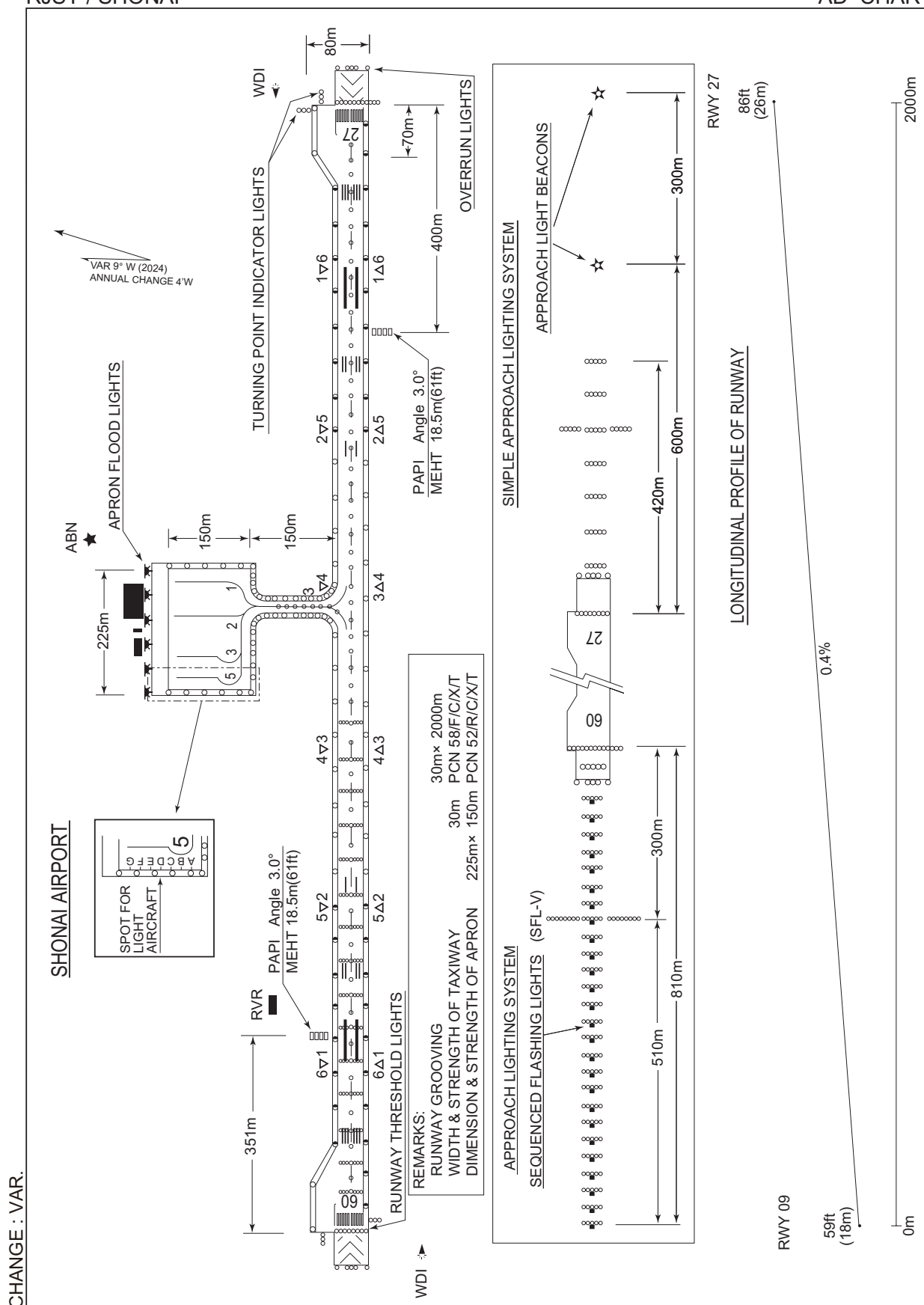


## AD CHART



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STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

SID

SHONAI REVERSAL THREE DEPARTURE

RWY 09 : Climb RWY HDG to 600FT, turn left HDG 285° to intercept and proceed via YSE R330 to YSE R330/8.5DME, turn left,...

RWY 27 : Climb via YSE R278 to YSE R278/7.0DME, turn right,...  
...direct to YSE VOR/DME.  
Cross YSE VOR/DME at or above 6000FT.



SHONAI REVERSAL THREE DEPARTURE

STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

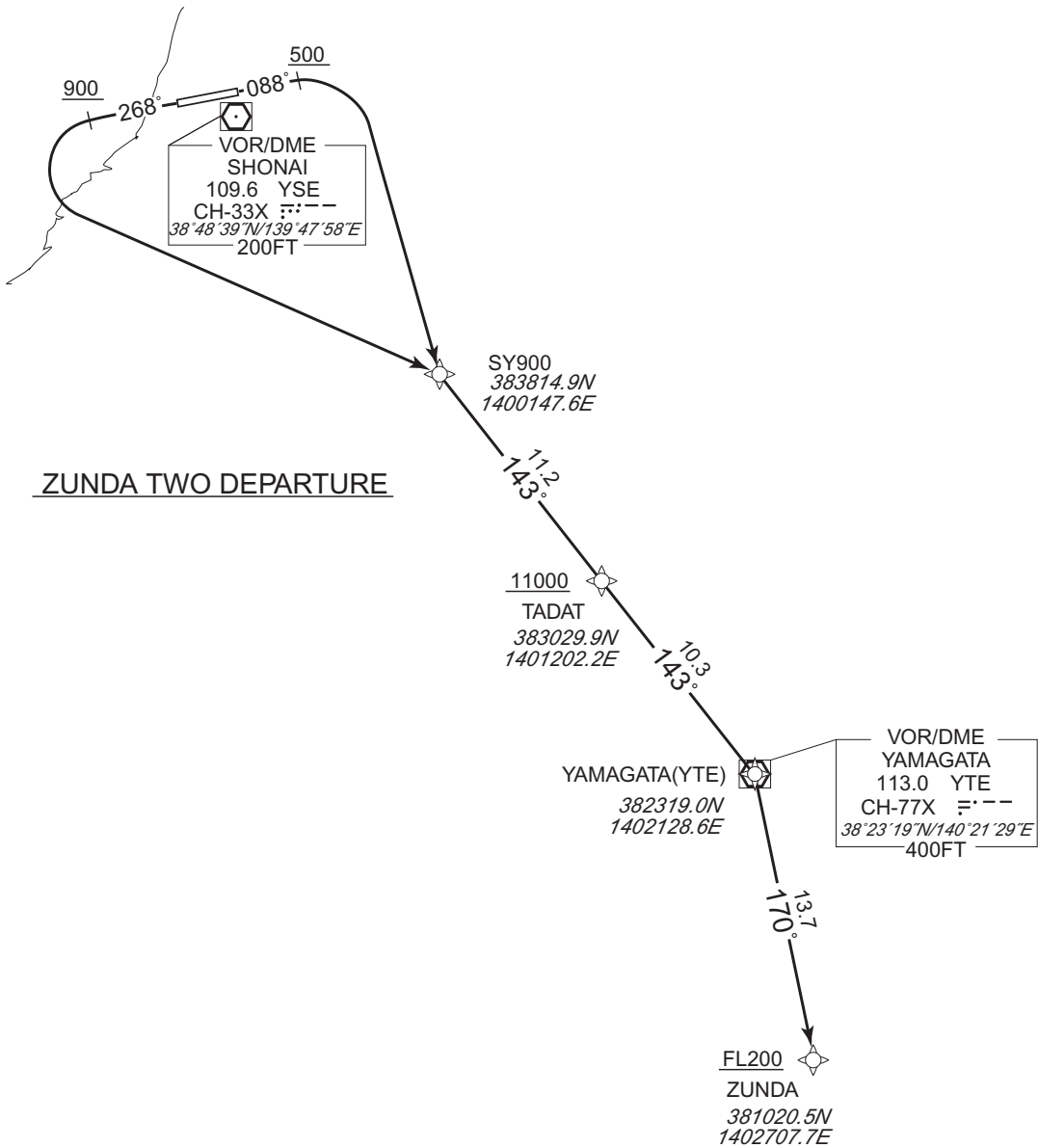
RNAV SID

ZUNDA TWO DEPARTURE

RNP1

Note GNSS required.

VAR 9°W (2022)



ZUNDA TWO DEPARTURE

- RWY09 : Climb on HDG 088° at or above 500FT, turn right direct to SY900, to TADAT at or above 11000FT, to YTE, to ZUNDA at or above FL200.
- RWY27 : Climb on HDG 268° at or above 900FT, turn left direct to SY900, to TADAT at or above 11000FT, to YTE, to ZUNDA at or above FL200.
- NOTE RWY09 : 4.8% climb gradient required up to 5000FT.  
OBST ALT 4758FT located at 17.2NM 150°FM end of RWY09.
- RWY27 : 4.4% climb gradient required up to 3500FT.  
OBST ALT 1117FT located at 3.1NM 212°FM end of RWY27.

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

RNAV SID

ZUNDA TWO DEPARTURE

RWY09

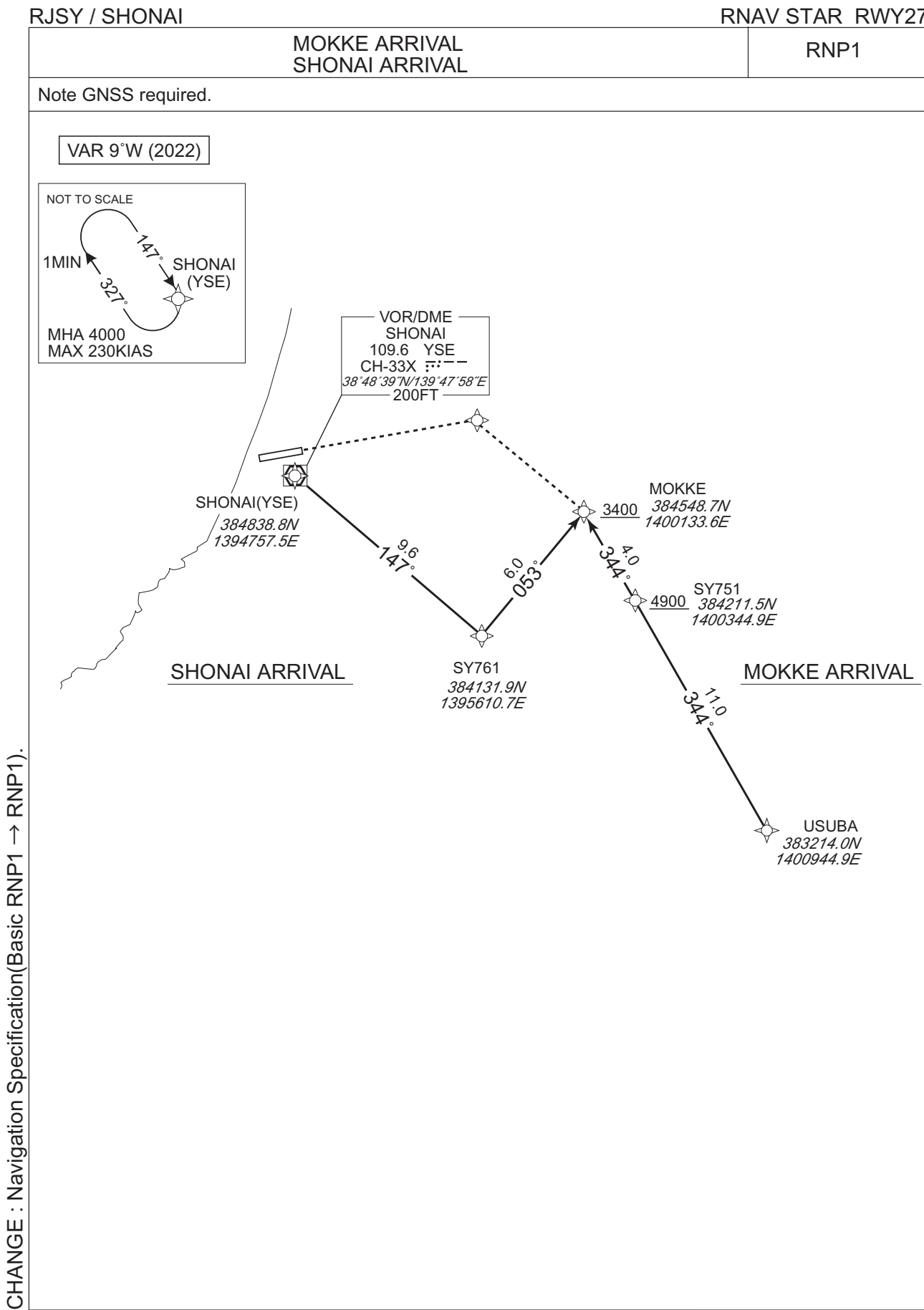
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	-	-	088 (079.5)	-8.8	-	-	+500	-	-	RNP1
002	DF	SY900	-	-	-8.8	-	R	-	-	-	RNP1
003	TF	TADAT	-	143 (134.0)	-8.8	11.2	-	+11000	-	-	RNP1
004	TF	YTE	-	143 (134.1)	-8.8	10.3	-	-	-	-	RNP1
005	TF	ZUNDA	-	170 (161.1)	-8.8	13.7	-	+FL200	-	-	RNP1

RWY27

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	-	-	268 (259.5)	-8.8	-	-	+900	-	-	RNP1
002	DF	SY900	-	-	-8.8	-	L	-	-	-	RNP1
003	TF	TADAT	-	143 (134.0)	-8.8	11.2	-	+11000	-	-	RNP1
004	TF	YTE	-	143 (134.1)	-8.8	10.3	-	-	-	-	RNP1
005	TF	ZUNDA	-	170 (161.1)	-8.8	13.7	-	+FL200	-	-	RNP1

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART -INSTRUMENT



STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

RNAV STAR RWY27

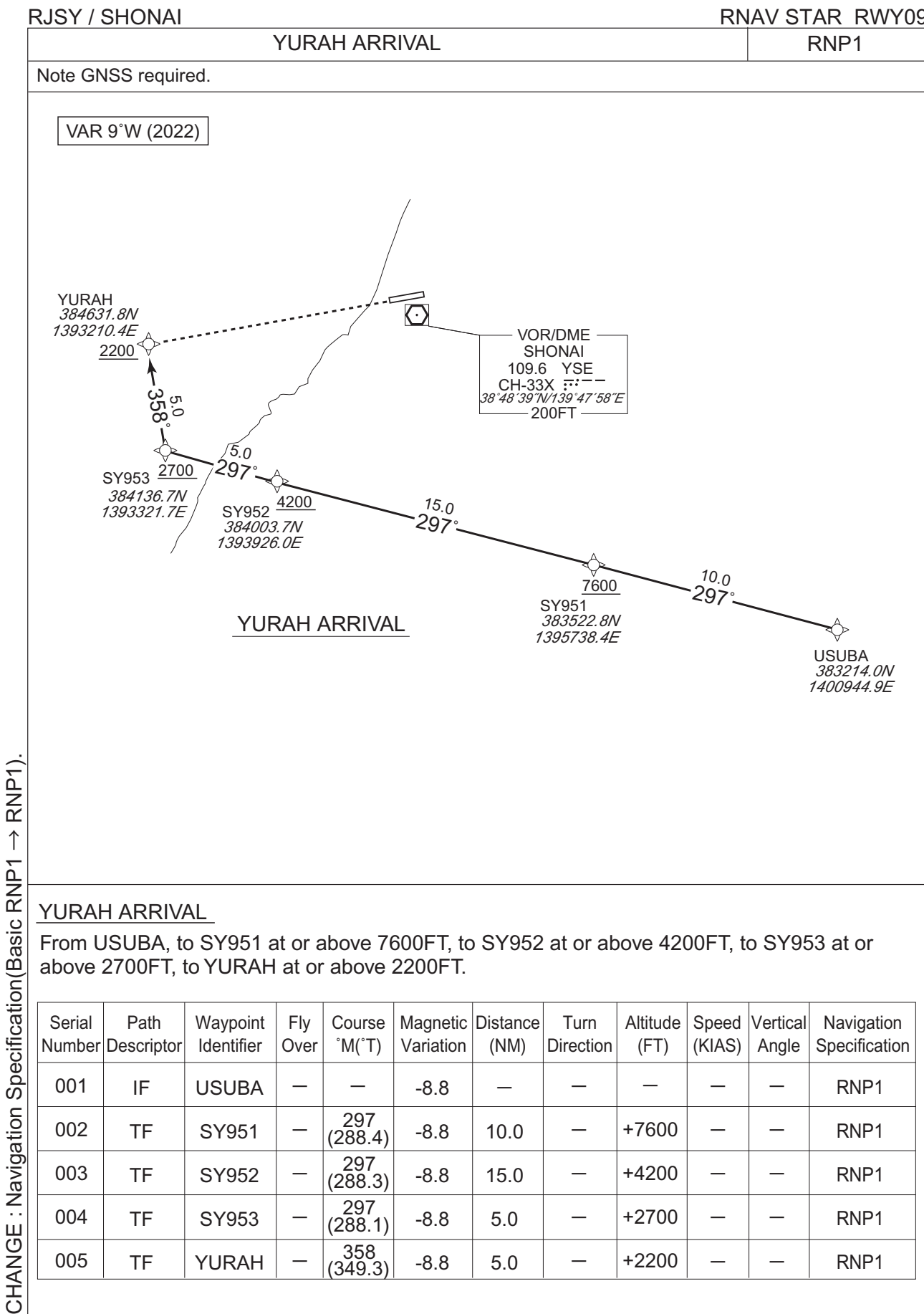
MOKKE ARRIVAL											
From USUBA, to SY751 at or above 4900FT, to MOKKE at or above 3400FT.											
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	USUBA	-	-	-8.8	-	-	-	-	-	RNP1
002	TF	SY751	-	344 (334.8)	-8.8	11.0	-	+4900	-	-	RNP1
003	TF	MOKKE	-	344 (334.8)	-8.8	4.0	-	+3400	-	-	RNP1

SHONAI ARRIVAL											
From YSE, to SY761, to MOKKE at or above 3400FT.											
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	YSE	-	-	-8.8	-	-	-	-	-	RNP1
002	TF	SY761	-	147 (137.9)	-8.8	9.6	-	-	-	-	RNP1
003	TF	MOKKE	-	053 (044.4)	-8.8	6.0	-	+3400	-	-	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	YSE	147 (137.9)	-8.8	1.0(-14000)	R	4000	FL140	-230(-14000)	RNP1

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART -INSTRUMENT

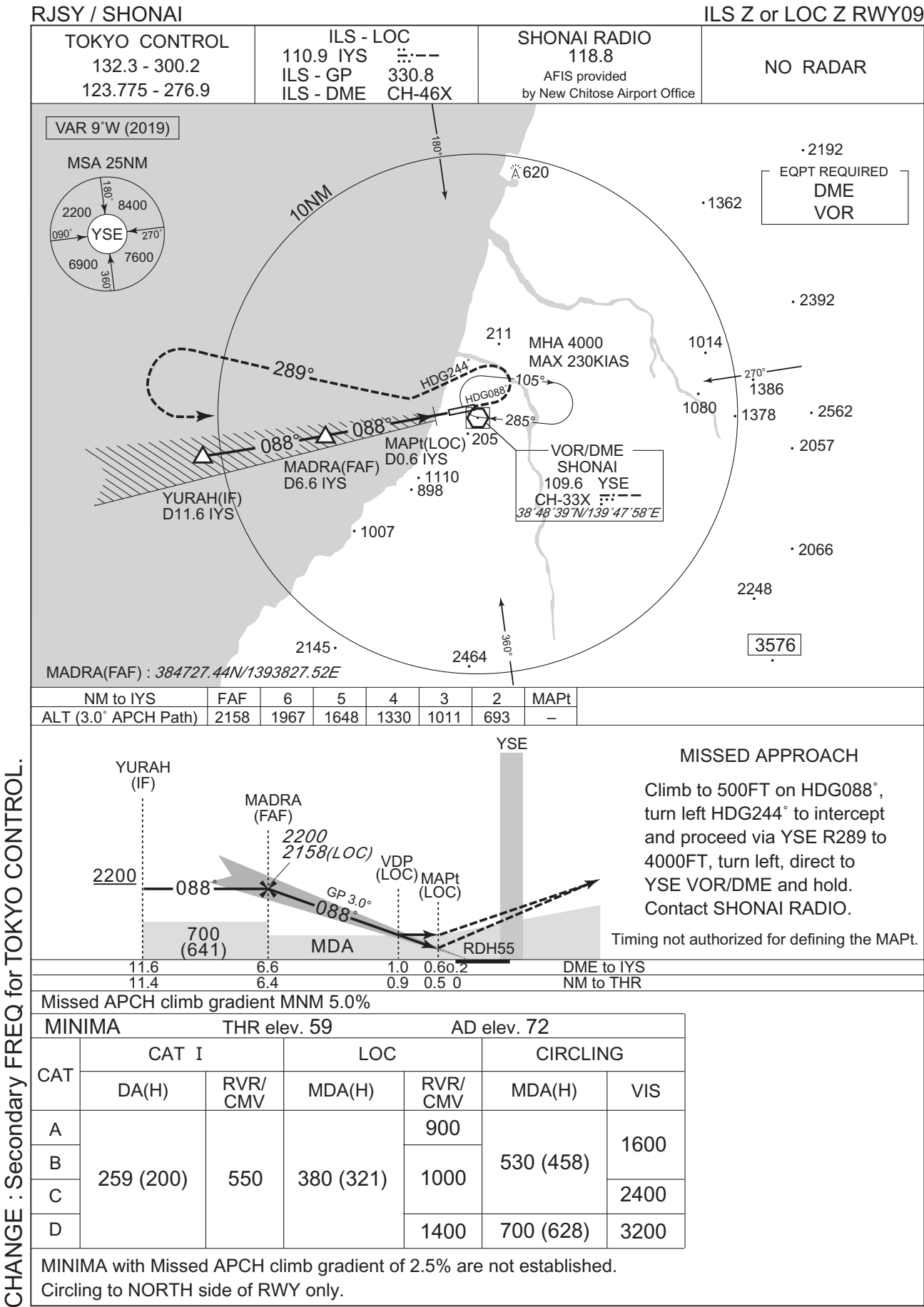


CHANGE : Navigation Specification(Basic RNP1 → RNP1).



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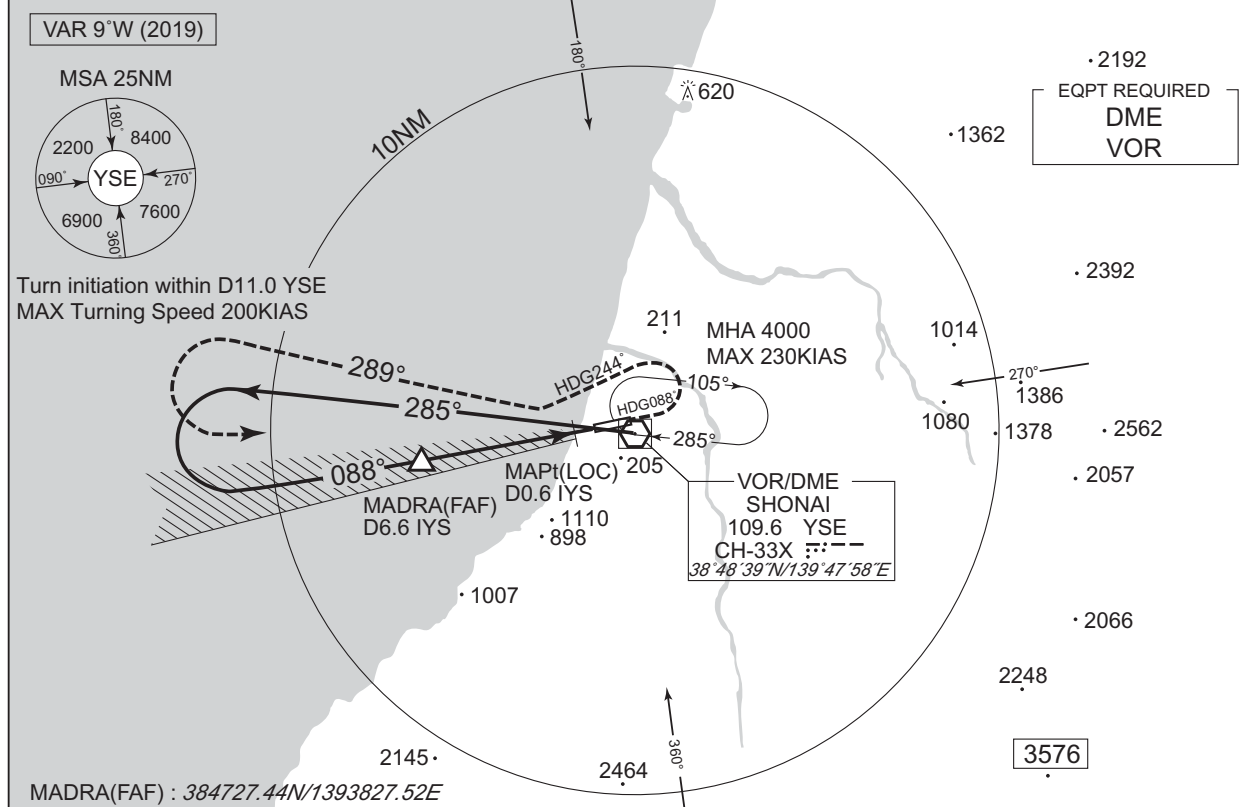
INSTRUMENT APPROACH CHART



## RJSY / SHONAI

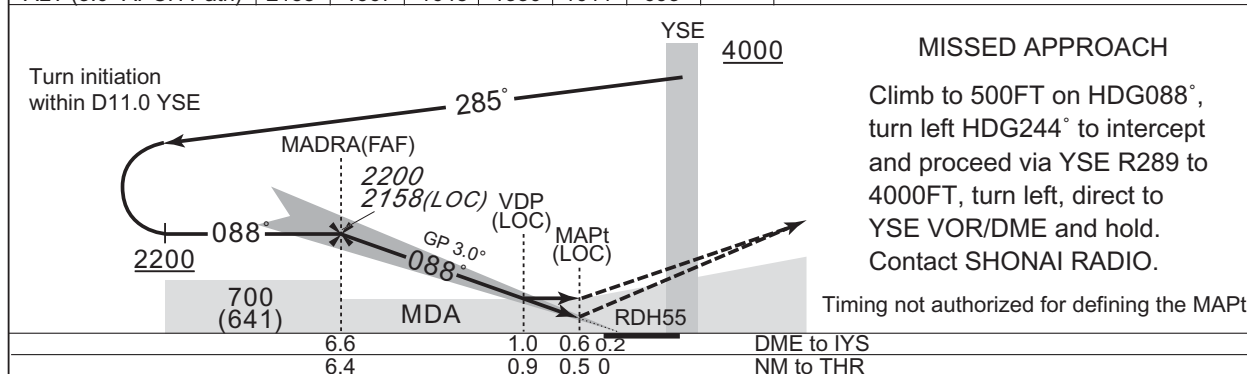
ILS Y or LOC Y RWY09

TOKYO CONTROL 132.3 - 300.2 123.775 - 276.9	ILS - LOC 110.9 IYS 330.8 ILS - GP 330.8 ILS - DME CH-46X	SHONAI RADIO 118.8 AFIS provided by New Chitose Airport Office	NO RADAR
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NM to IYS	FAF	6	5	4	3	2	MAPt
ALT (3.0' APCH Path)	2158	1967	1648	1330	1011	693	—

CHANGE : Secondary FREQ for TOKYO CONTROL.



Missed APCH climb gradient MNM 5.0%						
MINIMA		THR elev. 59		AD elev. 72		
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/ CMV	MDA(H)	RVR/ CMV	MDA(H)	VIS
	259 (200)	550	380 (321)	900	530 (458)	1600
				1000		
				C		
D			1400	700 (628)	3200	

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

## RJSY / SHONAI

LOC RWY27

**MISSED APPROACH**

Turn right, climb to 4000FT via YSE R289, turn left, direct to YSE VOR/DME and hold.  
Contact SHONAI RADIO.

Timing not authorized for defining the MAPt.

4000 YSE

071°

Turn initiation within D12.0 YSE

3600

265°

AMARU (FAF)

SDF

VDP

1727

3.0°

MAPt

1700 (1628)

2500 (2428)

3000 (2928)

MDA

MINIMA		THR elev. 86	AD elev. 72	
CAT			CIRCLING	
	MDA(H)	CMV	MDA(H)	VIS
A	460 (388)	1200	530 (458)	1600
B		1300		
C		1400		2400
D		1600	700 (628)	3200

Circling to NORTH side of RWY only

CHANGE : Secondary FREQ for TOKYO CONTROL.

## RJSY / SHONAI

TOKYO CONTROL  
132.3 - 300.2  
123.775 - 276.9

SHONAI VOR / DME  
109.6 YSE  
CH-33X  
38°48'39"N/139°47'58"E

SHONAI RADIO  
118.8  
AFIS provided  
by New Chitose Airport Office

VOR RWY 04  
NO RADAR

VAR 8°W (2013)

MSA 25NM

Turn initiation within D11.0 YSE  
MAX Turning Speed 200KIAS

ANCOU(FAF) : 384803.21N/1394012.41E

• 2192  
EQPT REQUIRED  
DME

NM to YSE	FAF	6	5	4	3	MAPt
ALT (3.0° APCH Path)	1701	1673	1355	1036	718	—

Turn initiation within D11.0 YSE

ANCOU(FAF) 1701

MDA 700 (641)

VDP

MAPt

YSE 4000

**MISSED APPROACH**

Climb to 500FT on HDG092°, turn left HDG244° to intercept and proceed via YSE R289 to 4000FT, turn left, direct to YSE VOR/DME and hold. Contact SHONAI RADIO.

Timing not authorized for defining the MAPt.

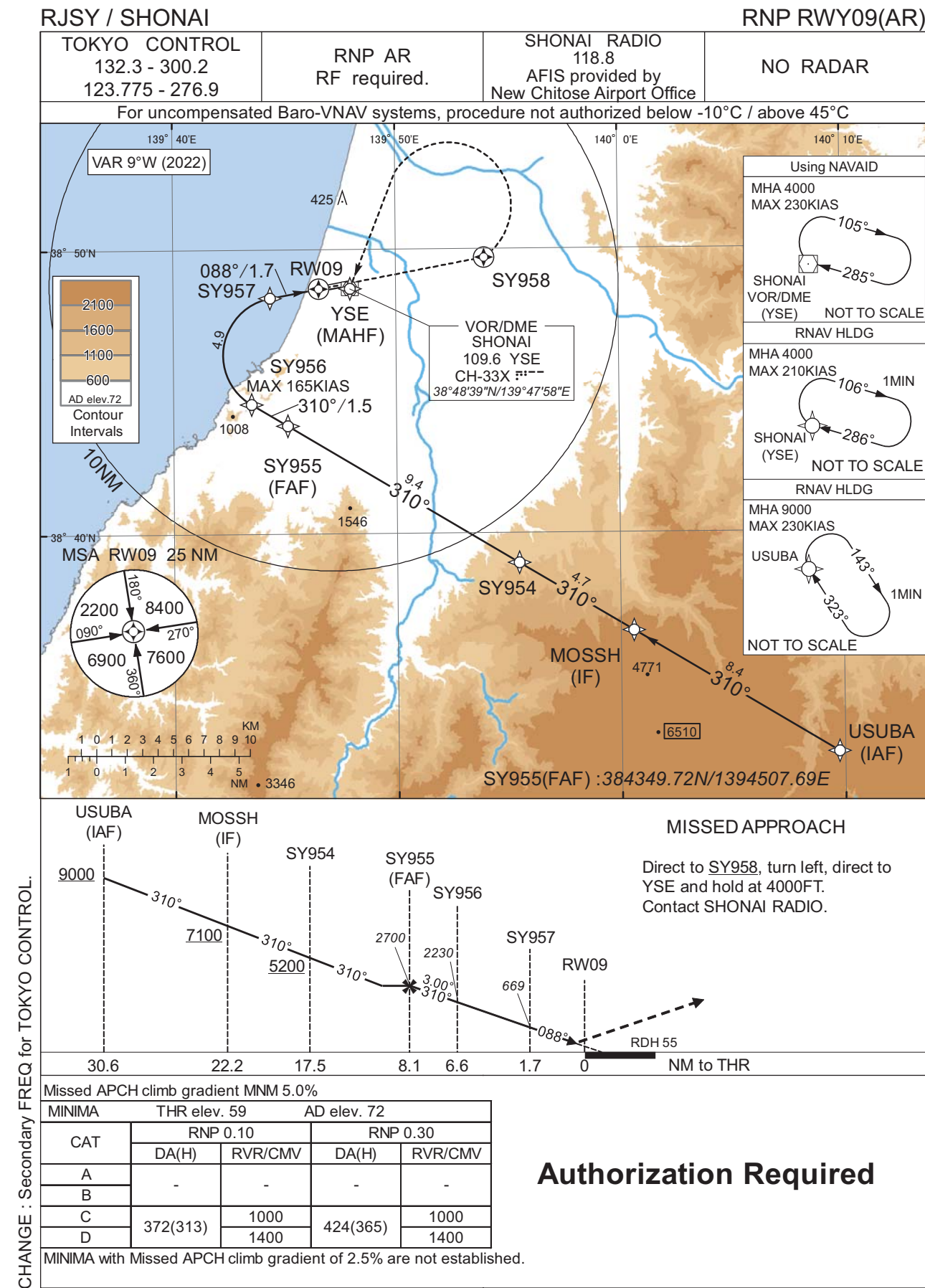
DME to YSE		NM to THR	
6.1	2.3	1.1	0
5.0	1.2	0	

MINIMA		THR elev. 59	AD elev. 72
CAT	CIRCLING		
	MDA(H)	RVR/CMV	MDA(H)
	470 (411)	900	530 (458)
		1000	
		1400	
			1600
			2400
			3200

Circling to NORTH side of RWY only

CHANGE : Secondary FREQ for TOKYO CONTROL.

INSTRUMENT APPROACH CHART



## INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNP RWY09(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	USUBA	-	-	-8.8	-	-	+9000	-	-	-
002	TF	MOSSH	-	310 (301.2)	-8.8	8.4	-	+7100	-	-	1.0
003	TF	SY954	-	310 (301.1)	-8.8	4.7	-	+5200	-	-	1.0
004	TF	SY955	-	310 (301.1)	-8.8	9.4	-	2700	-	-	1.0
005	TF	SY956	-	310 (301.0)	-8.8	1.5	-	2230	-165	-3.00	0.1 0.3
006	RF Center: SYRF1 r=2.03NM	SY957	-	-	-8.8	4.9	R	669	-	-3.00	0.1 0.3
007	TF	RW09	Y	088 (079.4)	-8.8	1.7	-	114	-	-3.00/55	0.1 0.3
008	DF	SY958	Y	-	-8.8	-	-	-	-	-	1.0
009	DF	YSE	-	-	-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	USUBA	323 (314.1)	-8.8	1.0 (-14000)	R	9000	FL140	-230 (-14000)	1.0
Hold	YSE	286 (277.0)	-8.8	1.0 (-14000)	R	4000	FL140	-210 (-14000)	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
USUBA	383214.02N / 1400944.88E	SYRF1	384619.71N / 1394450.17E
MOSSH	383634.00N / 1400035.10E		
SY954	383858.43N / 1395528.53E		
SY955	384349.72N / 1394507.69E		
SY956	384435.19N / 1394330.47E		
SY957	384819.37N / 1394421.61E		
RW09	384838.58N / 1394633.12E		
SY958	384943.40N / 1395359.19E		
YSE	384838.81N / 1394757.51E		

CHANGE : PROC renamed.

## RJSY / SHONAI

RNP Z RWY27

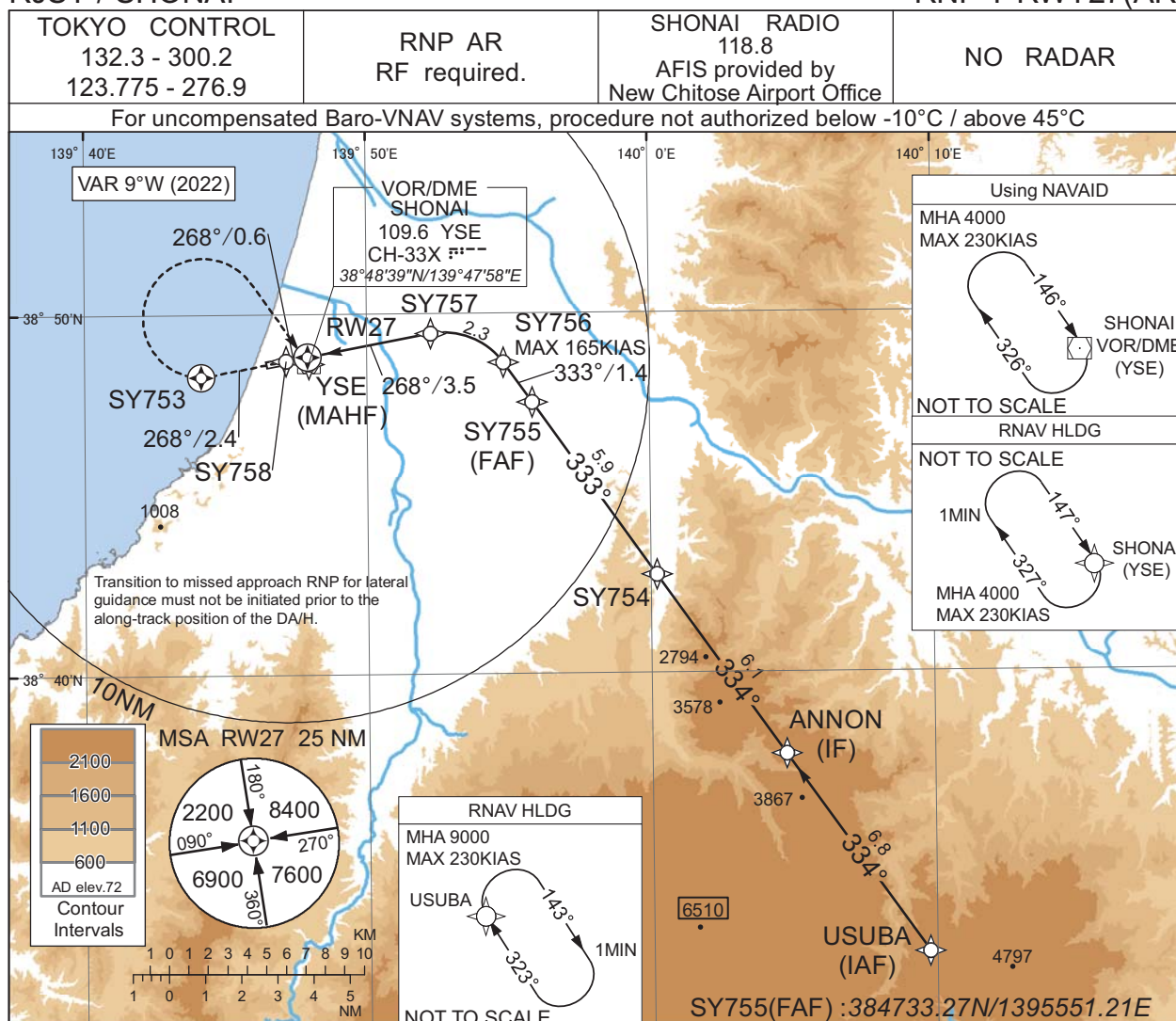




## INSTRUMENT APPROACH CHART

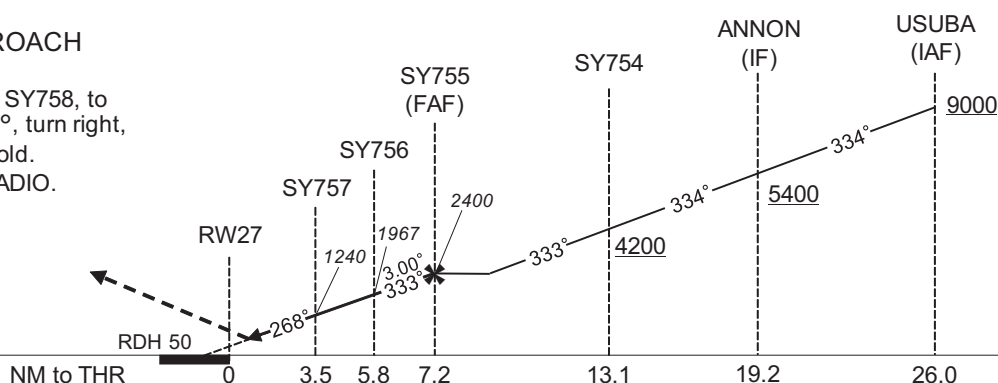
RJSY / SHONAI

RNP Y RWY27(AR)



## MISSED APPROACH

Climb to 4000FT, to SY758, to SY753 on track 268°, turn right, direct to YSE and hold.  
Contact SHONAI RADIO.



Missed APCH climb gradient MNM 5.0%

CAT	THR elev. 86		AD elev. 72	
	RNP 0.12		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B	-	-	-	-
C	386(300)	1400	424(338)	1400
D		1600		1600

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

**Authorization Required**

CHANGE : Secondary FREQ for TOKYO CONTROL.

## INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNP Y RWY27(AR)

Coding Table

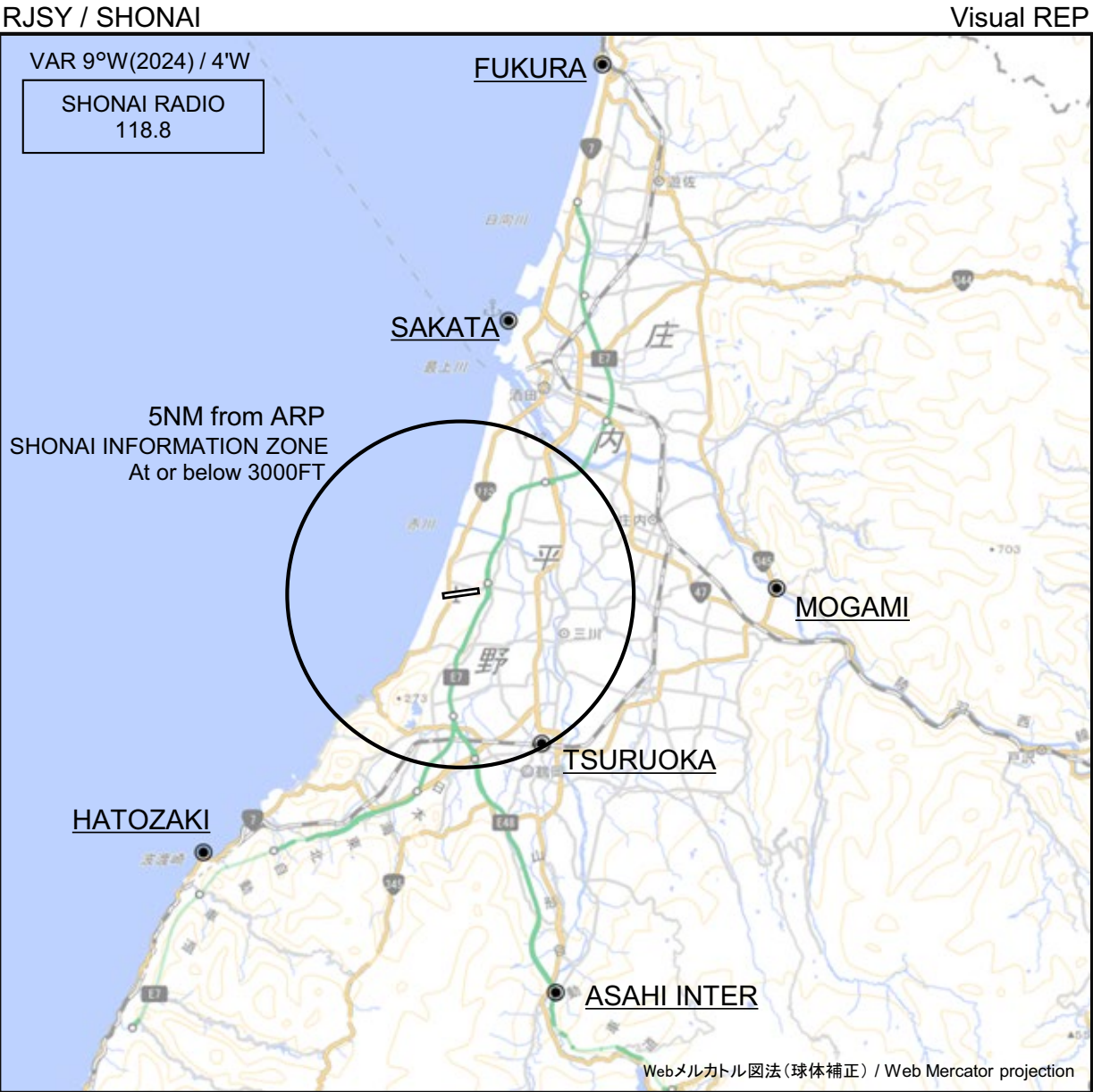
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	USUBA	-	-	-8.8	-	-	+9000	-	-	-
002	TF	ANNON	-	334 (324.8)	-8.8	6.8	-	+5400	-	-	1.0
003	TF	SY754	-	334 (324.7)	-8.8	6.1	-	+4200	-	-	1.0
004	TF	SY755	-	333 (324.7)	-8.8	5.9	-	2400	-	-	1.0
005	TF	SY756	-	333 (324.6)	-8.8	1.4	-	1967	-165	-3.00	0.12 0.30
006	RF Center: SYRF2 r=2.01NM	SY757	-	-	-8.8	2.3	L	1240	-	-3.00	0.12 0.30
007	TF	RW27	Y	268 (259.5)	-8.8	3.5	-	136	-	-3.00/50	0.12 0.30
008	TF	SY758	-	268 (259.4)	-8.8	0.6	-	-	-	-	0.12 0.30
009	CF	SY753	Y	268 (259.4)	-8.8	2.4	-	-	-	-	1.0
010	DF	YSE	-	-	-8.8	-	R	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	USUBA	323 (314.1)	-8.8	1.0 (-14000)	R	9000	FL140	-230 (-14000)	1.0
Hold	YSE	147 (137.9)	-8.8	1.0 (-14000)	R	4000	FL140	-230 (-14000)	1.0

Waypoint Coordinates

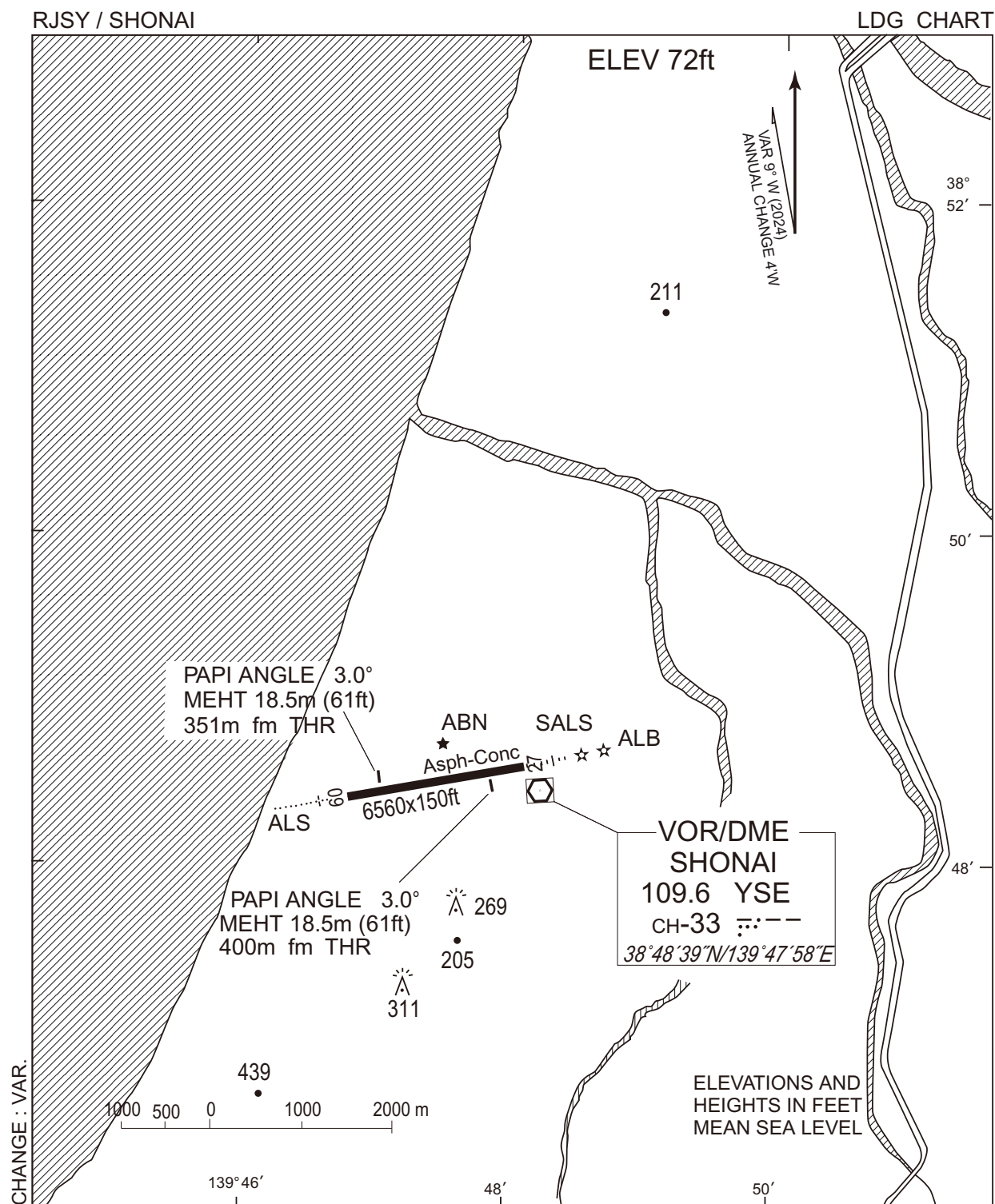
Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
USUBA	383214.02N / 1400944.88E	SYRF2	384729.55N / 1395244.67E
ANNON	383745.37N / 1400445.25E		
SY754	384245.22N / 1400013.26E		
SY755	384733.27N / 1395551.21E		
SY756	384839.83N / 1395450.54E		
SY757	384928.52N / 1395216.49E		
RW27	384850.46N / 1394754.61E		
SY758	384843.80N / 1394708.93E		
SY753	384817.41N / 1394408.18E		
YSE	384838.81N / 1394757.51E		

CHANGE : PROC renamed.



※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
	吹浦 Fukura	014°T / 16.0NM	吹浦港 Harbor
	酒田 Sakata	009°T / 8.1NM	酒田港 Harbor
	最上 Mogami	089°T / 9.1NM	最上川橋 Bridge
	鶴岡 Tsuruoka	153°T / 4.9NM	JR駅 Station
	波渡崎 Hatozaki	225°T / 10.6NM	岬 Cape
	あさひインター Asahi Inter	167°T / 11.9NM	山形自動車道 庄内あさひインターチェンジ Interchange



RJSY / SHONAI

Minimum Vectoring Altitude CHART

