

RJCK / KUSHIRO SID

## KUSHIRO REVERSAL FIVE DEPARTURE

RWY17: Climb RWY HDG to 1000FT, turn right...

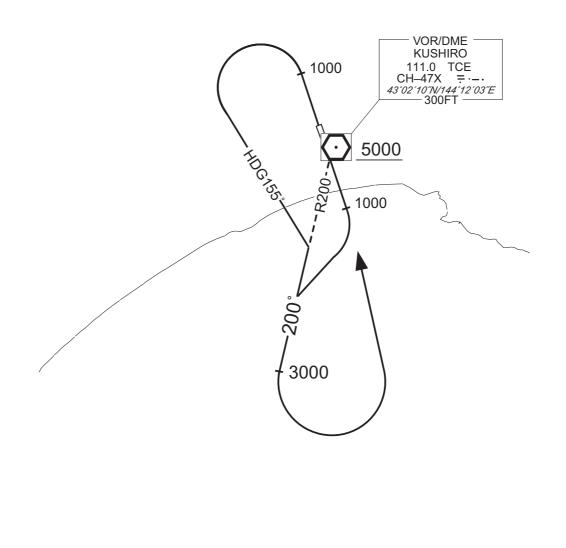
RWY35: Climb RWY HDG to 1000FT, turn left HDG155°...

...to intercept and proceed via TCE R200 to 3000FT, turn left, direct to

TCE VOR/DME.

Cross TCE VOR/DME at or above 5000FT.

Note: No turn before DER.



PROC renamed. KUSHIRO VOR/DME relocated(KSE→TCE)

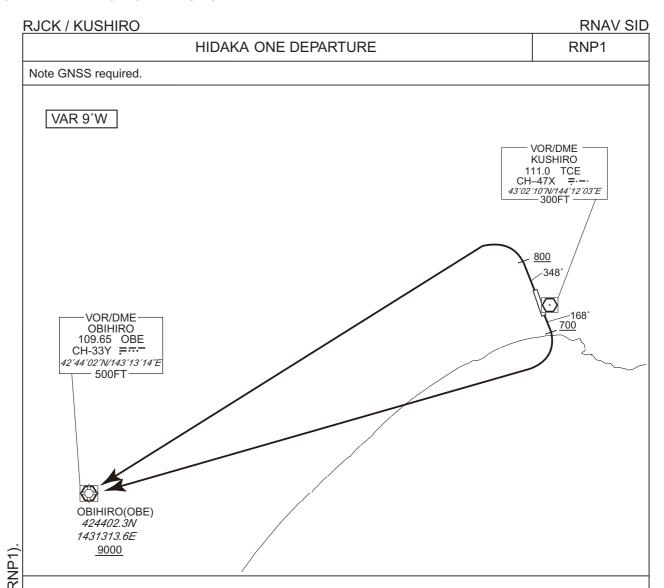
RJCK / KUSHIRO **RNAV SID** RNP1 TANCHO ONE DEPARTURE Note GNSS required. VAR 9°W VOR/DME 800 KUSHIRO 348° 111.0 TCE CH-47X **= · -** · 43°02′10″W144°12′03″E 300FT 168° <u>700</u> YUDOH 423005.4N 1434446.5E 10000

RWY17: Climb on HDG168° at or above 700FT, turn right direct to YUDOH at or above 10000FT. RWY35: Climb on HDG348° at or above 800FT, turn left direct to YUDOH at or above 10000FT.

### RWY17

1 ( ) 1 1 1 1											
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	VA	_	_	168 (159.0)	-9.2	_	-	+700	_	_	RNP1
002	DF	YUDOH		_	-9.2	_	R	+10000	-	_	RNP1

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	VA	_	_	348 (339.0)	-9.2	_	-	+800	_	_	RNP1
002	DF	YUDOH	_	_	-9.2	_	L	+10000	_	_	RNP1



RWY17: Climb on HDG168° at or above 700FT, turn right direct to OBE at or above 9000FT. RWY35: Climb on HDG348° at or above 800FT, turn left direct to OBE at or above 9000FT.

## RWY17

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	VA	_	_	168 (159.0)	-9.2	1	ı	+700	-	_	RNP1
002	DF	OBE	_	_	-9.2	_	R	+9000	_	_	RNP1

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	VA	_	-	348 (339.0)	-9.2	-	ı	+800	-	_	RNP1
002	DF	OBE	_	_	-9.2	_	L	+9000	_	_	RNP1

**RJCK / KUSHIRO RNAV SID** RNP1 RUGMO ONE DEPARTURE Note GNSS required. VAR 9°W 800 **RUGMO** VOR/DME **KUSHIRO** 430433.6N 111.0 TCE CH-47X =:--: 43°02′10″W/144°12′03″E 300FT 1432949.1E 6000 168° <u>700</u>

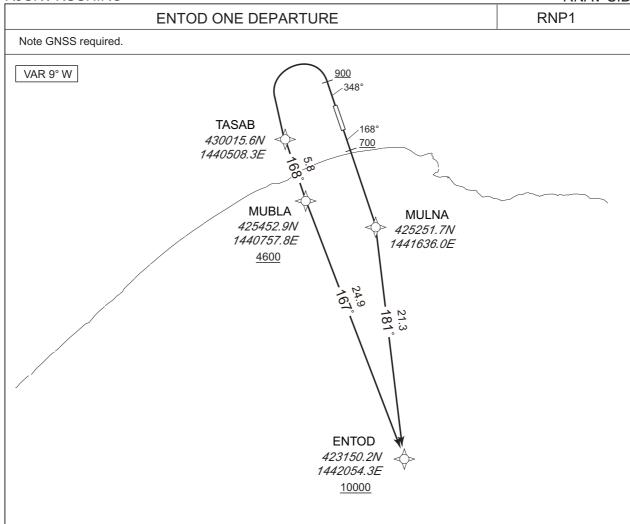
RWY17: Climb on HDG168 $^{\circ}$  at or above 700FT, turn right direct to RUGMO at or above 6000FT. RWY35: Climb on HDG348 $^{\circ}$  at or above 800FT, turn left direct to RUGMO at or above 6000FT.

## RWY17

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	VA	_	_	168 (159.0)	-9.2	_	-	+700	-	_	RNP1
002	DF	RUGMO	-	_	-9.2	_	R	+6000	_	_	RNP1

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	VA	_	_	348 (339.0)	-9.2	_	-	+800	_	_	RNP1
002	DF	RUGMO	_	_	-9.2	_	L	+6000	_	_	RNP1

RJCK / KUSHIRO RNAV SID



RWY17: Climb on HDG168° at or above 700FT, direct to MULNA, to ENTOD at or above 10000FT. RWY35: Climb on HDG348° at or above 900FT, turn left direct to TASAB, to MUBLA at or above 4600FT, to ENTOD at or above 10000FT.

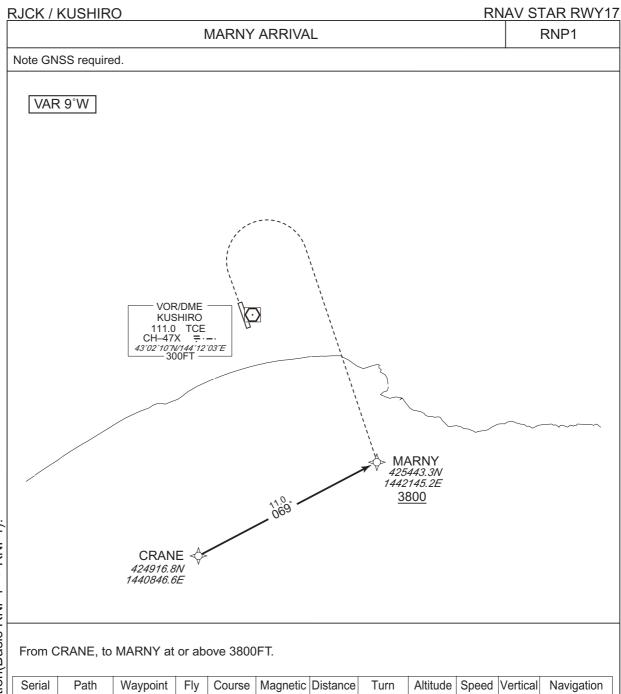
### RWY17

I											
Serial Number	Path Descriptor	Waypoint Identifier			Magnetic Variation		Turn Direction		•		Navigation Specification
001	VA	_	_	168 (159.0)	-9.3	_	_	+700	_	_	RNP1
002	DF	MULNA	_	_	-9.3	_	_	-	_	_	RNP1
003	TF	ENTOD	_	181 (171.4)	-9.3	21.3	_	+10000	_	_	RNP1

١I												
	Serial Number	Path Descriptor	Waypoint Identifier	,	Course °M(°T)	Magnetic Variation		Turn Direction		Speed (KIAS)		Navigation Specification
	001	VA	_	_	348 (339.0)	-9.3	_	_	+900	_	_	RNP1
:	002	DF	TASAB	_	_	-9.3	_	L	_	_	_	RNP1
	003	TF	MUBLA	_	168 (159.0)	-9.3	5.8	_	+4600	_	_	RNP1
	004	TF	ENTOD	_	167 (157.5)	-9.3	24.9	_	+10000	_	_	RNP1
: 1												



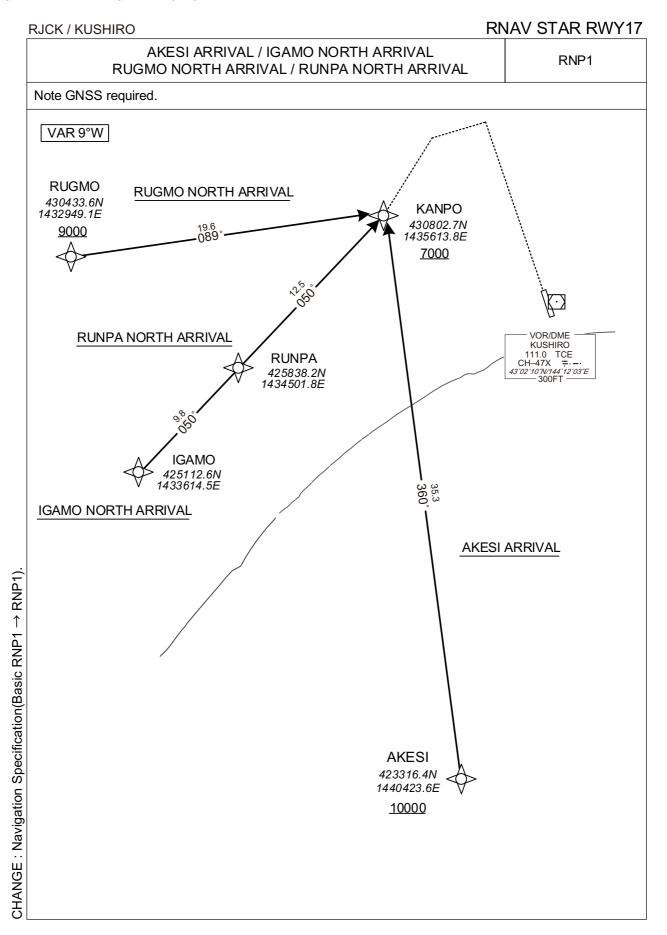
## STANDARD ARRIVAL CHART -INSTRUMENT



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	CRANE	_	_	-9.2	_	-	_	_	_	RNP1
002	TF	MARNY	_	069 (060.2)	-9.2	11.0	-	+3800	_	_	RNP1



#### STANDARD ARRIVAL CHART-INSTRUMENT



#### STANDARD ARRIVAL CHART -INSTRUMENT

## RJCK / KUSHIRO

## **RNAV STAR RWY17**

# **AKESI ARRIVAL**

From AKESI at or above 10000FT, to KANPO at or above 7000FT.

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	AKESI	1	-	-9.2	-	-	+10000	-	1	RNP1
002	TF	KANPO	1	360 (350.3)	-9.2	35.3	-	+7000	-	1	RNP1

# **IGAMO NORTH ARRIVAL**

From IGAMO, to RUNPA, to KANPO at or above 7000FT.

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	IGAMO	ı	1	-9.2	1	-	-	-	1	RNP1
002	TF	RUNPA	ı	050 (040.9)	-9.2	9.8	-	ı	1	1	RNP1
003	TF	KANPO	ı	050 (041.0)	-9.2	12.5	-	+7000	ı	-	RNP1

## **RUGMO NORTH ARRIVAL**

From RUGMO at or above 9000FT, to KANPO at or above 7000FT.

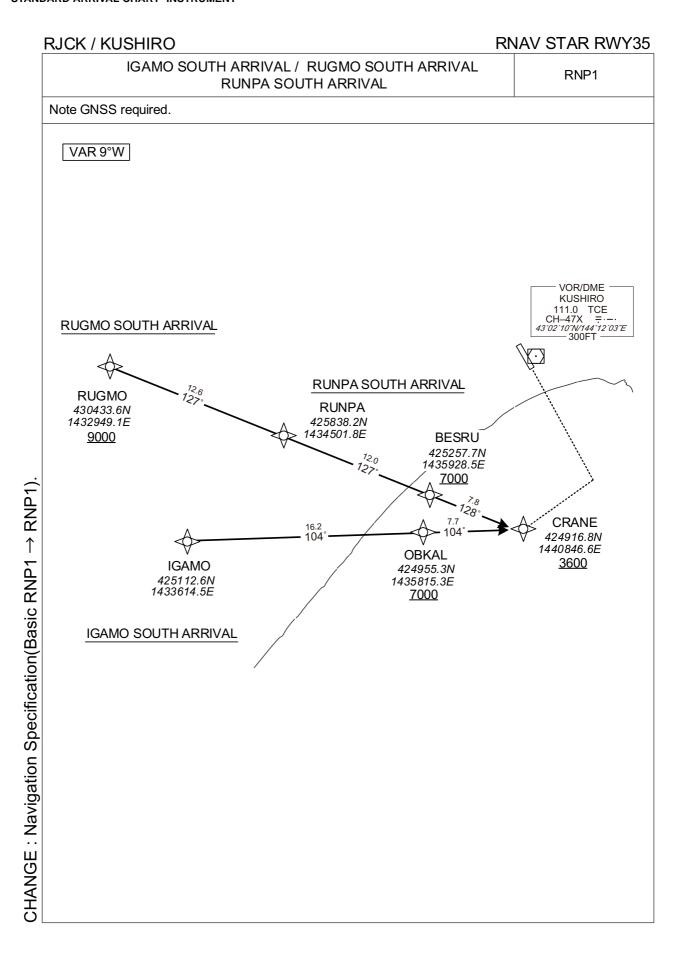
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	RUGMO	1	1	-9.2		1	+9000	-	1	RNP1
002	TF	KANPO	1	089 (079.6)	-9.2	19.6	-	+7000	-	1	RNP1

## **RUNPA NORTH ARRIVAL**

From RUNPA, to KANPO at or above 7000FT.

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	RUNPA	1	1	-9.2	1	1	ı	1	1	RNP1
002	TF	KANPO	1	050 (041.0)	-9.2	12.5	1	+7000	1	1	RNP1

#### STANDARD ARRIVAL CHART-INSTRUMENT



# CHANGE : Navigation Specification(Basic RNP1 → RNP1).

#### STANDARD ARRIVAL CHART -INSTRUMENT

# RJCK / KUSHIRO

## **RNAV STAR RWY35**

## **IGAMO SOUTH ARRIVAL**

From IGAMO, to OBKAL at or above 7000FT, to CRANE at or above 3600FT.

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	IGAMO	1	1	-9.2	-	1	-	-	1	RNP1
002	TF	OBKAL	1	104 (094.4)	-9.2	16.2	ı	+7000	1	-	RNP1
003	TF	CRANE	1	104 (094.7)	-9.2	7.7	-	+3600	-	1	RNP1

## **RUGMO SOUTH ARRIVAL**

From RUGMO at or above 9000FT, to RUNPA, to BESRU at or above 7000FT, to CRANE at or above 3600FT.

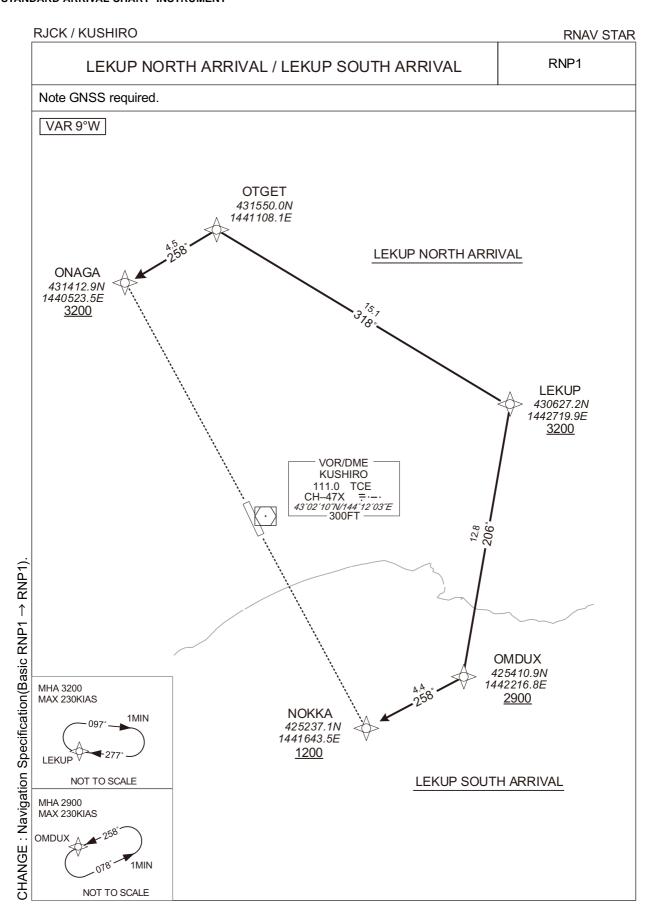
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	RUGMO	-	-	-9.2	-	1	+9000	-	1	RNP1
002	TF	RUNPA	-	127 (118.0)	-9.2	12.6	1	1	1	1	RNP1
003	TF	BESRU	-	127 (118.1)	-9.2	12.0	-	+7000	-	1	RNP1
004	TF	CRANE	-	128 (118.3)	-9.2	7.8	ı	+3600	-	-	RNP1

## **RUNPA SOUTH ARRIVAL**

From RUNPA, to BESRU at or above 7000FT, to CRANE at or above 3600FT.

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	RUNPA	1	1	-9.2	-	1	1	1	1	RNP1
002	TF	BESRU	1	127 (118.1)	-9.2	12.0	1	+7000	1	1	RNP1
003	TF	CRANE	1	128 (118.3)	-9.2	7.8	1	+3600	1	1	RNP1

## STANDARD ARRIVAL CHART-INSTRUMENT



## STANDARD ARRIVAL CHART -INSTRUMENT

# RJCK / KUSHIRO RNAV STAR

# **LEKUP NORTH ARRIVAL**

From LEKUP at or above 3200FT, to OTGET, to ONAGA at or above 3200FT.

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	LEKUP	1	-	-9.2	1	1	+3200	-	1	RNP1
002	TF	OTGET	1	318 (308.5)	-9.2	15.1	-	1	-	1	RNP1
003	TF	ONAGA	-	258 (248.9)	-9.2	4.5	-	+3200	-	-	RNP1

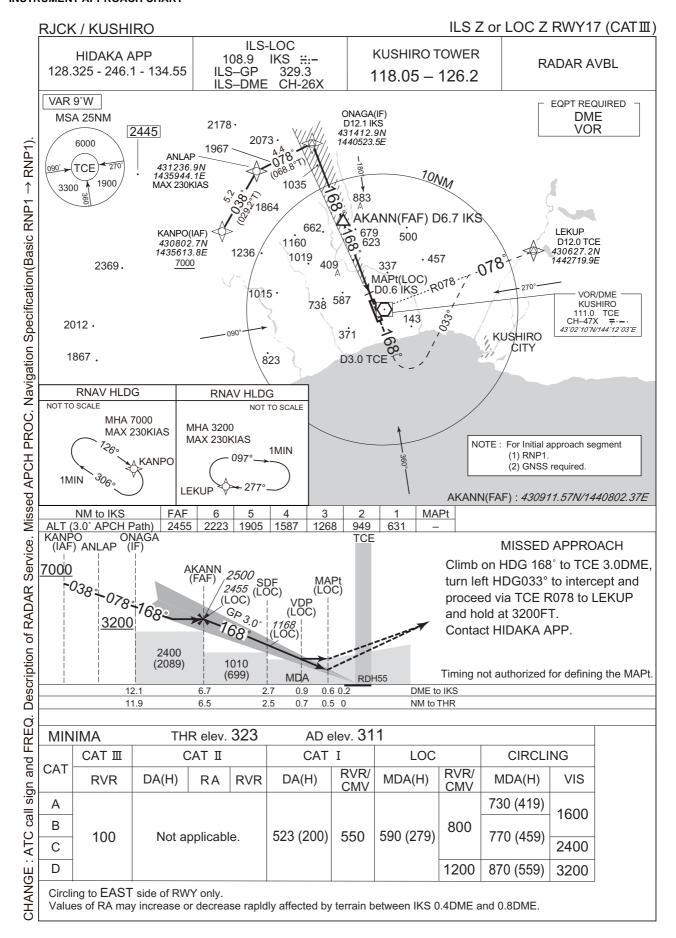
Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	LEKUP	277 (268.1)	-9.2	1.0(-14000)	R	3200	FL140	-230(-14000)	RNP1

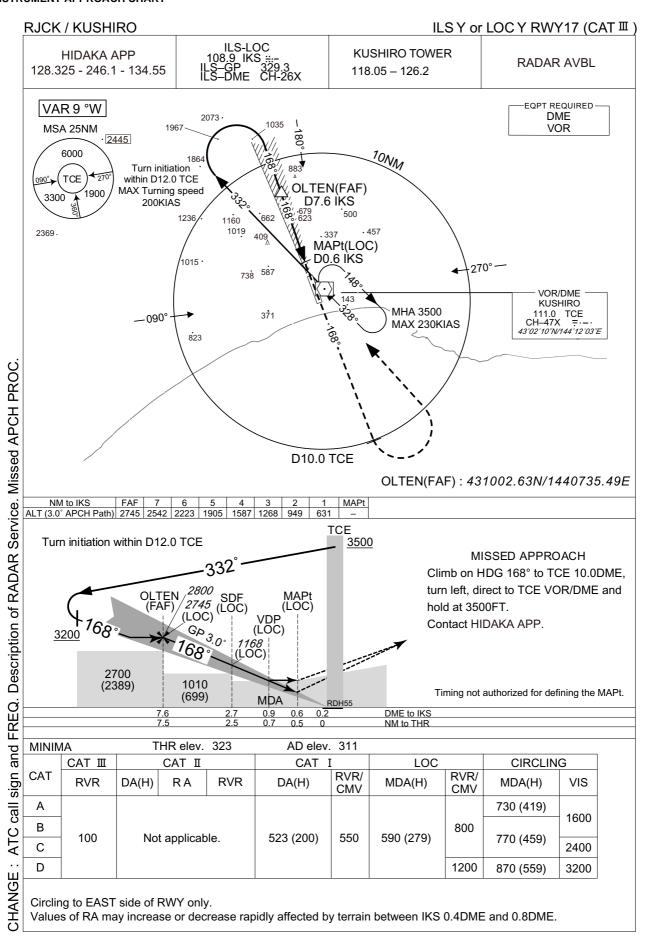
# **LEKUP SOUTH ARRIVAL**

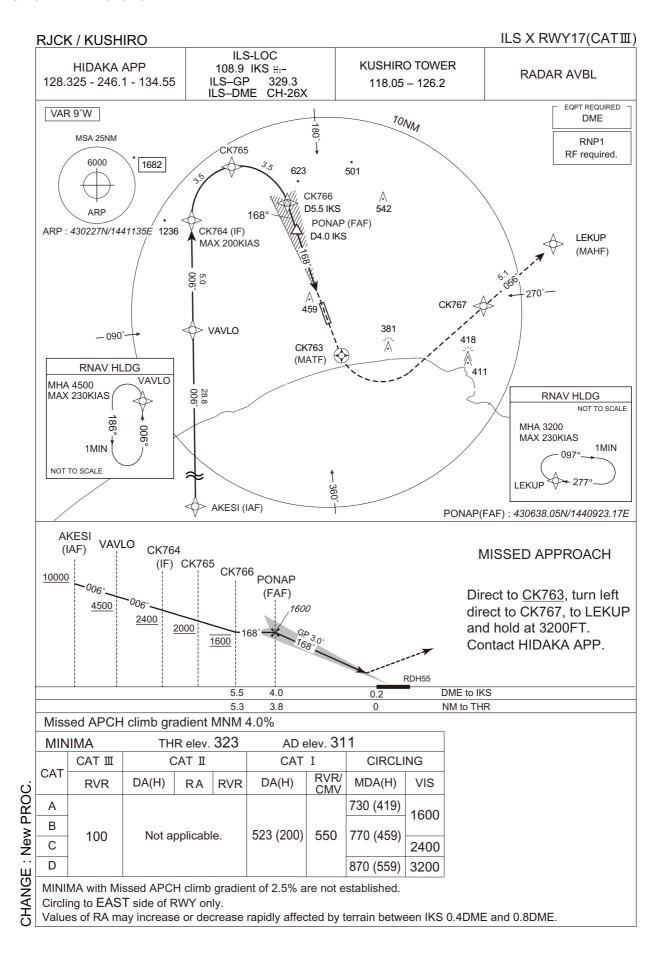
From LEKUP at or above 3200FT, to OMDUX at or above 2900FT, to NOKKA at or above 1200FT.

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	LEKUP	-	1	-9.2	-	-	+3200	-	1	RNP1
002	TF	OMDUX	-	206 (196.8)	-9.2	12.8	-	+2900	-	-	RNP1
003	TF	NOKKA	-	258 (249.0)	-9.2	4.4	-	+1200	-	-	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	LEKUP	277 (268.1)	-9.2	1.0(-14000)	R	3200	FL140	-230(-14000)	RNP1
Hold	OMDUX	258 (249.0)	-9.2	1.0(-14000)	L	2900	FL140	-230(-14000)	RNP1







# RJCK / KUSHIRO

ILS X RWY17(CATⅢ)

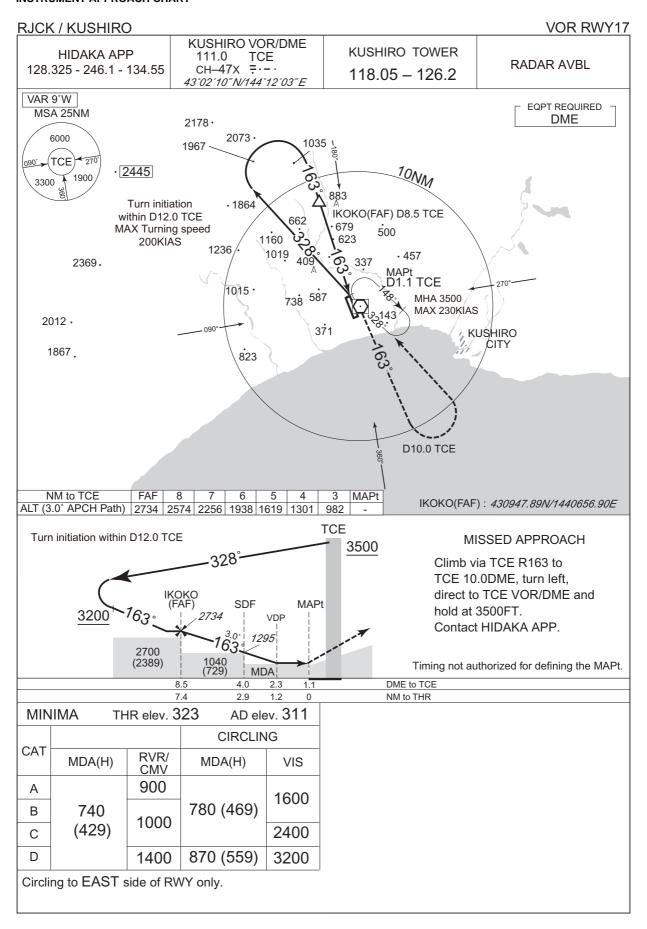
# Coding Table

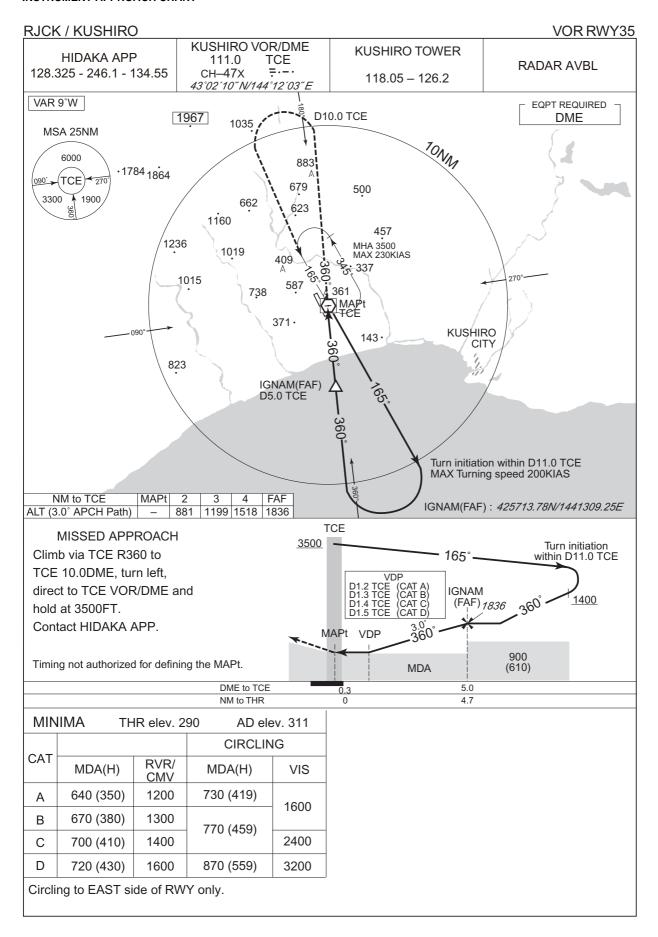
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
	·		OVCI	101( 1)		(14171)	Direction	, ,	(INIAO)	Aligic	Opecinication
001	IF	AKESI	_	_	-9.3	_	_	+10000	_	_	RNP1
002	TF	VAVLO	_	006 (357.1)	-9.3	28.8	_	+4500	_	_	RNP1
003	TF	CK764	_	006 (357.0)	-9.3	5.0	_	+2400	-200	_	RNP1
004	RF Center: CKRF3 r=2.51NM	CK765	_	_	-9.3	3.5	R	+2000	_	_	RNP1
005	RF Center: CKRF3 r=2.51NM	CK766	-	-	-9.3	3.5	R	1600	_	_	RNP1
001	DF	CK763	Υ	_	-9.3	_	_	_	_	_	RNP1
002	DF	CK767	_	_	-9.3	_	L	_	_	_	RNP1
003	TF	LEKUP	1	056 (046.9)	-9.3	5.1	_	3200	_	_	RNP1

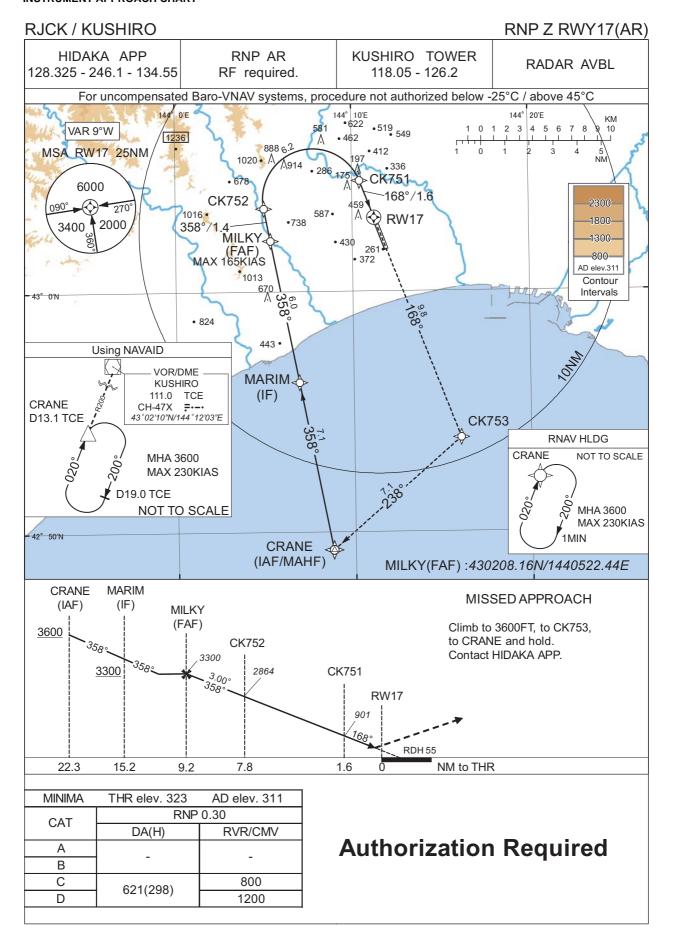
Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	VAVLO	006 (357.0)	-9.3	1.0(-14000)	L	4500	FL140	-230(-14000)	RNP1
Hold	LEKUP	277 (268.1)	-9.3	1.0(-14000)	R	3200	FL140	-230(-14000)	RNP1

# Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
AKESI	423316.40N / 1440423.57E	CKRF3	430707.83N / 1440527.18E
VAVLO	430200.49N / 1440223.10E		
CK764	430700.07N / 1440201.89E		
CK765	430935.11N / 1440444.33E		
CK766	430802.03N / 1440839.00E		
CK763	430017.29N / 1441242.98E		
CK767	430257.41N / 1442212.36E		
LEKUP	430627.23N / 1442719.94E		







# RJCK / KUSHIRO

RNP Z RWY17(AR)

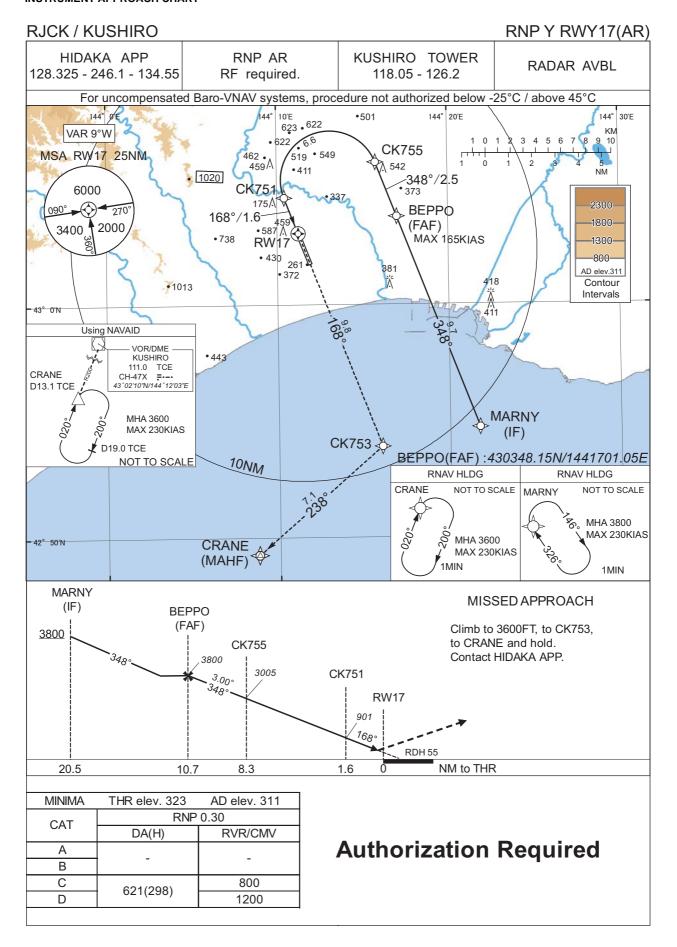
# **Coding Table**

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	CRANE	_	_	-9.2	_	_	+3600	_	_	_
002	TF	MARIM	_	358 (349.1)	-9.2	7.1	_	+3300	_	_	1.0
003	TF	MILKY	_	358 (349.0)	-9.2	6.0	_	3300	-165	_	1.0
004	TF	CK752	_	358 (349.0)	-9.2	1.4	_	2864	_	-3.00	0.3
005	RF Center: CKRF1 r=2.08NM	CK751	_	_	-9.2	6.2	R	901	_	-3.00	0.3
006	TF	RW17	Υ	168 (159.0)	-9.2	1.6	_	378	_	-3.00/55	0.3
007	TF	CK753	_	168 (159.0)	-9.2	9.8	_	_	_	_	1.0
008	TF	CRANE	_	238 (229.0)	-9.2	7.1	_	3600	_	_	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	CRANE	020 (010.5)	-9.2	1.0(-14000)	R	3600	FL140	-230(-14000)	1.0

# Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
CRANE	424916.84N / 1440846.59E	CKRF1	430352.65N / 1440747.87E
MARIM	425614.81N / 1440656.16E		•
MILKY	430208.16N / 1440522.44E		
CK752	430328.83N / 1440501.00E		
CK751	430437.47N / 1441026.54E		
RW17	430305.30N / 1441114.92E		
CK753	425355.48N / 1441602.58E		



# RJCK / KUSHIRO

RNP Y RWY17(AR)

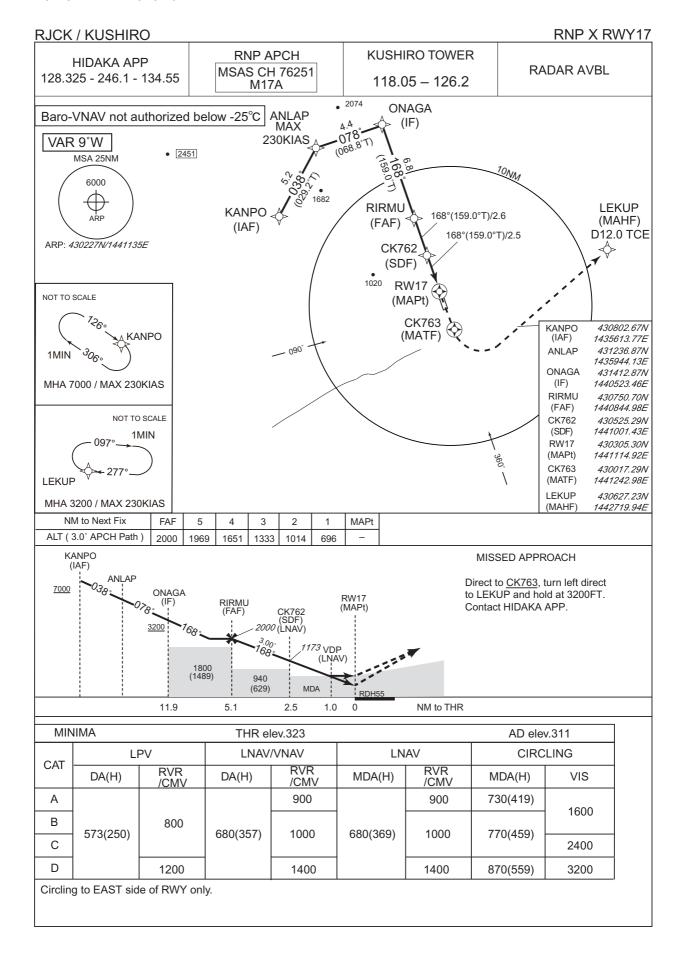
# Coding Table

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	MARNY	_	_	-9.2	_	_	+3800	_	_	_
002	TF	BEPPO	_	348 (339.1)	-9.2	9.7	_	3800	-165	_	1.0
003	TF	CK755	_	348 (339.1)	-9.2	2.5	_	3005	_	-3.00	0.3
004	RF Center: CKRF2 r=2.10NM	CK751	ı	_	-9.2	6.6	L	901	_	-3.00	0.3
005	TF	RW17	Υ	168 (159.0)	-9.2	1.6	_	378	_	-3.00/55	0.3
006	TF	CK753	_	168 (159.0)	-9.2	9.8	_	_	_	_	1.0
007	TF	CRANE		238 (229.0)	-9.2	7.1	_	3600	_	_	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	CRANE	020 (010.5)	-9.2	1.0(-14000)	R	3600	FL140	-230(-14000)	1.0
Hold	MARNY	326 (316.4)	-9.2	1.0(-14000)	R	3800	FL140	-230(-14000)	1.0

# Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
MARNY	425443.27N / 1442145.22E	CKRF2	430522.76N / 1441307.17E
BEPPO	430348.15N / 1441701.05E		•
CK755	430607.99N / 1441547.87E		
CK751	430437.47N / 1441026.54E		
RW17	430305.30N / 1441114.92E		
CK753	425355.48N / 1441602.58E		
CRANE	424916.84N / 1440846.59E		



# RJCK /KUSHIRO

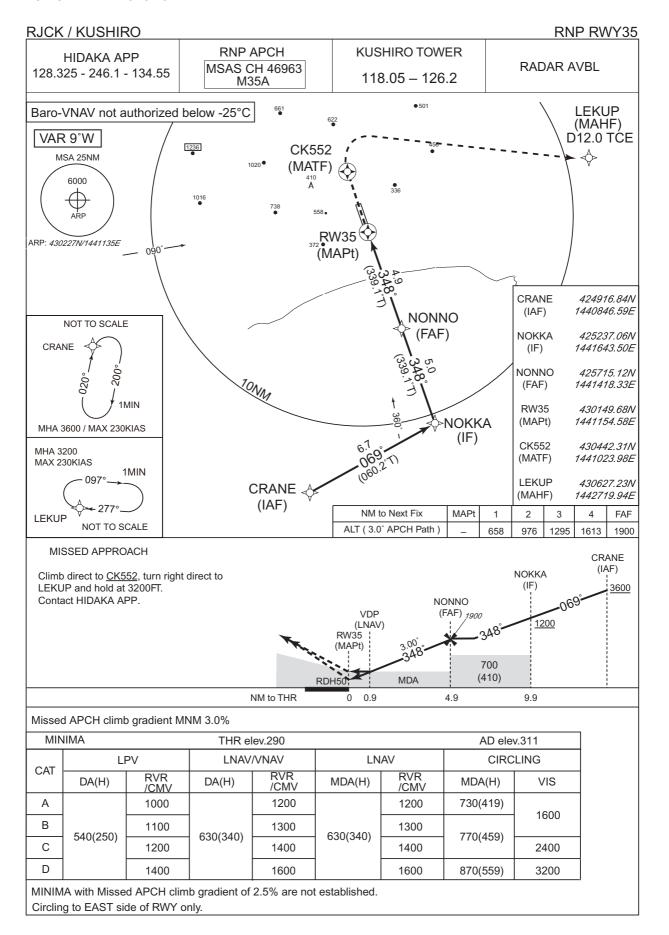
RNP X RWY17

## **FAS DATA BLOCK**

Operation type	0	LTP/FTP ellipsoidal height	+01279
SBAS service provider identifier	2	FPAP latitude	430149.6680N
Airport identifier	RJCK	FPAP longitude	1441154.5465E
Runway	17	Threshold crossing height	00016.7
Approach performance designator	0	TCH units selector	1
Route indicator	X	Glide path angle	03.00
Reference path data selector	0	Course width at threshold	105.00
Reference path ID	M17A	✓ length offset	0000
LTP/FTP latitude	430305.2840N	HAL	40.0
LTP/FTP longitude	1441114.8770E	VAL	50.0
CRC remainder	A0B919FD		

Required additional data

LTP/FTP orthometric height	98.0	
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# RJCK /KUSHIRO

RNP RWY35

## **FAS DATA BLOCK**

Operation type	0	LTP/FTP ellipsoidal height	+01179		
SBAS service provider identifier	2	FPAP latitude	430305.2840N		
Airport identifier	RJCK	FPAP longitude	1441114.8770E		
Runway	35	Threshold crossing height	00015.0		
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	M35A	✓ length offset	0000		
LTP/FTP latitude	430149.6680N	HAL	40.0		
LTP/FTP longitude	1441154.5465E	VAL	50.0		
CRC remainder	F9C3454C	F9C3454C			

Required additional data

LTP/FTP orthometric height	88.1	



※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
北斗 Hokuto	080°T / 4.6NM	T字路交差点 Intersection
大楽毛 Otanoshike	113°T / 4.2NM	製紙工場煙突群 Chimneys
釧路ステーション Kushiro Station	110°T / 8.8NM	JR駅 Station
西庶路 Nishisyoro	215°T / 4.7NM	JR駅 Station
白糠 Shiranuka	225°T / 7.2NM	JR駅 Station

