

RJAF / MATSUMOTO

AD CHART

CHANGE: Aircraft stand lead-in line (Spot 6,10,11) changed.



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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.



## STANDARD DEPARTURE CHART-INSTRUMENT

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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.

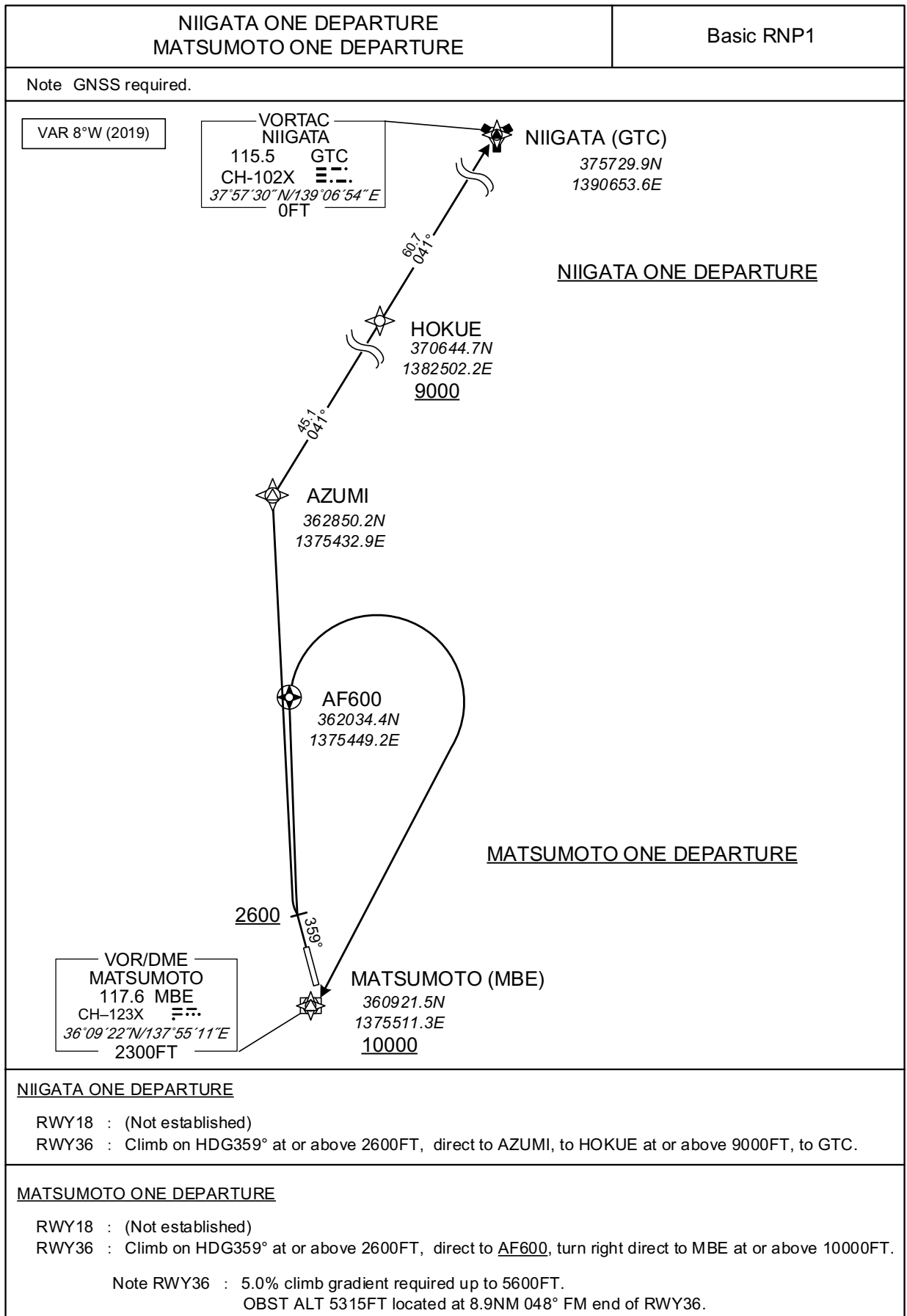
2) Departure turn limited to 150KIAS maximum until completing left turn.



STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

RNAV SID



## STANDARD DEPARTURE CHART-INSTRUMENT

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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 (351.4)	-8.0	-	-	+2600	-	-	Basic RNP1
002	DF	AZUMI	-	-	-8.0	-	-	-	-	-	Basic RNP1
003	TF	HOKUE	-	041 (032.6)	-8.0	45.1	-	+9000	-	-	Basic RNP1
004	TF	GTC	-	041 (033.0)	-8.0	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 (351.4)	-8.0	-	-	+2600	-	-	Basic RNP1
002	DF	AF600	Y	-	-8.0	-	-	-	-	-	Basic RNP1
003	DF	MBE	-	-	-8.0	-	R	+10000	-	-	Basic RNP1

CHANGE:New PROC

INSTRUMENT APPROACH CHART

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VOR RWY18



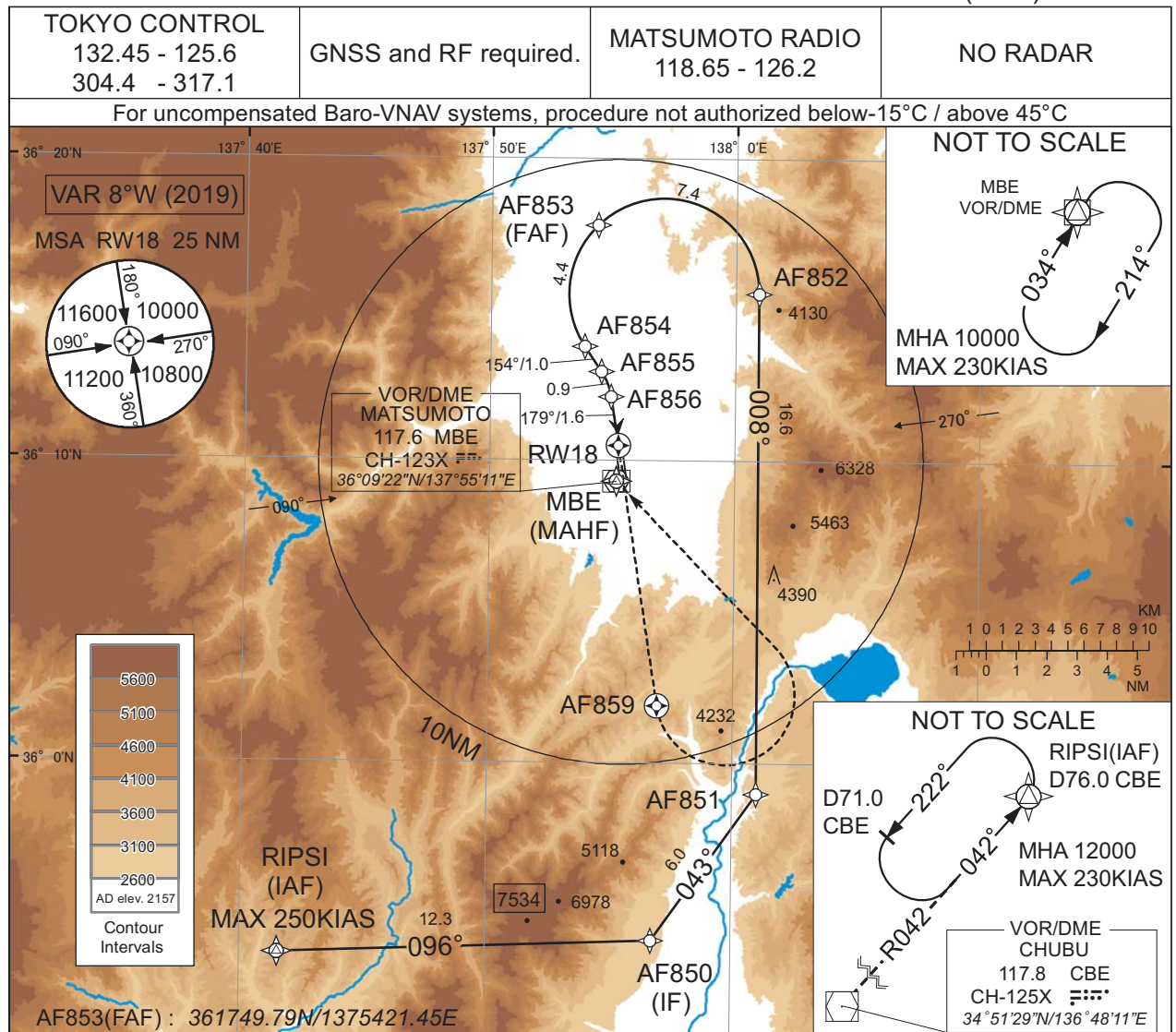
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INSTRUMENT APPROACH CHART

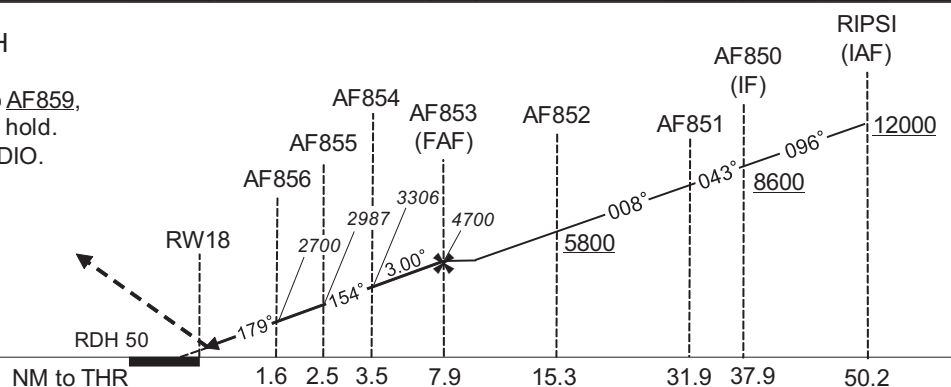
RJAF / MATSUMOTO

RNAV(RNP) Z RWY18



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%

CAT	THR elev. 2132		AD elev. 2157	
	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

## INSTRUMENT APPROACH CHART

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RNAV(RNP) Z RWY18

RNAV(RNP) Z RWY18Coding 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	-	-	-8.0	-	-	+12000	-250	-	-
002	TF	AF850	-	096 (087.7)	-8.0	12.3	-	+8600	-	-	1.0
003	TF	AF851	-	043 (035.2)	-8.0	6.0	-	-	-	-	0.3
004	TF	AF852	-	008 (359.9)	-8.0	16.6	-	+5800	-	-	0.3
005	RF Center: AFRF5 r=3.15NM	AF853	-	-	-8.0	7.4	L	4700	-	-	0.3
006	RF Center: AFRF5 r=3.15NM	AF854	-	-	-8.0	4.4	L	3306	-	-3.00	0.2 0.3
007	TF	AF855	-	154 (146.1)	-8.0	1.0	-	2987	-	-3.00	0.2 0.3
008	RF Center: AFRF6 r=2.06NM	AF856	-	-	-8.0	0.9	R	2700	-	-3.00	0.2 0.3
009	TF	RW18	Y	179 (171.1)	-8.0	1.6	-	2182	-	-3.00/50	0.2 0.3
010	DF	AF859	Y	-	-8.0	-	-	-	-	-	1.0
011	DF	MBE	-	-	-8.0	-	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 : Correction of misdescription (AFRF6 Coordinates).

INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Y RWY18



**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%

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 : New PROC

## INSTRUMENT APPROACH CHART

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RNAV(RNP) Y RWY18

RNAV(RNP) Y RWY18Coding 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	-	-	-8.0	-	-	+12000	-	-	-
002	TF	AF857	-	221 (212.8)	-8.0	13.6	-	+5200	-	-	1.0
003	TF	AF858	-	179 (171.0)	-8.0	9.9	-	4000	-	-	1.0
004	TF	RW18	Y	179 (171.1)	-8.0	5.7	-	2182	-	-3.00/50	0.2 0.3
005	DF	AF859	Y	-	-8.0	-	-	-	-	-	1.0
006	DF	MBE	-	-	-8.0	-	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 : New PROC



INSTRUMENT APPROACH CHART

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RNAV(RNP) Z RWY36



**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%

CAT	THR elev. 2182		AD elev. 2157	
	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**

## INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Z RWY36

RNAV(RNP) Z RWY36Coding 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	-	-	-8.0	-	-	+12000	-250	-	-
002	TF	AF850	-	096 (087.7)	-8.0	12.3	-	+8600	-	-	1.0
003	TF	AF851	-	043 (035.2)	-8.0	6.0	-	+5700	-	-	1.0
004	RF Center: AFRF1 r=4.60NM	AF650	-	-	-8.0	5.6	L	5000	-	-	1.0
005	RF Center: AFRF1 r=4.60NM	AF651	-	-	-8.0	3.0	L	3880	-	-3.50	0.2 0.3
006	TF	AF652	-	296 (288.3)	-8.0	0.6	-	3657	-	-3.50	0.2 0.3
007	RF Center: AFRF2 r=2.02NM	AF653	-	-	-8.0	2.2	R	2837	-	-3.50	0.2 0.3
008	TF	RW36	Y	359 (351.1)	-8.0	1.6	-	2232	-	-3.50/50	0.2 0.3
009	FA	-	-	359 (351.1)	-8.0	-	-	+7000	-	-	1.0
010	DF	MBE	-	-	-8.0	-	R	10000	-	-	1.0

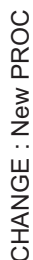
Waypoint Coordinates

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 : New PROC

## RJAF / MATSUMOTO

RNAV(RNP) Y RWY36



**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.

Diagram illustrating the missed approach procedure for RW36:

- Start at **RW36** (Runway 36).
- Initial climb gradient: **3.50°** (3.0% RNP).
- Key altitudes: **2837**, **3657**, **4179**, **6800**, **7500**, **12000**.
- Key distances: **1.6**, **3.8**, **5.2**, **12.3**, **15.3**, **20.3**, **41.8**.
- Key points: **RDH 50**, **RW36**, **AF653**, **AF652**, **AF657**, **AF656 (FAF)**, **AF655**, **AF654 (IF)**, **PAPNA (IAF)**.
- Final climb gradient: **178°** (3.0% RNP).

Distance (NM)	Altitude (FT)	Point
1.6	2837	AF653
3.8	3657	AF652
5.2	4179	AF657
12.3	6800	AF656 (FAF)
15.3	7500	AF655
20.3	7500	AF654 (IF)
41.8	12000	PAPNA (IAF)

# RNP AR

Special Authorization Required

## INSTRUMENT APPROACH CHART

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RNAV(RNP) Y RWY36

RNAV(RNP) Y RWY36Coding 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	-	-	-8.0	-	-	+12000	-	-	-
002	TF	AF654	-	178 (170.2)	-8.0	21.5	-	-	-	-	1.0
003	TF	AF655	-	178 (170.3)	-8.0	5.0	-	7500	-	-	0.3
004	RF Center: AFRF4 r=4.89NM	AF656	-	-	-8.0	3.0	R	6800	-	-	0.3
005	RF Center: AFRF4 r=4.89NM	AF657	-	-	-8.0	7.1	R	4179	-	-3.50	0.2 0.3
006	TF	AF652	-	296 (288.4)	-8.0	1.4	-	3657	-	-3.50	0.2 0.3
007	RF Center: AFRF2 r=2.02NM	AF653	-	-	-8.0	2.2	R	2837	-	-3.50	0.2 0.3
008	TF	RW36	Y	359 (351.1)	-8.0	1.6	-	2232	-	-3.50/50	0.2 0.3
009	FA	-	-	359 (351.1)	-8.0	-	-	+7000	-	-	1.0
010	DF	MBE	-	-	-8.0	-	R	10000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
PAPNA	363721.74N / 1380122.92E	AFRF4	361027.73N / 1380059.34E
AF654	361613.48N / 1380553.24E	AFRF2	360810.39N / 1375813.97E
AF655	361117.56N / 1380656.02E		
AF656	360820.76N / 1380625.54E		
AF657	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 : New PROC



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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



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Minimum Vectoring Altitude CHART

