

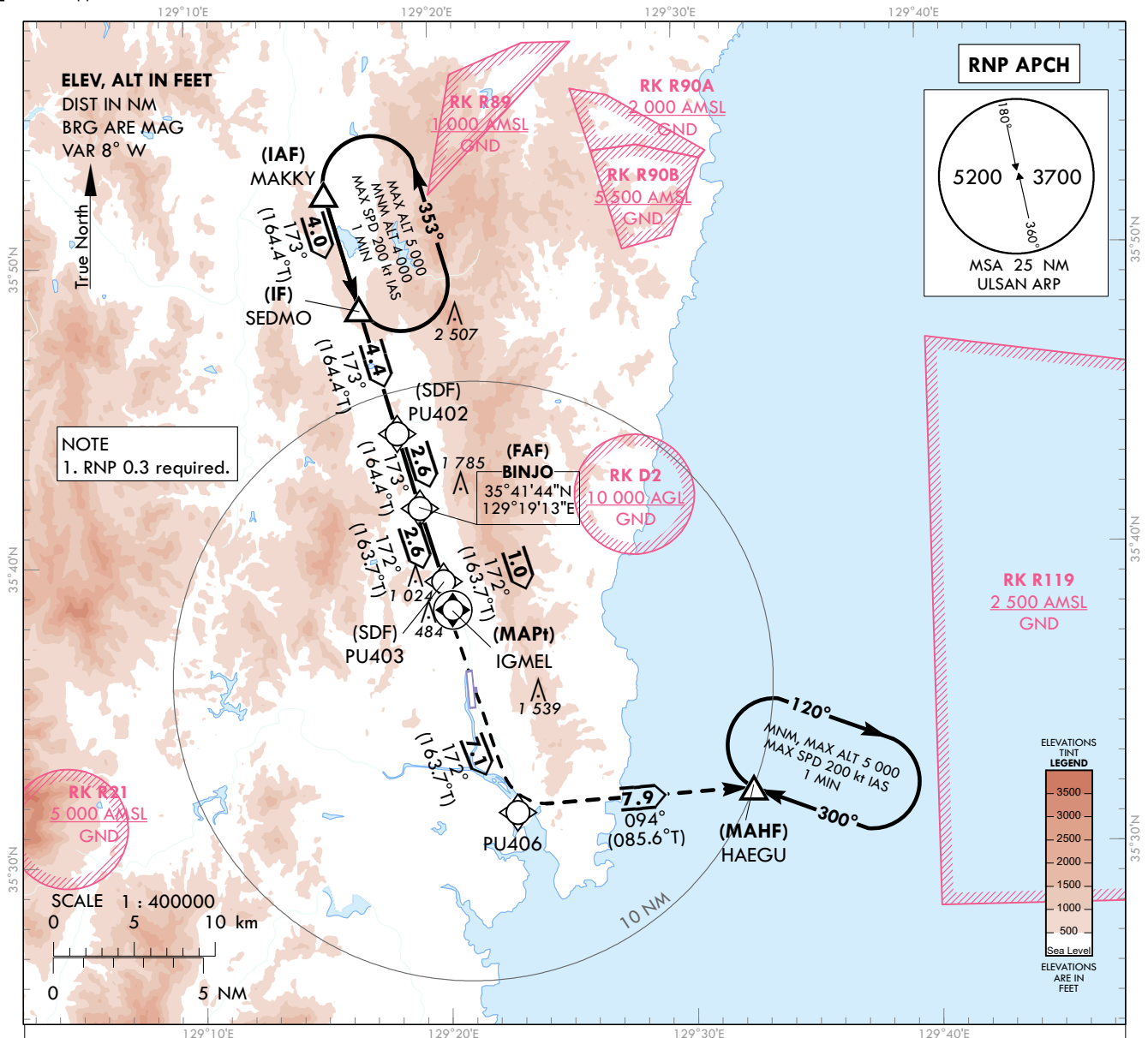
**INSTRUMENT  
APPROACH  
CHART**

**AERODROME ELEV 42 ft**  
HEIGHTS RELATED TO  
THR RWY 18 - ELEV 42 ft

POHANG	APP	124.25
		120.2
ULSAN	TWR	118.75

**ULSAN/Ulsan(RKPU)**  
**RNP Y RWY 18**

Note : Approach under U.S.TERPS.

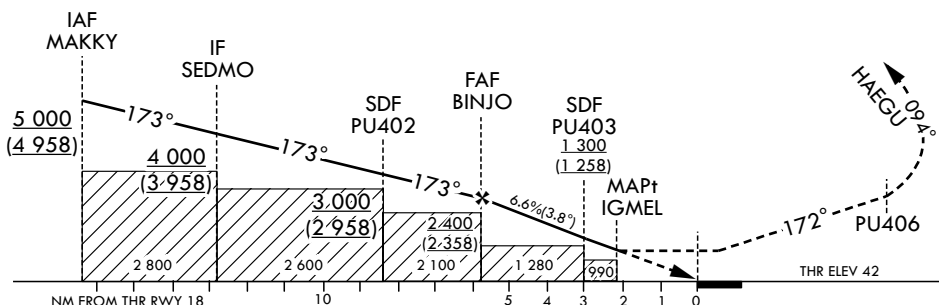


RECOMMENDED PROFILE(FAA)	THR RWY 18	5	4	3	2.2
Final Approach Gradient 6.58%, 400 ft/NM	ALT(HGT)	2 092 (2 050)	1 692 (1 650)	1 292 (1 250)	990 (948)

TRANSITION ALT 14 000  
TRANSITION LVL FL 140

**MISSED APPROACH**

Climb on track of 172° to PU406 then LEFT turn on track of 094° to HAEGU and HOLD at 5 000 ft.



\* Missed APCH climb rate :  
304 ft/NM(5.0%)

CATEGORY		MDA(H)	A	B	C	D	Rate of descent	Knots	60	90	120	150	180
STA	LNAV	FULL ALS INOP	990 (948)	3 600 m 4 000 m	3 900 m 4 300 m	N/A N/A	* Timing Not authorized for defining MAPt. * Circling Not authorized.	V/V fpm	400	600	800	1 000	1 200

Change : Amended phrase.

AERONAUTICAL DATA TABULATION

Instrument Approach Procedure Coding Tables

RNP Y RWY 18

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course/Track °M(T)	Distance (NM)	Turn direction	Altitude (ft)	Speed (kt)	Coordinates	VPA/RDH	Navigation specification	Remarks
001	IF	MAKKY	-	-	-	-	+5 000	-	35°52'18.8"N 129°15'35.8"E	-	RNP APCH	IAF
002	TF	SEDMO	-	173(164.4)	4.0	-	+4 000	-	35°48'27.1"N 129°16'55.0"E	-	RNP APCH	IF
003	TF	PU402	-	173(164.4)	4.4	-	+3 000	-	35°44'14.2"N 129°18'21.4"E	-	RNP APCH	SDF
004	TF	BINJO	-	173(164.4)	2.6	-	+2 400	-	35°41'43.5"N 129°19'12.8"E	-	RNP APCH	FAF
005	TF	PU403	-	172(163.7)	2.6	-	+1 300	-	35°39'15.5"N 129°20'05.6"E	-	RNP APCH	SDF
006	TF	IGMEL	Y	172(163.7)	1.0	-	+990	-	35°38'17.7"N 129°20'26.4"E	-3.77/50	RNP APCH	MAPt
007	TF	PU406	-	172(163.7)	7.1	-	-	-	35°31'29.1"N 129°22'52.3"E	-	RNP APCH	-
008	TF	HAEGU	Y	094(085.6)	7.9	-	-	-	35°32'06.7"N 129°32'32.3"E	-	RNP APCH	-
009	HIM	HAEGU	Y	300(292.1)	-	R	@5 000	-200	35°32'06.7"N 129°32'32.3"E	-	RNP APCH	1 min (Outbound timing)

HOLDING PROCEDURE

Holding Identification	Path Descriptor	Waypoint Identifier	Fly-over	Course/Track °M(T)	Time (min)	Turn direction	Altitude (ft)	Speed (kt)	Coordinates	VPA/RDH	Navigation specification	Remarks
RNP Y RWY 18	HIM	SEDMO	Y	173(164.4)	1.0	L	-5 000 +4 000	-200	35°48'27.1"N 129°16'55.0"E	-	RNAV 1	-

**INSTRUMENT  
APPROACH  
CHART - ICAO**

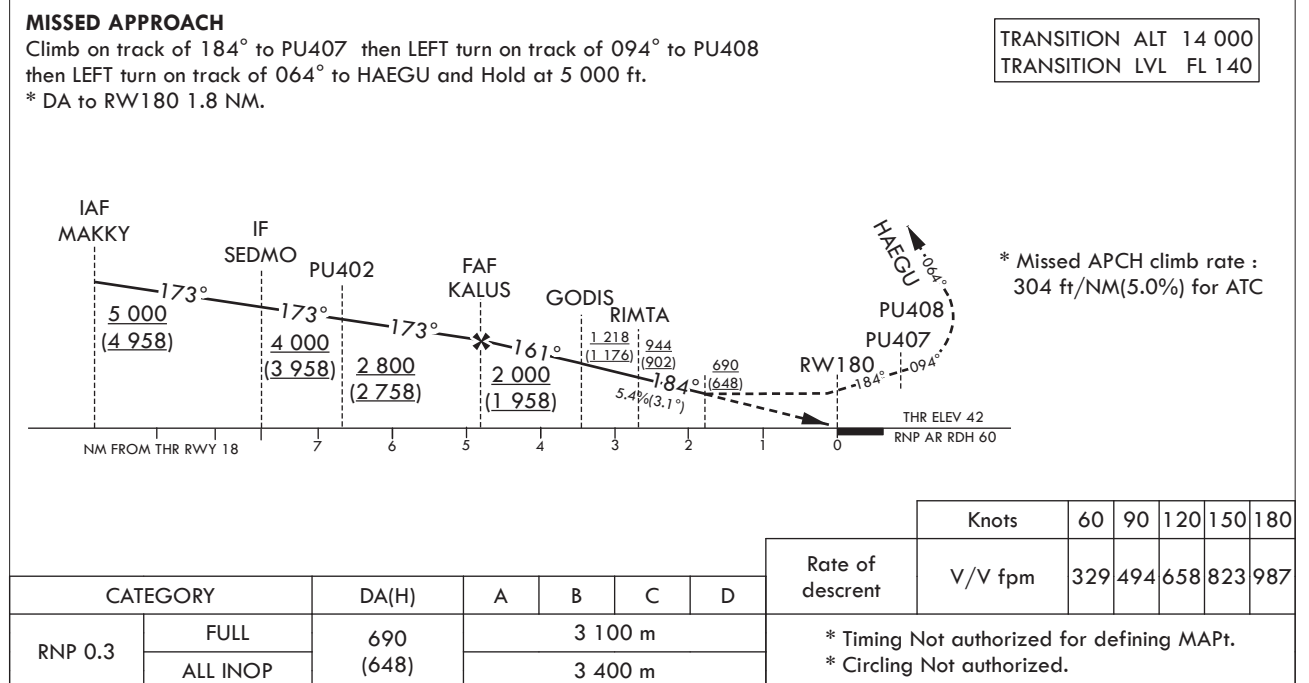
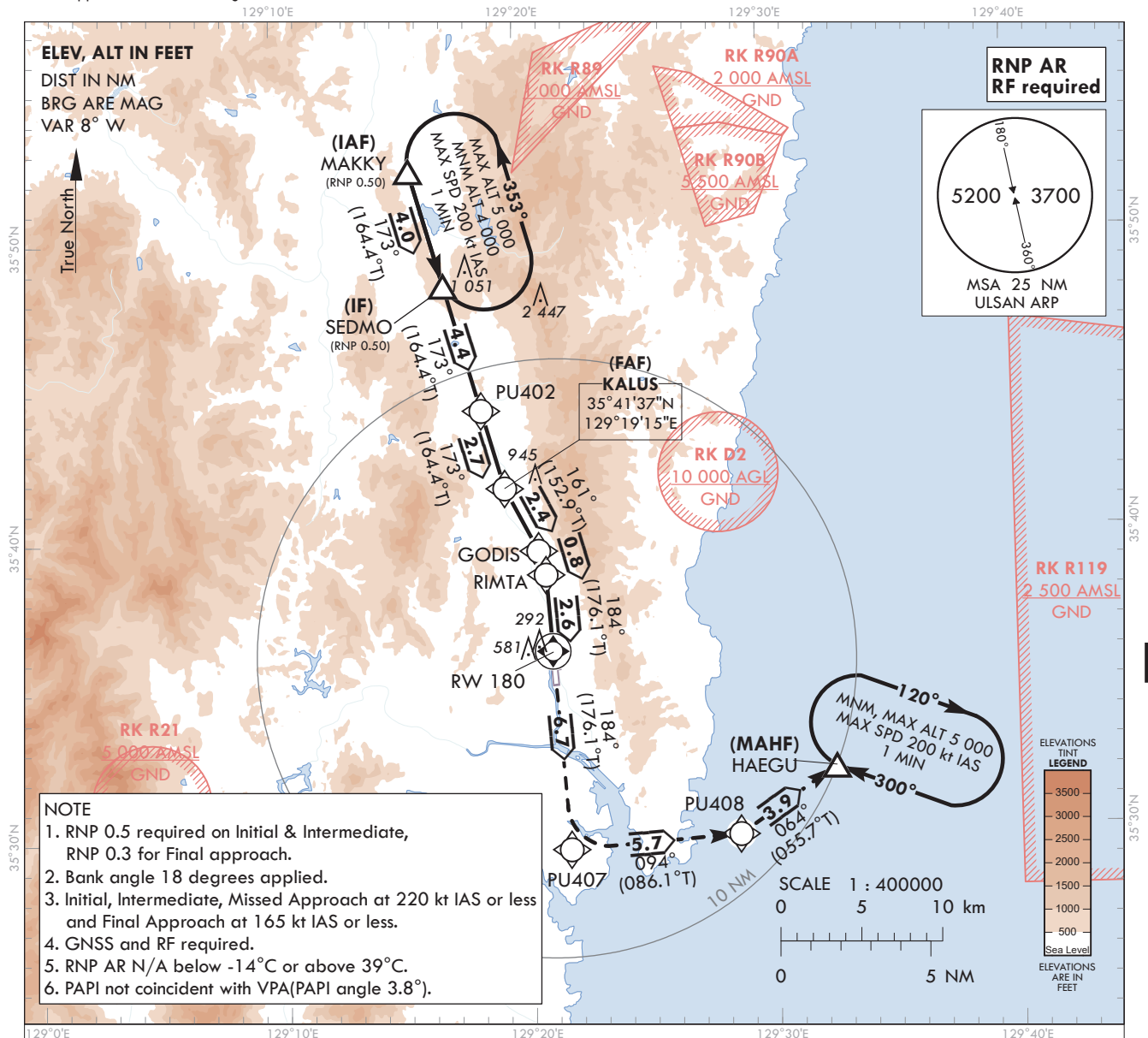
**AERODROME ELEV 42 ft**  
HEIGHTS RELATED TO  
THR RWY 18 - ELEV 42 ft

POHANG	APP	124.25
		120.2
ULSAN	TWR	118.75

**ULSAN/Ulsan(RKPU)**

**RNP Z RWY 18(AR)**

Note : Approach Under ICAO Flight Procedures.



Change : Establishment of symbol for waypoint(RW180).

AERONAUTICAL DATA TABULATION

Instrument Approach Procedure Coding Tables

RNP Z RWY 18 (AR)

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course/Track °M(T)	Distance (NM)	Turn direction	Altitude (ft)	Speed (kt)	Coordinates	VPA/RDH	Navigation specification	Remarks
001	IF	MAKKY	-	-	-	-	+5 000	-220	35°52'18.8"N 129°15'35.8"E	-	-	IAF
002	TF	SEDWO	-	173(164.4)	4.0	-	+4 000	-220	35°48'27.1"N 129°16'55.0"E	-	0.5	IF
003	TF	PU402	-	173(164.4)	4.4	-	+2 800	-220	35°44'14.2"N 129°18'21.4"E	-	0.5	
004	TF	KALUS	-	173(164.4)	2.7	-	+2 000	-165	35°41'37.4"N 129°19'14.9"E	-	0.3	FAF Bank Angle 18°
005	TF	GODIS	-	161(152.9)	2.4	L	+1 218	-165	35°39'30.7"N 129°20'34.3"E	-3.10	0.3	Bank Angle 18°
006	RF Center: ARCO1 r=2.08 NM	RIMTA	-	-	0.8	R	+944	-165	35°38'42.4"N 129°20'50.7"E	-3.10	0.3	Bank Angle 18°
007	TF	RW180	Y	184(176.1)	2.6	-	-	-165	35°36'08.9"N 129°21'03.5"E	-3.10/60	0.3	-
008	TF	PU407	-	184(176.1)	6.7	-	-	-220	35°29'30.2"N 129°21'36.8"E	-	1.0	
009	TF	PU408	-	094(086.1)	5.7	L	-	-220	35°29'53.2"N 129°28'33.2"E	-	1.0	Bank Angle 18°
010	TF	HAEGU	Y	064(055.7)	3.9	L	+5 000	-220	35°32'06.7"N 129°32'32.3"E	-	1.0	Bank Angle 18°
011	HM	HAEGU	Y	300 (292.1)	-	R	@5 000	-200	35°32'06.7"N 129°32'32.3"E	-	RNP APCH	1 min (Outbound timing)

RF arc center Identifier	Coordinates
ARCO1	35°38'33.8"N 129°18'18.0"E



**INSTRUMENT  
APPROACH  
CHART**

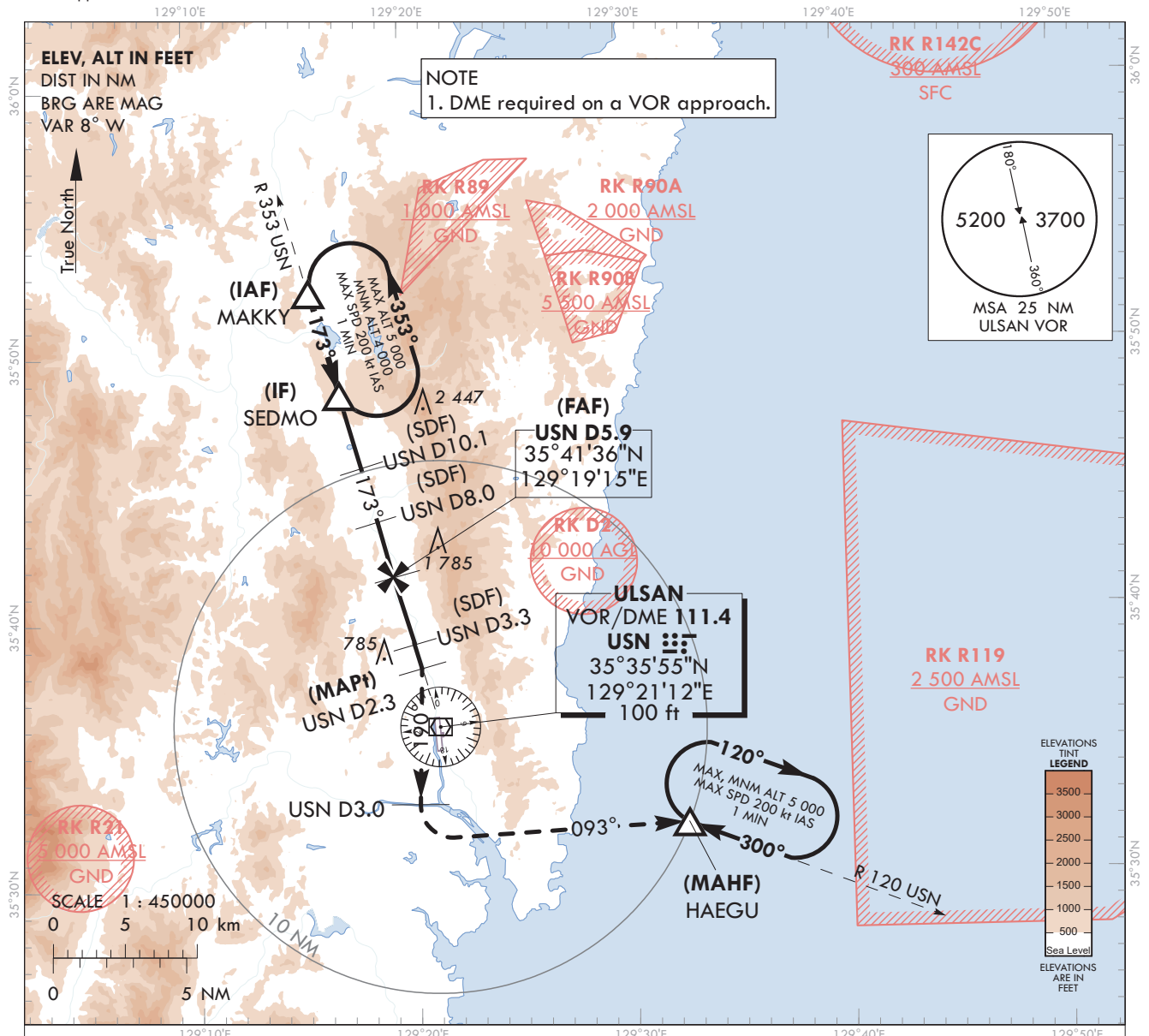
Note : Approach Under U.S. TERPS.

**AERODROME ELEV 42 ft**  
HEIGHTS RELATED TO AD ELEV

POHANG	APP	124.25
		120.2
ULSAN	TWR	118.75

**ULSAN/Ulsan(RKPU)**

**VOR RWY 18**



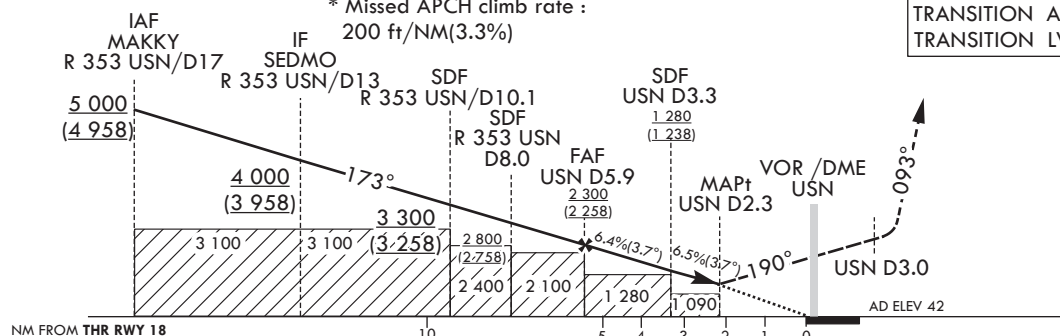
**MISSED APPROACH**

Climb on HDG 190° to USN 3 DME, then LEFT turn direct to HAEGU and Hold at 5 000 ft.

RECOMMENDED PROFILE (FAA)	DME USN	5	4	3	2.8
Final Approach Gradient 6.45%, 392 ft/NM	ALT (HGT)	1 947 (1 906)	1 556 (1 514)	1 164 (1 122)	1 080 (1 038)

\* Missed APCH climb rate :  
200 ft/NM (3.3%)

TRANSITION ALT 14 000  
TRANSITION LVL FL 140



CATEGORY	MDA (MDH)	A	B	C	D	Knots	60	90	120	150	180
STA	FULL	1 090 (1 048)	3 600 m	4 600 m	N/A	Rate of descent V/V fpm	392	588	784	980	1 175
	ALS INOP		4 000 m	4 900 m	N/A		* Timing Not authorized for defining MAPt. * Circling Not authorized.				

Change : Information of AD ELEV datum.

ULSAN/Ulsan(RKPU)  
VOR RWY 18

## AERONAUTICAL DATA TABULATION

VOR Approach to RWY 18 from MAKKY		
Fix/point		Coordinates
MAKKY(IAF)	R 353 USN / 17.00 NM USN	35°52'18.8"N 129°15'35.8"E
SEDMO(IF)	BRG 172.64° / 13.00 NM USN	35°48'27.1"N 129°16'55.0"E
D10.1 USN(SDF)	BRG 172.64° / 10.10 NM USN	35°45'39.1"N 129°17'51.8"E
D8.0 USN(SDF)	BRG 172.64° / 8.00 NM USN	35°43'37.6"N 129°18'33.5"E
D5.9 USN(FAF)	BRG 172.64° / 5.90 NM USN	35°41'36.0"N 129°19'15.1"E
D3.3 USN(SDF)	BRG 172.64° / 3.28 NM USN	35°39'04.4"N 129°20'07.0"E
D2.3 USN(MAPt)	BRG 172.64° / 2.26 NM USN	35°38'05.4"N 129°20'27.1"E
THR RWY 18	Final approach descent angle 3.67°(FAF-SDF) / 3.71°(SDF-THR)	35°36'08.89"N 129°21'03.54"E
USN VOR/DME		35°35'54.6"N 129°21'11.8"E
D3.0 USN	BRG 190.62° / 3.00 NM USN	35°33'01.3"N 129°20'11.6"E
HAEGU	BRG 93.43° / 10.00 NM USN	35°32'06.7"N 129°32'32.3"E

**INSTRUMENT  
APPROACH  
CHART - ICAO**

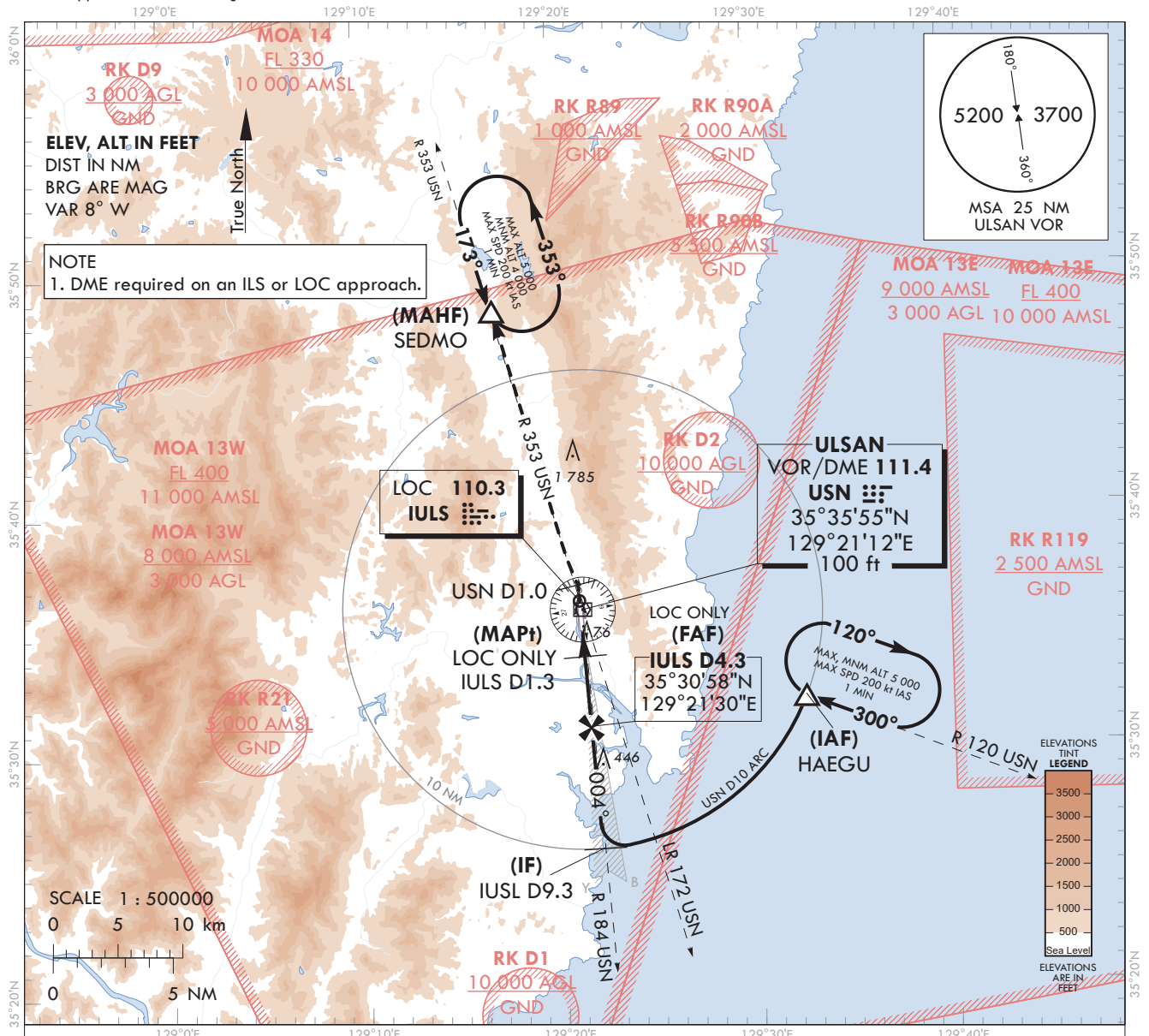
**AERODROME ELEV 42 ft**  
HEIGHTS RELATED TO  
THR RWY 36 - ELEV 28 ft

POHANG APP 124.25  
120.2  
ULSAN TWR 118.75

**ULSAN/Ulsan(RKP)**

**ILS Y or LOC Y RWY 36**

Note : Approach under ICAO Flight Procedures.



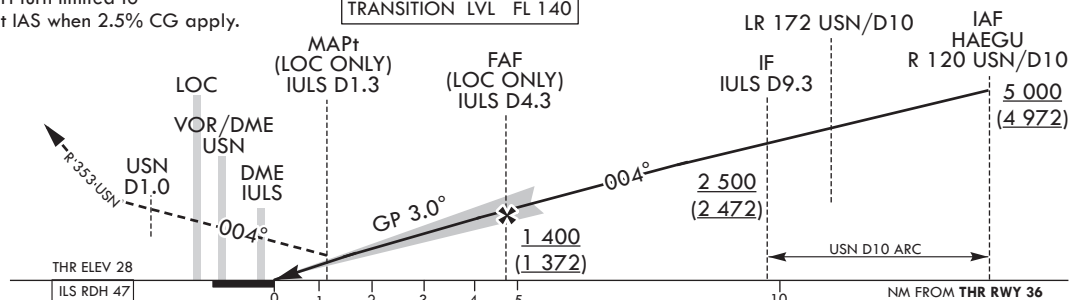
**MISSED APPROACH**

Climb on HDG 004° to USN 1 DME,  
then LEFT turn to intercept R 353 USN to SEDMO.  
Hold at SEDMO at 4 000 ft.

\* Missed APCH turn limited to  
MAX 200 kt IAS when 2.5% CG apply.

RECOMMENDED PROFILE(LOC ONLY)	DME IULS	6	5	4	3	2.3
Final Approach Gradient 5.28%, 321 ft/NM	ALT(HGT)	1 950 (1 922)	1 620 (1 592)	1 300 (1 272)	980 (952)	750 (722)

TRANSITION ALT 14 000  
TRANSITION LVL FL 140



CATEGORY			DA(DH)/ MDA(MDH)	A	B	C	D								
STA	CAT-I (CG 2.5%)	FULL	710	3 000m				Rate of descent	Knots	60	90	120	150	180	
		ALS INOP	(682)	3 700m					V/V fpm	318	478	637	796	955	
	CAT-I (CG 5.0%)	FULL	246	800m					*Timing Not authorized for defining MAPt. *Circling Not authorized.						
		ALS INOP	(218)	1 200m											
	LOC	FULL	750	2 700m											
		ALS INOP	(722)	3 400m											

Chage : Improved clarity such as terrain.

ULSAN/Ulsan(RKPU)  
ILS Y or LOC Y RWY 36

## AERONAUTICAL DATA TABULATION

ILS Y / LOC Y Approach to RWY 36 from HAEGU		
Fix/point		Coordinates
HAEGU(IAF)	R 120 USN / 10.00 NM USN	35°32'06.7"N 129°32'32.3"E
D9.3 IULS(IF)	BRG 4.31° / 9.30 NM IULS	35°25'54.7"N 129°21'54.8"E
D4.3 IULS(FAF LOC ONLY)	BRG 4.31° / 4.30 NM IULS	35°30'57.6"N 129°21'29.5"E
D1.3 IULS(MAPt LOC ONLY)	BRG 4.31° / 1.30 NM IULS	35°33'55.7"N 129°21'14.7"E
THR RWY 36	Final approach descent angle 2.90° (LOC ONLY)	35°35'04.15"N 129°21'08.95"E
IULS DME		35°35'13.8"N 129°21'12.2"E
USN VOR/DME		35°35'54.6"N 129°21'11.8"E
IULS LOC		35°36'16.3"N 129°21'02.9"E
D1.0 USN	BRG 4.31° / 1.00 NM USN	35°36'53.8"N 129°20'59.8"E
SEDMO	BRG 352.68° / 13.00 NM USN	35°48'27.1"N 129°16'55.0"E

**INSTRUMENT  
APPROACH  
CHART - ICAO**

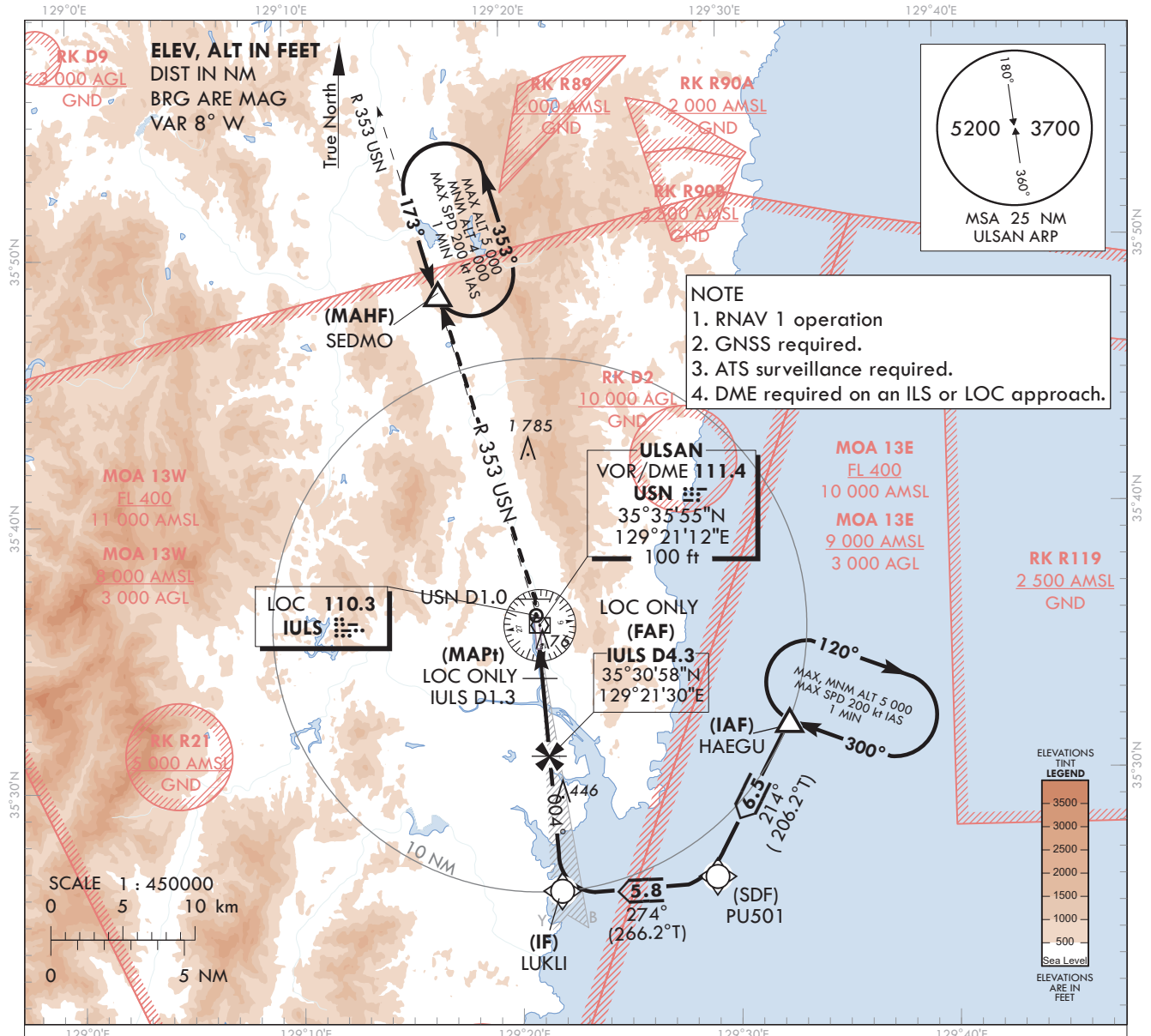
**AERODROME ELEV 42 ft**  
HEIGHTS RELATED TO  
THR RWY 36 - ELEV 28 ft

POHANG	APP	124.25
		120.2
ULSAN	TWR	118.75

**ULSAN/Ulsan(RKPU)**

**ILS Z or LOC Z RWY 36**

Note : Approach under ICAO Flight Procedures.



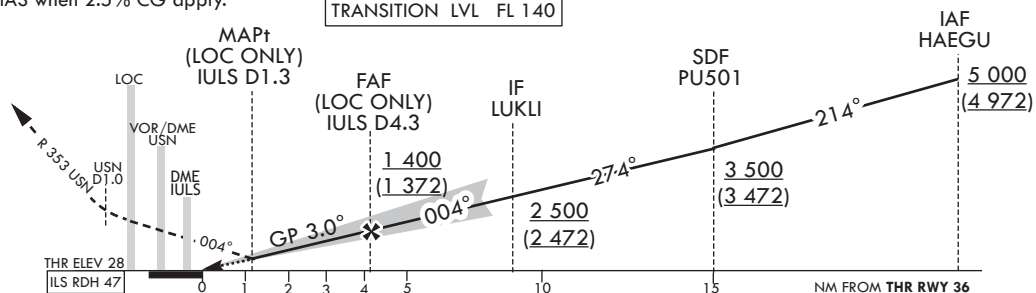
**MISSED APPROACH**

Climb on HDG 004° to USN 1 DME, then LEFT turn to intercept R 353 USN to SEDMO.  
Hold at SEDMO at 4 000 ft.

\* Missed APCH turn limited to  
MAX 200 kt IAS when 2.5% CG apply.

RECOMMENDED PROFILE(LOC ONLY)	DME IULS	6	5	4	3	2.3
Final Approach Gradient 5.28%, 321 ft/NM	ALT(HGT)	1 950 (1 922)	1 620 (1 592)	1 300 (1 272)	980 (952)	750 (722)

TRANSITION ALT 14 000  
TRANSITION LVL FL 140



CATEGORY			DA(DH)/ MDA(MDH)	A	B	C	D							
STA	CAT-I (CG 2.5%)	FULL	710	3 000 m			Rate of descent	Knots	60	90	120	150	180	
		ALS INOP	(682)	3 700 m				V/V fpm	318	478	637	796	955	
	CAT-I (CG 5.0%)	FULL	246	800 m				*Timing Not authorized for defining MAPt. *Circling Not authorized.						
		ALS INOP	(218)	1 200 m										
	LOC	FULL	750	2 700 m										
		ALS INOP	(722)	3 400 m										

Change : Improved clarity such as terrain.

AERONAUTICAL DATA TABULATION

ILS Z / LOC Z Approach to RWY 36 from HAEGU			
Fix/point		Coordinates	
HAEGU(IAF)		35°32'06.7"N	129°32'32.3"E
PU501(SDF)		35°26'18.1"N	129°29'02.9"E
LUKLI(IF)	BRG 4.31° / 9.30 NM IULS	35°25'54.4"N	129°21'54.8"E
D4.3 IULS(FAF LOC ONLY)	BRG 4.31° / 4.30 NM IULS	35°30'57.6"N	129°21'29.5"E
D1.3 IULS(MAPt LOC ONLY)	BRG 4.31° / 1.30 NM IULS	35°33'55.7"N	129°21'14.7"E
THR RWY 36	Final approach descent angle 2.90° (LOC ONLY)	35°35'04.15"N	129°21'08.95"E
IULS DME		35°35'13.8"N	129°21'12.2"E
USN VOR/DME		35°35'54.6"N	129°21'11.8"E
IULS LOC		35°36'16.3"N	129°21'02.9"E
D1.0 USN	BRG 4.31° / 1.00 NM USN	35°36'53.8"N	129°20'59.8"E
SEDMO	BRG 352.68° / 13.00 NM USN	35°48'27.1"N	129°16'55.0"E



**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 42 ft**  
HEIGHTS RELATED TO  
THR RWY 36 - ELEV 28 ft

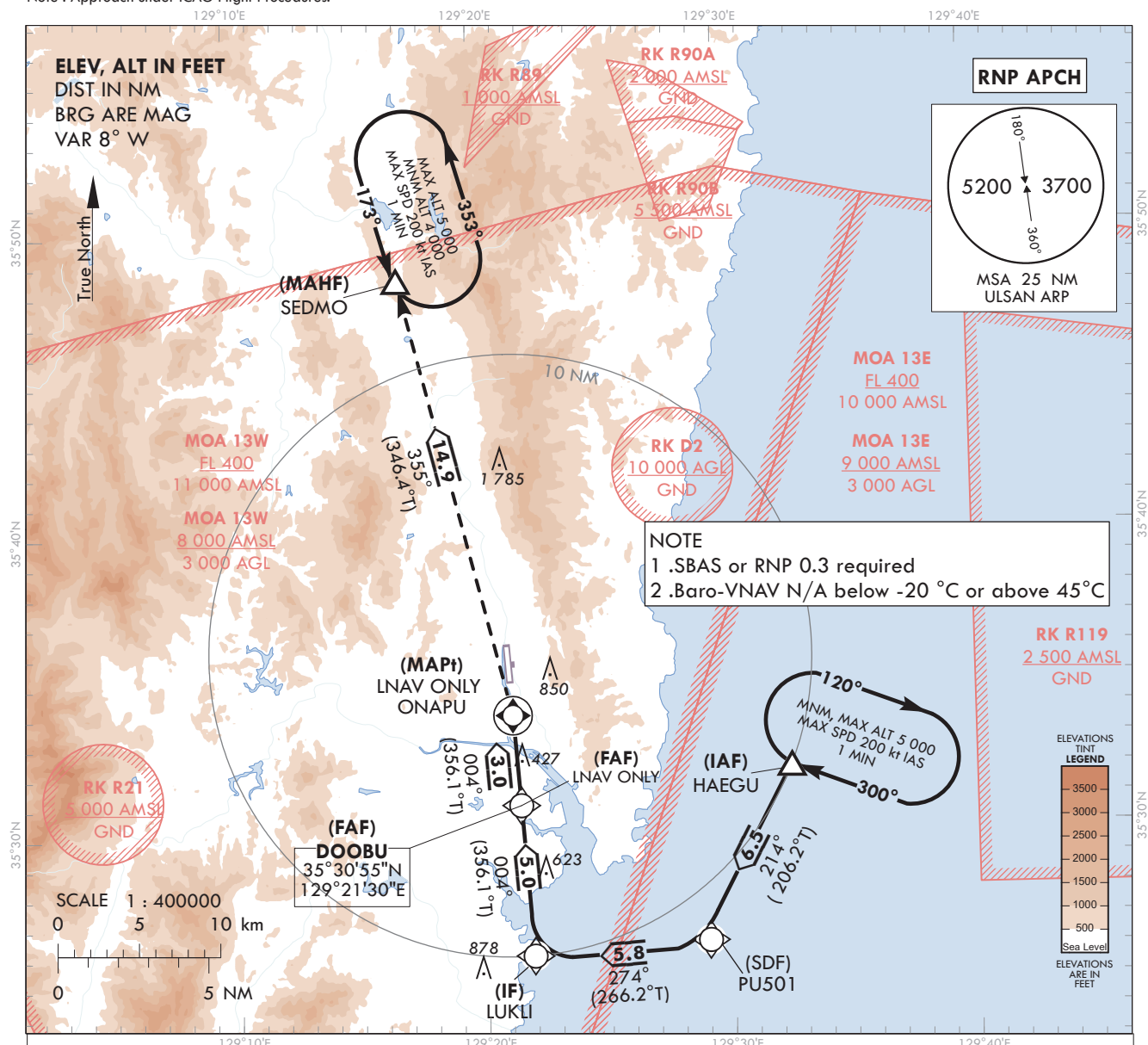
POHANG APP 124.25  
ULSAN TWR 118.75

KASS  
CH71318  
K36A  
RDH : 50

**ULSAN/Ulsan(RKPU)**

**RNP RWY 36**

Note : Approach under ICAO Flight Procedures.



TRANSITION ALT 14 000

TRANSITION LVL FL 140

MISSED APPROACH

Climb to 4 000 ft on track of 355° to SEDMO.

Hold as published.

CATEGORY			DA(H)/MDA(H)	A	B	C	D
STA	LPV (CG 2.5%)	FULL	740	3 200 m			
		ALS INOP	(712)	3 900 m			
	LPV (CG 5.0%)	FULL	340	900 m			
		ALS INOP	(312)	1 600 m			
	LNAV/VNAV	FULL	810	3 600 m			
		ALS INOP	(782)	4 300 m			
	LNAV	FULL	910	3 300 m			
		ALS INOP	(882)	4 000 m			

Rate of descent	Knots					
	60	90	120	150	180	
	V/V fpm	319	478	637	796	956
* Timing Not authorized for defining MAPt.						
* Circling Not authorized.						

Change : Establishment of SBAS procedure and Information of WX minima.

AERONAUTICAL DATA TABULATION

Instrument Approach Procedure Coding Tables

RNP RWY 36

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course/Track °M(°T)	Distance (NM)	Turn direction	Altitude (ft)	Speed (kt)	Coordinates	VPA/ RDH	Navigation specification	Remarks
001	IF	HAEGU	-	-	-	-	+5 000	-	35°32'06.7"N 129°32'32.3"E	-	RNP APCH	IAF
002	TF	PU501	-	214(206.2)	6.5	-	+3 500	-	35°26'18.1"N 129°29'02.9"E	-	RNP APCH	SDF
003	TF	LUKLI	-	274(266.2)	5.8	-	+2 500	-	35°25'54.4"N 129°21'54.8"E	-	RNP APCH	IF
004	TF	DOOBU	-	004(356.1)	5.0	-	+1 400	-	35°30'55.3"N 129°21'29.7"E	-	RNP APCH	FAF
005	TF	ONAPU	Y	004(356.1)	3.0	-	+910	-	35°33'54.4"N 129°21'14.8"E	-3.00/50	RNP APCH	MAPt
006	HM	SEDMO	Y	355(346.4)	14.9	-	-	-	35°48'27.1"N 129°16'55.0"E	-	RNP APCH	1 min (Outbound timing)

HOLDING PROCEDURE

Holding Identification	Path Descriptor	Waypoint Identifier	Fly-over	Course/Track °M(°T)	Time (min)	Turn direction	Altitude (ft)	Speed (kt)	Coordinates	VPA/ RDH	Navigation specification	Remarks
RNP RWY 36	HM	HAEGU	Y	300 (292.1)	1.0	R	@5 000	-200	35°32'06.7"N 129°32'32.3"E	-	RNAV 1	-
	HM	SEDMO	Y	173 (164.4)	1.0	L	-5 000 +4 000	-200	35°48'27.1"N 129°16'55.0"E	-	RNAV 1	-

Change : Information of remark and holding procedure for SDEMO.

ULSAN/Ulsan(RKPU)  
RNP RWY 36

## FAS DATA BLOCK INFORMATION

## INPUT DATA

Parameters	Values
Operation Type	0
SBAS Provider	6 (KASS)
Airport Identifier	RKPU
Runway	36
Runway Letter	0 (None)
Approach Performance Designator	0
Route Indicator	
Reference Path Data Selector	0
Reference Path Identifier	K36A
LTP/FTP Latitude	35°35'04.1470"N
LTP/FTP Longitude	129°21'08.9500"E
LTP/FTP Ellipsoidal Height (meters)	38.3
FPAP Latitude	35°36'08.8905"N
Delta FPAP Latitude (seconds)	64.7435
FPAP Longitude	129°21'03.5405"E
Delta FPAP Longitude (seconds)	-5.4095
Threshold Crossing Height (TCH)	50.0
TCH Units Selector	0 (Feet)
Glidepath Angle (GPA, degrees)	3.00
Course Width (metres)	105.00
Length Offset (metres)	0
Horizontal Alert Limit (HAL, meters)	40.0
Vertical Alert Limit (VAL, meters)	50.0

## OUTPUT DATA

Data Block	60 15 10 0B 12 24 00 00 01 36 33 0B A6 6D 45 0F AC 16 83 37 7F 15 CF F9 01 BD D5 FF F4 01 2C 01 64 00 C8 FA 10 38 07 E6
Calculated CRC Value	103807E6

Change : Establishment of FAS data block information.

**INTENTIONALLY**

**LEFT**

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**INSTRUMENT  
APPROACH  
CHART - ICAO**

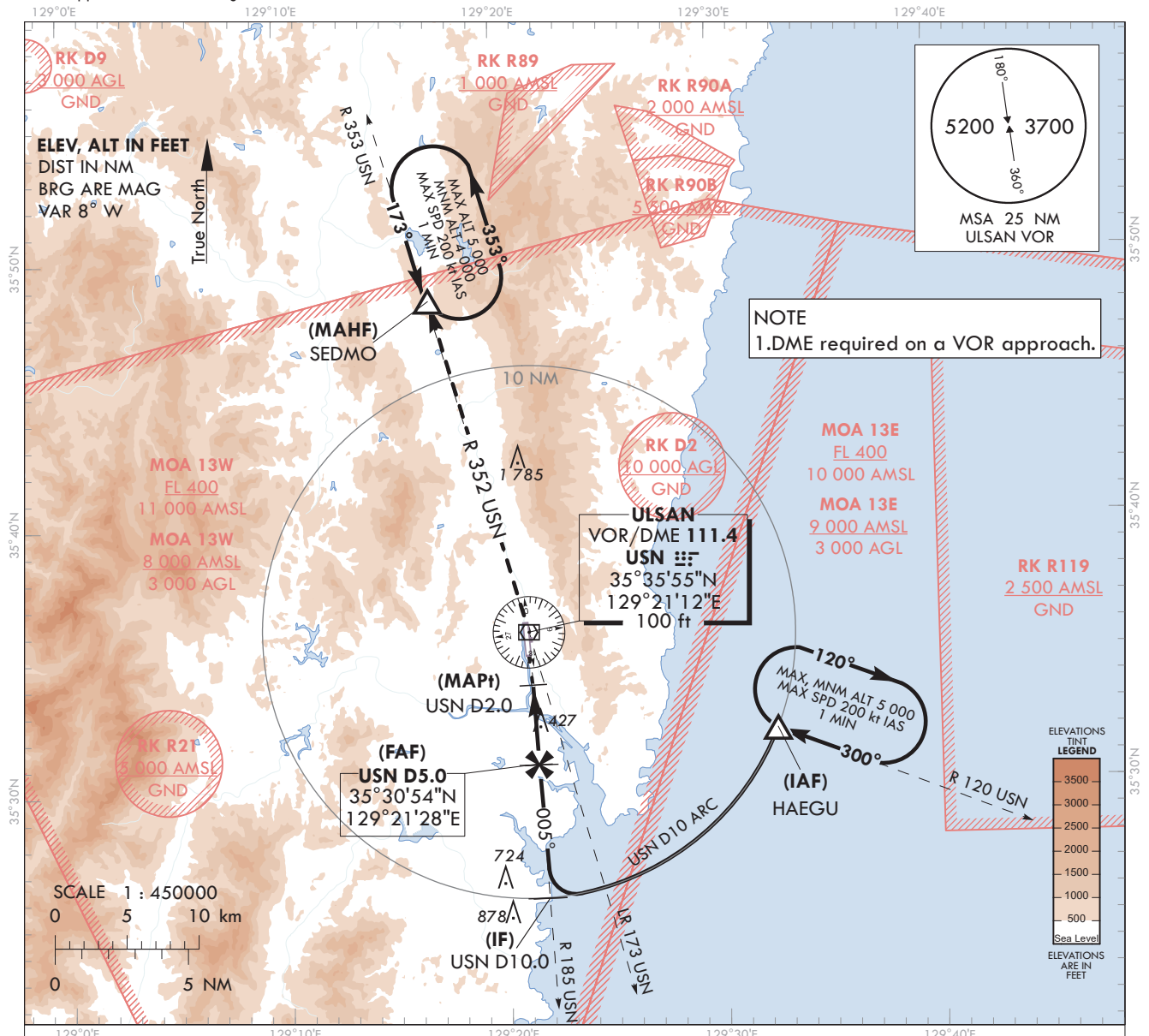
**AERODROME ELEV 42 ft**  
HEIGHTS RELATED TO  
THR RWY 36 - ELEV 28 ft

POHANG	APP	124.25
		120.2
ULSAN	TWR	118.75

**ULSAN/Ulsan(RKPU)**

**VOR RWY 36**

Note : Approach under ICAO Flight Procedures.

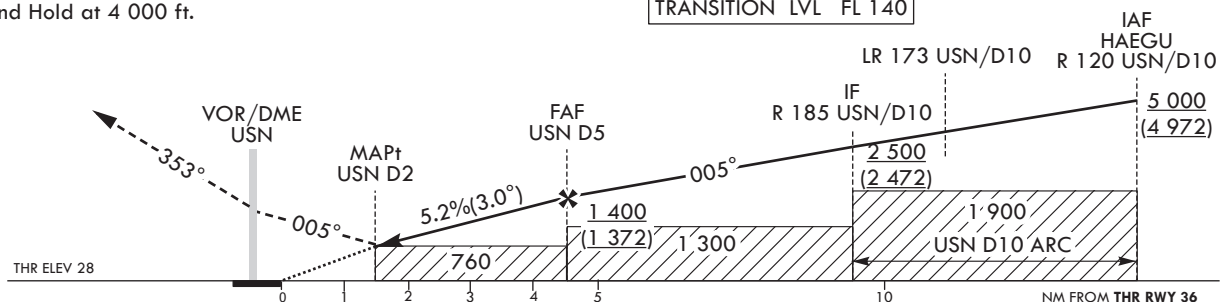


RECOMMENDED PROFILE	DME USN	5	4	3
Final Approach Gradient 5.24%, 318 ft/NM	ALT(HGT)	1 400 (1 372)	1 080 (1 052)	760 (732)

**MISSED APPROACH**

Climb direct to USN then proceed on R 353 USN to SEMDO and Hold at 4 000 ft.

TRANSITION ALT 14 000  
TRANSITION LVL FL 140



CATEGORY		MDA(MDH)	A	B	C	D		Knots	60	90	120	150	180
STA	FULL	760 (732)	2 700 m				Rate of descent	V/V fpm	318	477	636	795	954
	ALS INOP		3 400 m				* Timing Not authorized for defining MAPt. * Circling Not authorized.						

Change : Improved clarity such as terrain.

**ULSAN/Ulsan(RKPU)**  
**VOR RWY 36**
**AERONAUTICAL DATA TABULATION**

VOR Approach to RWY 36 from HAEGU		
Fix/point		Coordinates
HAEGU(IAF)	R 120 USN / 10.00 NM USN	35°32'06.7"N 129°32'32.3"E
D10.0 USN(IF)	BRG 5.63° / 10.00 NM USN	35°25'54.3"N 129°21'44.9"E
D5.0 USN(FAF)	BRG 5.63° / 5.00 NM USN	35°30'54.4"N 129°21'28.4"E
D2.0 USN(MAPt)	BRG 5.63° / 2.00 NM USN	35°33'54.5"N 129°21'18.5"E
THR RWY 36	Final approach descent angle 2.99°	35°35'04.15"N 129°21'08.95"E
USN VOR/DME		35°35'54.6"N 129°21'11.8"E
SEDMO	BRG 352.68° / 13.00 NM USN	35°48'27.1"N 129°16'55.0"E