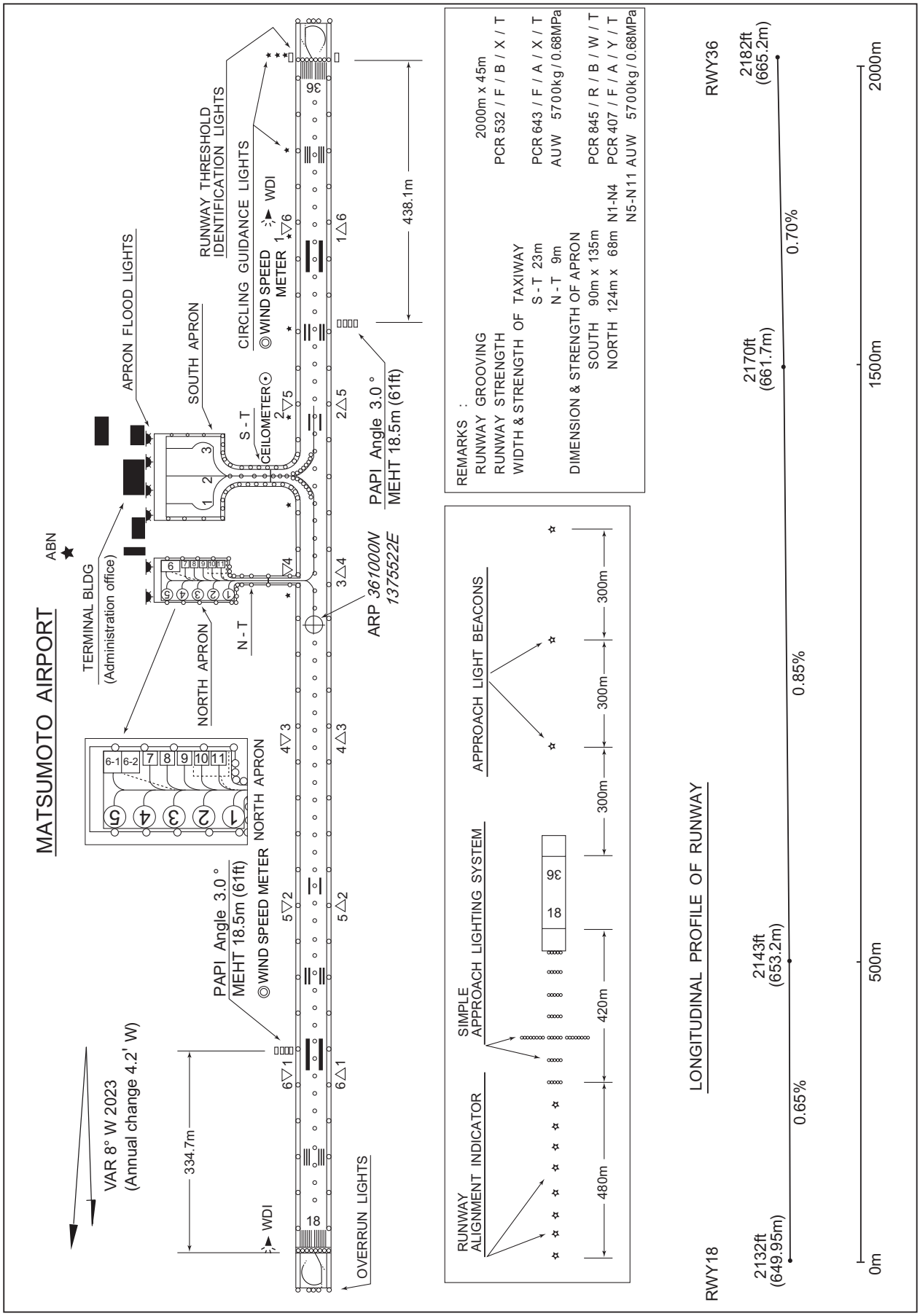
CHANGE : WIND SPEED METER, CEILOMETER added.

RJAF / MATSUMOTO AD CHART



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STANDARD DEPARTURE CHART-INSTRUMENT

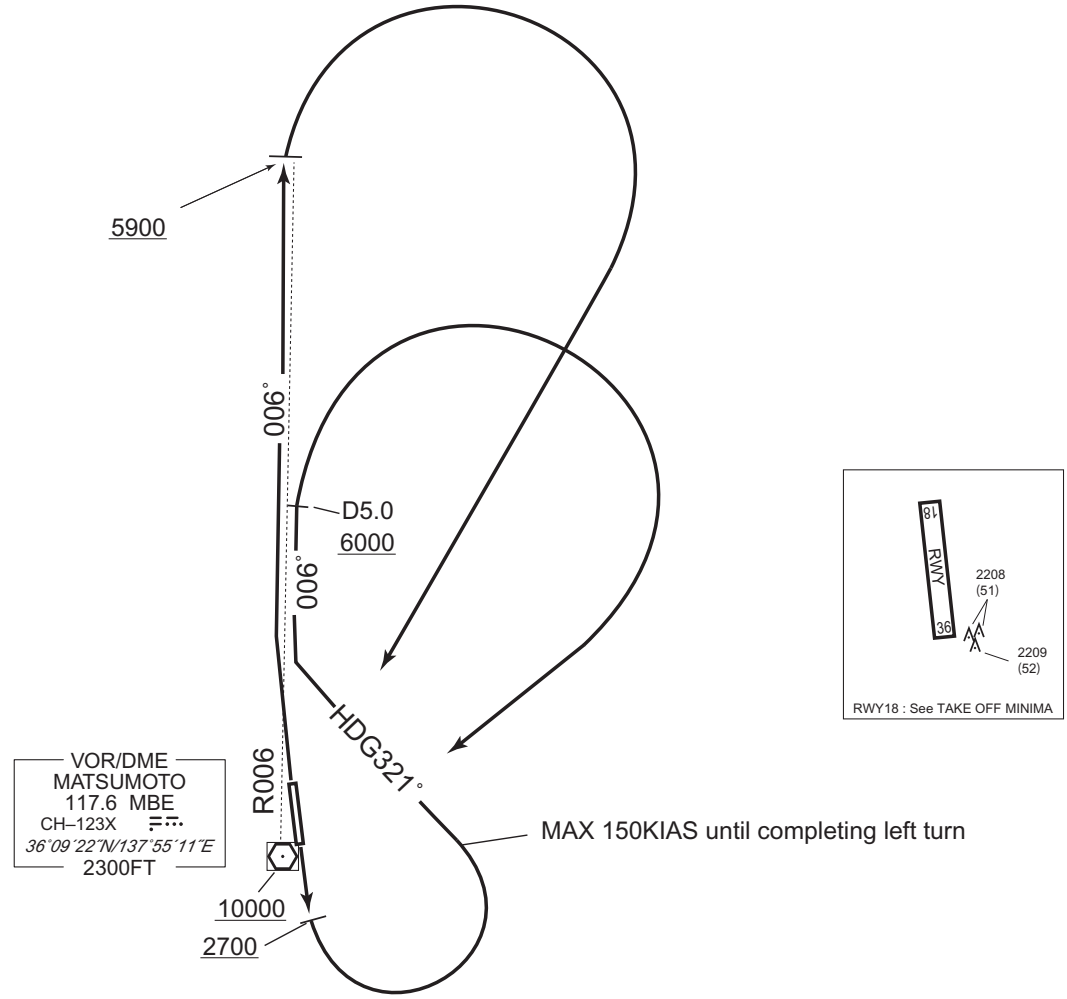
RJAF / MATSUMOTO SID

MATSUMOTO REVERSAL ONE DEPARTURE

RWY 18 : Climb RWY HDG to 2700FT, turn left HDG321˚ to intercept and proceed via MBE R006 to 5.0DME, turn right direct to MBE VOR/DME.
Cross MBE R006/5.0DME at or above 6000FT, cross MBE VOR/DME at or above 10000FT.

RWY 36 : Climb via MBE R006 to 5900FT, turn right direct to MBE VOR/DME.
Cross MBE VOR/DME at or above 10000FT.

NOTE RWY18 : 1) 6.6% climb gradient required up to 4200FT.
OBST ALT 3740FT located at 111˚/4.40NM FM end of RWY18.
2) Departure turn limited to 150KIAS maximum until completing left turn.



CHANGE : OBST chart.

STANDARD DEPARTURE CHART-INSTRUMENT

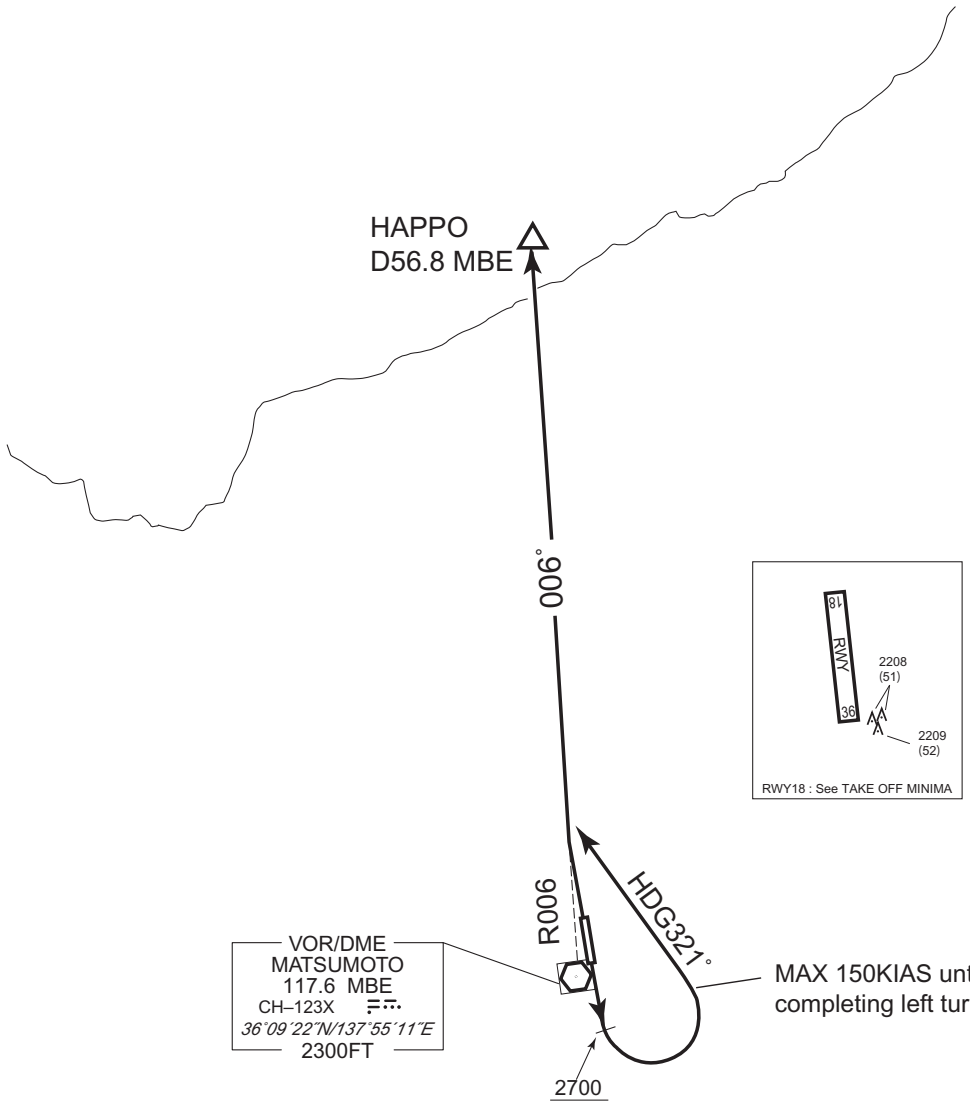
RJAF / MATSUMOTO SID

HAPPO ONE DEPARTURE

RWY 18 : Climb RWY HDG to 2700FT, turn left HDG321˚ to intercept and proceed via MBE R006 to HAPPO.

RWY 36 : Climb via MBE R006 to HAPPO.

NOTE RWY18 : 1) 6.6% climb gradient required up to 4200FT.
OBST ALT 3740FT located at 111˚/4.40NM FM end of RWY18.
2) Departure turn limited to 150KIAS maximum until completing left turn.



CHANGE : OBST chart.

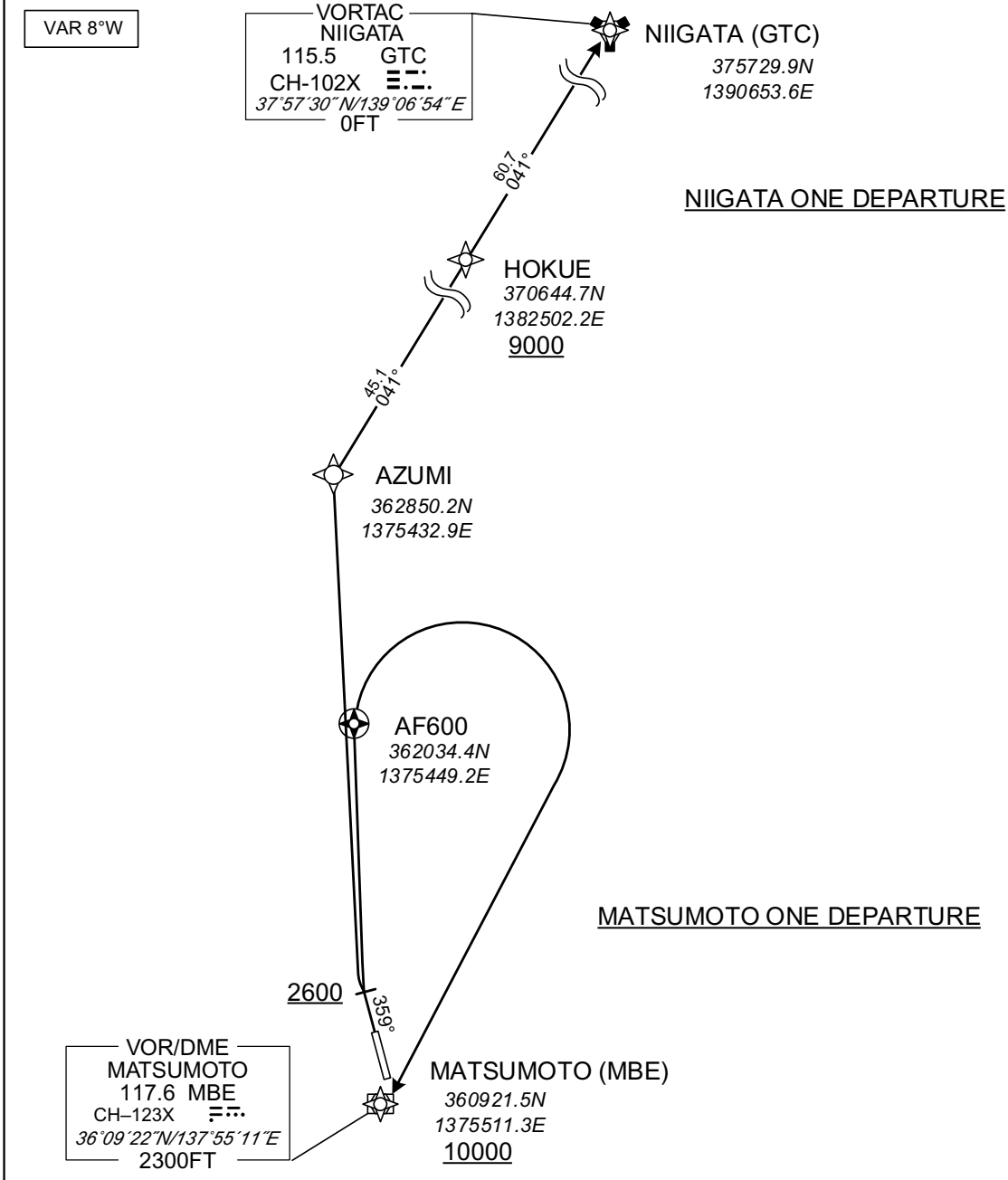
STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

RNAV SID

NIIGATA ONE DEPARTURE MATSUMOTO ONE DEPARTURE	RNP1

Note GNSS required.



NIIGATA ONE DEPARTURE

RWY18 : (Not established)
RWY36 : Climb on HDG359° at or above 2600FT, direct to AZUMI, to HOKUE at or above 9000FT, to GTC.

MATSUMOTO ONE DEPARTURE

RWY18 : (Not established)
RWY36 : Climb on HDG359° at or above 2600FT, direct to AF600, turn right direct to MBE at or above 10000FT.

Note RWY36 : 5.0% climb gradient required up to 5600FT.
OBST ALT 5315FT located at 8.9NM 048° FM end of RWY36.

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO RNAV SID

NIIGATA ONE DEPARTURE

RWY36

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	-	-	359 (351.1)	-8.2	-	-	+2600	-	-	RNP1
002	DF	AZUMI	-	-	-8.2	-	-	-	-	-	RNP1
003	TF	HOKUE	-	041 (032.6)	-8.2	45.1	-	+9000	-	-	RNP1
004	TF	GTC	-	041 (033.0)	-8.2	60.7	-	-	-	-	RNP1

MATSUMOTO ONE DEPARTURE

RWY36

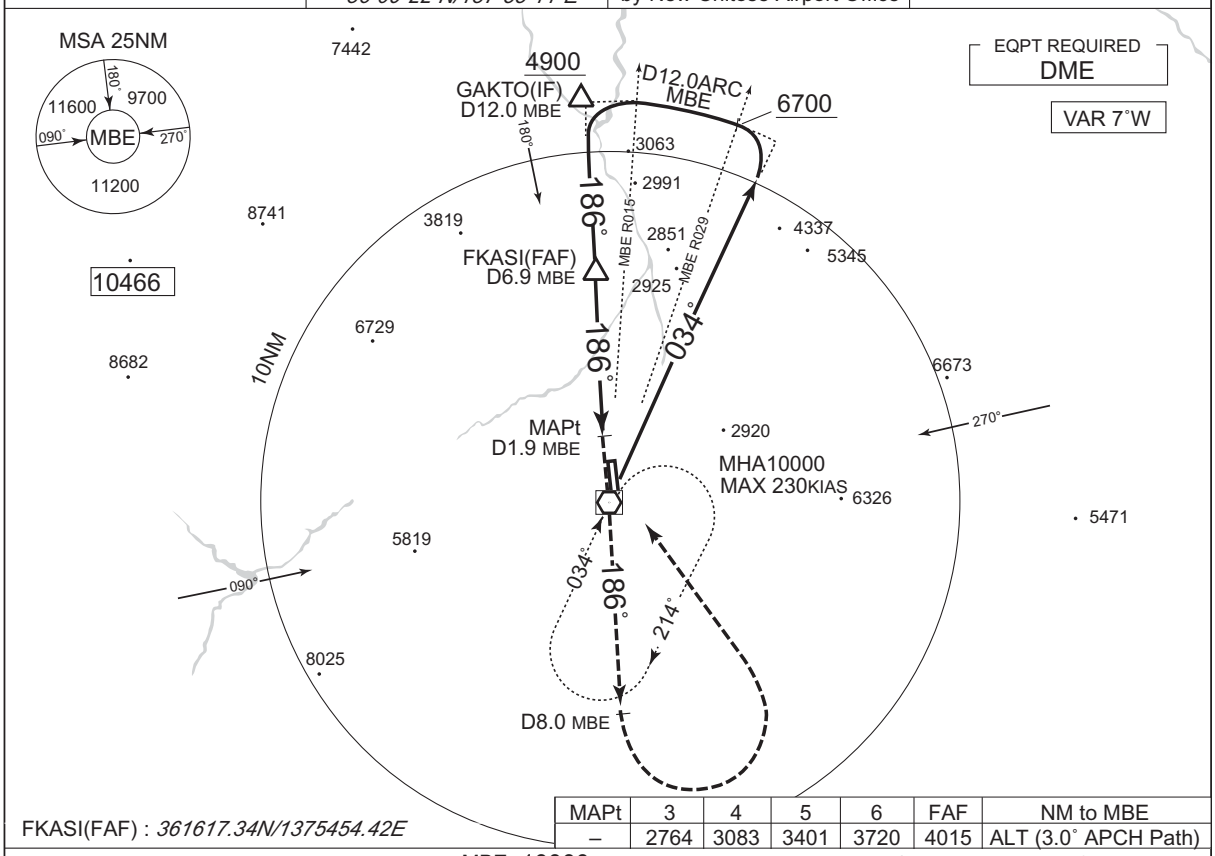
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	-	-	359 (351.1)	-8.2	-	-	+2600	-	-	RNP1
002	DF	AF600	Y	-	-8.2	-	-	-	-	-	RNP1
003	DF	MBE	-	-	-8.2	-	R	+10000	-	-	RNP1

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO VOR RWY18

KOBE CONTROL	MATSUMOTO VOR/DME	MATSUMOTO RADIO	NO RADAR
132.45 - 125.6 304.4 - 317.1	117.6 MBE CH-123X *36°09′22″N/137°55′11″E*	118.65 AFIS provided by New Chitose Airport Office	



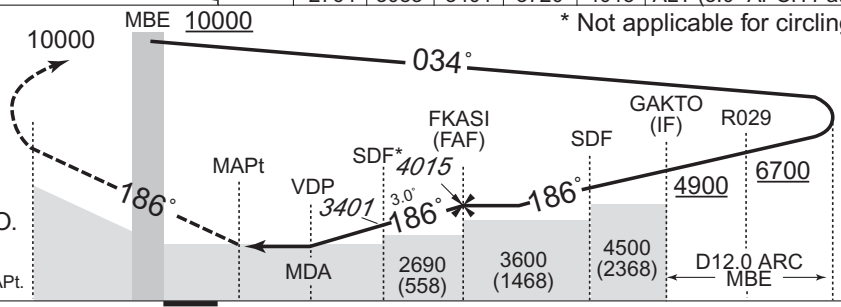
FKASI(FAF) : *361617.34N/1375454.42E*

MAPt	3	4	5	6	FAF	NM to MBE
–	2764	3083	3401	3720	4015	ALT (3.0° APCH Path)

* Not applicable for circling

MISSED APPROACH
Climb to 10000FT via MBE
R186 to 8.0DME, turn left
direct to MBE VOR/DME
and hold.
Contact MATSUMOTO RADIO.

Timing not authorized for defining the MAPt.



DME to MBE	8.0		1.9	2.4	5.0	6.9		10.0	12.0
NM to THR			0.7	1.2	3.8	5.7		8.8	10.8

Missed APCH climb gradient MNM 6.0%

MINIMA THR elev. 2132 AD elev. 2157

CAT			CIRCLING	
	MDA(H)	CMV	MDA(H)	VIS
A	2550 (418)	900	2700 (543)	1600
B		1000		
C			2830 (673)	2400
D	–	–	–	–

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

CHANGE : ATC call sign(TOKYO CONTROL → KOBE CONTROL).

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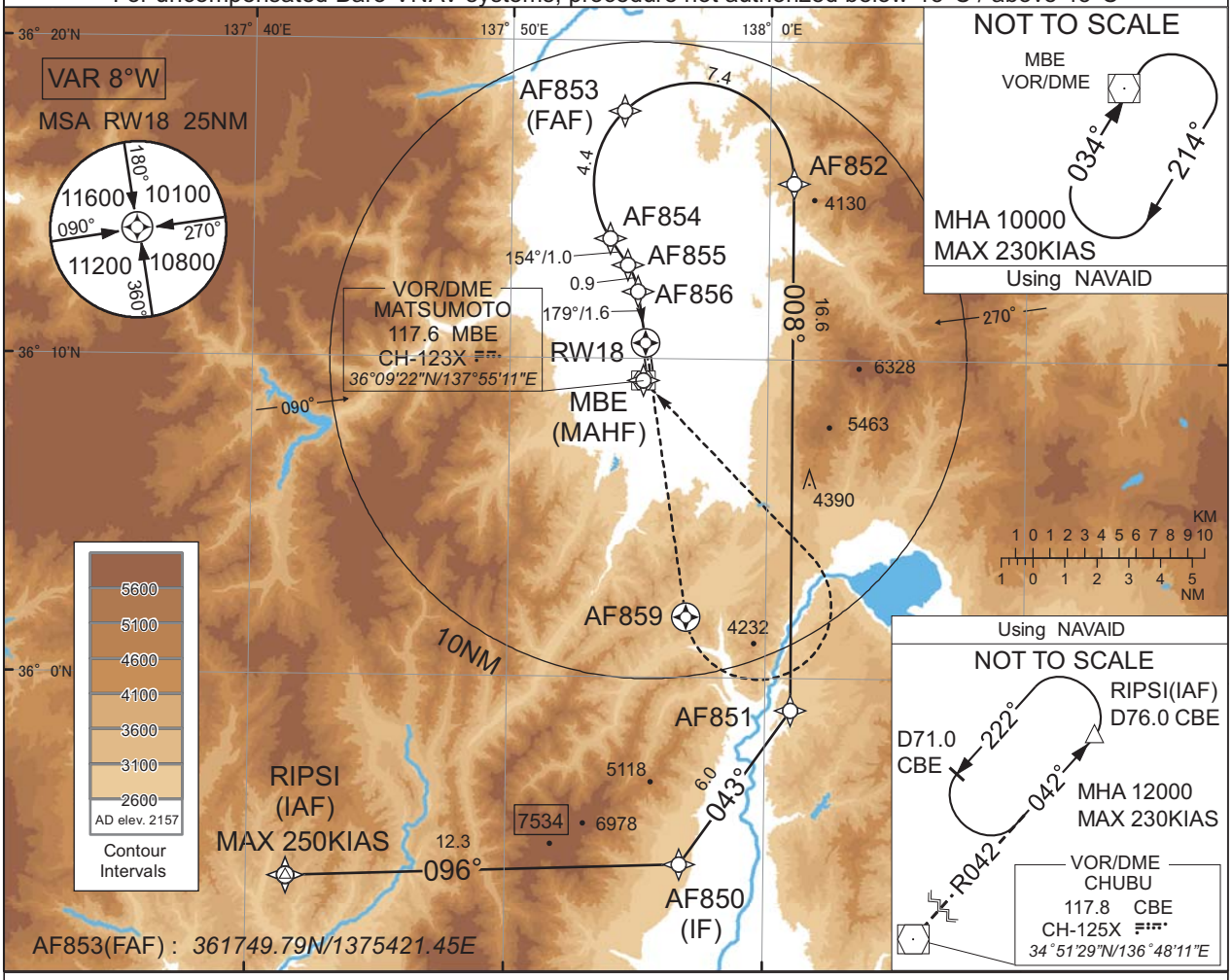
INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Z RWY18(AR)

KOBE CONTROL 132.45 - 125.6 304.4 - 317.1	RNP AR RF required.	MATSUMOTO RADIO 118.65 AFIS provided by New Chitose Airport Office	NO RADAR

For uncompensated Baro-VNAV systems, procedure not authorized below-15°C / above 45°C



NOT TO SCALE

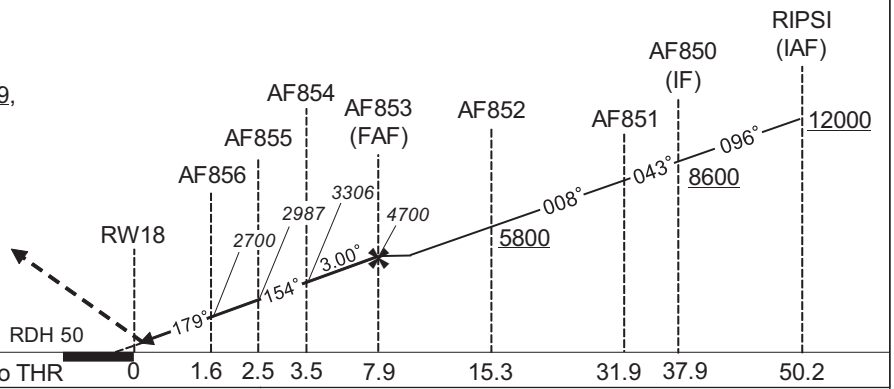
Using NAVAID

NOT TO SCALE

Using NAVAID

MISSED APPROACH

Climb to 10000FT, direct to AF859,
turn left, direct to MBE and hold.
Contact MATSUMOTO RADIO.



Missed APCH climb gradient MNM 7.0%

MINIMA	THR elev. 2132		AD elev. 2157	
CAT	RNP 0.20		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B				
C	2432(300)	1000	2448(316)	1000
D	-	-	-	-

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

Authorization Required

CHANGE : ATC call sign (TOKYO CONTROL → KOBE CONTROL).

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO RNP Z RWY18(AR)

Coding Table

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	RIPSI	-	-	-8.2	-	-	+12000	-250	-	-
002	TF	AF850	-	096 (087.7)	-8.2	12.3	-	+8600	-	-	1.0
003	TF	AF851	-	043 (035.2)	-8.2	6.0	-	-	-	-	0.3
004	TF	AF852	-	008 (359.9)	-8.2	16.6	-	+5800	-	-	0.3
005	RF Center: AFRF5 r=3.15NM	AF853	-	-	-8.2	7.4	L	4700	-	-	0.3
006	RF Center: AFRF5 r=3.15NM	AF854	-	-	-8.2	4.4	L	3306	-	-3.00	0.2 0.3
007	TF	AF855	-	154 (146.1)	-8.2	1.0	-	2987	-	-3.00	0.2 0.3
008	RF Center: AFRF6 r=2.06NM	AF856	-	-	-8.2	0.9	R	2700	-	-3.00	0.2 0.3
009	TF	RW18	Y	179 (171.1)	-8.2	1.6	-	2182	-	-3.00/50	0.2 0.3
010	DF	AF859	Y	-	-8.2	-	-	-	-	-	1.0
011	DF	MBE	-	-	-8.2	-	L	10000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
RIPSI	*355340.33N / 1374133.41E*	AFRF5	*361534.43N / 1375704.35E*
AF850	*355408.74N / 1375645.79E*	AFRF6	*361149.74N / 1375225.49E*
AF851	*355901.18N / 1380100.60E*		
AF852	*361534.92N / 1380057.71E*		
AF853	*361749.79N / 1375421.45E*		
AF854	*361348.83N / 1375350.85E*		
AF855	*361259.03N / 1375432.28E*		
AF856	*361209.11N / 1375456.52E*		
RW18	*361032.37N / 1375515.37E*		
AF859	*360155.80N / 1375655.84E*		
MBE	*360921.51N / 1375511.34E*		

CHANGE : PROC renamed.

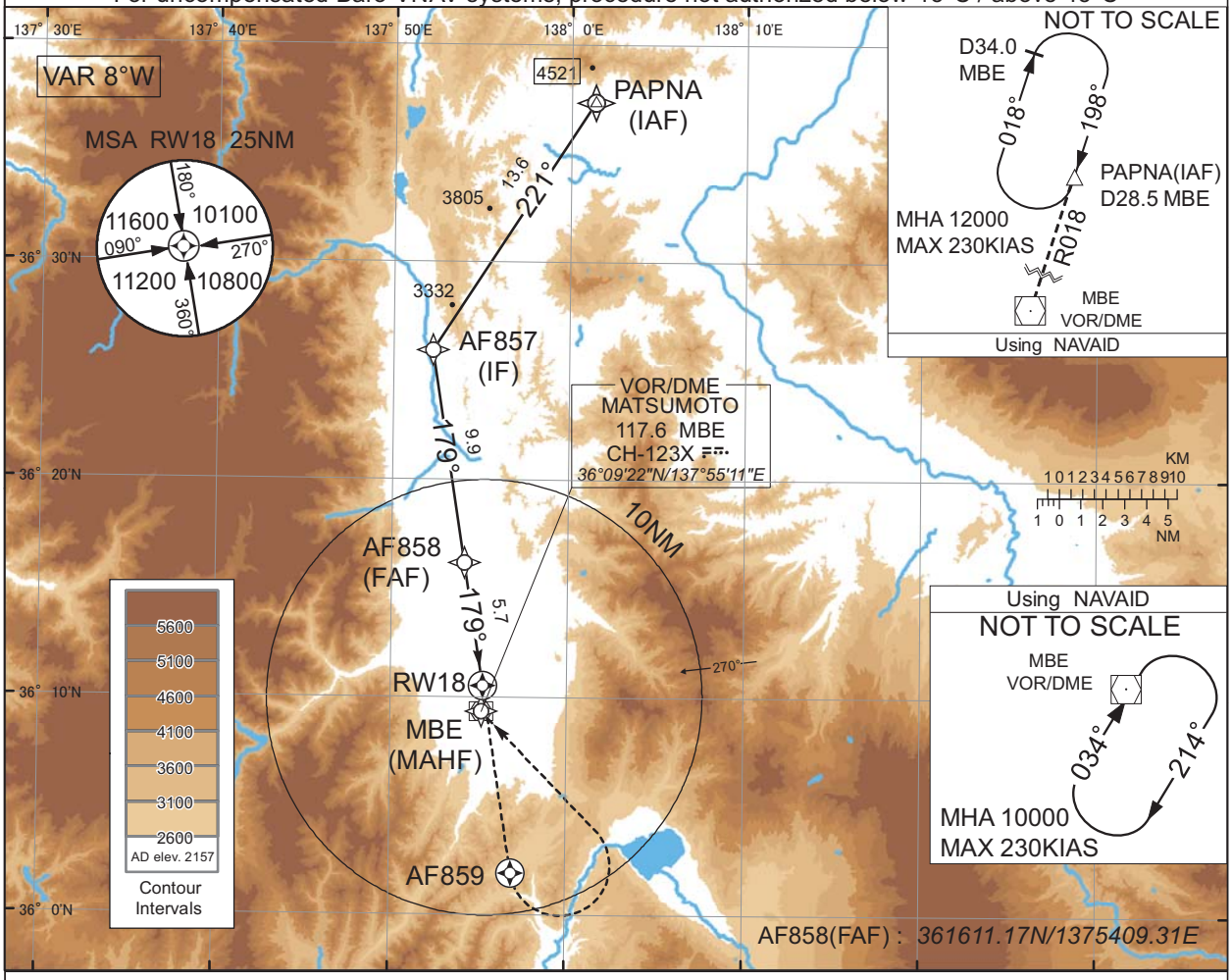
INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Y RWY18(AR)

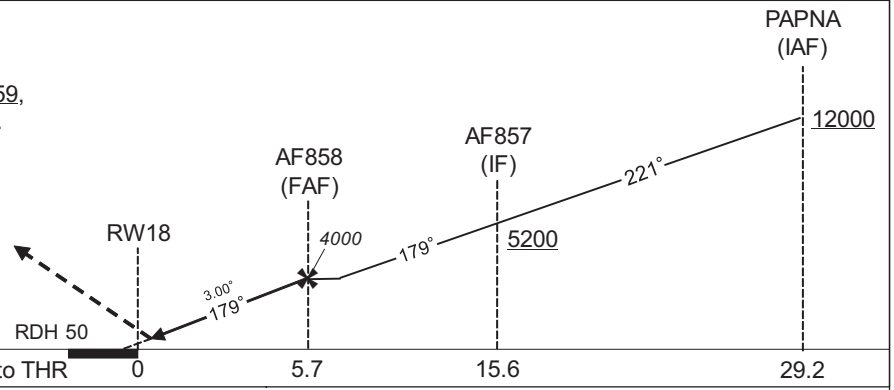
KOBE CONTROL	RNP AR	MATSUMOTO RADIO	NO RADAR
132.45 - 125.6 304.4 - 317.1		118.65 AFIS provided by New Chitose Airport Office	

For uncompensated Baro-VNAV systems, procedure not authorized below-15°C / above 45°C



MISSED APPROACH

Climb to 10000FT, direct to AF859,
turn left, direct to MBE and hold.
Contact MATSUMOTO RADIO.



Missed APCH climb gradient MNM 7.0%

MINIMA	THR elev. 2132		AD elev. 2157	
CAT	RNP 0.20		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B				
C	2432(300)	1000	2448(316)	1000
D	-	-	-	-

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

Authorization Required

CHANGE : ATC call sign (TOKYO CONTROL → KOBE CONTROL).

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO RNP Y RWY18(AR)

Coding Table

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	PAPNA	-	-	-8.2	-	-	+12000	-	-	-
002	TF	AF857	-	221 (212.8)	-8.2	13.6	-	+5200	-	-	1.0
003	TF	AF858	-	179 (171.0)	-8.2	9.9	-	4000	-	-	1.0
004	TF	RW18	Y	179 (171.1)	-8.2	5.7	-	2182	-	-3.00/50	0.2 0.3
005	DF	AF859	Y	-	-8.2	-	-	-	-	-	1.0
006	DF	MBE	-	-	-8.2	-	L	10000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates
PAPNA	*363721.74N / 1380122.92E*
AF857	*362557.23N / 1375214.72E*
AF858	*361611.17N / 1375409.31E*
RW18	*361032.37N / 1375515.37E*
AF859	*360155.80N / 1375655.84E*
MBE	*360921.51N / 1375511.34E*

CHANGE : PROC renamed.

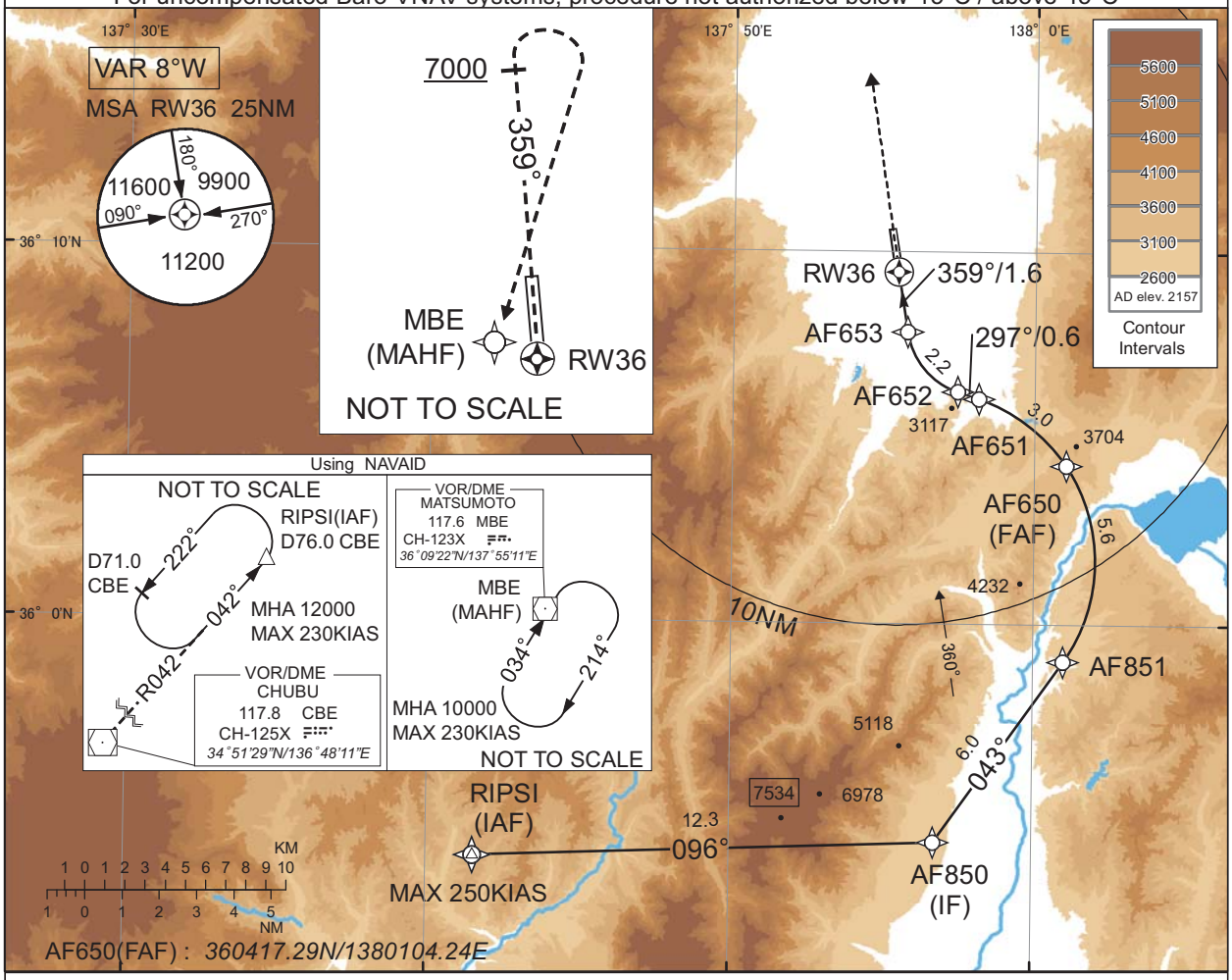
INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Z RWY36(AR)

KOBE CONTROL 132.45 - 125.6 304.4 - 317.1	RNP AR RF required.	MATSUMOTO RADIO 118.65 AFIS provided by New Chitose Airport Office	NO RADAR

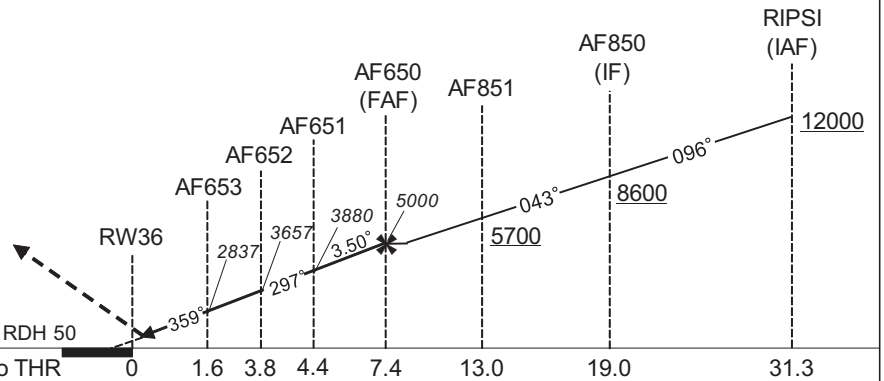
For uncompensated Baro-VNAV systems, procedure not authorized below-15°C / above 45°C



MISSED APPROACH

From RW36 on track 359°, at or above 7000FT turn right, direct to MBE and hold at 10000FT.
Contact MATSUMOTO RADIO.

PAPI not coincident with VPA.



Missed APCH climb gradient MNM 3.0%

MINIMA	THR elev. 2182		AD elev. 2157	
CAT	RNP 0.20		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B				
C	2482(300)	1800	2551(369)	1800
D	-	-	-	-

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

Authorization Required

CHANGE : ATC call sign (TOKYO CONTROL → KOBE CONTROL).

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO RNP Z RWY36(AR)

Coding Table

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	RIPSI	-	-	-8.2	-	-	+12000	-250	-	-
002	TF	AF850	-	096 (087.7)	-8.2	12.3	-	+8600	-	-	1.0
003	TF	AF851	-	043 (035.2)	-8.2	6.0	-	+5700	-	-	1.0
004	RF Center: AFRF1 r=4.60NM	AF650	-	-	-8.2	5.6	L	5000	-	-	1.0
005	RF Center: AFRF1 r=4.60NM	AF651	-	-	-8.2	3.0	L	3880	-	-3.50	0.2 0.3
006	TF	AF652	-	297 (288.3)	-8.2	0.6	-	3657	-	-3.50	0.2 0.3
007	RF Center: AFRF2 r=2.02NM	AF653	-	-	-8.2	2.2	R	2837	-	-3.50	0.2 0.3
008	TF	RW36	Y	359 (351.1)	-8.2	1.6	-	2232	-	-3.50/50	0.2 0.3
009	FA	-	-	359 (351.1)	-8.2	-	-	+7000	-	-	1.0
010	DF	MBE	-	-	-8.2	-	R	10000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
RIPSI	*355340.33N / 1374133.41E*	AFRF1	*360141.27N / 1375622.53E*
AF850	*355408.74N / 1375645.79E*	AFRF2	*360810.39N / 1375813.97E*
AF851	*355901.18N / 1380100.60E*		
AF650	*360417.29N / 1380104.24E*		
AF651	*360604.23N / 1375809.40E*		
AF652	*360615.53N / 1375727.24E*		
AF653	*360751.55N / 1375546.68E*		
RW36	*360928.29N / 1375527.85E*		
MBE	*360921.51N / 1375511.34E*		

CHANGE : PROC renamed.

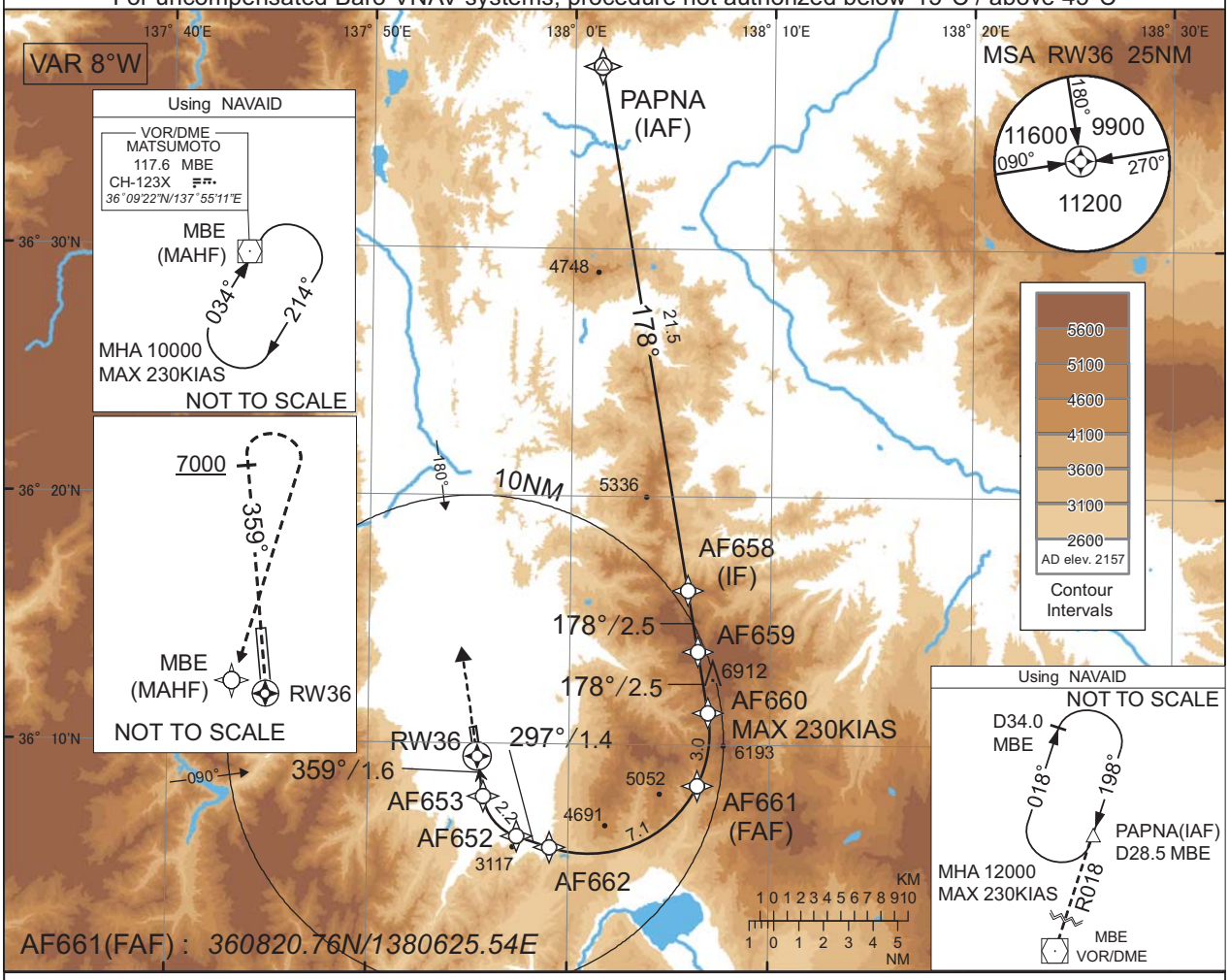
INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNP Y RWY36(AR)

KOBE CONTROL 132.45 - 125.6 304.4 - 317.1	RNP AR RF required.	MATSUMOTO RADIO 118.65 AFIS provided by New Chitose Airport Office	NO RADAR

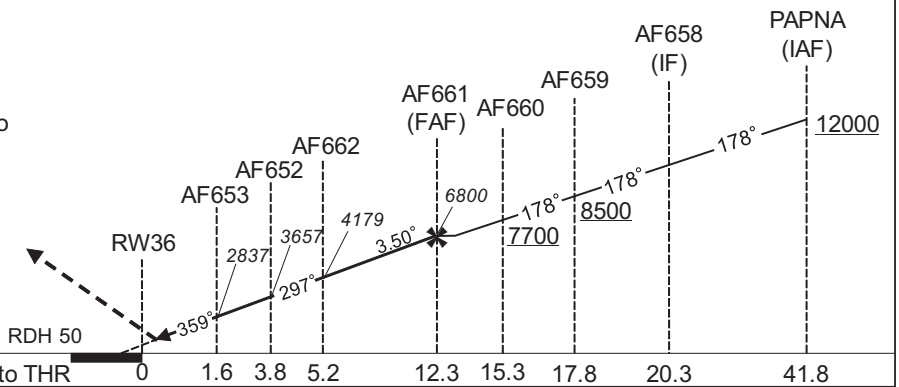
For uncompensated Baro-VNAV systems, procedure not authorized below-15°C / above 45°C



MISSED APPROACH

From RW36 on track 359°, at or above 7000FT turn right, direct to MBE and hold at 10000FT.
Contact MATSUMOTO RADIO.

PAPI not coincident with VPA.



Missed APCH climb gradient MNM 3.0%

MINIMA	THR elev. 2182		AD elev. 2157	
CAT	RNP 0.20		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B				
C	2482(300)	1800	2551(369)	1800
D	-	-	-	-

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

Authorization Required

CHANGE : ATC call sign (TOKYO CONTROL → KOBE CONTROL).

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO RNP Y RWY36(AR)

Coding Table

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	PAPNA	-	-	-8.2	-	-	+12000	-	-	-
002	TF	AF658	-	178 (170.2)	-8.2	21.5	-	-	-	-	1.0
003	TF	AF659	-	178 (170.3)	-8.2	2.5	-	+8500	-	-	0.3
004	TF	AF660	-	178 (170.3)	-8.2	2.5	-	+7700	-230	-	0.3
005	RF Center: AFRF4 r=4.89NM	AF661	-	-	-8.2	3.0	R	6800	-	-	0.3
006	RF Center: AFRF4 r=4.89NM	AF662	-	-	-8.2	7.1	R	4179	-	-3.50	0.2 0.3
007	TF	AF652	-	297 (288.4)	-8.2	1.4	-	3657	-	-3.50	0.2 0.3
008	RF Center: AFRF2 r=2.02NM	AF653	-	-	-8.2	2.2	R	2837	-	-3.50	0.2 0.3
009	TF	RW36	Y	359 (351.1)	-8.2	1.6	-	2232	-	-3.50/50	0.2 0.3
010	FA	-	-	359 (351.1)	-8.2	-	-	+7000	-	-	1.0
011	DF	MBE	-	-	-8.2	-	R	10000	-	-	1.0

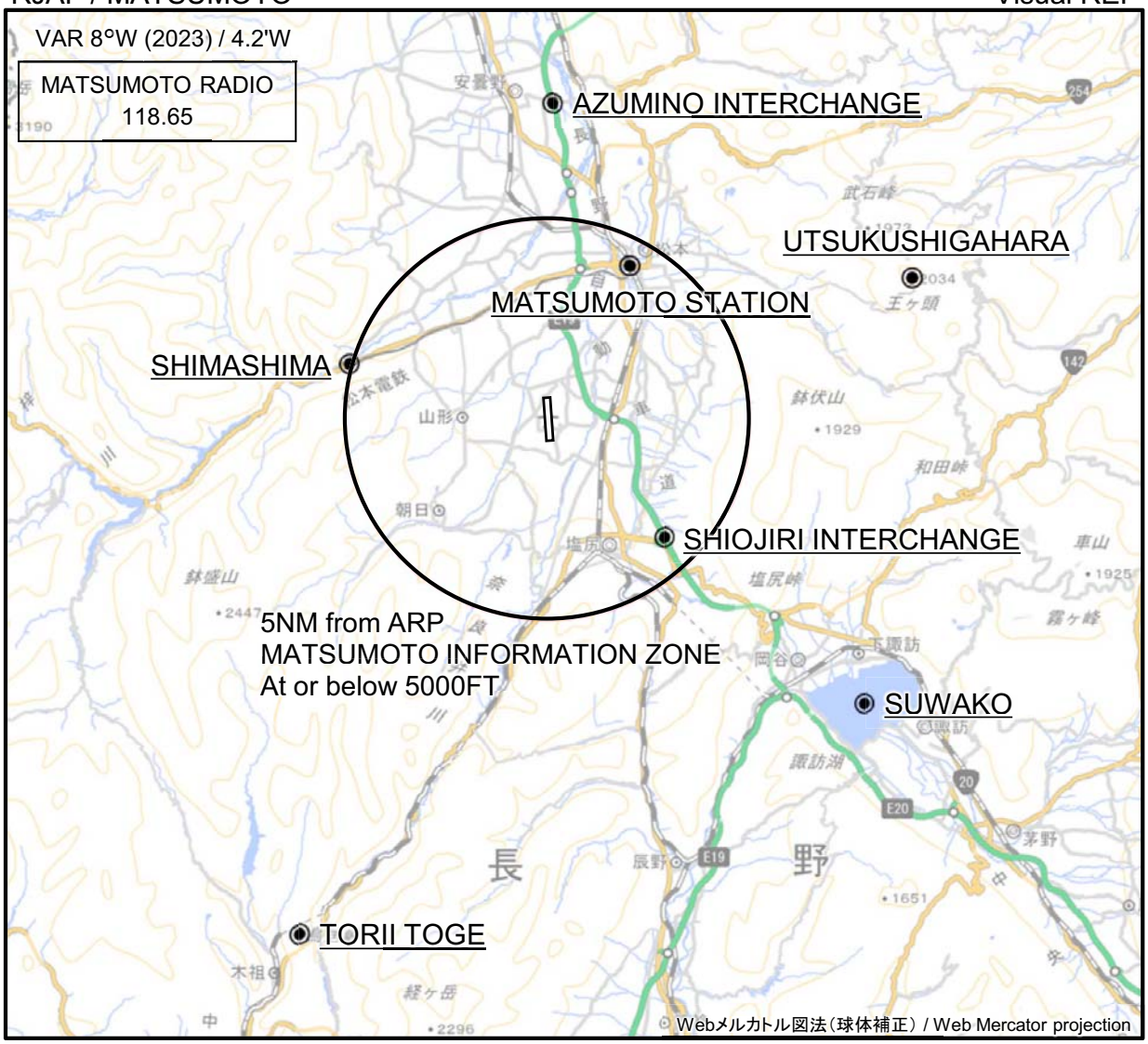
Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
PAPNA	*363721.74N / 1380122.92E*	AFRF4	*361027.73N / 1380059.34E*
AF658	*361613.48N / 1380553.24E*	AFRF2	*360810.39N / 1375813.97E*
AF659	*361345.52N / 1380624.64E*		
AF660	*361117.56N / 1380656.02E*		
AF661	*360820.76N / 1380625.54E*		
AF662	*360549.12N / 1375905.80E*		
AF652	*360615.53N / 1375727.24E*		
AF653	*360751.55N / 1375546.68E*		
RW36	*360928.29N / 1375527.85E*		
MBE	*360921.51N / 1375511.34E*		

CHANGE : PROC renamed.

RJAF / MATSUMOTO

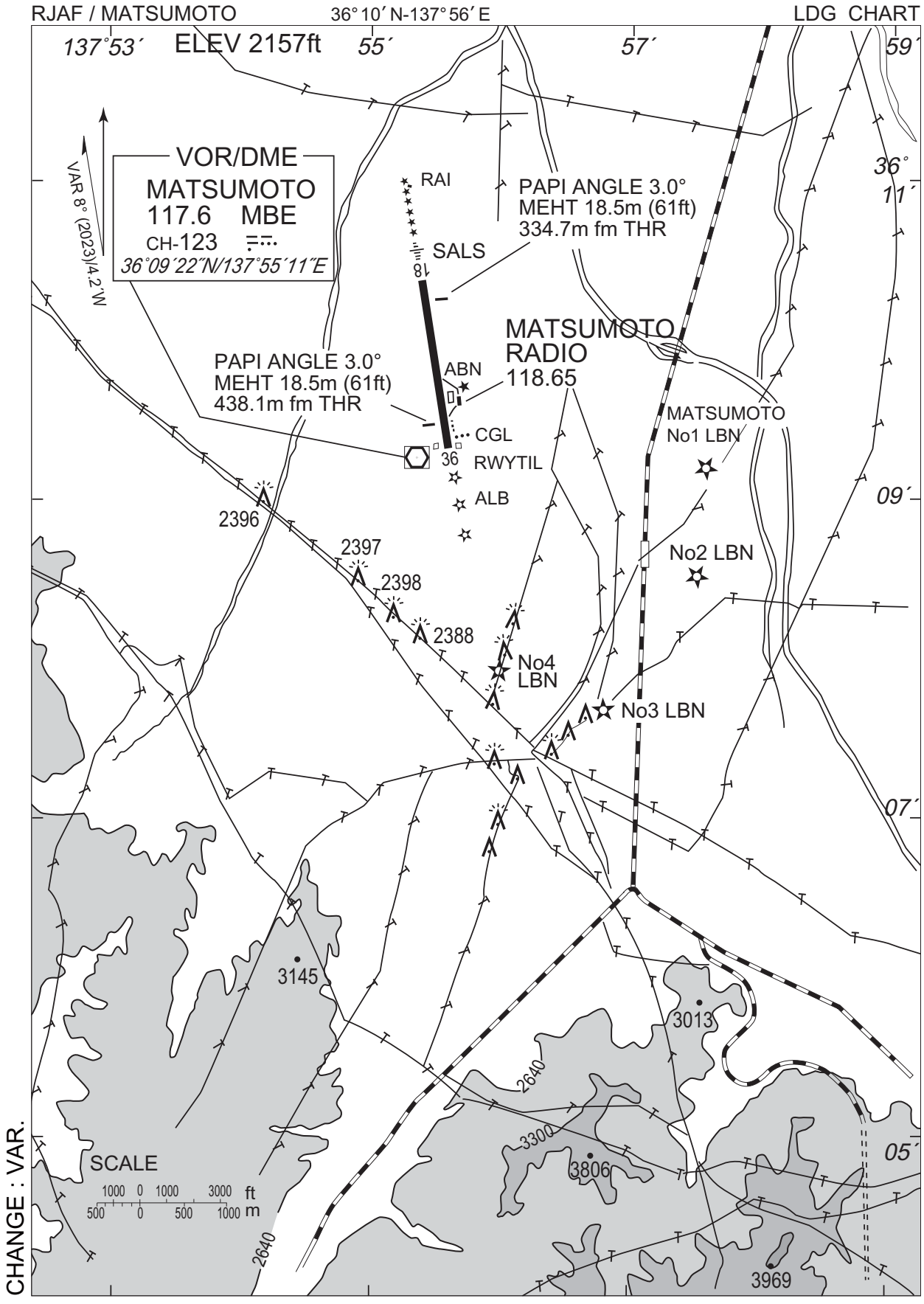
Visual REP



※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 : VAR.

Call sign	BRG / DIST from ARP	Remarks
安曇野インターチェンジ Azumino Interchange	001°T / 7.9NM	長野自動車道 安曇野インターチェンジ Interchange
松本ステーション Matsumoto Station	028°T / 4.3NM	JR駅 Station
美ヶ原 Utsukushigahara	068°T / 9.7NM	美ヶ原王ヶ頭 Peak
島島 Shimashima	286°T / 5.1NM	松本電鉄新島島駅 Station
塩尻インターチェンジ Shiojiri Interchange	136°T / 4.1NM	長野自動車道 塩尻インターチェンジ Interchange
諏訪湖 Suwako	132°T / 10.6NM	諏訪湖上空 Lake
鳥居峠 Torii Toge	205°T / 14.3NM	峠 Mountain Pass


RJAF / MATSUMOTO
36° 10′ N-137° 56′ E
LDG CHART
137˚53′
ELEV 2157ft
55′
57′
59′
36˚ 11′
09′
07′
05′
VOR/DME
MATSUMOTO
117.6 MBE
CH-123
36˚09′22″N/137˚55′11″E
VAR 8° (2023)4.2'W
RAI
SALS
18
PAPI ANGLE 3.0°
MEHT 18.5m (61ft)
334.7m fm THR
PAPI ANGLE 3.0°
MEHT 18.5m (61ft)
438.1m fm THR
MATSUMOTO
RADIO
118.65
ABN
CGL
36
RWYTIL
ALB
MATSUMOTO
No1 LBN
No2 LBN
No3 LBN
No4
LBN
2396
2397
2398
2388
3145
3013
2640
3300
3806
3969
SCALE
1000 0 1000 3000 ft
500 0 500 1000 m
CHANGE : VAR.

RJAF / MATSUMOTO Minimum Vectoring Altitude CHART