VTCN AD 2.1 AERODROME LOCATION INDICATOR AND NAME

VTCN - NAN / NAN NAKHON AIRPORT

VTCN AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	184828.49N 1004700.31E
2	Direction and distance from (city)	3 KM N, from city
3	Elevation/Reference temperature	685 FT/29°C
4	Geoid Undulation at AD ELEV PSN	NIL
5	MAG VAR/Annual change	0.85°W (2016)/0.00°E
6	AD Administration, address, telephone, telefax, telex, AFS	Director of Nan Nakhon Airport Nan Nakhon Airport Nan-Thung Chang Road, Moo 2 Tambon pasing Amphoe Muang Nan 55000 Thailand Tel: +665 471 0270 +665 477 1650 Fax: +665 477 1308 AFS: VTCNYDYX
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Operator: Department of Airports

VTCN AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	2300-1300 Outside this period 1HR PN to ATC for OPS
2	Customs and immigration	On request
3	Health and sanitation	On request
4	AIS Briefing Office	HJ
5	ATS Reporting Office (ARO)	NIL
6	MET Briefing Office	NIL
7	ATS	2300-1100 Outside this period 1HR PN to ATC for OPS
8	Fuelling	NIL
9	Handling	NIL
10	Security	NIL
11	De-icing	NIL
12	Remarks	NIL

VTCN AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/oil types	NIL
3	Fuelling facilities/capacity	NIL
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

VTCN AD 2.5 PASSENGER FACILITIES

1	Hotels	In the city
2	Restaurants	In the city
3	Transportation	Car rent, Taxi and motorbike taxi services
4	Medical facilities	First aid at AD and hospital in the city
5	Bank and Post Office	Automatic teller machine(ATM) available but bank and post office in the city
6	Tourist Office	NIL
7	Remarks	NIL

VTCN AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	Category 6
2	Rescue equipment	Yes
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

VTCN AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	The aerodrome is available all seasons.

VTCN AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	Surface: Concrete Strength: PCN 45/R/C/X/T
2	Taxiway width, surface and strength	Width: 20 M Surface: Concrete and asphalt Strength: PCN 37/F/C/X/T
3	Altimeter checkpoint location and elevation	NIL
4	VOR checkpoints	NIL
5	INS checkpoints	NIL
6	Remarks	NIL

VTCN AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	NIL
2	RWY and TWY markings and LGT	RWY AND TWY: Marked and lighted.
3	Stop bars	NIL
4	Remarks	NIL

VTCN AD 2.10 AERODROME OBSTACLES

In approach/TKOF areas			In circling areas and at AD		Remarks
1			2		3
RWY/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
a	b	c	a	b	
NIL	NIL	NIL	Radio mast erected at field right side of RWY 20,215 M from centre line height 24 M and the another, height 153 M Both painted red and white alternatively lighted by red light on top	184430N 1004435E	NIL

VTCN AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Aeronautical Meteorological Station-Nan, Northern Meteorological Center, Thai Meteorological Department (TMD)
2	Hours of service MET Office outside hours	2300-1100 NIL
3	Office responsible for TAF preparation Periods of validity	Supply TAF from Northern Meteorological Center 24 HR
4	Type of landing forecast Interval of issuance	TREND 1 HR
5	Briefing/consultation provided	Personal Consultation Tel: +665 471 8670
6	Flight documentation Language(s) used	NIL
7	Charts and other information available for briefing or consultation	S, U85, Daily Weather Forecast, satellite and radar images
8	Supplementary equipment available for providing information	Automated Weather Observation System (AWOS), Weather Radar
9	ATS units provided with information	Nan TWR
10	Additional information (limitation of service, etc.)	NIL

VTCN AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
02	020.12°	2000x45	PCN 42/F/C/X/T Concrete and asphalt	184758.24N 1004648.31E	THR 679 FT TDZ 681 FT
20	200.12°	2000x45	PCN 42/F/C/X/T Concrete and asphalt	184858.74N 1004712.31E	THR 682 FT TDZ 685 FT

Slope of RWY-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
NIL	NIL	150x45	2120x150	NIL	NIL
NIL	NIL	150x45	2120x150	NIL	NIL

VTCN AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
02	2000	2150	2000	2000	NIL
20	2000	2150	2000	2000	NIL

VTCN AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
02	RTIL	Green	PAPI Both 3.4° (16.12 M)	NIL	NIL	2 000 M 60 M White, LIM	Red	NIL	NIL
20	RTIL	Green	PAPI Left 3°	NIL	NIL	2 000 M 60 M White, LIM	Red	NIL	NIL

VTCN AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: At tower building, FLG W G EV 7 SEC IBN: NIL
2	LDI location and LGT Anemometer location and LGT	NIL
3	TWY edge and centre line lighting	Edge: TWY A, B
4	Secondary power supply/switch-over time	Secondary power supply to all tower, PAPI Switch-over time: 15 SEC
5	Remarks	Flares 2 HR PN

VTCN AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True and MAG BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

VTCN AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	A circle of 5 NM radius centred on NAN DVOR/DME (184832.76N 1004657.31E)
2	Vertical limits	2000 FT/AGL
3	Airspace classification	C
4	ATS unit call sign Language(s)	Nan Tower English, Thai
5	Transition altitude	11000 FT
6	Remarks	NIL

VTCN AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP	Nan Approach	120.25 MHZ	23:00-10:00	*Emergency Freq. **After this period and holidays 3 HR PN to ATC
TWR	Nan Tower	**118.55 MHZ *121.5 MHZ **236.6 MHZ *243.0 MHZ	23:00-10:00	
ATIS		355 KHZ	H24	

VTCN AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB	NN	355 KHZ	H24	184826.00N 1004711.91E		NDB restriction, orbit coverage in mountain terrain and border limited was check and found as follow: -40 NM from bearing 331-045 DEG (CW) altitude should not below 8000 FT. (due to border limited). -20 NM from bearing 046-160 DEG (CW) altitude should not below 6500 FT. (due to border limited). -50 NM from bearing 161-330 DEG (CW) altitude should not below 7500 FT.

Type of aid, MAG VAR CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
DVOR/DME	NAN	115.7MHZ CH104X	H24	184832.76N 1004657.31E		DVOR/DME restriction, due to Mountainous terrain surround DVOR/DME station coverage check does not provide adequate signal to 40 NM. At the required altitude in various areas as follow: -RDL 021-110 DEG at 20 NM should not below 8000 FT. -RDL 111-160 DEG at 20 NM should not below 6000 FT. -RDL 161-230 DEG at 40 NM should not below 7000 FT. -RDL 231-250 DEG at 40 NM should not below 9000 FT. -RDL 251-290 DEG at 40 NM should not below 11000 FT. -RDL 291-350 DEG at 40 NM should not below 9000 FT. -RDL 351-020 DEG at 40 NM should not below 8000 FT.
ILS CAT I RWY02 LOC/DME	INAN	110.3MHZ CH40X	H24	184903.30N 1004714.13E	687.34 FT	LOC designated operation coverage 18 NM, ALT 7000 FT AMSL
DME			H24	184904.17N 1004711.85E		DME paired with LOC FREQ
GP		335MHZ	H24	184808.72N 1004648.08E		GP 3.4 DEG, RDH 58 FT

VTCN AD 2.20 LOCAL AERODROME REGULATIONS

To prevent runway pavement damage which may result in the closure of the aerodrome if such damage is severe, aircraft code letter C or higher shall make 180 degrees turn at the runway turn pads located on left side of runway 20 (near the threshold of runway 20). Any breach done by the aircraft operator shall be recorded and reported to The Civil Aviation Authority of Thailand/the Headquarters of that operator and shall be liable for the compensation caused by such violation

VTCN AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

VTCN AD 2.22 FLIGHT PROCEDURES

1. IMPLEMENTATION OF THE CONTINUOUS DESCENT OPERATIONS (CDO) FOR ARRIVALS INTO NAN NAKHON AIRPORT

1.1 Condition of Use

1.1.1 Conditions for Conducting a CDO

1.1.1.1 CDO application can be either under Surveillance or Procedural environment.

1.1.1.2 CDO can be requested by pilot or initiated by ATC. Pilot should request CDO at least 5 minutes prior to reaching Top of Descent (TOD) for any type of approach.

Note: *1.There is limited benefit if CDO clearance is received at altitude lower than 10,000 FT.*

Note: *2.In case of CDO procedure being impractical due to an emergency, weather condition, traffic situation or any other reasons, an alternate instruction will be issued by ATC, or requested by pilot.*

1.1.2 Application of Other ATC Procedures

1.1.2.1 When conducting CDO, standard ATC procedures continue to apply. ATC may issue clearance to an intermediate approach level

while facilitating a CDO profile.

1.1.2.2 In doing so, ATC shall endeavour to issue further descent clearance prior to the CDO flight reaching the last assigned altitude so as to prevent aircraft from levelling off.

1.1.3 Change of Runway-In-Use

1.1.3.1 In case of change on Runway-in-Use prior to aircraft reaching to Intermediate Fix (IF), i.e. from RWY02 to RWY20 CDO procedure shall be cancelled.

1.1.3.2 Pilot should then re-plan arrival route to the revised landing runway and inform ATC if the flight would still be able to meet all required speed/altitude restrictions.

1.1.4 Aircraft Type

CDO procedure is applicable for FMS capable aircraft.

1.1.5 Arrival Routes

CDO procedure is in place for all aircraft on W29 inbound to Nan Nakhon Airport.

1.1.6 Operations Time

CDO is available 24 hours.

1.1.7 Available Runway

CDO procedure is available for RWY02

1.1.8 Types of Approach

1.1.8.1 ILS or LOC z RWY02

1.1.8.2 ILS or LOC y RWY02

1.1.9 Speed

When traffic permits, aircraft will operate at an optimum speed calculated by FMS, depending on aircraft type. The following speed guidance should be applicable in case of high traffic volume.

Flight Status	Speed Range
Above 10 000 FT.	250 – 320 IAS
Below 10 000 FT.	220 – 250 IAS
Final Segment (up to 4 NM)	160 – 180 IAS

1.1.10 Minimum Flight Altitude

1.1.10.1 Outside NAN TMA, aircraft shall comply with altitude constraints of the CDO procedure.

1.1.10.2 Inside NAN TMA, during CDO, minimum safety altitudes are identical to those within Instrument Approach Procedures required

1.2 CDO Procedure

1.2.1 Before aircraft reaching TOD (approximately 100 NM from the airport), either pilot or ATC can initiate CDO using phraseologies described in paragraph 1.3.

1.2.2 When all requirements for CDO are met and situation permits, CDO will commence.

1.2.3 Pilot shall operate aircraft FMS to plan optimal descent profile and report CDO execution commencing descent.

1.2.4 Aircraft should descend continuously on normal arrival route to NAN TMA.

1.2.5 Longitudinal separation required will be at least 10 minutes between CDO traffic.

1.2.6 CDO Operations

1.2.6.1 Fully ILS or LOC z RWY 02 and ILS or LOC y RWY02

Aircraft Arriving on W29

Aircraft Arriving on W29 after passing, DUGEL 20 NM from NAN DVOR, altitude not lower than 7,000 FT., or above, then proceed to ASUBI altitude not lower than 5,000 FT., or above and follow the ILS or LOC z RWY02 procedure as published in AIP Thailand.

1.2.6.2 Direct IF for ILS or LOC z RWY02 and DCT IF for ILS or LOC y RWY02

Aircraft Arriving on W29
The pilot may request permission to fly directly to Intermediate Fix (IF); however, this would be an ATC's jurisdiction whether the request can be approved, depending on traffic conditions. In this case, the pilot shall fly directly to (IF), and cross 25 NM from NAN DVOR, altitude not lower than 8,000 FT., and cross IF altitude not lower than 6,800 FT., following the ILS or LOC z RWY02 or ILS or LOC y RWY02 procedure as published in AIP Thailand.

1.2.7 Radio Communications Failure

1.2.7.1 In the event of radio communication failure, CDO flight will be terminated immediately.

1.2.7.2 Pilot is to apply radio failure procedures stated in AIP Thailand ENR 1.6-7 paragraph 6.

1.3 Phraseology

1.3.1 The following phraseology does not phrases and regular radio telephony procedure words contain in Doc 4444 and Doc 9432, but it enables clear and concise communications between pilot and controller to maintain safety of CDO arrivals.

1.3.2 ATC-initiated CDO

"(aircraft call sign), (ATC unit), CDO AVAILABLE, DO YOU ACCEPT?"

1.3.3 Pilots response to ATC-initiated CDO

1.3.3.1 "(aircraft call sign), ACCEPT CDO"

1.3.3.2 "(aircraft call sign), NEGATIVE CDO"

1.3.4 Pilot-requested CDO

"(ATC Unit), (aircraft call sign), REQUEST CDO (type of approach) APPROACH"

1.3.5 Approval CDO by Bangkok Area Control Centre

"(aircraft call sign), CDO (type of approach) APPROVED DESCEND TO (level or altitude), QNH (number)"

1.3.6 Denial CDO by Bangkok Area Control Centre

1.3.6.1 "(aircraft call sign), UNABLE TO APPROVED, DUE TO (reason)"

1.3.6.2 "(aircraft call sign), EXPECT CDO FROM NAN APPROACH"

1.3.7 CDO Cleared or Approved by NAN Approach Control Unit

1.3.7.1 "(aircraft call sign), CDO DESCEND TO (level or altitude), QNH (number), INFORMATION…CURRENT EXPECT (type of approach) APPROACH RWY (number)"

1.3.7.2 "(aircraft call sign), DESCENT TO (level) QNH (number) CDO (type of approach) APPROVED"

1.3.8 CDO Cancellation

1.3.8.1 "(aircraft call sign), CANCEL CDO DUE TO (reason), STOP DESCEND (level or altitude), QNH (number)"

1.3.8.2 "(aircraft call sign), CDO TERMINATED DUE TO (reason)"

1.3.9 Resuming CDO

"(aircraft call sign), RESUME CDO DIRECT (point), DESCEND TO (level or altitude), QNH (number), CLEAR (type of approach) APPROACH RWY02"

1.3.10 Pilot report leaving assigned level

"(aircraft call sign), CDO LEAVING (level)"

1.3.11 Warning of aircraft below CDO Profile

"(aircraft call sign), BELOW CDO PROFILE, ALTITUDE SHOULD BE (altitude) OR ABOVE"

1.4 Information/Training

1.4.1 Each airline must ensure that, for each type of aircraft, pilots are aware of CDO performance requirements.

1.4.2 Airlines are expected to define strategy to be adopted to drag-generating parts extension to stabilize aircraft in landing configuration at an altitude in compliance with flight safety, taking into account glide path at 3.4° in Final Approach.

VTCN AD 2.23 ADDITIONAL INFORMATION

NIL

VTCN AD 2.24 CHARTS RELATED TO AN AERODROME

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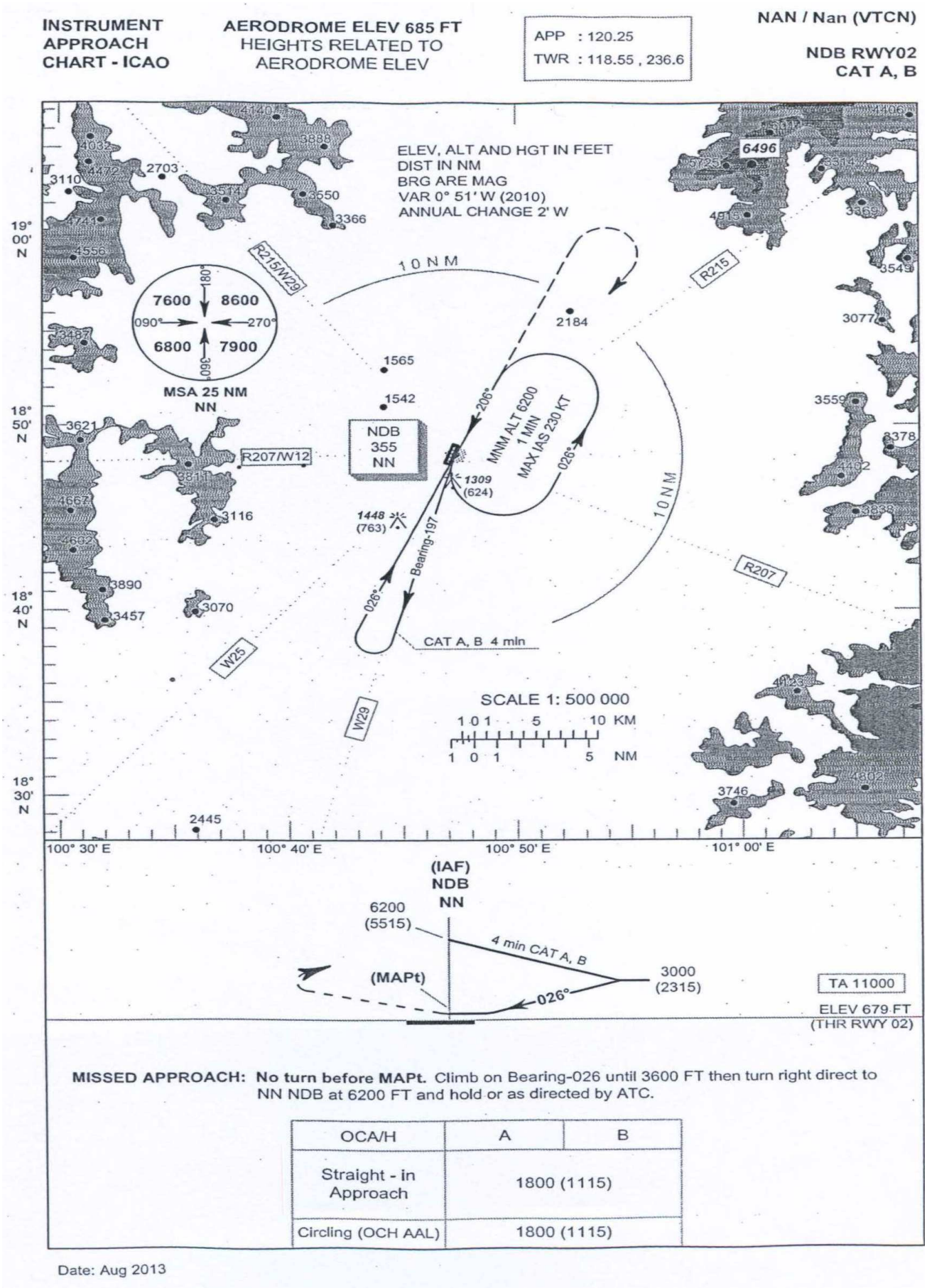


MISSED APPROACH: **No turn before MAPt.** Climb on Bearing-026 until 3600 FT then turn right direct to NN NDB at 6200 FT and hold or as directed by ATC.

OCA/H	A	B
Straight - in Approach	1800 (1115)	
Circling (OCH AAL)	1800 (1115)	

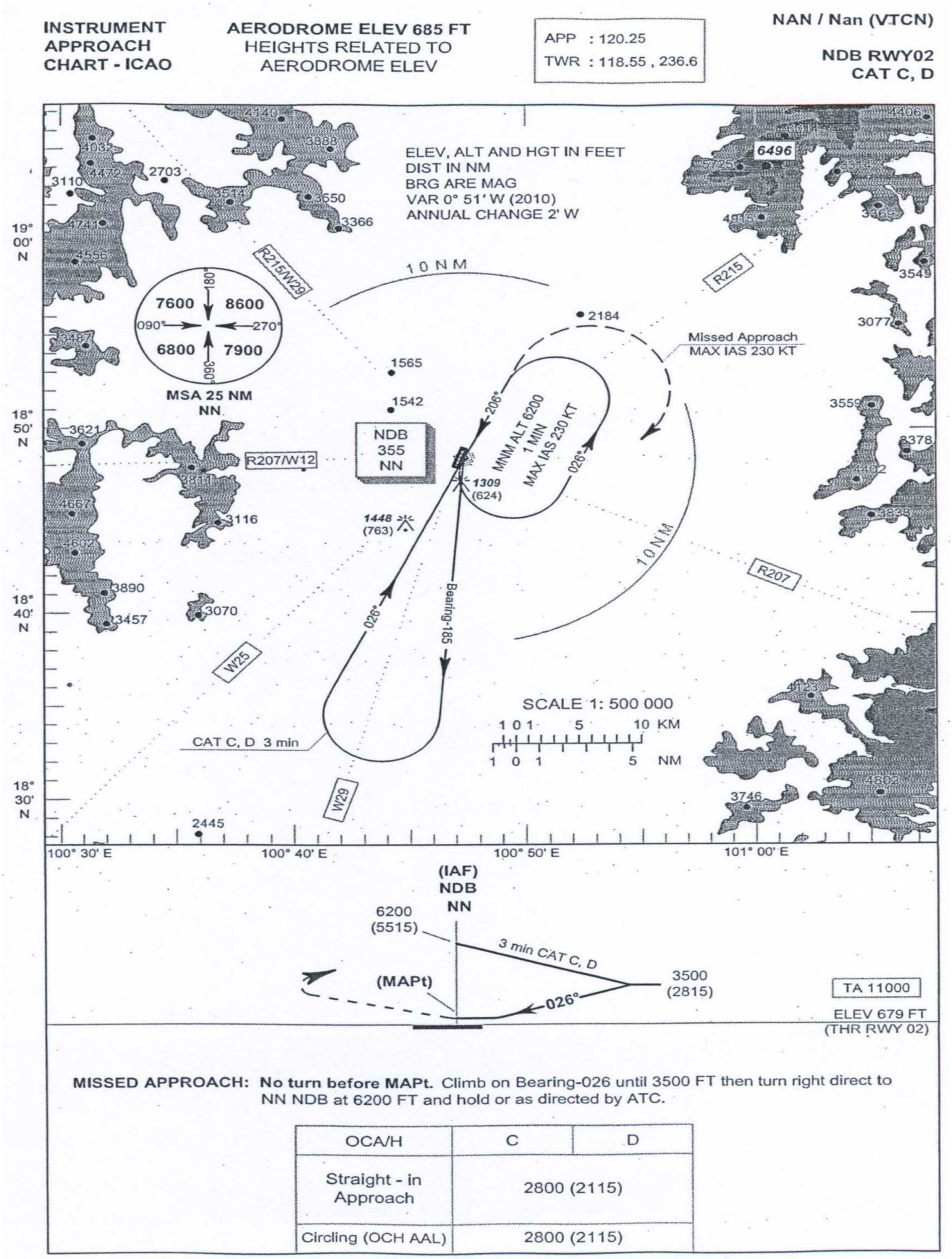
Date: Aug 2013

NAN / Nan (VTCN)

NDB RWY02
CAT A, B

Fixes / Points		Coordinates	
MAPt	NN	18 48 26.00 N 18 48.43 N	100 47 11.91 E 100 47.20 E
THR RWY 02	-	18 47 58.24 N 18 47.97 N	100 46 48.31 E 100 46.81 E
NDB	NN	18 48 26.00 N 18 48.43 N	100 47 11.91 E 100 47.20 E

Date: Aug 2013



MISSED APPROACH: **No turn before MAPt.** Climb on Bearing-026 until 3500 FT then turn right direct to NN NDB at 6200 FT and hold or as directed by ATC.

OCA/H	C	D
Straight - in Approach	2800 (2115)	
Circling (OCH AAL)	2800 (2115)	

Date: Aug 2013

NAN / Nan (VTCN)

NDB RWY02
CAT C, D

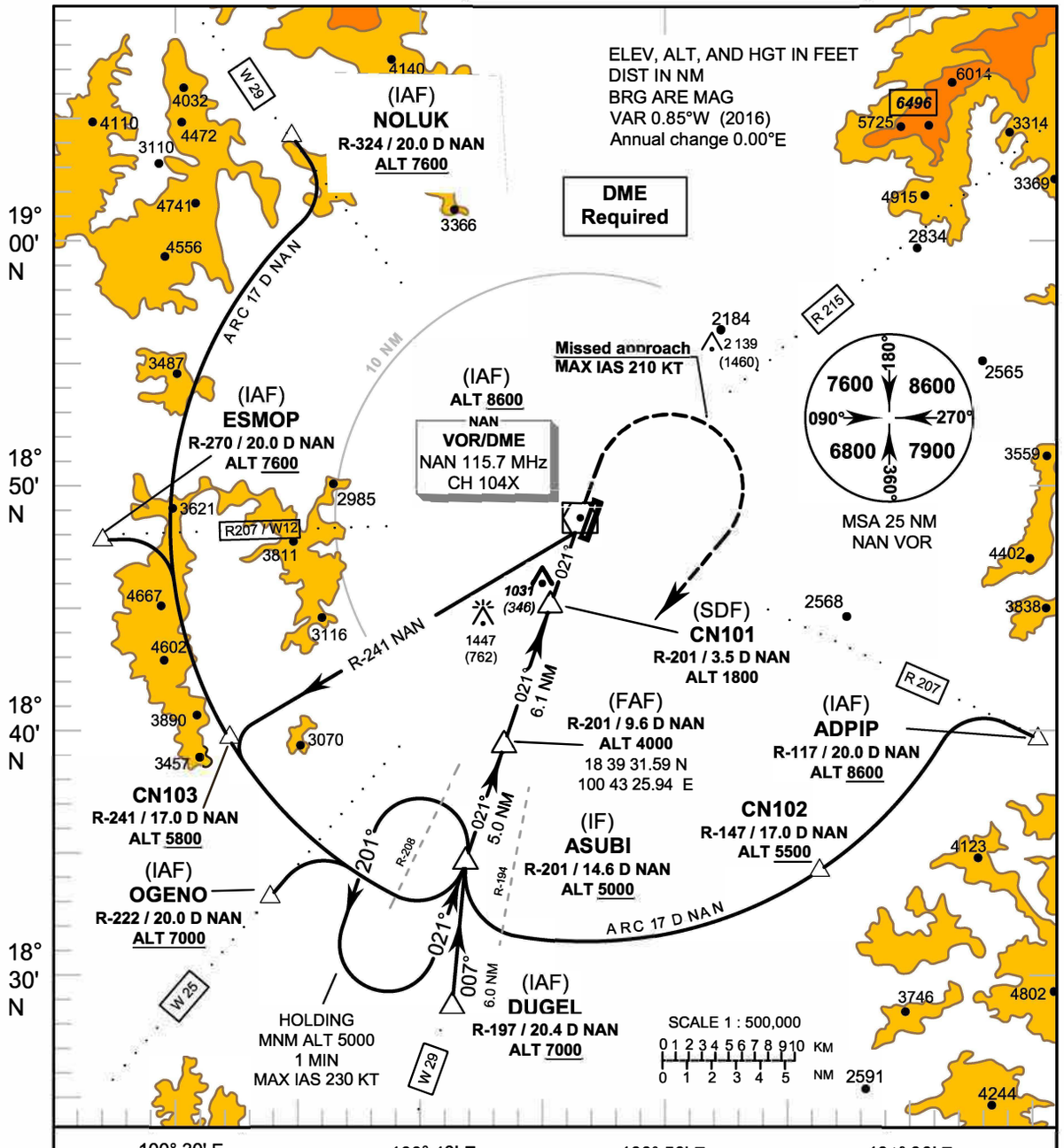
Fixes / Points		Coordinates	
MAPt	NN	18 48 26.00 N 18 48.43 N	100 47 11.91 E 100 47.20 E
THR RWY 02	-	18 47 58.24 N 18 47.97 N	100 46 48.31 E 100 46.81 E
NDB	NN	18 48 26.00 N 18 48.43 N	100 47 11.91 E 100 47.20 E

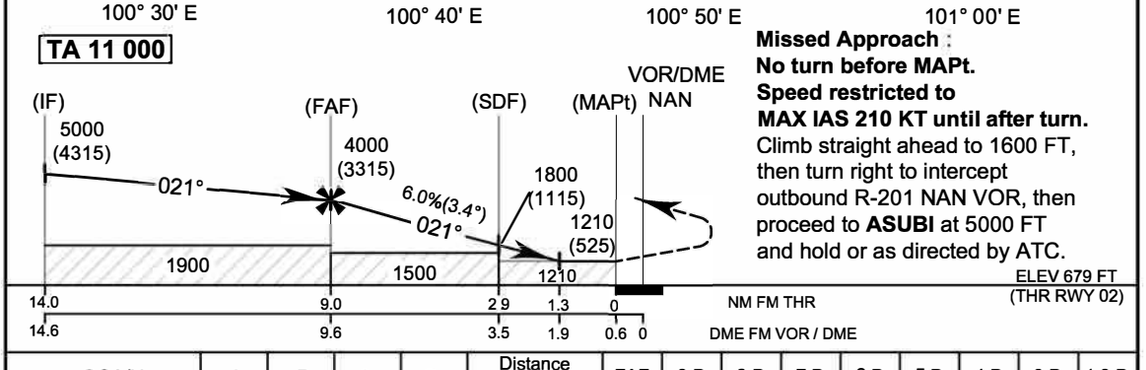
Date: Aug 2013

INSTRUMENT APPROACH CHART-ICAO — **AERODROME ELEV 685 FT** HEIGHTS RELATED TO AERODROME ELEV

APP : 120.25
TWR : 118.55, 236.6

NAN/Nan Nakhon (VTCN)
VOR RWY02





OCA/H	A	B	C	D
Straight-in approach	1210 (525)			
Circling (OCH AAL)	1500 (815)		2100 (1415)	

Distance (NAN)	FAF	9 D	8 D	7 D	6 D	5 D	4 D	3 D	1.9 D
Altitude (Height)	4000 (3315)	3795 (3110)	3435 (2750)	3070 (2385)	2705 (2020)	2340 (1655)	1975 (1290)	1610 (925)	1210 (525)
Ground Speed knot		70	90	100	120	140	160		
Rate of descent (6.0%) (ft/min)		425	547	608	729	851	972		

September 2017

INSTRUMENT APPROACH CHART-ICAO **AERODROME ELEV 685 FT** HEIGHTS RELATED TO AERODROME ELEV

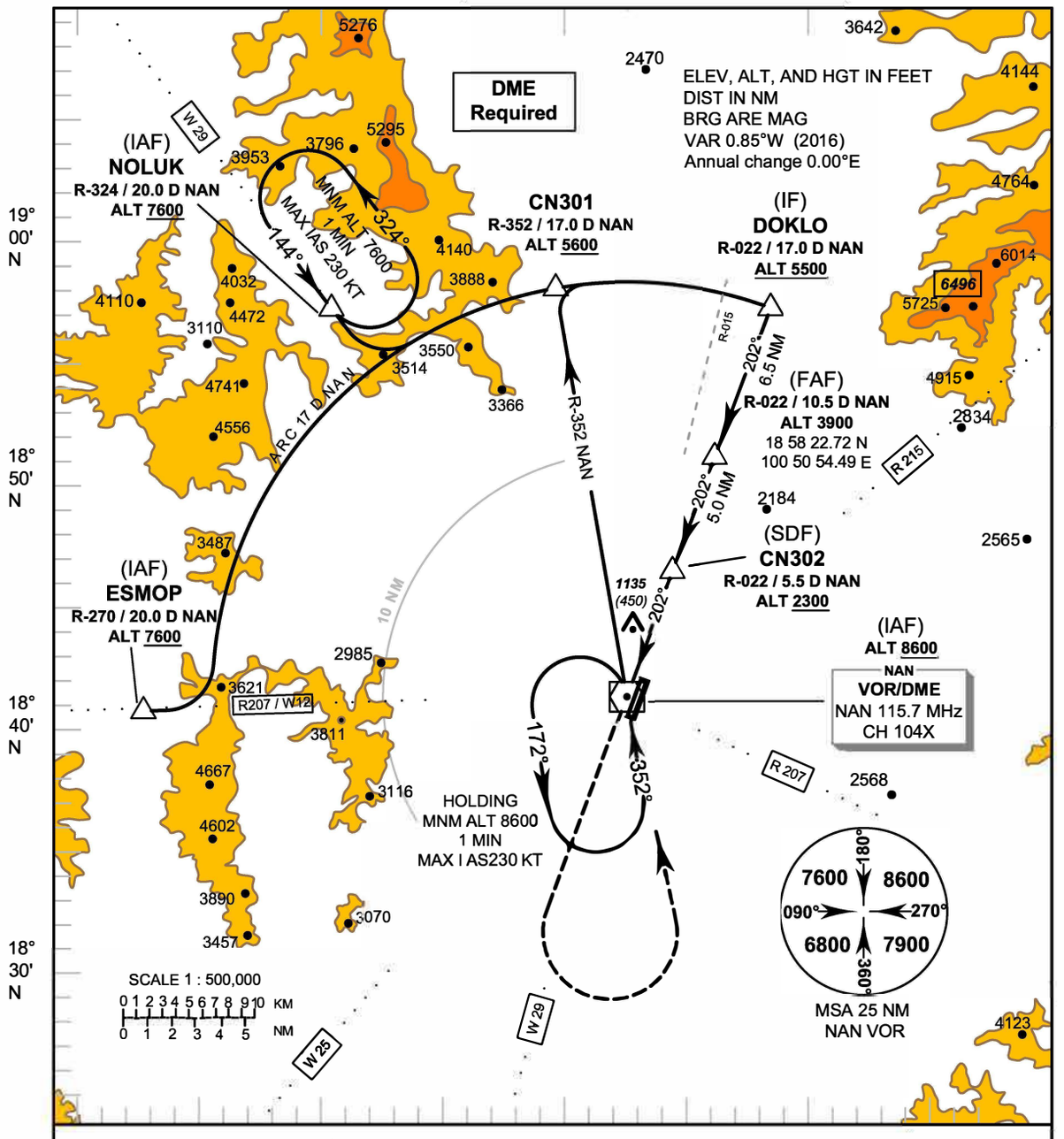
NAN/Nan Nakhon (VTCN)
VOR RWY02

Fix / Point		Coordinates	
VOR (IAF)	NAN	18 48 32.76 N	100 46 57.31 E
ADPIP (IAF)	R - 117 / 20.0 D NAN	18 39 46.40 N	101 05 54.67 E
CN102	R - 147 / 17.0 D NAN	18 34 24.99 N	100 56 59.93 E
NOLUK (IAF)	R - 324 / 20.0 D NAN	19 04 38.32 N	100 34 20.30 E
ESMOP (IAF)	R - 270 / 20.0 D NAN	18 48 07.91 N	100 25 52.62 E
CN103	R - 241 / 17.0 D NAN	18 40 00.13 N	100 31 26.91 E
OGENO (IAF)	R - 222 / 20.0 D NAN	18 33 27.22 N	100 33 07.59 E
DUGEL (IAF)	R - 197 / 20.4 D NAN	18 28 53.32 N	100 40 57.94 E
ASUBI (IF)	R - 201/ 14.6 D NAN	18 34 49.75 N	100 41 36.01 E
(FAF)	R - 201 / 9.6 D NAN	18 39 31.59 N	100 43 25.94 E
CN101 (SDF)	R - 201 / 3.5 D NAN	18 45 10.33 N	100 45 38.20 E
(MAPt)	R - 201 / 0.6 D NAN	18 47 59.66 N	100 46 44.37 E

INSTRUMENT APPROACH CHART-ICAO — **AERODROME ELEV 685 FT** HEIGHTS RELATED TO AERODROME ELEV

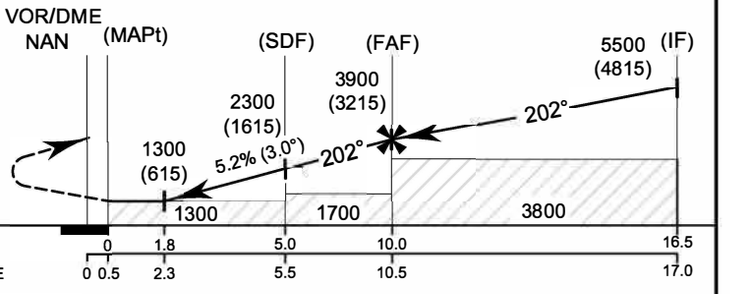
APP : 120.25
TWR : 118.55, 236.6

NAN/Nan Nakhon (VTCN)
VOR RWY20



TA 11000

Missed Approach :
No turn before MAPt.
Climb straight ahead to 3000 FT, then turn left to intercept inbound R-172 NAN VOR, then proceed to NAN VOR at 8600 FT and hold or as directed by ATC.



OCA/H	A	B	C	D	Distance (NAN)	2.3 D	3 D	4 D	5 D	6 D	7 D	8 D	9 D	10 D	FAF
Straight-in approach	1300 (615)				Altitude (Height)	1300 (615)	1525 (840)	1840 (1155)	2155 (1470)	2475 (1790)	2790 (2105)	3105 (2420)	3420 (2735)	3735 (3050)	3900 (3215)
					Ground Speed		knot	70	90	100	120	140	160		
Circling (OCH AAL)	1500 (815)		2100 (1415)		Rate of descent (5.2%)		(ft/min)	369	474	527	632	737	843		

September 2017

INSTRUMENT APPROACH CHART-ICAO **AERODROME ELEV 685 FT** HEIGHTS RELATED TO AERODROME ELEV

NAN/Nan Nakhon (VTCN)
VOR RWY20

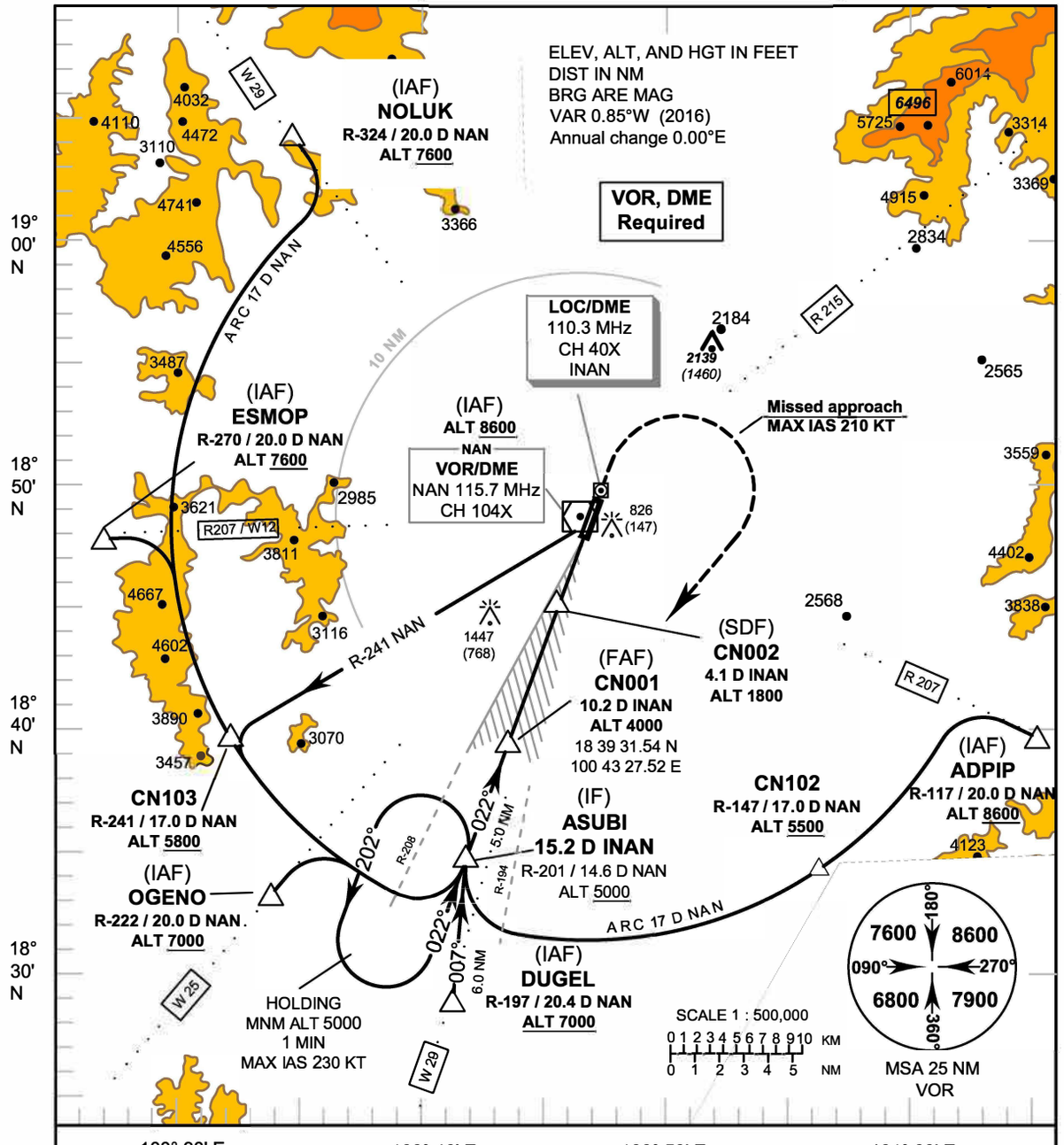
Fix / Point		**Coordinates**	
VOR (IAF)	NAN	18 48 32.76 N	100 46 57.31 E
ESMOP (IAF)	R - 270 / 20.0 D NAN	18 48 07.91 N	100 25 52.62 E
NOLUK (IAF)	R - 324 / 20.0 D NAN	19 04 38.32 N	100 34 20.30 E
CN301	R - 352 / 17.0 D NAN	19 05 23.21 N	100 44 03.17 E
DOKLO (IF)	R - 022 / 17.0 D NAN	19 04 29.04 N	100 53 22.01 E
(FAF)	R - 022 / 10.5 D NAN	18 58 22.72 N	100 50 54.49 E
CN302 (SDF)	R - 022 / 5.5 D NAN	18 53 41.45 N	100 49 01.35 E
(MAPt)	R - 022 / 0.5 D NAN	18 49 00.17 N	100 47 08.34 E

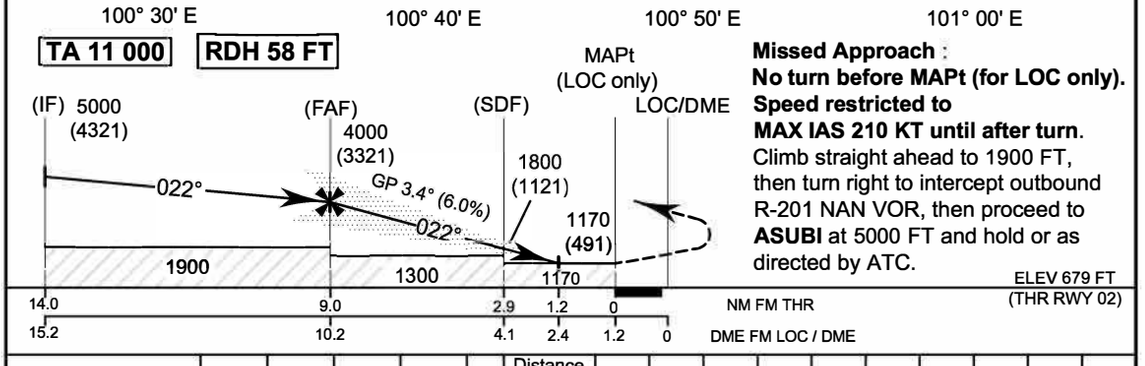
INSTRUMENT APPROACH CHART-ICAO

AERODROME ELEV 685 FT
HEIGHTS RELATED TO
THR RWY02 - ELEV 679 FT

APP : 120.25
TWR : 118.55, 236.6

NAN/Nan Nakhon (VTCN)
ILS or LOC y RWY02





Missed Approach :
No turn before MAPt (for LOC only).
Speed restricted to
MAX IAS 210 KT until after turn.
Climb straight ahead to 1900 FT, then turn right to intercept outbound R-201 NAN VOR, then proceed to **ASUBI** at 5000 FT and hold or as directed by ATC.

OCA/H	A	B	C	D
Straight-in approach CAT I	1030 (351)			
LOC Only	1170 (491)			
Circling (OCH AAL)	1500 (815)		2100 (1415)	

GS out	Distance (INAN)	FAF	10 D	9 D	8 D	7 D	6 D	5 D	4 D	3 D	2.4 D
	Altitude (Height)	4000 (3321)	3940 (3261)	3575 (2896)	3210 (2531)	2845 (2166)	2480 (1801)	2115 (1436)	1750 (1071)	1385 (706)	1170 (491)
	Ground Speed	knot	70	90	100	120	140	160			
	Rate of descent (3.4°)	(ft/min)	421	541	602	722	842	963			

September 2017

INSTRUMENT APPROACH CHART-ICAO **AERODROME ELEV 685 FT**
HEIGHTS RELATED TO
THR RWY02 - ELEV 679 FT

NAN/Nan Nakhon (VTCN)
ILS or LOC y RWY02

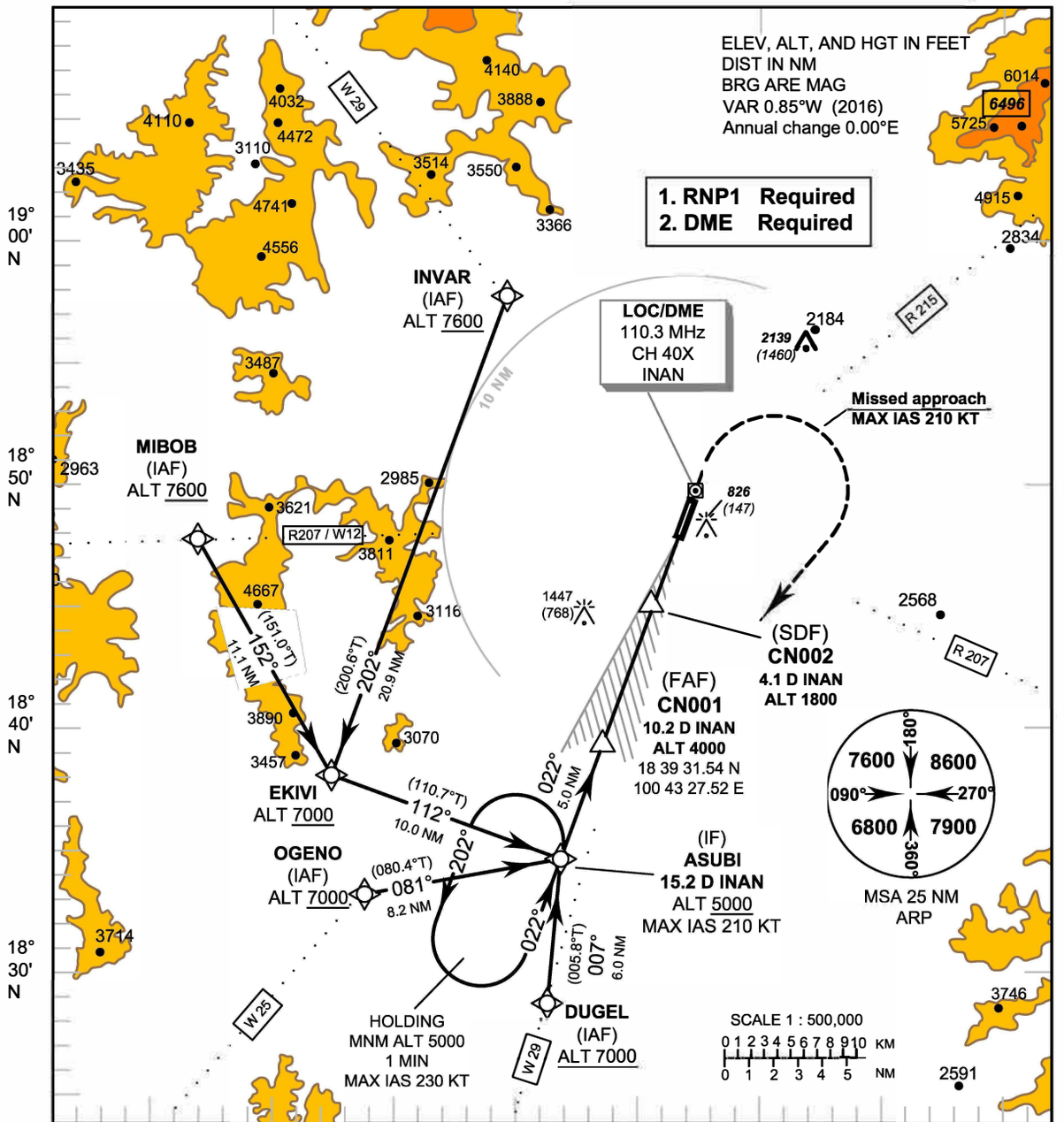
Fix / Point		Coordinates	
VOR (IAF)	NAN	18 48 32.76 N	100 46 57.31 E
ADPIP (IAF)	R - 117 20.0 D NAN	18 39 46.40 N	101 05 54.67 E
CN102	R - 147 17.0 D NAN	18 34 24.99 N	100 56 59.93 E
NOLUK (IAF)	R - 324 / 20.0 D NAN	19 04 38.32 N	100 34 20.30 E
ESMOP (IAF)	R - 270 / 20.0 D NAN	18 48 07.91 N	100 25 52.62 E
CN103	R - 241 / 17.0 D NAN	18 40 00.13 N	100 31 26.91 E
OGENO (IAF)	R - 222 / 20.0 D NAN	18 33 27.22 N	100 33 07.59 E
DUGEL (IAF)	R - 197 / 20.4 D NAN	18 28 53.32 N	100 40 57.94 E
ASUBI (IF)	15.2 D INAN	18 34 49.75 N	100 41 36.01 E
CN001 (FAF)	10.2 D INAN	18 39 31.54 N	100 43 27.52 E
CN002 (SDF)	4.1 D INAN	18 45 14.84 N	100 45 43.49 E
MAPt (LOC only) @ THR RWY02	1.2 D INAN	18 47 58.24 N	100 46 48.31 E
LOC/DME	INAN	18 49 03.30 N	100 47 14.13 E
GP	INAN	18 48 08.72 N	100 46 48.08 E

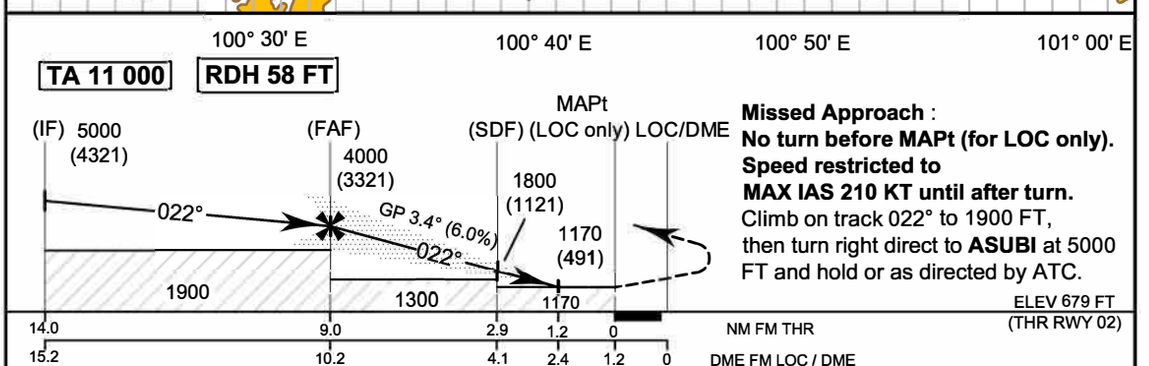
INSTRUMENT APPROACH CHART-ICAO

AERODROME ELEV 685 FT
HEIGHTS RELATED TO
THR RWY02 - ELEV 679 FT

APP : 120.25
TWR : 118.55, 236.6

NAN/Nan Nakhon (VTCN)
ILS or LOC z RWY02





Missed Approach :
No turn before MAPt (for LOC only).
Speed restricted to
MAX IAS 210 KT until after turn.
Climb on track 022° to 1900 FT,
then turn right direct to **ASUBI** at 5000
FT and hold or as directed by ATC.

OCA/H	A	B	C	D
Straight-in approach CAT I	1030 (351)			
LOC Only	1170 (491)			
Circling (OCH AAL)	1500 (815)		2100 (1415)	

GS out	Distance (INAN)	FAF	10 D	9 D	8 D	7 D	6 D	5 D	4 D	3 D	2.4 D
	Altitude (Height)	4000 (3321)	3940 (3261)	3575 (2896)	3210 (2531)	2845 (2166)	2480 (1801)	2115 (1436)	1750 (1071)	1385 (706)	1170 (491)
Ground Speed	knot	70	90	100	120	140	160				
Rate of descent (3.4°)	(ft/min)	421	541	602	722	842	963				

September 2017

INSTRUMENT APPROACH CHART-ICAO **AERODROME ELEV 685 FT**
HEIGHTS RELATED TO
THR RWY02 **-** ELEV 679 FT

NAN/Nan Nakhon (VTCN)
ILS or LOC z RWY02

TABULAR DESCRIPTION

ILS or LOC z RWY02

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/ RDH	Navigation Specification
010	IF	DUGEL (IAF)	-	-	+0.85	-	-	+7000	-	-	RNP 1
020	TF	ASUBI (IF)	-	007°(005.8°)	+0.85	6.0	-	+5000	-210	-	RNP 1
010	IF	OGENO (IAF)	-	-	+0.85	-	-	+7000	-	-	RNP 1
020	TF	ASUBI (IF)	-	081°(080.4°)	+0.85	8.2	-	+5000	-210	-	RNP 1
010	IF	MIBOB (IAF)	-	-	+0.85	-	-	+7600	-	-	RNP 1
020	TF	EKIVI	-	152°(151.0°)	+0.85	11.1	L	+7000	-	-	RNP 1
030	TF	ASUBI (IF)	-	112°(110.7°)	+0.85	10.0	-	+5000	-210	-	RNP 1
010	IF	INVAR (IAF)	-	-	+0.85	-	-	+7600	-	-	RNP 1
020	TF	EKIVI	-	202°(200.6°)	+0.85	20.9	L	+7000	-	-	RNP 1
030	TF	ASUBI (IF)	-	112°(110.7°)	+0.85	10.0	-	+5000	-210	-	RNP 1
010	IF	ASUBI (IF)	-	-	+0.85	-	-	+5000	-210	-	RNP 1
TRANSITION TO ILS or LOC											
020	TF	CN001 (FAF)	-	022°(020.7°)	+0.85	5.0	-	@4000	-	-	ILS
030	TF	CN002 (SDF)	-	022°(020.7°)	+0.85	6.1	-	@1800	-	-	ILS
040	TF	CN003 (MAPt)	Y	022°(020.7°)	+0.85	2.9	-	@737	-	-3.4 / 58	ILS
050	CA	-	-	022°(020.7°)	+0.85	-	-	+1900	-	-	RNP 1
060	DF	ASUBI (IF)	-	-	+0.85	-	R	+5000	-210	-	RNP 1
070	HM	ASUBI (IF)	Y	022°(020.7°)	+0.85	1 minute	L	+5000	-230	-	RNP 1

WAYPOINT LIST

ILS or LOC z RWY02

Waypoint Identifier	Coordinates	
INVAR	18° 58' 02.05" N	100° 39' 31.36" E
MIBOB	18° 48' 08.12" N	100° 26' 03.27" E
EKIVI	18° 38' 22.25" N	100° 31' 44.36" E
OGENO	18° 33' 27.22" N	100° 33' 07.59" E
DUGEL	18° 28' 53.32" N	100° 40' 57.94" E
ASUBI	18° 34' 49.75" N	100° 41' 36.01" E
CN001	18° 39' 31.54" N	100° 43' 27.52" E
CN002	18° 45' 14.84" N	100° 45' 43.49" E
CN003 (THR02)	18° 47' 58.24" N	100° 46' 48.31" E

INSTRUMENT APPROACH CHART-ICAO **AERODROME ELEV 685 FT**
HEIGHTS RELATED TO
THR RWY02 - ELEV 679 FT

NAN/Nan Nakhon (VTCN)
ILS or LOC z RWY02

Fix / Point		Coordinates	
ASUBI (IF)	15.2 D INAN	18 34 49.75 N	100 41 36.01 E
CN001 (FAF)	10.2 D INAN	18 39 31.54 N	100 43 27.52 E
CN002 (SDF)	4.1 D INAN	18 45 14.84 N	100 45 43.49 E
MAPt (LOC only) @ THR RWY02	1.2 D INAN	18 47 58.24 N	100 46 48.31 E
LOC/DME	INAN	18 49 03.30 N	100 47 14.13 E
GP	INAN	18 48 08.72 N	100 46 48.08 E

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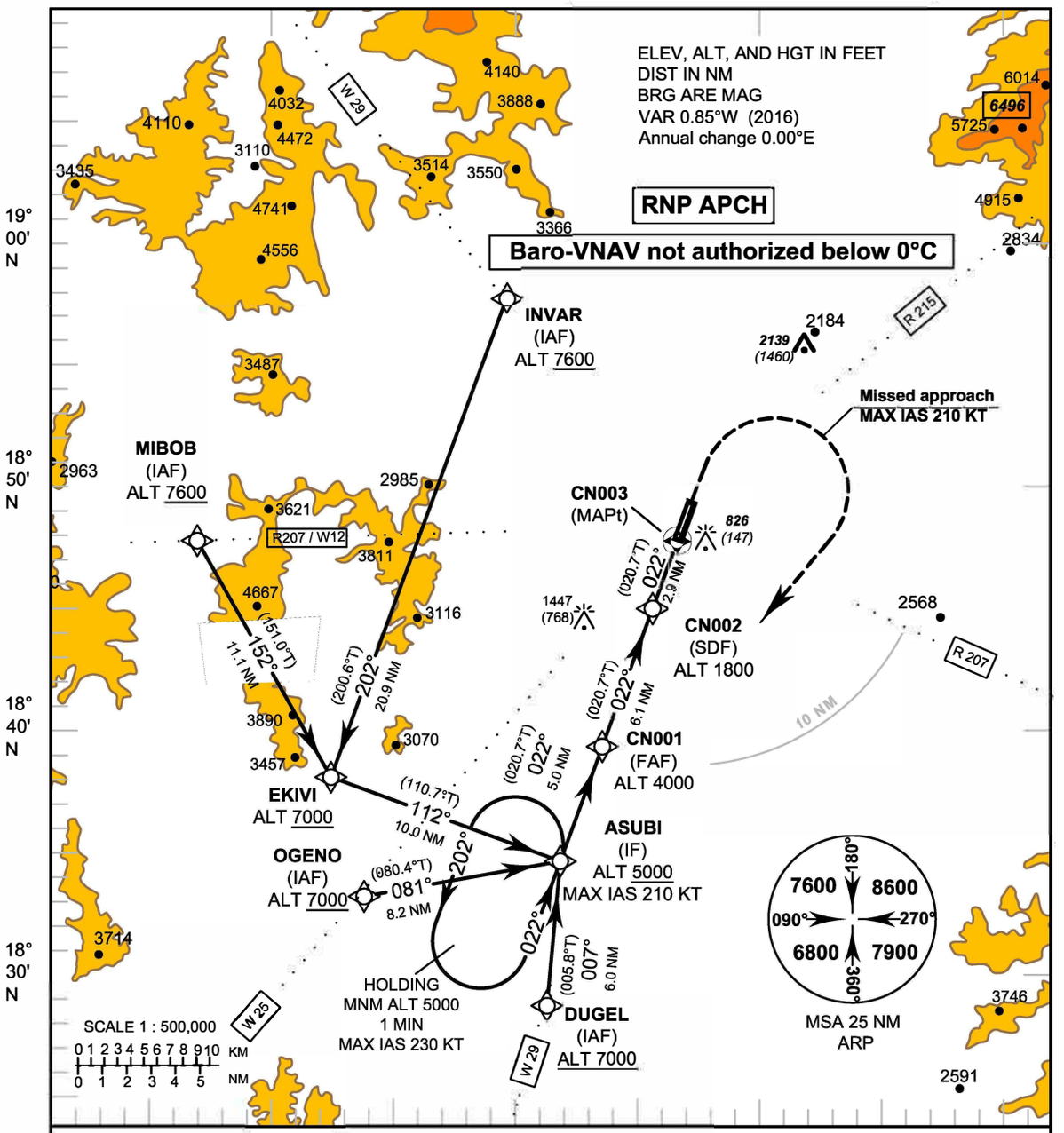
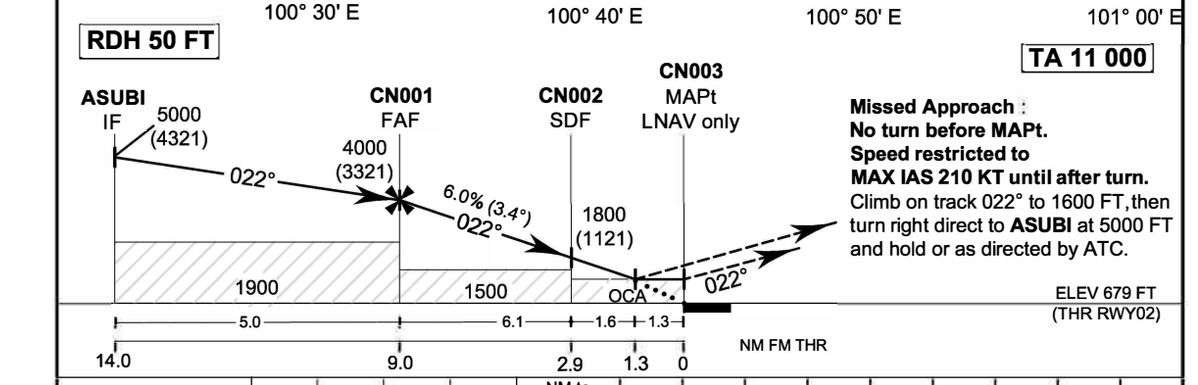
INSTRUMENT APPROACH CHART-ICAO — **AERODROME ELEV 685 FT** HEIGHTS RELATED TO THR RWY02 - ELEV 679 FT

APP : 120.25
TWR : 118.55, 236.6

NAN/Nan Nakhon (VTCN)
RNAV (GNSS) RWY02





OCA/H	A	B	C	D	NM to NEXT WPT	FAF	8 NM	7 NM	6 NM	5 NM	4 NM	3 NM	2 NM	1.3 NM
LNAV/VNAV	1200 (521)				Altitude (Height)	4000 (3321)	3645 (2966)	3280 (2601)	2915 (2236)	2550 (1871)	2190 (1511)	1825 (1146)	1460 (781)	1200 (521)
LNAV	1200 (521)				Ground Speed	knot	70	90	100	120	140	160		
Circling (OCH AAL)	1500 (815)		2100 (1415)		Rate of descent FAF-MAPt (6.0%)	(ft/min)	425	547	608	729	851	972		

September 2017

INSTRUMENT APPROACH CHART-ICAO **AERODROME ELEV 685 FT**
HEIGHTS RELATED TO
THR RWY02 - ELEV 679 FT

NAN/Nan Nakhon (VTCN)
RNAV (GNSS) RWY02

TABULAR DESCRIPTION

RNAV (GNSS) RWY02

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/ TCH	Navigation Specification
010	IF	DUGEL (IAF)	-	-	+0.85	-	-	+7000	-	-	RNP APCH
020	TF	ASUBI (IF)	-	007°(005.8°)	+0.85	6.0	-	+5000	-210	-	RNP APCH
010	IF	OGENO (IAF)	-	-	+0.85	-	-	+7000	-	-	RNP APCH
020	TF	ASUBI (IF)	-	081°(080.4°)	+0.85	8.2	-	+5000	-210	-	RNP APCH
010	IF	MIBOB (IAF)	-	-	+0.85	-	-	+7600	-	-	RNP APCH
020	TF	EKIVI	-	152°(151.0°)	+0.85	11.1	L	+7000	-	-	RNP APCH
030	TF	ASUBI (IF)	-	112°(110.7°)	+0.85	10.0	-	+5000	-210	-	RNP APCH
010	IF	INVAR (IAF)	-	-	+0.85	-	-	+7600	-	-	RNP APCH
020	TF	EKIVI	-	202°(200.6°)	+0.85	20.9	L	+7000	-	-	RNP APCH
030	TF	ASUBI (IF)	-	112°(110.7°)	+0.85	10.0	-	+5000	-210	-	RNP APCH
010	IF	ASUBI (IF)	-	-	+0.85	-	-	+5000	-210	-	RNP APCH
020	TF	CN001 (FAF)	-	022°(020.7°)	+0.85	5.0	-	@4000	-	-	RNP APCH
030	TF	CN002 (SDF)	-	022°(020.7°)	+0.85	6.1	-	@1800	-	-	RNP APCH
040	TF	CN003 (MAPt)	Y	022°(020.7°)	+0.85	2.9	-	@729	-	-3.4 / 50	RNP APCH
050	CA	-	-	022°(020.7°)	+0.85	-	-	+1600	-	-	RNP APCH
060	DF	ASUBI (IF)	-	-	+0.85	-	R	+5000	-210	-	RNP APCH
070	HM	ASUBI (IF)	Y	022°(020.7°)	+0.85	1 minute	L	+5000	-230	-	RNP APCH

WAYPOINT LIST

RNAV (GNSS) RWY02

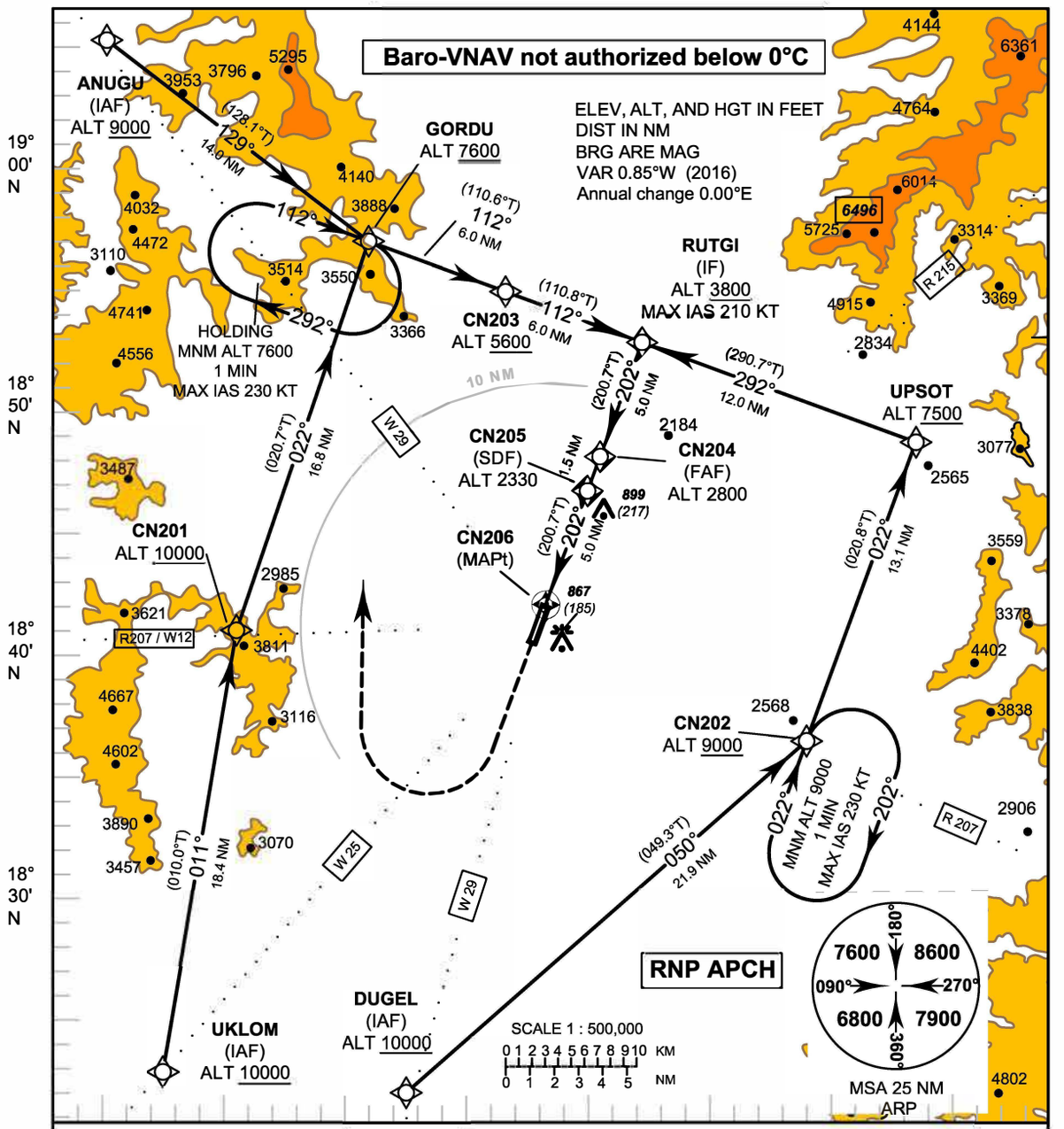
Waypoint Identifier	Coordinates	
INVAR	18° 58' 02.05" N	100° 39' 31.36" E
MIBOB	18° 48' 08.12" N	100° 26' 03.27" E
EKIVI	18° 38' 22.25" N	100° 31' 44.36" E
OGENO	18° 33' 27.22" N	100° 33' 07.59" E
DUGEL	18° 28' 53.32" N	100° 40' 57.94" E
ASUBI	18° 34' 49.75" N	100° 41' 36.01" E
CN001	18° 39' 31.54" N	100° 43' 27.52" E
CN002	18° 45' 14.84" N	100° 45' 43.49" E
CN003 (THR02)	18° 47' 58.24" N	100° 46' 48.31" E

INSTRUMENT APPROACH CHART-ICAO

AERODROME ELEV 685 FT
HEIGHTS RELATED TO
THR RWY20 - ELEV 682 FT

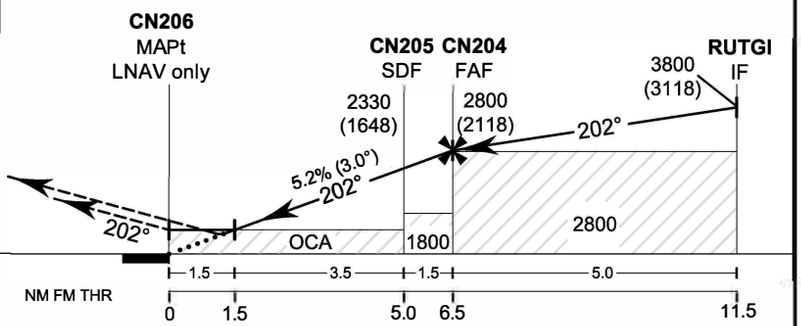
APP : 120.25
TWR : 118.55, 236.6

NAN/Nan Nakhon (VTCN)
RNAV (GNSS) RWY20



TA 11 000 **RDH 50 FT**

Missed Approach :
No turn before MAPt.
Climb on track 202° to 3300 FT, then turn right direct to **GORDU** at 7600 FT and hold or as directed by ATC.



OCA/H	A	B	C	D	NM to NEXT WPT	1.5 NM	2 NM	3 NM	4 NM	5 NM	6 NM	FAF
LNAV/VNAV	1030 (348)				Altitude (Height)	1200 (518)	1365 (683)	1680 (998)	1995 (1313)	2310 (1628)	2630 (1948)	2800 (2118)
LNAV	1200 (518)				Ground Speed	knot	70	90	100	120	140	160
Circling (OCH AAL)	1500 (815)		2100 (1415)		Rate of descent FAF-MAPt (5.2%)	(ft/min)	369	474	527	632	737	843

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INSTRUMENT APPROACH CHART-ICAO **AERODROME ELEV 685 FT** HEIGHTS RELATED TO THR RWY20 **-** ELEV 682 FT

NAN/Nan Nakhon (VTCN)
RNAV (GNSS) RWY20

TABULAR DESCRIPTION

RNAV (GNSS) RWY20

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/ TCH	Navigation Specification
010	IF	DUGEL (IAF)	-	-	+0.85	-	-	+10000	-	-	RNP APCH
020	TF	CN202	-	050°(049.3°)	+0.85	21.9	L	+9000	-	-	RNP APCH
030	TF	UPSOT	-	022°(020.8°)	+0.85	13.1	L	+7500	-	-	RNP APCH
040	TF	RUTGI (IF)	-	292°(290.7°)	+0.85	12.0	-	+3800	-210	-	RNP APCH
010	IF	ANUGU (IAF)	-	-	+0.85	-	-	+9000	-	-	RNP APCH
020	TF	GORDU	-	129°(128.1°)	+0.85	14.0	L	+7600	-	-	RNP APCH
030	TF	CN203	-	112°(110.6°)	+0.85	6.0	-	+5600	-	-	RNP APCH
040	TF	RUTGI (IF)	-	112°(110.8°)	+0.85	6.0	-	+3800	-210	-	RNP APCH
010	IF	UKLOM (IAF)	-	-	+0.85	-	-	+10000	-	-	RNP APCH
020	TF	CN201	-	011°(010.0°)	+0.85	18.4	R	+10000	-	-	RNP APCH
030	TF	GORDU	-	022°(020.7°)	+0.85	16.8	R	+7600	-	-	RNP APCH
040	TF	CN203	-	112°(110.6°)	+0.85	6.0	-	+5600	-	-	RNP APCH
050	TF	RUTGI (IF)	-	112°(110.8°)	+0.85	6.0	-	+3800	-210	-	RNP APCH
010	IF	RUTGI (IF)	-	-	+0.85	-	-	+3800	-210	-	RNP APCH
020	TF	CN204 (FAF)	-	202°(200.7°)	+0.85	5.0	-	@2800	-	-	RNP APCH
030	TF	CN205 (SDF)	-	202°(200.7°)	+0.85	1.5	-	@2330	-	-	RNP APCH
040	TF	CN206 (MAPt)	Y	202°(200.7°)	+0.85	5.0	-	@732	-	-3.0 / 50	RNP APCH
050	CA	-	-	202°(200.7°)	+0.85	-	-	+3300	-	-	RNP APCH
060	DF	GORDU	-	-	+0.85	-	R	+7600	-	-	RNP APCH
070	HM	GORDU	Y	112°(110.6°)	+0.85	1 minute	R	+7600	-230	-	RNP APCH

WAYPOINT LIST

RNAV (GNSS) RWY20

Waypoint Identifier	Coordinates	
UKLOM	18° 30' 05.00" N	100° 30' 02.76" E
CN201	18° 48' 17.06" N	100° 33' 24.54" E
ANUGU	19° 12' 40.76" N	100° 28' 00.88" E
GORDU	19° 04' 02.04" N	100° 39' 38.68" E
CN203	19° 01' 55.14" N	100° 45' 34.52" E
DUGEL	18° 28' 53.32" N	100° 40' 57.94" E
CN202	18° 43' 14.06" N	100° 58' 26.68" E
UPSOT	18° 55' 30.53" N	101° 03' 20.04" E
RUTGI	18° 59' 46.66" N	100° 51' 29.66" E
CN204	18° 55' 04.97" N	100° 49' 37.70" E
CN205	18° 53' 40.46" N	100° 49' 04.13" E
CN206 (THR20)	18° 48' 58.74" N	100° 47' 12.31" E