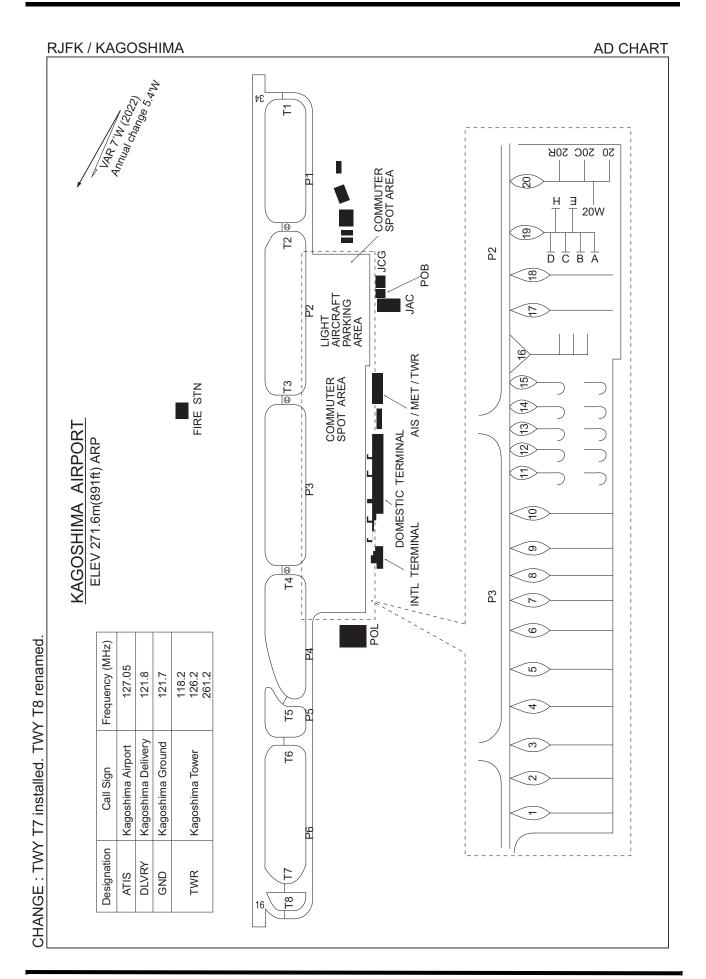
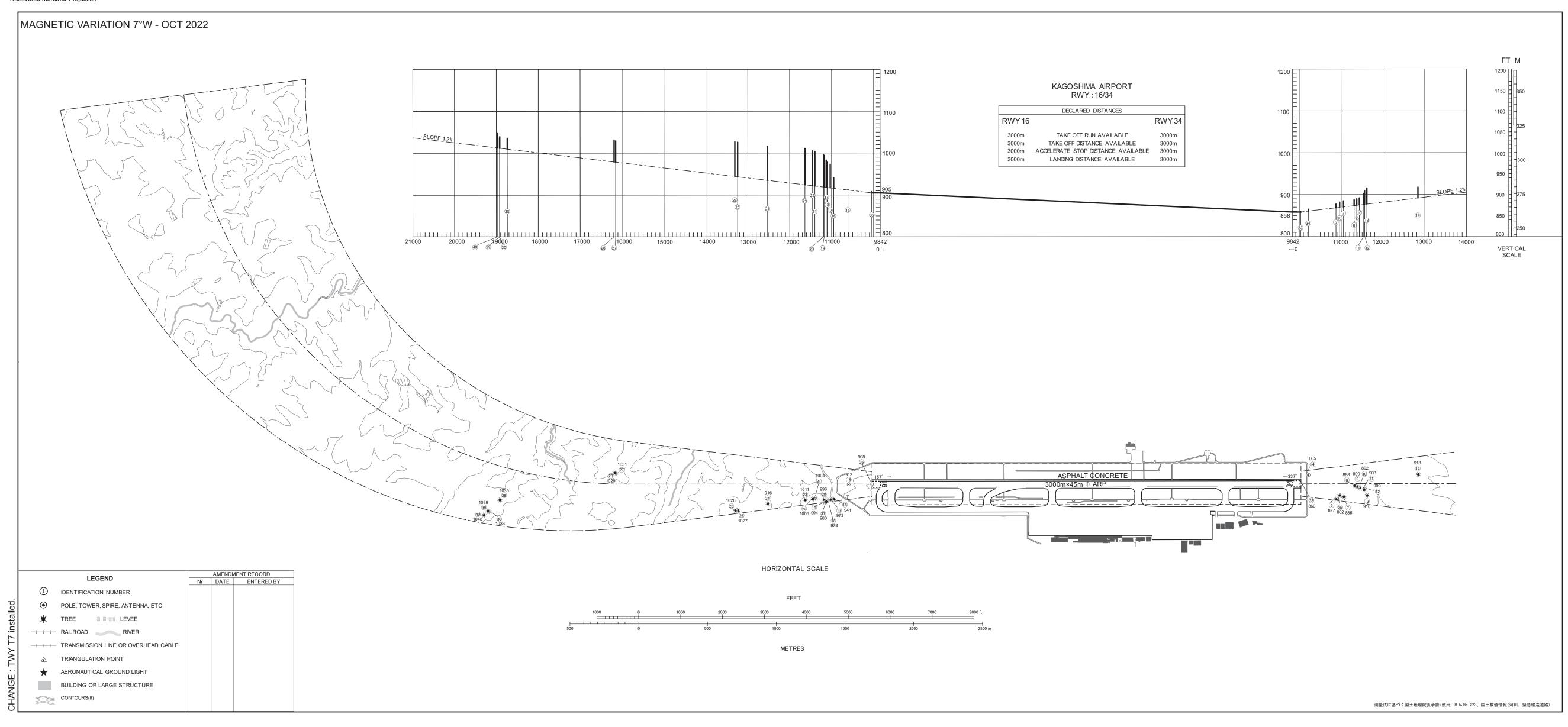
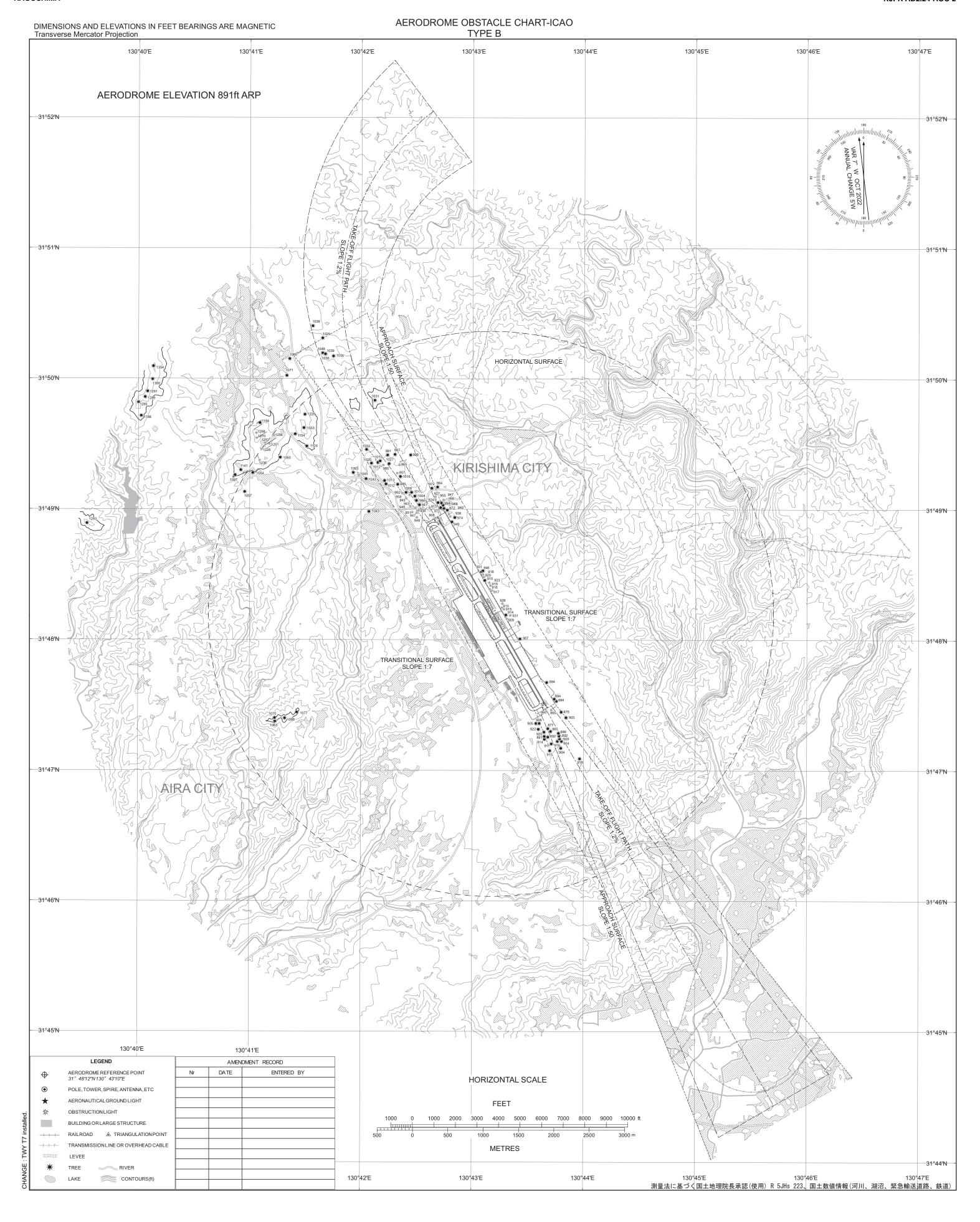


Civil Aviation Bureau, Japan (EFF:18 APR 2024)



DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC Transverse Mercator Projection





## RJFK / KAGOSHIMA

SID and TRANSITION

## OVSID ONE DEPARTURE

RWY 16: Climb RWY HDG to KGE2.0DME, turn left HDG 303°...

RWY 34: Climb RWY HDG to 2000FT, turn right...

... to intercept and proceed via KGE R348 to OVSID.

Note RWY16 : 5.0% climb gradient required up to 1300FT. RWY34 : 5.0% climb gradient required up to 2000FT.

OBST ALT 1181FT located at 1.4NM 319° FM end of RWY34. OBST ALT 2067FT located at 6.7NM 345° FM end of RWY34.

## KAJIKI TRANSITION

From over OVSID, turn left, direct to KGE VOR/DME.

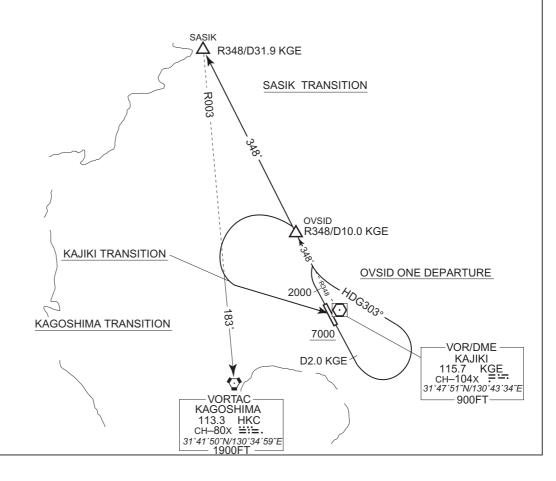
Cross KGE VOR/DME at or above 7000FT.

## SASIK TRANSITION

From over OVSID, via KGE R348 to SASIK.

## KAGOSHIMA TRANSITION

From over OVSID, turn left to intercept and proceed via HKC R003 to HKC VORTAC.



RJFK / KAGOSHIMA **RNAV SID** MIDAI THREE DEPARTURE RNAV 1 Note 1) DME/DME/IRU or GNSS required. RWY16: HKC:7NM to OICHI — 2NM to OICHI KGE:7NM to OICHI — 2NM to OICHI  $\frak{MThe}$  aircraft equipped with only DME/DME/IRU Critical DME must be able to update its position without delay at the starting point of take-off roll. RWY16: DER - 7NM to OICHI 2) RADAR service required. DME GAP RWY34: DER - 12NM to SMIKO Inappropriate Navaids | See AD 1.1.6.10.3. Inappropriate NAVAIDs for RNAV1 VAR 7°W VOR/DME MIYAZAKI 112.4 MZE CH-71X ==... VOR/DME KAJIKI 115.7 KGE CH−104X ; :--: 31°47′51″N/130°43′34″E 31°52′43″N/131°26′15″E ——— 100FT ——— -900FT MIYAZAKIAP 337 FK400 2000 315023.2N 1304844.2E 157 . Ś., 1300 Δ OICHI 9.4 20.3 313712.8N 099 1304725.8E 099 FL160 **SMIKO** MÍDAI 313657.5N 313621.1N 1305824.7E 1312212.7E 7000 0

RWY16 : Climb on HDG 157° at or above 1300FT, turn right direct to OICHI, to SMIKO at or above 7000FT, to MIDAI at or above FL160.

RWY34 : Climb on HDG 337° at or above 2000FT, turn right direct to FK400, to SMIKO at or above 7000FT, to MIDAI at or above FL160.

Note RWY34: 5.0% climb gradient required up to 3100FT.

OBST ALT 3117FT located at 7.7NM 046° FM end of RWY34.

# RJFK / KAGOSHIMA

**RNAV SID** 

## MIDAI THREE DEPARTURE

## RWY16

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	_	_	157 (150.1)	-7.2	_	_	+1300	_	_	RNAV1
002	DF	OICHI	_	_	-7.2	_	R	_	_	_	RNAV1
003	TF	SMIKO	_	099 (091.5)	-7.2	9.4	_	+7000	_	_	RNAV1
004	TF	MIDAI	_	099 (091.6)	-7.2	20.3	_	+FL160	_	_	RNAV1

## RWY34

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	_	_	337 (330.1)	-7.2	_	_	+2000	_	_	RNAV1
002	DF	FK400	_	_	-7.2	_	R	_	_	_	RNAV1
003	TF	SMIKO	_	156 (148.5)	-7.2	15.8	_	+7000	_	_	RNAV1
004	TF	MIDAI	_	099 (091.6)	-7.2	20.3	_	+FL160	_	_	RNAV1

## RNAV SID and TRANSITION RJFK / KAGOSHIMA ATRUK ONE DEPARTURE RNAV1 **ASHIKITA TRANSITION** RWY16: HKC 6.0NM to FK601 - FK601 11.0NM to ATRUK - 4.0NM to ATRUK KGE 6.0NM to FK601 - 5.0NM to FK601 4.0NM to FK601 - 4.0NM to ATRUK MZE 6.0NM to FK601 - 4.0NM to FK601 Critical DME Note 1) DME/DME/IRU or GNSS required. 3.0NM to ATRUK - 1.0NM to ATRUK \*The aircraft equipped with only DME/DME/IRU RWY34: HKC 3.0NM from DER - 5.0NM to ATRUK must be able to update its position without delay KGE 5.0NM to OVSID - 3.0NM to OVSID 1.0NM to OVSID - 5.0NM to ATRUK at the starting point of take-off roll. 2) RADAR service required. MZE 3.0NM to ATRUK - 1.0NM to ATRUK RWY16: DER - 6.0NM to FK601 DME GAP RWY34: DER - 3.0NM from DER Inappropriate Navaids See AD1.1.6.10.3 Inappropriate NAVAIDs for RNAV1 SASIK VAR7°W 321759.3N 1303115.7E **ASHIKITA TRANSITION** ATRUK 320425.8N 1303648.9E 348 348 ATRUK ONE DEPARTURE OVSID 315719.2N 1303942.9E 13.7 VOR/DME KAJIKI 115.7 KGE CH-104x = --FK601 2000 315043.9N 31°47′51″N/130°43′34″E 338 1303706.9E 900FT -158 1300 FK602 314616.5N 1304428.1E **ATRUK ONE DEPARTURE** RWY16: Climb on HDG158° at or above 1300FT, direct to FK602, turn right direct to FK601, to ATRUK. RWY34: Climb on HDG338° at or above 2000FT, turn right direct to OVSID, to ATRUK. CHANGE: New PROC Note RWY16: 7.0% climb gradient required up to 2000FT. OBST ALT 896FT located at 0.6NM 141° FM end of RWY16. Note RWY34: 5.0% climb gradient required up to 2000FT. OBST ALT 1181FT located at 1.4NM 319° FM end of RWY34. OBST ALT 2067FT located at 6.7NM 345° FM end of RWY34. ASHIKITA TRANSITION From ATRUK, to SASIK.

## RJFK / KAGOSHIMA

# RNAV SID and TRANSITION

# **ATRUK ONE DEPARTURE**

## RWY16

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	-	-	158 (150.1)	-7.4	-	-	+1300	-	-	RNAV1
002	DF	FK602	Υ	-	-7.4	-	-	-	-	-	RNAV1
003	DF	FK601	-	-	-7.4	-	R	-	-	-	RNAV1
004	TF	ATRUK	-	006 (358.9)	-7.4	13.7	-	-	-	-	RNAV1

## RWY34

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	-	-	338 (330.1)	-7.4	-	-	+2000	-	-	RNAV1
002	DF	OVSID	-	-	-7.4	-	R	-	-	-	RNAV1
003	TF	ATRUK	-	348 (340.9)	-7.4	7.5	-	-	-	-	RNAV1

# **ASHIKITA 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	ATRUK	-	-	-7.4	-	-	-	-	-	RNAV1
002	TF	SASIK	-	348 (340.9)	-7.4	14.4	-	-	-	-	RNAV1

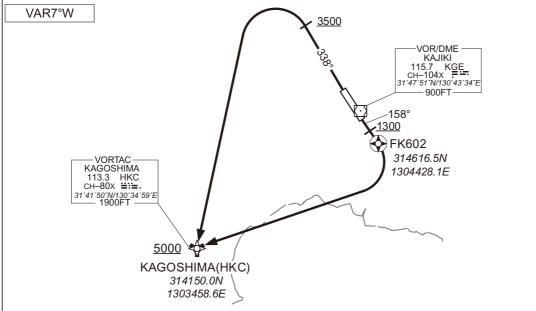
CHANGE: New PROC.

RNAV SID

## STANDARD DEPARTURE CHART - INSTRUMENT

RJFK / KAGOSHIMA

MIZOBE ONE DEPARTURE RNAV1 RWY16: HKC 9.0NM to HKC - 3.0NM to HKC KGE 9.0NM to HKC - HKC SGE 3.0NM to HKC - HKC RWY34: HKC 2.0NM from DER - 14.0NM to HKC Critical DME Note 1) DME/DME/IRU or GNSS required. KGE 2.0NM from DER - 9.0NM to HKC XThe aircraft equipped with only DME/DME/IRU 7.0NM to HKC - 6.0NM to HKC must be able to update its position without delay 4.0NM to HKC - 2.0NM to HKC at the starting point of take-off roll. SGE 3.0NM to HKC - HKC 2) RADAR service required. RWY16: DER - 9.0NM to HKC DME GAP RWY34: DER - 2.0NM from DER Inappropriate Navaids See AD1.1.6.10.3 Inappropriate NAVAIDs for RNAV1



RWY16 : Climb on HDG158° at or above 1300FT, direct to <u>FK602</u>, turn right direct to HKC at or above 5000FT.

RWY34 : Climb on HDG338° at or above 3500FT, turn left direct to HKC at or above 5000FT.

Note RWY16: 7.0% climb gradient required up to 2000FT.

OBST ALT 890FT located at 0.6NM 154° FM end of RWY16.

Note RWY34: 5.0% climb gradient required up to 3500FT.

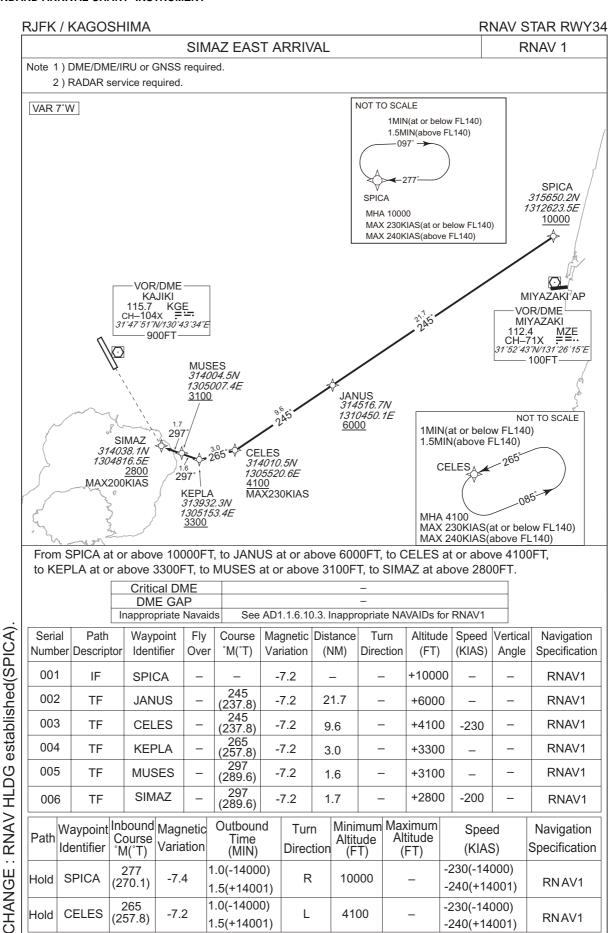
OBST ALT 1181FT located at 1.4NM 319° FM end of RWY34. OBST ALT 2067FT located at 6.7NM 345° FM end of RWY34.

## RWY16

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	-	-	158 (150.1)	-7.4	-	-	+1300	-	-	RNAV1
002	DF	FK602	Υ	-	-7.4	-	-	-	1	-	RNAV1
003	DF	нкс	-	-	-7.4	-	R	+5000	-	-	RNAV1

## RWY34

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	-	-	338 (330.1)	-7.4	-	-	+3500	-	-	RNAV1
002	DF	НКС	-	1	-7.4	1	L	+5000	1	-	RNAV1



# CHANGE : RNAV HLDG established. HLDG for using NAVAID abolished(HKC)

1MIN(at or below FL140) 1.5MIN(above FL140)

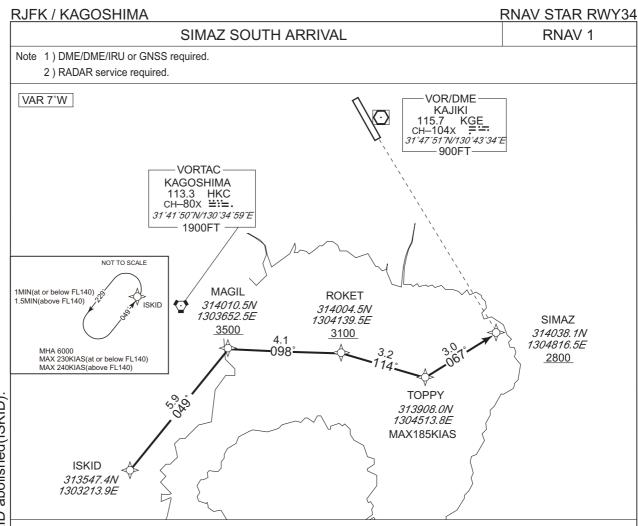
## RJFK / KAGOSHIMA **RNAV STAR RWY34** SIMAZ NORTH ARRIVAL RNAV 1 Note 1) DME/DME/IRU or GNSS required. 2) RADAR service required. VAR 7°W VOR/DME KAJIKI 115.7 KGE CH-104X F:-31°47′51″N/130°43′34″E 900FT VORTAC-KAGOSHIMA 113.3 HKC CH–80x ≌:≡ 31°41′50″N/130°34′59″E 1900FT KAGOSHIMA(HKC) 314150.0N 1303458.6E 6.0 SIMAZ 3500 314038.1N 1304816.5E 3.2 2800 ROKET NOT TO SCALE MHA 5000 MAX 230KIAS(at or below FL140) 314004.5N 1304139.5E TOPPY MAX 240KIAS (above FL140) 3100 313908.0N KAGOSHIMA 1304513.8E (HKC) MAX185KIAS

From HKC at or above 3500FT, to ROKET at or above 3100FT, to TOPPY, to SIMAZ at or above 2800FT.

Critical DME	KGE: 3NM to ROKET - SIMAZ
DME GAP	HKC - 3NM to ROKET
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	HKC	_	_	-6.9	_	ı	+3500	ı	_	RNAV1
002	TF	ROKET	_	114 (107.2)	-6.9	6.0	ı	+3100	ı	_	RNAV1
003	TF	TOPPY	_	114 (107.2)	-6.9	3.2	1	_	-185	_	RNAV1
004	TF	SIMAZ	_	067 (059.9)	-6.9	3.0	_	+2800	_	_	RNAV1

Path	Waypoint Identifier	(:Alireal	Magnetic Variation	Lime	Turn Direction	Altitude	Maximum Altitude (FT)	Оросса	Navigation Specification
Hold	HKC	115 (107.1)	-7.4	1.0(-14000) 1.5(+14001)	R	5000	_	-230(-14000) -240(+14001)	RNAV1



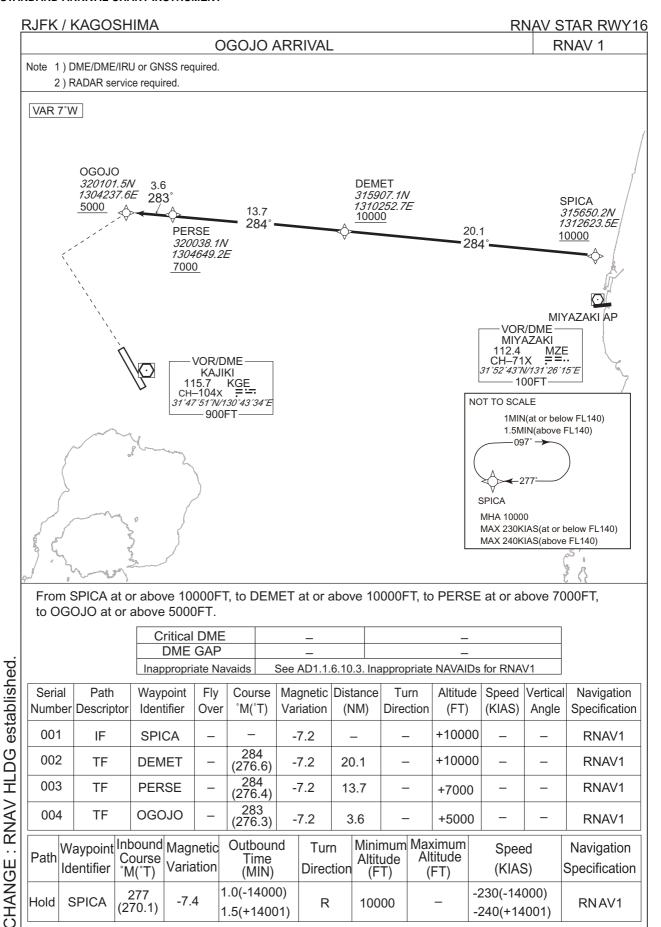
From ISKID, to MAGIL at or above 3500FT, to ROKET at or above 3100FT, to TOPPY, to SIMAZ at or above 2800FT.

Critical DME	-
DME GAP	ISKID - 3NM to MAGIL 1NM to MAGIL - SIMAZ
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	ISKID	_	_	-6.9	_	-	_	_	_	RNAV1
002	TF	MAGIL	_	049 (042.0)	-6.9	5.9	_	+3500	_	_	RNAV1
003	TF	ROKET	_	098 (091.4)	-6.9	4.1	-	+3100	-	_	RNAV1
004	TF	TOPPY	_	114 (107.2)	-6.9	3.2	_	_	-185	_	RNAV1
005	TF	SIMAZ	_	067 (059.9)	-6.9	3.0	_	+2800	_	_	RNAV1

Pat	Waypoint Identifier	( 'Alirea	Magnetic Variation	lımα	Turn Direction	Altitude	Maximum Altitude (FT)	Орсса	Navigation Specification
Hold	ISKID	049 (042.0)	-7.4	1.0(-14000) 1.5(+14001)	L	6000	_	-230(-14000) -240(+14001)	RN AV1

### RNAV STAR RWY34 RJFK / KAGOSHIMA KINKOH ARRIVAL RNAV 1 Note 1) DME/DME/IRU or GNSS required. 2) RADAR service required. VOR/DME VAR 7°W KAJIKI 115.7 KGE CH–104X **Ξ ≔** 31°47′51″W130°43′34″E -900FT $\bigcirc$ ZAIHO **VORTAC KAGOSHIMA** 313801.8N 113.3 HKC CH-80x **∷**:= 1305001.9E 3300 31°41′50″N/130°34′59″E 1900FT YOGAN 313146.3N 1305414.5E 6000 CHANGE: RNAV HLDG established. HLDG for using NAVAID abolished(YOGAN) **IROHA** NOT TO SCALE 312837.6N 1305117.6E 7000 YOGAN 1MIN(at or below FL140) .5MIN(above FL140) KINKO MHA 6000 311958.2N MAX 230KIAS(at or below FL140) 1304312.0E MAX 240KIAS (above FL140) From KINKO, to IROHA at or above 7000FT, to YOGAN at or above 6000FT, to ZAIHO at or above 3300FT. 10.2NM to IROHA - 5.7NM to IROHA 5.6NM to IROHA - 2.4NM to IROHA Critical DME 2.4NM to ZAIHO - 1.2NM to ZAIHO HKC: 4.4NM to ZAIHO - 1.3NM to ZAIHO DME GAP See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1 Inappropriate Navaids Path Serial Waypoint Fly Course Magnetic Distance Turn Altitude Speed Vertical Navigation Number Descriptor Identifier Over °M(°T) Variation (NM) Direction (FT) (KIAS) Angle Specification 001 **KINKO** RNAV1 IF -6.9 045 002 +7000 TF **IROHA** -6.9 11.1 RNAV1 (038.6)046 003 +6000 RNAV1 TF YOGAN -6.9 4.0 (038.6)337 004 +3300 TF ZAIHO -6.9 7.2 RNAV1 (330.2)Waypoint Inbound Magnetic Minimum Maximum Outbound Turn Navigation Speed Path Altitude Course Time Altitude Variation Identifier Specification Direction (KIAS) (MIN) °M(°T) (FT) (FT) 1.0(-14000) -230(-14000) 338 -7.4 R 6000 Hold YOGAN RNAV1 (330.2)1.5(+14001) -240(+14001)



# **RNAV STAR RWY16** RJFK / KAGOSHIMA YUKSA ARRIVAL RNAV 1 Note 1) DME/DME/IRU or GNSS required. 2) RADAR service required. VAR 7°W JADDO SEPPE 320827.6N 320755.5N 1304908.6E 1303856.6E 8.7 10000 280° MOCOS > 320740.4N 1305350.6E 281° 10000 YUKSA 320313.3N ∜ 1303258.9E 5000 VOR/DME KAJIKI 115.7 KGE CH-104X 31°47′51″N/130°43′34″E -900FT

From MOCOS at or above 10000FT, to SEPPE at or above 10000FT, to JADDO, to YUKSA at or above 5000FT.

	MZE	2NM to JADDO - JADDO		
Critical DME	KUE	1NM to YUKSA - YUKSA		
	MZE	1NM to YUKSA - YUKSA		
DME GAP	_	_		
Inappropriate Navaids	See AD1.1.6.10.3	. Inappropriate NAVAIDs for RNAV1		

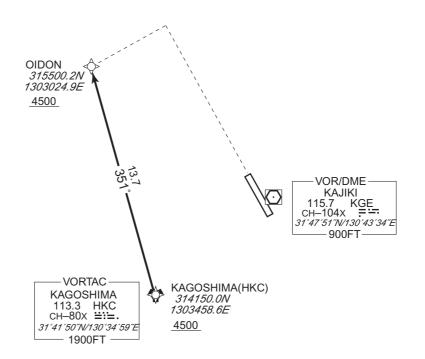
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	MOCOS	_	_	-6.9	_	_	+10000	_	_	RNAV1
002	TF	SEPPE		281 (273.6)	-6.9	4.0	_	+10000	_	-	RNAV1
003	TF	JADDO	_	280 (273.6)	-6.9	8.7	_	_	_	_	RNAV1
004	TF	YUKSA	_	231 (224.0)	-6.9	7.3	_	+5000	_	_	RNAV1

# RJFK / KAGOSHIMA RNAV STAR RWY16 OIDON ARRIVAL RNAV 1

Note 1) DME/DME/IRU or GNSS required.

2) RADAR service required.

VAR 7°W

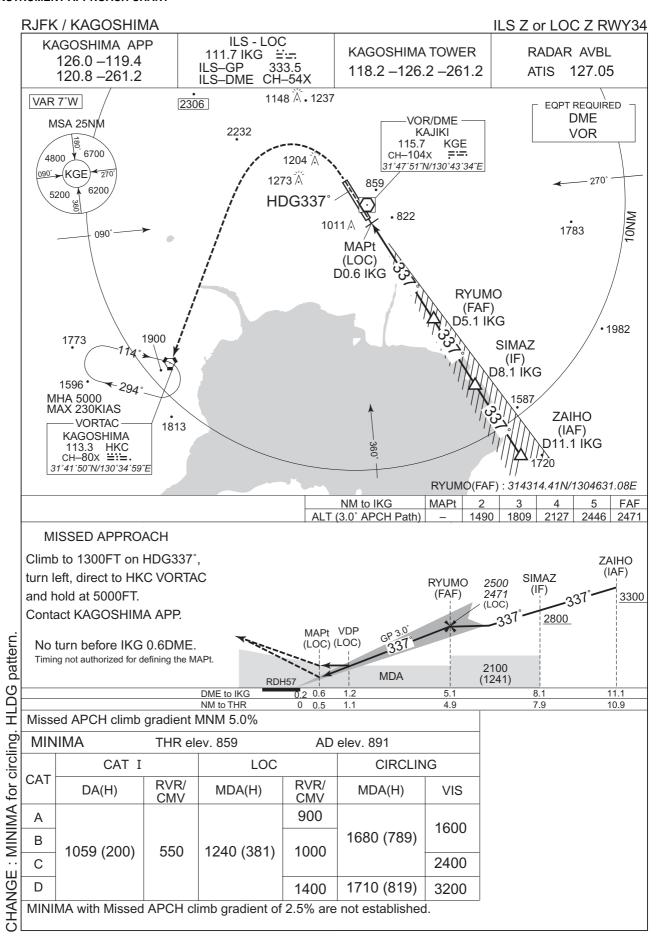


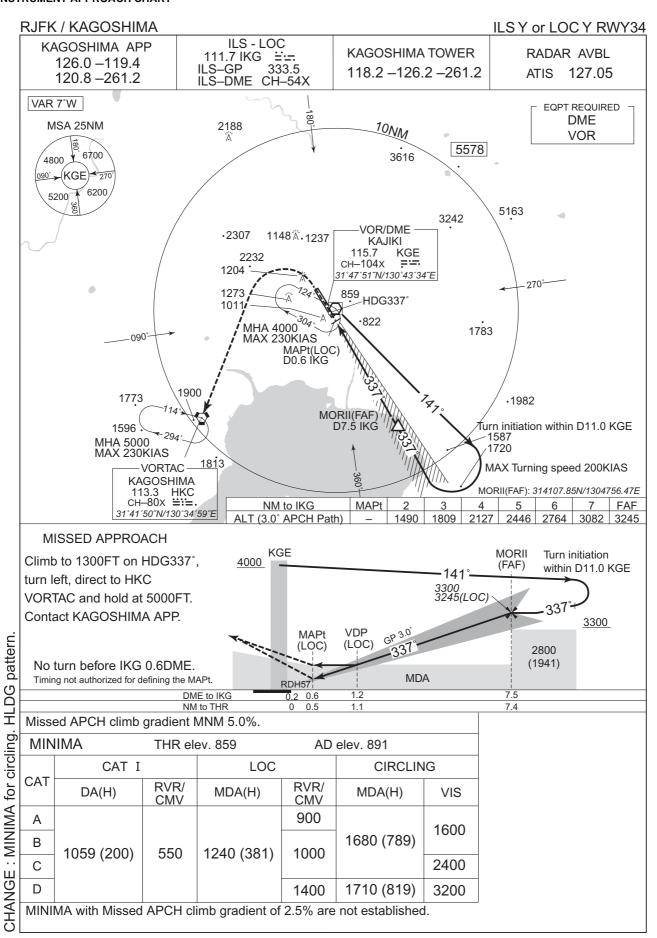
From HKC at or above 4500FT, to OIDON at or above 4500FT.

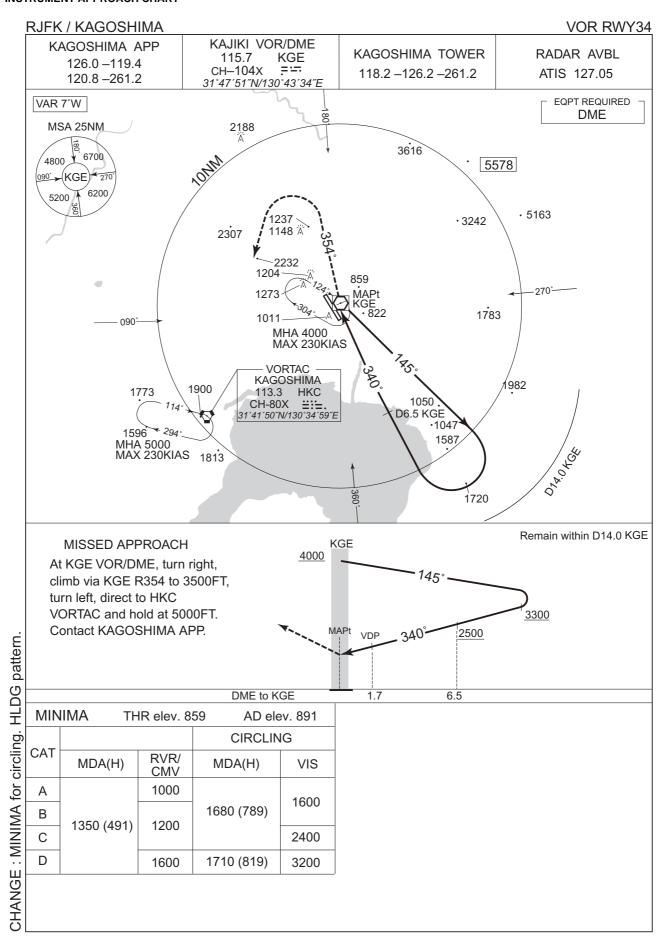
Critical DME	HKC	7NM to OIDON - OIDON
DME GAP	HKC - 10NM to OIDC	N
Inappropriate Navaids	See AD1.1.6.10.3	. Inappropriate NAVAIDs for RNAV1

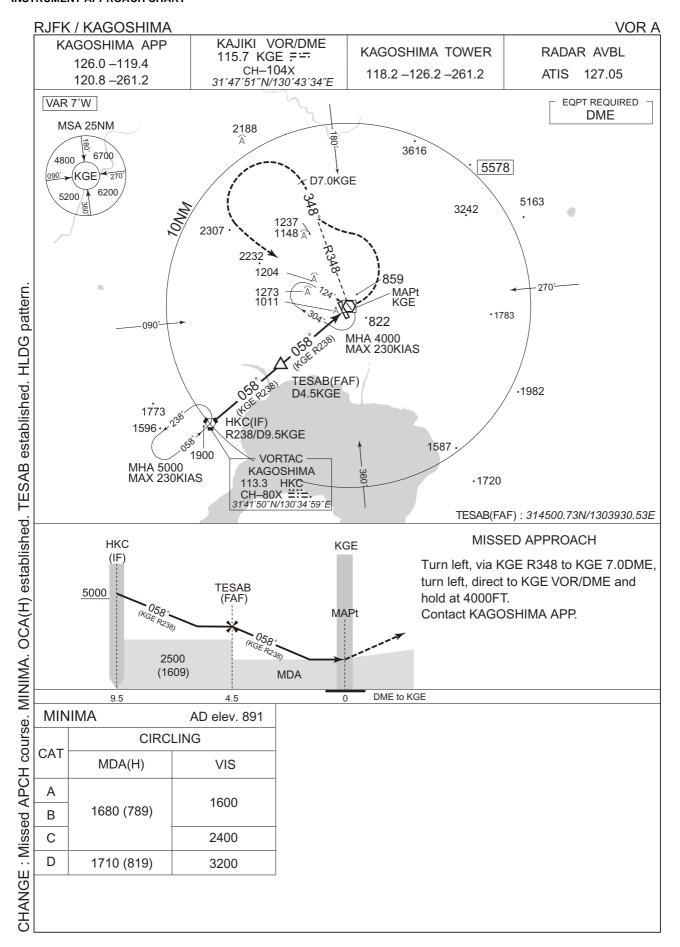
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	HKC	_	_	-6.9	_	_	+4500	_	_	RNAV1
002	TF	OIDON	_	351 (343.6)	-6.9	13.7	_	+4500	_	_	RNAV1

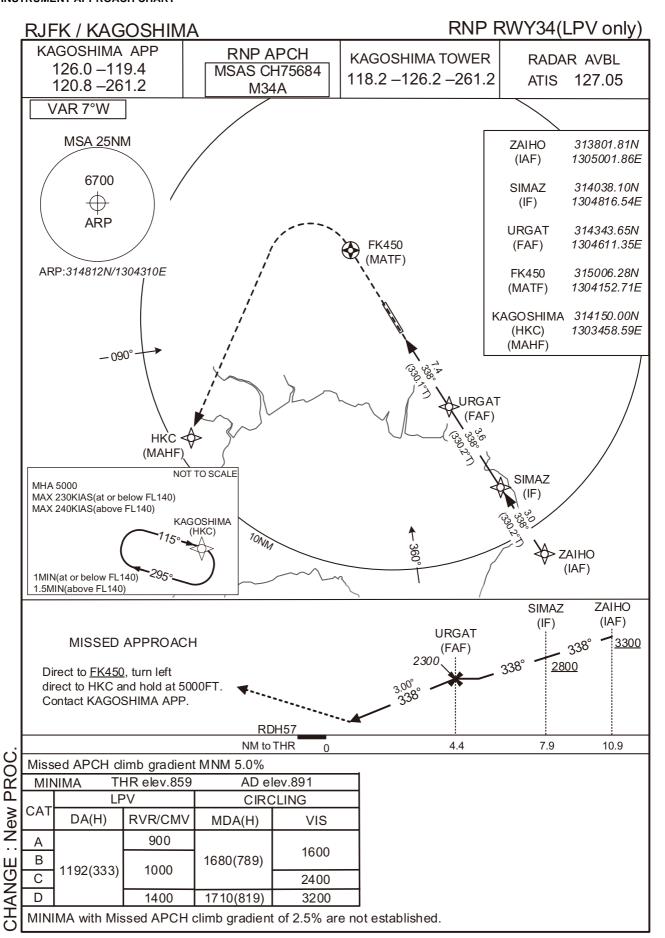












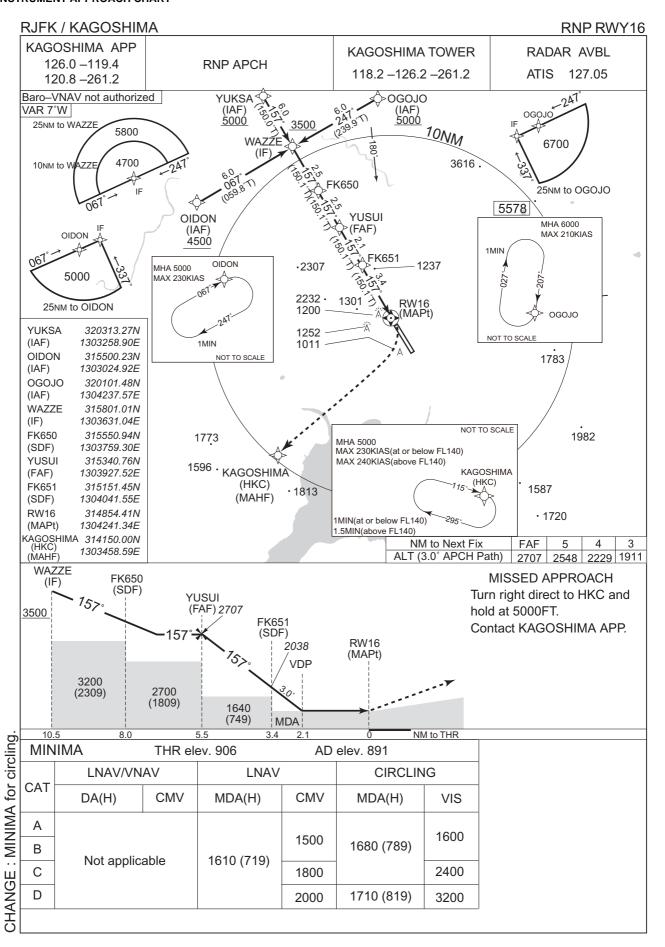
# RJFK / KAGOSHIMA

# RNP RWY34(LPV only)

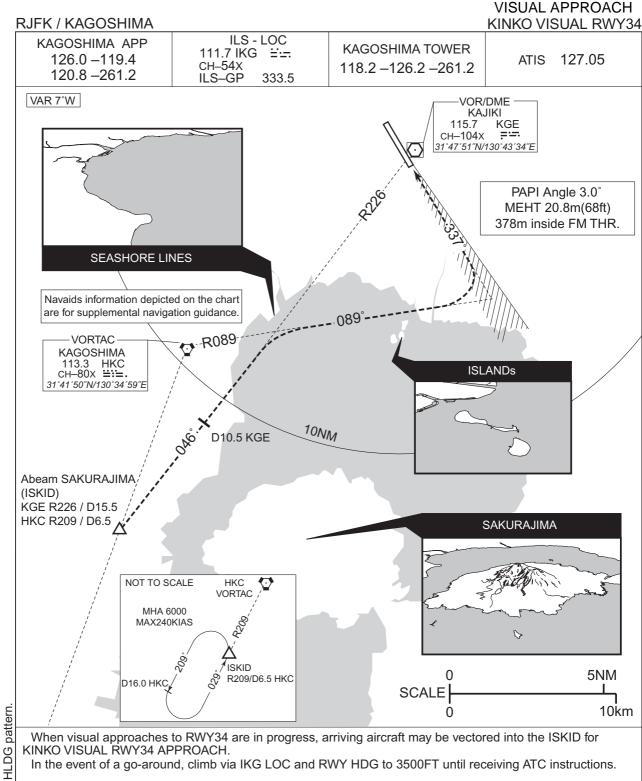
FAS DATA BLOCK			
Operation type	0	LTP/FTP ellipsoidal height	+02939
SBAS service provider identifier	2	FPAP latitude	314854.3765N
Airport identifier	RJFK	FPAP longitude	1304241.3430E
Runway	34	Threshold crossing height	00017.3
Approach performance designator	0	TCH units selector	1
Route indicator		Glide path angle	03.00
Reference path data selector	0	Course width at threshold	105.00
Reference path ID	M34A	∠ length offset	0000
LTP/FTP latitude	314730.0345N	HAL	40.0
LTP/FTP longitude	1304338.3800E	VAL	50.0
CRC remainder	7F3AFA21	•	·

# Required additional data

	rtoquir ou uuurtioriur uutu	
ı	LTP/FTP orthometric height	262.2







When visual approaches to RWY34 are in progress, arriving aircraft may be vectored into the ISKID for KINKO VISUAL RWY34 APPROACH.

In the event of a go-around, climb via IKG LOC and RWY HDG to 3500FT until receiving ATC instructions.

## <KINKO VISUAL RWY34 APPROACH>

After ISKID, aircraft proceed via seashore lines to the mouth of the Beppu River (KGE R226), proceed via seashore lines to ISLANDs(HKC R089) until intercept to RWY34 RWY center line, and proceed to RWY34(IKG LOC course).

Aircraft is recommended KGE 10.5DME(HKC R168) at or above 3500FT.

Note1: Pilot is urged to report promptly to ATC when lose sight of landmark(SAKURAJIMA, Seashore Lines and ISLANDs) and the preceding aircraft concerned.

Note2: Reference NAVAIDS(KGE, HKC and IKG LOC) must be operating.

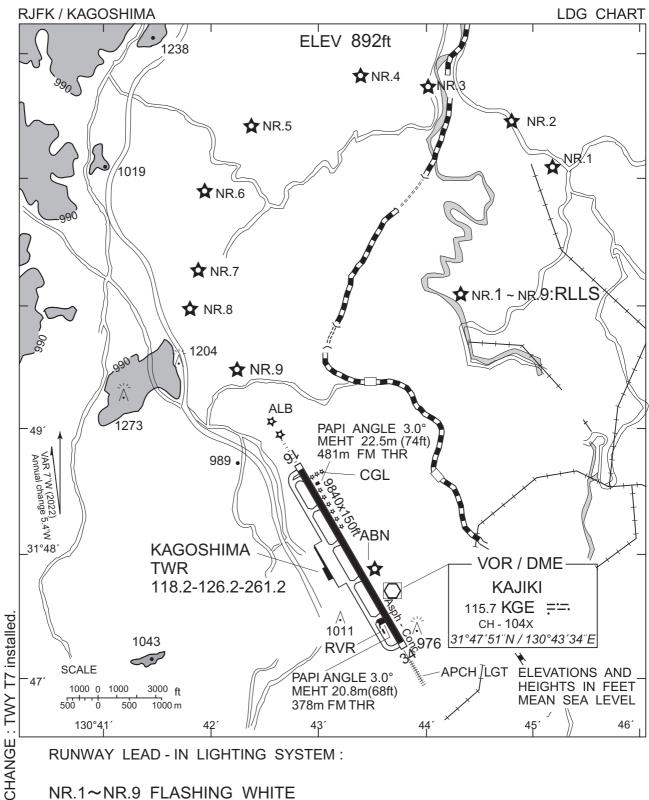
Note3: RADAR service required.

Note4: Procedure not authorized at night.



※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).

	Call sign	BRG / DIST from ARP	Remarks
ARP.	鶴田ダム Tsuruta Dam	314°T / 16.0NM	ダム Dam
from	栗野 Kurino	001°T / 8.8NM	JR駅 JR Station
BRG/DIST	神宮 Jingu	081°T / 6.1NM	JR駅 JR Station
	蒲生 Kamo	254°T / 6.8NM	住吉池 Pond
pdated	都城 Miyakonojo	102°T / 18.6NM	JR駅 JR Station
Map updated.	加治木タウン Kajiki Town	214°T / 5.3NM	網掛川河口 River mouth (The Amikake)
	大崎鼻 Osakibana	211°T / 10.0NM	崎 Point
CHANGE	鹿児島シティ Kagoshima City	211°T / 14.7NM	港 Harbor



RUNWAY LEAD - IN LIGHTING SYSTEM:

NR.1~NR.9 FLASHING WHITE



