AD 2 AERODROMES

RJAF AD 2.1 AERODROME LOCATION INDICATOR AND NAME

RJAF - MATSUMOTO

RJAF AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	*361000N 1375522E*
2	Direction and distance from (city)	5nm SW FM Matsumoto station
3	Elevation/ Reference temperature	2157ft / -
4	Geoid undulation at AD ELEV PSN	Nil
5	MAG VAR/ Annual change	7° W (2010) / 1' W
6	AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses	Nagano Pref. 8909 Kukohigashi Matsumoto-shi Nagano Tel 0263-58-2517 Fax 0263-57-1553 e-mail:matsukuuko@pref.nagano.lg.jp
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Nil

RJAF AD 2.3 OPERATIONAL HOURS

1	AD Administration	2330 - 1000
2	Customs and immigration	On request Customs: 0266-58-5953 Immigration: 026-232-3317
3	Health and sanitation	Quarantine(human): On request(03-3599-1515) Quarantine(animal, plant): Nil
4	AIS Briefing Office	Nil
5	ATS Reporting Office(ARO)	Nil
6	MET Briefing Office	H24 (TOKYO)
7	ATS	2330 - 1000
8	Fuelling	2330 - 1000
9	Handling	2330 - 1000
10	Security	2330 - 1000
11	De-icing	Nil
12	Remarks	Nil

RJAF AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Nil
2	Fuel/ oil types	JET A-1 AVGAS100LL
3	Fuelling facilities/ capacity	Fuel truck
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

RJAF AD 2.5 PASSENGER FACILITIES

1	Hotels	In Matsumoto city and Shiojiri city
2	Restaurants	At Airport
3	Transportation	Buses and Taxi
4	Medical facilities	First aid treatment
5	Bank and Post Office	In Matsumoto city and Shiojiri city
6	Tourist Office	At Airport
7	Remarks	Nil

RJAF AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 7
2	Rescue equipment	Fire fighting truck x 2
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

RJAF AD 2.7 SEASONAL AVAILABILITY-CLEARING

1	Types of clearing equipment	Snow remove equipments: Truck x 7, Rotary x 3, Dozer x 1, Sweeper x 2
2	Clearance priorities	1.RWY 2.TWY 3.APRON
3	Remarks	Nil

RJAF AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	South Apron: Surface: Concrete Strength: PCN 58/R/B/X/T North Apron: N1-N4 Surface: Asphalt Strength: PCN 51/F/A/Y/T N5-N11 Surface: Asphalt Strength: AUW 5700kg
2	Taxiway width, surface and strength	S-T : 23m PCN 45/F/B/X/T N-T : 9m AUW 5700kg
3	ACL and elevation	Not available
4	VOR checkpoints	Not Available
5	INS checkpoints	Spot Nr 1: *360953.36N 1375532.62E* 2: *360951.91N 1375532.90E* 3: *360950.52N 1375533.17E*
6	Remarks	Nil

RJAF 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:RWY 18/36 (Marking) RWY designation ,RWY CL, RWY THR, Aiming point, TDZ, RWY side stripe (LGT) RCLL, REDL, RTHL, RENL, RWY DIST markar LGT TWY: (Marking) TWY CL, TWY side stripe (LGT)TWY edge LGT, TWY CL LGT(for S-T only)
3	Stop bars	Nil
4	Remarks	(Marking) Overrun area (LGT) Apron flood LGT

180°Turn on Overrun

B737-800 型機の過走帯 180°転回実施要領

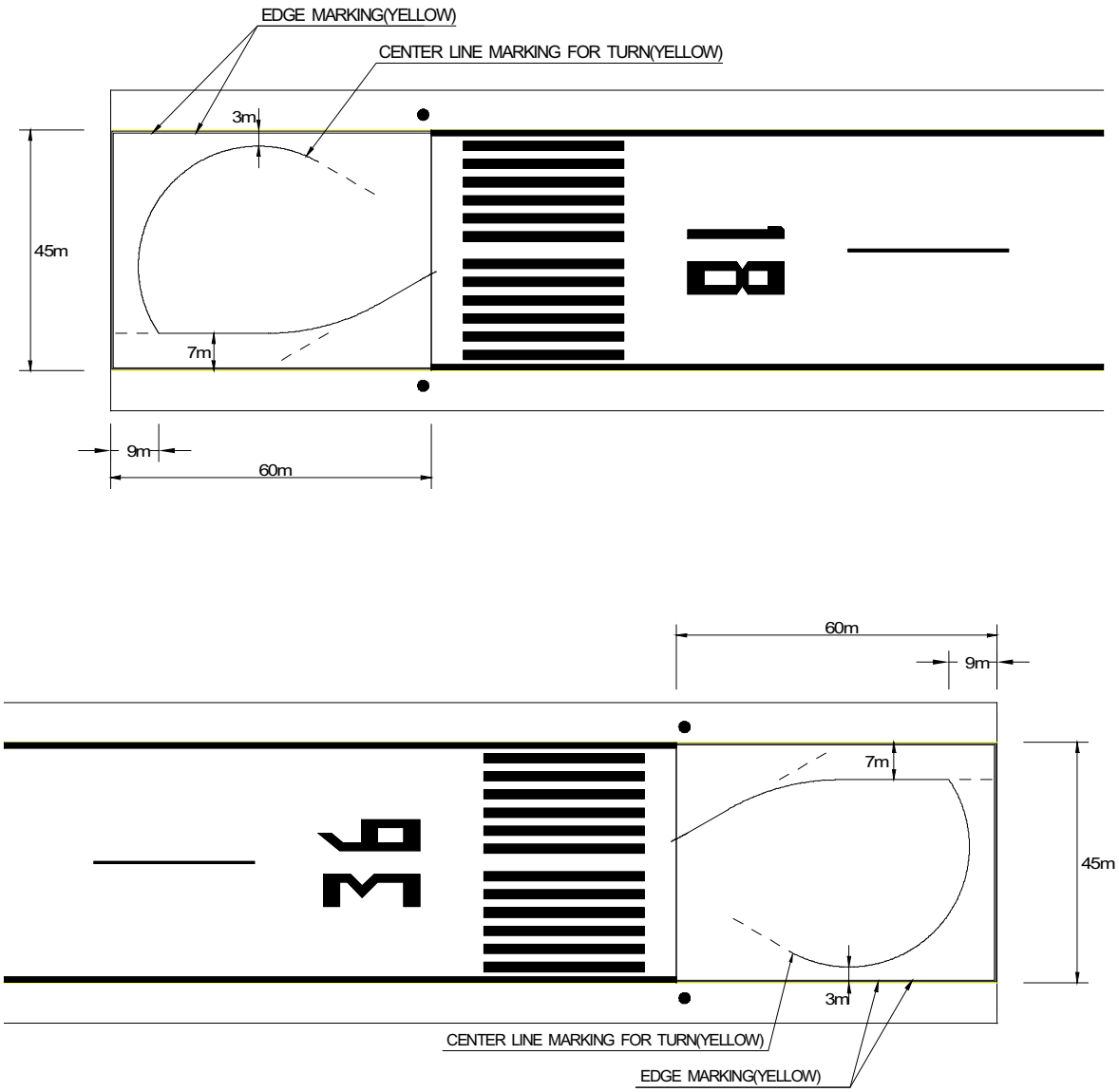
1．転回用中心線標識に従って進行する。

2．転回時の STEERING ANGLE は 48 度以上を使用する。

Procedure of 180° turn on Overrun for B737-800 aircraft.

1. Proceed along the Center Line Marking for turn.

2. When turning, take 48° or more steering angle.



RJAF AD 2.10 AERODROME OBSTACLES

In Area2 See Obstacle data

In Area3 To be developed

RJAF AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

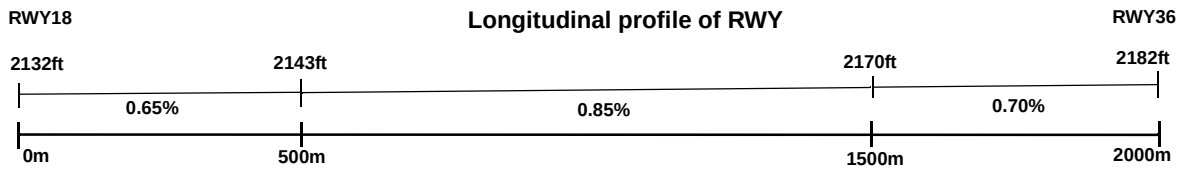
1	Associated MET Office	TOKYO
2	Hours of service MET Office outside hours	H24 (TOKYO)
3	Office responsible for TAF preparation Periods of validity	Nil
4	Trend forecast Interval of issuance	Nil
5	Briefing/ consultation provided	Briefing is available upon inquiry at TOKYO
6	Flight documentation Language(s) 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

RJAF 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
18	171.24°	2000×45	PCN 45/F/B/X/T Asphalt Concrete	*361032.37N 1375515.37E*	THR ELEV : 2132ft
36	351.24°	2000×45	PCN 45/F/B/X/T Asphalt Concrete	*360928.29N 1375527.85E*	THR ELEV : 2182ft

Slope of RWY	Strip Dimensions(M)	RESA(Overrun) Dimensions(M)	Remarks
7	10	11	14
See below figure	2120×150	40x(MNM:91 MAX:150)*	RWY Grooving : 2000m×45m
	2120×150	42x(MNM:135 MAX:150)* *For detail, ask airport administrator	

Longitudinal profile of RWY



RJAF AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
18	2000	2000	2000	2000	Nil
36	2000	2000	2000	2000	Nil

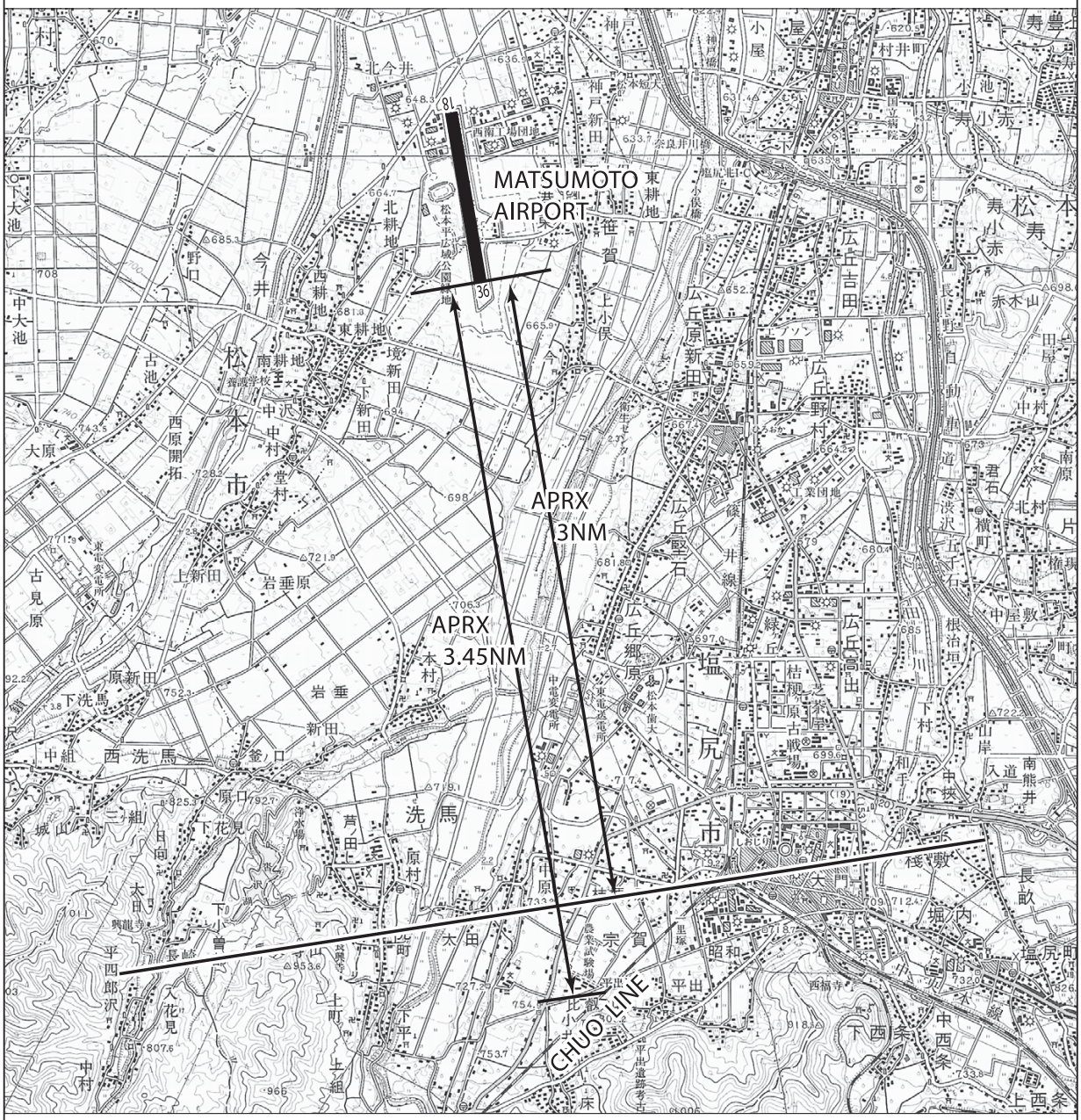
RJAF AD 2.14 APPROACH AND RUNWAY LIGHTING

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
18	SALS (*1) 420m	Green -	PAPI 3.0°/Left 334.7m 61ft	Nil	2000m 30m Coded color (White/Red) LIH	2000m 60m Coded color (White/Yellow) LIH	Red	Nil (*3)
36	Nil (*2)	Green -	PAPI 3.0°/Left 438.1m 61ft	Nil	2000m 30m Coded color (White/Red) LIH	2000m 60m Coded color (White/Yellow) LIH	Red	Nil (*3)
Remarks								
10								
SALS with RAI(LEN:480m) (*1) APCH LGT beacon (300m, 600m and 900m FM RWY THR) (*2) Overrun area edge LGT (LEN: 60m, Color: Red) (*3) CGL for RWY 36 RWY THR ID LGT for RWY 36 THR (Color: White)								

Usable area of PAPI

滑走路36末端側進入角指示灯の使用範囲は，障害物（山及び送電線）のため滑走路36側末端から3NM以内とする。

Usable area of PAPI for runway 36 is within approx. 3NM from runway 36 threshold due to obstructions (mountain and power line).



RJAF AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: *360957N/1375539E*, White/Green EV4.3sec, HO
2	LDI location and LGT Anemometer location and LGT	LDI: Nil Anemometer: RWY18: 435m from RWY18 THR, LGTD RWY36: 447m from RWY36 THR, LGTD
3	TWY edge and centerline lighting	To be issued later
4	Secondary power supply/ switch-over time	Nil
5	Remarks	WDI LGT

RJAF AD 2.16 HELICOPTER LANDING AREA

Nil

RJAF 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
Matsumoto information zone	Area within a radius of 9km(5NM) of ARP	5,000 ft or below	E	Matsumoto radio En	

RJAF AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
AFIS	Matsumoto Radio	118.65MHz(1) 126.2MHz	2330 - 1000	(1)Primary

RJAF 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 (7°W/2009)	MBE	117.6MHz	H24	*360921.51N 1375511.34E*		Unusable: 050°-060° beyond 30nm BLW 11,000ft. 060°-070° beyond 25nm BLW 11,000ft. 070°-075° beyond 20nm BLW 11,000ft. 075°-085° beyond 25nm BLW 11,000ft. 085°-095° beyond 15nm BLW 11,000ft. 095°-110° beyond 20nm BLW 11,000ft. 110°-120° beyond 25nm BLW 13,000ft. 120°-130° beyond 30nm BLW 13,000ft. 195°-220° beyond 30nm BLW 13,000ft. 220°-235° beyond 25nm BLW 13,000ft. 235°-275° beyond 20nm BLW 13,000ft. 275°-305° beyond 25nm BLW 13,000ft. 305°-335° beyond 20nm BLW 13,000ft. 335°-345° beyond 30nm BLW 12,000ft.
DME	MBE	1210MHz (CH-123X)	H24	*360921.51N 1375511.34E*	2260ft	

RJAF AD 2.20 LOCAL TRAFFIC REGULATIONS

1. Airport regulations

PPR for use tel 0263-58-2517,2518

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

RJAF AD 2.21 NOISE ABATEMENT PROCEDURES

Nil

RJAF AD 2.22 FLIGHT PROCEDURES

1. TAKE OFF MINIMA

	RWY	ACFT CAT	REDL & RCLL		REDL or RCLL or RCL Marking		NIL (DAYTIME ONLY)	
			RVR	CEIL-VIS	RVR	CEIL-VIS	RVR	CEIL-VIS
Multi-Engine ACFT with TKOF ALTN AP FILED	18	A,B,C	-	200′-1600m	-	200′-1600m	-	200′-1600m
	36		-	0′-400m	-	0′-400m	-	0′-500m
OTHER	18		AVBL LDG MINIMA					
	36							

2. Other

当空港に着陸又は空港周辺、特に空港の北側を飛行しようとする VFR 機については、交通情報の入手のため、少なくとも 15NM 以遠からの松本 RADIO との通信設定が推奨される。 VFR aircraft intending to land on or fly around the AP, especially north of the airport is recommended to make initial contact with Matsumoto RADIO to obtain traffic information at least 15nm far from the AP.

RJAF AD 2.23 ADDITIONAL INFORMATION

Nil

RJAF AD 2.24 CHARTS RELATED TO AN AERODROME

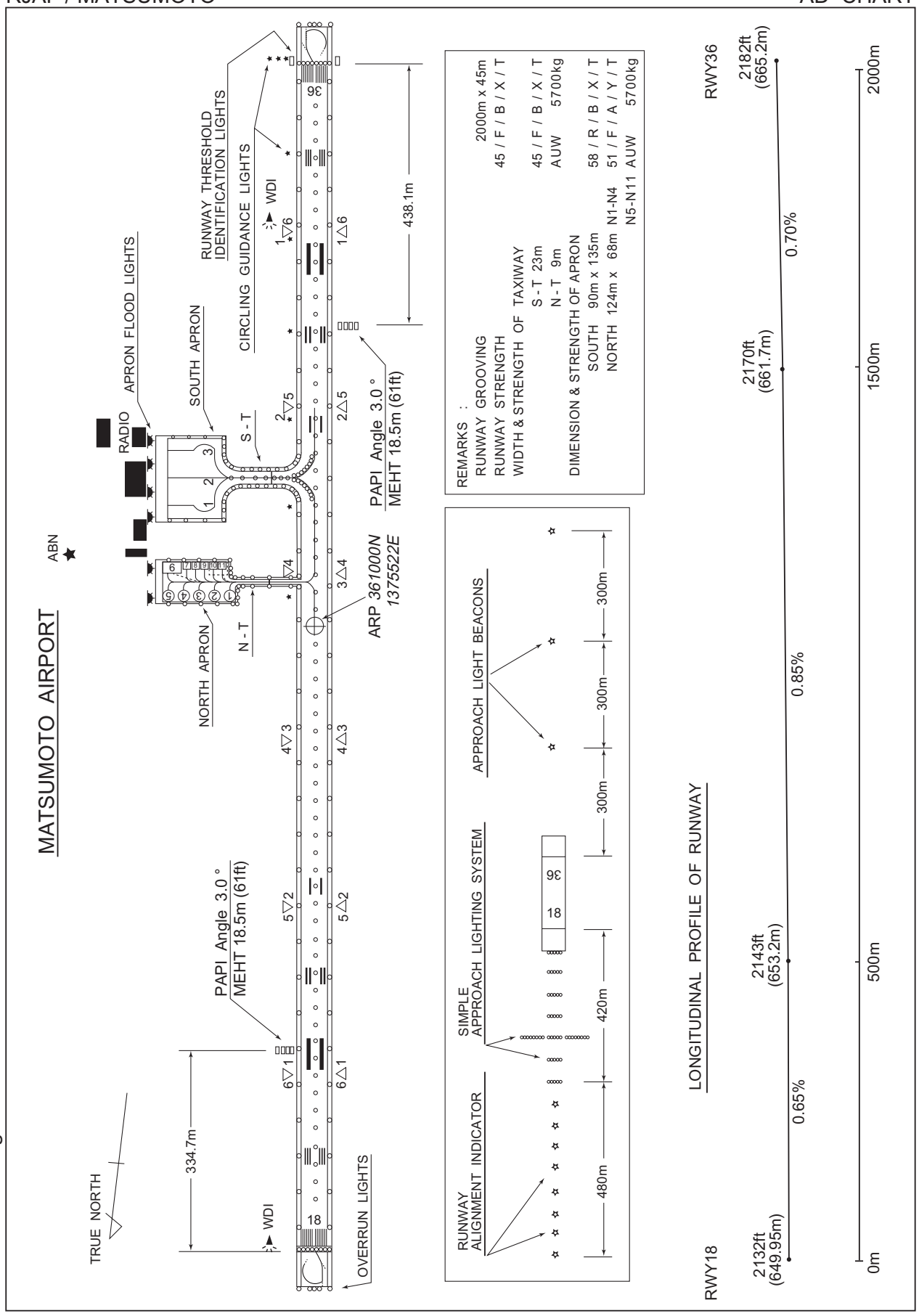
Aerodrome Chart Standard Departure Chart - Instrument (MATSUMOTO REVERSAL) Standard Departure Chart - Instrument (HAPPO) Standard Departure Chart - Instrument (NIIGATA, MATSUMOTO- RNAV) Instrument Approach Chart (VOR RWY18) Instrument Approach Chart (RNAV(RNP) Z RWY18) Instrument Approach Chart (RNAV(RNP) Y RWY18) Instrument Approach Chart (RNAV(RNP) Z RWY36) Instrument Approach Chart (RNAV(RNP) Y RWY36) Other Chart (Visual REP) Other Chart (LDG CHART) Other Chart (MVA CHART)

INTENTIONALLY LEFT BLANK

RJAF / MATSUMOTO

AD CHART

CHANGE: Marking for 180°turn on overrun added.



INTENTIONALLY LEFT BLANK

STANDARD DEPARTURE CHART-INSTRUMENT

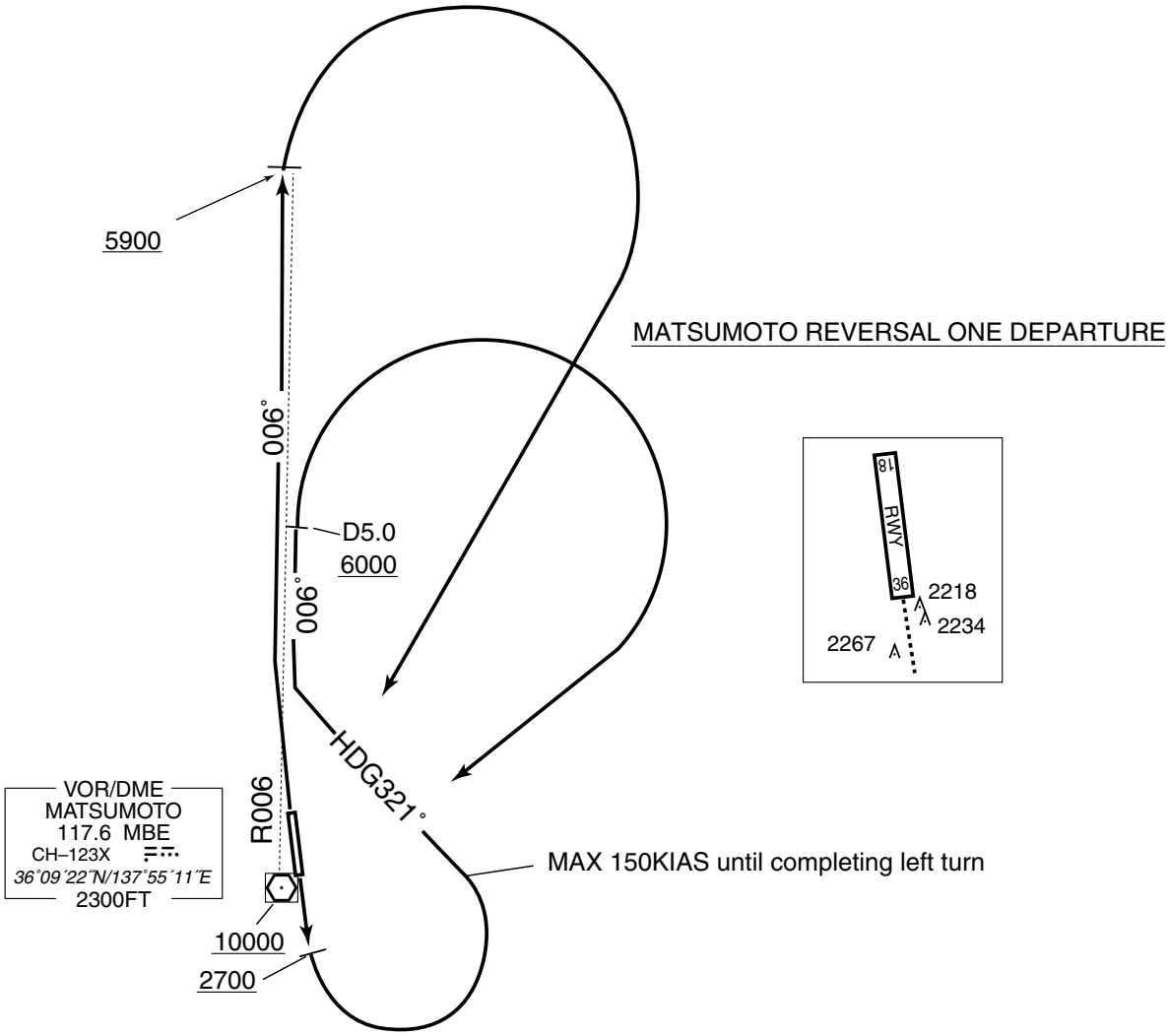
RJAF / MATSUMOTO SID

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.



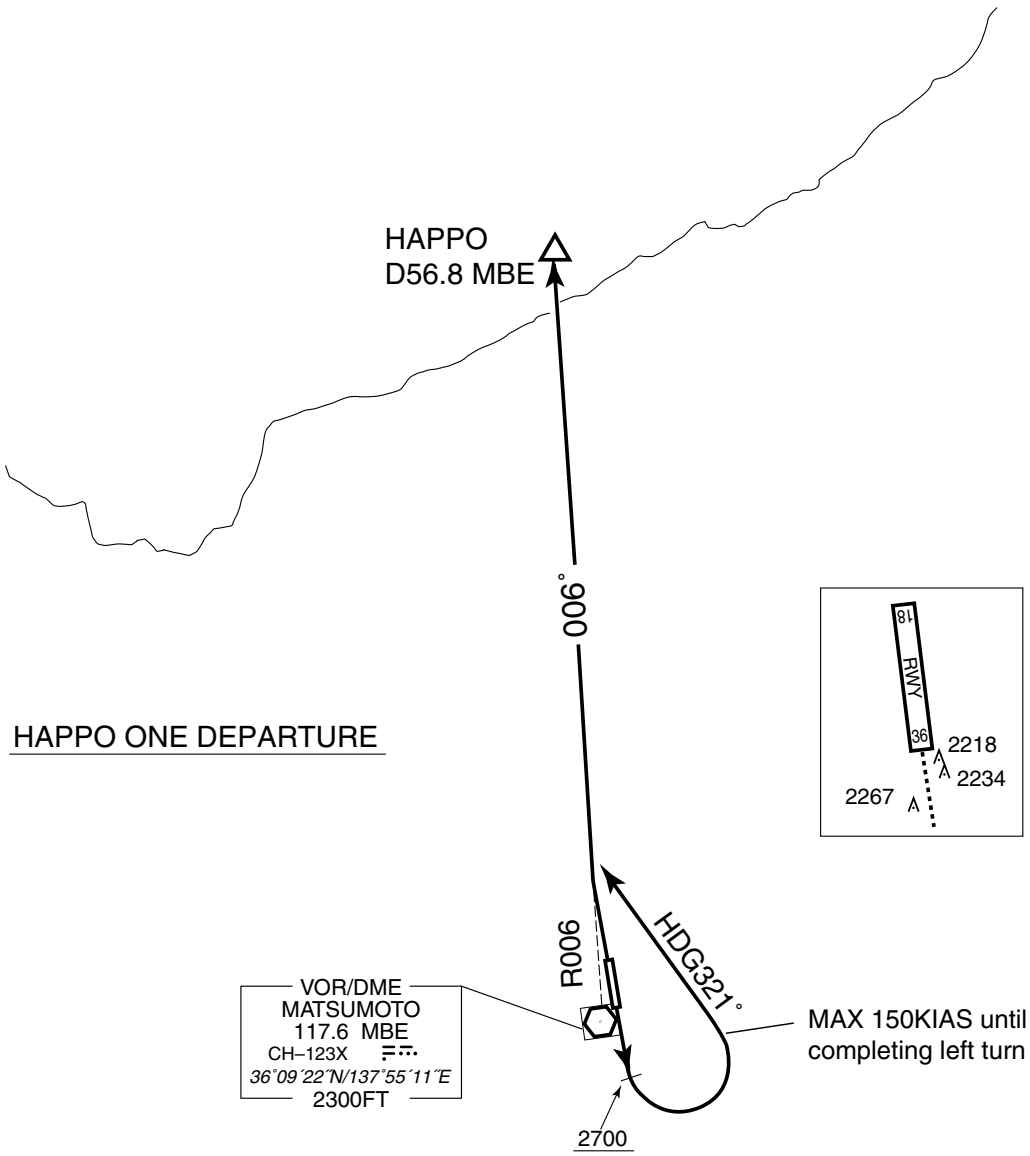
STANDARD DEPARTURE CHART-INSTRUMENT

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.



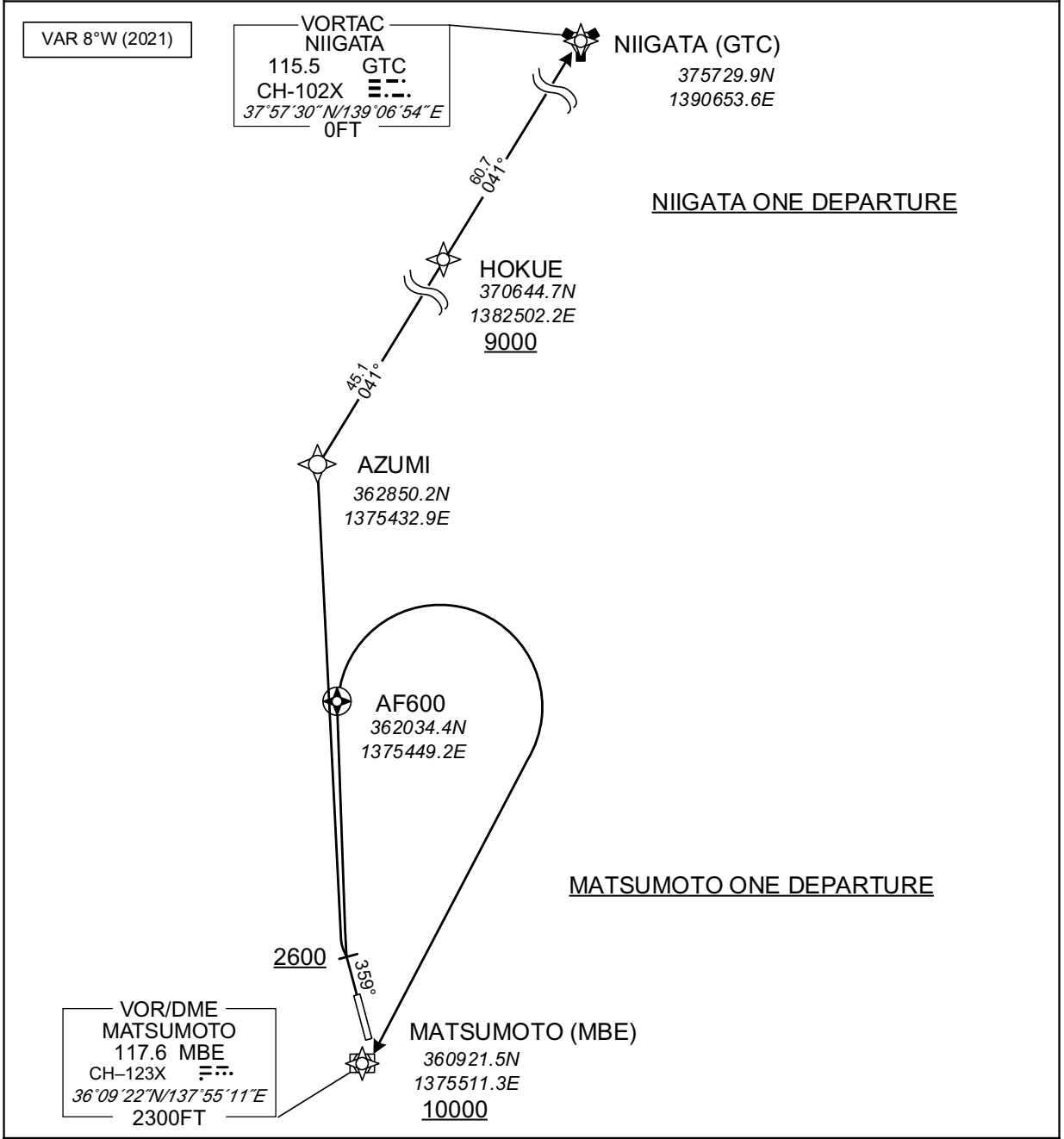
STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

RNAV SID

NIIGATA ONE DEPARTURE MATSUMOTO ONE DEPARTURE	Basic 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: VAR.

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

MATSUMOTO ONE DEPARTURE

RWY36

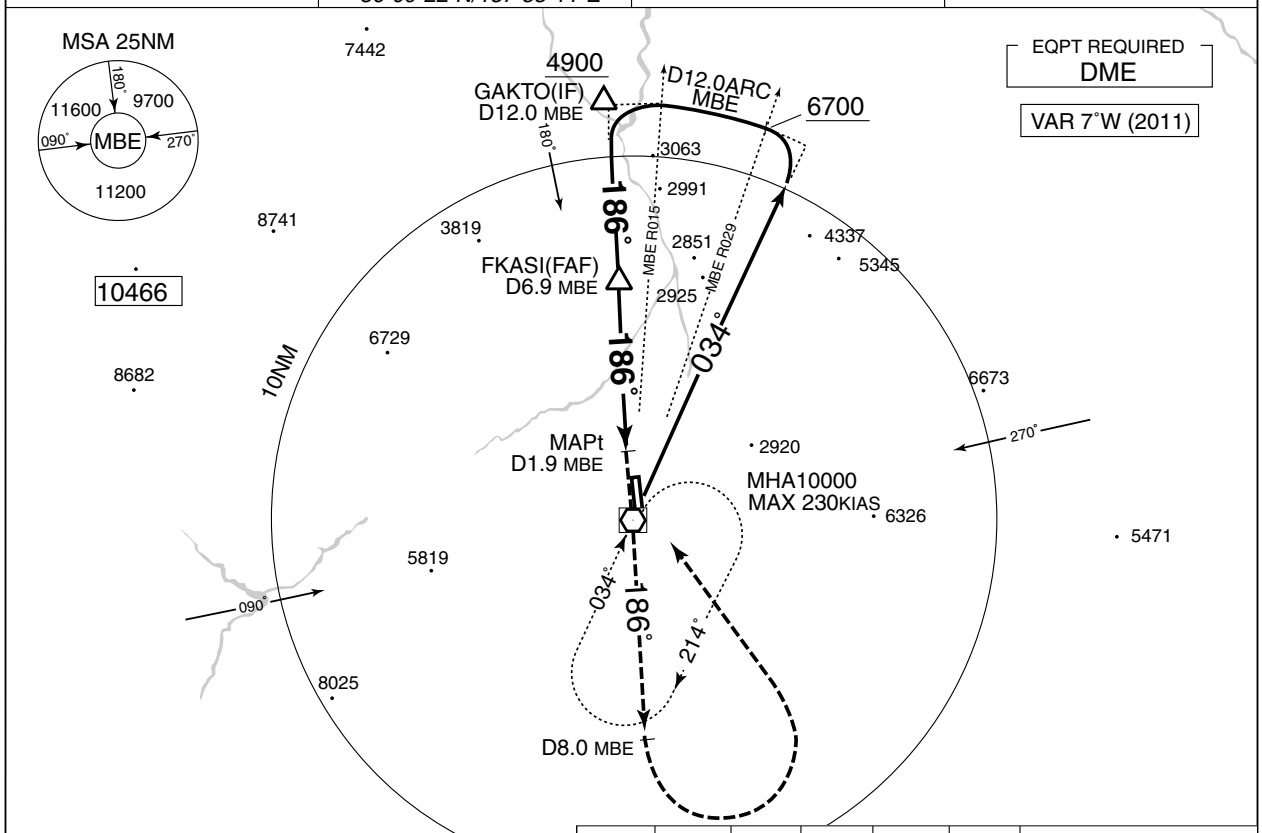
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	-	-	359 (351.1)	-8.2	-	-	+2600	-	-	Basic RNP1
002	DF	AF600	Y	-	-8.2	-	-	-	-	-	Basic RNP1
003	DF	MBE	-	-	-8.2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

CHANGE: VAR. True course(VA).

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO — VOR RWY18

TOKYO 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 - 126.2	



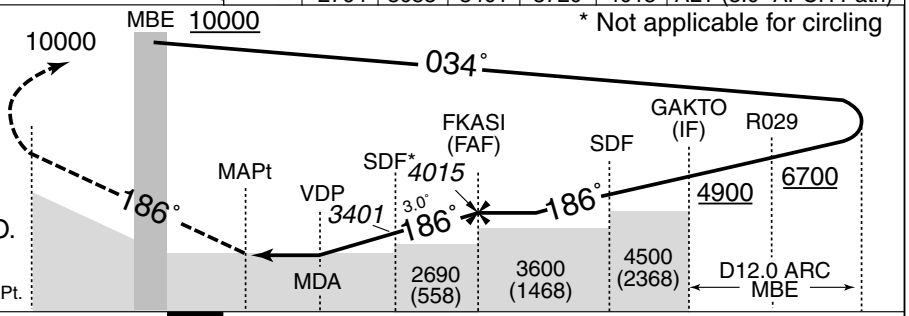
FKASI(FAF) : *361617.34N/1375454.42E*

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.

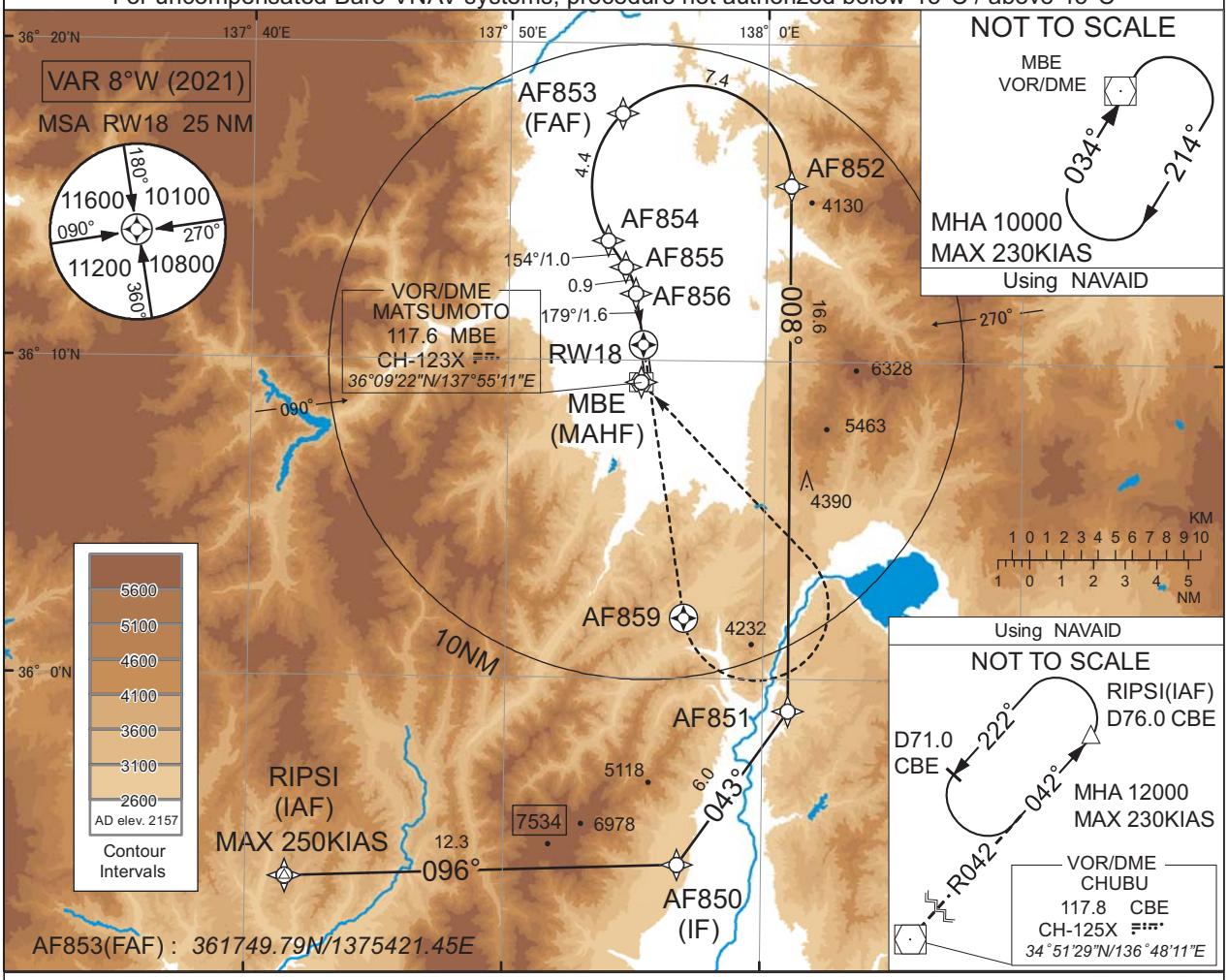
INTENTIONALLY LEFT BLANK

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO — RNAV(RNP) Z RWY18

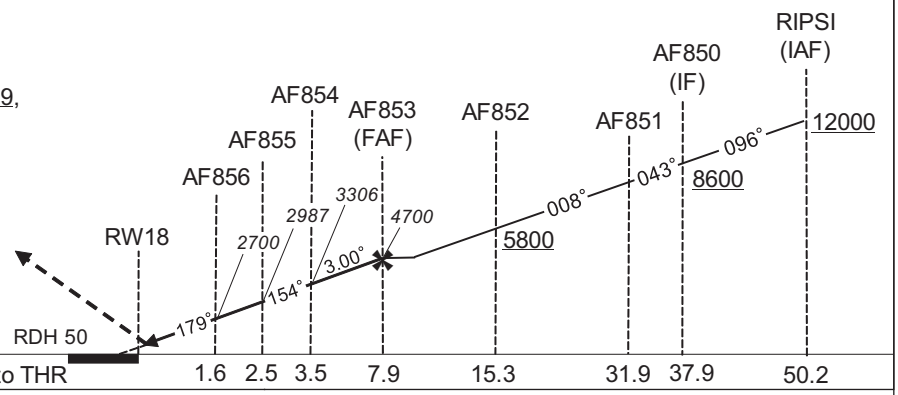
TOKYO CONTROL 132.45 - 125.6 304.4 - 317.1	GNSS and RF required.	MATSUMOTO RADIO 118.65 - 126.2	NO RADAR

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.

CHANGE : VAR. MSA.

RNP AR

Special Authorization Required

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO RNAV(RNP) Z RWY18

RNAV(RNP) Z RWY18

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*		

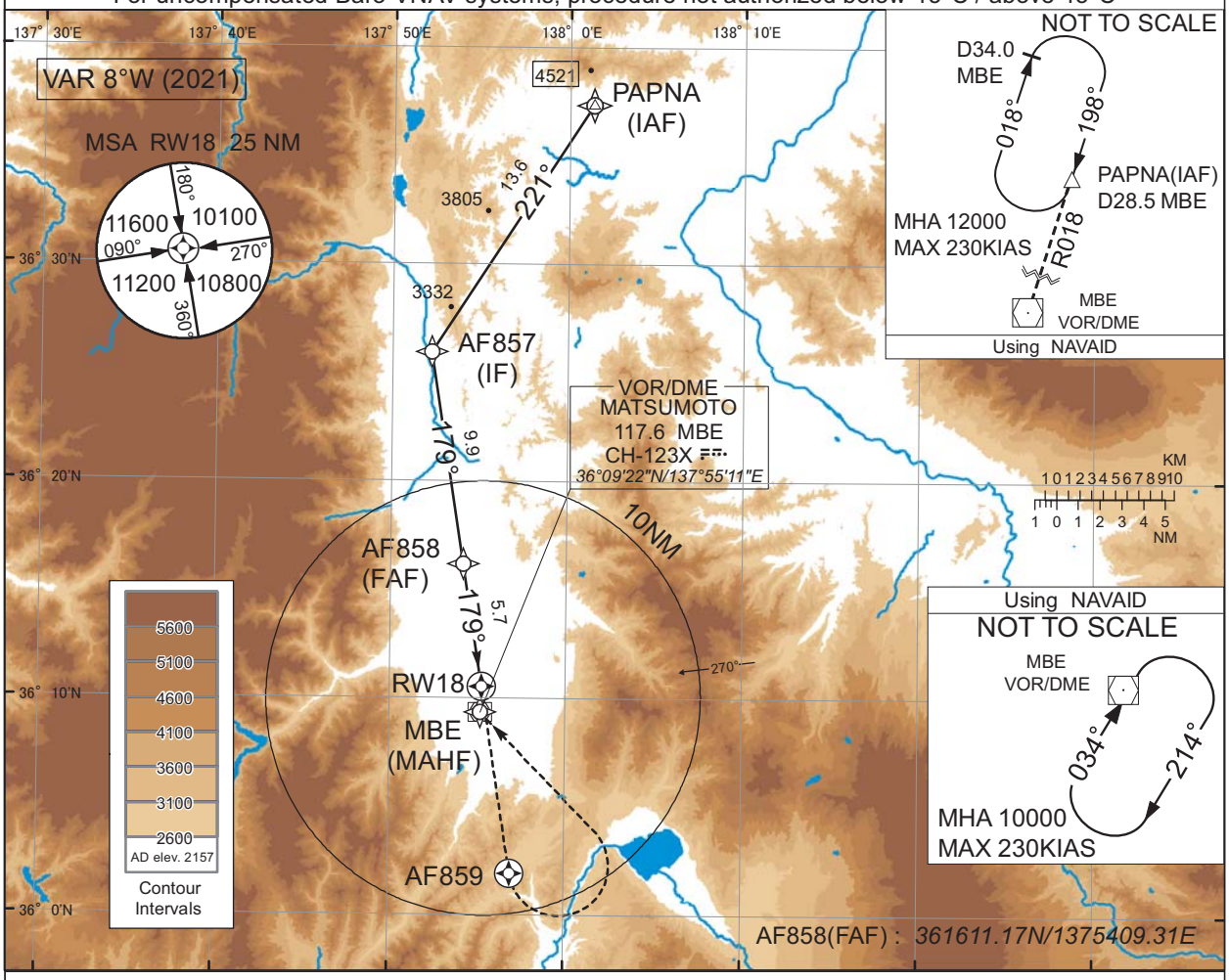
CHANGE : VAR.

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO — RNAV(RNP) Y RWY18

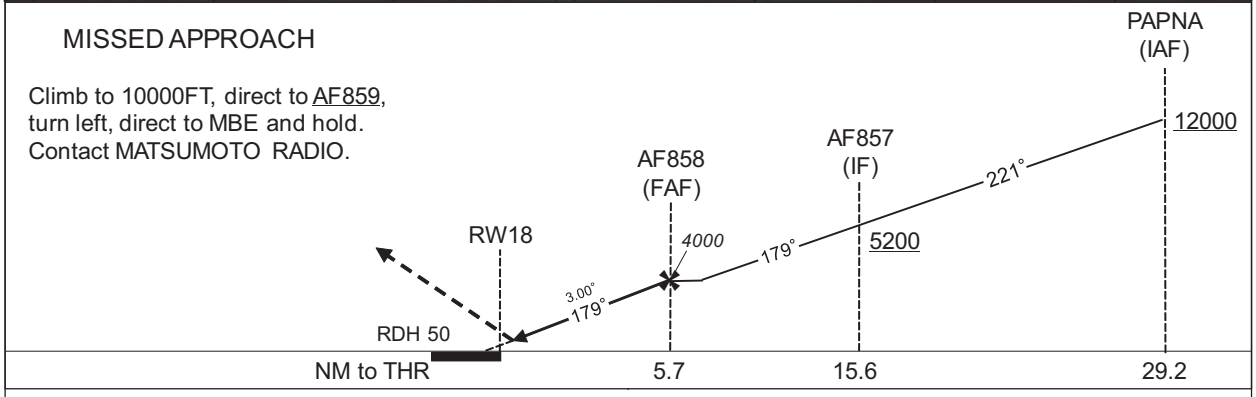
TOKYO CONTROL 132.45 - 125.6 304.4 - 317.1	GNSS required.	MATSUMOTO RADIO 118.65 - 126.2	NO RADAR

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.

RNP AR

Special Authorization Required

CHANGE : VAR. MSA.

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO RNAV(RNP) Y RWY18

RNAV(RNP) Y RWY18

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*

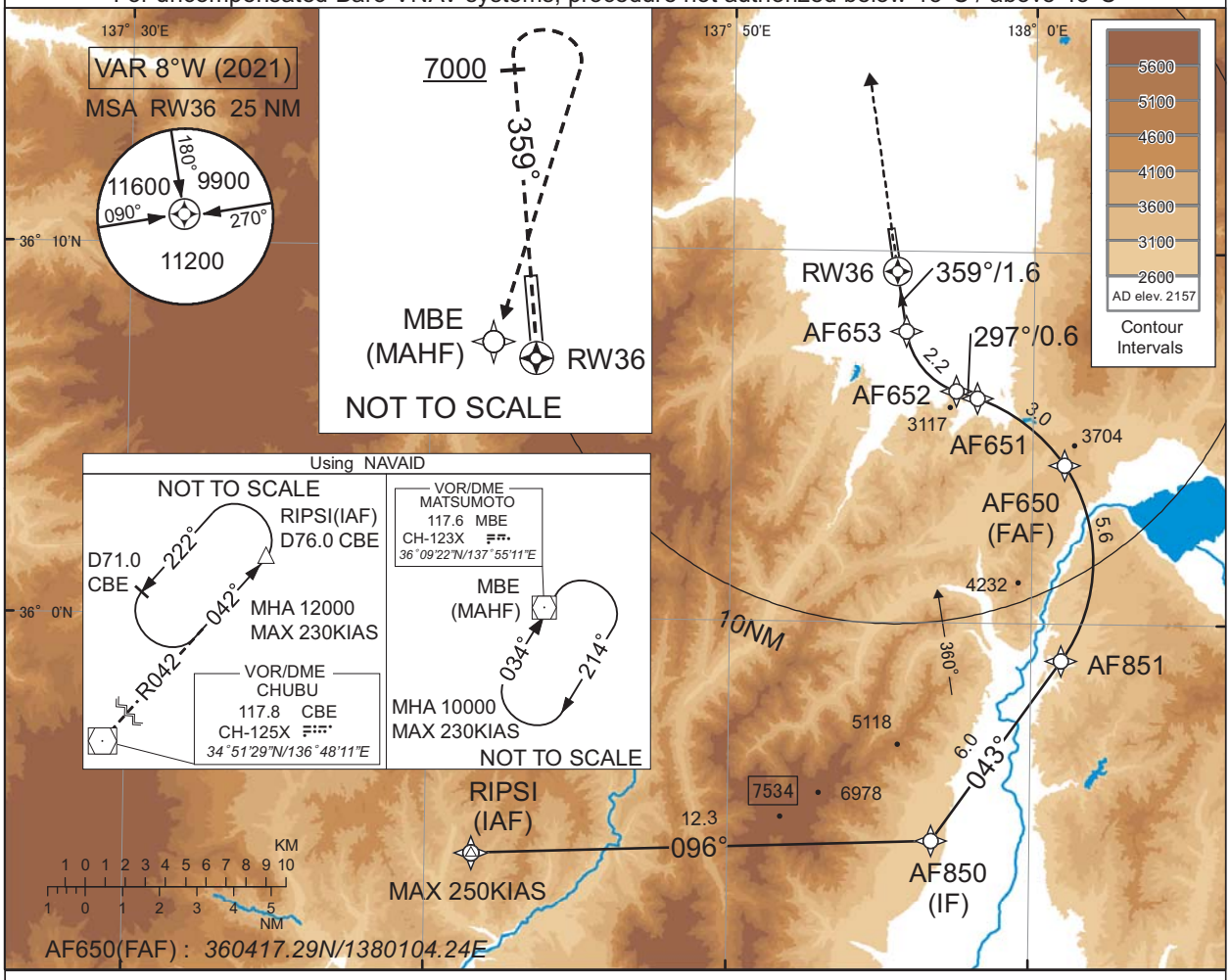
CHANGE : VAR.

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO — RNAV(RNP) Z RWY36

TOKYO CONTROL 132.45 - 125.6 304.4 - 317.1	GNSS and RF required.	MATSUMOTO RADIO 118.65 - 126.2	NO RADAR

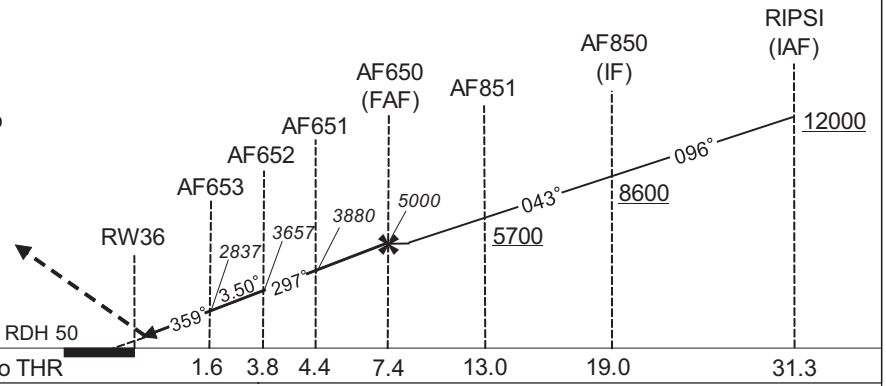
For uncompensated Baro-VNAV systems, procedure not authorized below-15°C / above 45°C



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.

RNP AR

Special Authorization Required

CHANGE : VAR. MSA. Course FM AF651 to AF652.

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO RNAV(RNP) Z RWY36

RNAV(RNP) Z RWY36

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*		

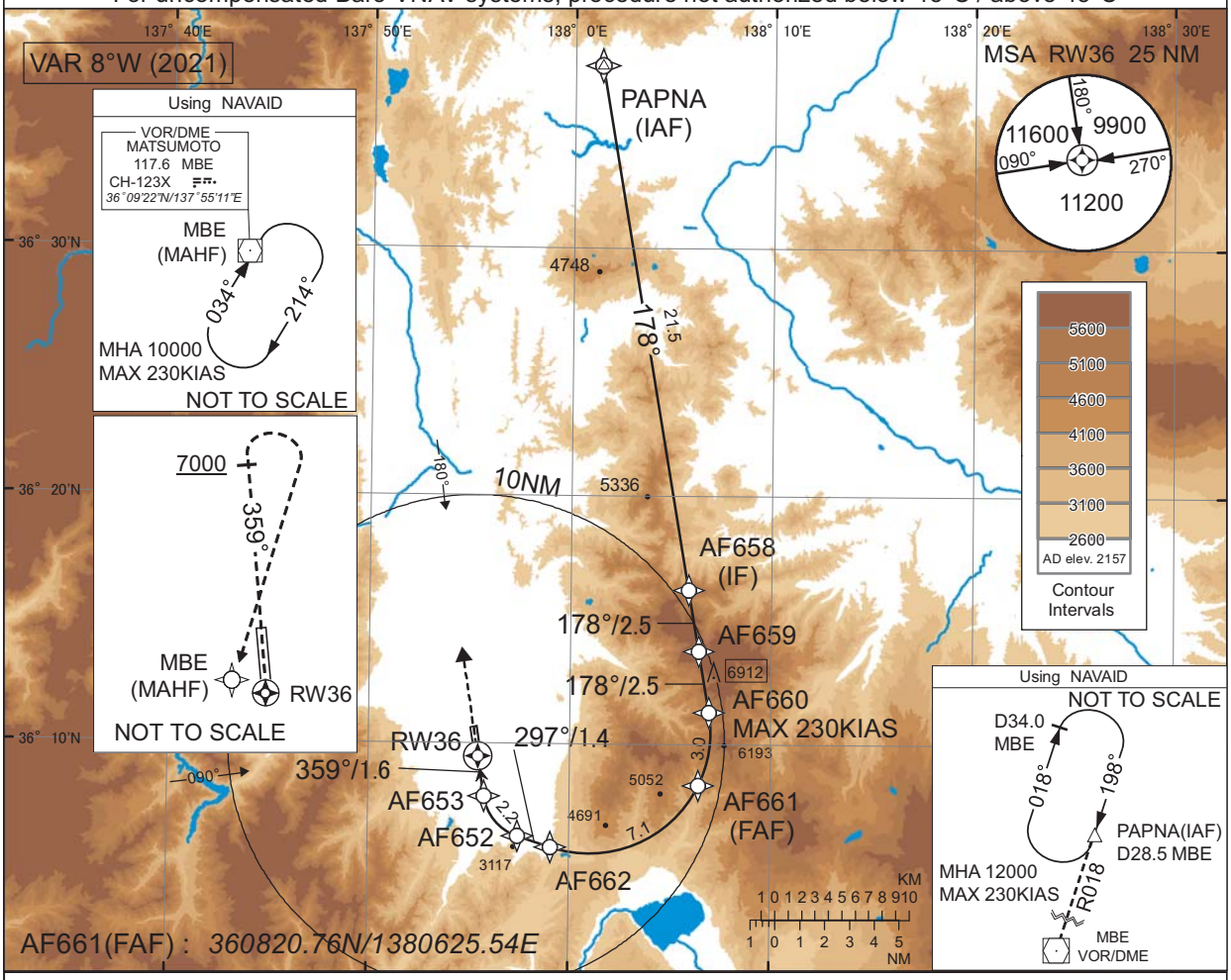
CHANGE : VAR. Course FM AF651 to AF652.

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO — RNAV(RNP) Y RWY36

TOKYO CONTROL 132.45 - 125.6 304.4 - 317.1	GNSS and RF required.	MATSUMOTO RADIO 118.65 - 126.2	NO RADAR

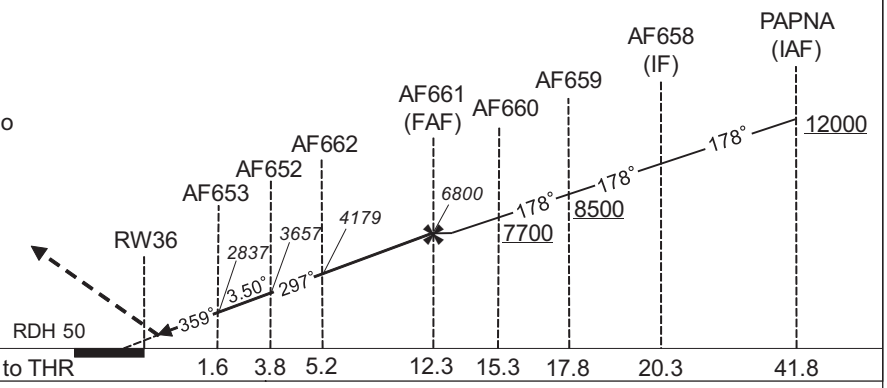
For uncompensated Baro-VNAV systems, procedure not authorized below-15°C / above 45°C



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.

RNP AR

Special Authorization Required

CHANGE : VAR. MSA. AF659 established. Waypoint renamed(AF654→AF658, AF655→AF660, AF656→AF661, AF657→AF662). Course FM AF662 to AF652. ALT restriction(AF660). Speed restriction(AF660).

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO RNAV(RNP) Y RWY36

CHANGE : VAR. AF659 established. Waypoint renamed(AF654→AF658, AF655→AF660, AF656→AF661, AF657→AF662). Course FM AF662 to AF652. ALT restriction(AF660). Speed restriction(AF660).

RNAV(RNP) Y RWY36

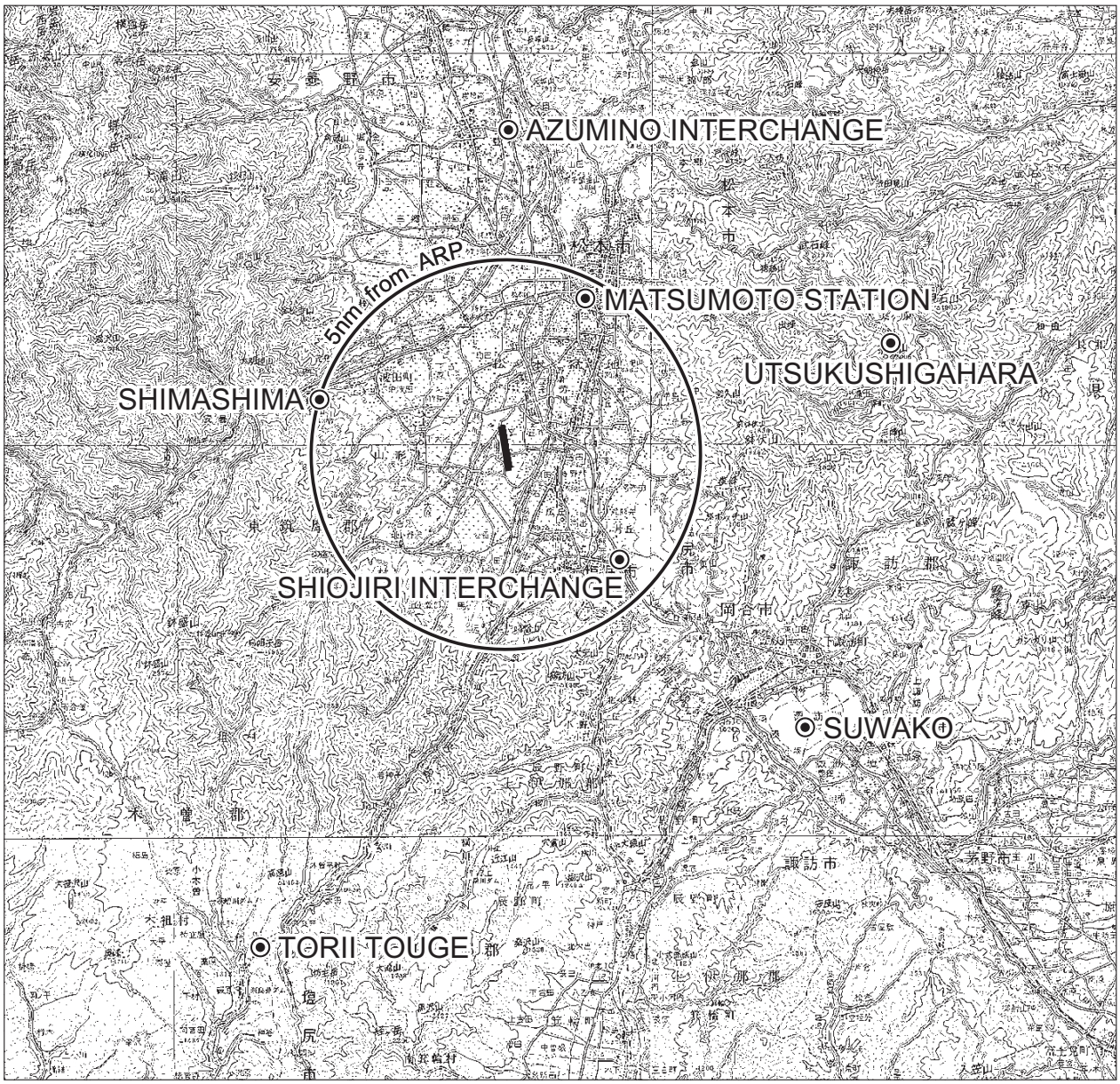
Coding Table

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

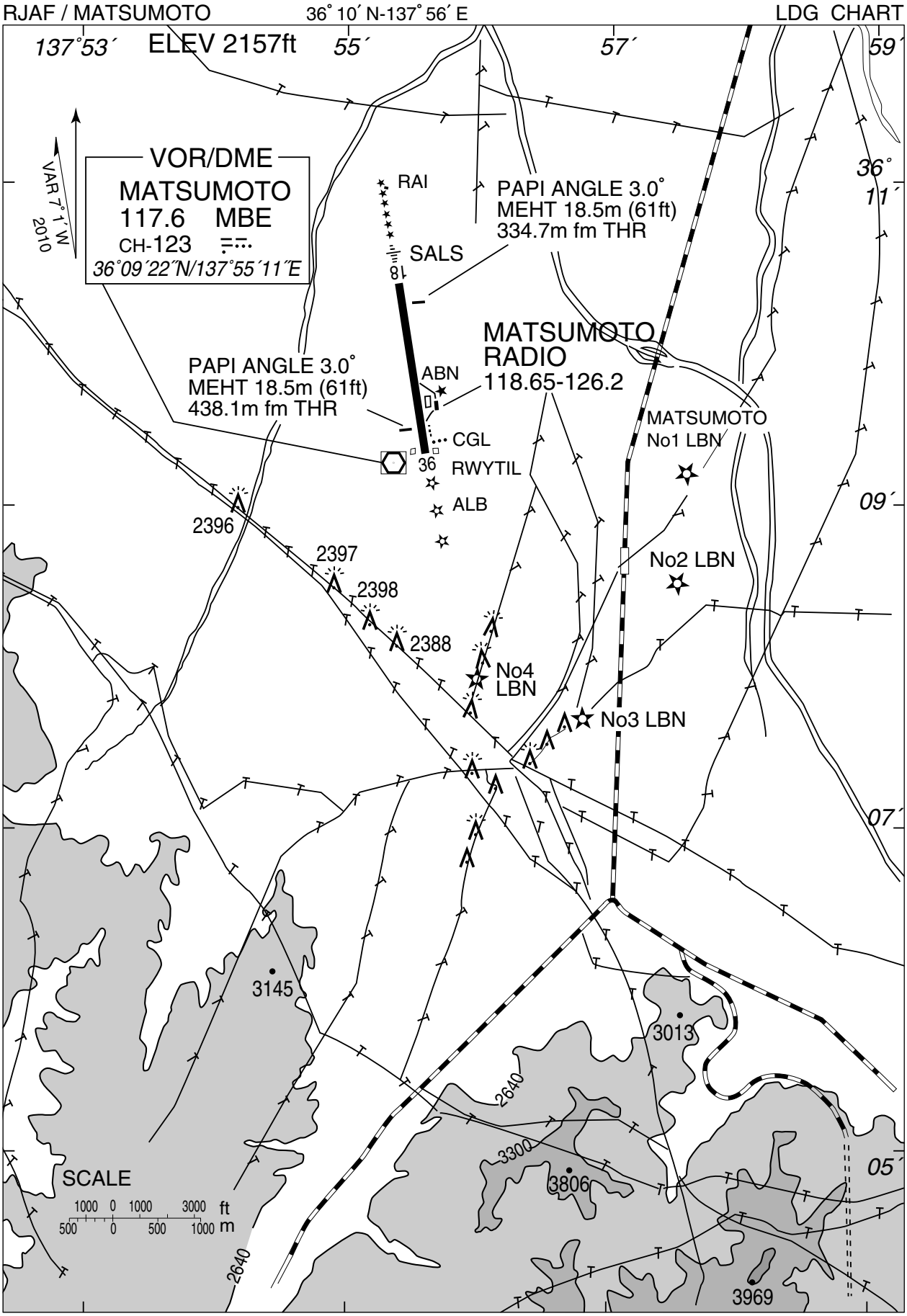
Waypoint Coordinates

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*		

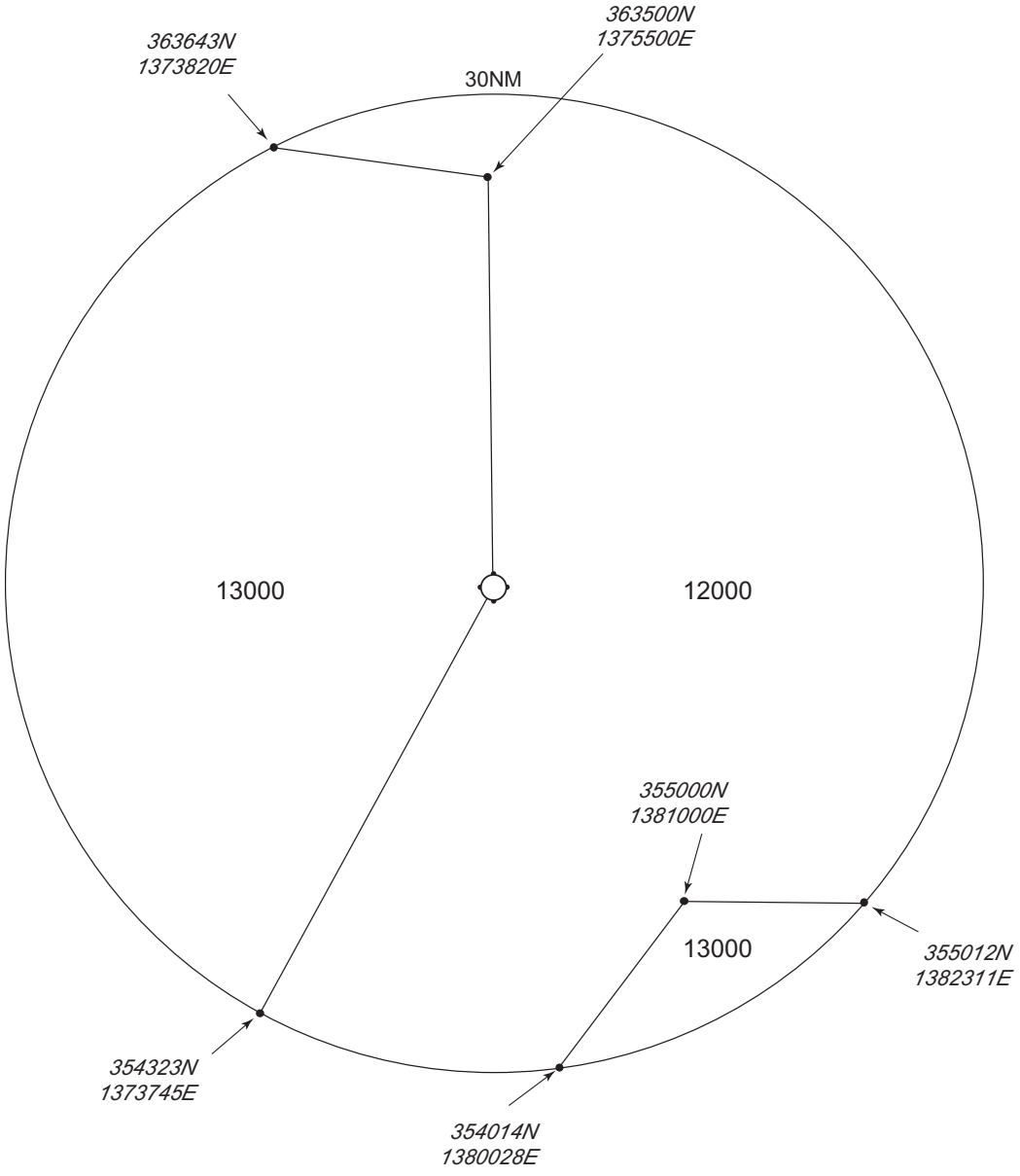
RJAF / MATSUMOTO Visual REP



Call sign	BRG / DIST from ARP	Remarks
安曇野インターチェンジ Azumino Interchange	008˚/8.0NM	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	036˚/4.3NM	JR駅 Station
美ヶ原 Utsukushigahara	075˚/9.6NM	美ヶ原王ヶ頭 Peak
島島 Shimashima	292˚/5.0NM	松本電鉄新島島駅 Station
塩尻インターチェンジ Shiojiri Interchange	142˚/4.1NM	長野自動車道　塩尻インターチェンジ Interchange
諏訪湖 Suwako	140˚/10NM	諏訪湖上空 Lake
鳥居峠 Torii touge	213˚/14.4NM	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′
VAR 7° 1′ W 2010
VOR/DME
MATSUMOTO
117.6 MBE
CH-123
36°09′22″N/137°55′11″E
RAI
SALS
18
PAPI ANGLE 3.0°
MEHT 18.5m (61ft)
334.7m fm THR
MATSUMOTO
RADIO
118.65-126.2
PAPI ANGLE 3.0°
MEHT 18.5m (61ft)
438.1m fm THR
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

RJAF / MATSUMOTO Minimum Vectoring Altitude CHART



CENTER : *361000N/1375522E*(ARP)