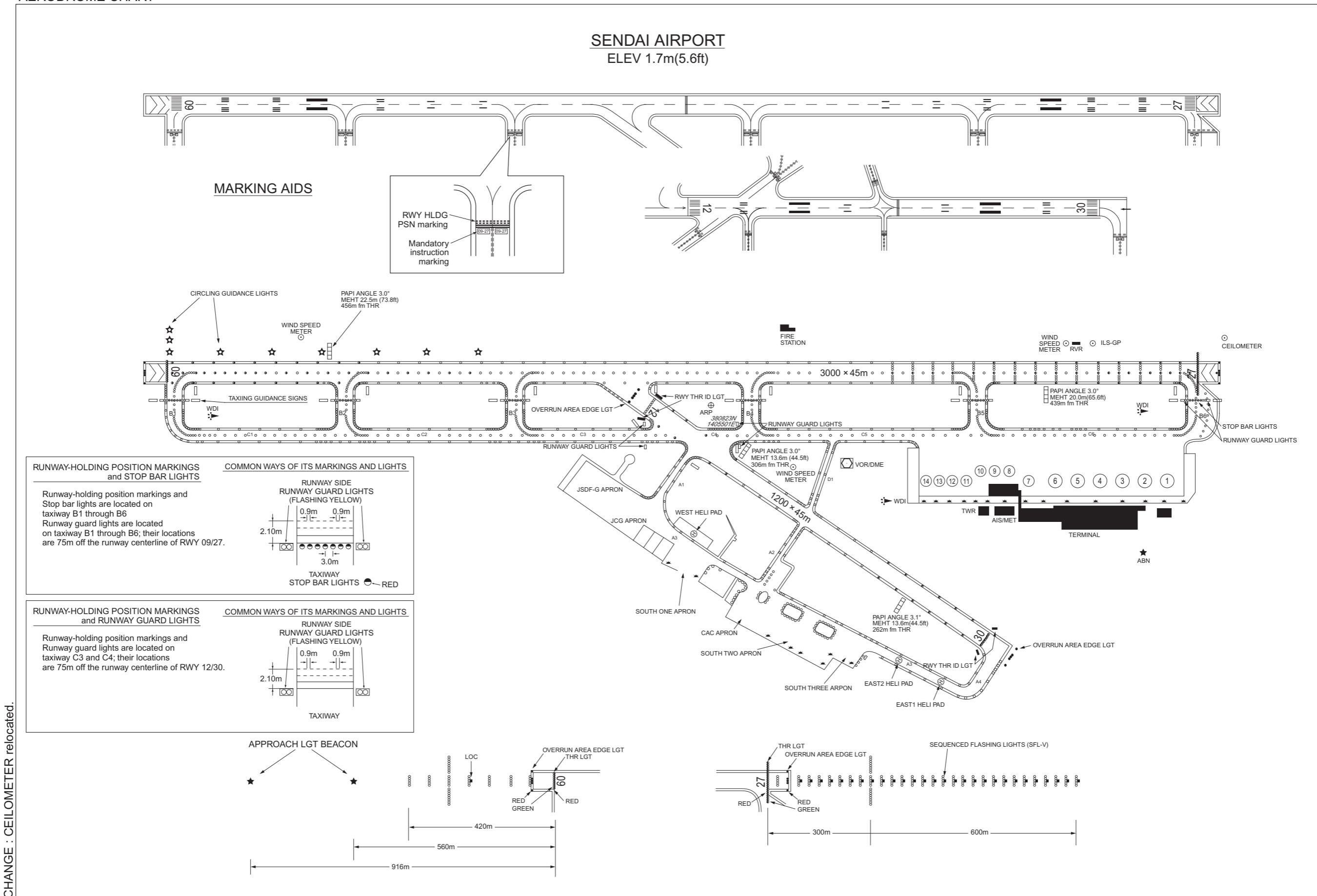
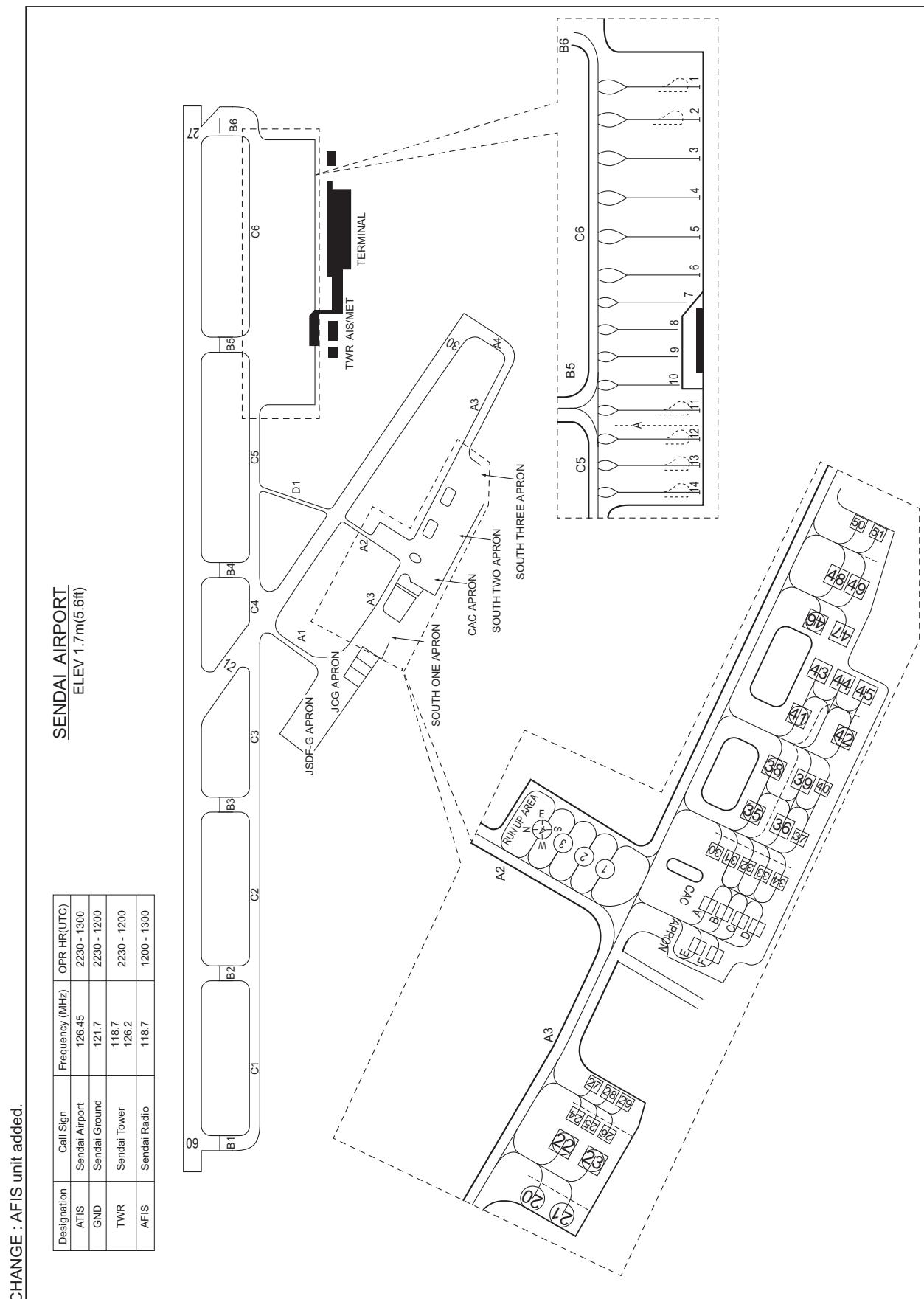


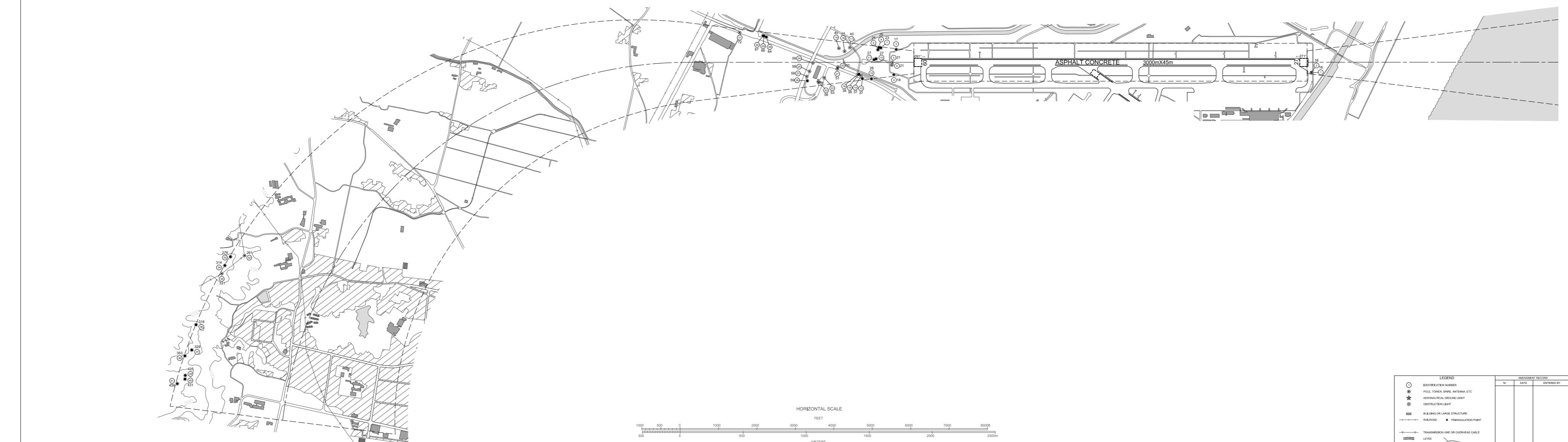
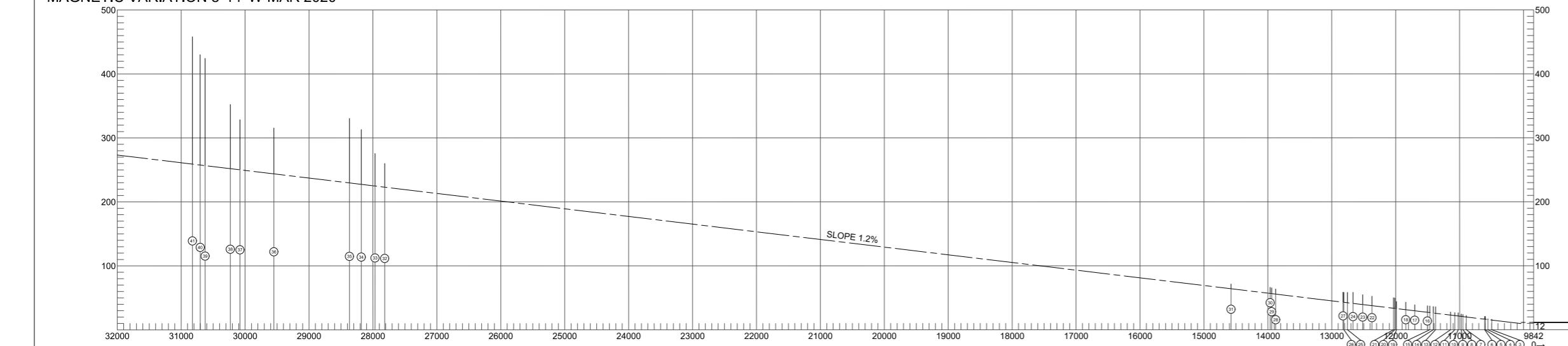
AERODROME CHART





DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

MAGNETIC VARIATION 8°14' W-MAR 2020



AERODROME OBSTACLE CHART-ICAO

TYPE B

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC



CHANGE:Update

STANDARD DEPARTURE CHART-INSTRUMENT

RJSS / SENDAI

SID

IWAKI EIGHT DEPARTURE

RWY 09 : Climb RWY HDG to SDE 3.4DME (2.8NM FM DER), turn right to intercept and proceed...

RWY 12 : Climb ...

RWY 27 : Climb RWY HDG to 500FT, turn left HDG 090° to intercept and proceed...

RWY 30 : Climb RWY HDG to 500FT, turn left HDG 090° to intercept and proceed...
...via SDE R120, via IXE R024 to IXE VOR/DME.

Cross IXE R024/46.7DME at or above 11000FT, cross IXE R024/28.0DME at or above FL150, cross IXE VOR/DME at assigned altitude.

Note RWY 09 : 5.0% climb gradient required up to 500FT.

OBST ALT 62FT located at 0.2NM 102° FM end of RWY09.

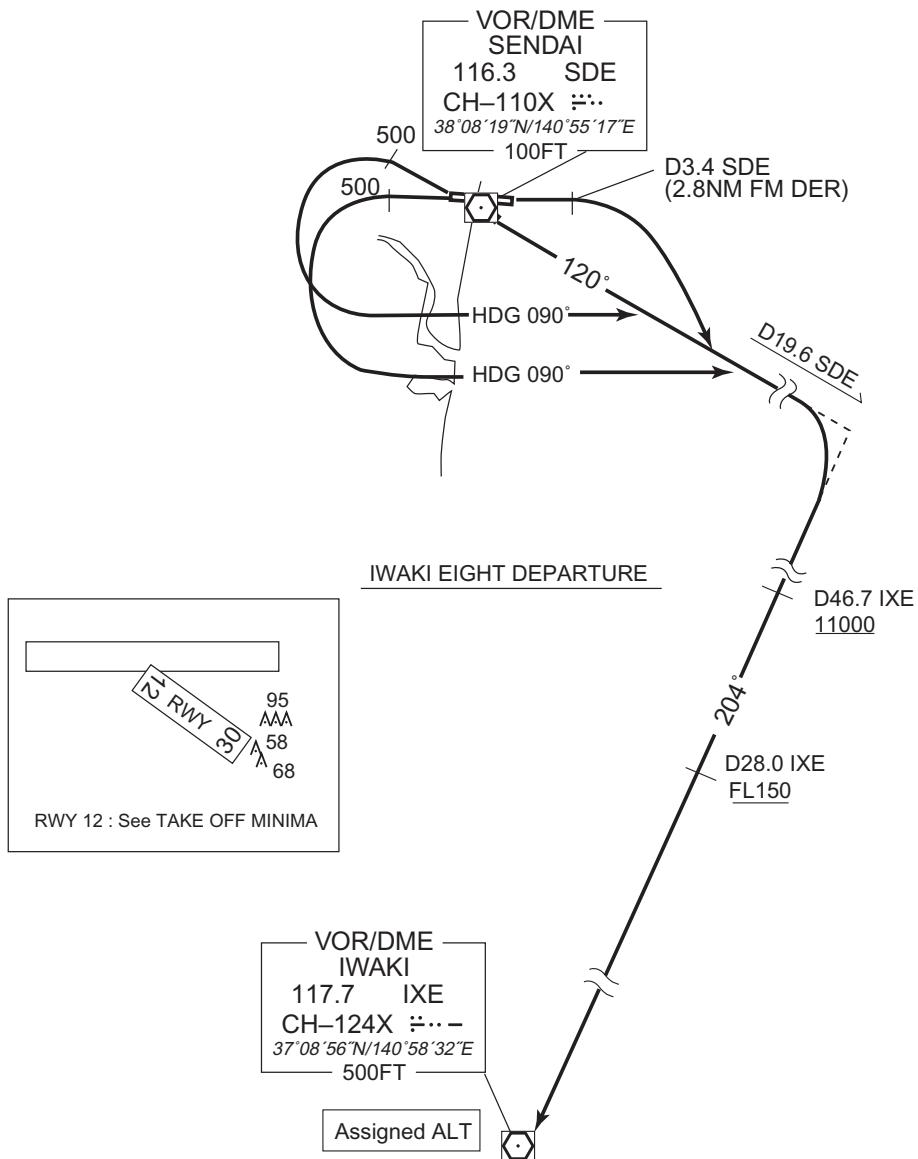
RWY 27 : 5.0% climb gradient required up to 1000FT.

OBST ALT 919FT located at 4.1NM 269° FM end of RWY27.

RWY 30 : 5.0% climb gradient required up to 1200FT.

OBST ALT 1181FT located at 5.3NM 283° FM end of RWY30.

CHANGE : PROC renamed.Restriction added (IXE R024/46.7 DME).



STANDARD DEPARTURE CHART-INSTRUMENT

RJSS / SENDAI

SID

SENDAI REVERSAL SIX DEPARTURE

RWY 09 : Climb RWY HDG to SDE 3.4DME (2.8NM fm DER), turn right to intercept and proceed...

RWY 12 : Climb ...

RWY 27 : Climb RWY HDG to 500FT, turn left HDG 090° to intercept and proceed...

RWY 30 : Climb RWY HDG to 500FT, turn left HDG 090° to intercept and proceed...
...via SDE R120 to 10.0DME, turn right, direct to SDE VOR/DME.

Cross SDE VOR/DME at or above 7000FT(*)

* In case of proceeding to IXE VOR/DME : Cross SDE VOR/DME at or above 5000FT.

In case of proceeding to FKE VOR/DME : Cross SDE VOR/DME at or above 6000FT.

Note RWY 09 : 5.0% climb gradient required up to 500FT.

OBST ALT 62FT located at 0.2NM 102° FM end of RWY09.

RWY 27 : 5.0% climb gradient required up to 1000FT.

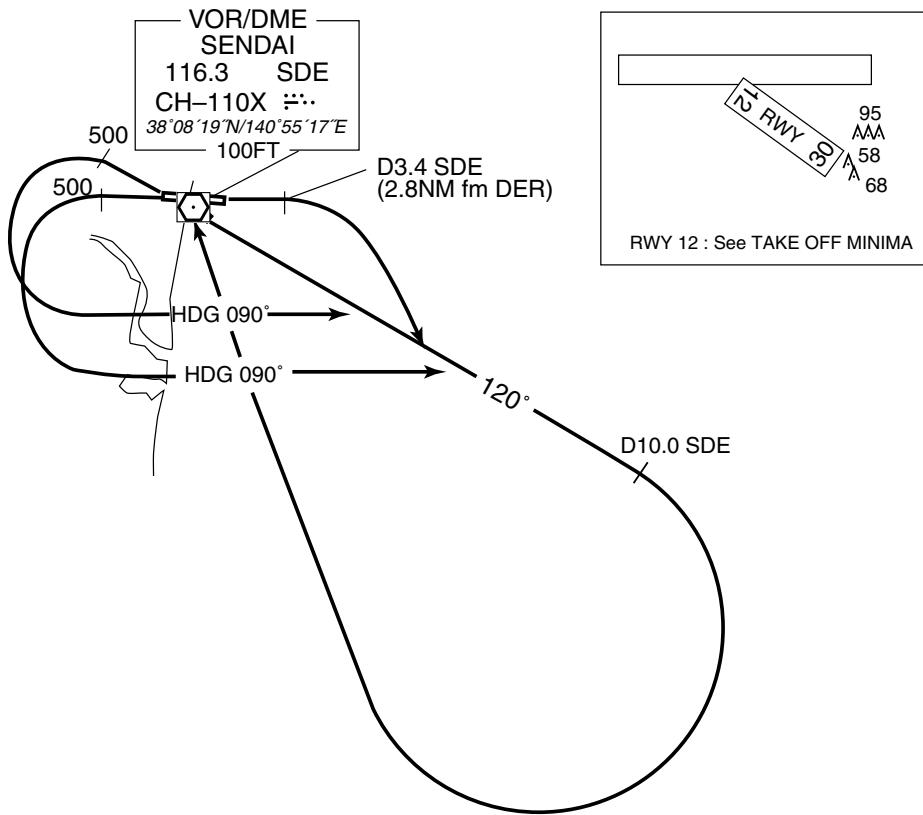
OBST ALT 919FT located at 4.1NM 269° FM end of RWY27.

RWY 30 : 5.0% climb gradient required up to 1200FT.

OBST ALT 1181FT located at 5.3NM 283° FM end of RWY30.

SENDAI REVERSAL SIX DEPARTURE

7000
5000 (For IXE only)
6000 (For FKE only)



STANDARD DEPARTURE CHART - INSTRUMENT

CHANGE : VAR. SID renamed. YAMAGATA TRANSITION, RIKYU NORTH TRANSITION, SASAP TRANSITION established. Navigation specification.

<p>DERBY FOUR DEPARTURE YAMAGATA TRANSITION / NIIGATA TRANSITION / RIKYU NORTH TRANSITION / SASAP TRANSITION</p>	<p>RNAV SID and TRANSITION</p>
<p>Basic RNP1</p>	
<p>Note GNSS required.</p>	
<p>DERBY FOUR DEPARTURE</p> <p>RWY09 : Climb on HDG091° at or above 500FT, direct to <u>SS901</u>, turn right direct to ANEMO, to EBOSI, to DERBY at or above 9000FT.</p> <p>RWY27 : Climb on HDG271° at or above 500FT, direct to <u>SS701</u>, turn left direct to EBOSI, to DERBY at or above 9000FT.</p> <p>NOTE RWY09: 5.0% climb gradient required up to 500FT. OBST ALT 62FT located at 0.2NM 103° FM end of RWY09.</p> <p>RWY27: 5.9% climb gradient required up to 1300FT. OBST ALT 1181FT located at 4.6NM 285° FM end of RWY27.</p>	
<p>YAMAGATA TRANSITION</p> <p>From DERBY at or above 9000FT, to YTE.</p>	
<p>NIIGATA TRANSITION</p> <p>From DERBY at or above 9000FT, to GTC.</p>	
<p>RIKYU NORTH TRANSITION</p> <p>From DERBY at or above 9000FT, to RIKYU.</p>	
<p>SASAP TRANSITION</p> <p>From DERBY at or above 9000FT, to SASAP.</p>	

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI

RNAV SID and TRANSITION

DERBY FOUR 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	—	—	091 (082.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	SS901	Y	—	-8.3	—	—	—	—	—	Basic RNP1
003	DF	ANEMO	—	—	-8.3	—	R	—	—	—	Basic RNP1
004	TF	EBOSI	—	285 (276.4)	-8.3	17.6	—	—	—	—	Basic RNP1
005	TF	DERBY	—	276 (268.1)	-8.3	7.7	—	+9000	—	—	Basic 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	—	—	271 (262.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	SS701	Y	—	-8.3	—	—	—	—	—	Basic RNP1
003	DF	EBOSI	—	—	-8.3	—	L	—	—	—	Basic RNP1
004	TF	DERBY	—	276 (268.1)	-8.3	7.7	—	+9000	—	—	Basic RNP1

CHANGE : VAR, SID renamed. SID course. ALT restriction at DERBY. Navigation specification. NIIGATA TRANSITION deleted.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI

RNAV SID and TRANSITION

YAMAGATA 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	DERBY	—	—	-8.3	—	—	+9000	—	—	Basic RNP1
002	TF	YTE	—	356 (347.9)	-8.3	23.7	—	—	—	—	Basic RNP1

NIIGATA 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	DERBY	—	—	-8.3	—	—	+9000	—	—	Basic RNP1
002	TF	GTC	—	276 (268.0)	-8.3	63.9	—	—	—	—	Basic RNP1

RIKYU NORTH 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	DERBY	—	—	-8.3	—	—	+9000	—	—	Basic RNP1
002	TF	RIKYU	—	189 (180.5)	-8.3	26.8	—	—	—	—	Basic RNP1

SASAP 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	DERBY	—	—	-8.3	—	—	+9000	—	—	Basic RNP1
002	TF	SASAP	—	188 (179.4)	-8.3	49.3	—	—	—	—	Basic RNP1

CHANGE : YAMAGATA TRANSITION, NIIGATA TRANSITION, SASAP TRANSITION, RIKYU NORTH TRANSITION, RIKYU TRANSITION, SASAP TRANSITION added.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI

RNAV SID and TRANSITION

STEED FOUR DEPARTURE / RIKYU TRANSITION

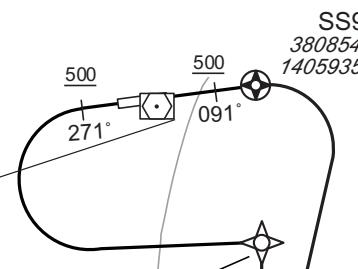
Basic RNP1

Note GNSS required.

VAR 8°W(2020)

VOR/DME
SENDAI
116.3 SDE
CH-110X 38°08'19"N 140°55'17"E
100FT

SS901
380854.6N
1405935.6E

STEED FOUR DEPARTURERIKYU TRANSITION

RIKYU
373327.8N
1402731.8E

27.3

251°

STEED
374336.2N
1405932.8E

STEED FOUR DEPARTURE

RWY09 : Climb on HDG091° at or above 500FT, direct to SS901, turn right direct to MUSBI at or above 5000FT, to STEED.

RWY27 : Climb on HDG271° at or above 500FT, turn left direct to BUBLE, to MUSBI at or above 5000FT, to STEED.

NOTE RWY09: 5.0% climb gradient required up to 500FT.

OBST ALT 62FT located at 0.2NM 103° FM end of RWY09.

RWY27: 5.0% climb gradient required up to 1000FT.

OBST ALT 919FT located at 4.1NM 269° FM end of RWY27.

RIKYU TRANSITION

From STEED, to RIKYU.

CHANGE : VAR. SID renamed. Navigation specification. Sensor for RNAV. PROC course. MUSBI established.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI

RNAV SID and TRANSITION

STEED FOUR 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	—	—	091 (082.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	SS901	Y	—	-8.3	—	—	—	—	—	Basic RNP1
003	DF	MUSBI	—	—	-8.3	—	R	+5000	—	—	Basic RNP1
004	TF	STEED	—	189 (180.9)	-8.3	12.8	—	—	—	—	Basic 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	—	—	271 (262.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	BUBLE	—	—	-8.3	—	L	—	—	—	Basic RNP1
003	TF	MUSBI	—	189 (180.9)	-8.3	7.2	—	+5000	—	—	Basic RNP1
004	TF	STEED	—	189 (180.9)	-8.3	12.8	—	—	—	—	Basic RNP1

RIKYU 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	STEED	—	—	-8.3	—	—	—	—	—	Basic RNP1
002	TF	RIKYU	—	257 (248.4)	-8.3	27.3	—	—	—	—	Basic RNP1

CHANGE : VAR. SID renamed. Navigation specification. PROC course. MUSBI established.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI	RNAV SID and TRANSITION
	CUBIC FOUR DEPARTURE / TOHOKU TRANSITION Basic RNP1
Note GNSS required.	
VAR 8°W(2020)	
CUBIC FOUR DEPARTURE RWY09 : Climb on HDG091° at or above 500FT, direct to <u>SS901</u> , to HAGNO at or above 11000FT, to CUBIC at or above FL150. RWY27 : Climb on HDG271° at or above 500FT, turn left direct to BUBLE, to MONAK at or above 11000FT, to CUBIC at or above FL150. NOTE RWY09: 5.0% climb gradient required up to 500FT. OBST ALT 62FT located at 0.2NM 103° FM end of RWY09. RWY27: 5.0% climb gradient required up to 1000FT. OBST ALT 919FT located at 4.1NM 269° FM end of RWY27.	
TOHOKU TRANSITION From CUBIC at or above FL150, to SERRY, to SAITI, to SAMBO.	

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI

RNAV SID and TRANSITION

CUBIC FOUR 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	—	—	091 (082.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	SS901	Y	—	-8.3	—	—	—	—	—	Basic RNP1
003	TF	HAGNO	—	124 (115.8)	-8.3	22.0	—	+11000	—	—	Basic RNP1
004	TF	CUBIC	—	124 (116.1)	-8.3	9.1	—	+FL150	—	—	Basic 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	—	—	271 (262.5)	-8.3	—	—	+500	—	—	Basic RNP1
002	DF	BUBLE	—	—	-8.3	—	L	—	—	—	Basic RNP1
003	TF	MONAK	—	115 (106.4)	-8.3	19.5	—	+11000	—	—	Basic RNP1
004	TF	CUBIC	—	115 (106.7)	-8.3	9.4	—	+FL150	—	—	Basic RNP1

TOHOKU 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	CUBIC	—	—	-8.3	—	—	+FL150	—	—	Basic RNP1
002	TF	SERRY	—	018 (009.5)	-8.3	36.4	—	—	—	—	Basic RNP1
003	TF	SAITI	—	347 (338.8)	-8.3	58.9	—	—	—	—	Basic RNP1
004	TF	SAMBO	—	351 (343.0)	-8.3	47.4	—	—	—	—	Basic RNP1

CHANGE : VAR, SID renamed. Navigation specification. PROC course. HAGNO, MONAK, SERRY established. RIDER abolished. TOHOKU TRANSITION added.

STANDARD ARRIVAL CHART-INSTRUMENT

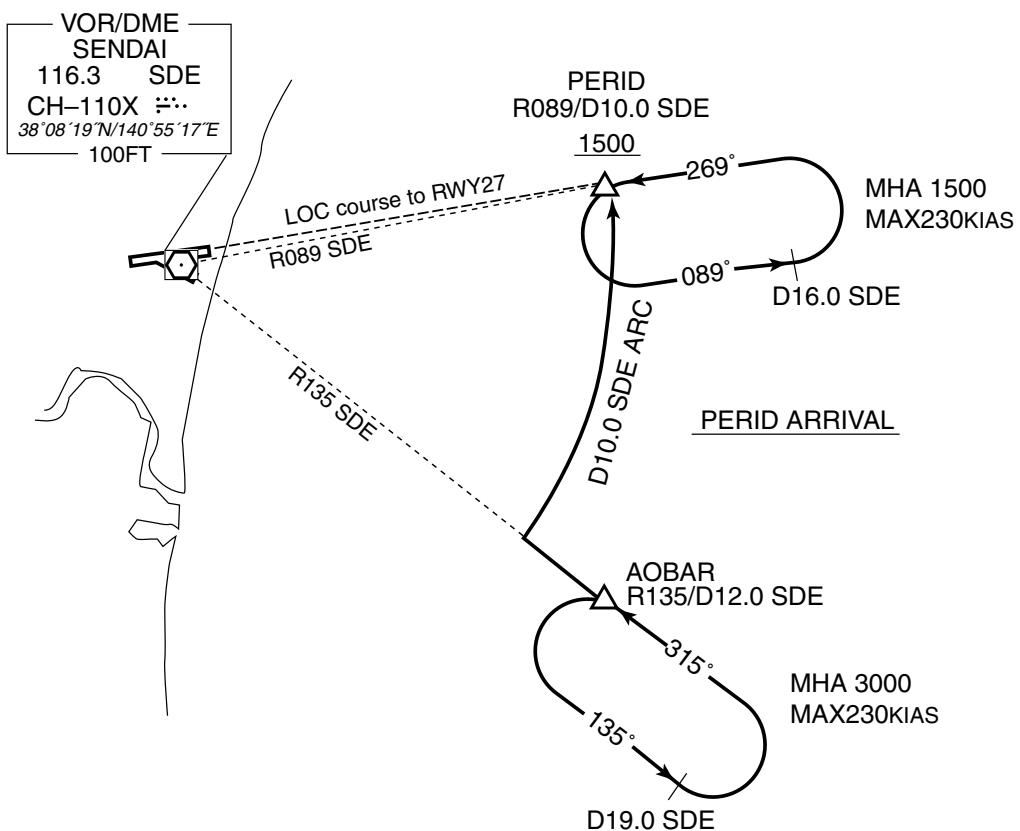
RJSS / SENDAI

STAR

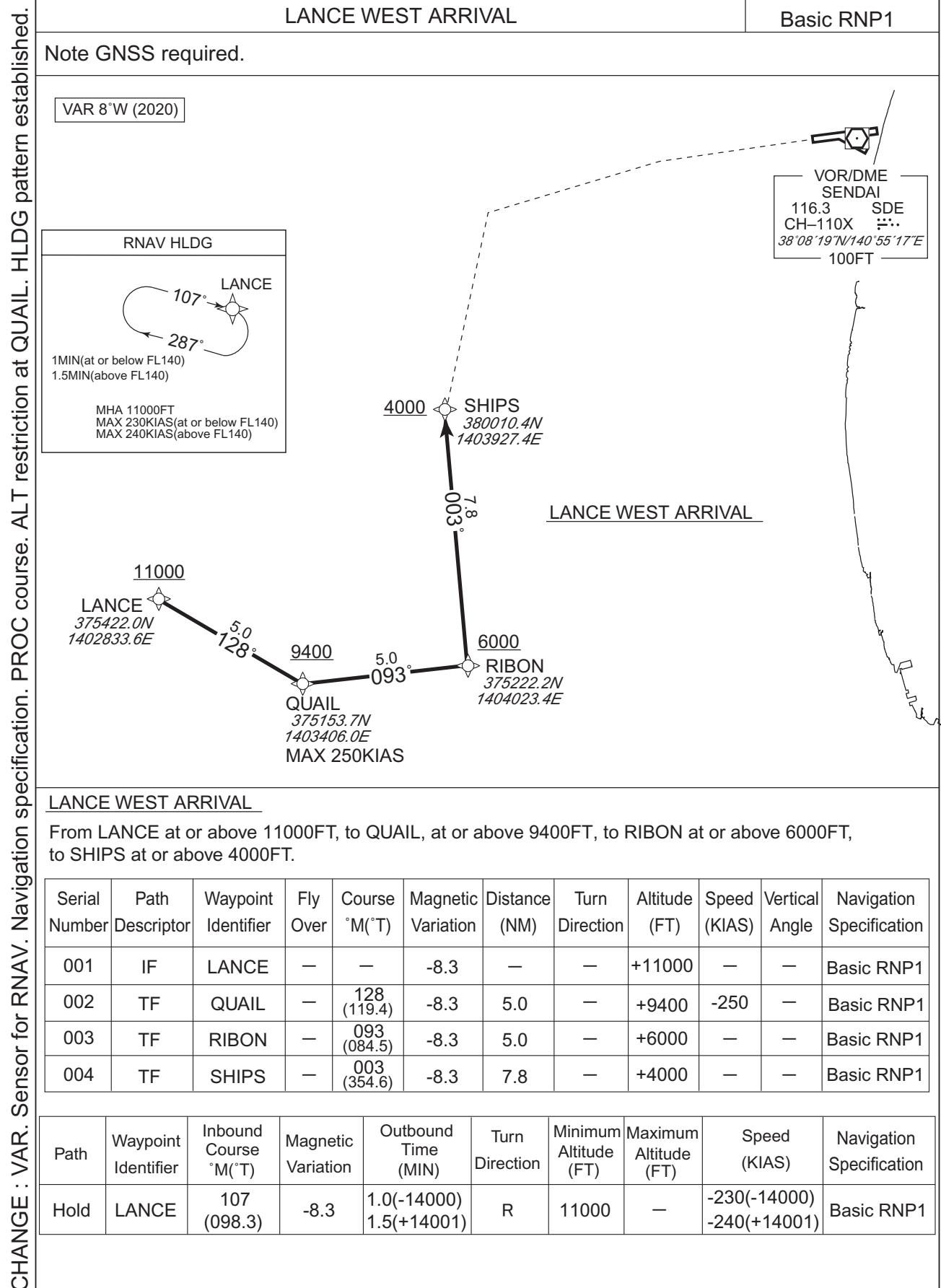
PERID ARRIVAL

From over AOBAR, via SDE R135 to intercept and proceed via SDE 10.0DME counterclockwise ARC to PERID.

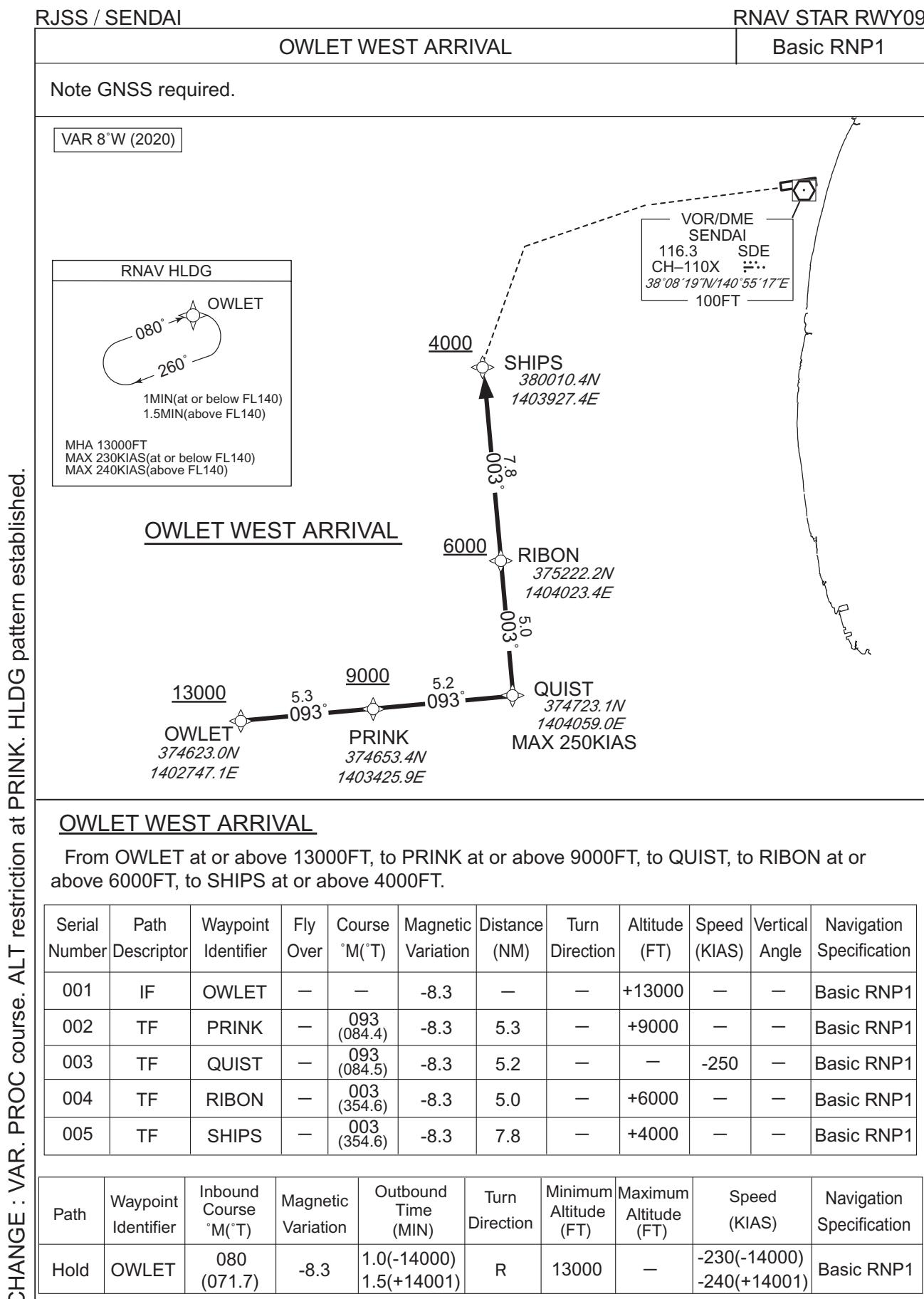
Cross PERID at or above 1500FT.



STANDARD ARRIVAL CHART - INSTRUMENT

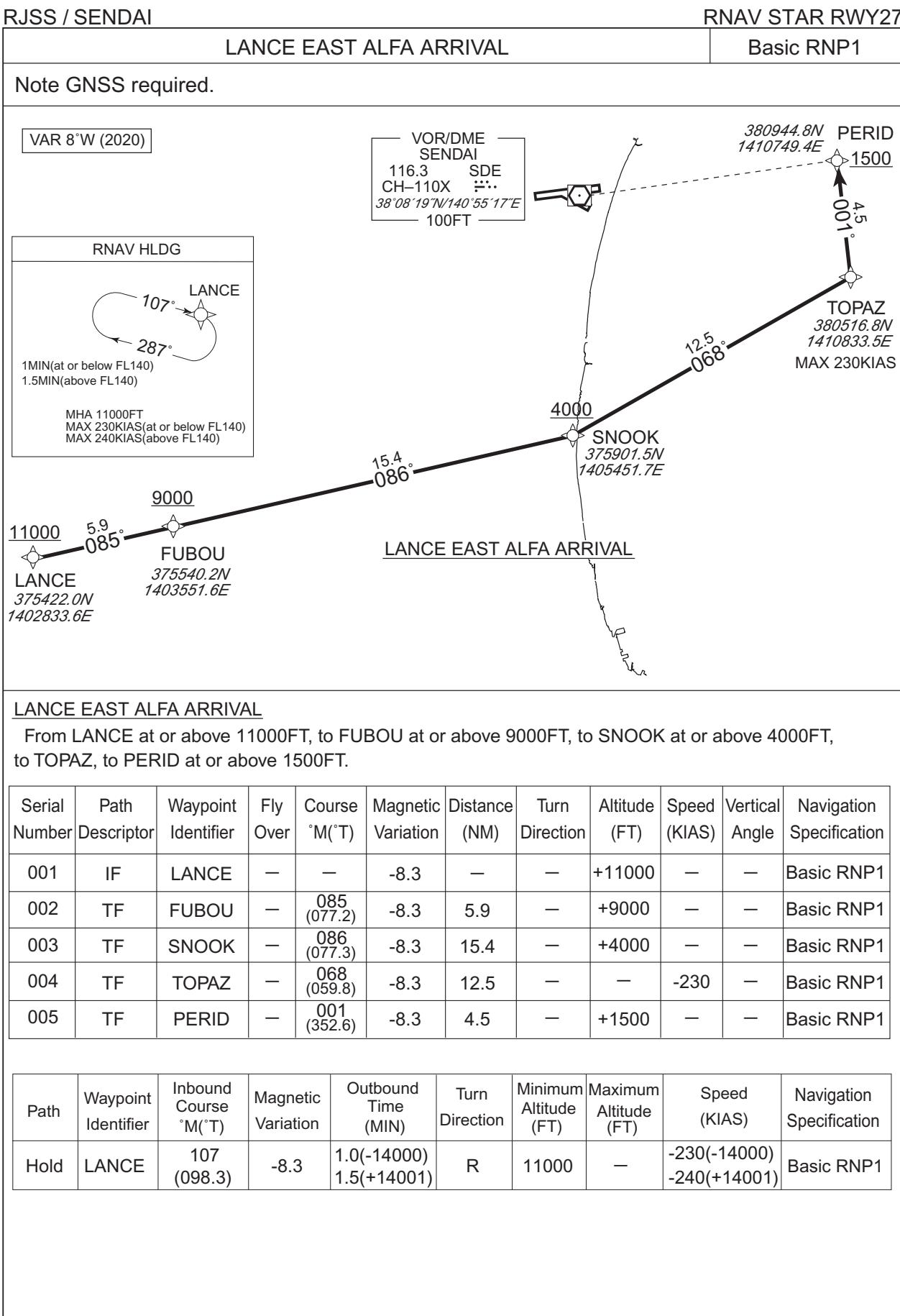


STANDARD ARRIVAL CHART-INSTRUMENT

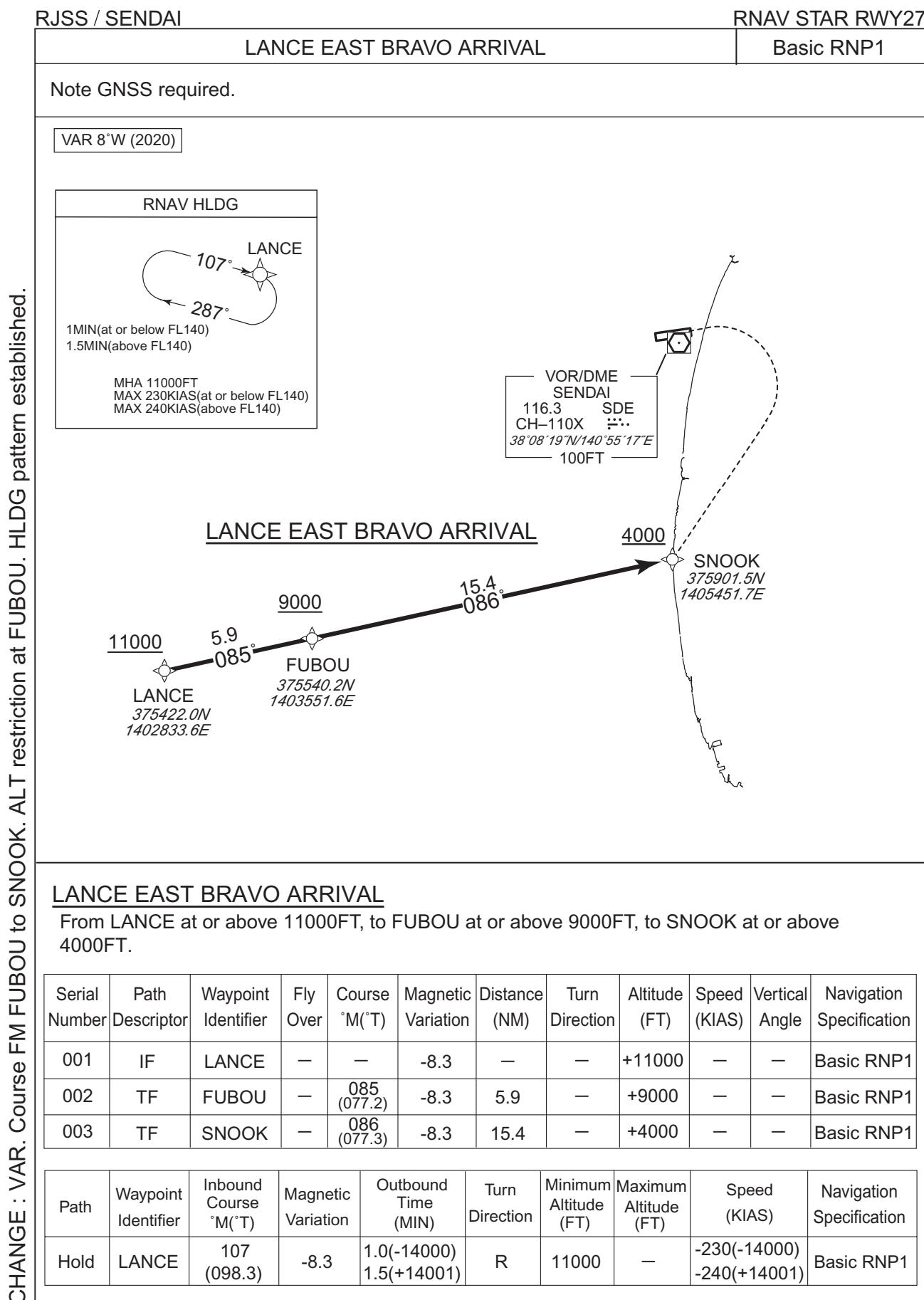


STANDARD ARRIVAL CHART-INSTRUMENT

CHANGE : VAR, Navigation specification. Sensor for RNAV. Course FM FUBOU to SNOOK. Course FM TOPAZ to PERID. ALT restriction at FUBOU. HLDG pattern established.

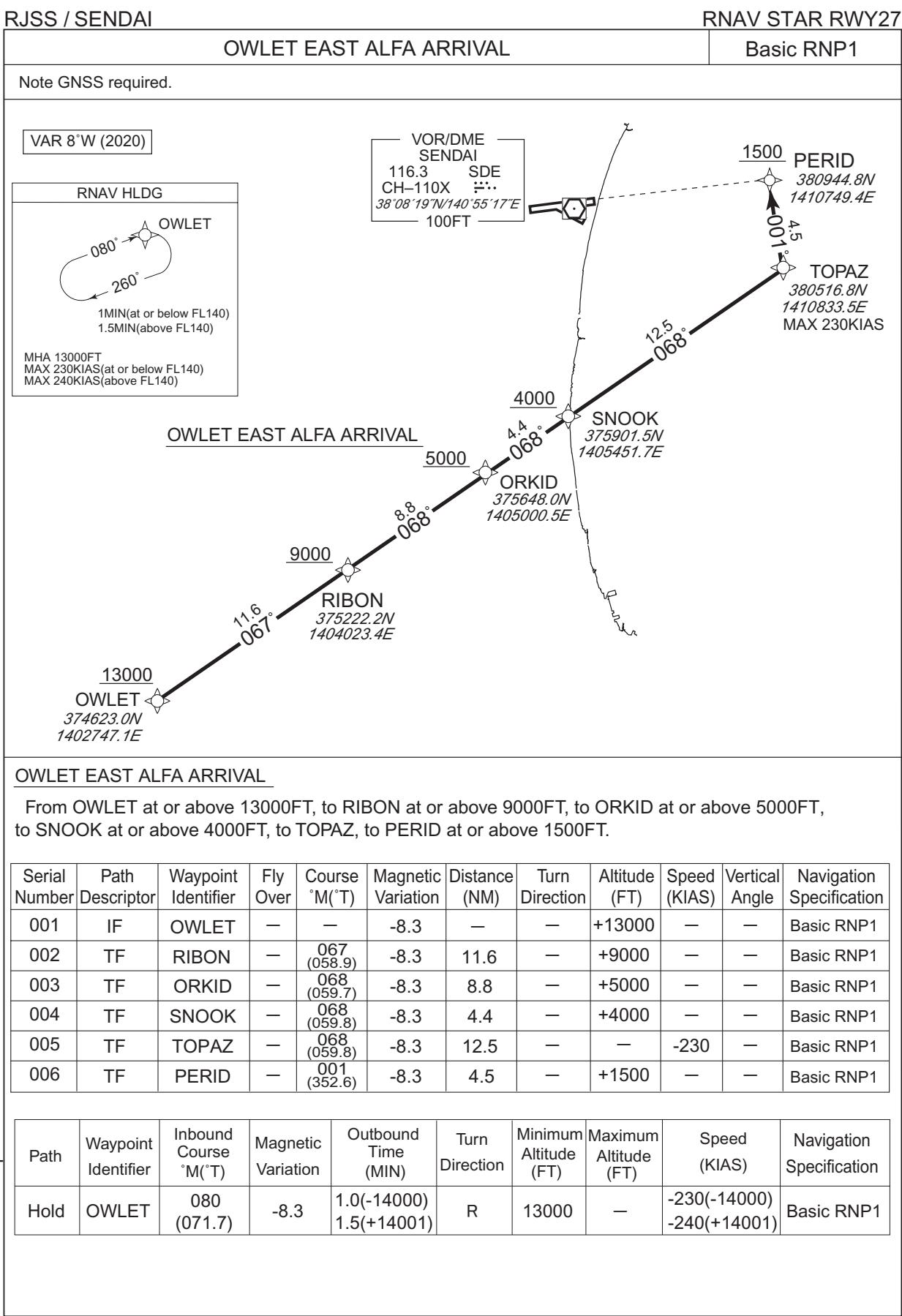


STANDARD ARRIVAL CHART-INSTRUMENT



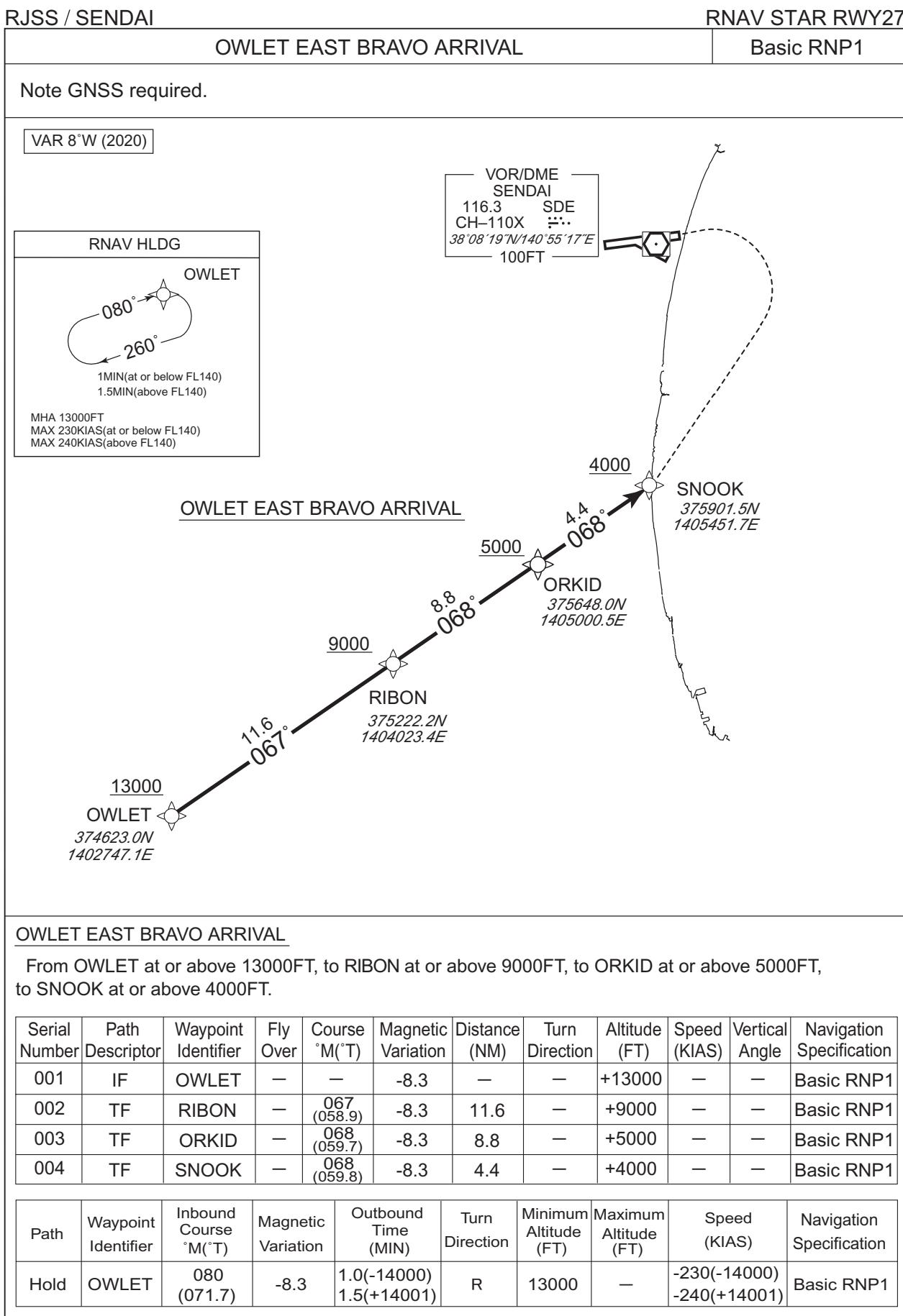
STANDARD ARRIVAL CHART-INSTRUMENT

CHANGE : VAR. Navigation specification. Sensor for RNAV. ORKID established. DATTE abolished. ALT restriction at RIBON. HLDG pattern established.



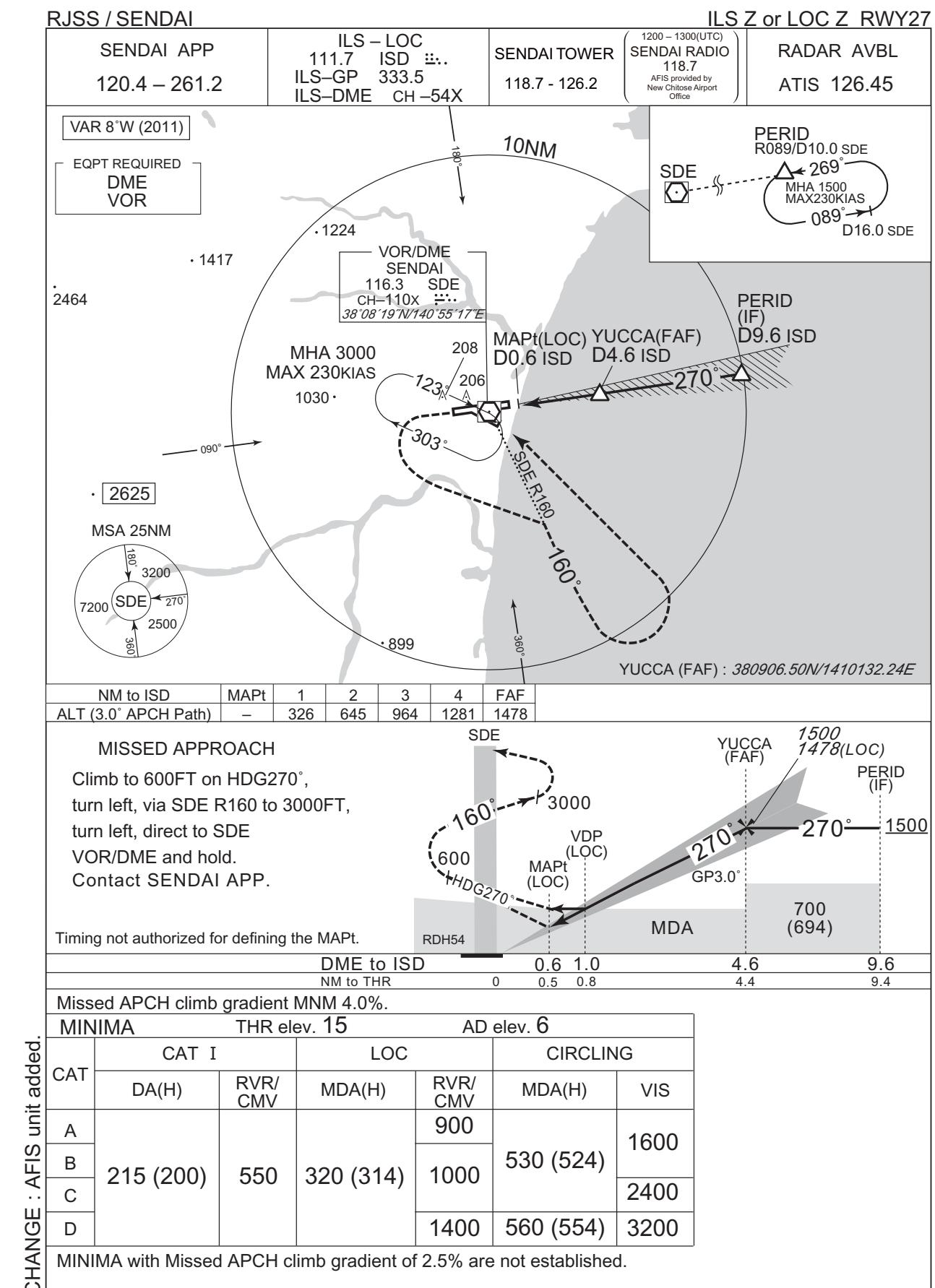
STANDARD ARRIVAL CHART-INSTRUMENT

CHANGE : VAR. ORKID established. Course FM RIBON to SNOOK. ALT restriction at RIBON. HLDG pattern established.

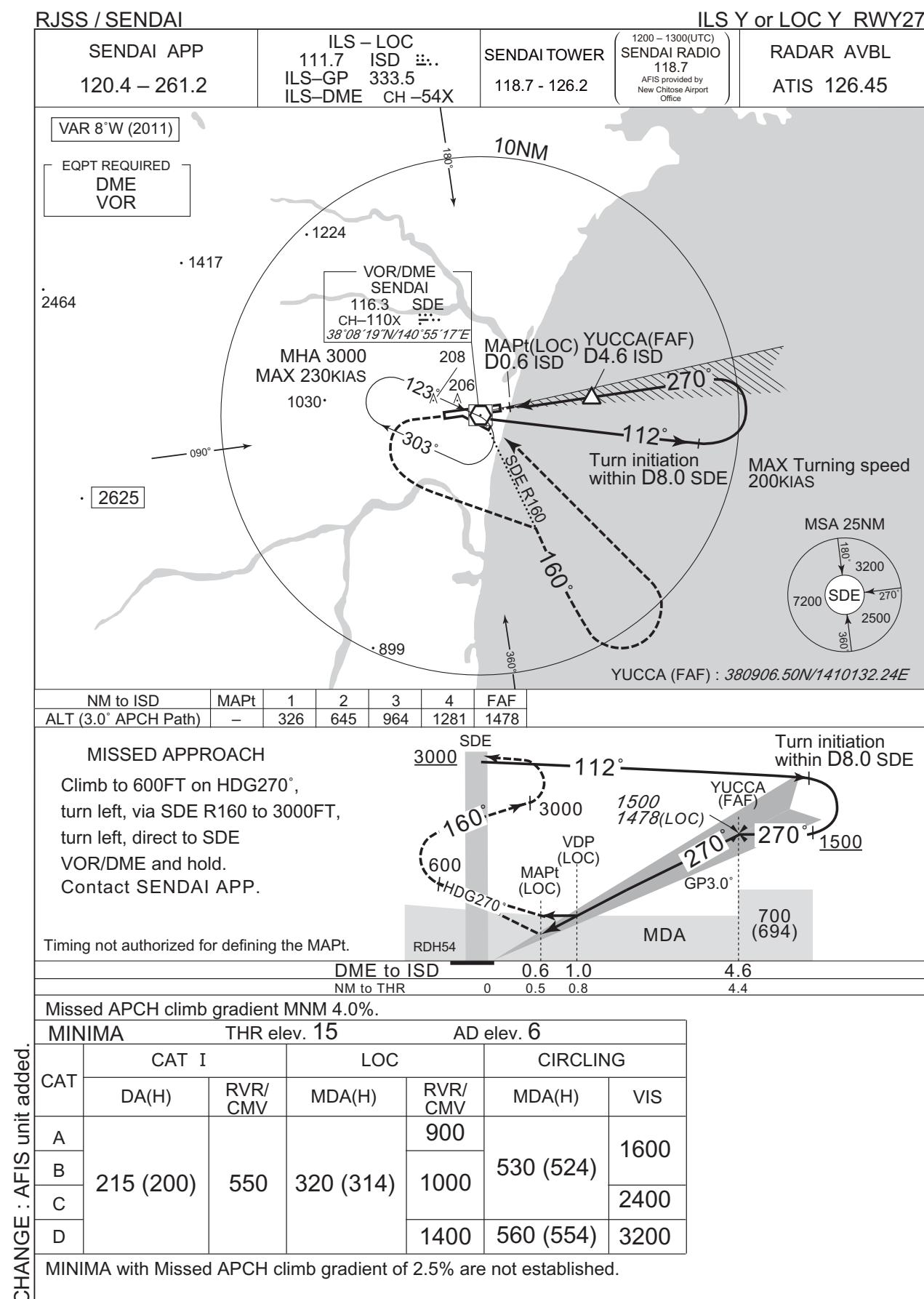


INTENTIONALLY LEFT BLANK

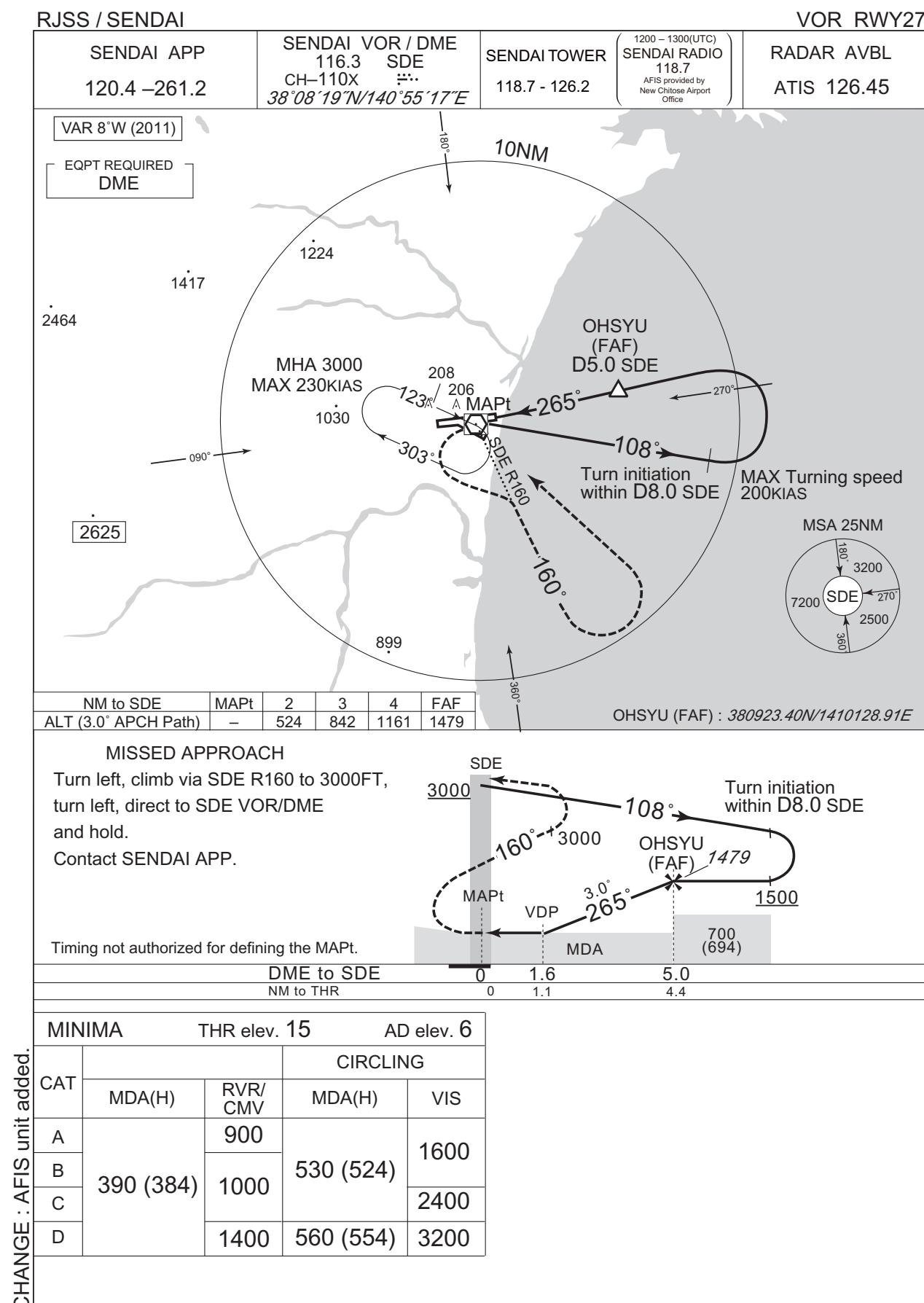
INSTRUMENT APPROACH CHART



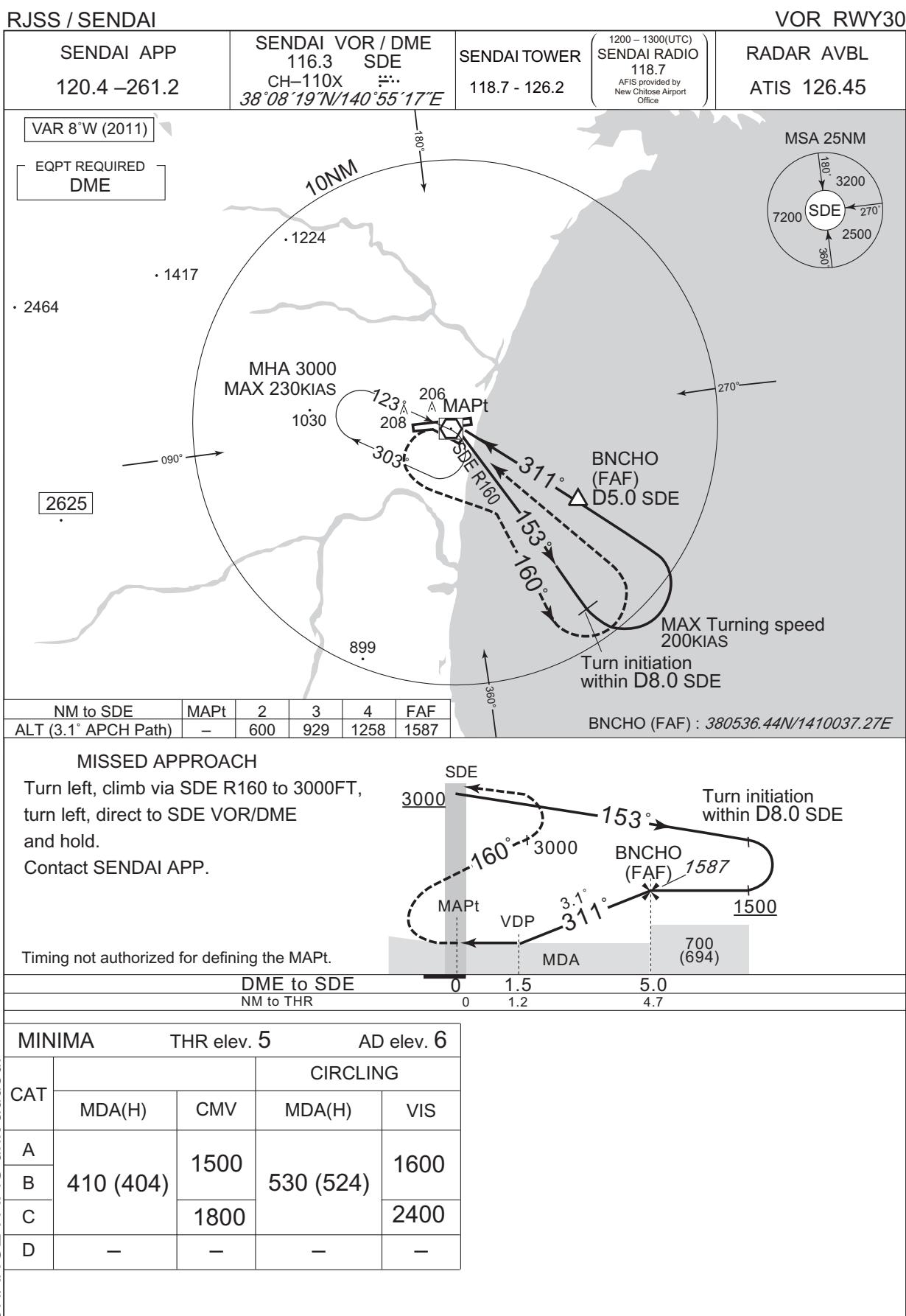
INSTRUMENT APPROACH CHART



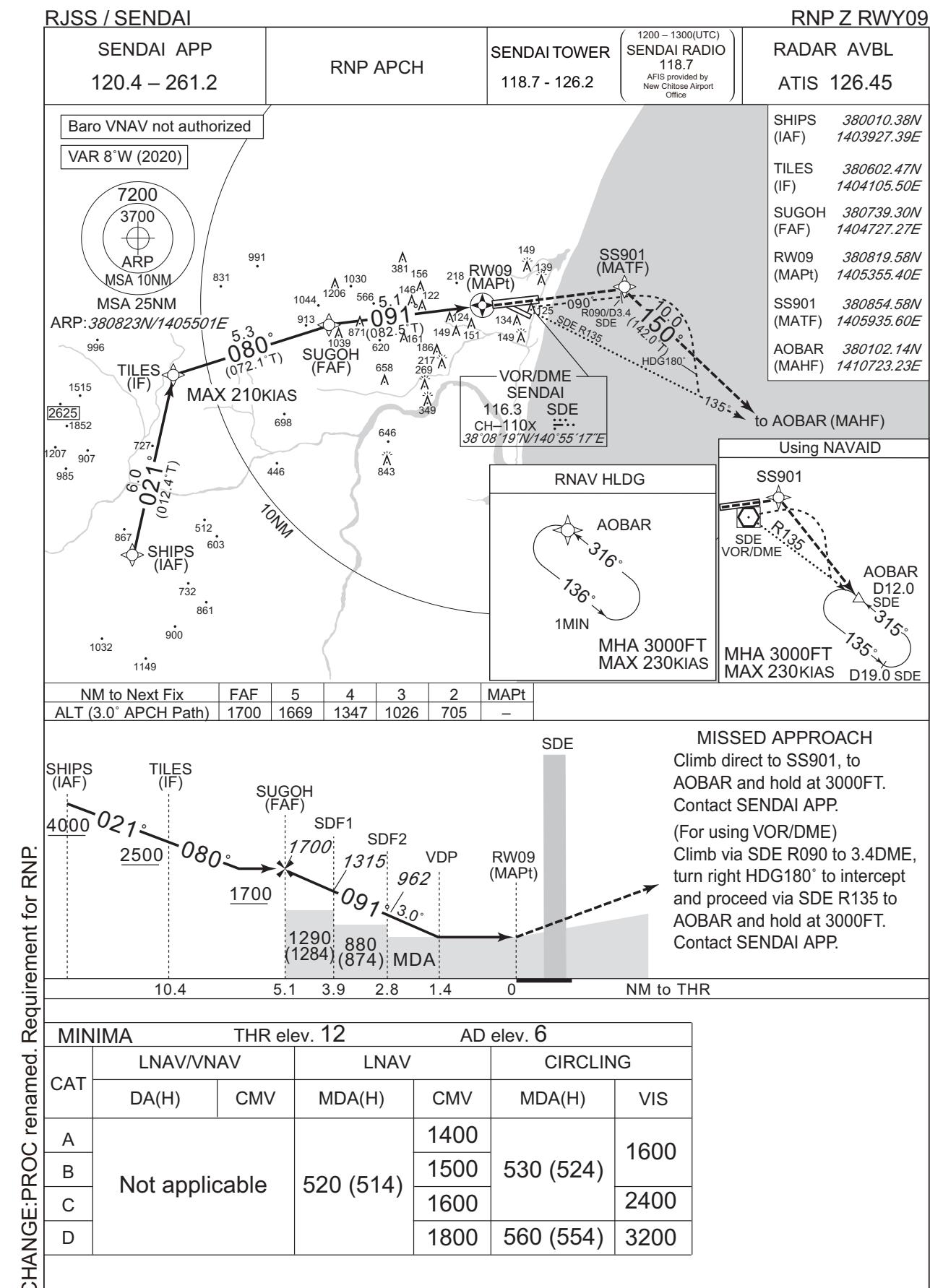
INSTRUMENT APPROACH CHART



INSTRUMENT APPROACH CHART



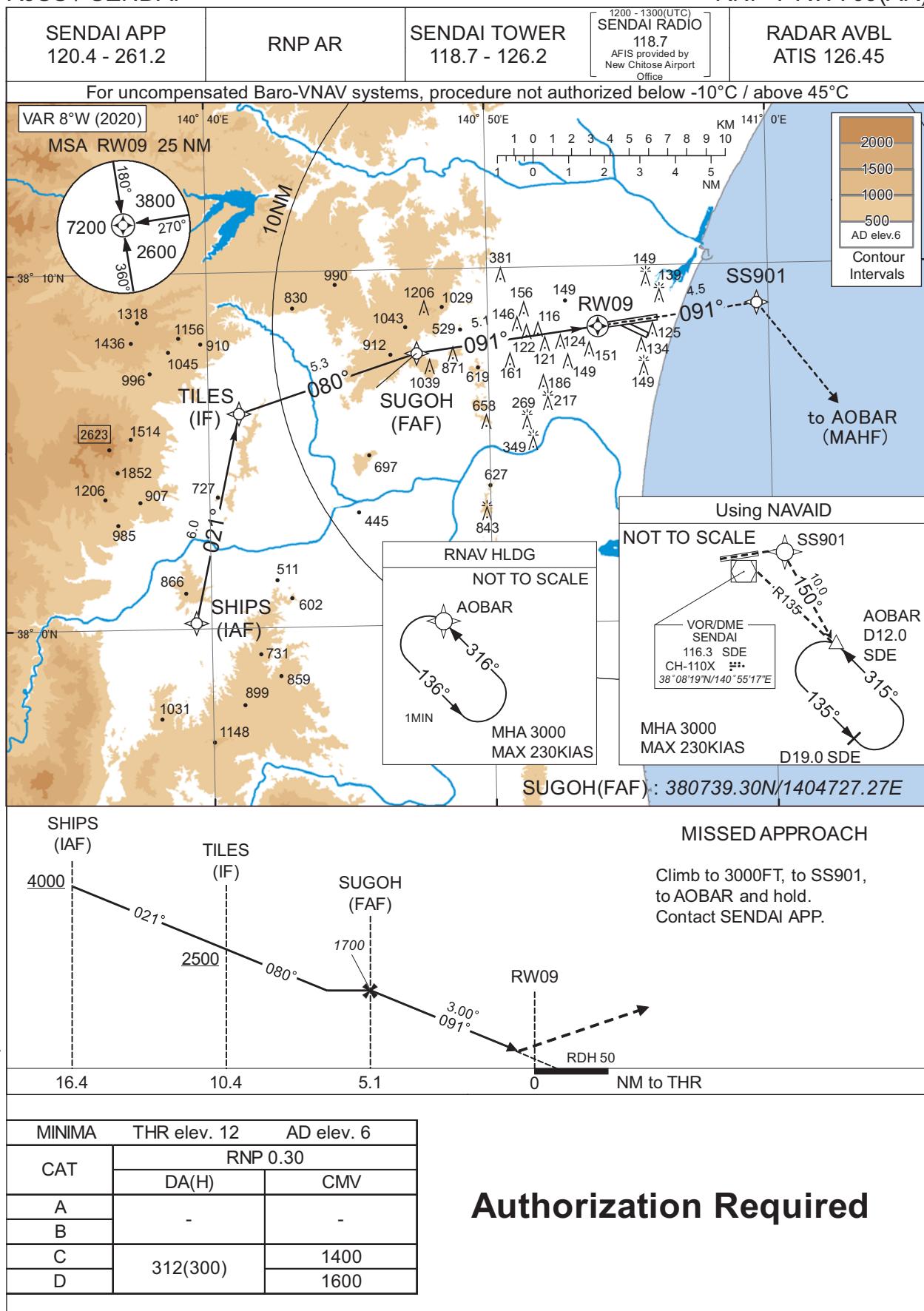
INSTRUMENT APPROACH CHART



INSTRUMENT APPROACH CHART

RJSS / SENDAI

RNP Y RWY09(AR)



INSTRUMENT APPROACH CHART

RJSS / SENDAI

RNP Y 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	SHIPS	-	-	-8.3	-	-	+4000	-	-	-
002	TF	TILES	-	021 (012.4)	-8.3	6.0	-	+2500	-	-	1.0
003	TF	SUGOH	-	080 (072.1)	-8.3	5.3	-	1700	-	-	1.0
004	TF	RW09	Y	091 (082.5)	-8.3	5.1	-	62	-	-3.00/50	0.3
005	TF	SS901	-	091 (082.5)	-8.3	4.5	-	-	-	-	1.0
006	TF	AOBAR	-	150 (142.0)	-8.3	10.0	-	3000	-	-	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	AOBAR	316 (307.5)	-8.3	1.0 (-14000)	L	3000	FL140	-230 (-14000)	1.0

Waypoint Coordinates

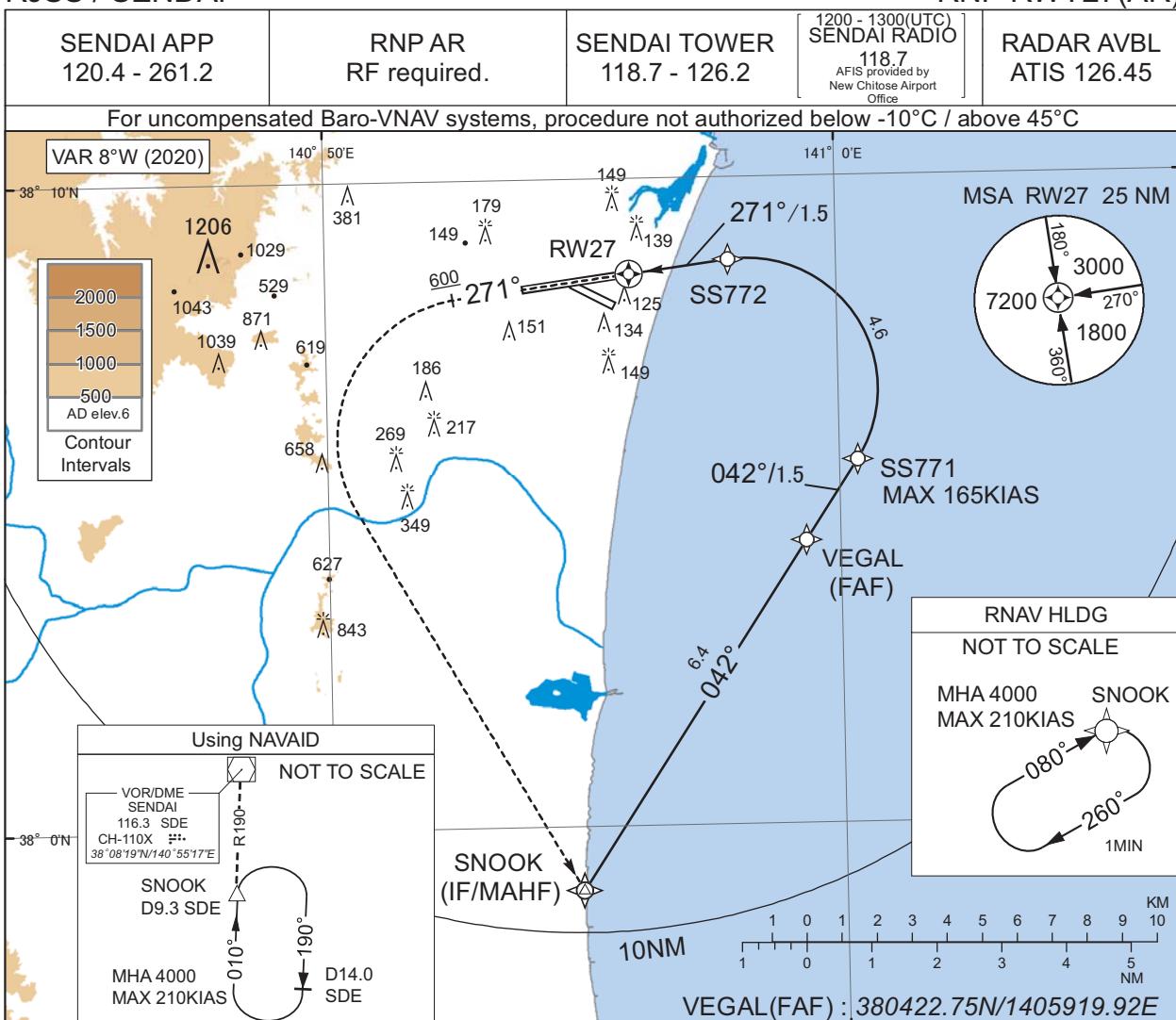
Waypoint Identifier	Coordinates
SHIPS	380010.38N / 1403927.39E
TILES	380602.47N / 1404105.50E
SUGOH	380739.30N / 1404727.27E
RW09	380819.58N / 1405355.40E
SS901	380854.58N / 1405935.60E
AOBAR	380102.14N / 1410723.23E

CHANGE : PROC renamed.

INSTRUMENT APPROACH CHART

RJSS / SENDAI

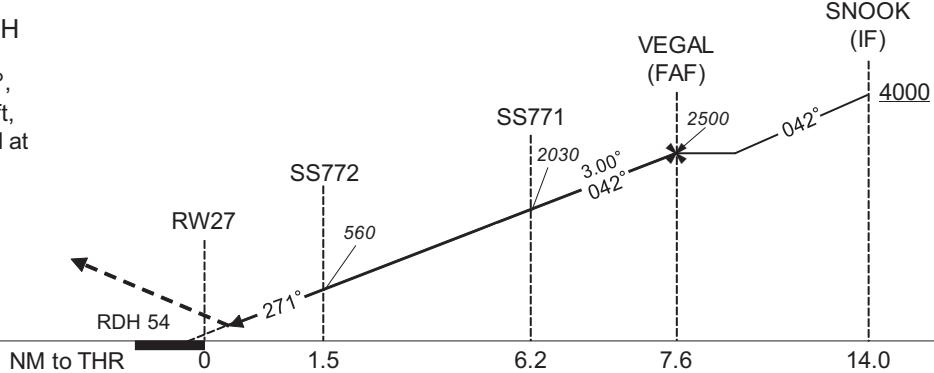
RNP RWY27(AR)



MISSSED APPROACH

From RW27 on track 271°, at or above 600FT turn left, direct to SNOOK and hold at 4000FT.

Contact SENDAI APP.



CHANGE : PROC renamed. Requirement for RNP.

	MINIMA	THR elev. 15	AD elev. 6
CAT	RNP 0.30		
	DA(H)	RVR/CMV	
A	-	-	
B			
C	315(300)	1000	
D		1400	

Authorization Required

* Missed APCH climb gradient MNM 4.0%

INSTRUMENT APPROACH CHART

RJSS / SENDAI

RNP 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	SNOOK	-	-	-8.3	-	-	+4000	-	-	-
002	TF	VEGAL	-	042 (033.3)	-8.3	6.4	-	2500	-	-	1.0
003	TF	SS771	-	042 (033.4)	-8.3	1.5	-	2030	-165	-3.00	0.3
004	RF Center: SSRF1 r=2.02NM	SS772	-	-	-8.3	4.6	L	560	-	-3.00	0.3
005	TF	RW27	Y	271 (262.6)	-8.3	1.5	-	69	-	-3.00/54	0.3
006	FA	-	-	271 (262.6)	-8.3	-	-	+600	-	-	1.0
007	DF	SNOOK	-	-	-8.3	-	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	SNOOK	080 (071.9)	-8.3	1.0 (-14000)	R	4000	FL140	-210 (-14000)	1.0

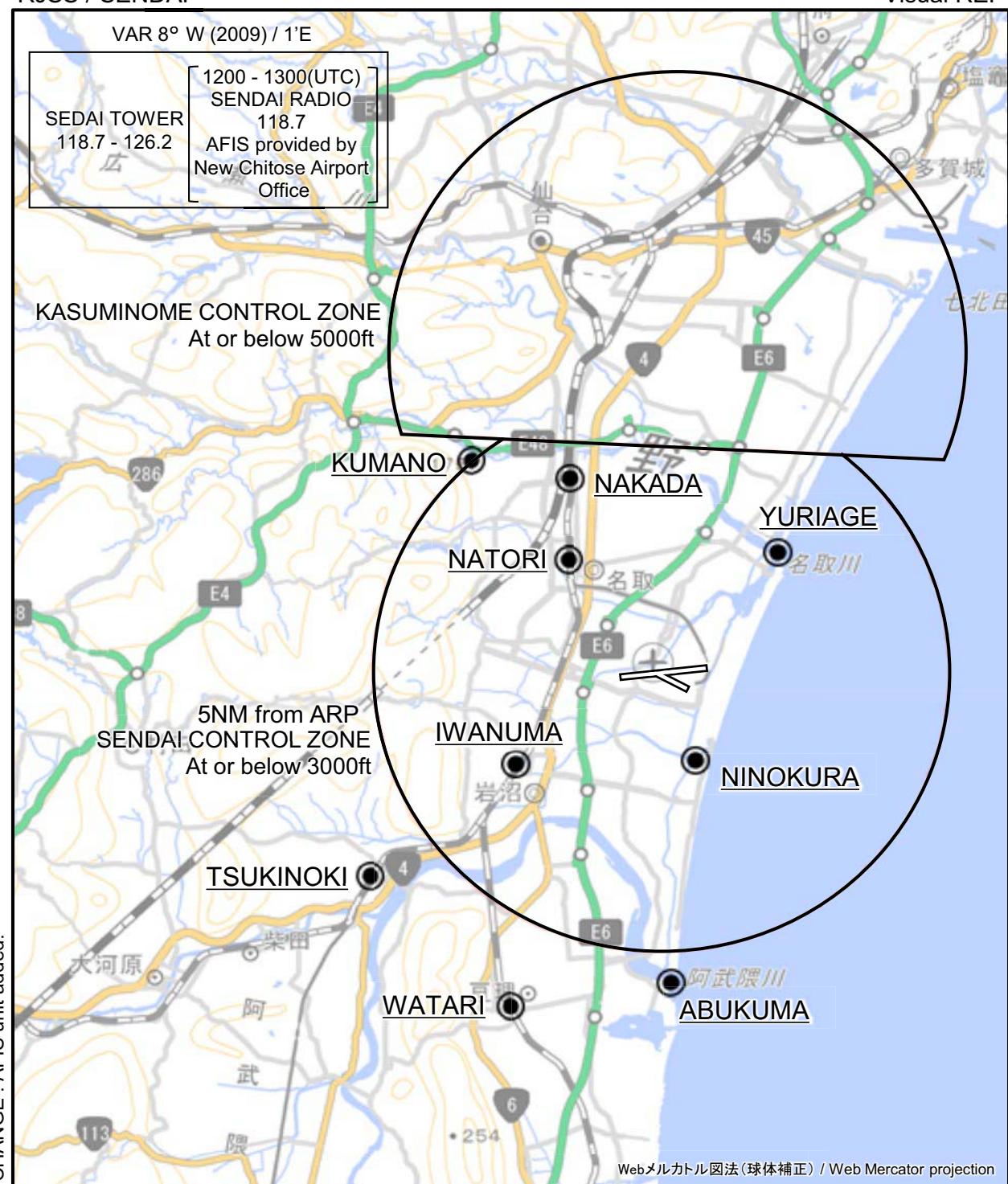
Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
SNOOK	375901.53N / 1405451.66E	SSRF1	380643.74N / 1405813.69E
VEGAL	380422.75N / 1405919.92E		
SS771	380536.78N / 1410021.86E		
SS772	380844.14N / 1405753.87E		
RW27	380832.18N / 1405557.56E		

CHANGE : PROC renamed.

RJSS / SENDAI

Visual REP



RJSS / SENDAI

Visual REP

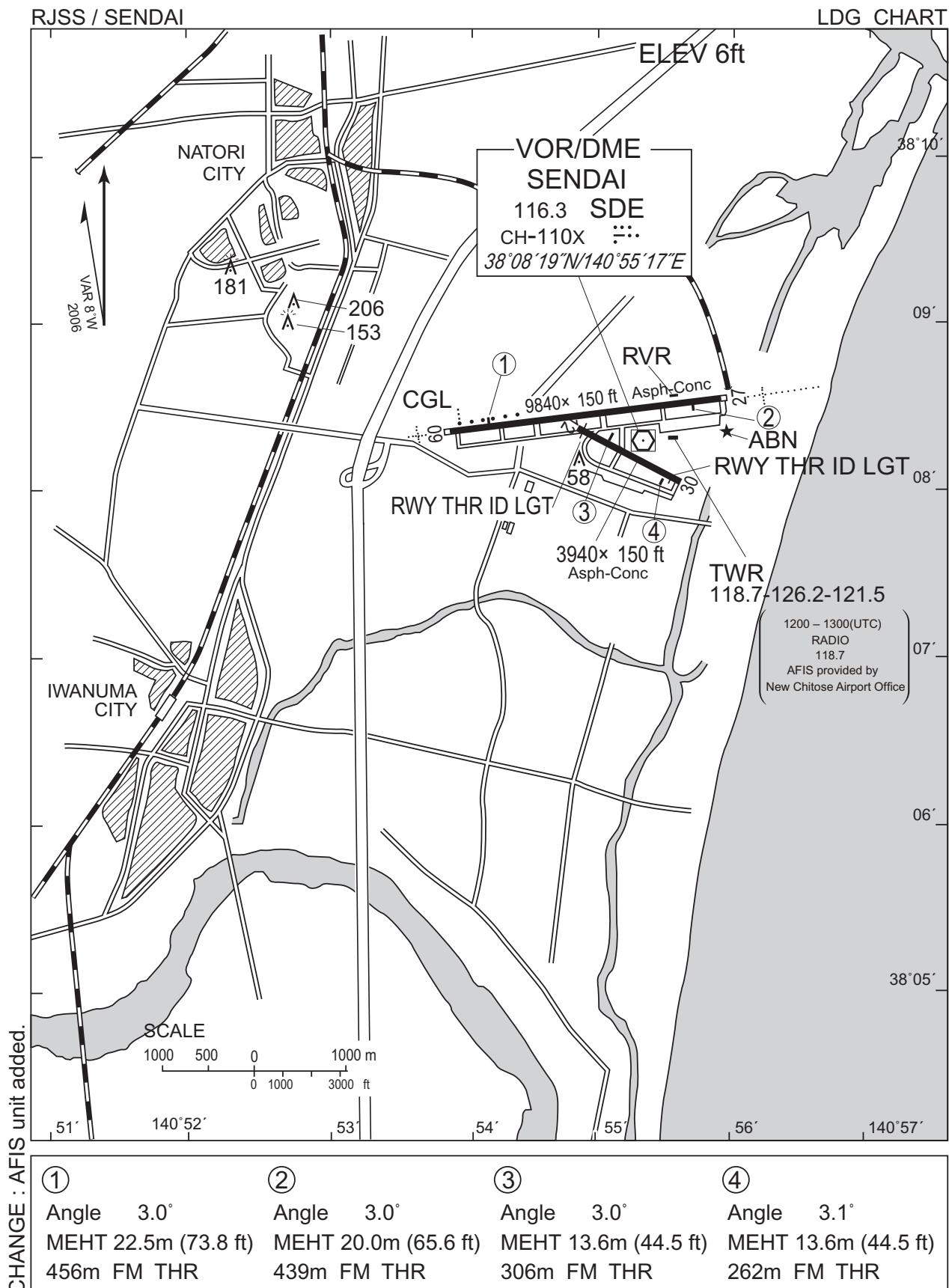
Call sign	BRG / DIST from ARP	Remarks
熊野 Kumano	319°T / 5.0NM	熊野神社 Kumano Shrine
中田 Nakada	336°T / 3.8NM	JR南仙台駅 Station
閑上 Yuriage	043°T / 2.9NM	名取川河口 River-mouth of the Natori
名取 Natori	321°T / 2.6NM	JR名取駅 Station
二の倉 Ninokura	160°T / 1.7NM	県南浄化センター Sewage disposal center
岩沼 Iwanuma	236°T / 3.0NM	JR岩沼駅 Station
楓木 Tsukinoki	234°T / 6.2NM	JR楓木駅 Station
阿武隈 Abukuma	178°T / 5.6NM	阿武隈川河口 River-mouth of the Abukuma
亘理 Watari	204°T / 6.5NM	JR亘理駅 Station

注: 有視界飛行方式により霞目管制圏から仙台管制圏へ進入しようとする航空機は、仙台管制圏に入圏する前に仙台タワーまたは仙台レディオへ通報すること。

NOTE : When any VFR flight enters SENDAI CTR directly via KASUMINOME CTR, the pilot shall report to "SENDAI TWR" or "SENDAI RADIO" before entering SENDAI CTR.

注: VFR機とIFR機の航行の安全のため、仙台進入管制区のうち、仙台空港から15NM以内の地域をVFRで航行する場合は、仙台TCAと積極的にコンタクトすること。

NOTE : In order to ensure the safety operations for both VFR and IFR aircraft, VFR aircraft should contact SENDAI TCA positively when the flight includes SENDAI Approach Control Area, within 15 miles from Sendai Airport.



RJSS / SENDAI

Minimum Vectoring Altitude CHART

VAR 8°W (2011)

