8.8	20.6	–	+5800	–	–	RNP1

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	SIOMO	039 (030.1)	-8.8	1.0(-14000)	R	8000	FL140	-210(-14000)	RNP1

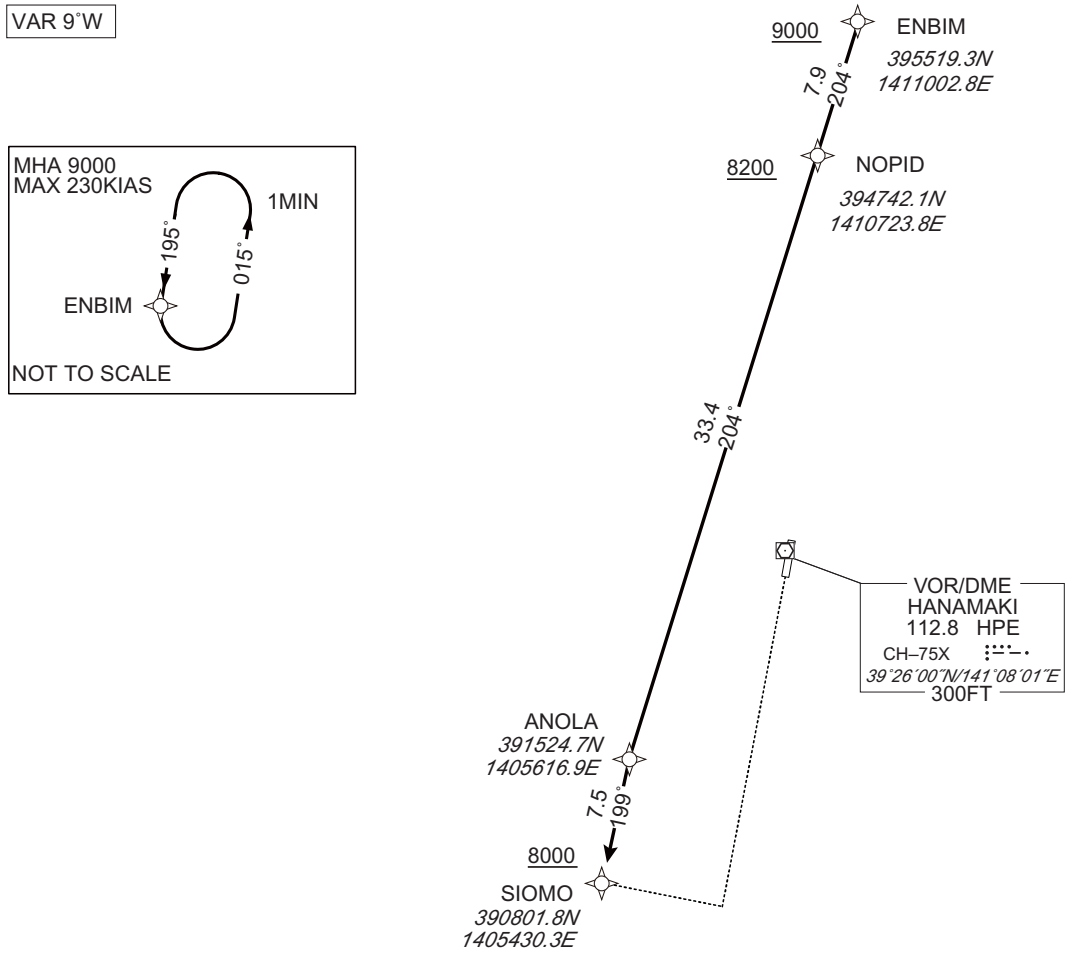
CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART - INSTRUMENT

RJSI / HANAMAKI — RNAV STAR RWY02

SIOMO ARRIVAL	RNP1

Note GNSS required.



From ENBIM at or above 9000FT, to NOPID at or above 8200FT, to ANOLA, to SIOMO at or above 8000FT.

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	ENBIM	–	–	-8.8	–	–	+9000	–	–	RNP1
002	TF	NOPID	–	204 (195.0)	-8.8	7.9	–	+8200	–	–	RNP1
003	TF	ANOLA	–	204 (194.9)	-8.8	33.4	–	–	–	–	RNP1
004	TF	SIOMO	–	199 (190.6)	-8.8	7.5	–	+8000	–	–	RNP1

Path	Waypoint Identifier	Inbound Course ˚M(˚T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	ENBIM	195 (186.5)	-8.8	1.0(-14000)	L	9000	FL140	-230 (-14000)	RNP1

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

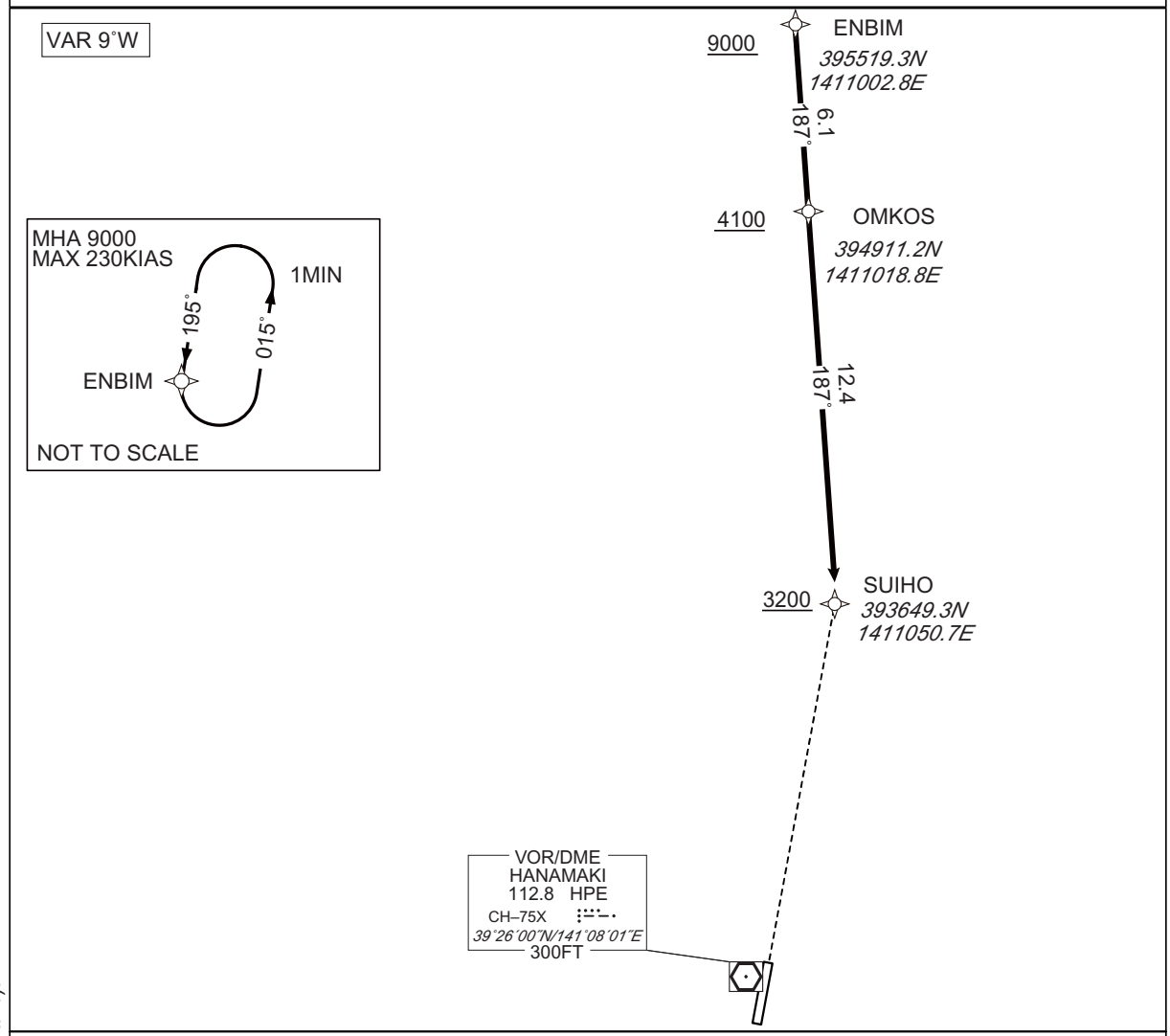
STANDARD ARRIVAL CHART - INSTRUMENT

RJSI / HANAMAKI

RNAV STAR RWY20

SUIHO ARRIVAL | RNP1

Note GNSS required.



From ENBIM at or above 9000FT, to OMKOS at or above 4100FT, to SUIHO at or above 3200FT.

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	ENBIM	–	–	-8.8	–	–	+9000	–	–	RNP1
002	TF	OMKOS	–	187 (178.1)	-8.8	6.1	–	+4100	–	–	RNP1
003	TF	SUIHO	–	187 (178.1)	-8.8	12.4	–	+3200	–	–	RNP1

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	ENBIM	195 (186.5)	-8.8	1.0(-14000)	L	9000	FL140	-230 (-14000)	RNP1

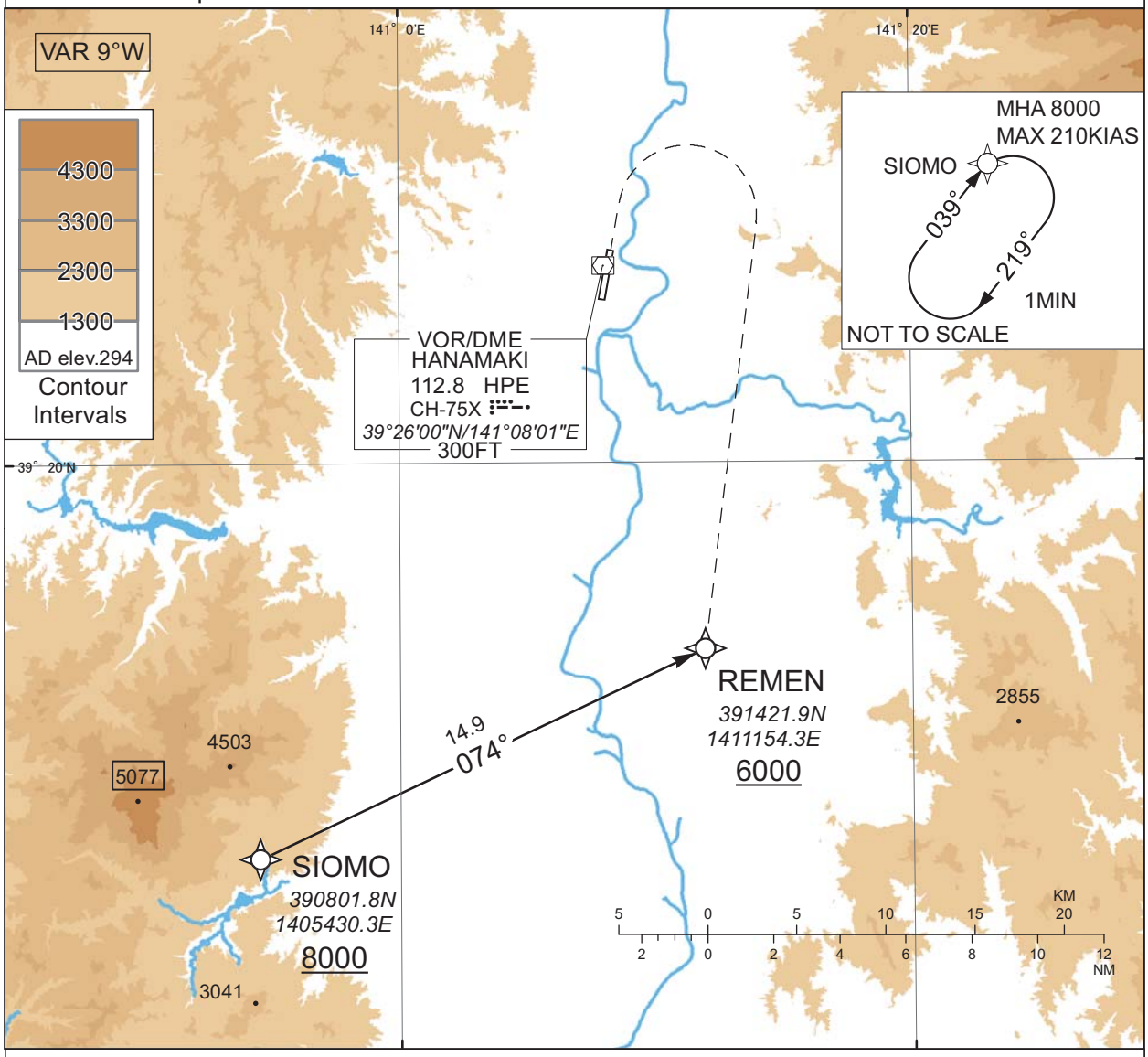
CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART - INSTRUMENT

RJSI / HANAMAKI — RNAV STAR RWY20

REMEN WEST ARRIVAL — RNP1

Note GNSS required.



From SIOMO at or above 8000FT, to REMEN at or above 6000FT.

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	SIOMO	-	-	-8.8	-	-	+8000	-	-	RNP1
002	TF	REMEN	-	074 (064.7)	-8.8	14.9	-	+6000	-	-	RNP1

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	SIOMO	039 (030.1)	-8.8	1.0(-14000)	R	8000	FL140	-210(-14000)	RNP1

CHANGE : Navigation Specification(Basic RNP1→RNP1).

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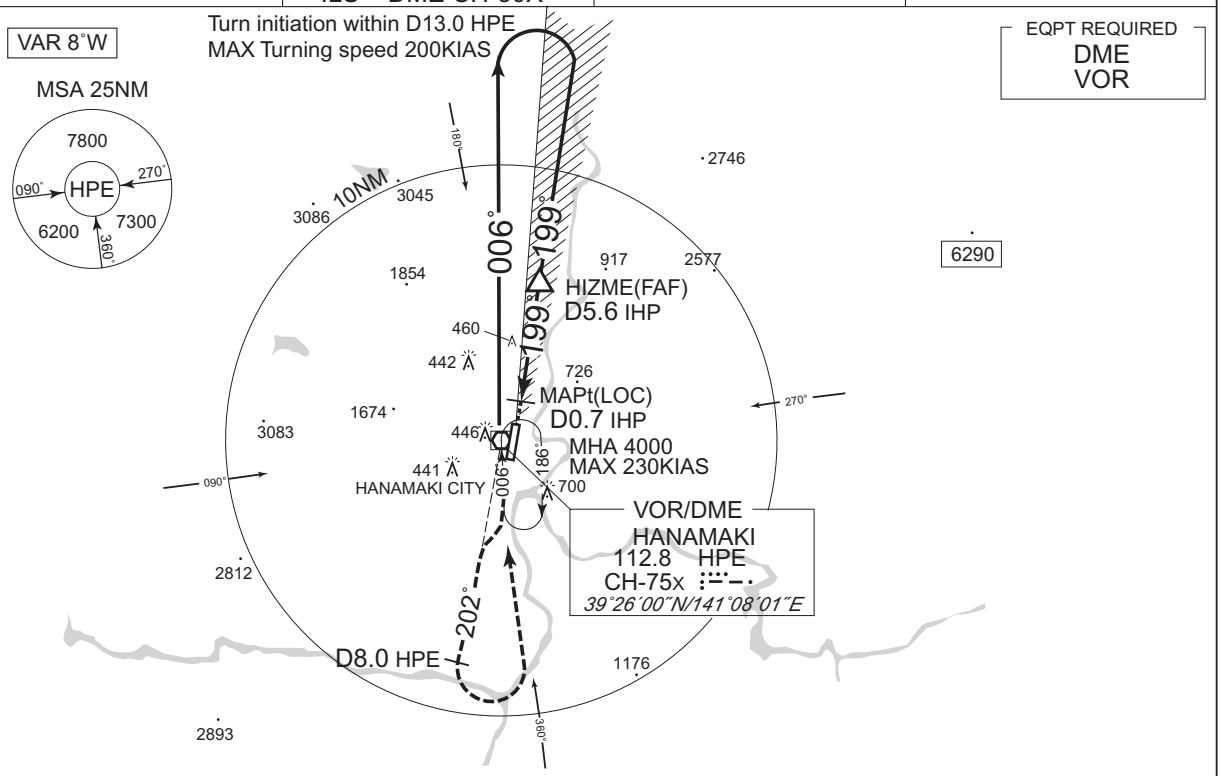
INSTRUMENT APPROACH CHART

RJSI / HANAMAKI — ILS Z or LOC Z RWY20

SHIRAKAMI APP	ILS – LOC	HANAMAKI RADIO	RADAR AVBL
119.25 - 315.3 - 120.65	109.3 IHP ILS – GP 332.0 ILS – DME CH-30X	118.2 – 126.2	



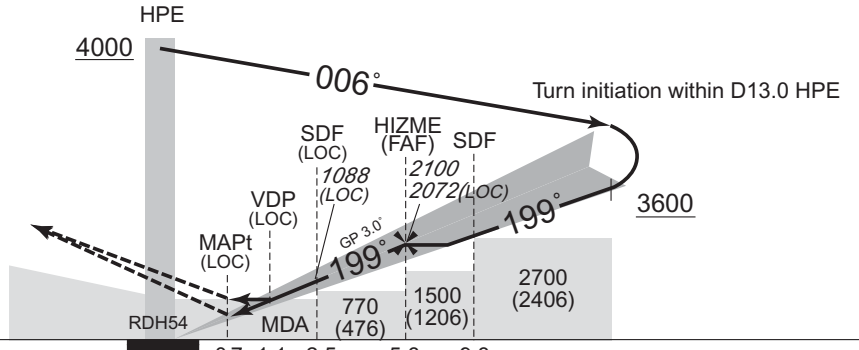
HIZME(FAF) : *393142.42N/1410935.33E*

NM to IHP	MAPt	2	3	4	5	FAF
ALT (3.0˚ APCH Path)	–	929	1247	1566	1884	2072

MISSED APPROACH

Climb via HPE R202 to HPE 8.0DME, turn left, direct to HPE VOR/DME and hold at 4000FT. Contact SHIRAKAMI APP.

Timing not authorized for defining the MAPt.



DME to IHP	0.2	0.7	1.1	2.5	5.6	9.3
NM to THR	0	0.5	0.9	2.3	5.4	9.1

MINIMA THR elev. 298 AD elev. 294

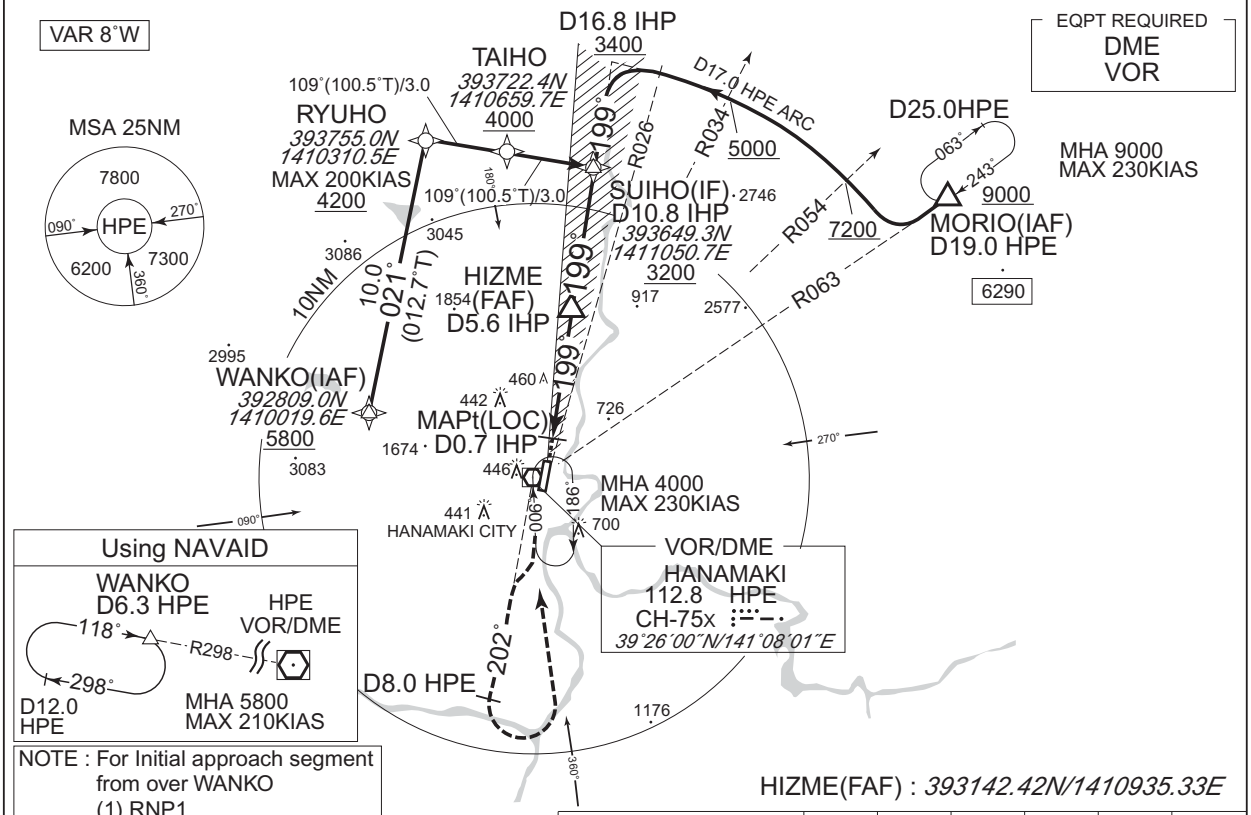
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/CMV	MDA(H)	RVR/CMV	MDA(H)	VIS
A	498 (200)	550	640 (346)	900	760 (466)	1600
B				1000	860 (566)	
C					1000 (706)	2400
D				1400		3200

CHANGE : ATC call sign and FREQ. Description of RADAR Service. Missed APCH PROC.

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI — ILS Y or LOC Y RWY20

SHIRAKAMI APP 119.25 - 315.3 - 120.65	ILS – LOC 109.3 IHP ILS – GP 332.0 ILS – DME CH-30X	HANAMAKI RADIO 118.2 – 126.2	RADAR AVBL

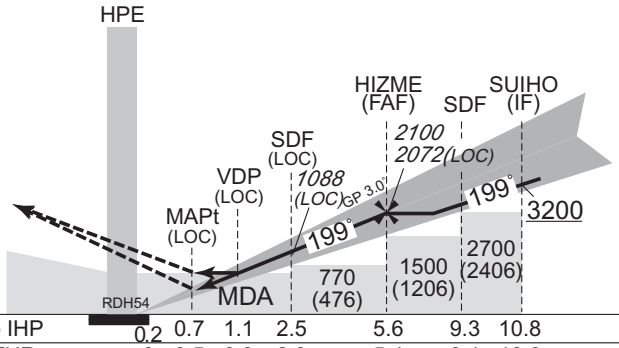


NM to IHP	MAPt	2	3	4	5	FAF
ALT (3.0° APCH Path)	–	929	1247	1566	1884	2072

MISSED APPROACH

Climb via HPE R202 to
HPE 8.0DME, turn left,
direct to HPE VOR/DME
and hold at 4000FT.
Contact SHIRAKAMI APP.

Timing not authorized for
defining the MAPt.



DME to IHP	0.2	0.7	1.1	2.5	5.6	9.3	10.8
NM to THR	0	0.5	0.9	2.3	5.4	9.1	10.6

MINIMA — THR elev. 298 — AD elev. 294

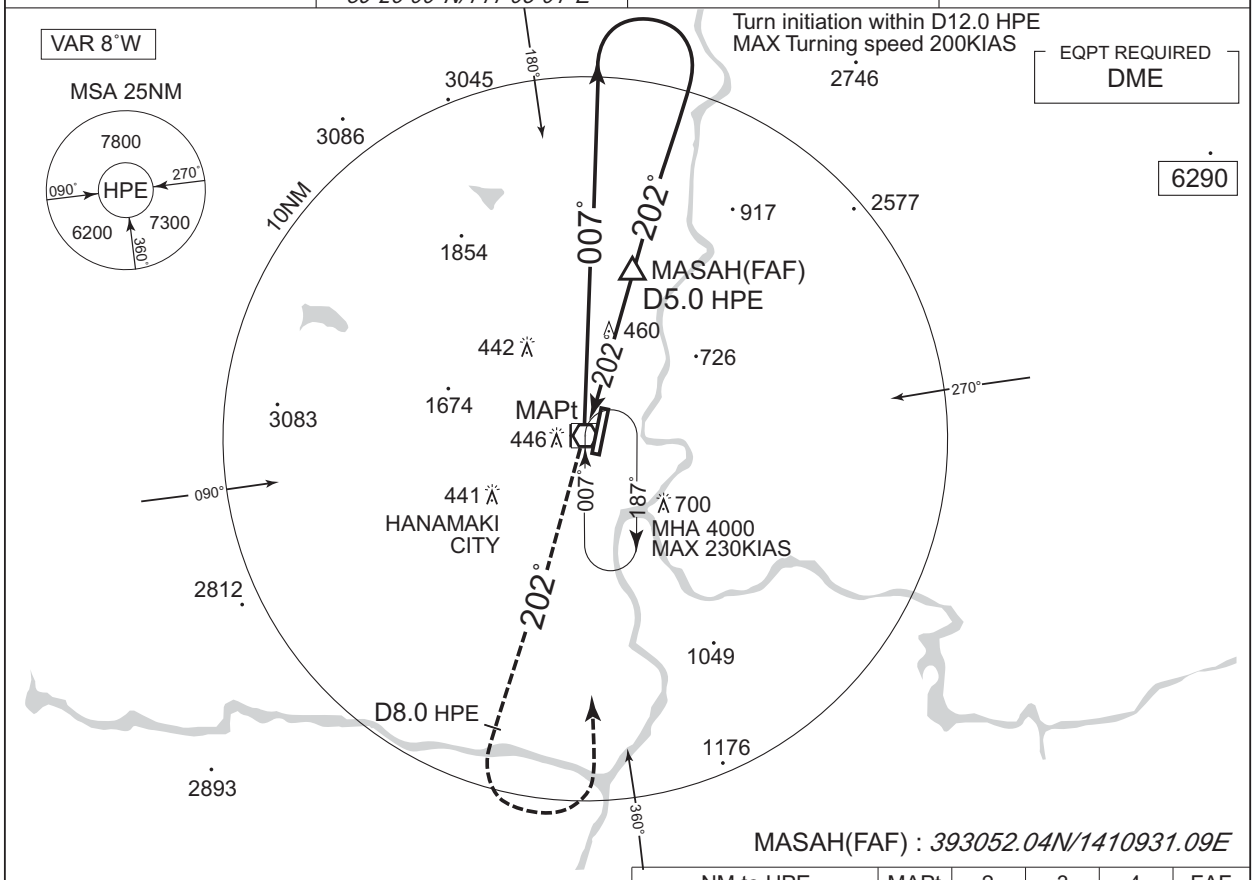
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/CMV	MDA(H)	RVR/CMV	MDA(H)	VIS
A	498 (200)	550	640 (346)	900	760 (466)	1600
B				1000	860 (566)	
C					1000 (706)	2400
D				1400		3200

CHANGE : ATC call sign and FREQ. Description of RADAR Service. Missed APCH PROC. Navigation Specification(Basic RNP1 → RNP1).

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI — VOR RWY20

SHIRAKAMI APP	HANAMAKI VOR/DME	HANAMAKI RADIO	RADAR AVBL
119.25 - 315.3 - 120.65	112.8 HPE CH–75X *39°26′00″N/141°08′01″E*	118.2 – 126.2	



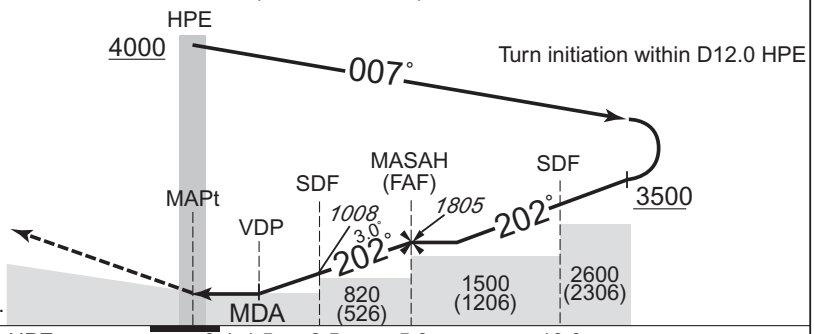
NM to HPE	MAPt	2	3	4	FAF
ALT (3.0° APCH Path)	–	849	1168	1486	1805

MISSED APPROACH

Climb via HPE R202 to HPE 8.0DME, turn left, direct to HPE VOR/DME and hold at 4000FT.

Contact SHIRAKAMI APP.

Timing not authorized for defining the MAPt.



DME to HPE	0.4	1.5	2.5	5.0	10.0
NM to THR	0	1.1	2.1	4.6	9.6

MINIMA THR elev. 298 AD elev. 294

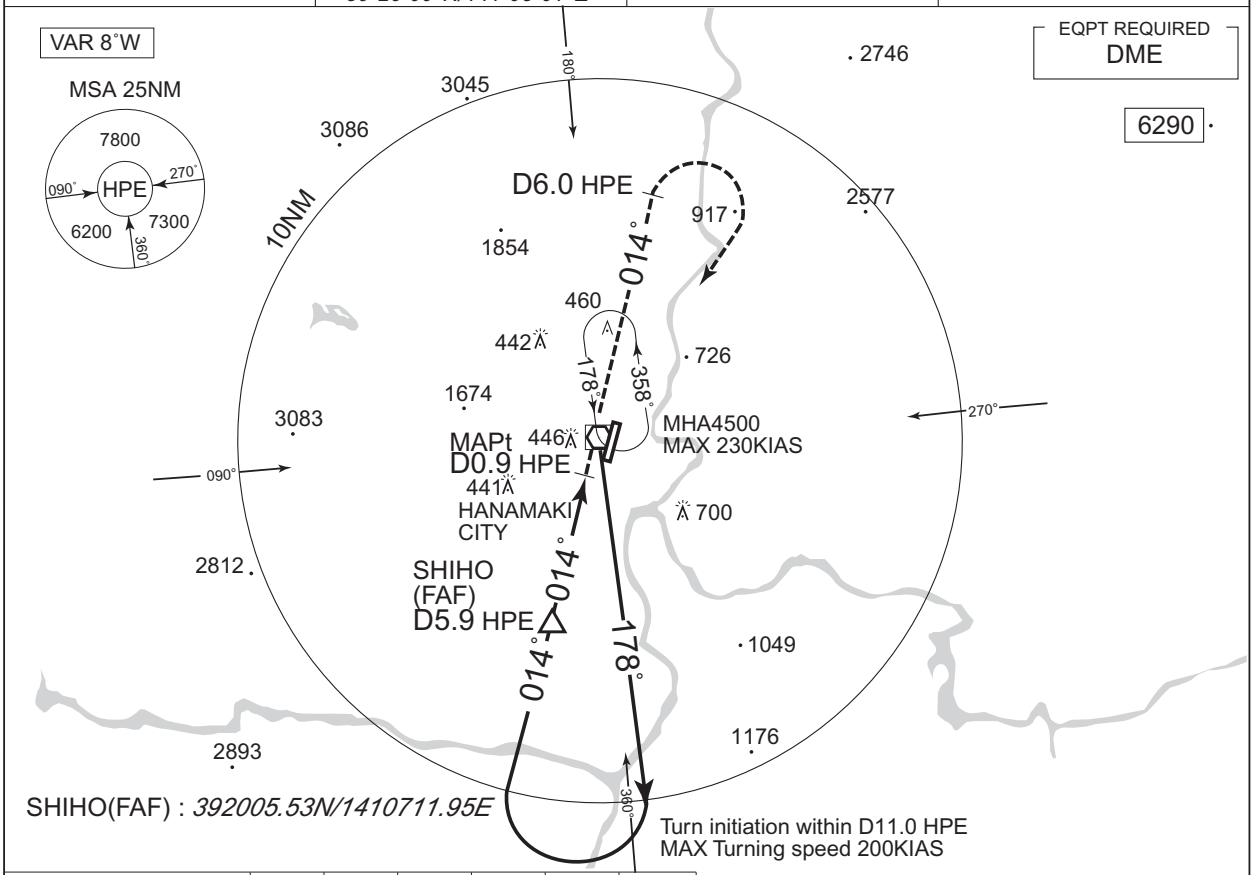
CAT			CIRCLING	
	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	690 (396)	900	760 (466)	1600
B		1000	860 (566)	
C			1000 (706)	2400
D		1400		3200

CHANGE : ATC call sign and FREQ. Description of RADAR Service. Missed APCH PROC.

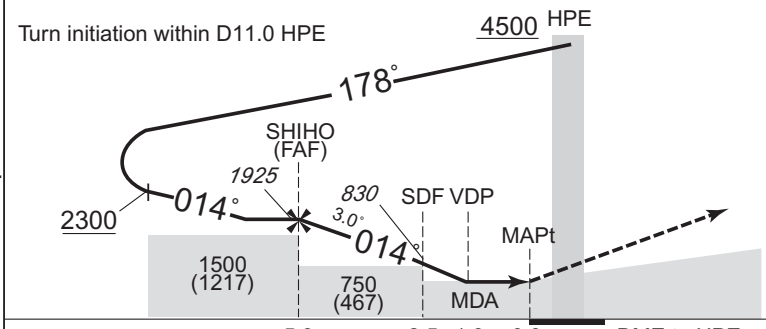
INSTRUMENT APPROACH CHART

RJSI / HANAMAKI — VOR RWY02

SHIRAKAMI APP	HANAMAKI VOR/DME	HANAMAKI RADIO	RADAR AVBL
119.25 - 315.3 - 120.65	112.8 HPE CH–75X *39°26′00″N/141°08′01″E*	118.2 – 126.2	



NM to HPE	FAF	5	4	3	2	MAPt
ALT (3.0° APCH Path)	1925	1626	1308	989	671	–



MISSED APPROACH

Climb via HPE R014 to HPE 6.0DME, turn right, proceed to HPE VOR/DME and hold at 4500FT. Contact SHIRAKAMI APP.

Timing not authorized for defining the MAPt.

5.9	2.5	1.9	0.9		DME to HPE
5.0	1.6	1.0	0		NM to THR

Missed APCH climb gradient MNM 3.6%

MINIMA THR elev. 283 AD elev. 294

CAT			CIRCLING	
	MDA(H)	CMV	MDA(H)	VIS
A	640 (357)	1200	760 (466)	1600
B		1300	860 (566)	
C		1400	1000 (706)	2400
D	650 (367)	1600		3200

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

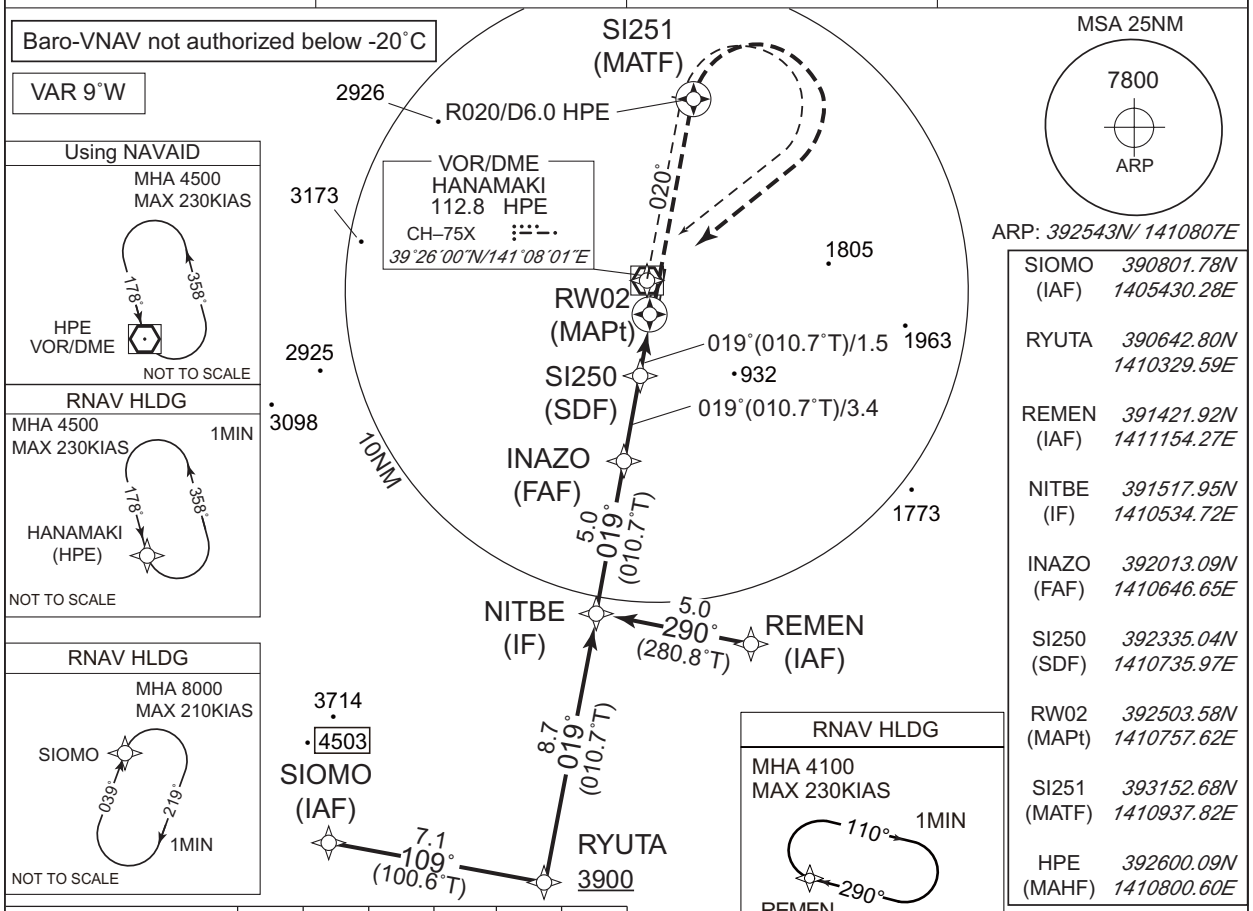
CHANGE : ATC call sign and FREQ. Description of RADAR Service. Missed APCH PROC.

INSTRUMENT APPROACH CHART

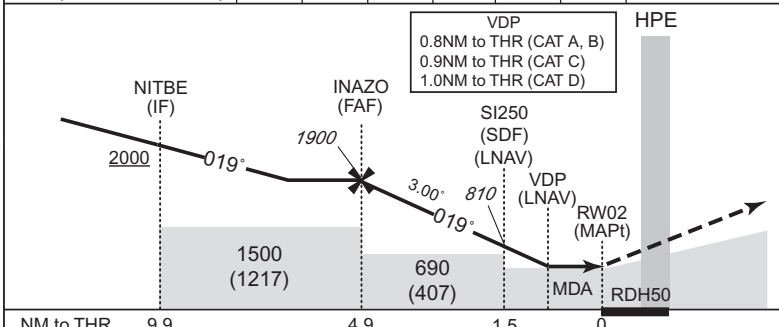
RJSI / HANAMAKI

RNP Z RWY02

SHIRAKAMI APP 119.25 - 315.3 - 120.65	RNP APCH	HANAMAKI RADIO 118.2 – 126.2	RADAR AVBL



NM to Next Fix	FAF	4	3	2	1	MAPt
ALT(3.0˚ APCH Path)	1900	1606	1288	969	651	–



MISSED APPROACH

Climb direct to SI251, turn right direct to HPE and hold at 4500FT.
Contact SHIRAKAMI APP.

(For using VOR/DME)
Climb via HPE R020 to HPE 6.0DME, turn right, direct to HPE VOR/DME and hold at 4500FT.
Contact SHIRAKAMI APP.

Missed APCH climb gradient MNM 4 .0%

MINIMA	THR elev.283		AD elev.294			
CAT	LNAV/VNAV		LNAV		CIRCLING	
	DA(H)	CMV	MDA(H)	CMV	MDA(H)	VIS
A	610(327)	1200	610(327)	1200	760(466)	1600
B		1300		1300	860(566)	
C	630(347)	1400	630(347)	1400	1000(706)	2400
D	650(367)	1600	650(367)	1600		3200

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

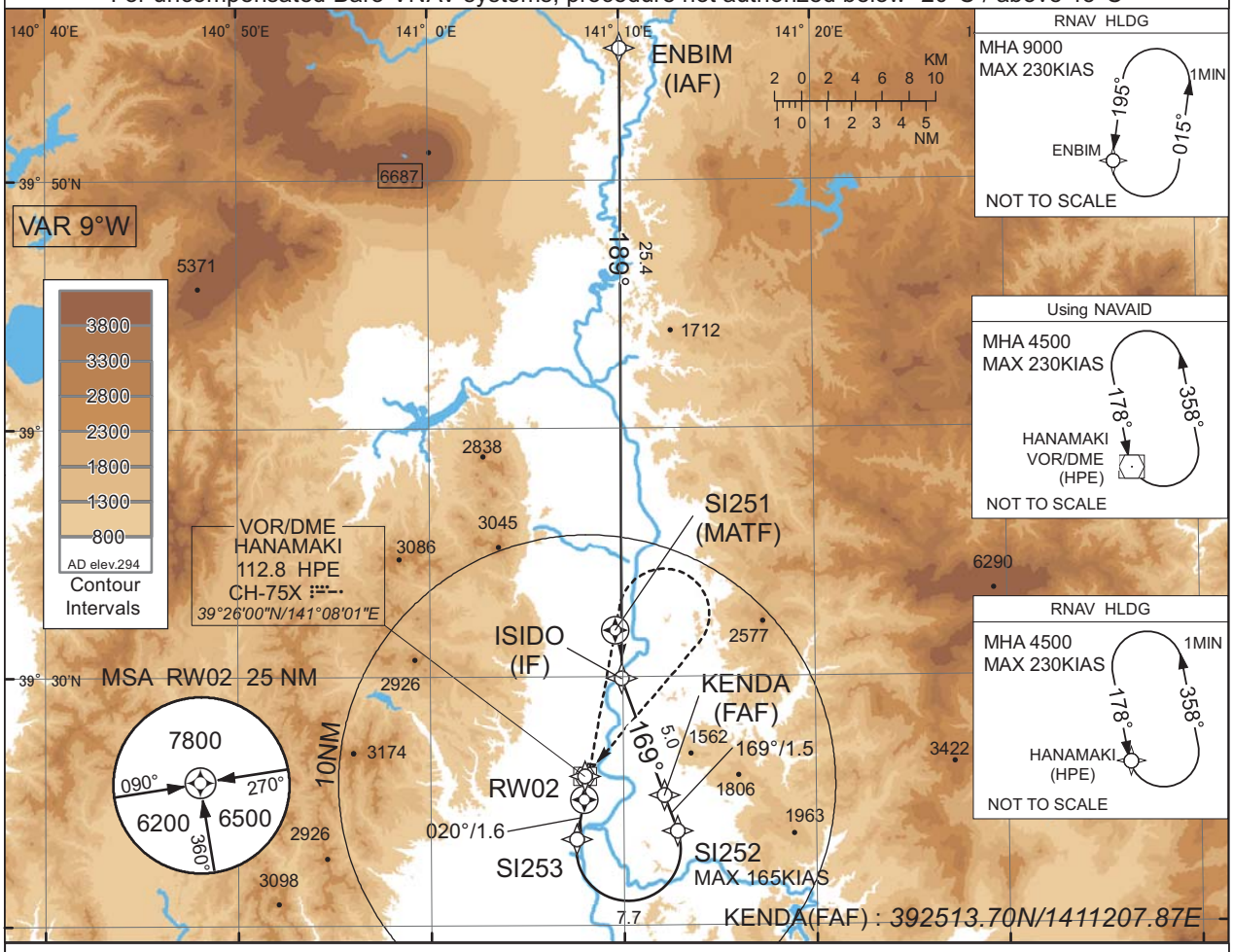
CHANGE : ATC call sign and FREQ. Description of RADAR Service. Missed APCH PROC.

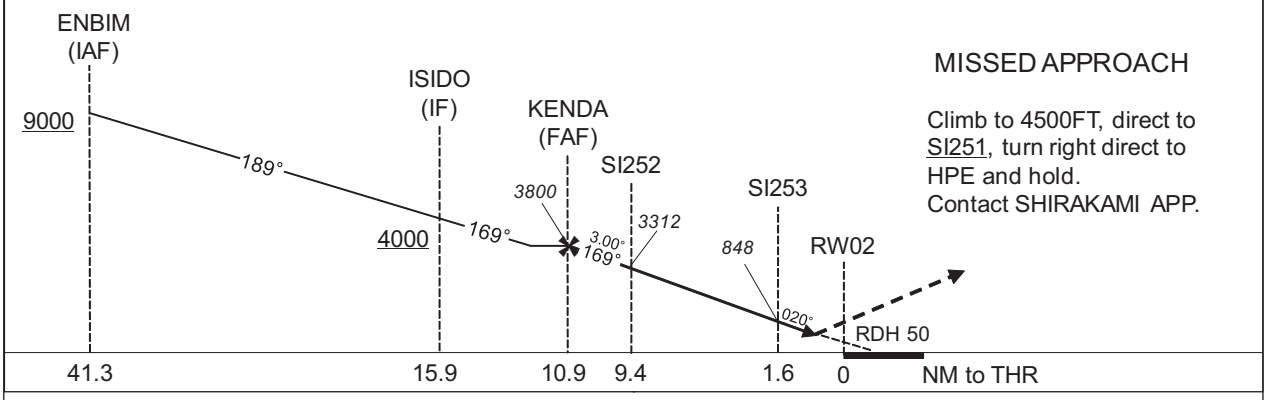
INSTRUMENT APPROACH CHART

RJSI / HANAMAKI — RNP Y RWY02(AR)

SHIRAKAMI APP 119.25 - 315.3 - 120.65	RNP AR RF required.	HANAMAKI RADIO 118.2 - 126.2	RADAR AVBL

For uncompensated Baro-VNAV systems, procedure not authorized below -20°C / above 45°C





Missed APCH climb gradient MNM 4.0%

MINIMA	THR elev. 283	AD elev. 294
CAT	RNP 0.30	
	DA(H)	CMV
A	-	-
B		
C	595(312)	1400
D		1600

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

Authorization Required

CHANGE : ATC call sign and FREQ. Description of RADAR Service. Missed APCH PROC.

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI RNP Y RWY02(AR)

CHANGE : PROC course. ESBEL,NOJYO abolished. ENBIM established. RNAV HLDG abolished(ESBEL). RNAV HLDG established(ENBIM).

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	ENBIM	-	-	-8.8	-	-	+9000	-	-	-
002	TF	ISIDO	-	189 (180.2)	-8.8	25.4	-	+4000	-	-	1.0
003	TF	KENDA	-	169 (160.3)	-8.8	5.0	-	3800	-	-	1.0
004	TF	SI252	-	169 (160.4)	-8.8	1.5	-	3312	-165	-3.00	0.3
005	RF Center: SIRF1 r=2.10NM	SI253	-	-	-8.8	7.7	R	848	-	-3.00	0.3
006	TF	RW02	Y	020 (010.7)	-8.8	1.6	-	333	-	-3.00/50	0.3
007	DF	SI251	Y	-	-8.8	-	-	-	-	-	1.0
008	DF	HPE	-	-	-8.8	-	R	4500	-	-	1.0

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	RNP Value
Hold	ENBIM	195 (186.5)	-8.8	1.0 (-14000)	L	9000	FL140	-230 (-14000)	1.0
Hold	HPE	178 (169.7)	-8.8	1.0 (-14000)	L	4500	FL140	-230 (-14000)	1.0

Waypoint Coordinates

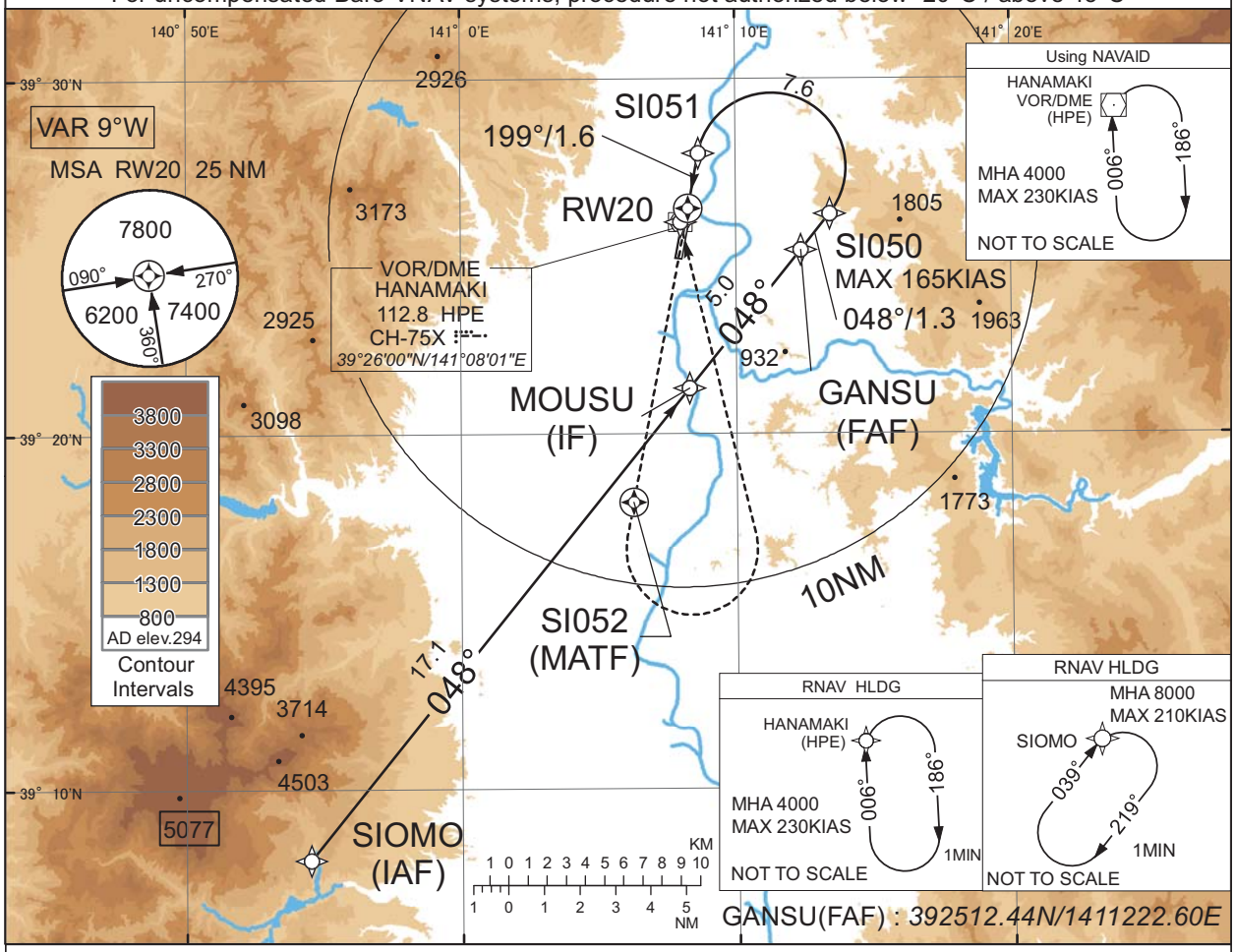
Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
ENBIM	*395519.34N / 1411002.82E*	SIRF1	*392304.37N / 1411014.42E*
ISIDO	*392956.45N / 1410957.05E*		
KENDA	*392513.70N / 1411207.87E*		
SI252	*392347.07N / 1411247.89E*		
SI253	*392327.97N / 1410734.24E*		
RW02	*392503.58N / 1410757.62E*		
SI251	*393152.68N / 1410937.82E*		
HPE	*392600.09N / 1410800.60E*		

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI — RNP Z RWY20(AR)

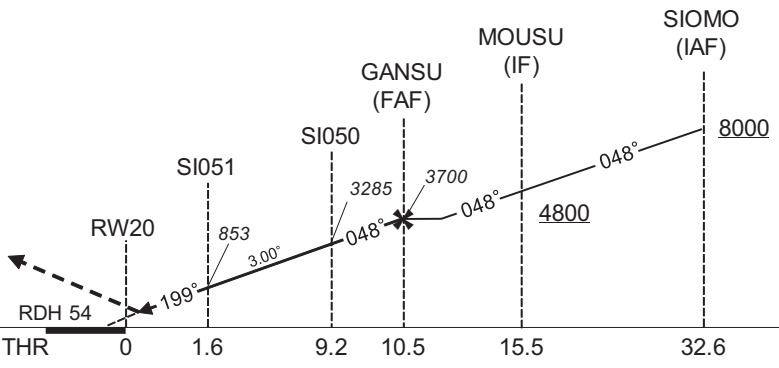
SHIRAKAMI APP 119.25 - 315.3 - 120.65	RNP AR RF required.	HANAMAKI RADIO 118.2 - 126.2	RADAR AVBL

For uncompensated Baro-VNAV systems, procedure not authorized below -20°C / above 45°C



MISSED APPROACH

Climb to 4000FT, direct to SI052, turn left direct to HPE and hold.
Contact SHIRAKAMI APP.



MINIMA	THR elev. 298	AD elev. 294
CAT	RNP 0.30	
	DA(H)	RVR/CMV
A	-	-
B		
C	607(309)	1000
D		1400

Authorization Required

CHANGE : ATC call sign and FREQ. Description of RADAR Service. Missed APCH PROC.

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI RNP Z RWY20(AR)

CHANGE : PROC renamed.

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	SIOMO	-	-	-8.8	-	-	+8000	-	-	-
002	TF	MOUSU	-	048 (038.8)	-8.8	17.1	-	+4800	-	-	1.0
003	TF	GANSU	-	048 (038.9)	-8.8	5.0	-	3700	-	-	1.0
004	TF	SI050	-	048 (038.9)	-8.8	1.3	-	3285	-165	-3.00	0.3
005	RF Center: SIRF2 r=2.10NM	SI051	-	-	-8.8	7.6	L	853	-	-3.00	0.3
006	TF	RW20	Y	199 (190.7)	-8.8	1.6	-	352	-	-3.00/54	0.3
007	DF	SI052	Y	-	-8.8	-	-	-	-	-	1.0
008	DF	HPE	-	-	-8.8	-	L	4000	-	-	1.0

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	RNP Value
Hold	SIOMO	039 (030.1)	-8.8	1.0 (-14000)	R	8000	FL140	-210 (-14000)	1.0
Hold	HPE	006 (357.5)	-8.8	1.0 (-14000)	R	4000	FL140	-230 (-14000)	1.0

Waypoint Coordinates

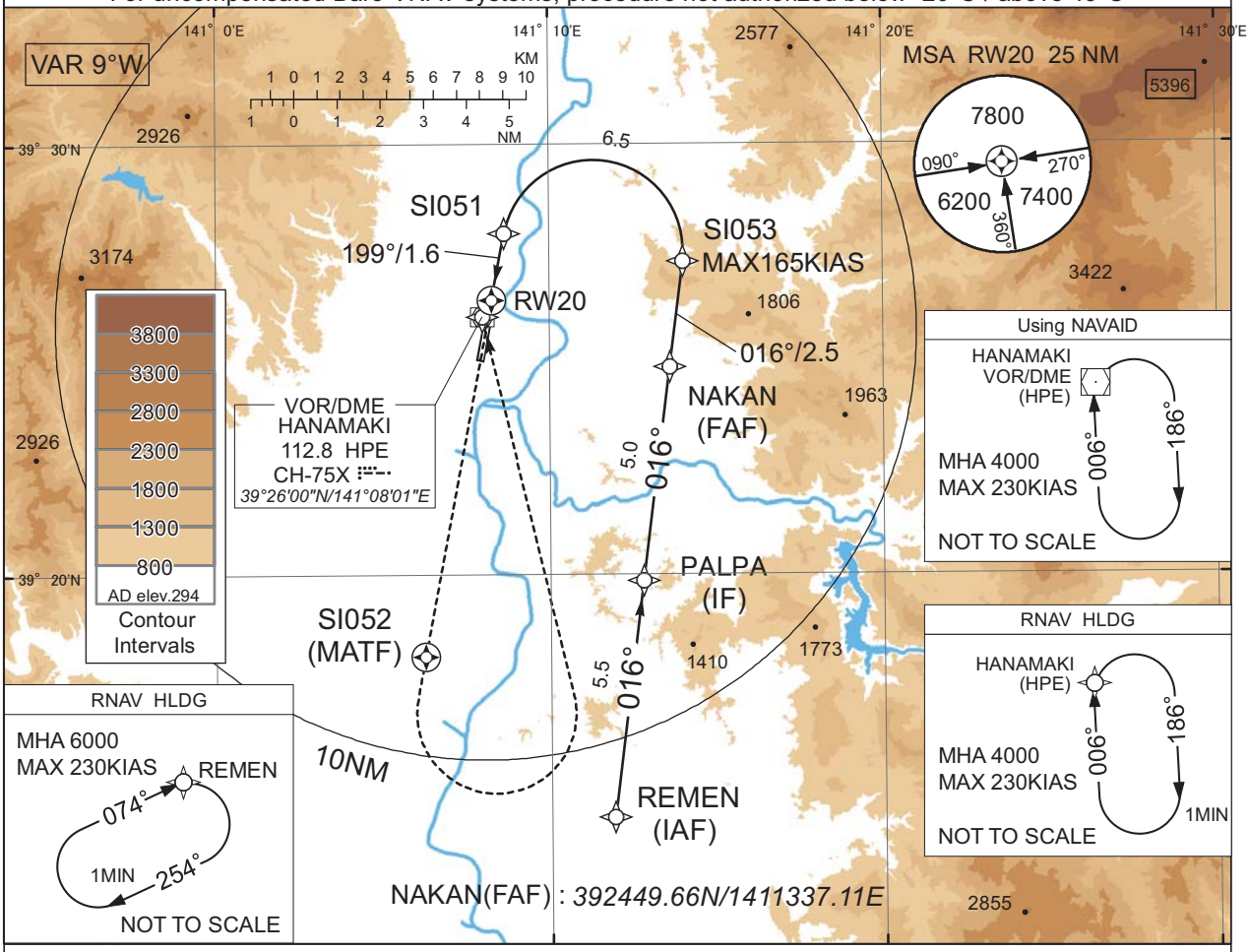
Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
SIOMO	*390801.78N / 1405430.28E*	SIRF2	*392732.73N / 1411119.82E*
MOUSU	*392119.11N / 1410818.81E*		
GANSU	*392512.44N / 1411222.60E*		
SI050	*392613.23N / 1411326.21E*		
SI051	*392756.30N / 1410839.89E*		
RW20	*392623.24N / 1410817.11E*		
SI052	*391806.42N / 1410615.76E*		
HPE	*392600.09N / 1410800.60E*		

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI — RNP Y RWY20(AR)

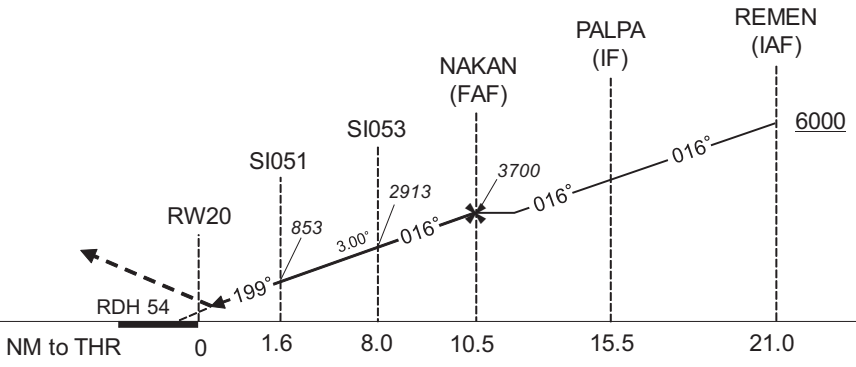
SHIRAKAMI APP 119.25 - 315.3 - 120.65	RNP AR RF required.	HANAMAKI RADIO 118.2 - 126.2	RADAR AVBL

For uncompensated Baro-VNAV systems, procedure not authorized below -20°C / above 45°C



MISSED APPROACH

Climb to 4000FT, direct to SI052, turn left direct to HPE and hold.
Contact SHIRAKAMI APP.



MINIMA	THR elev. 298	AD elev. 294
CAT	RNP 0.30	
	DA(H)	RVR/CMV
A	-	-
B	-	-
C	607(309)	1000
D		1400

Authorization Required

CHANGE : ATC call sign and FREQ. Description of RADAR Service. Missed APCH PROC.

INSTRUMENT APPROACH CHART

RJSI / HANAMAKI RNP Y RWY20(AR)

CHANGE : PROC renamed.

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	REMEN	-	-	-8.8	-	-	+6000	-	-	-
002	TF	PALPA	-	016 (007.2)	-8.8	5.5	-	-	-	-	1.0
003	TF	NAKAN	-	016 (007.2)	-8.8	5.0	-	3700	-	-	1.0
004	TF	SI053	-	016 (007.2)	-8.8	2.5	-	2913	-165	-3.00	0.3
005	RF Center: SIRF2 r=2.10NM	SI051	-	-	-8.8	6.5	L	853	-	-3.00	0.3
006	TF	RW20	Y	199 (190.7)	-8.8	1.6	-	352	-	-3.00/54	0.3
007	DF	SI052	Y	-	-8.8	-	-	-	-	-	1.0
008	DF	HPE	-	-	-8.8	-	L	4000	-	-	1.0

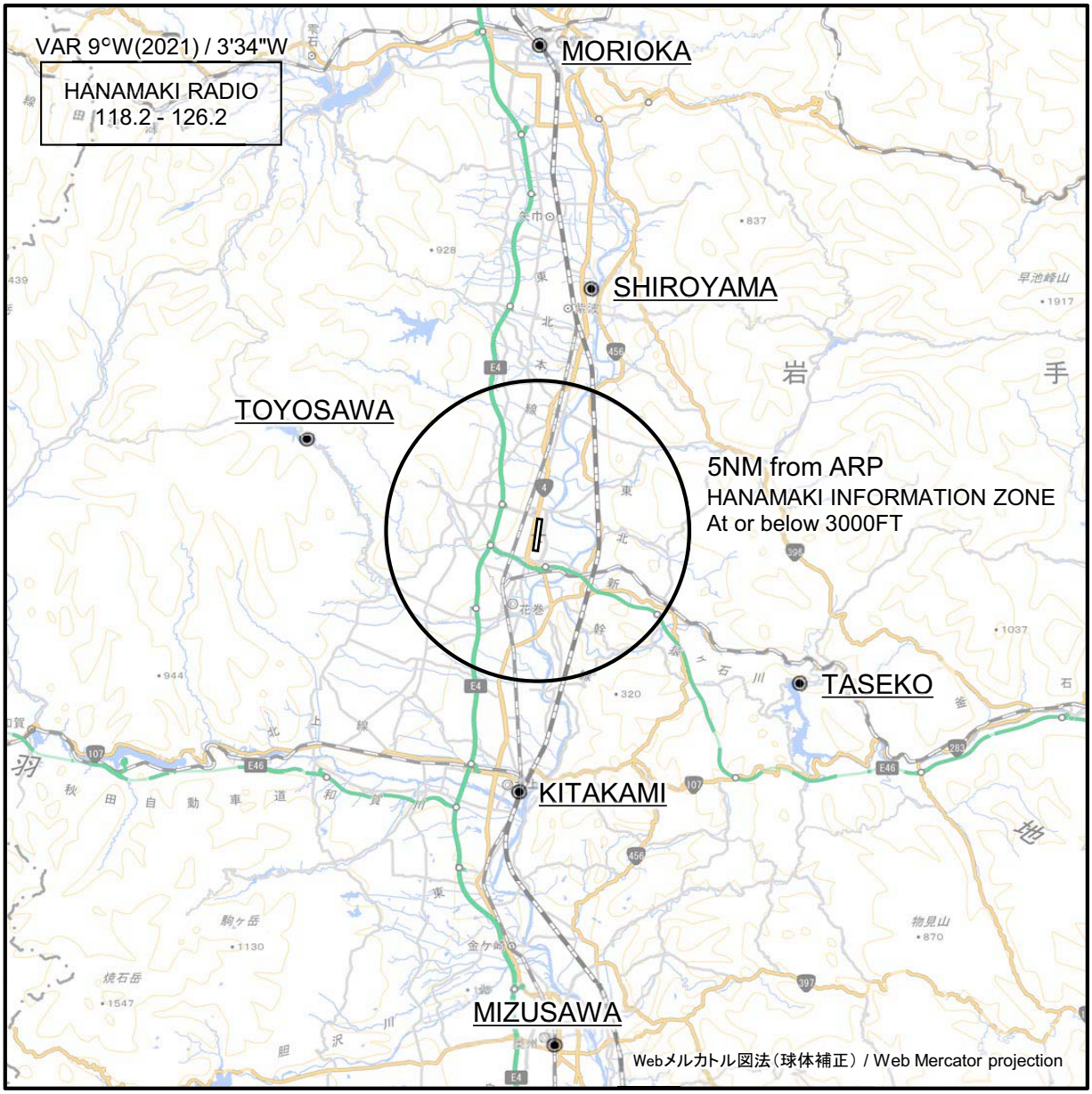
Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	RNP Value
Hold	REMEN	074 (065.0)	-8.8	1.0 (-14000)	R	6000	FL140	-230 (-14000)	1.0
Hold	HPE	006 (357.5)	-8.8	1.0 (-14000)	R	4000	FL140	-230 (-14000)	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
REMEN	*391421.92N / 1411154.27E*	SIRF2	*392732.73N / 1411119.82E*
PALPA	*391951.68N / 1411248.23E*		
NAKAN	*392449.66N / 1411337.11E*		
SI053	*392716.81N / 1411401.29E*		
SI051	*392756.30N / 1410839.89E*		
RW20	*392623.24N / 1410817.11E*		
SI052	*391806.42N / 1410615.76E*		
HPE	*392600.09N / 1410800.60E*		

RJSI / HANAMAKI

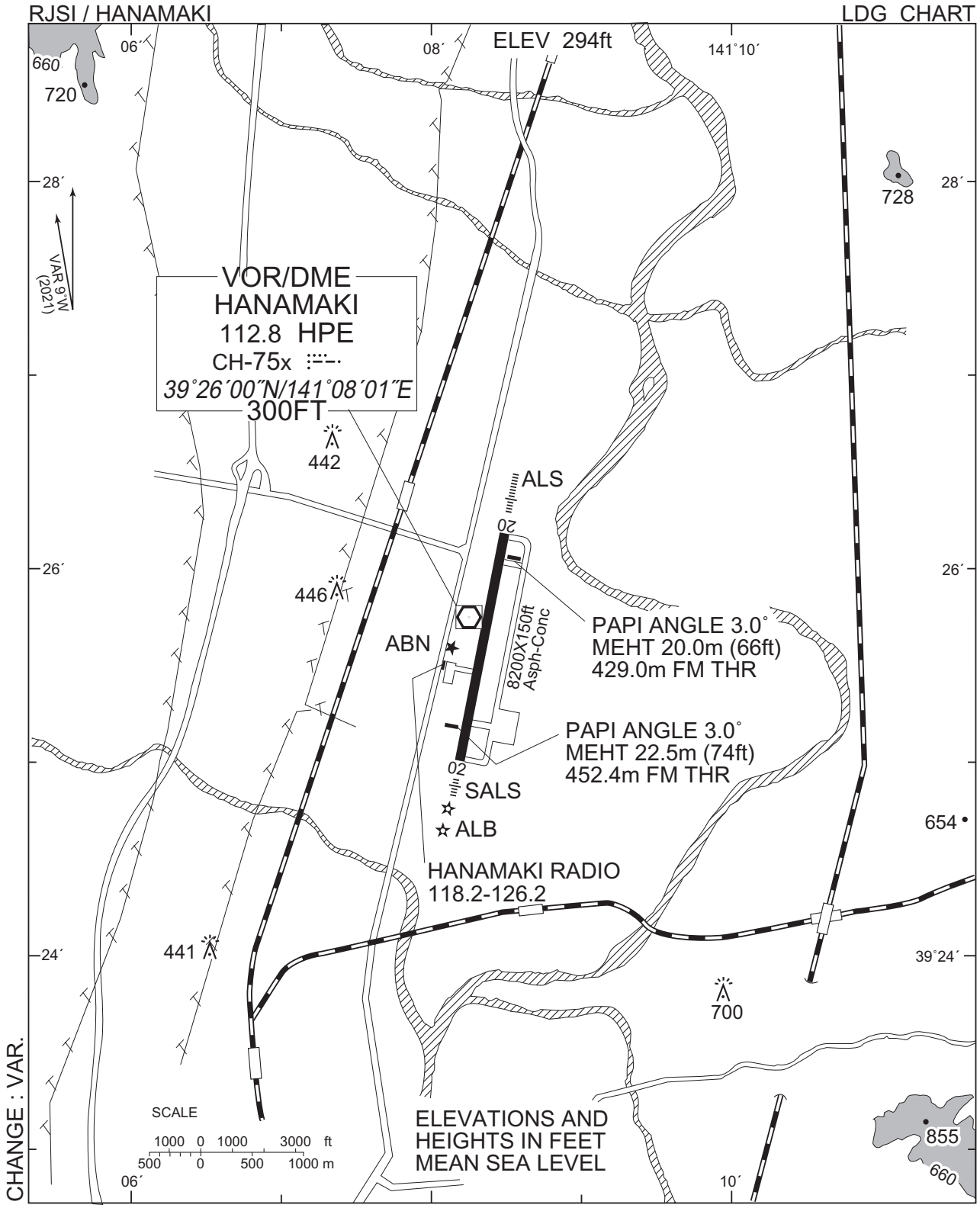
Visual REP



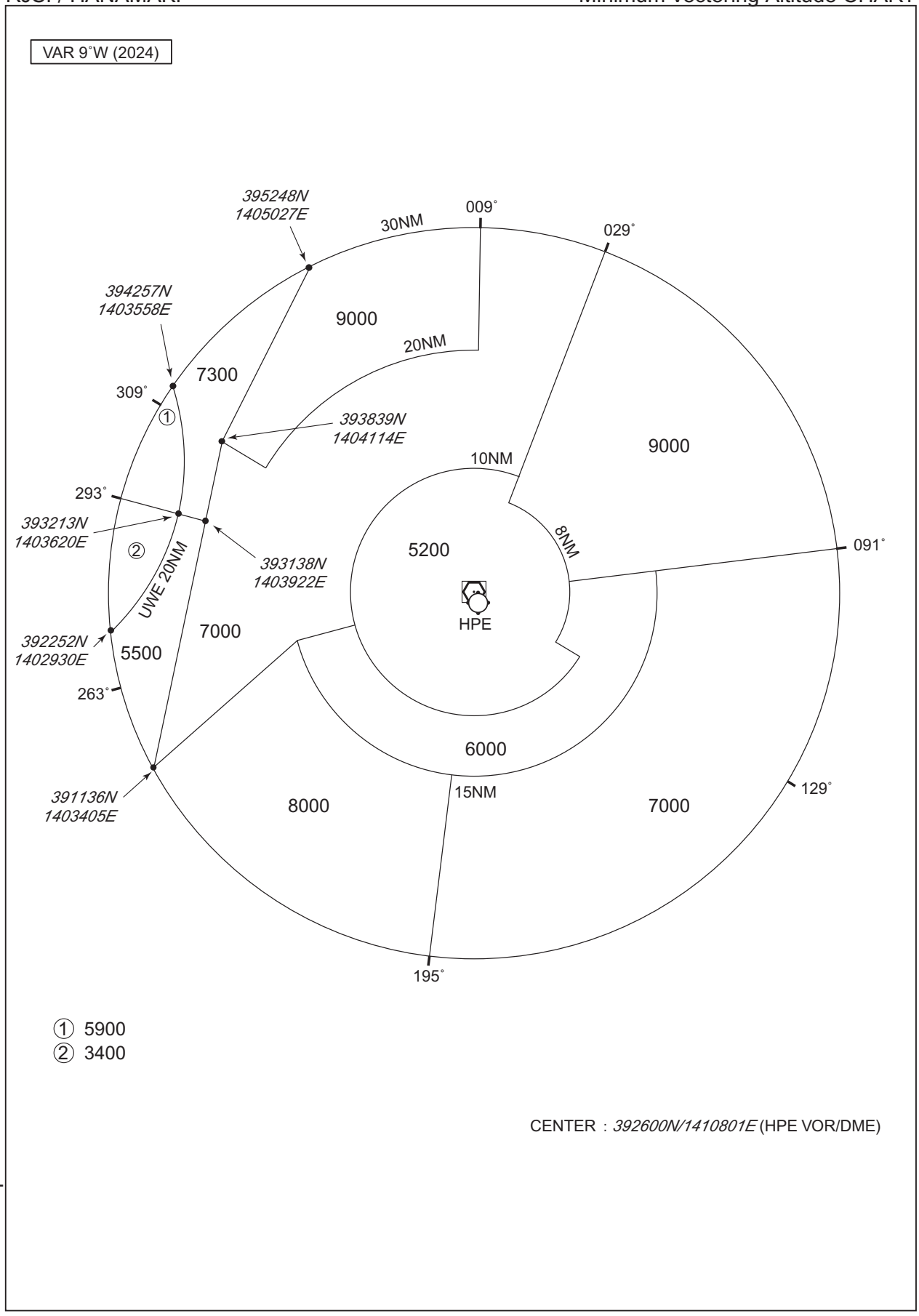
※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

CHANGE : Map updated. BRG/DIST from ARP. Taseko established. Tsuchisawa abolished.

Call sign	BRG / DIST from ARP	Remarks
盛岡 Morioka	360°T / 16.4NM	JR駅 JR Station
城山 Shiroyama	012°T / 8.4NM	城跡 The site of a castle
豊沢 Toyosawa	293°T / 8.1NM	豊沢ダム Dam
田瀬湖 Taseko	121°T / 10.0NM	田瀬ダム Dam
北上 Kitakami	184°T / 8.9NM	JR駅 JR Station
水沢 Mizusawa	178°T / 17.4NM	JR駅 JR Station


RJSI / HANAMAKI
LDG CHART
ELEV 294ft
141˚10´
06´
08´
28´
26´
24´
10´
660
720
728
654
855
660
VAR 9˚W (2021)
VOR/DME
HANAMAKI
112.8 HPE
CH-75x
39˚26´00˝N/141˚08´01˝E
300FT
442
446
441
700
ALS
20
02
ABN
8200X150ft Asph-Conc
PAPI ANGLE 3.0˚
MEHT 20.0m (66ft)
429.0m FM THR
PAPI ANGLE 3.0˚
MEHT 22.5m (74ft)
452.4m FM THR
SALS
ALB
HANAMAKI RADIO
118.2-126.2
SCALE
1000 0 1000 3000 ft
500 0 500 1000 m
ELEVATIONS AND
HEIGHTS IN FEET
MEAN SEA LEVEL
CHANGE : VAR.

RJSI / HANAMAKI Minimum Vectoring Altitude CHART



CHANGE : Update.