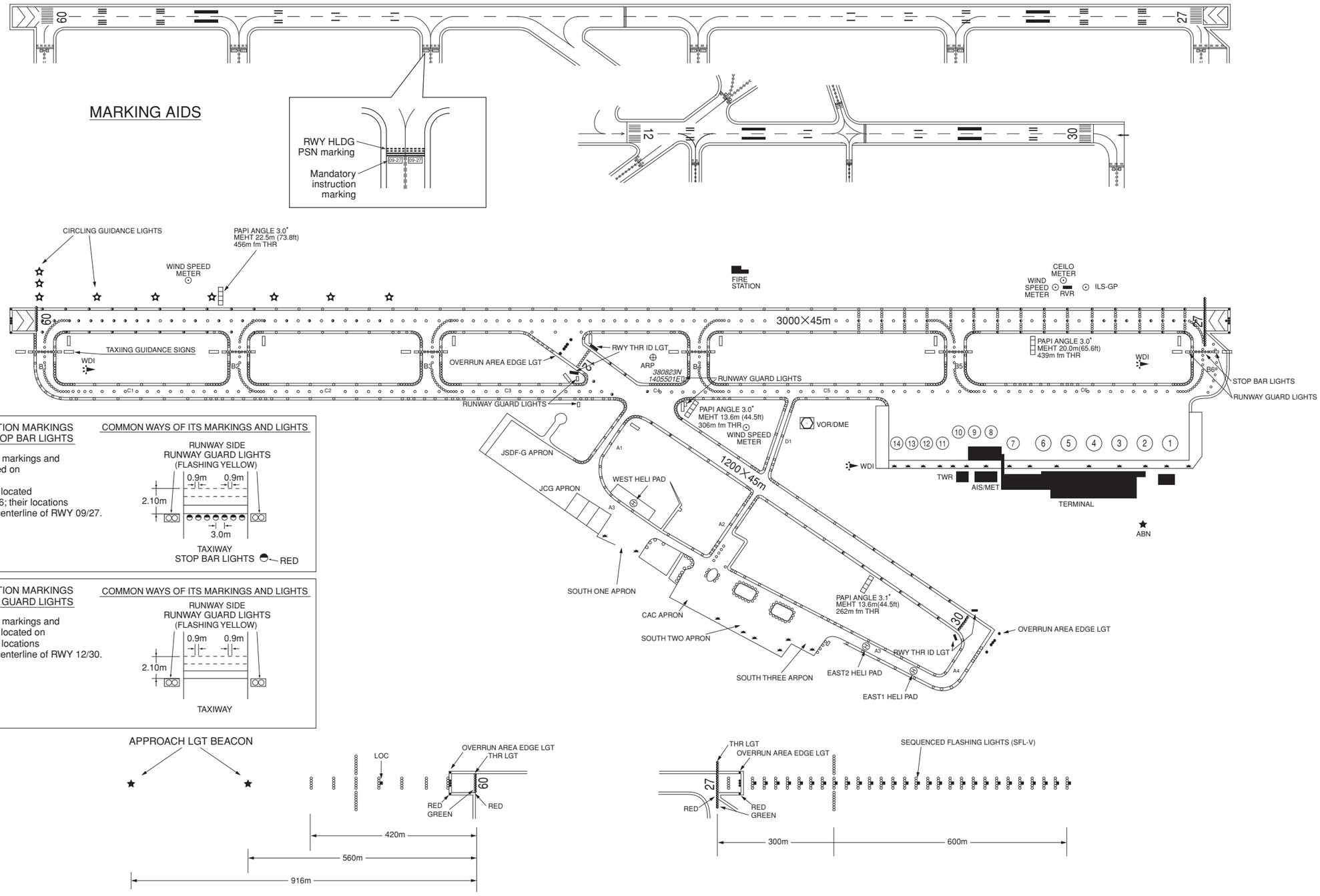
AERODROME CHART

SENDAI AIRPORT

ELEV 1.7m(5.6ft)



RUNWAY-HOLDING POSITION MARKINGS and STOP BAR LIGHTS

Runway-holding position markings and Stop bar lights are located on taxiway B1 through B6
Runway guard lights are located on taxiway B1 through B6; their locations are 75m off the runway centerline of RWY 09/27.

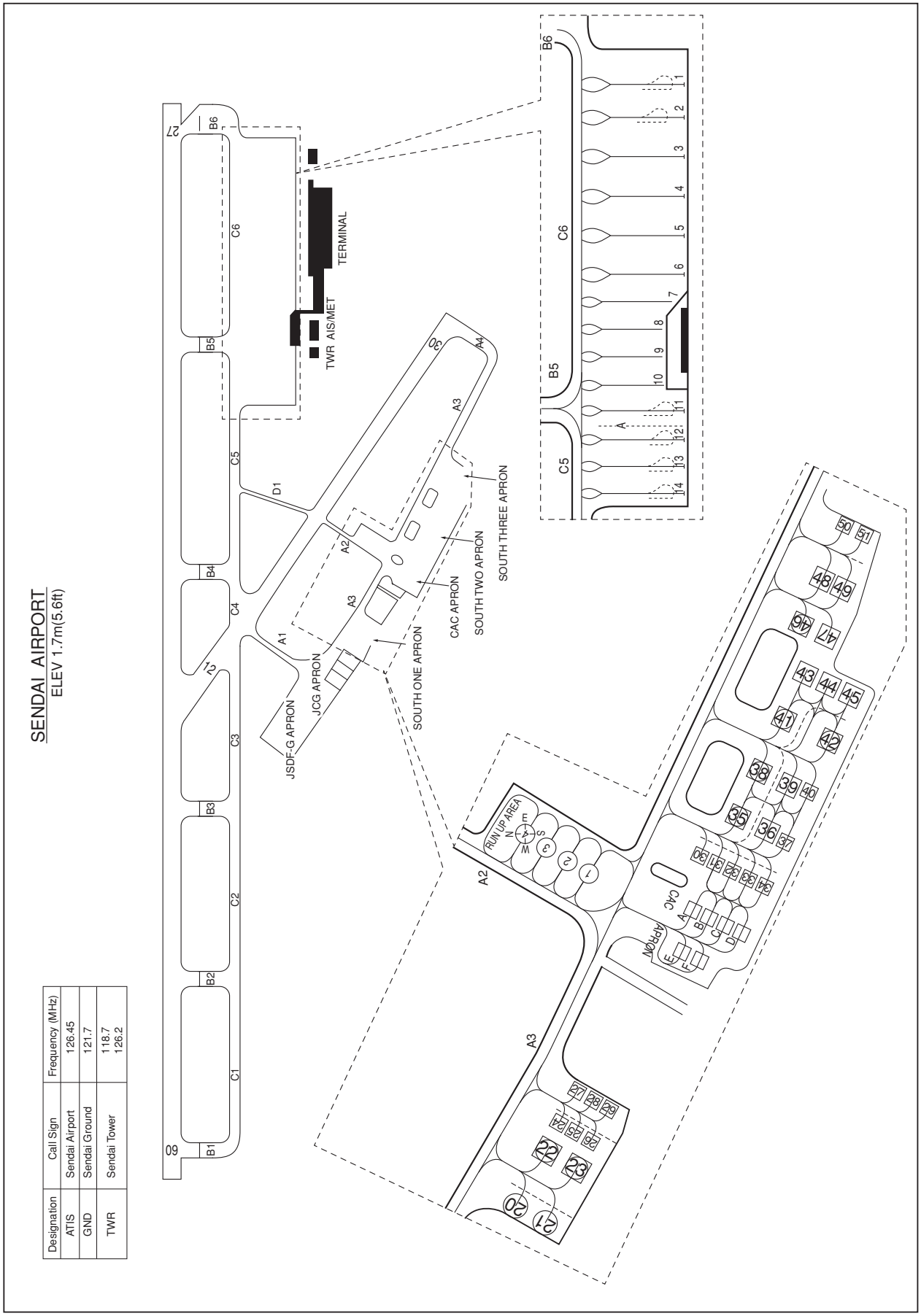
COMMON WAYS OF ITS MARKINGS AND LIGHTS

RUNWAY-HOLDING POSITION MARKINGS and RUNWAY GUARD LIGHTS

Runway-holding position markings and Runway guard lights are located on taxiway C3 and C4; their locations are 75m off the runway centerline of RWY 12/30.

COMMON WAYS OF ITS MARKINGS AND LIGHTS

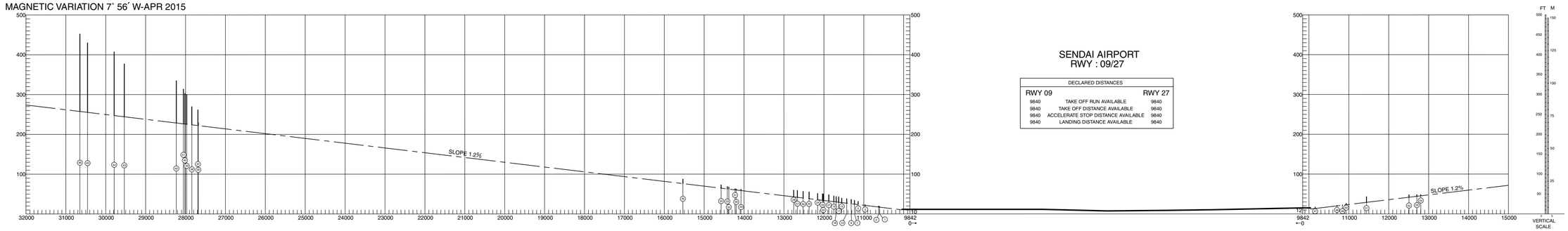
APPROACH LGT BEACON


SENDAI AIRPORT
ELEV 1.7m(5.6ft)
TERMINAL
TWR AIS/MET
JSDF-G APRON
JCG APRON
SOUTH ONE APRON
CAC APRON
SOUTH TWO APRON
SOUTH THREE APRON
RUN UP AREA
CAC APRON
09
27
30
12
Designation
Call Sign
Frequency (MHz)
ATIS
Sendai Airport
126.45
GND
Sendai Ground
121.7
TWR
Sendai Tower
118.7
126.2

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

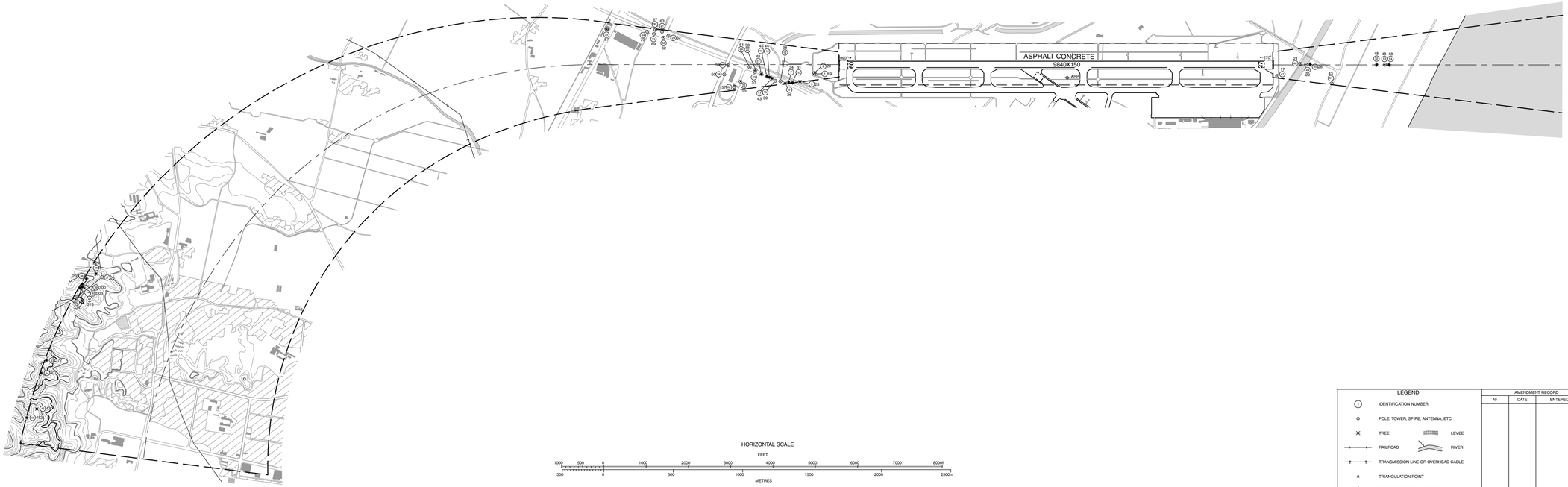
AERODROME OBSTACLE CHART-ICAO
TYPE A (OPERATING LIMITATIONS)

MAGNETIC VARIATION 7˚ 56′ W-APR 2015



SENDAI AIRPORT
RWY : 09/27

DECLARED DISTANCES		
RWY 09		RWY 27
9840	TAKE OFF RUN AVAILABLE	9840
9840	TAKE OFF DISTANCE AVAILABLE	9840
9840	ACCELERATE STOP DISTANCE AVAILABLE	9840
9840	LANDING DISTANCE AVAILABLE	9840



LEGEND

- IDENTIFICATION NUMBER
- POLE, TOWER, SPIRE, ANTENNA, ETC
- TREE
- LEVEE
- RAILROAD
- RIVER
- TRANSMISSION LINE OR OVERHEAD CABLE
- TRIANGULATION POINT
- AERONAUTICAL GROUND LIGHT

AMENDMENT RECORD		
Nr	DATE	ENTERED BY

AERODROME OBSTACLE CHART-ICAO
TYPE B

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

AERODROME ELEVATION 5.6ft ARP

VAR 7°56' W APR 2015
ANNUAL CHANGE 5'W

140° 50' E | 140° 51' E | 140° 52' E | 140° 53' E | 140° 54' E | 140° 55' E | 140° 56' E | 140° 57' E | 140° 58' E | 140° 59' E | 141° 00' E

38° 11' N
38° 10' N
38° 09' N
38° 08' N
38° 07' N
38° 06' N
38° 05' N

NATORI RIVER
H ROURA
SENDAI-TOBU ROAD
MASUDA RIVER
NATORI CITY
HORIZONTAL SURFACE
APPROACH SURFACE SLOPE 1:30
TRANSITIONAL SURFACE SLOPE 1:7
TRANSITIONAL SURFACE SLOPE 1:7
TRANSITIONAL SURFACE SLOPE 1:7
TRANSITIONAL SURFACE SLOPE 1:7
TRANSITIONAL SURFACE SLOPE 1:7
TAKE-OFF FLIGHT PATH SLOPE 1.2%
APPROACH SURFACE SLOPE 1:50
APPROACH SURFACE SLOPE 1:50
TAKE-OFF FLIGHT PATH SLOPE 1.2%
APPROACH SURFACE SLOPE 1:30
ASPHALT/CONCRETE
APRON
ASPHALT/CONCRETE
APRON
ABN
PACIFIC OCEAN
TOHOKU LINE
IWANUMA CITY
ITUMA MOAT
SADAYAMA MOAT

LEGEND

- AERODROME REFERENCE POINT 38°08'23"N 140°55'01"E
- POLE, TOWER, SPIRE, ANTENNA, ETC
- AERONAUTICAL GROUND LIGHT
- OBSTRUCTION LIGHT
- BUILDING OR LARGE STRUCTURE
- RAILROAD
- TRIANGULATION POINT
- TRANSMISSION LINE OR OVERHEAD CABLE
- LEVEE
- TREE
- RIVER
- LAKE
- CONTOURS(ft)

AMENDMENT RECORD

Nr	DATE	ENTERED BY

HORIZONTAL SCALE

FEET: 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000ft

METRES: 300 0 500 1000 1500 2000 2500 3000m

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 ...

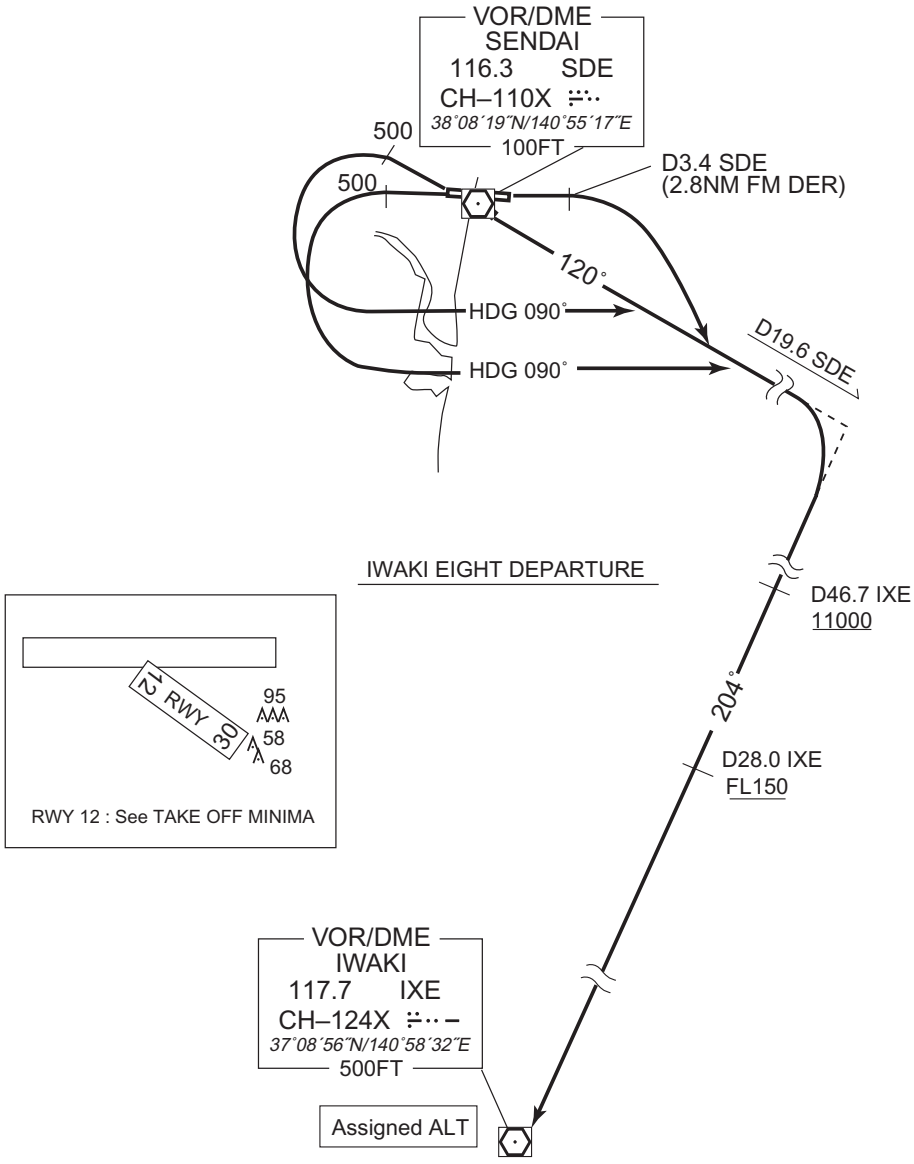
RWY 27 : Climb RWY HDG to 500FT, turn left HDG 090˚ to intercept and proceed...

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 R024/46.7DME).

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 ...

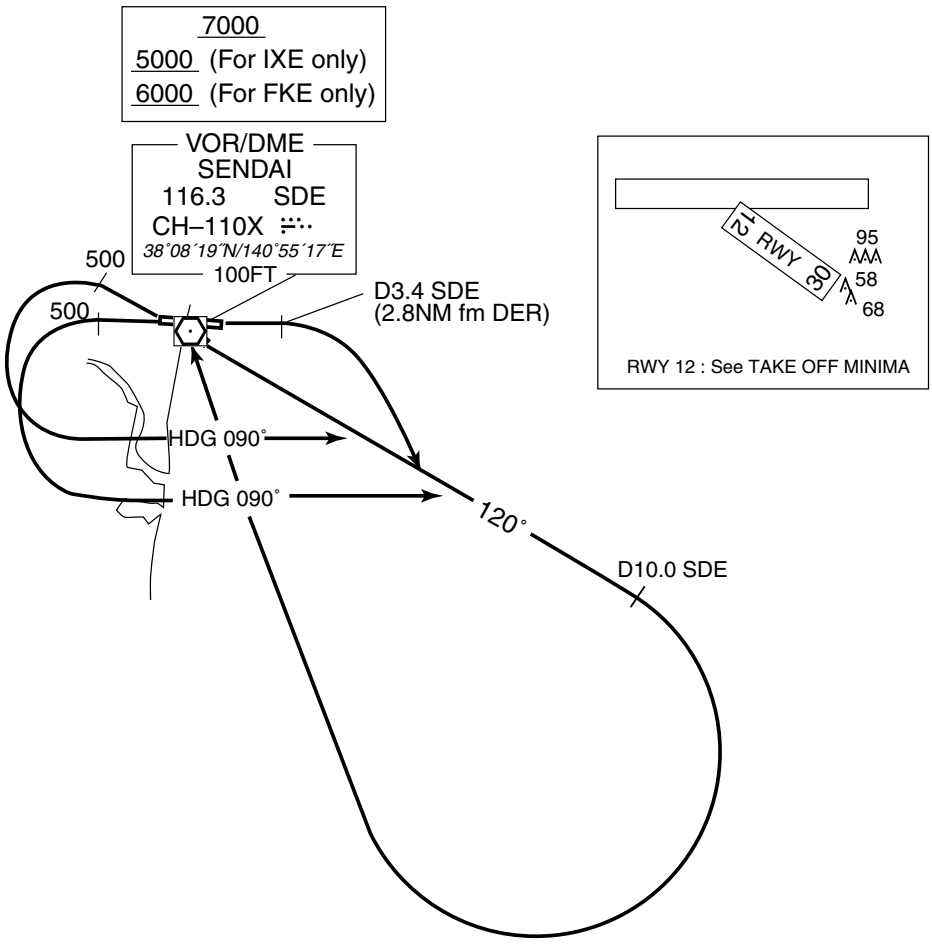
RWY 27 : Climb RWY HDG to 500FT, turn left HDG 090˚ to intercept and proceed...

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



STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI — RNAV SID and TRANSITION

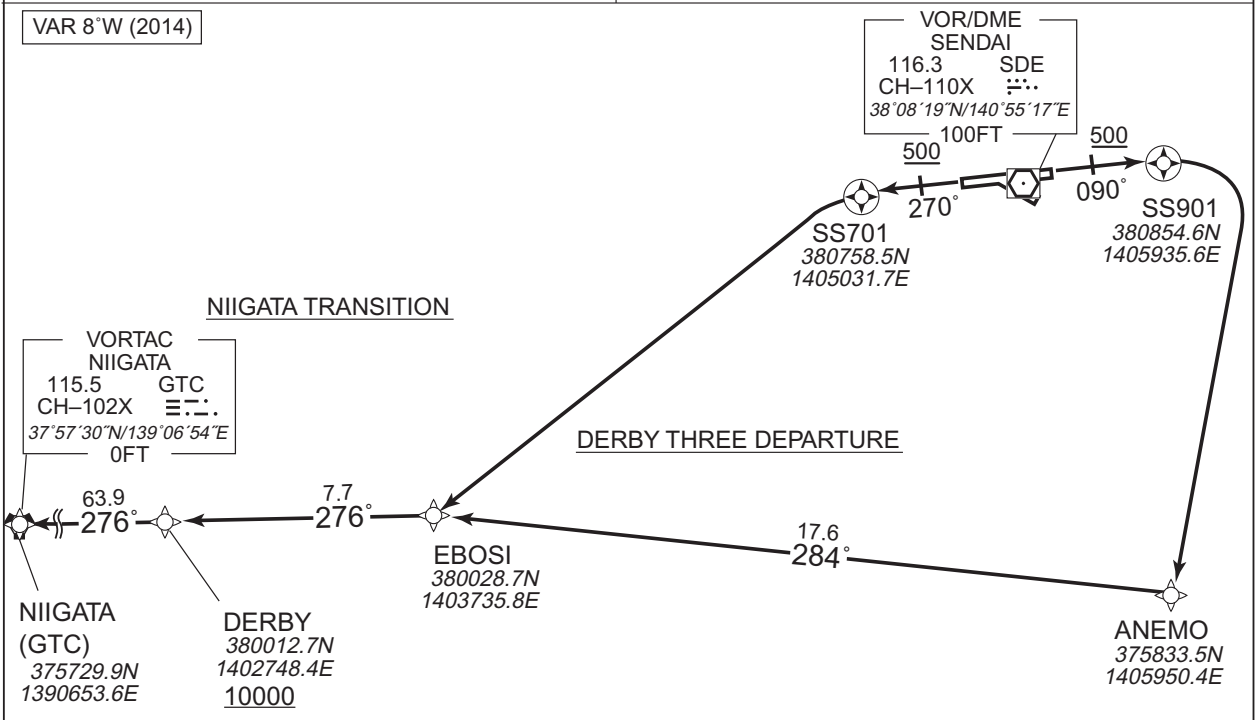
DERBY THREE DEPARTURE / NIIGATA TRANSITION — RNAV 1

Note 1) DME/DME/IRU or GNSS required.
※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.
2) RADAR service required.

DME GAP
RWY09 09DER – 8.0NM to ANEMO
3.0NM to ANEMO – 5.0NM to EBOSI
RWY27 27DER – 5.0NM to EBOSI
NIIGATA TRANSITION
4.0NM to GTC – GTC

Inappropriate Navaids
See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

Critical DME
RWY09 SDE : 8.0NM to ANEMO – 3.0NM to ANEMO
5.0NM to EBOSI – EBOSI
IXE : 8.0NM to ANEMO – 3.0NM to ANEMO
HPE : 5.0NM to EBOSI – 2.0NM to EBOSI
RWY27 SDE : 5.0NM to EBOSI – EBOSI
HPE : 5.0NM to EBOSI – EBOSI
NIIGATA TRANSITION
SDE : DERBY – 58.0NM to GTC
YTE : DERBY – 18.0NM to GTC
YSE : 18.0NM to GTC – 4.0NM to GTC
GTC : 40.0NM to GTC – 18.0NM to GTC
14.0NM to GTC – 4.0NM to GTC



DERBY THREE DEPARTURE

RWY09 : Climb on HDG090° at or above 500FT, direct to SS901, turn right direct to ANEMO, to EBOSI, to DERBY at or above 10000FT.

RWY27 : Climb on HDG270° at or above 500FT, direct to SS701, turn left direct to EBOSI, to DERBY at or above 10000FT.

NOTE RWY09: 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 102° FM end of RWY09.
RWY27: 5.9% climb gradient required up to 1300FT.
OBST ALT 1181FT located at 4.6NM 284° FM end of RWY27.

NIIGATA TRANSITION

From DERBY at or above 10000FT, to GTC.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV SID and TRANSITION

DERBY THREE 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	—	—	090 (082.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	SS901	Y	—	-7.8	—	—	—	—	—	RNAV1
003	DF	ANEMO	—	—	-7.8	—	R	—	—	—	RNAV1
004	TF	EBOSI	—	284 (276.4)	-7.8	17.6	—	—	—	—	RNAV1
005	TF	DERBY	—	276 (268.1)	-7.8	7.7	—	+10000	—	—	RNAV1

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	—	—	270 (262.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	SS701	Y	—	-7.8	—	—	—	—	—	RNAV1
003	DF	EBOSI	—	—	-7.8	—	L	—	—	—	RNAV1
004	TF	DERBY	—	276 (268.1)	-7.8	7.7	—	+10000	—	—	RNAV1

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	—	—	-7.8	—	—	+10000	—	—	RNAV1
002	TF	GTC	—	276 (268.0)	-7.8	63.9	—	—	—	—	RNAV1

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI — RNAV SID and TRANSITION

STEED THREE DEPARTURE / RIKYU TRANSITION — RNAV 1

Note 1) DME/DME/IRU or GNSS required.
※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off rolling.
2) RADAR service required.

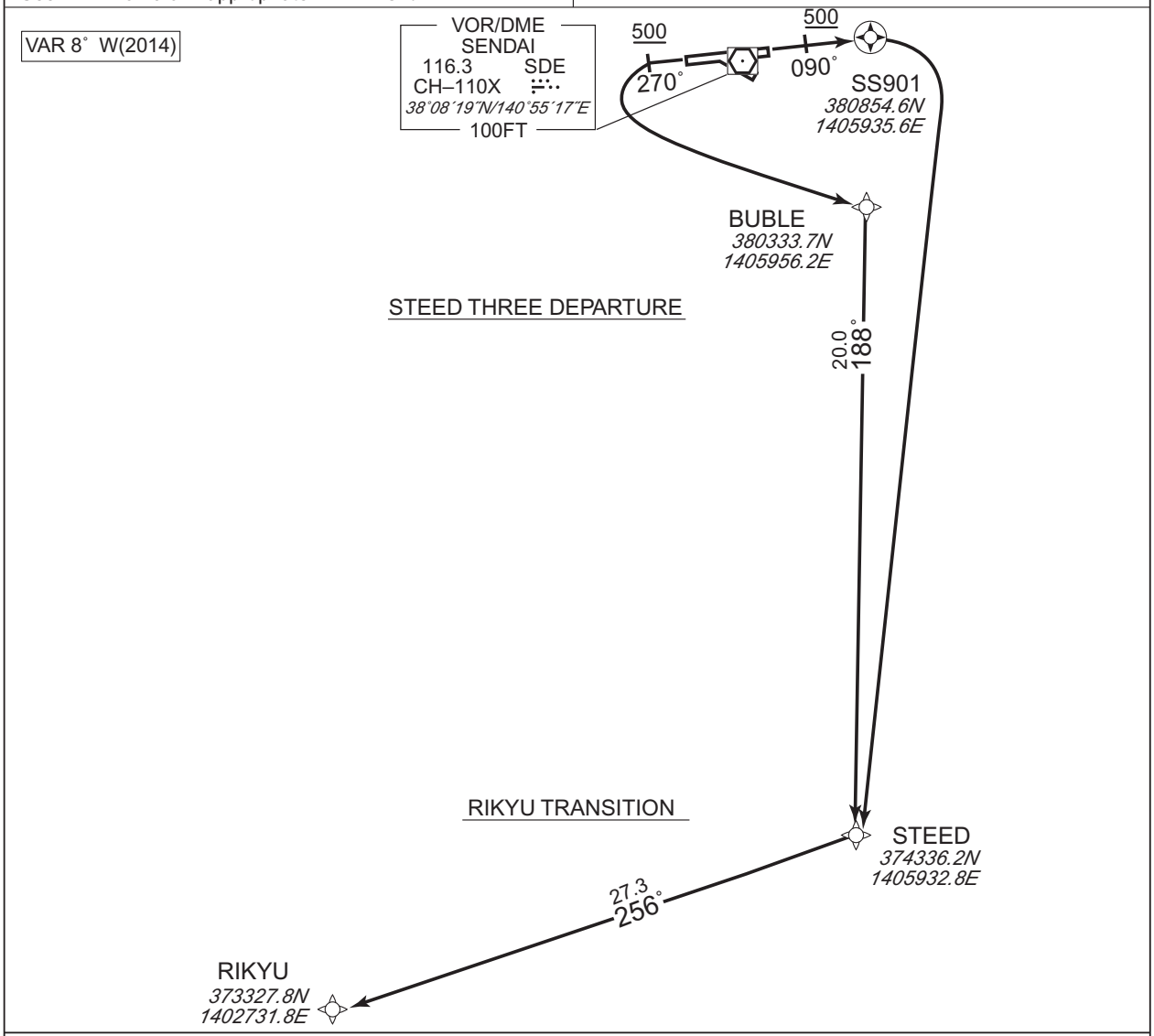
DME GAP
RWY09 09DER – 23.0NM to STEED
8.0NM to STEED – STEED
RWY27 27DER – 4.0NM to BUBLE
8.0NM to STEED – STEED

Inappropriate Navaids
See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

Critical DME
RWY09 SDE : 23.0NM to STEED – 8.0NM to STEED
MXT : 18.0NM to STEED – 8.0NM to STEED

RWY27 SDE : 2.0NM to BUBLE – 8.0NM to STEED
MXT : 4.0NM to BUBLE – 2.0NM to BUBLE
18.0NM to STEED – 8.0NM to STEED

RIKYU TRANSITION
YTE : 25.0NM to RIKYU – 23.0NM to RIKYU



STEED THREE DEPARTURE
RWY09 : Climb on HDG090° at or above 500FT, direct to SS901, turn right direct to STEED.
RWY27 : Climb on HDG270° at or above 500FT, turn left direct to BUBLE, to STEED.
NOTE RWY09: 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 102° 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.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV SID and TRANSITION

STEED THREE 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	—	—	090 (082.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	SS901	Y	—	-7.8	—	—	—	—	—	RNAV1
003	DF	STEED	—	—	-7.8	—	R	—	—	—	RNAV1

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	—	—	270 (262.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	BUBLE	—	—	-7.8	—	L	—	—	—	RNAV1
003	TF	STEED	—	188 (180.9)	-7.8	20.0	—	—	—	—	RNAV1

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	—	—	-7.8	—	—	—	—	—	RNAV1
002	TF	RIKYU	—	256 (248.4)	-7.8	27.3	—	—	—	—	RNAV1

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV SID

CUBIC THREE DEPARTURE	RNAV 1

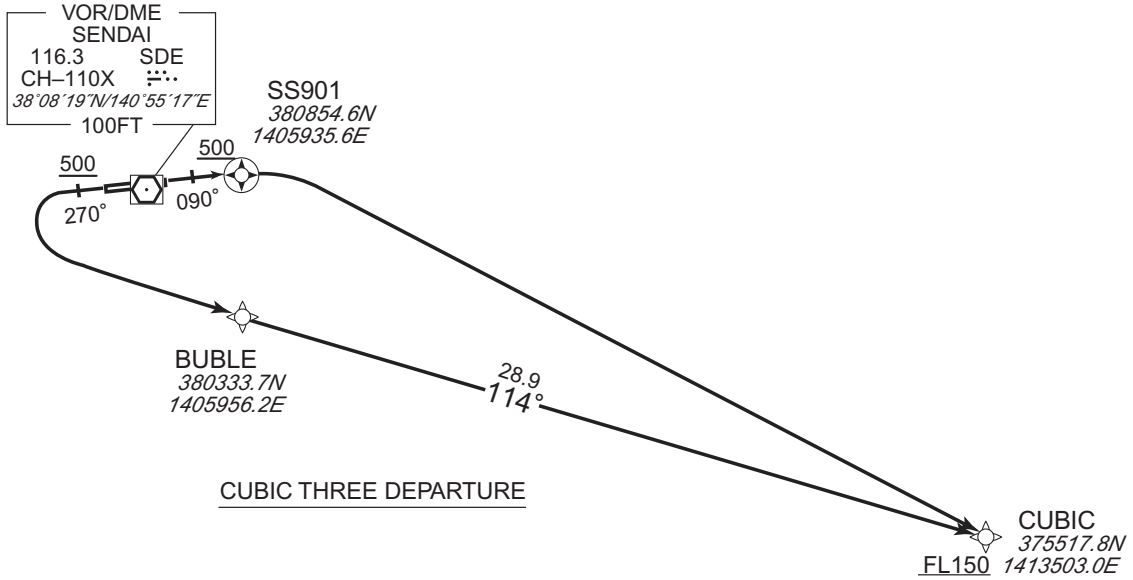
Note 1) DME/DME/IRU or GNSS required.
※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.
2) RADAR service required.

DME GAP
RWY09 09DER – 29.0NM to CUBIC
RWY27 27DER – 4.0NM to BUBLE

Inappropriate Navaids
See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

Critical DME
RWY09 SDE, IXE : 29.0NM to CUBIC – CUBIC
RWY27 MXT : 4.0NM to BUBLE – 2.0NM to CUBIC
SDE : 2.0NM to BUBLE – 12.0NM to CUBIC

VAR 8° W(2014)



CUBIC THREE DEPARTURE

RWY09 : Climb on HDG090° at or above 500FT, direct to SS901, turn right direct to CUBIC at or above FL150.

RWY27 : Climb on HDG270° at or above 500FT, turn left direct to BUBLE, to CUBIC at or above FL150.

NOTE RWY09: 5.0% climb gradient required up to 500FT.
OBST ALT 62FT located at 0.2NM 102° 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.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV SID

CUBIC THREE 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	—	—	090 (082.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	SS901	Y	—	-7.8	—	—	—	—	—	RNAV1
003	DF	CUBIC	—	—	-7.8	—	R	+FL150	—	—	RNAV1

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	—	—	270 (262.5)	-7.8	—	—	+500	—	—	RNAV1
002	DF	BUBLE	—	—	-7.8	—	L	—	—	—	RNAV1
003	TF	CUBIC	—	114 (106.5)	-7.8	28.9	—	+FL150	—	—	RNAV1

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV TRANSITION

TOHOKU TRANSITION	RNAV 1

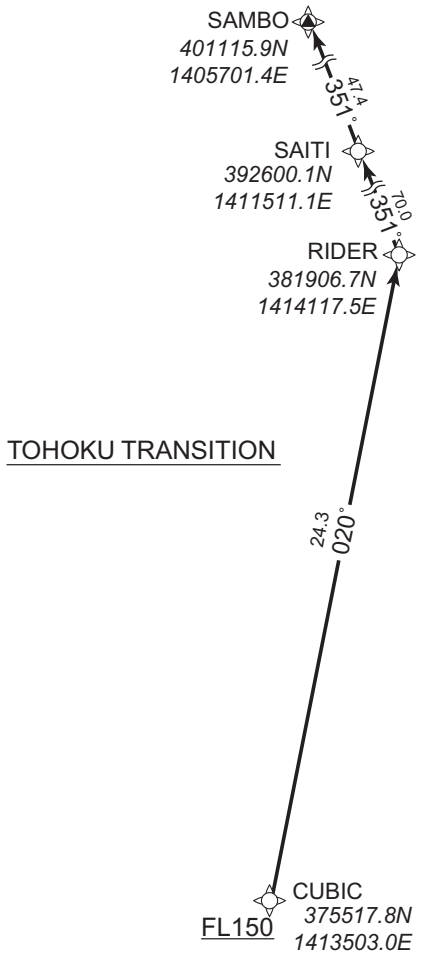
Note 1) DME/DME/IRU or GNSS required.
2) RADAR service required.

Critical DME
HPE : 45.0NM to SAITI - 39.0NM to SAITI
UWE : 31.0NM to SAMBO - 24.0NM to SAMBO

DME GAP
—

Inappropriate Navaids
See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

VAR 8° W(2019)



TOHOKU TRANSITION

From CUBIC at or above FL150, to RIDER, to SAITI, to SAMBO.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSS / SENDAI RNAV TRANSITION

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	—	—	-8.2	—	—	+FL150	—	—	RNAV1
002	TF	RIDER	—	020 (011.6)	-8.2	24.3	—	—	—	—	RNAV1
003	TF	SAITI	—	351 (343.2)	-8.2	70.0	—	—	—	—	RNAV1
004	TF	SAMBO	—	351 (343.0)	-8.2	47.4	—	—	—	—	RNAV1

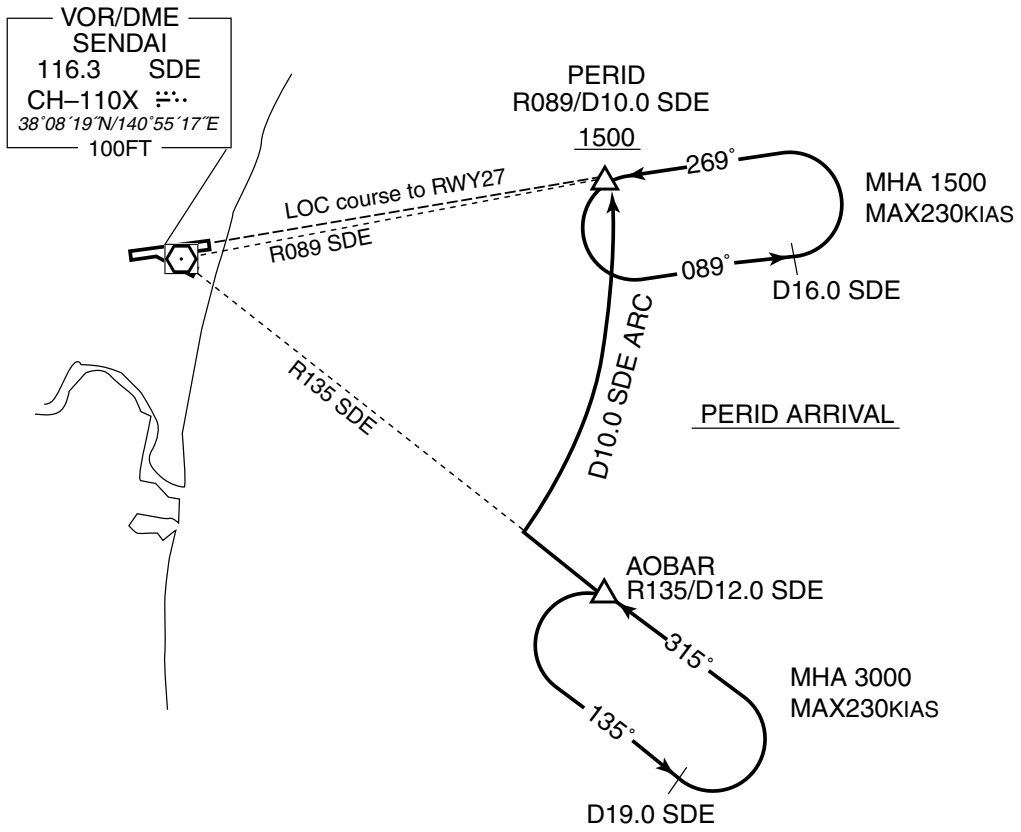
STANDARD ARRIVAL CHART-INSTRUMENT

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.

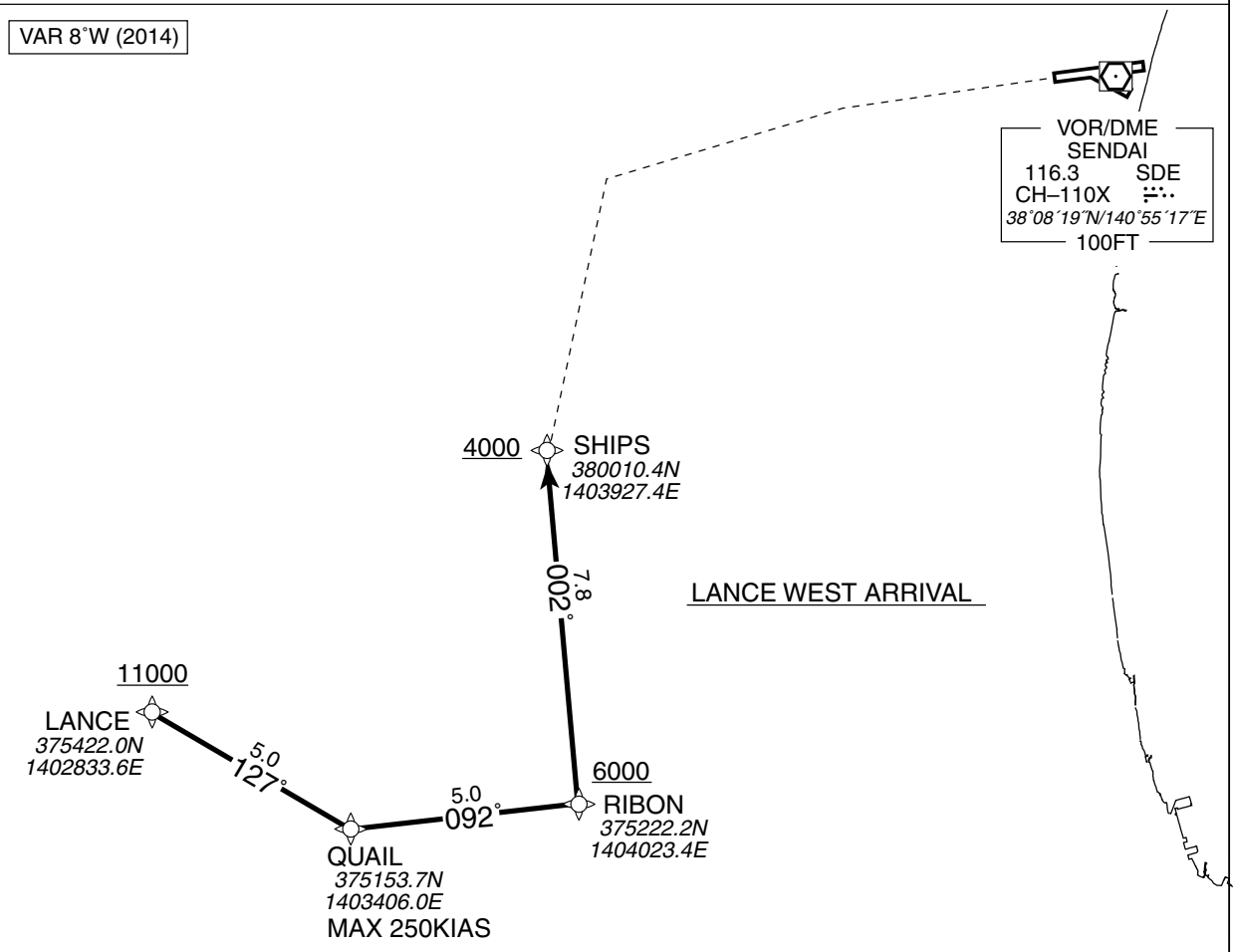


STANDARD ARRIVAL CHART - INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY09

LANCE WEST ARRIVAL	RNAV 1

Note 1) DME/DME/IRU or GNSS required.
2) RADAR service required.



LANCE WEST ARRIVAL

From LANCE at or above 11000FT, to QUAIL, to RIBON at or above 6000FT, to SHIPS at or above 4000FT.

Critical DME	SDE : 5.0NM to QUAIL – 4.0NM to QUAIL 2.0NM to QUAIL – QUAIL HPE : 1.0NM to QUAIL – QUAIL
DME GAP	QUAIL – SHIPS
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

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	LANCE	—	—	-7.8	—	—	+11000	—	—	RNAV1
002	TF	QUAIL	—	127 (119.4)	-7.8	5.0	—	—	-250	—	RNAV1
003	TF	RIBON	—	092 (084.5)	-7.8	5.0	—	+6000	—	—	RNAV1
004	TF	SHIPS	—	002 (354.6)	-7.8	7.8	—	+4000	—	—	RNAV1

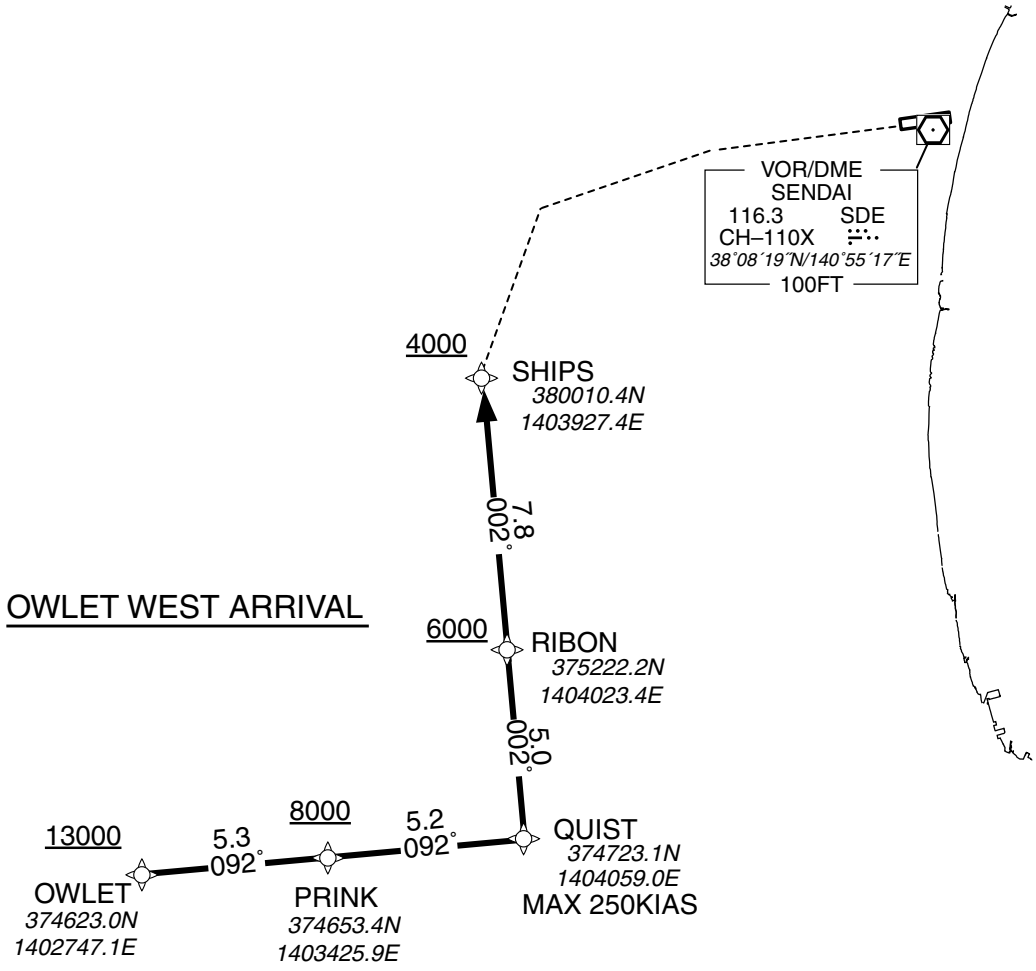
STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI RNAV STAR RWY09

OWLET WEST ARRIVAL	Basic RNP1

Note GNSS required.

VAR 8˚W (2014)



OWLET WEST ARRIVAL

From OWLET at or above 13000FT, to PRINK at or above 8000FT, to QUIST, to RIBON at or above 6000FT, to SHIPS at or above 4000FT.

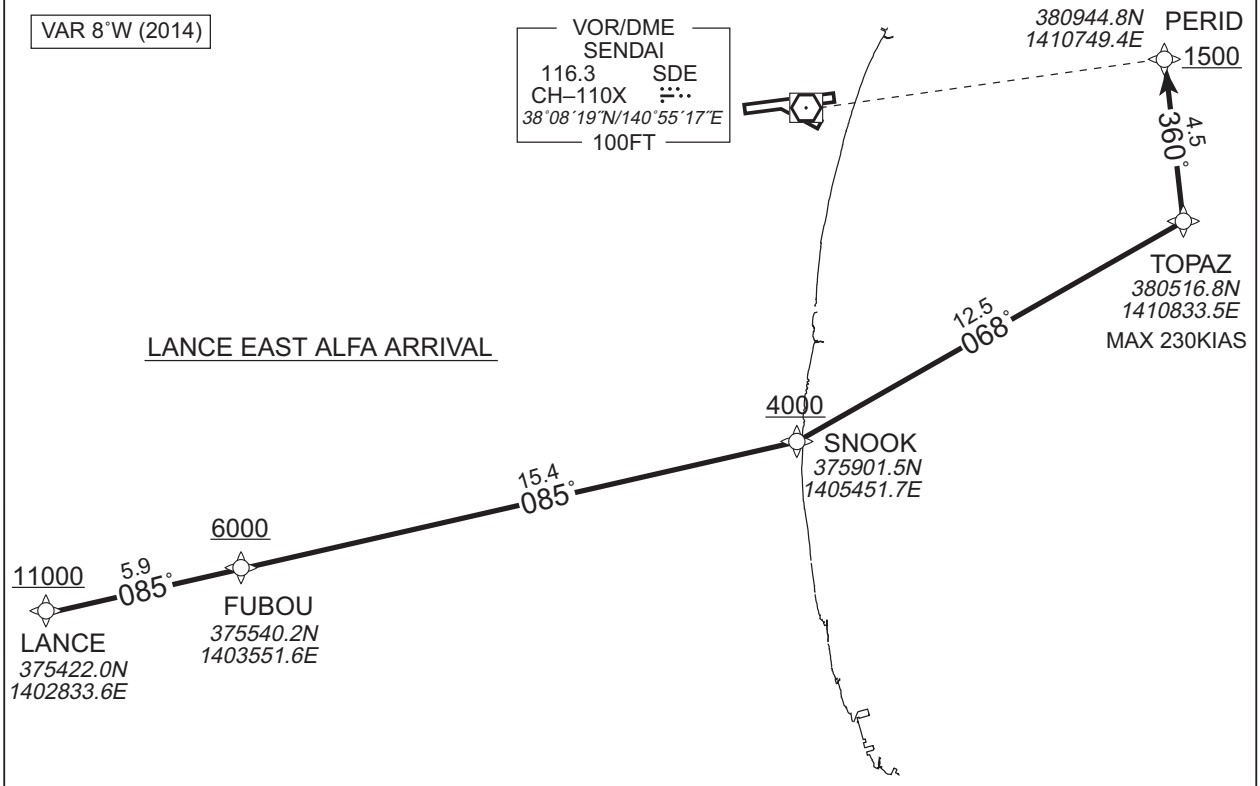
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course ˚M(˚T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	OWLET	—	—	-7.8	—	—	+13000	—	—	Basic RNP1
002	TF	PRINK	—	092 (084.4)	-7.8	5.3	—	+8000	—	—	Basic RNP1
003	TF	QUIST	—	092 (084.5)	-7.8	5.2	—	—	-250	—	Basic RNP1
004	TF	RIBON	—	002 (354.6)	-7.8	5.0	—	+6000	—	—	Basic RNP1
005	TF	SHIPS	—	002 (354.6)	-7.8	7.8	—	+4000	—	—	Basic RNP1

STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI RNAV STAR RWY27

LANCE EAST ALFA ARRIVAL	RNAV 1

Note 1) DME/DME/IRU or GNSS required.
2) RADAR service required.



LANCE EAST ALFA ARRIVAL

From LANCE at or above 11000FT, to FUBOU at or above 6000FT, to SNOOK at or above 4000FT, to TOPAZ, to PERID at or above 1500FT.

Critical DME	MXT : 3.0NM to SNOOK - 8.0NM to TOPAZ SDE : 11.0NM to TOPAZ - PERID IXE : 3.0NM to SNOOK - 12.0NM to TOPAZ
DME GAP	LANCE – 3.0NM to SNOOK
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

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	LANCE	—	—	-7.8	—	—	+11000	—	—	RNAV1
002	TF	FUBOU	—	085 (077.2)	-7.8	5.9	—	+6000	—	—	RNAV1
003	TF	SNOOK	—	085 (077.3)	-7.8	15.4	—	+4000	—	—	RNAV1
004	TF	TOPAZ	—	068 (059.8)	-7.8	12.5	—	—	-230	—	RNAV1
005	TF	PERID	—	360 (352.6)	-7.8	4.5	—	+1500	—	—	RNAV1

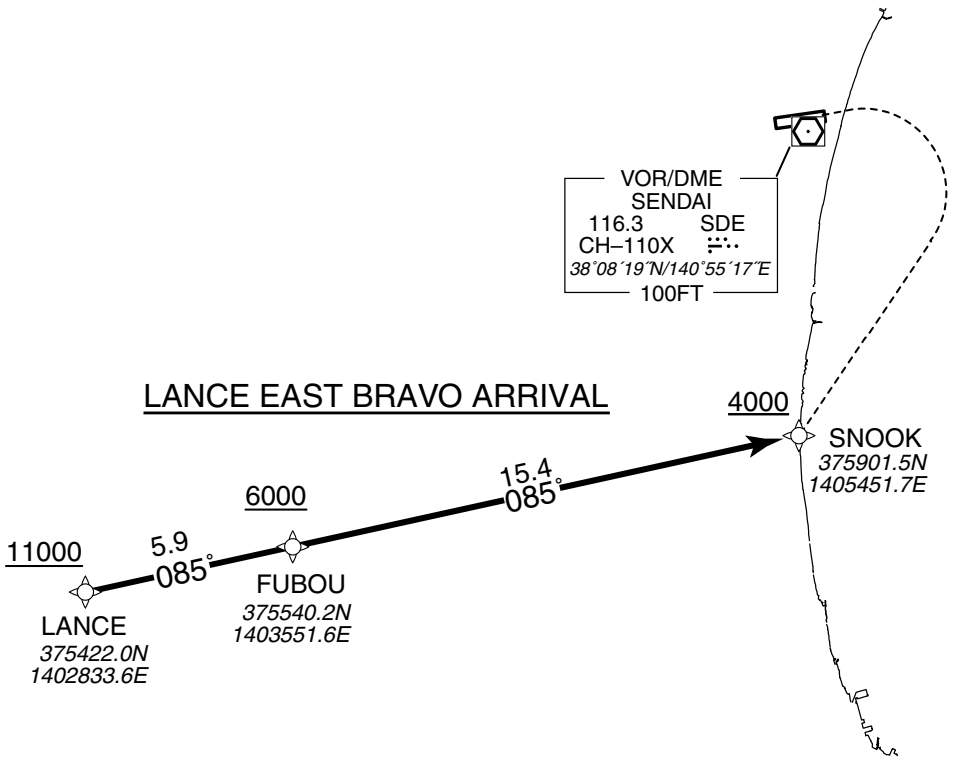
STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI RNAV STAR RWY27

LANCE EAST BRAVO ARRIVAL	Basic RNP1

Note GNSS required.

VAR 8˚W (2014)



LANCE EAST BRAVO ARRIVAL

From LANCE at or above 11000FT, to FUBOU at or above 6000FT, to SNOOK at or above 4000FT.

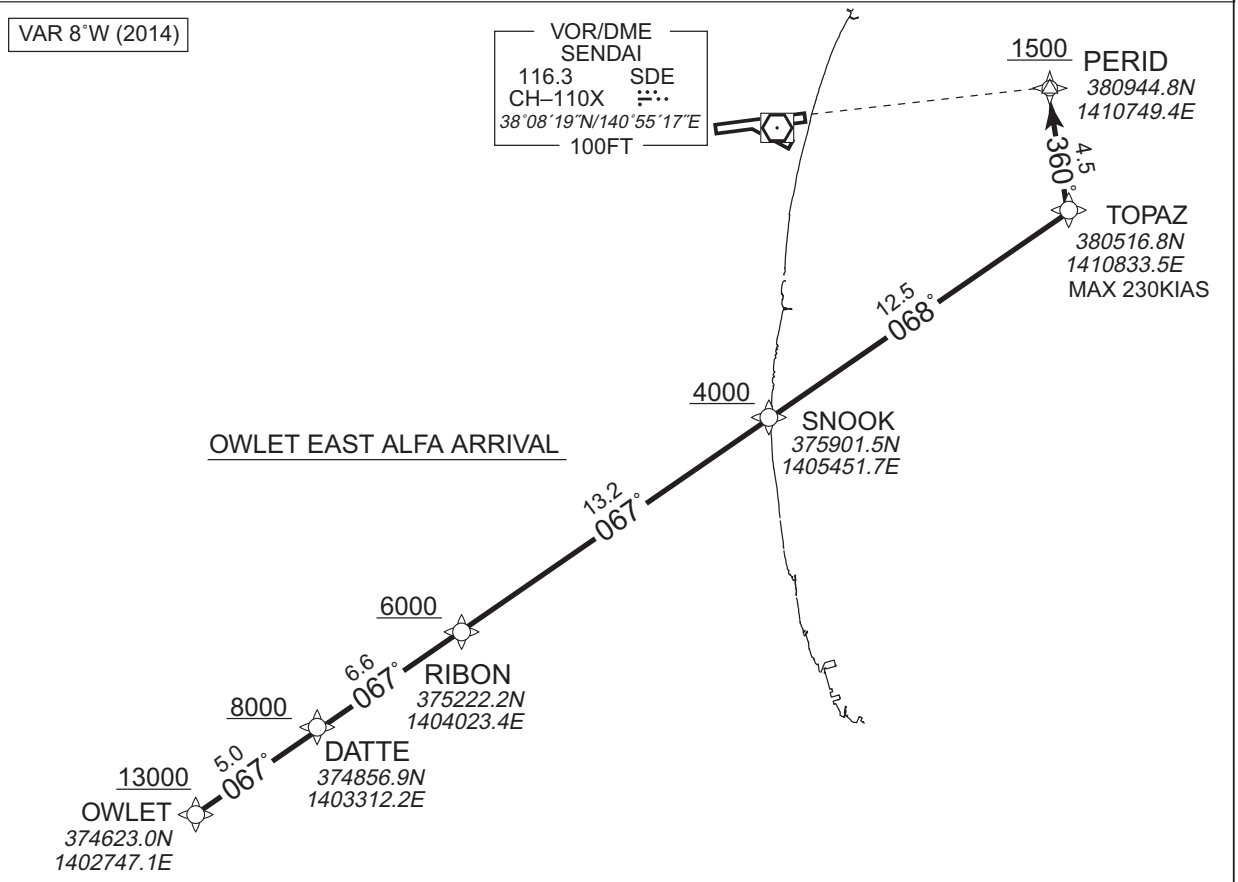
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course ˚M(˚T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	LANCE	—	—	-7.8	—	—	+11000	—	—	Basic RNP1
002	TF	FUBOU	—	085 (077.2)	-7.8	5.9	—	+6000	—	—	Basic RNP1
003	TF	SNOOK	—	085 (077.3)	-7.8	15.4	—	+4000	—	—	Basic RNP1

STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY27

OWLET EAST ALFA ARRIVAL — RNAV 1

Note 1) DME/DME/IRU or GNSS required.
2) RADAR service required.



OWLET EAST ALFA ARRIVAL

From OWLET at or above 13000FT, to DATTE at or above 8000FT, to RIBON at or above 6000FT, to SNOOK at or above 4000FT, to TOPAZ, to PERID at or above 1500FT.

Critical DME	MXT : 2.0NM to SNOOK – 8.0NM to TOPAZ SDE : 11.0NM to TOPAZ – PERID IXE : 2.0NM to SNOOK – SNOOK
DME GAP	DATTE – 2.0NM to SNOOK
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1.

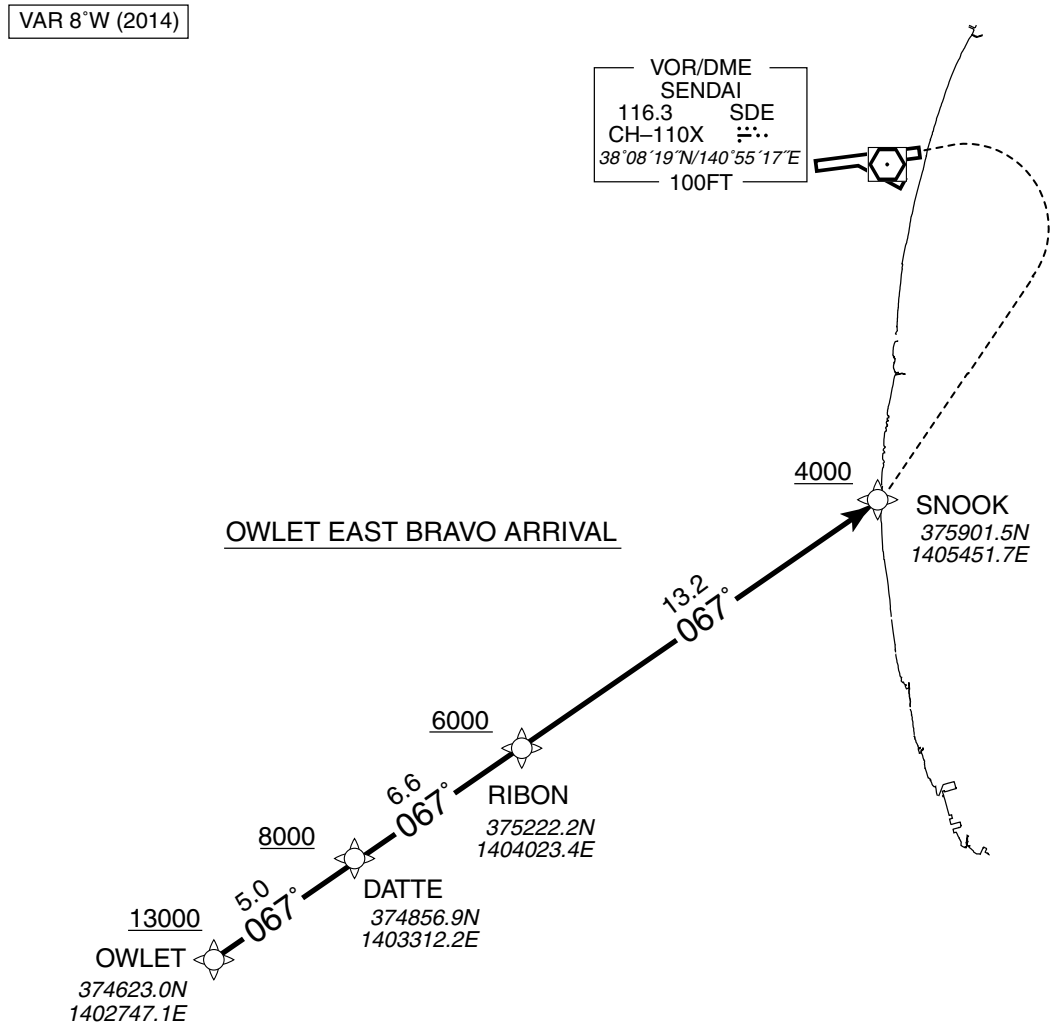
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	OWLET	—	—	-7.8	—	—	+13000	—	—	RNAV1
002	TF	DATTE	—	067 (059.0)	-7.8	5.0	—	+8000	—	—	RNAV1
003	TF	RIBON	—	067 (058.9)	-7.8	6.6	—	+6000	—	—	RNAV1
004	TF	SNOOK	—	067 (059.7)	-7.8	13.2	—	+4000	—	—	RNAV1
005	TF	TOPAZ	—	068 (059.8)	-7.8	12.5	—	—	-230	—	RNAV1
006	TF	PERID	—	360 (352.6)	-7.8	4.5	—	+1500	—	—	RNAV1

STANDARD ARRIVAL CHART-INSTRUMENT

RJSS / SENDAI — RNAV STAR RWY27

OWLET EAST BRAVO ARRIVAL	Basic RNP1

Note GNSS required.



OWLET EAST BRAVO ARRIVAL

From OWLET at or above 13000FT, to DATTE at or above 8000FT, to RIBON at or above 6000FT, to SNOOK at or above 4000FT.

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	OWLET	—	—	-7.8	—	—	+13000	—	—	Basic RNP1
002	TF	DATTE	—	067 (059.0)	-7.8	5.0	—	+8000	—	—	Basic RNP1
003	TF	RIBON	—	067 (058.9)	-7.8	6.6	—	+6000	—	—	Basic RNP1
004	TF	SNOOK	—	067 (059.7)	-7.8	13.2	—	+4000	—	—	Basic RNP1

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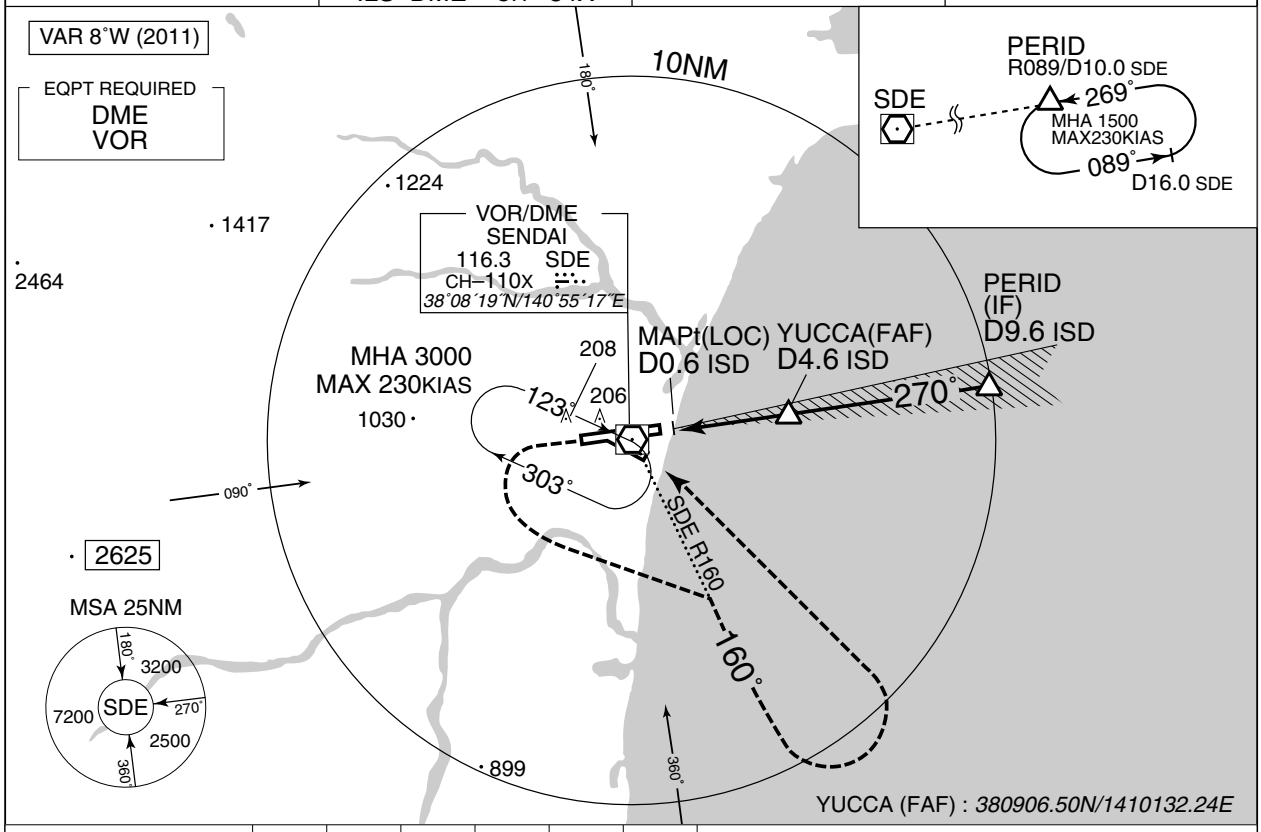
INSTRUMENT APPROACH CHART

RJSS / SENDAI ILS Z or LOC Z RWY27

SENDAI APP	ILS – LOC	SENDAI TWR	RADAR AVBL
120.4 – 261.2	111.7 ISD ILS–GP 333.5 ILS–DME CH –54X	118.7 – 126.2	ATIS 126.45

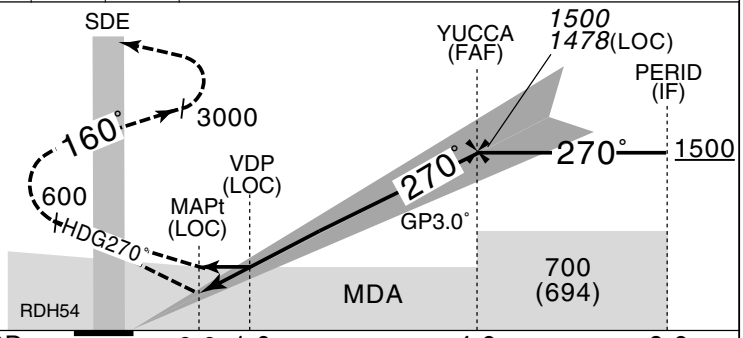


NM to ISD	MAPt	1	2	3	4	FAF
ALT (3.0° APCH Path)	–	326	645	964	1281	1478

MISSED APPROACH

Climb to 600FT on HDG270°,
turn left, via SDE R160 to 3000FT,
turn left, direct to SDE
VOR/DME and hold.
Contact SENDAI APP.

Timing not authorized for defining the MAPt.



DME to ISD		0.6	1.0	4.6	9.6
NM to THR	0	0.5	0.8	4.4	9.4

Missed APCH climb gradient MNM 4.0%.

MINIMA THR elev. 15 AD elev. 6

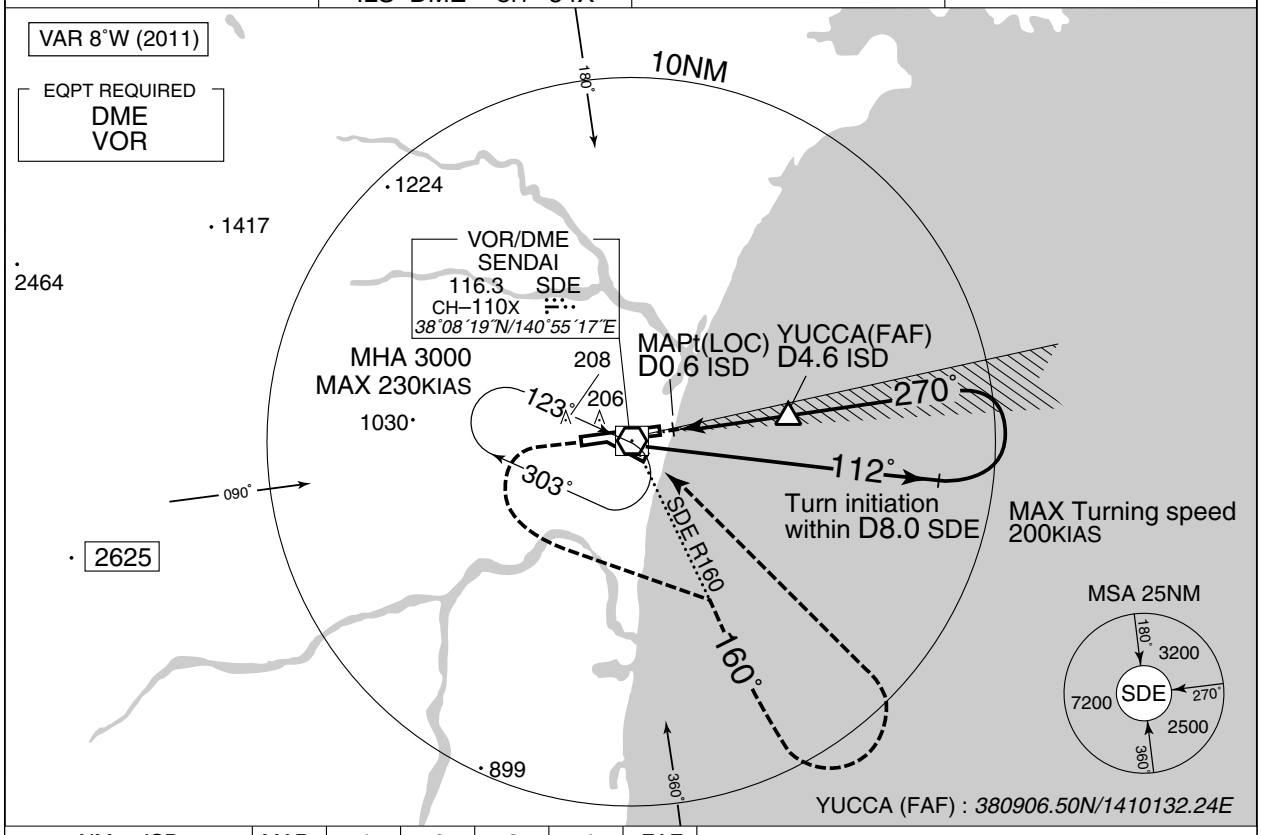
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/CMV	MDA(H)	RVR/CMV	MDA(H)	VIS
A	215 (200)	550	320 (314)	900	530 (524)	1600
B				1000		
C						2400
D				1400	560 (554)	3200

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

INSTRUMENT APPROACH CHART

RJSS / SENDAI ILS Y or LOC Y RWY27

SENDAI APP	ILS – LOC	SENDAI TWR	RADAR AVBL
120.4 – 261.2	111.7 ISD ILS–GP 333.5 ILS–DME CH –54X	118.7 – 126.2	ATIS 126.45

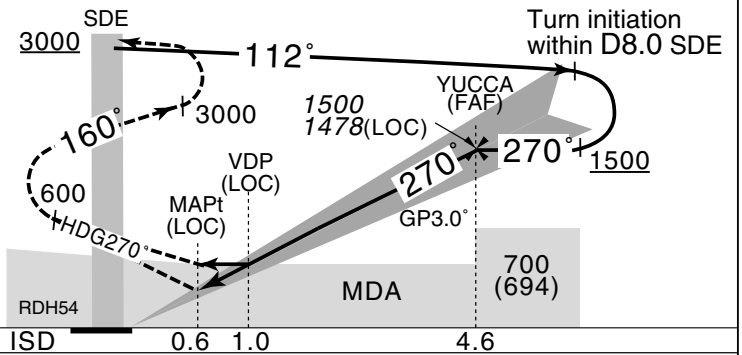


NM to ISD	MAPt	1	2	3	4	FAF
ALT (3.0° APCH Path)	–	326	645	964	1281	1478

MISSED APPROACH

Climb to 600FT on HDG270°,
turn left, via SDE R160 to 3000FT,
turn left, direct to SDE
VOR/DME and hold.
Contact SENDAI APP.

Timing not authorized for defining the MAPt.



DME to ISD		0.6	1.0	4.6
NM to THR	0	0.5	0.8	4.4

Missed APCH climb gradient MNM 4.0%.

MINIMA THR elev. 15 AD elev. 6

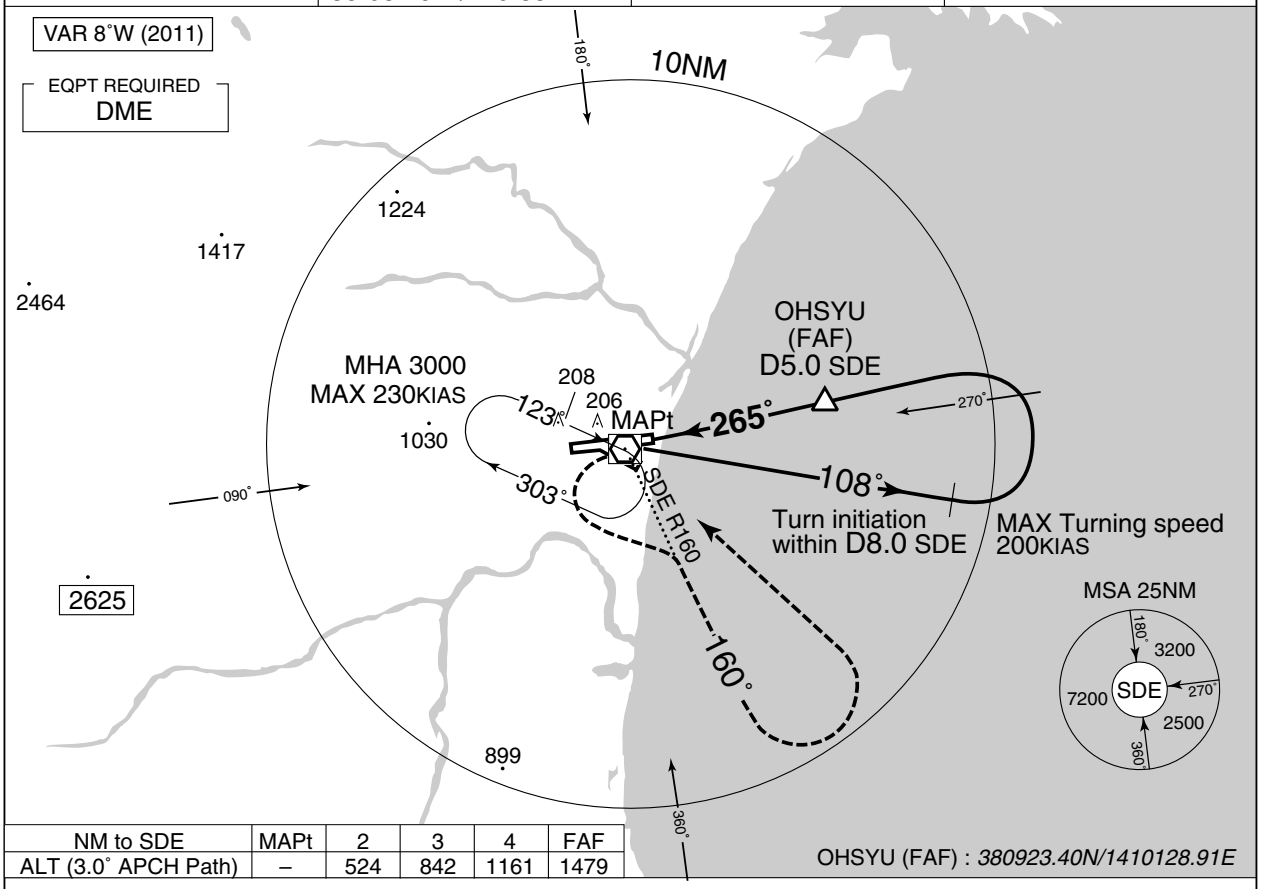
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/ CMV	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	215 (200)	550	320 (314)	900	530 (524)	1600
B				1000		
C						2400
D				1400	560 (554)	3200

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

INSTRUMENT APPROACH CHART

RJSS / SENDAI VOR RWY27

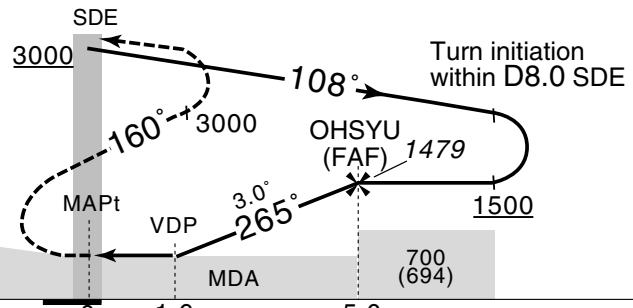
SENDAI APP	SENDAI VOR / DME 116.3 SDE CH–110X *38˚08´19˝N/140˚55´17˝E*	SENDAI TWR	RADAR AVBL
120.4 –261.2		118.7 –126.2	ATIS 126.45



NM to SDE	MAPt	2	3	4	FAF
ALT (3.0˚ APCH Path)	–	524	842	1161	1479

OHSYU (FAF) : *380923.40N/1410128.91E*

MISSED APPROACH
Turn left, climb via SDE R160 to 3000FT,
turn left, direct to SDE VOR/DME
and hold.
Contact SENDAI APP.



Timing not authorized for defining the MAPt.

DME to SDE	0	1.6	5.0
NM to THR	0	1.1	4.4

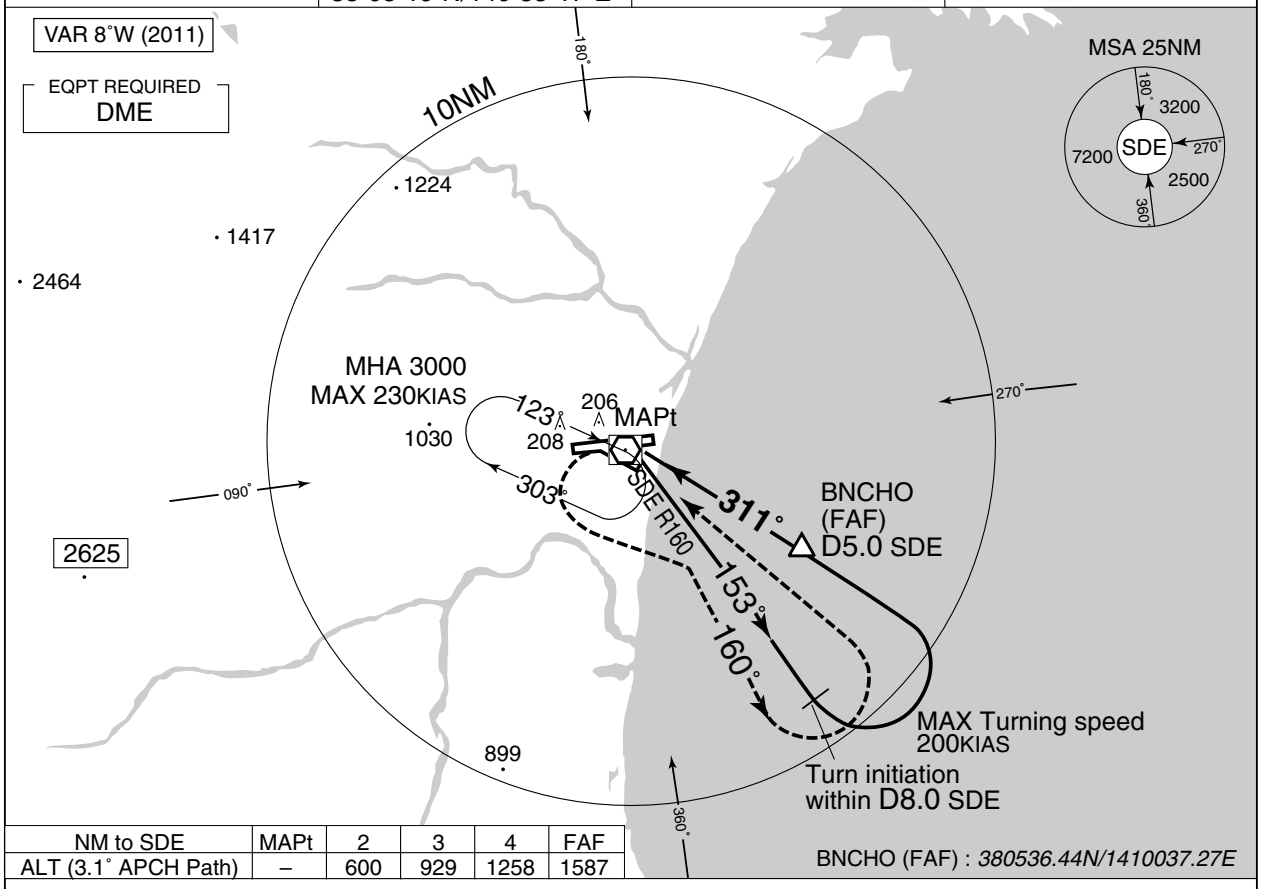
MINIMA THR elev. 15 AD elev. 6

CAT			CIRCLING	
	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	390 (384)	900	530 (524)	1600
B		1000		
C				2400
D		1400	560 (554)	3200

INSTRUMENT APPROACH CHART

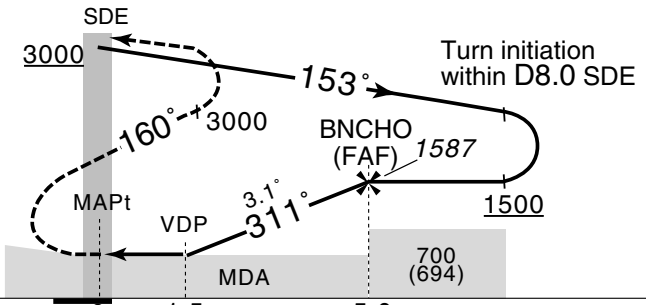
RJSS / SENDAI VOR RWY30

SENDAI APP	SENDAI VOR / DME 116.3 SDE	SENDAI TWR	RADAR AVBL
120.4 –261.2	CH–110X *38°08′19″N/140°55′17″E*	118.7 –126.2	ATIS 126.45



NM to SDE	MAPt	2	3	4	FAF
ALT (3.1° APCH Path)	–	600	929	1258	1587

MISSED APPROACH
Turn left, climb via SDE R160 to 3000FT,
turn left, direct to SDE VOR/DME
and hold.
Contact SENDAI APP.



Timing not authorized for defining the MAPt.

DME to SDE	0	1.5	5.0
NM to THR	0	1.2	4.7

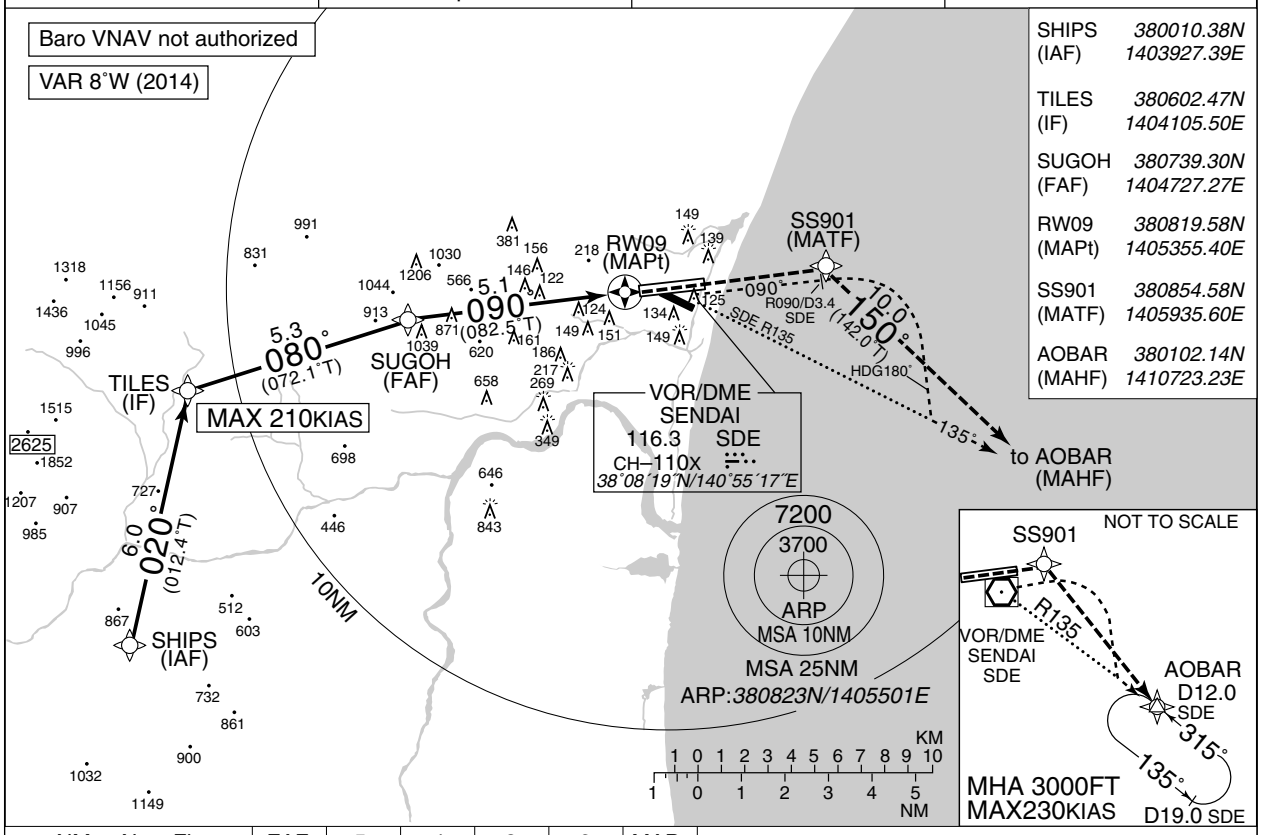
MINIMA THR elev. 5 AD elev. 6

CAT			CIRCLING	
	MDA(H)	CMV	MDA(H)	VIS
A	410 (404)	1500	530 (524)	1600
B				
C		1800		2400
D	–	–	–	–

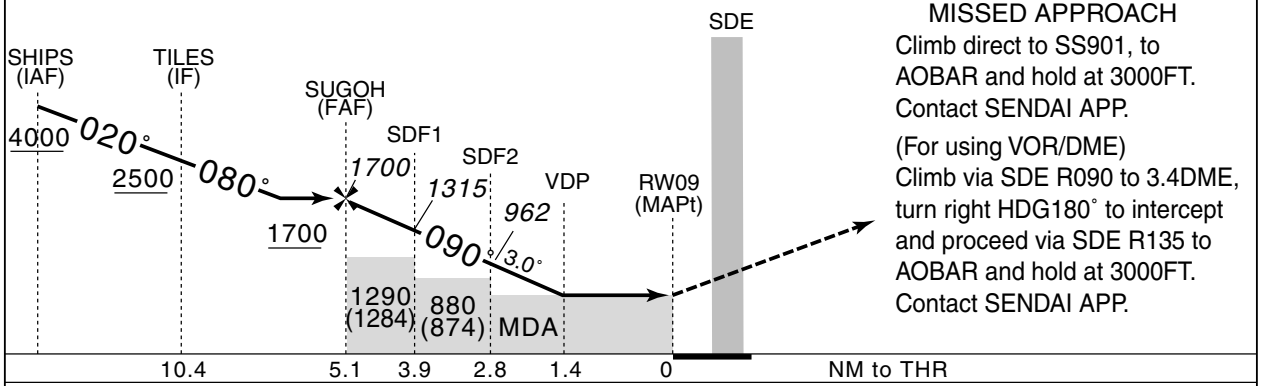
INSTRUMENT APPROACH CHART

RJSS / SENDAI RNAV(GNSS) Z RWY09

SENDAI APP	1. DME/DME not authorized. 2. RADAR service required. 3. GNSS required	SENDAI TWR	RADAR AVBL
120.4 – 261.2		118.7 – 126.2	ATIS 126.45



NM to Next Fix	FAF	5	4	3	2	MAPt
ALT (3.0˚ APCH Path)	1700	1669	1347	1026	705	–



MISSED APPROACH
Climb direct to SS901, to AOBAR and hold at 3000FT.
Contact SENDAI APP.

(For using VOR/DME)
Climb via SDE R090 to 3.4DME, turn right HDG180˚ to intercept and proceed via SDE R135 to AOBAR and hold at 3000FT.
Contact SENDAI APP.

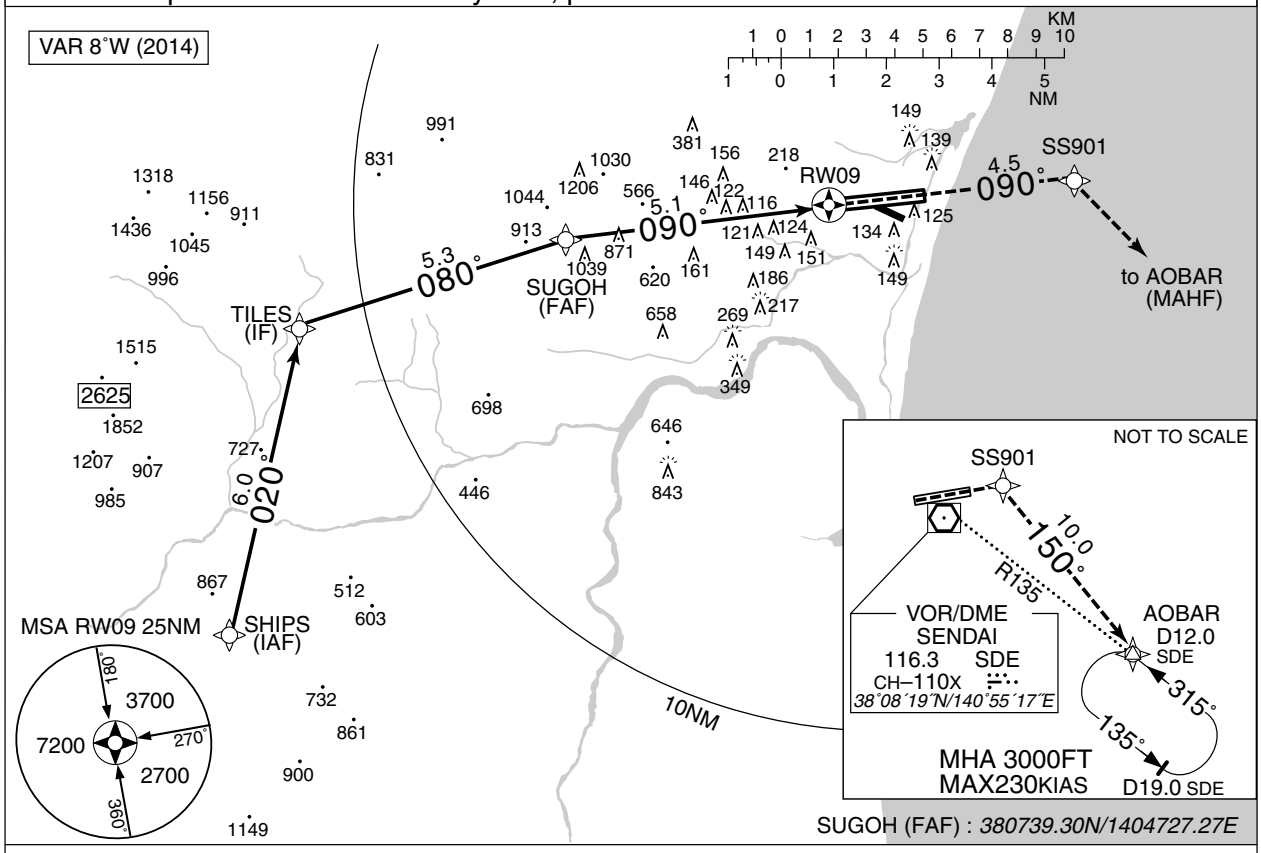
MINIMA	THR elev. 12		AD elev. 6			
CAT	LNAV/VNAV		LNAV		CIRCLING	
	DA(H)	CMV	MDA(H)	CMV	MDA(H)	VIS
A	Not applicable		520 (514)	1400	530 (524)	1600
B				1500		
C				1600		2400
D				1800	560 (554)	3200

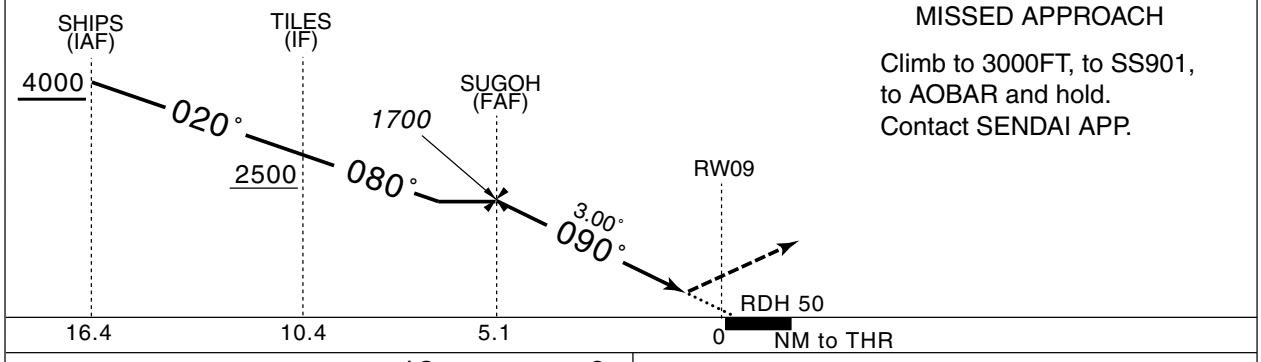
INSTRUMENT APPROACH CHART

RJSS / SENDAI — RNAV(RNP) Y RWY09

SENDAI APP	GNSS required	SENDAI TWR	RADAR AVBL
120.4 – 261.2		118.7 – 126.2	ATIS 126.45

For uncompensated Baro-VNAV system, procedure not authorized below -10˚C / above 45˚C





MISSED APPROACH

Climb to 3000FT, to SS901,
to AOBAR and hold.
Contact SENDAI APP.

MINIMA — THR elev. 12 — AD elev. 6

CAT	RNP 0.30	
	DA(H)	CMV
A	–	–
B		
C	312 (300)	1400
D		1600

RNP AR

Special Authorization Required

INSTRUMENT APPROACH CHART

RJSS / SENDAI RNAV(RNP) Y RWY09

RNAV(RNP) Y RWY09

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	—	—	-7.8	—	—	+4000	—	—	—
002	TF	TILES	—	020 (012.4)	-7.8	6.0	—	+2500	—	—	1.0
003	TF	SUGOH	—	080 (072.1)	-7.8	5.3	—	1700	—	—	1.0
004	TF	RW09	Y	090 (082.5)	-7.8	5.1	—	62	—	-3.00/50	0.3
005	TF	SS901	—	090 (082.5)	-7.8	4.5	—	—	—	—	1.0
006	TF	AOBAR	—	150 (142.0)	-7.8	10.0	—	3000	—	—	1.0

Waypoint Coordinates

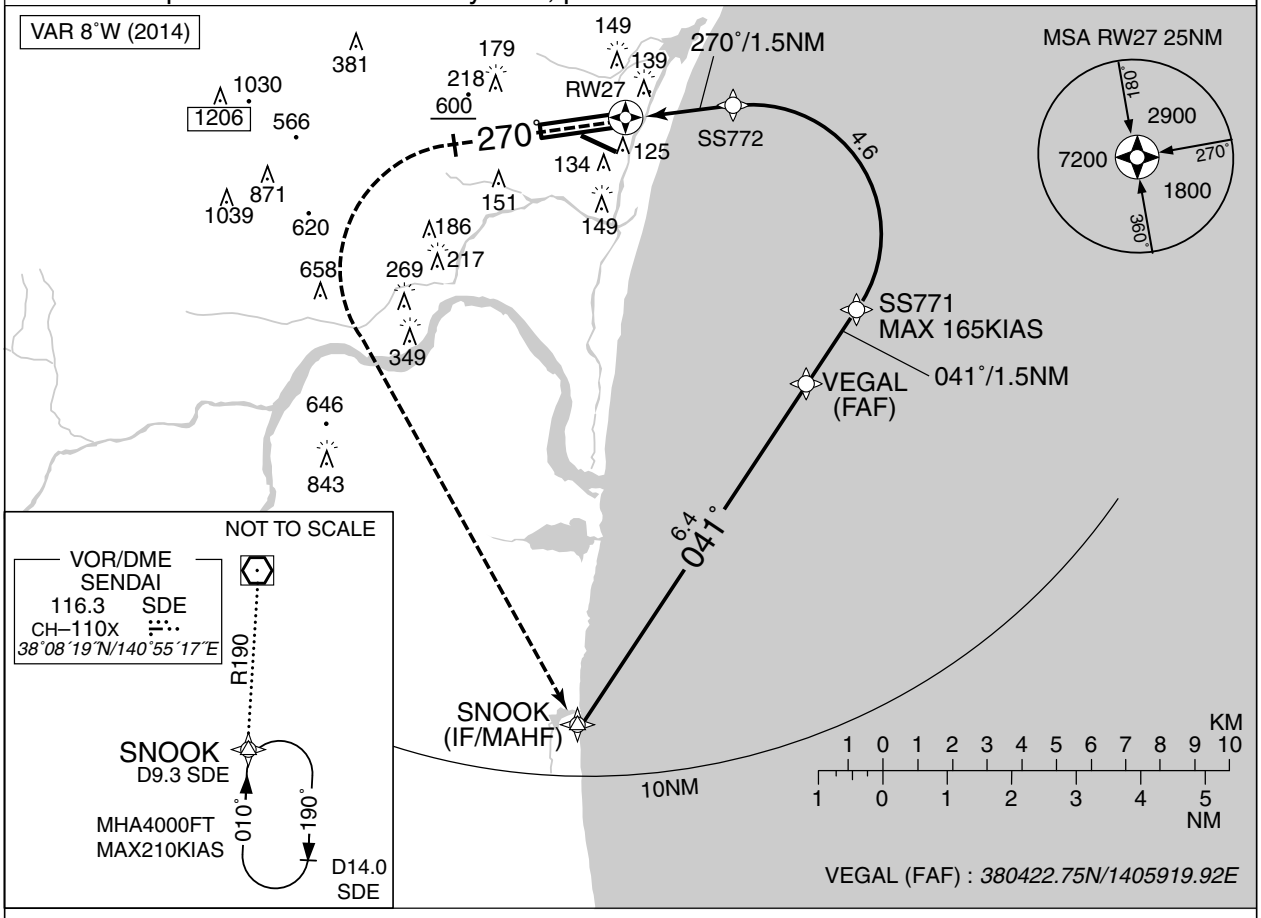
Waypoint Identifier	Coordinates
SHIPS	*380010.38N/1403927.39E*
TILES	*380602.47N/1404105.50E*
SUGOH	*380739.30N/1404727.27E*
RW09	*380819.58N/1405355.40E*
SS901	*380854.58N/1405935.60E*
AOBAR	*380102.14N/1410723.23E*

INSTRUMENT APPROACH CHART

RJSS / SENDAI RNAV(RNP) RWY27

SENDAI APP	GNSS and RF required	SENDAI TWR	RADAR AVBL
120.4 – 261.2		118.7 – 126.2	ATIS 126.45

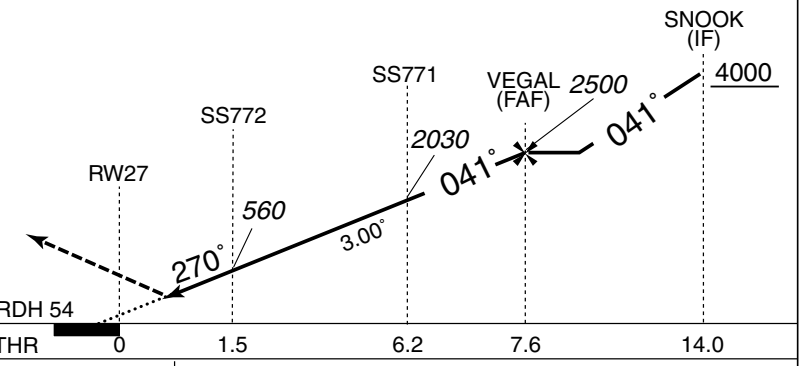
For uncompensated Baro-VNAV system, procedure not authorized below -10˚C / above 45˚C



MISSED APPROACH

From RW27 on track 270˚, at or above 600FT turn left, direct to SNOOK and hold at 4000FT.

Contact SENDAI APP.



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

RNP AR

Special Authorization Required

* Missed APCH climb gradient MNM 4.0%

INSTRUMENT APPROACH CHART

RJSS / SENDAI RNAV(RNP) RWY27

RNAV(RNP) RWY27

Coding Table

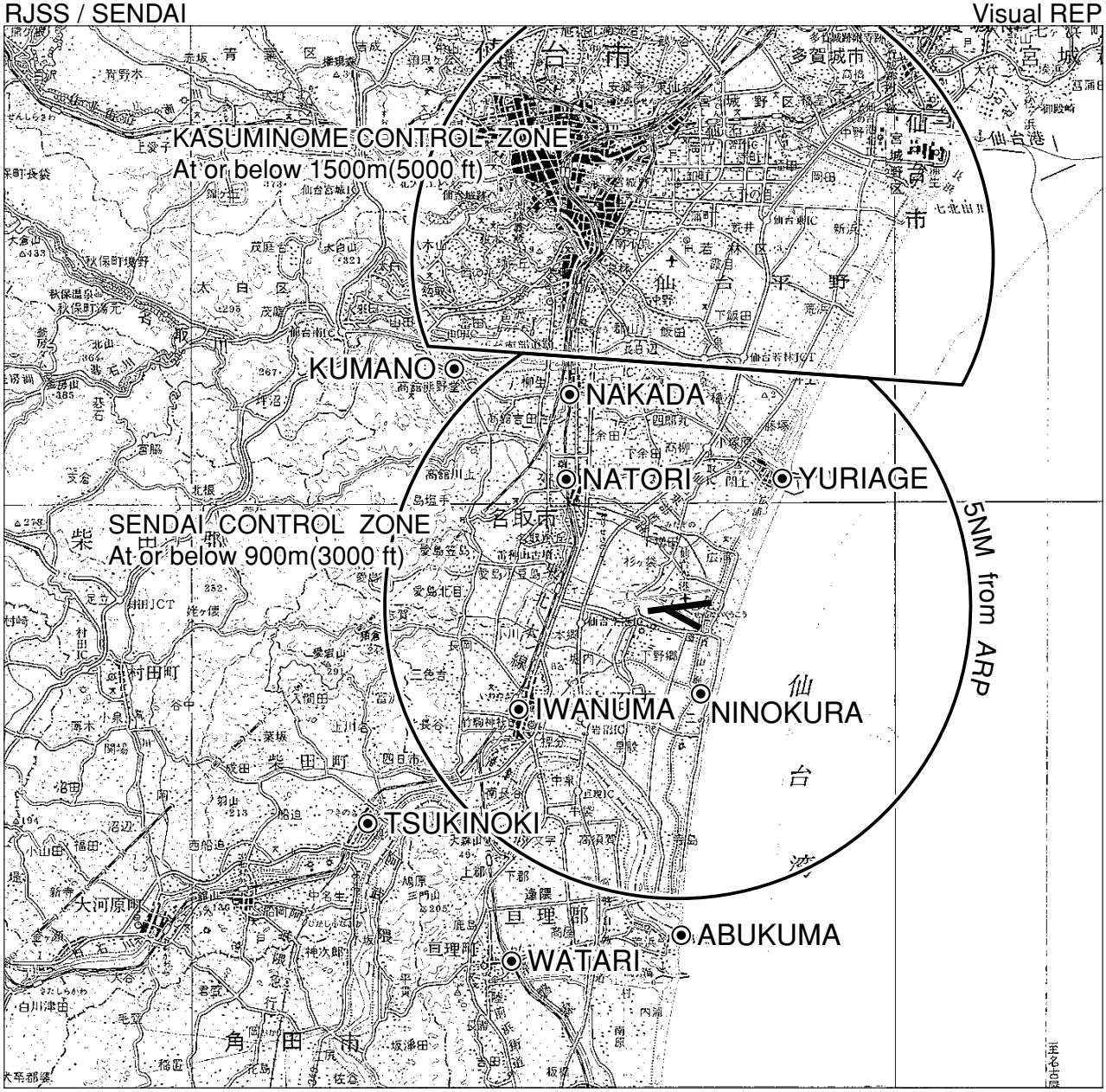
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course ˚M(˚T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/RDH (˚/FT)	RNP Value
001	IF	SNOOK	—	—	-7.8	—	—	+4000	—	—	—
002	TF	VEGAL	—	041 (033.3)	-7.8	6.4	—	2500	—	—	1.0
003	TF	SS771	—	041 (033.4)	-7.8	1.5	—	2030	-165	-3.00	0.3
004	RF Center: SSRF1 R=2.02NM	SS772	—	—	-7.8	4.6	L	560	—	-3.00	0.3
005	TF	RW27	Y	270 (262.6)	-7.8	1.5	—	69	—	-3.00/54	0.3
006	FA	—	—	270 (262.6)	-7.8	—	—	+600	—	—	1.0
007	DF	SNOOK	—	—	-7.8	—	L	4000	—	—	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*		

RJSS / SENDAI

Visual REP



RJSS / SENDAI Visual REP

Call sign	BRG / DIST from ARP	Remarks
槻木 Tsukinoki	242˚/ 6.2NM	JR槻木駅 Station
岩沼 Iwanuma	244˚/ 3.0NM	JR岩沼駅 Station
亘理 Watari	212˚/ 6.6NM	JR亘理駅 Station
阿武隈 Abukuma	186˚/ 5.6NM	阿武隈川河口 River-mouth of the Abukuma
二の倉 Ninokura	169˚/ 1.7NM	県南浄化センター Sewage disposal center
閖上 Yuriage	054˚/ 3.0NM	名取川河口 River-mouth of the Natori
中田 Nakada	343˚/ 3.8NM	JR南仙台駅 Station
名取 Natori	329˚/ 2.6NM	JR名取駅 Station
熊野 Kumano	327˚/ 5.1NM	熊野神社 the Kumano Shrine

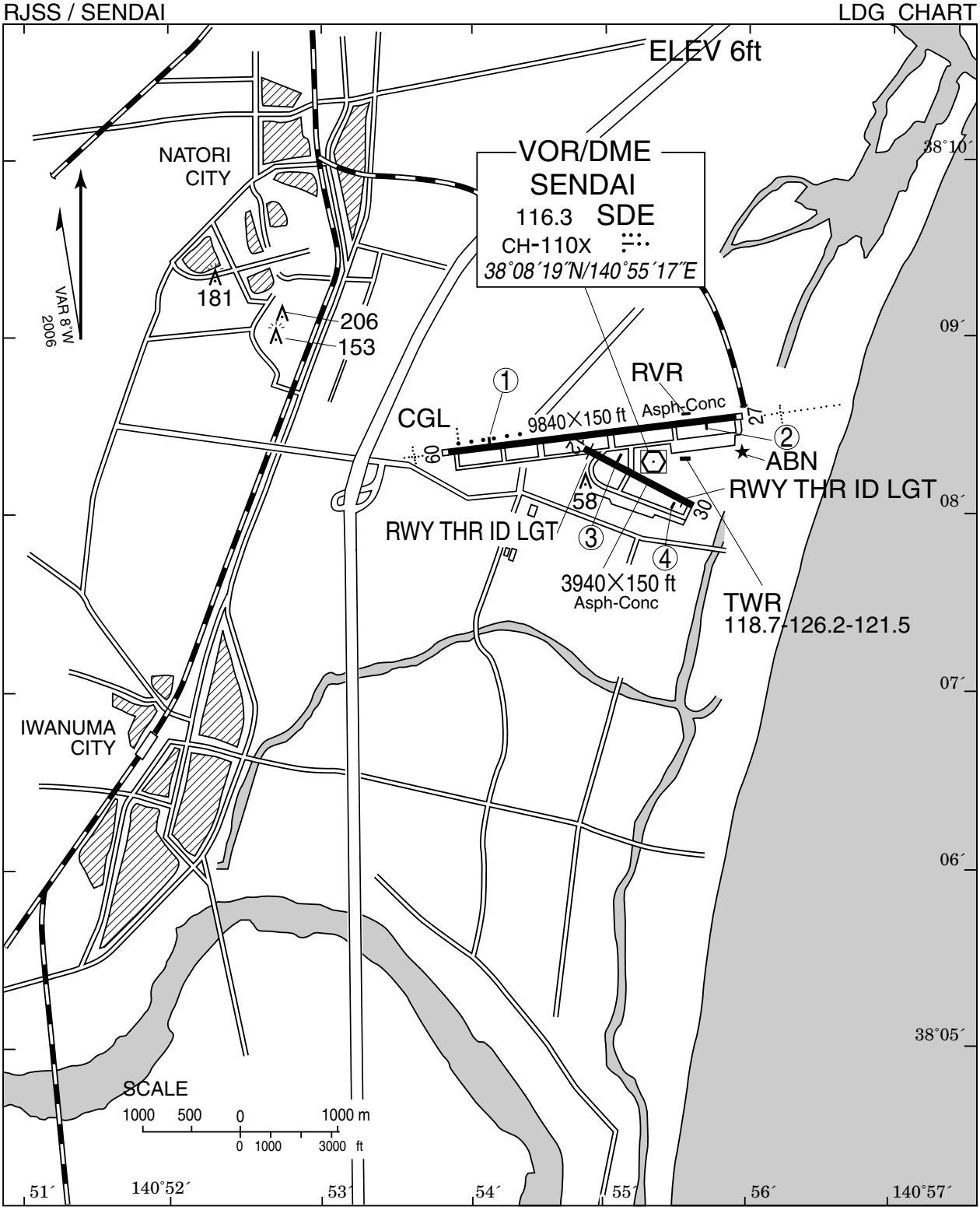
注：有視界飛行方式により霞目管制圏から仙台管制圏へ進入しようとする航空機は、仙台管制圏に入圏する前に仙台タワーへ通報すること。

NOTE：When any VFR flight enters SENDAI CTR directly via KASUMINOME CTR, the pilot shall report to "SENDAI TWR" 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 LDG CHART



①	②	③	④
Angle 3.0°	Angle 3.0°	Angle 3.0°	Angle 3.1°
MEHT 22.5m (73.8 ft)	MEHT 20.0m (65.6 ft)	MEHT 13.6m (44.5 ft)	MEHT 13.6m (44.5 ft)
456m FM THR	439m FM THR	306m FM THR	262m FM THR

RJSS / SENDAI Minimum Vectoring Altitude CHART