

MARKING AIDS

Mandatory
instruction
marking



SIMPLE APPROACH LIGHTING SYSTEM



CHANGE:STOP BAR LGT abolished

AIRCRAFT PARKING/DOCKING CHART
RJCH / HAKODATE

AD CHART

CHANGE : UHF frequency(TWR) deleted.

HAKODATE AIRPORT
ELEV34.1m (111.9ft)

Designation	Call Sign	Frequency (MHz)
ATIS	Hakodate Airport	126.6
TWR	Hakodate Tower	118.35 126.2

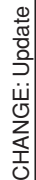


AERODROME OBSTACLE CHART - ICAO
TYPE A (OPERATING LIMITATIONS)

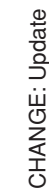
DIMENSIONS AND ELEVATIONS IN FEET, BEARINGS ARE MAGNETIC



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STANDARD DEPARTURE CHART - INSTRUMENT

RJCH / HAKODATE

SID and TRANSITION

HAKODATE SOUTH SEVEN DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG239°...

RWY 30: Climb RWY HDG until 500FT, turn left HDG149°...

...to intercept and proceed via HWE R194 to MRE VOR/DME.

Cross HWE R194/30.0DME at or above 6000FT.

Note RWY12 : 4.0% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

RWY30 : 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

HAKODATE REVERSAL FIVE DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG239°...

RWY 30: Climb RWY HDG until 500FT, turn left HDG149°...

...to intercept and proceed via HWE R194 to 3000FT, turn right direct to HWE VOR/DME.

Cross HWE VOR/DME at or above 5000FT.

Note RWY12 : 4.0% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

RWY30 : 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

TAPPI SEVEN DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG272°...

RWY 30: Climb RWY HDG until 500FT, turn left HDG182°...

...to intercept and proceed via HWE R227 to TAPPI. Cross TAPPI at or above FL170.

Note RWY12 : 4.0% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

RWY30 : 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

YUWA TRANSITION

From over TAPPI, proceed via UWE R008 to UWE VOR/DME.

Cross UWE R008/21.0DME at assigned altitude.

ESASI SIX DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn right HDG340°...

RWY 30: Climb RWY HDG until 700FT, turn right,...

...to intercept and proceed via HWE R295 to ESASI.

Cross ESASI at or above 5000FT.

Note RWY12 : 4.9% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.43NM 105° FM end of RWY12.

TIKYU ONE DEPARTURE

RWY 12: Climb RWY HDG until 600FT, turn left,...

RWY 30: Climb RWY HDG until 600FT, turn left HDG073°...

...to intercept and proceed via HWE R118 to TIKYU.

Cross TIKYU at or above 6000FT.

Note RWY12 : 6.3% climb gradient required up to 1700FT.

OBST ALT 1302FT located at 4.03NM 101° FM end of RWY12.

RWY30 : 5.4% climb gradient required up to 1600FT.

OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.

CHANGE : ESASI SIX DEPARTURE.

STANDARD DEPARTURE CHART - INSTRUMENT



STANDARD DEPARTURE CHART - INSTRUMENT

RJCH / HAKODATE

RNAV SID and TRANSITION

TSUGARU ONE DEPARTURE KOMACHI TRANSITION		RNAV1
<p>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.</p> <p>2) RADAR service required.</p>	Critical DME	RWY12 : MRE : 30.0NM to TAPPI – TAPPI RWY30 : MRE : 47.6NM to TAPPI – TAPPI HWE : 47.6NM to TAPPI – 40.0NM to TAPPI KOMACHI Transition : MRE: TAPPI - 24.0NM to UWE HWE: TAPPI - 55.0NM to UWE UWE: 55.0NM to UWE - 24.0NM to UWE HPE: 16.0NM to UWE - UWE
	DME GAP	RWY12 : RWY12DER – 30.0NM to TAPPI RWY30 : RWY30DER – 47.6NM to TAPPI KOMACHI Transition: 24.0NM to UWE – 22.0NM to UWE 19.0NM to UWE – 16.0NM to UWE
	Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1
<p>VAR 9°W (2014)</p> <p>TSUGARU ONE DEPARTURE</p> <p>KOMACHI TRANSITION</p> <p>TAPPI 410805.5N 1400954.5E</p> <p>YUWA(UWE) 393701.7N 1401113.0E</p> <p>VOR/DME HAKODATE 112.3 HWE CH-70X 41°46'27"N/140°49'56"E 300FT</p> <p>VOR/DME YUWA 110.65 UWE CH-43Y 39°37'02"N/140°11'13"E 300FT</p> <p>VOR/DME AOMORI 114.1 MRE CH-88X 40°44'20"N/140°42'19"E 800FT</p>		
<p><u>TSUGARU ONE DEPARTURE</u></p> <p>RWY12 : Climb on HDG117° at or above 600FT, turn right direct to TAPPI. RWY30 : Climb on HDG297° at or above 500FT, turn left direct to TAPPI.</p> <p>NOTE RWY12 : 4.0% climb gradient required up to 1300FT. OBST ALT 919FT located at 3.43NM 105° FM end of RWY12. RWY30 : 5.4% climb gradient required up to 1600FT. OBST ALT 1296FT located at 4.63NM 267° FM end of RWY30.</p>		
<p><u>KOMACHI TRANSITION</u> From TAPPI, to UWE.</p>		

STANDARD DEPARTURE CHART - INSTRUMENT

RJCH / HAKODATE

RNAV SID and TRANSITION

TSUGARU ONE DEPARTURE

RWY12

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	—	—	117 (108.0)	-8.9	—	—	+600	—	—	RNAV1
002	DF	TAPPI	—	—	-8.9	—	R	—	—	—	RNAV1

RWY30

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	—	—	297 (288.1)	-8.9	—	—	+500	—	—	RNAV1
002	DF	TAPPI	—	—	-8.9	—	L	—	—	—	RNAV1

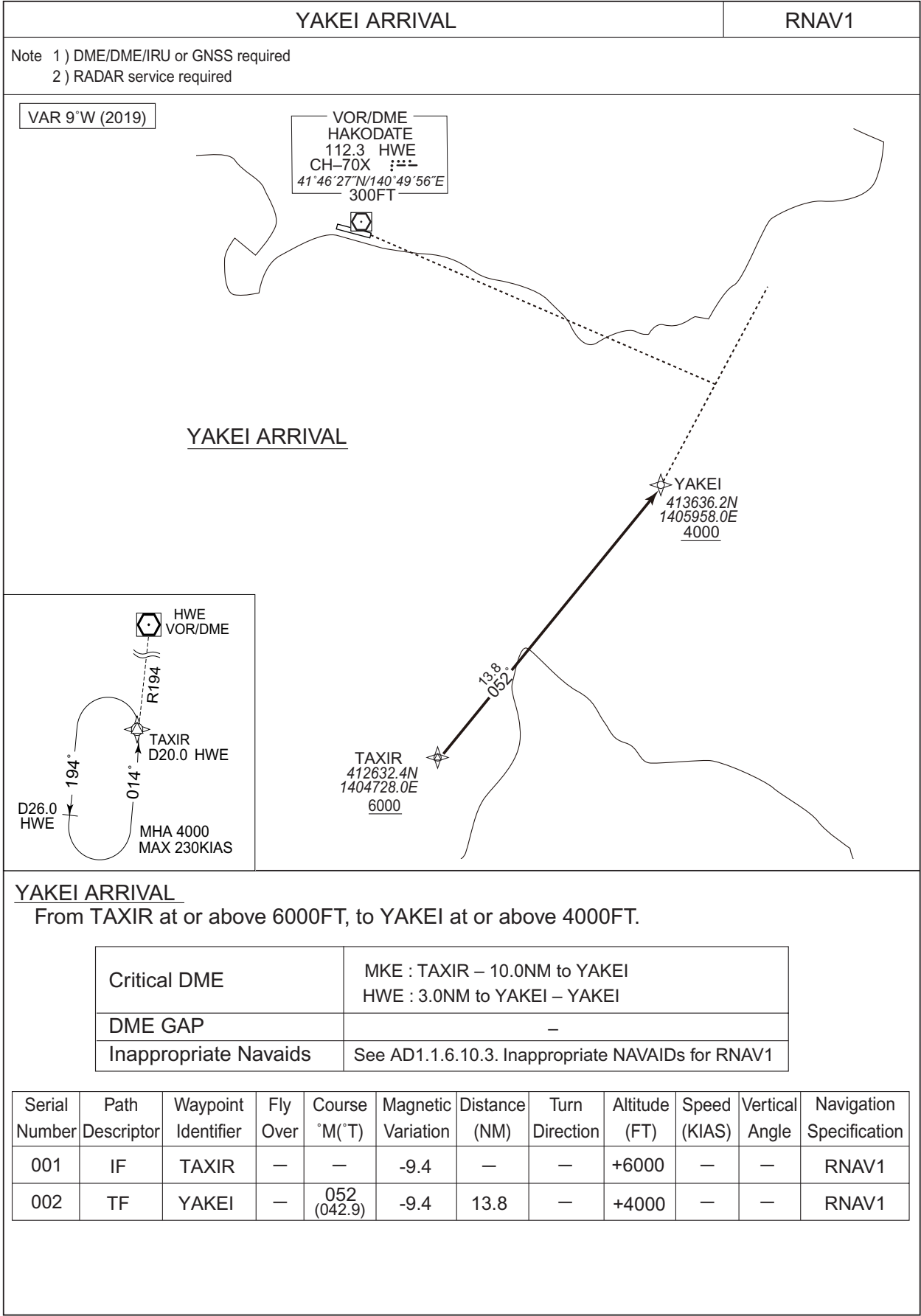
KOMACHI TRANSITION

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	TAPPI	—	—	-8.9	—	—	—	—	—	RNAV1
002	TF	UWE	—	188 (179.4)	-8.9	91.1	—	—	—	—	RNAV1

STANDARD ARRIVAL CHART - INSTRUMENT

RJCH / HAKODATE

RNAV STAR RWY30



CHANGE : New PROC.

STANDARD ARRIVAL CHART - INSTRUMENT

RJCH / HAKODATE

RNAV STAR RWY12

PATRA ARRIVAL

RNAV1

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

VAR 9°W (2019)

PATRA ARRIVAL

From TAXIR at or above 6000FT, to KANTA, to PATRA at or above 4000FT.

Critical DME	MRE : 18.0NM to KANTA – KANTA HWE : 2.2NM to KANTA – KANTA
DME GAP	KANTA – PATRA
Inappropriate Nav aids	See AD1.1.6.10.3. Inappropriate NAV AIDs for RNAV1

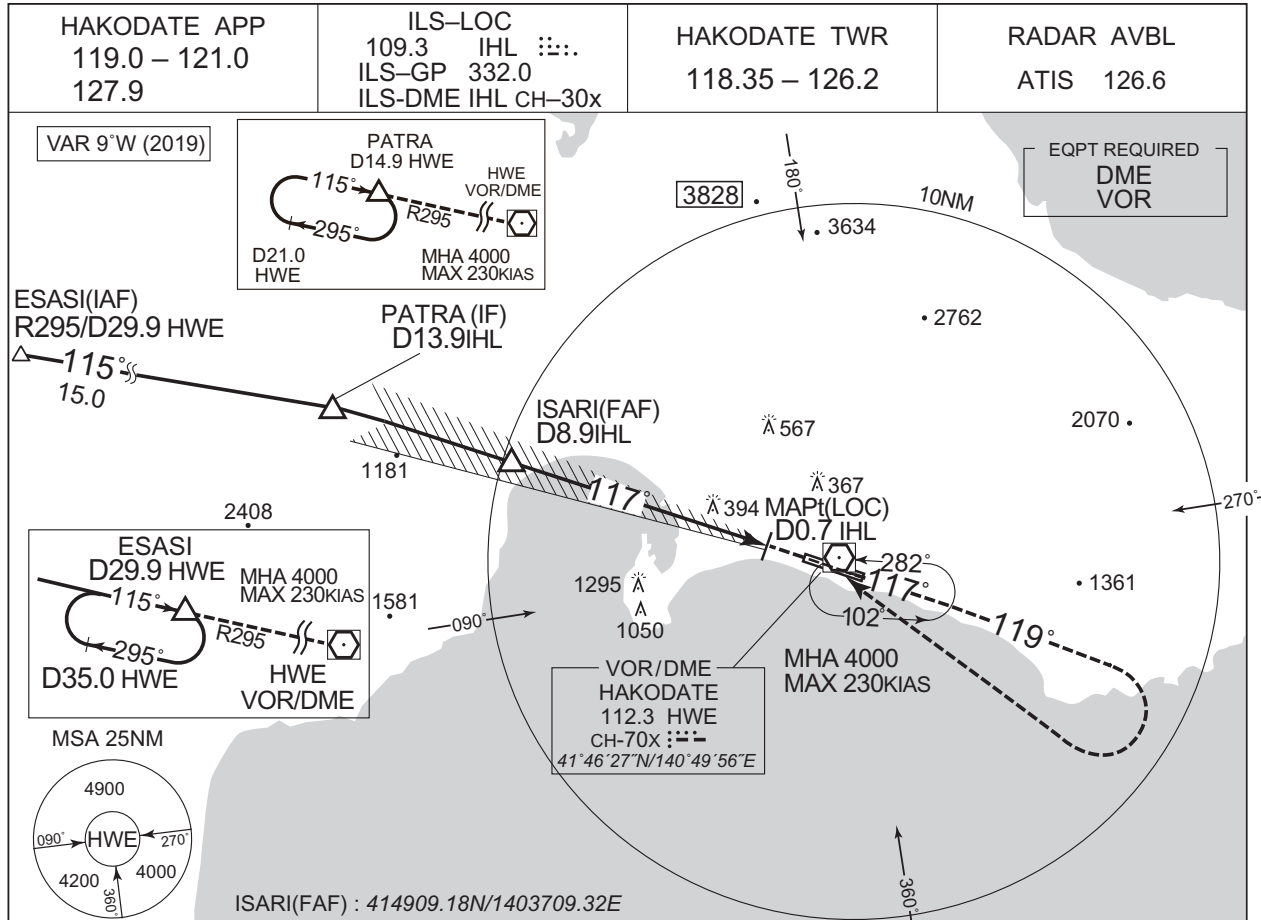
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	TAXIR	—	—	-9.4	—	—	+6000	—	—	RNAV1
002	TF	KANTA	—	335 (325.6)	-9.4	24.3	—	—	—	—	RNAV1
003	TF	PATRA	—	027 (017.7)	-9.4	4.3	—	+4000	—	—	RNAV1

CHANGE : Correction of misdescription(Name of PROC).

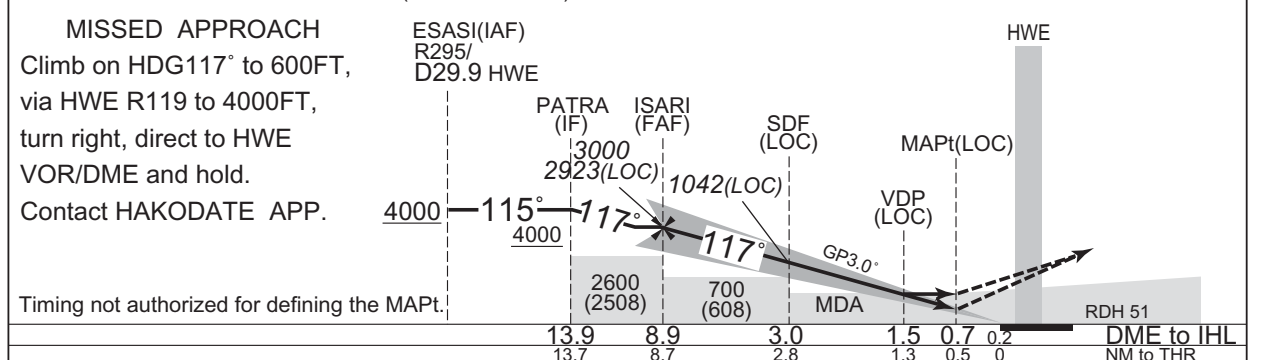
INSTRUMENT APPROACH CHART

RJCH / HAKODATE

ILS Z or LOC Z RWY12



	NM to IHL	FAF	8	7	6	5	4	3	2	MAPt
ALT (3.0° APCH Path)	2923	2634	2316	1997	1679	1361	1042	724	-	-



Missed APCH climb gradient MNM 5.0%

MINIMA		THR elev. 92		AD elev. 112		
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/ CMV	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	292 (200)	700	540 (448)	1200	550 (438)	1600
B				1300	570 (458)	
C	299 (207)			1400	600 (488)	2400
D	309 (217)			1600	690 (578)	3200

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

CHANGE : ALT restriction at PATRA.

INSTRUMENT APPROACH CHART

RJCH / HAKODATE

ILS Y or LOC Y RWY12

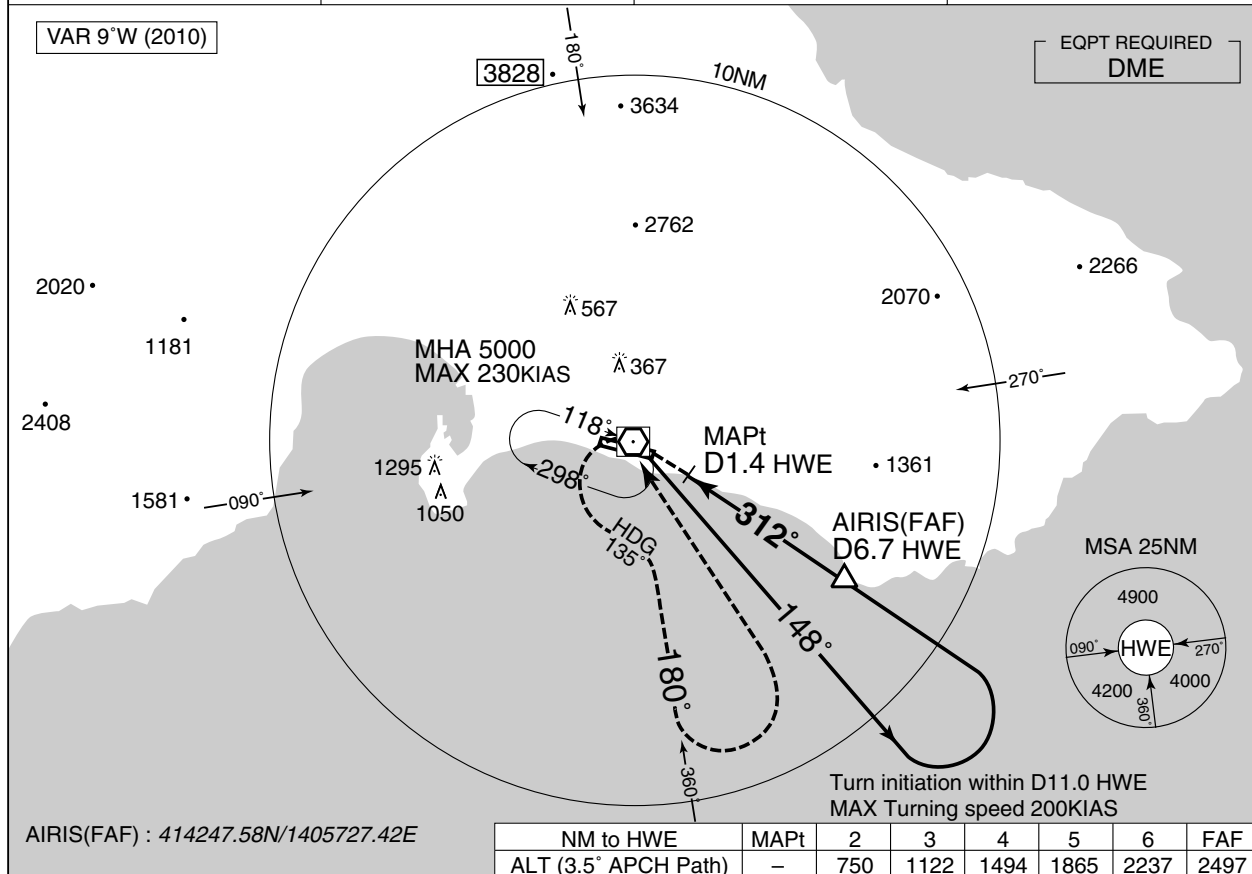


INSTRUMENT APPROACH CHART

RJCH / HAKODATE

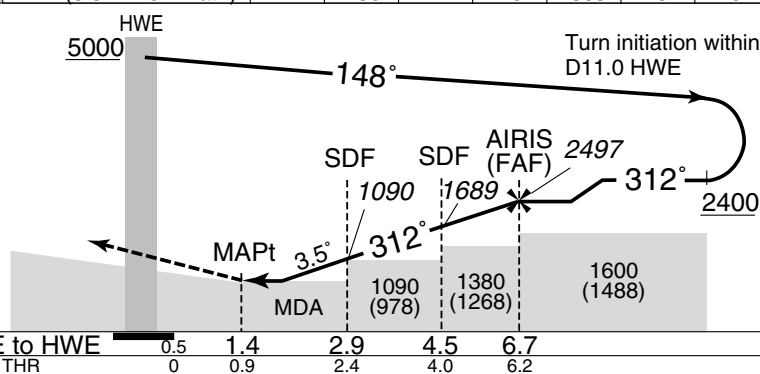
VOR RWY30

HAKODATE APP 119.0 – 121.0 127.9	HAKODATE VOR/DME 112.3 HWE CH-70X 41°46'27"N/140°49'56"E	HAKODATE TOWER 118.35 – 126.2	RADAR AVBL ATIS 126.6
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MISSED APPROACH
Turn left HDG135° to intercept
HWE R180 to 3000FT, turn left
direct to HWE VOR/DME and
hold at 5000FT.
Contact HAKODATE APP.

No Turn before MAPt.
PAPI and descent angles not coincident.
Timing not authorized for defining the MAPt.



MINIMA		THR elev. 151	AD elev. 112		
CAT			CIRCLING		
	MDA(H)	CMV	MDA(H)	VIS	
A	730 (618)	1000	730 (618)	1600	
B		1200			
C				1600	2400
D					3200

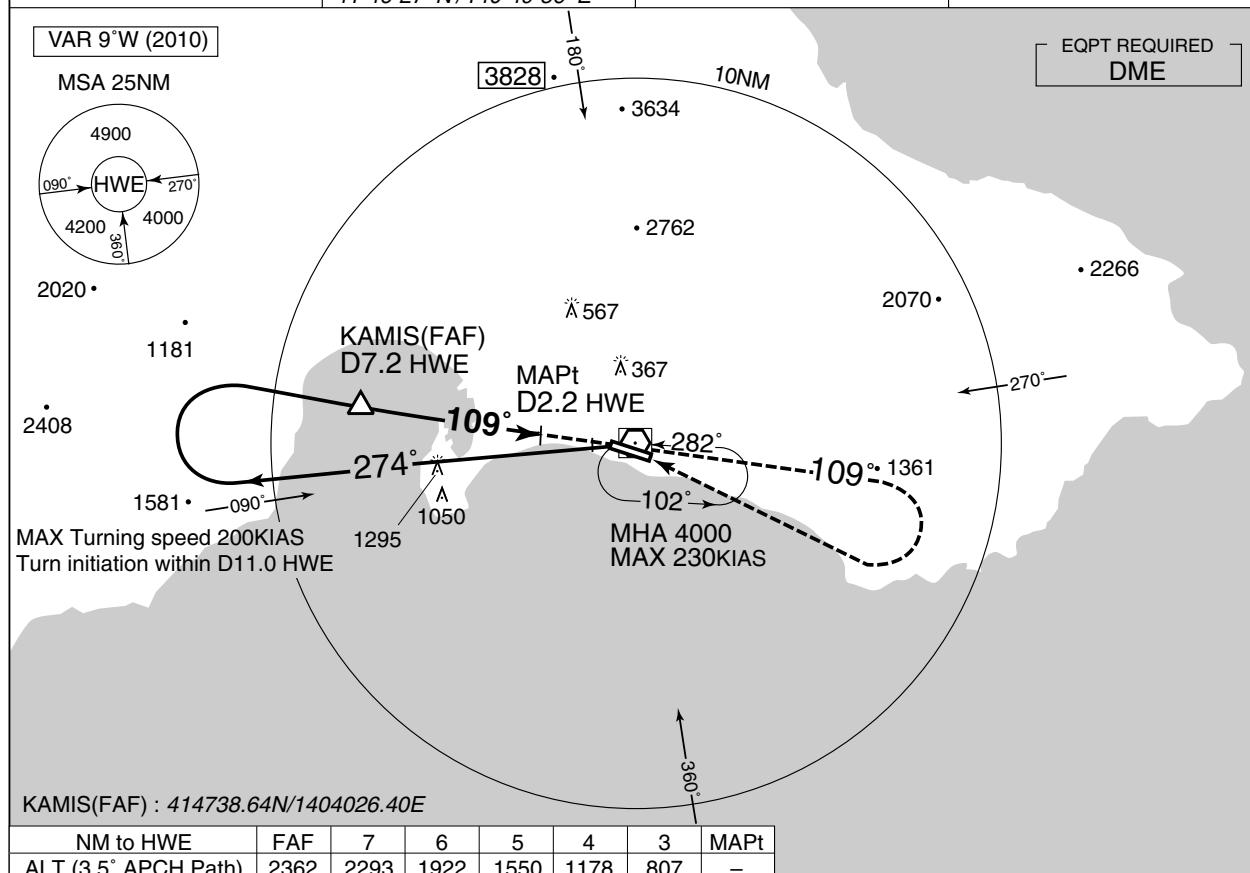
Circling to SOUTH side of RWY only.

INSTRUMENT APPROACH CHART

RJCH / HAKODATE

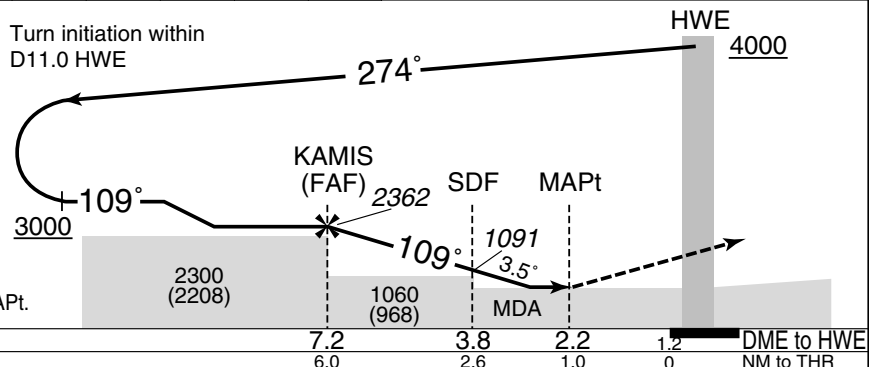
VOR RWY12

HAKODATE APP 119.0 – 121.0 127.9	HAKODATE VOR/DME 112.3 HWE CH-70X 41°46'27"N/140°49'56"E	HAKODATE TOWER 118.35 – 126.2	RADAR AVBL ATIS 126.6
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MISSED APPROACH
Climb via HWE R109 to 4000FT, turn right direct to HWE VOR/DME and hold.
Contact HAKODATE APP.

PAPI and descent angles not coincident.
Timing not authorized for defining the MAPt.



Missed APCH climb gradient MNM 3.6%

MINIMA THR elev. 92 AD elev. 112

CAT	CIRCLING			
	MDA(H)	RVR/CMV	MDA(H)	VIS
A	530 (438)	1200	550 (438)	1600
B		1300	570 (458)	
C		1400	600 (488)	
D		1600	690 (578)	

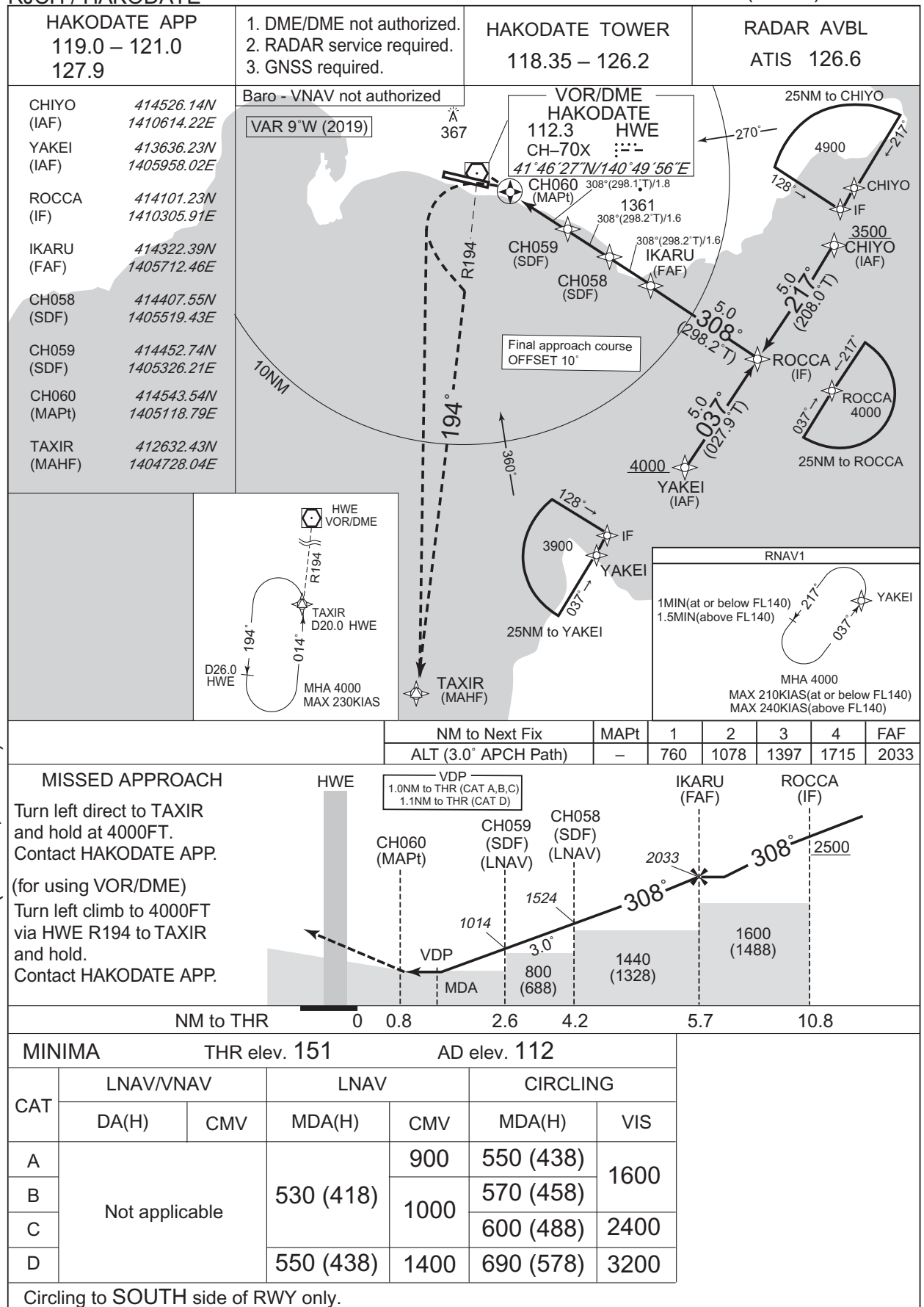
Circling to SOUTH side of RWY only.

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

INSTRUMENT APPROACH CHART

RJCH / HAKODATE

RNAV(GNSS) Z RWY30



CHANGE : VAR. PROC. HLDG Pattern(TAXIR,YAKEI) established.

INSTRUMENT APPROACH CHART

RJCH / HAKODATE

RNAV(RNP) Y RWY30



CHANGE : VAR. PROC. HLDG Pattern. Minimum temperature.

INSTRUMENT APPROACH CHART

RJCH / HAKODATE

RNAV(RNP) Y RWY30

RNAV(RNP) Y RWY30Coding 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	TAXIR	-	-	-9.4	-	-	+4000	-	-	-
002	TF	SABIO	-	029 (019.2)	-9.4	10.1	-	+2500	-	-	1.0
003	TF	TRAPI	-	029 (019.2)	-9.4	5.0	-	2500	-	-	1.0
004	TF	CH054	-	029 (019.2)	-9.4	1.4	-	2041	-	-3.00	0.3
005	RF Center: CHRF3 r=2.50NM	CH055	-	-	-9.4	4.0	L	774	-	-3.00	0.3
006	TF	RW30	Y	298 (288.1)	-9.4	1.8	-	201	-	-3.00/50	0.3
007	TF	CH272	-	297 (288.1)	-9.4	5.6	-	-	-	-	1.0
008	RF Center: CHRF4 r=2.90NM	CH056	-	-	-9.4	6.6	L	-	-	-	1.0
009	TF	TAXIR	-	168 (158.5)	-9.4	18.6	-	4000	-	-	1.0

Waypoint Coordinates

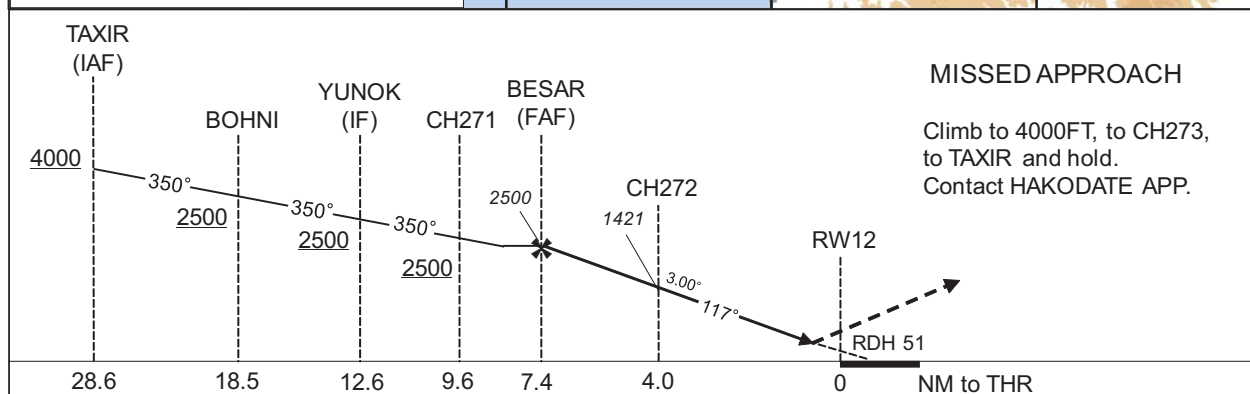
Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
TAXIR	412632.43N / 1404728.04E	CHRF3	414301.30N / 1405136.09E
SABIO	413606.58N / 1405154.81E	CHRF4	414456.26N / 1404159.49E
TRAPI	414049.99N / 1405407.02E		
CH054	414211.71N / 1405445.20E		
CH055	414524.03N / 1405238.26E		
RW30	414557.54N / 1405021.00E		
CH272	414742.10N / 1404311.31E		
CH056	414352.33N / 1403822.94E		

CHANGE : VAR. PROC.

INSTRUMENT APPROACH CHART

RJCH / HAKODATE

RNAV(RNP) RWY12



Missed APCH climb gradient MNM 5.0%

MINIMA	THR elev. 92	AD elev. 112
CAT	RNP 0.30	
	DA(H)	RVR/CMV
A	-	-
B	-	-
C	402(310)	1400
D	423(331)	1600

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

RNP AR**Special Authorization Required**

CHANGE : New PROC.

INSTRUMENT APPROACH CHART

RJCH / HAKODATE

RNAV(RNP) RWY12

RNAV(RNP) RWY12Coding 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	TAXIR	-	-	-9.4	-	-	+4000	-	-	-
002	TF	BOHNI	-	350 (340.6)	-9.4	10.1	-	+2500	-	-	1.0
003	TF	YUNOK	-	350 (340.6)	-9.4	5.9	-	+2500	-	-	1.0
004	TF	CH271	-	350 (340.5)	-9.4	3.0	-	+2500	-185	-	1.0
005	RF Center: CHRF5 r=2.50NM	BESAR	-	-	-9.4	2.2	R	2500	-	-	1.0
006	RF Center: CHRF5 r=2.50NM	CH272	-	-	-9.4	3.4	R	1421	-	-3.00	0.3
007	TF	RW12	Y	117 (108.0)	-9.4	4.0	-	143	-	-3.00/51	0.3
008	TF	CH273	-	117 (108.1)	-9.4	5.4	-	-	-	-	1.0
009	TF	TAXIR	-	207 (197.6)	-9.4	19.1	-	4000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
TAXIR	412632.43N / 1404728.04E	CHRF5	414519.29N / 1404209.46E
BOHNI	413606.23N / 1404258.19E		
YUNOK	414139.34N / 1404020.87E		
CH271	414429.13N / 1403900.50E		
BESAR	414635.08N / 1403916.36E		
CH272	414742.10N / 1404311.31E		
RW12	414627.62N / 1404817.61E		
CH273	414446.88N / 1405510.13E		

CHANGE : New PROC.

RJCH / HAKODATE

Visual REP

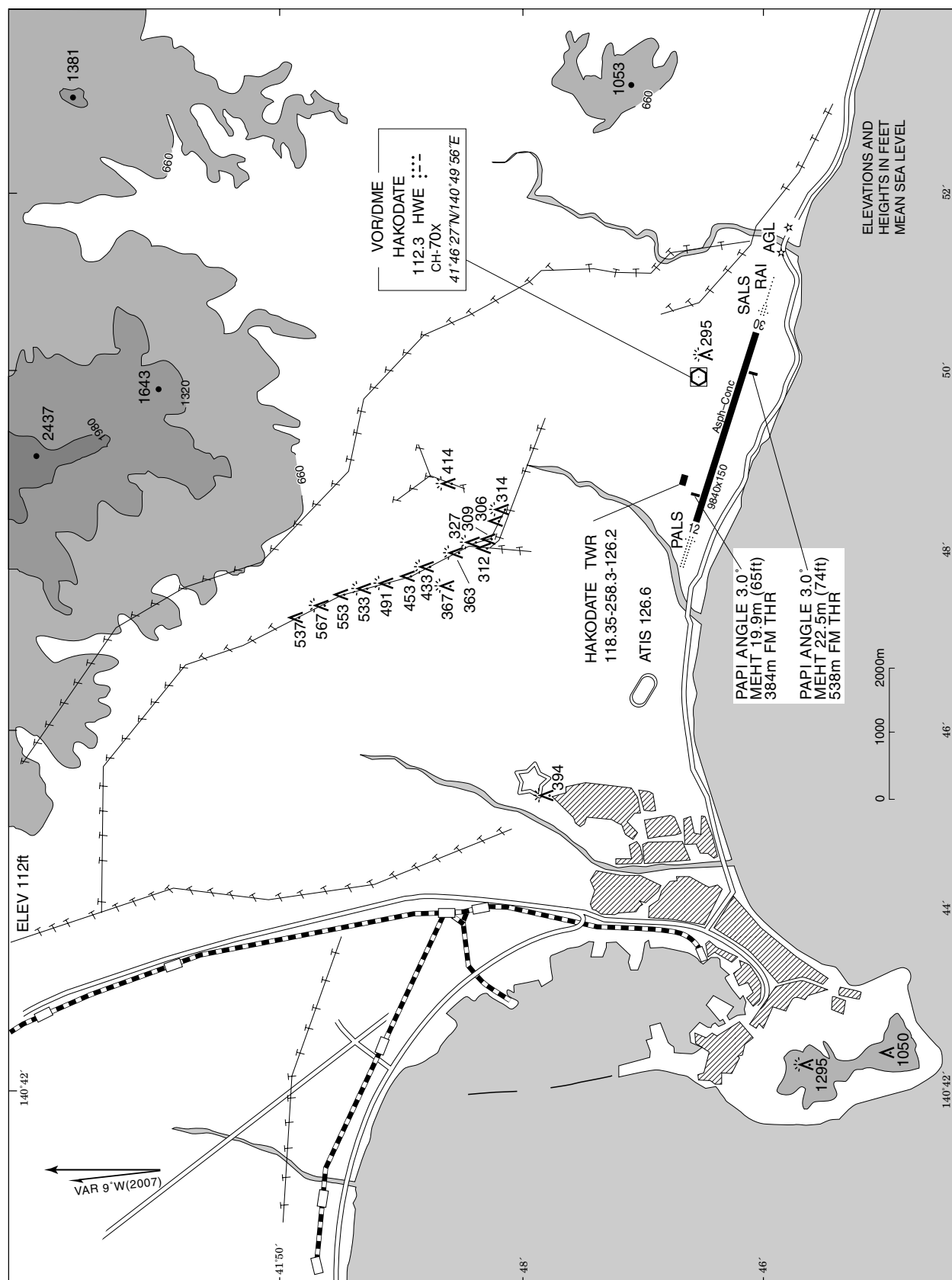


※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

CHANGE :DIST from ARP(Mihara):

Call sign	BRG / DIST from ARP	Remarks
大沼 Onuma	330°T / 13.9NM	JR駅 JR Station
桔梗 Kikyo	316°T / 6.4NM	JR駅 JR Station
矢別 Yabetsu	043°T / 5.7NM	ダム Dam
恵山岬 Esanmisaki	081°T / 16.5NM	灯台 Lighthouse
美原 Mihara	310°T / 3.9NM	NHKラジオアンテナ NHK radio antenna
立待 Tachimachi	252°T / 4.8NM	岬 Cape
当別 Tobetsu	261°T / 11.5NM	トラピスト修道院 Religious house
汐首岬 Shiokubimisaki	119°T / 7.3NM	灯台 Lighthouse
5NM S	180°T / 5.0NM	海上 Over the sea
大間崎 Omazaki	163°T / 14.0NM	岬 Cape

LDG CHART





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