

## VTUD AD 2.1 AERODROME LOCATION INDICATOR AND NAME

## VTUD - UDON THANI / UDON THANI AIRPORT

## VTUD AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	172311.17N 1024717.69E
2	Direction and distance from (city)	3 KM SW, from city
3	Elevation/Reference temperature	579 FT/26°C
4	Geoid Undulation at AD ELEV PSN	NIL
5	MAG VAR/Annual change	0.87°W(2016) / 0.01°W
6	AD Administration, address, telephone, telefax, telex, AFS	Director of Udon Thani Airprot Udon Thani Airport Makkhaeng, Muang Udon Thani 41000 Thailand Tel: +664 224 4426 Fax: +664 224 6804 AFS: VTUDYDYX
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Operator: Department of Airports

## VTUD AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	2300-1500
2	Customs and immigration	On request
3	Health and sanitation	On request
4	AIS Briefing Office	NIL
5	ATS Reporting Office (ARO)	2300-1500
6	MET Briefing Office	NIL
7	ATS	2300-1500
8	Fuelling	2300-1500
9	Handling	NIL
10	Security	NIL
11	De-icing	NIL
12	Remarks	ATS Reporting Office (ARO): Located at Udon Thani Air Traffic Control Centre (1st floor of tower building) Tel: +664 223 0124 +669 2262 3477 Fax: +664 224 2797

**VTUD AD 2.4 HANDLING SERVICES AND FACILITIES**

1	Cargo-handling facilities	NIL
2	Fuel/oil types	JET A-1, AVGAS
3	Fuelling facilities/capacity	3 JET A-1 Refueller @ 12,000 L1 JET A-1 Refueller @ 22,000 L1 AVGAS DC Motor Dispenser from drum 200 L
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

**VTUD AD 2.5 PASSENGER FACILITIES**

1	Hotels	Near the AD and in the city
2	Restaurants	At AD and in the city
3	Transportation	Limousines and shuttle bus
4	Medical facilities	Hospital in the city
5	Bank and Post Office	Bank: NIL Post office: At AD, open 0300-1100
6	Tourist Office	At AD and in the city
7	Remarks	NIL

**VTUD AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	AD category for fire fighting	Category 8
2	Rescue equipment	Yes
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

**VTUD AD 2.7 SEASONAL AVAILABILITY - CLEARING**

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

**VTUD AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA**

1	Apron surface and strength	Surface: Concrete Strength: PCN 61/R/C/X/T
2	Taxiway width, surface and strength	TWY A - TWY N Width: 23 M Surface: Concrete Strength: PCN 61/R/C/X/T
3	Altimeter checkpoint location and elevation	Location: At Apron Elevation: 179 M (590 FT)
4	VOR checkpoints	NIL
5	INS checkpoints	NIL
6	Remarks	NIL

**VTUD 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	Aircraft stand ID signs: Marked TWY guide lines: Yes VDGS of aircraft stands: NIL, aircraft shall follow marshaller strictly.
2	RWY and TWY markings and LGT	RWY marking: RWY Designation, THR, TDZ, CL, Aiming Point and RWY Side Stripe RWY LGT: THR, RWY Edge and RWY End TWY marking: CL and Edge TWY LGT: TWY Edge
3	Stop bars	NIL
4	Remarks	NIL

**VTUD AD 2.10 AERODROME OBSTACLES**

In approach/TKOF areas			In circling areas and at AD		Remarks
1			2		
RWY/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
a	b	c	a	b	
RWY12/ Approach area RWY30/ Take off area	Tree HGT 132 FT AGL NIL / NIL	172336.09N 1024613.09E	AWOS 1 ELEV 613.75 FT (187.07 M) Paint red/white LGTD	172327.73 N 1024634.26E	NIL
RWY12/ Approach area RWY30/ Take off area	Radio mast ELEV 701.44 FT (213.80 M) Paint red/white LGTD	172402.44N 1024600.88E	AWOS 2 ELEV 613.65 FT (187.04 M) Paint red/white LGTD	172327.64N 1024634.44E	
RWY30/ Approach area	Radio mast ELEV 727.26 FT (221.67 M) Paint red/white LGTD	172211.25N 1024841.64E	AWOS 3 ELEV 612.40 FT (186.66 M) Paint red/white LGTD	172250.71N 1024750.63E	
RWY30/ Approach area RWY12/ Take off area	Radio mast ELEV 829.27 FT (252.76 M) Paint red/white LGTD	172144.55N 1024911.61E	AWOS 4 ELEV 612.60 FT (186.72 M) Paint red/white LGTD	172250.64N 1024750.71E	
RWY30/ Approach area RWY12/ Take off area	Telecommunication mast ELEV 634.74 FT (193.47 M) NIL / NIL	172246.27N 1024825.46E	GP ELEV 637.43 FT (194.29 M) Paint red/white LGTD	172256.83N 1024756.06E	
			Radio mast ELEV 829.56 FT (252.85 M) Paint red/white LGTD	172454.30N 1024648.57E	
			Radio mast ELEV 833.92 FT (254.18 M) Paint red/white LGTD	172421.52N 1024649.65E	

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	
			Radio mast ELEV 807.09 FT (246 M) Paint red/white LGTD	172226.91N 1024816.60E	
			Radio mast ELEV 763.25 FT (232.64 M) Paint red/white LGTD	172417.56N 1024717.27E	
			Radio mast ELEV 983.01 FT (299.62 M) Paint red/white LGTD	172444.38N 1024742.77E	
			Radio mast ELEV 732.87 FT (223.38 M) Paint red/white LGTD	172353.89N 1024711.03E	
			Radio mast ELEV 909.28 FT (277.15 M) NIL / NIL	172320.67N 1024814.35E	
			Radio mast ELEV 917.16 FT (279.55 M) Paint red/white LGTD	172508.08N 1024806.00E	
			Radio mast ELEV 784.71 FT (239.18 M) NIL / NIL	172222.33N 1024803.13E	
			Radio mast ELEV 870.34 FT (265.28 M) Paint red/white NIL	172444.66N 1024733.74E	
			Microwave radio mast ELEV 734.51 FT (223.88 M) Paint red/white LGTD	172304.98N 1024756.02E	
			Telecommunication mast ELEV 783.17 FT (238.71 M) Paint red/white LGTD	172125.77N 1024708.40E	



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	
			Telecommunication mast ELEV 746.46 FT (227.52 M) Paint red/white LGTD	172140.25N 1024711.59E	
			Telecommunication mast ELEV 746.46 FT (227.52 M) Paint red/white LGTD	172410.35N 1024627.69E	
			Telecommunication mast ELEV 740.39 FT (225.67 M) Paint red/white LGTD	172334.37N 1024717.19E	
			Telecommunication mast ELEV 797.34 FT (243.03 M) Paint red/white LGTD	172442.34N 1024307.60E	
			Telecommunication mast ELEV 748.16 FT (228.04 M) Paint red/white LGTD	172205.85N 1024749.72E	
			Telecommunication mast ELEV 761.35 FT (232.06 M) NIL / NIL	172114.53N 1024806.03E	
			Telecommunication mast ELEV 774.57 FT (236.09 M) NIL / NIL	172248.11N 1024427.81E	
			Telecommunication mast ELEV 836.75 FT (255.04 M) Paint red/white NIL	172248.52N 1024432.37E	
			Telecommunication mast ELEV 760.56 FT (231.82 M) Paint red/white NIL	172302.83N 1024447.32E	

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	
			Telecommunication mast ELEV 735.17 FT (224.08 M) NIL / NIL	172306.14N 1024539.60E	
			Telecommunication mast ELEV 780.61 FT (237.93 M) Paint red/white LGTD	172138.71N 1024535.51E	
			Telecommunication mast ELEV 765.68 FT (233.38 M) NIL / NIL	172153.95N 1024536.29E	
			Telecommunication mast ELEV 742.09 FT (226.19 M) Paint red/white NIL	172222.25N 1024619.06E	
			Telecommunication mast ELEV 745.31 FT (227.17 M) Paint red/white NIL	172224.47N 1024622.42E	
			Telecommunication mast ELEV 753.28 FT (229.60 M) Paint red/white NIL	172224.38N 1024623.49E	
			Telecommunication mast ELEV 743.01 FT (226.47 M) Paint red/white LGTD	172221.31N 1024625.98E	
			Telecommunication mast ELEV 761.91 FT (232.23 M) NIL / NIL	172117.43N 1024645.34E	
			Telecommunication mast ELEV 873.03 FT (266.10 M) Paint red/white NIL	172104.48N 1024706.73E	

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	
			Building ELEV 776.15 FT (236.57 M) Paint red/white LGTD	172202.95N 1024535.16E	
			Building ELEV 734.94 FT (224.01 M) NIL / NIL	172439.51N 1024742.31E	
			Building ELEV 754.17 FT (229.87 M) NIL / NIL	172420.21N 1024759.92E	
			Building ELEV 743.57 FT (226.64 M) NIL / LGTD	172456.73N 1024642.99E	
			Telecommunication Mast HGT 237 FT AGL NIL / NIL	172356.00N 1024618.60E	

**VTUD AD 2.11 METEOROLOGICAL INFORMATION PROVIDED**

1	Associated MET Office	Aeronautical Meteorological Station-Udon Thani, Upper Northeastern Meteorological Center, Thai Meteorological Department (TMD)
2	Hours of service MET Office outside hours	2200-1500 NIL
3	Office responsible for TAF preparation Periods of validity	Supply TAF from Upper Northeastern Meteorological Center 24 HR
4	Type of landing forecast Interval of issuance	TREND 1 HR
5	Briefing/consultation provided	Personal Consultation Tel: +664 224 6803
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) and Low Level Wind Shear Alert System (LLWAS)
9	ATS units provided with information	Udon Thani TWR
10	Additional information (limitation of service, etc.)	NIL

**VTUD 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
12	117.69°	3048x45	PCN 65/F/C/X/T Asphalt	172333.72N 1024631.65E	THR 579 FT TDZ 579 FT
30	297.68°	3048x45	PCN 65/F/C/X/T Asphalt	172248.62N 1024803.73E	THR 579 FT TDZ 579 FT

Slope of RWY-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
NIL	300x45	NIL	3768x300	NIL	NIL
NIL	300x45	NIL	3768x300	NIL	NIL

**VTUD AD 2.13 DECLARED DISTANCES**

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
12	3048	3048	3348	3048	NIL
30	3048	3048	3348	3048	NIL

## VTUD 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
12	SALS 420 M LIH	Green NIL	PAPI LEFT 3° (50.60 FT)	NIL	NIL	3 048 M 60 M White LIH YCZ: 600 M	Red NIL	300 M Red	NIL
30	SALS 420 M LIH	Green Green	PAPI LEFT 3° (53.84 FT)	NIL	NIL	3 048 M 60 M White LIH YCZ: 600 M	Red NIL	300 M Red	NIL

## VTUD AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: At Tower Building, FLG WG EV 4 SEC.. IBN: NIL
2	LDI location and LGT Anemometer location and LGT	LDI: NIL WDI: - Wind cone at 350 M from THR 12 off set to the right side 80 M from RCL, illuminated. - Wind cone at 350 M from THR 30 off set to the left side 80 M from RCL, illuminated. Anemometer: NIL
3	TWY edge and centre line lighting	Edge: All TWY Centre Line: NIL
4	Secondary power supply/switch-over time	Secondary power supply at air field lighting (AFL). Switch-over time: 15 SEC
5	Remarks	NIL

## VTUD 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

## VTUD AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	A circle of 5 NM radius centred on UDN DVOR/DME (172304.20N 1024630.05E)
2	Vertical limits	3000 FT/AGL
3	Airspace classification	C
4	ATS unit call sign Language(s)	Udon Tower English, Thai

5	Transition altitude	11000 FT
6	Remarks	NIL

**VTUD AD 2.18 ATS COMMUNICATION FACILITIES**

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP	Udon Approach	126.2 MHZ 265.9 MHZ 119.45 MHZ <sup>2)</sup> 121.5 MHZ <sup>1)</sup>	As AD OPR HR	<sup>1)</sup> Emergency frequency <sup>2)</sup> Backup frequency
TWR	Udon Tower	121.5 MHZ <sup>1)</sup> 122.5 MHZ 243.0 MHZ <sup>1)</sup> 355.4 MHZ 119.45 MHZ <sup>2)</sup>	As AD OPR HR	
GND	Udon Ground	121.9 MHZ 275.8 MHZ	As AD OPR HR	
ATIS	Udon Airport	127.6 MHZ	As AD OPR HR	

**VTUD 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
DVOR/DME	UDN	114.3 MHZ CH90X	H24	172304.20N 1024630.05E		DVOR/DME restriction, due to mountainous terrain surround DVOR/DME station coverage check does not provide adequate signal at required altitudes in various areas as follow: 1.20 NM orbit (due to border limited) - RDL331°-030° ALT should not below 2500 FT 2. 40 NM orbit - RDL031°-090° ALT should not below 3000 FT - RDL091°-190° ALT should not below 4000 FT - RDL191°-220° ALT should not below 5000 FT - RDL221°-330° ALT should not below 4000 FT 3. The airways were checked and result found satisfactory - Airway W15 on RDL097° flown to 40.1 NM ALT 4000 FT - Airway W4 on RDL143° flown to 50.0 NM ALT 4000 FT
ILS CAT I LOC RWY30	IUDN	110.1 MHZ	H24	172341.25N 1024616.25E		
GP/DME		334.4 MHZ CH38X	H24	172256.70N 1024755.94E		
TACAN	UDN	CH86	0000-1300	1722.9N 10248.1E		Military Facilities PN 30 min to ATC

## VTUD AD 2.20 LOCAL AERODROME REGULATIONS

### 1. VFR REPORTING POINTS AND LOCAL PROCEDURES

1.1 Reporting points for VFR flight In order to expedite and maintain an order flow of air traffic into Udon Thani Airport, the procedures of the inbound traffic of VFR flight, conventional and prop-jet aircraft be set up as follow:

- a) Aircraft entering to land from north and northeast of Udon Thani Airport, will report over Bantin Distric, designated as TANGO (1739.6N 10247.6E) which is 17 NM on R-360 of UD VOR. When reaching TANGO the aircraft will be instructed to join aerodrome traffic pattern accordingly
- b) Aircraft entering to land from east and southeast of Udon Thani Airport, will report over Nonghan District, designated as NOVEMBER (1721.5N 10306.1E) which is 17 NM on R-095 of UD VOR. When reaching NOVEMBER the aircraft will be instructed to join aerodrome traffic pattern accordingly
- c) Aircraft entering to land from south and southwest of Udon Thani Airport will report over Ban Dongrueng, designated as ROMEO (1709.5N 10258.0E) which is 16 NM on R-145 of UD VOR. When reaching ROMEO the aircraft will be instructed to join aerodrome traffic pattern accordingly
- d) Aircraft entering to land from west of Udon Thani Airport, will report over Ban Hua Khua (Hui Luang Reservoir) designated as HOTEL (1725.0N 10236.5E) which is 12 NM on R-280 of UD VOR. When reaching HOTEL the aircraft will be instructed to join aerodrome traffic pattern accordingly

1.2 Aerodrome traffic circuit.

Using both sides of traffic circuit

1.3 Overhead approach pattern.

- a) Using runway 12 by right turn pattern.
- b) Using runway 30 by left turn pattern.

### VTUD AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

### VTUD AD 2.22 FLIGHT PROCEDURES

#### 1. IFR DEPARTURES OTHER THAN VIA SID

IFR departure procedures described below are determined for the purpose of case when an instrument departure via SID is impossible or undesirable.

#### 2. VISUAL DEPARTURES

Visual departures during take-off and initial climb-out are permitted during the daytime and Visual Meteorological Conditions (VMC). ATC clearance to execute a visual departure may be issued upon request of the pilot or upon initiative of the ATC and accepted by the pilot.

To execute a visual departure

- meteorological conditions in the direction of take-off and the following climb-out shall enable visual reference to terrain up to Minimum Sector Altitude (MSA) or Minimum Flight Altitude (MFA) stated in ATC clearance,
- the pilot shall be responsible for obstacle clearance until such specified altitude,
- the pilot prior to take-off shall agree to execute this procedure,
- the ATC clearance shall be readback,

#### 3. OMNIDIRECTIONAL DEPARTURES

Omnidirectional departures during take-off and initial climb-out are permitted during the day and night. ATC clearance to execute an omnidirectional departure may be issued upon request of the pilot or upon initiative of the ATC and accepted by the pilot.

To execute an omnidirectional departure:

- the pilot shall be maintaining a minimum climb gradient up to specific altitude as published shown as below,
  - the pilot shall be responsible for adherence to such obtained ATC clearance,
  - the pilot prior to take-off shall agree to execute this procedure,
  - The ATC clearance shall be readback,
- Runway 12:

UDON OMNI 12 Departure: Required climb gradient 201 ft per NM (3.3%) until 3,500 ft.

Ground speed	Knot	65	75	100	150	200	250	300
Rate of climb 3.3%	(ft/min)	217	251	334	501	668	835	1003

No turn before DER.

After departure climb straight ahead until 1,500 ft (or altitude assigned by ATC between 1,500 ft - 3,000 ft), then comply with ATC clearance issued (or as directed by ATC).

- Runway 30:

UDON OMNI 30 Departure: Required climb gradient 201 ft per NM (3.3%) until 3,500 ft.

Ground speed	Knot	65	75	100	150	200	250	300
Rate of climb 3.3%	(ft/min)	217	251	334	501	668	835	1003

No turn before DER.

After departure climb straight ahead until 1,500 ft (or altitude assigned by ATC between 1,500 ft - 3,000 ft), then comply with ATC clearance issued (or as directed by ATC).

### VTUD AD 2.23 ADDITIONAL INFORMATION

#### 1. MILITARY RADAR AND FACILITIES

- Royal Thai Air Force ASR/SSR facilities installed and operations details as follows:

Radio call sign : UDON Departure Control/ UDOM Arrival Control

DEP freq : 134.1 and 261.4 MHZ

ARR freq : 119.6, 298.0 and 382.4 MHZ

Conver range/height : ASR 70 NM/40 000 FT

: SSR 200 NM/100 000 FT

Hours of operations : Monday-Friday 0100-0900

Emission : ASR 500 KW, SSR 1.5 KW

Remarks : Available for Military.

- BAK 14 RAG installed at 427 M from threshold runway 12 and 30 cable height 3 inches.

- Net Barrier installed on both side of runway 12/30 at 15 M from threshold.

#### 2. BIRD CONCENTRATIONS

- Bird concentrations in the vicinity of an aerodrome.



## VTUD AD 2.24 CHARTS RELATED TO AN AERODROME

Chart name	Page
Aerodrome Chart - ICAO	AD 2-VTUD-2-1
Aircraft Parking/Docking Chart - ICAO	AD 2-VTUD-2-3
Standard Departure Chart - Instrument (SID) - ICAO - RNAV RWY 12 - ANPUS1B ELNET1B ESGIB1B GULNO1B POVEX1B SURGU1B TERCO1B	AD 2-VTUD-6-1
Standard Departure Chart - Instrument (SID) - ICAO - RNAV RWY 12 - ANPUS1B ELNET1B ESGIB1B GULNO1B POVEX1B SURGU1B TERCO1B (Tabular description 1)	AD 2-VTUD-6-2
Standard Departure Chart - Instrument (SID) - ICAO - RNAV RWY 12 - ANPUS1B ELNET1B ESGIB1B GULNO1B POVEX1B SURGU1B TERCO1B (Tabular description 2)	AD 2-VTUD-6-3
Standard Departure Chart - Instrument (SID) - ICAO - RNAV RWY 30 - ANPUS1D ELNET1D ESGIB1D GULNO1D POVEX1D SURGU1D TERCO1D	AD 2-VTUD-6-5
Standard Departure Chart - Instrument (SID) - ICAO - RNAV RWY 30 - ANPUS1D ELNET1D ESGIB1D GULNO1D POVEX1D SURGU1D TERCO1D (Tabular description 1)	AD 2-VTUD-6-6
Standard Departure Chart - Instrument (SID) - ICAO - RNAV RWY 30 - ANPUS1D ELNET1D ESGIB1D GULNO1D POVEX1D SURGU1D TERCO1D (Tabular description 2)	AD 2-VTUD-6-7
Standard Arrival Chart - Instrument (STAR) - ICAO - RNAV RWY 12 - ANPUS1A ELNET1A ESGIB1A GULNO1A MUGNO1A POVEX1A SURGU1A	AD 2-VTUD-7-1
Standard Arrival Chart - Instrument (STAR) - ICAO - RNAV RWY 12 - ANPUS1A ELNET1A ESGIB1A GULNO1A MUGNO1A POVEX1A SURGU1A (Tabular description)	AD 2-VTUD-7-2
Standard Arrival Chart - Instrument (STAR) - ICAO - RNAV RWY 12 - ANPUS1A ELNET1A ESGIB1A GULNO1A MUGNO1A POVEX1A SURGU1A (Waypoint list table)	AD 2-VTUD-7-3
Standard Arrival Chart - Instrument (STAR) - ICAO - RNAV RWY 30 - ANPUS1C ELNET1C ESGIB1C GULNO1C MUGNO1C POVEX1C SURGU1C	AD 2-VTUD-7-5
Standard Arrival Chart - Instrument (STAR) - ICAO - RNAV RWY 30 - ANPUS1C ELNET1C ESGIB1C GULNO1C MUGNO1C POVEX1C SURGU1C (Tabular description)	AD 2-VTUD-7-6
Standard Arrival Chart - Instrument (STAR) - ICAO - RNAV RWY 30 - ANPUS1C ELNET1C ESGIB1C GULNO1C MUGNO1C POVEX1C SURGU1C (Waypoint list table)	AD 2-VTUD-7-7
Instrument Approach Chart - ICAO - VOR RWY 12	AD 2-VTUD-8-1
Instrument Approach Chart - ICAO - VOR RWY 12 (Fix and point list table)	AD 2-VTUD-8-2
Instrument Approach Chart - ICAO - VOR RWY 30	AD 2-VTUD-8-3
Instrument Approach Chart - ICAO - VOR RWY 30 (Fix and point list table)	AD 2-VTUD-8-4
Instrument Approach Chart - ICAO - ILS or LOC y RWY 30	AD 2-VTUD-8-5
Instrument Approach Chart - ICAO - ILS or LOC y RWY 30 (Fix and point list table)	AD 2-VTUD-8-6
Instrument Approach Chart - ICAO - ILS or LOC z RWY 30	AD 2-VTUD-8-7
Instrument Approach Chart - ICAO - ILS or LOC z RWY 30 (Tabular description)	AD 2-VTUD-8-8
Instrument Approach Chart - ICAO - ILS or LOC z RWY 30 (Fix and point list table)	AD 2-VTUD-8-9
Instrument Approach Chart - ICAO - RNP RWY 12	AD 2-VTUD-8-11
Instrument Approach Chart - ICAO - RNP RWY 12 (Tabular description)	AD 2-VTUD-8-12
Instrument Approach Chart - ICAO - RNP RWY 30	AD 2-VTUD-8-13
Instrument Approach Chart - ICAO - RNP RWY 30 (Tabular description)	AD 2-VTUD-8-14

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**AERODROME CHART - ICAO** 17 23 11 N  
102 47 18 E

**ELEV 579 FT**  
**176 M**

**TWR 122.50**  
**355.40**

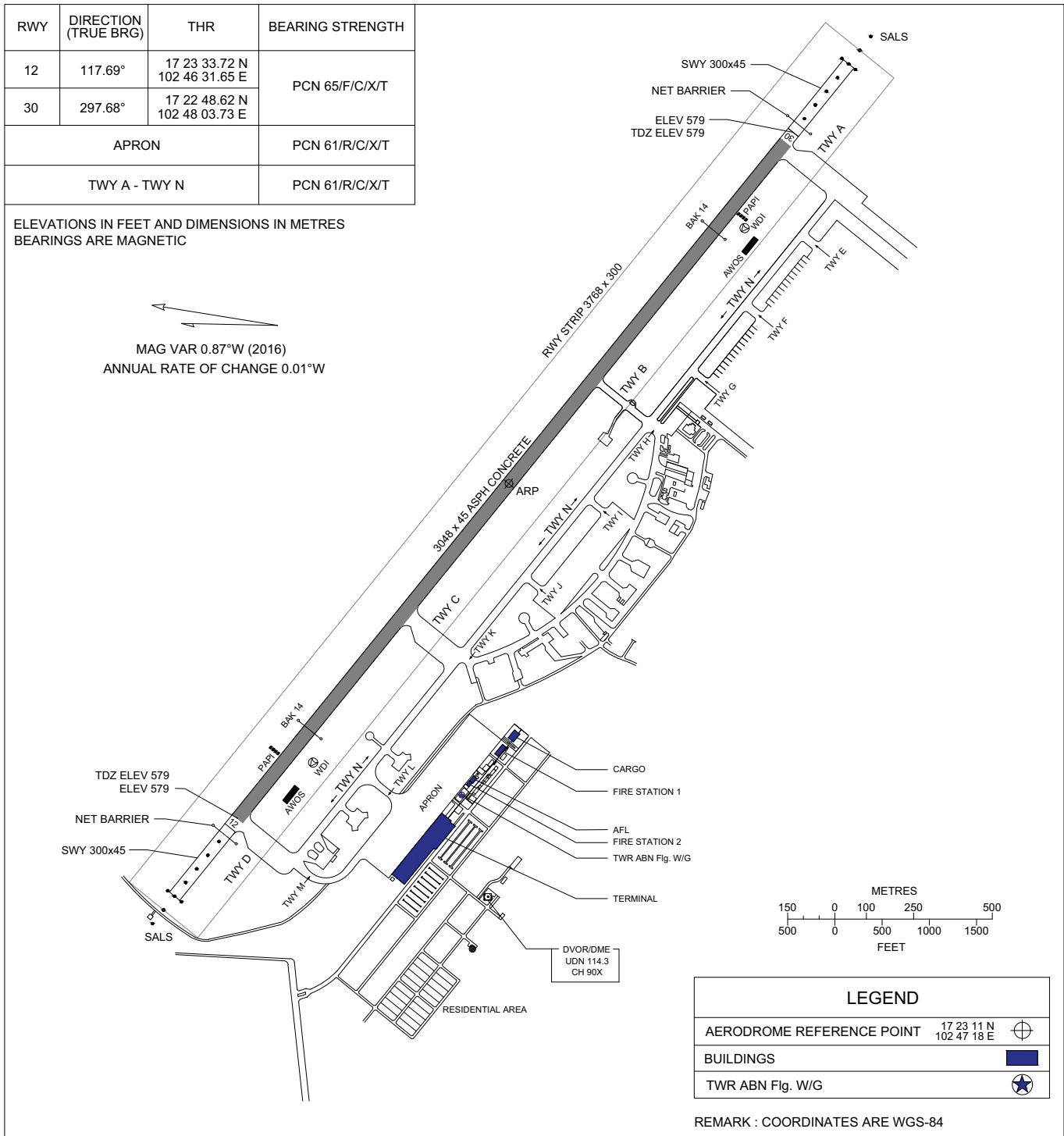
**UDON THANI / Udon Thani**

RWY	DIRECTION (TRUE BRG)	THR	BEARING STRENGTH
12	117.69°	17 23 33.72 N 102 46 31.65 E	PCN 65/F/C/X/T
30	297.68°	17 22 48.62 N 102 48 03.73 E	
APRON			PCN 61/R/C/X/T
TWY A - TWY N			PCN 61/R/C/X/T

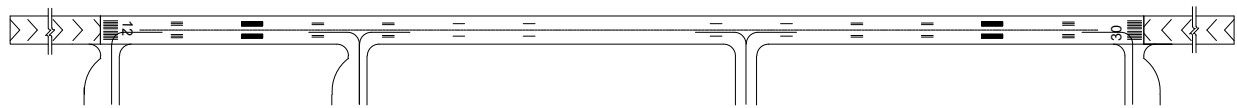
ELEVATIONS IN FEET AND DIMENSIONS IN METRES  
BEARINGS ARE MAGNETIC

MAG VAR 0.87°W (2016)  
ANNUAL RATE OF CHANGE 0.01°W

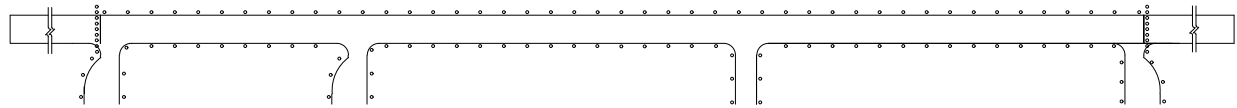
CHANGE : REVISED CHART. TABULAR ADDED. MAG VAR. ANNUAL RATE OF CHANGE. WIND CONE ADDED. AWOS ADDED. NDB DELETED.



MARKING AIDS RWY 12/30 AND EXIT TWY



LIGHTING AIDS RWY 12/30 AND EXIT TWY



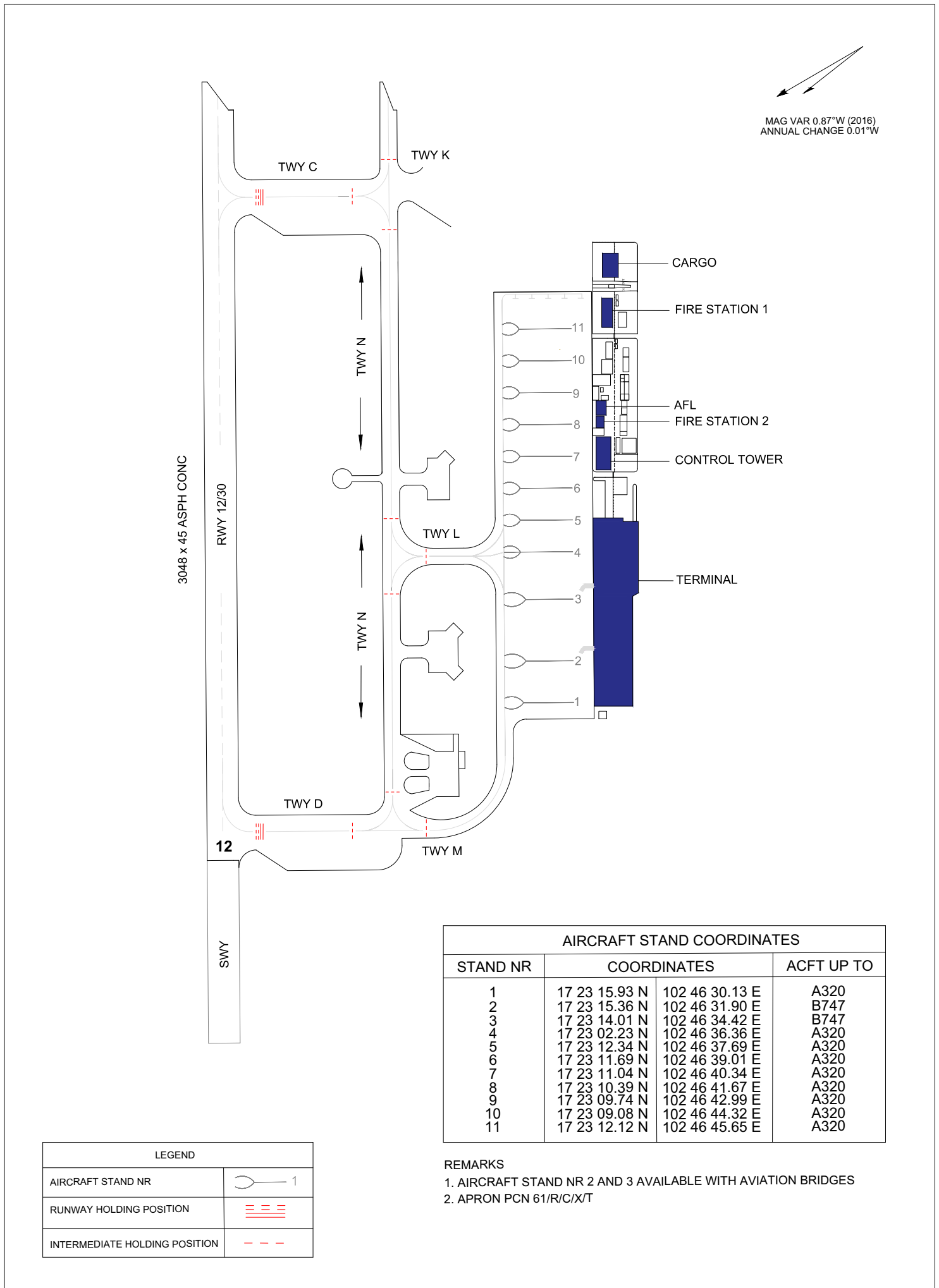
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AIRCRAFT PARKING /  
DOCKING CHART-ICAO




APRON ELEV 579 FT  
176 M

TWR 122.5  
GND 121.9

UDON THANI / Udon Thani



CHANGE : NEW CHART.

LEGEND	
AIRCRAFT STAND NR	 1
RUNWAY HOLDING POSITION	
INTERMEDIATE HOLDING POSITION	

AIRCRAFT STAND COORDINATES			
STAND NR	COORDINATES		ACFT UP TO
1	17 23 15.93 N	102 46 30.13 E	A320
2	17 23 15.36 N	102 46 31.90 E	B747
3	17 23 14.01 N	102 46 34.42 E	B747
4	17 23 02.23 N	102 46 36.36 E	A320
5	17 23 12.34 N	102 46 37.69 E	A320
6	17 23 11.69 N	102 46 39.01 E	A320
7	17 23 11.04 N	102 46 40.34 E	A320
8	17 23 10.39 N	102 46 41.67 E	A320
9	17 23 09.74 N	102 46 42.99 E	A320
10	17 23 09.08 N	102 46 44.32 E	A320
11	17 23 12.12 N	102 46 45.65 E	A320

REMARKS  
1. AIRCRAFT STAND NR 2 AND 3 AVAILABLE WITH AVIATION BRIDGES  
2. APRON PCN 61/R/C/X/T

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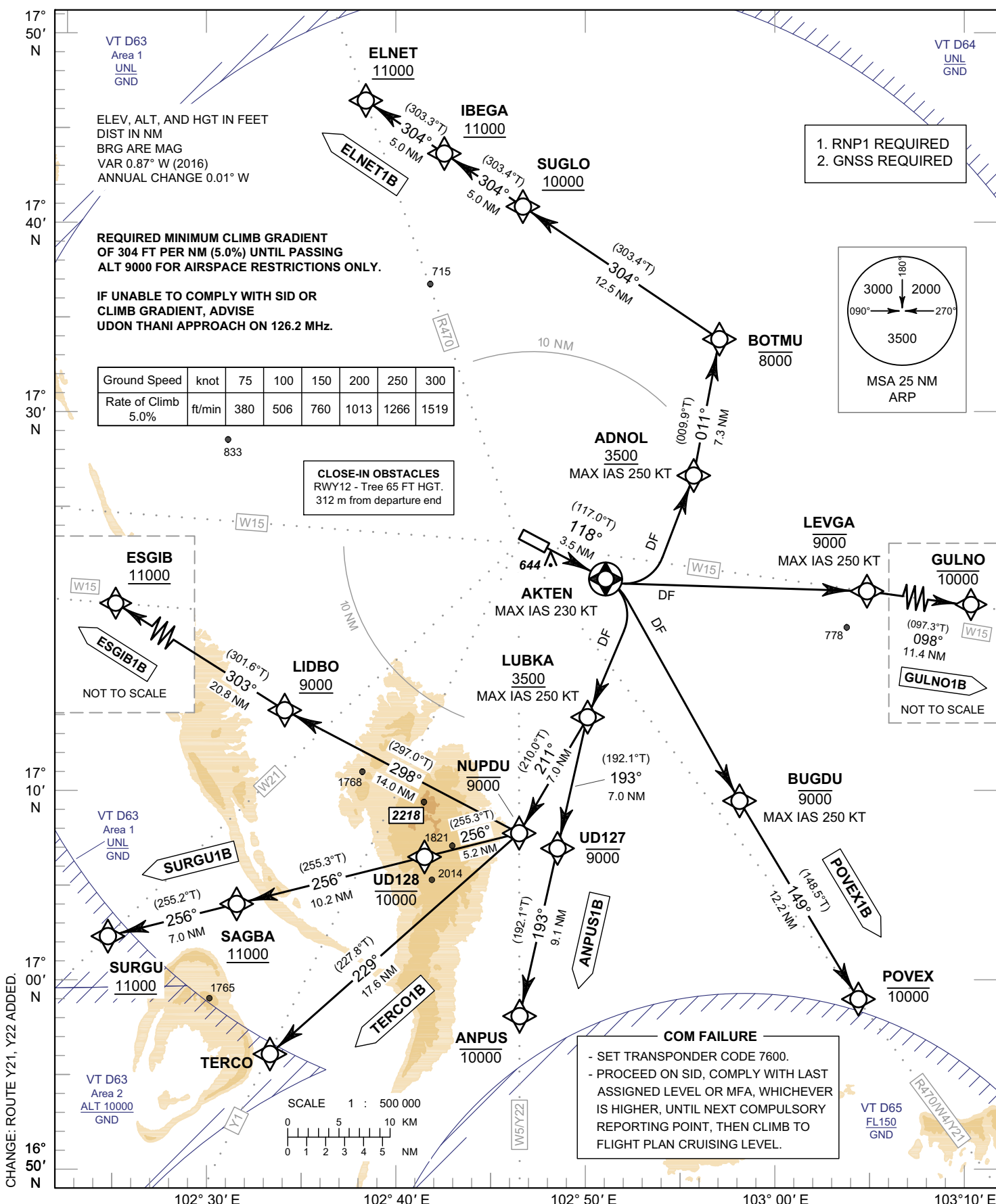
**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

TRANSITION ALTITUDE  
11000 FT

APP : 126.2, 265.9  
TWR : 122.5, 355.4  
GND : 121.9, 275.8  
ATIS : 127.6

**UDON THANI / Udon Thani (VTUD)  
RNAV RWY12**

ANPUS1B ELNET1B ESGIB1B  
GULNO1B POVEX1B SURGU1B TERCO1B



STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO

UDON THANI / Udon Thani (VTUD)  
RNAV RWY12

ANPUS1B ELNET1B ESGIB1B  
GULNO1B POVEX1B SURGU1B TERCO1B

TABULAR DESCRIPTION (1)

RNAV RWY12											
Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/TCH	Navigation Specification
ANPUS1B											
010	-	DER RWY12	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	AKTEN	Y	118°(117.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	LUBKA	-	-	+0.91	-	R	+3500	-250	-	RNP 1
040	TF	UD127	-	193°(192.1°)	+0.91	7.0	-	-9000	-	-	RNP 1
050	TF	ANPUS	-	193°(192.1°)	+0.91	9.1	-	-10000	-	-	RNP 1
ELNET1B											
010	-	DER RWY12	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	AKTEN	Y	118°(117.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	ADNOL	-	-	+0.91	-	L	+3500	-250	-	RNP 1
040	TF	BOTMU	-	011°(009.9°)	+0.91	7.3	-	-8000	-	-	RNP 1
050	TF	SUGLO	-	304°(303.4°)	+0.91	12.5	-	+10000	-	-	RNP 1
060	TF	IBEGA	-	304°(303.4°)	+0.91	5.0	-	+11000	-	-	RNP 1
070	TF	ELNET	-	304°(303.3°)	+0.91	5.0	-	+11000	-	-	RNP 1
ESGIB1B											
010	-	DER RWY12	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	AKTEN	Y	118°(117.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	LUBKA	-	-	+0.91	-	R	+3500	-250	-	RNP 1
040	TF	NUPDU	-	211°(210.0°)	+0.91	7.0	-	-9000	-	-	RNP 1
050	TF	LIDBO	-	298°(297.0°)	+0.91	14.0	-	+9000	-	-	RNP 1
060	TF	ESGIB	-	303°(301.6°)	+0.91	20.8	-	+11000	-	-	RNP 1
GULNO1B											
010	-	DER RWY12	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	AKTEN	Y	118°(117.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	LEVGA	-	-	+0.91	-	L	-9000	-250	-	RNP 1
040	TF	GULNO	-	098°(097.3°)	+0.91	11.4	-	-10000	-	-	RNP 1
POVEX1B											
010	-	DER RWY12	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	AKTEN	Y	118°(117.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	BUGDU	-	-	+0.91	-	R	-9000	-250	-	RNP 1
040	TF	POVEX	-	149°(148.5°)	+0.91	12.2	-	-10000	-	-	RNP 1



**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**UDON THANI / Udon Thani (VTUD)  
RNAV RWY12**

ANPUS1B ELNET1B ESGIB1B  
GULNO1B POVEX1B SURGU1B TERCO1B

**TABULAR DESCRIPTION (2)**

RNAV RWY12											
Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/TCH	Navigation Specification
SURGU1B											
010	-	DER RWY12	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	AKTEN	Y	118°(117.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	LUBKA	-	-	+0.91	-	R	+3500	-250	-	RNP 1
040	TF	NUPDU	-	211°(210.0°)	+0.91	7.0	-	-9000	-	-	RNP 1
050	TF	UD128	-	256°(255.3°)	+0.91	5.2	-	-10000	-	-	RNP 1
060	TF	SAGBA	-	256°(255.3°)	+0.91	10.2	-	+11000	-	-	RNP 1
070	TF	SURGU	-	256°(255.2°)	+0.91	7.0	-	+11000	-	-	RNP 1
TERCO1B											
010	-	DER RWY12	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	AKTEN	Y	118°(117.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	LUBKA	-	-	+0.91	-	R	+3500	-250	-	RNP 1
040	TF	NUPDU	-	211°(210.0°)	+0.91	7.0	-	-9000	-	-	RNP 1
050	TF	TERCO	-	229°(227.8°)	+0.91	17.6	-	-	-	-	RNP 1

**WAYPOINT LIST**

RNAV RWY12					
Waypoint Identifier	Coordinates		Waypoint Identifier	Coordinates	
DER RWY12	17° 22' 48.62" N	102° 48' 03.73" E	LIDBO	17° 14' 03.45" N	102° 33' 42.65" E
ADNOL	17° 26' 44.78" N	102° 56' 07.85" E	LUBKA	17° 13' 47.25" N	102° 50' 22.35" E
AKTEN	17° 21' 12.77" N	102° 51' 19.30" E	NUPDU	17° 07' 41.39" N	102° 46' 43.01" E
ANPUS	16° 57' 59.70" N	102° 46' 51.15" E	POVEX	16° 59' 05.19" N	103° 05' 29.66" E
BOTMU	17° 33' 59.49" N	102° 57' 27.11" E	SAGBA	17° 03' 45.63" N	102° 31' 11.90" E
BUGDU	17° 09' 33.14" N	102° 58' 49.31" E	SUGLO	17° 40' 53.99" N	102° 46' 31.13" E
ELNET	17° 46' 25.01" N	102° 37' 45.95" E	SURGU	17° 01' 57.87" N	102° 24' 08.06" E
ESGIB	17° 24' 58.25" N	102° 15' 13.93" E	TERCO	16° 55' 49.66" N	102° 33' 07.98" E
GULNO	17° 19' 14.93" N	103° 17' 35.08" E	UD127	17° 06' 54.37" N	102° 48' 50.25" E
IBEGA	17° 43' 39.55" N	102° 42' 08.61" E	UD128	17° 06' 22.50" N	102° 41' 30.85" E
LEVGA	17° 20' 42.77" N	103° 05' 45.34" E			

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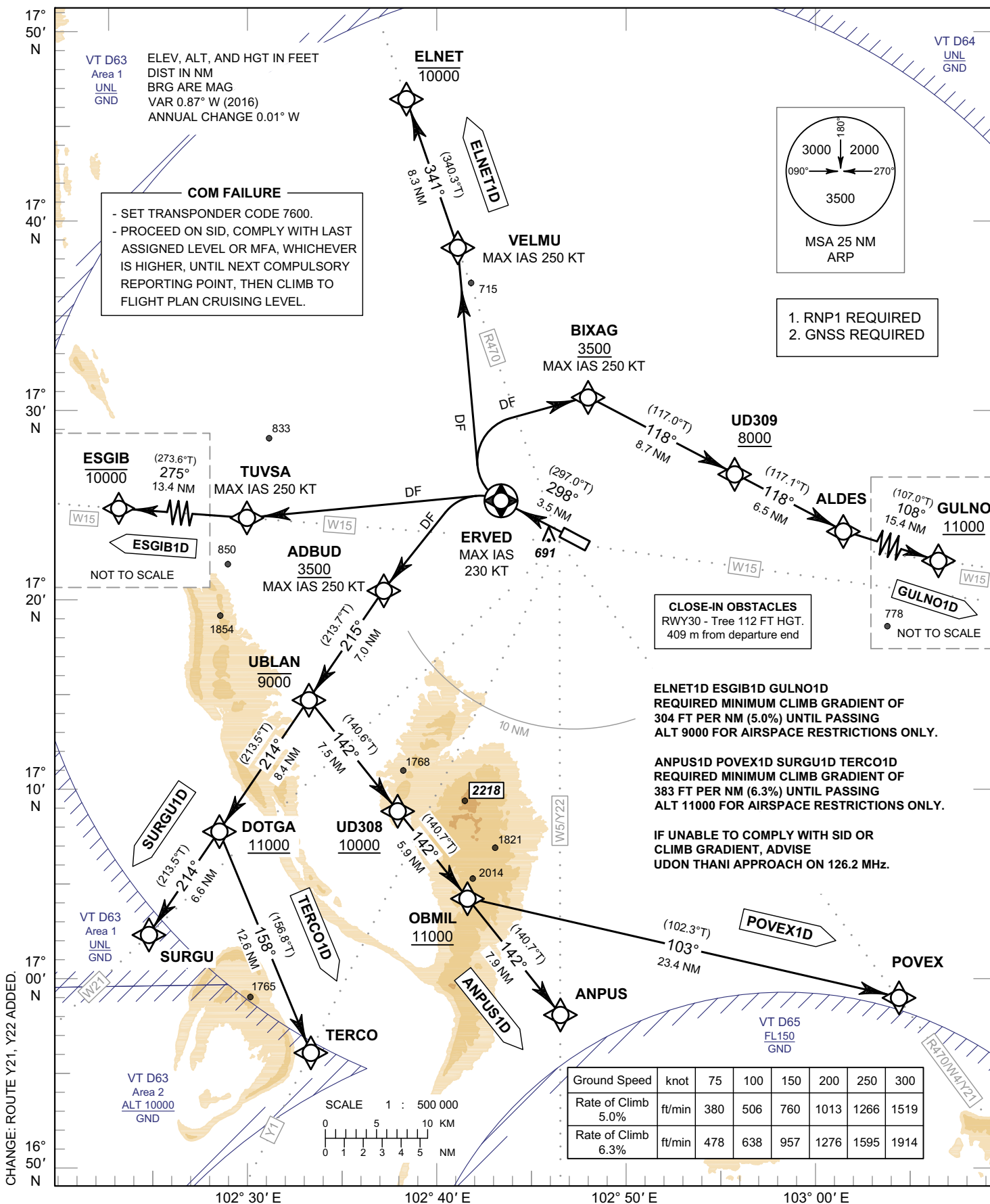
**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

TRANSITION ALTITUDE  
11000 FT

APP : 126.2, 265.9  
TWR : 122.5, 355.4  
GND : 121.9, 275.8  
ATIS : 127.6

**UDON THANI / Udon Thani (VTUD)  
RNAV RWY30**

ANPUS1D ELNET1D ESGIB1D  
GULNO1D POVEX1D SURGU1D TERCO1D



STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO

UDON THANI / Udon Thani (VTUD)  
RNAV RWY30

ANPUS1D ELNET1D ESGIB1D  
GULNO1D POVEX1D SURGU1D TERCO1D

TABULAR DESCRIPTION (1)

RNAV RWY30											
Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/TCH	Navigation Specification
ANPUS1D											
010	-	DER RWY30	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	ERVED	Y	298°(297.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	ADBUD	-	-	+0.91	-	L	+3500	-250	-	RNP 1
040	TF	UBLAN	-	215°(213.7°)	+0.91	7.0	-	-9000	-	-	RNP 1
050	TF	UD308	-	142°(140.6°)	+0.91	7.5	-	+10000	-	-	RNP 1
060	TF	OBMIL	-	142°(140.7°)	+0.91	5.9	-	+11000	-	-	RNP 1
070	TF	ANPUS	-	142°(140.7°)	+0.91	7.9	-	-	-	-	RNP 1
ELNET1D											
010	-	DER RWY30	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	ERVED	Y	298°(297.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	VELMU	-	-	+0.91	-	R	-	-250	-	RNP 1
040	TF	ELNET	-	341°(340.3°)	+0.91	8.3	-	-10000	-	-	RNP 1
ESGIB1D											
010	-	DER RWY30	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	ERVED	Y	298°(297.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	TUVSA	-	-	+0.91	-	L	-	-250	-	RNP 1
040	TF	ESGIB	-	275°(273.6°)	+0.91	13.4	-	-10000	-	-	RNP 1
GULNO1D											
010	-	DER RWY30	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	ERVED	Y	298°(297.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	BIXAG	-	-	+0.91	-	R	+3500	-250	-	RNP 1
040	TF	UD309	-	118°(117.0°)	+0.91	8.7	-	+8000	-	-	RNP 1
050	TF	ALDES	-	118°(117.1°)	+0.91	6.5	-	-	-	-	RNP 1
060	TF	GULNO	-	108°(107.0°)	+0.91	15.4	-	+11000	-	-	RNP 1
POVEX1D											
010	-	DER RWY30	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	ERVED	Y	298°(297.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	ADBUD	-	-	+0.91	-	L	+3500	-250	-	RNP 1
040	TF	UBLAN	-	215°(213.7°)	+0.91	7.0	-	-9000	-	-	RNP 1
050	TF	UD308	-	142°(140.6°)	+0.91	7.5	-	+10000	-	-	RNP 1
060	TF	OBMIL	-	142°(140.7°)	+0.91	5.9	-	+11000	-	-	RNP 1
070	TF	POVEX	-	103°(102.3°)	+0.91	23.4	-	-	-	-	RNP 1

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**UDON THANI / Udon Thani (VTUD)  
RNAV RWY30**

ANPUS1D ELNET1D ESGIB1D  
GULNO1D POVEX1D SURGU1D TERCO1D

**TABULAR DESCRIPTION (2)**

RNAV RWY30											
Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/TCH	Navigation Specification
SURGU1D											
010	-	DER RWY30	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	ERVED	Y	298°(297.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	ADBUD	-	-	+0.91	-	L	+3500	-250	-	RNP 1
040	TF	UBLAN	-	215°(213.7°)	+0.91	7.0	-	-9000	-	-	RNP 1
050	TF	DOTGA	-	214°(213.5°)	+0.91	8.4	-	+11000	-	-	RNP 1
060	TF	SURGU	-	214°(213.5°)	+0.91	6.6	-	-	-	-	RNP 1
TERCO1D											
010	-	DER RWY30	-	-	+0.91	-	-	-	-	-	RNP 1
020	CF	ERVED	Y	298°(297.0°)	+0.91	3.5	-	-	-230	-	RNP 1
030	DF	ADBUD	-	-	+0.91	-	L	+3500	-250	-	RNP 1
040	TF	UBLAN	-	215°(213.7°)	+0.91	7.0	-	-9000	-	-	RNP 1
050	TF	DOTGA	-	214°(213.5°)	+0.91	8.4	-	+11000	-	-	RNP 1
060	TF	TERCO	-	158°(156.8°)	+0.91	12.6	-	-	-	-	RNP 1

**WAYPOINT LIST**

RNAV RWY30					
Waypoint Identifier	Coordinates		Waypoint Identifier	Coordinates	
DER RWY30	17° 23' 33.72" N	102° 46' 31.65" E	OBMIL	17° 04' 05.93" N	102° 41' 39.53" E
ADBUD	17° 20' 21.55" N	102° 36' 50.43" E	POVEX	16° 59' 05.19" N	103° 05' 29.66" E
ALDES	17° 23' 47.70" N	103° 02' 08.55" E	SURGU	17° 01' 57.87" N	102° 24' 08.06" E
ANPUS	16° 57' 59.70" N	102° 46' 51.15" E	TERCO	16° 55' 49.66" N	102° 33' 07.98" E
BIXAG	17° 30' 44.10" N	102° 47' 59.49" E	TUVSA	17° 24' 07.82" N	102° 29' 13.75" E
DOTGA	17° 07' 29.54" N	102° 27' 56.58" E	UBLAN	17° 14' 30.72" N	102° 32' 46.85" E
ELNET	17° 46' 25.01" N	102° 37' 45.95" E	UD308	17° 08' 41.12" N	102° 37' 45.08" E
ERVED	17° 25' 09.49" N	102° 43' 15.99" E	UD309	17° 26' 44.78" N	102° 56' 07.85" E
ESGIB	17° 24' 58.25" N	102° 15' 13.93" E	VELMU	17° 38' 34.57" N	102° 40' 42.16" E
GULNO	17° 19' 14.93" N	103° 17' 35.08" E			

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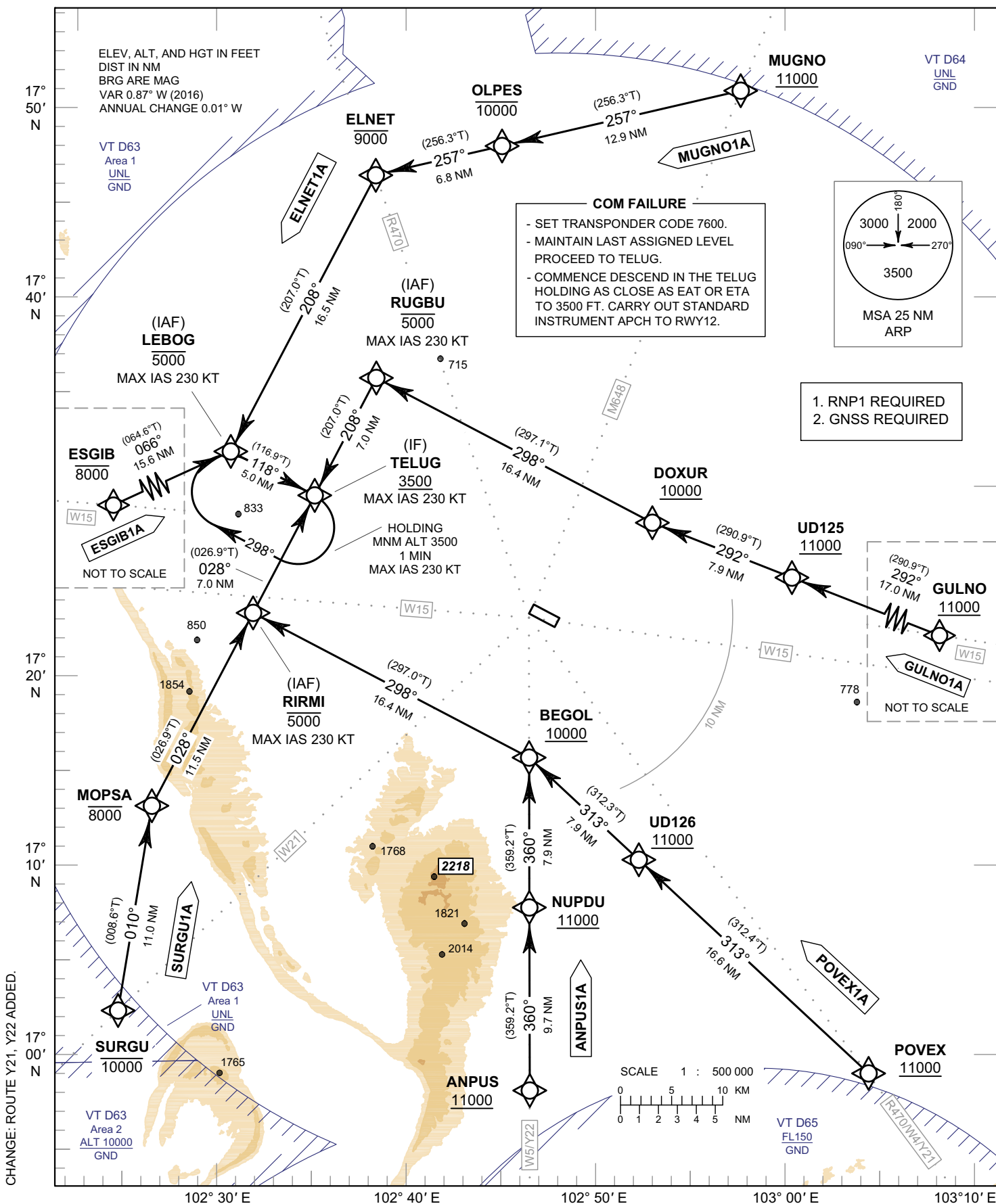
**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

TRANSITION ALTITUDE  
11000 FT

APP : 126.2, 265.9  
TWR : 122.5, 355.4  
GND : 121.9, 275.8  
ATIS : 127.6

**UDON THANI / Udon Thani (VTUD)  
RNAV RWY12**

ANPUS1A ELNET1A ESGIB1A  
GULNO1A MUGNO1A POVEX1A SURGU1A



STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO

UDON THANI / Udon Thani (VTUD)  
RNAV RWY12

ANPUS1A ELNET1A ESGIB1A  
GULNO1A MUGNO1A POVEX1A SURGU1A

TABULAR DESCRIPTION

RNAV RWY12											
Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/TCH	Navigation Specification
ANPUS1A											
010	IF	ANPUS	-	-	+0.91	-	-	+11000	-	-	RNP 1
020	TF	NUPDU	-	360°(359.2°)	+0.91	9.7	-	+11000	-	-	RNP 1
030	TF	BEGOL	-	360°(359.2°)	+0.91	7.9	-	+10000	-	-	RNP 1
040	TF	(IAF) RIRMI	-	298°(297.0°)	+0.91	16.4	-	-5000	-230	-	RNP 1
050	TF	(IF) TELUG	-	028°(026.9°)	+0.91	7.0	-	+3500	-230	-	RNP 1
ELNET1A											
010	IF	ELNET	-	-	+0.91	-	-	-9000	-	-	RNP 1
020	TF	(IAF) LEBOG	-	208°(207.0°)	+0.91	16.5	-	-5000	-230	-	RNP 1
030	TF	(IF) TELUG	-	118°(116.9°)	+0.91	5.0	-	+3500	-230	-	RNP 1
ESGIB1A											
010	IF	ESGIB	-	-	+0.91	-	-	-8000	-	-	RNP 1
020	TF	(IAF) LEBOG	-	066°(064.6°)	+0.91	15.6	-	-5000	-230	-	RNP 1
030	TF	(IF) TELUG	-	118°(116.9°)	+0.91	5.0	-	+3500	-230	-	RNP 1
GULNO1A											
010	IF	GULNO	-	-	+0.91	-	-	+11000	-	-	RNP 1
020	TF	UD125	-	292°(290.9°)	+0.91	17.0	-	+11000	-	-	RNP 1
030	TF	DOXUR	-	292°(290.9°)	+0.91	7.9	-	+10000	-	-	RNP 1
040	TF	(IAF) RUGBU	-	298°(297.1°)	+0.91	16.4	-	-5000	-230	-	RNP 1
050	TF	(IF) TELUG	-	208°(207.0°)	+0.91	7.0	-	+3500	-230	-	RNP 1
MUGNO1A											
010	IF	MUGNO	-	-	+0.91	-	-	+11000	-	-	RNP 1
020	TF	OLPES	-	257°(256.3°)	+0.91	12.9	-	-10000	-	-	RNP 1
030	TF	ELNET	-	257°(256.3°)	+0.91	6.8	-	-9000	-	-	RNP 1
040	TF	(IAF) LEBOG	-	208°(207.0°)	+0.91	16.5	-	-5000	-230	-	RNP 1
050	TF	(IF) TELUG	-	118°(116.9°)	+0.91	5.0	-	+3500	-230	-	RNP 1
POVEX1A											
010	IF	POVEX	-	-	+0.91	-	-	+11000	-	-	RNP 1
020	TF	UD126	-	313°(312.4°)	+0.91	16.6	-	+11000	-	-	RNP 1
030	TF	BEGOL	-	313°(312.3°)	+0.91	7.9	-	+10000	-	-	RNP 1
040	TF	(IAF) RIRMI	-	298°(297.0°)	+0.91	16.4	-	-5000	-230	-	RNP 1
050	TF	(IF) TELUG	-	028°(026.9°)	+0.91	7.0	-	+3500	-230	-	RNP 1
SURGU1A											
010	IF	SURGU	-	-	+0.91	-	-	-10000	-	-	RNP 1
020	TF	MOPSA	-	010°(008.6°)	+0.91	11.0	-	-8000	-	-	RNP 1
030	TF	(IAF) RIRMI	-	028°(026.9°)	+0.91	11.5	-	-5000	-230	-	RNP 1
040	TF	(IF) TELUG	-	028°(026.9°)	+0.91	7.0	-	+3500	-230	-	RNP 1



STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO

UDON THANI / Udon Thani (VTUD)  
RNAV RWY12

ANPUS1A ELNET1A ESGIB1A  
GULNO1A MUGNO1A POVEX1A SURGU1A

WAYPOINT LIST

RNAV RWY12		
Waypoint Identifier	Coordinates	
ANPUS	16° 57' 59.70" N	102° 46' 51.15" E
BEGOL	17° 15' 38.05" N	102° 46' 36.32" E
DOXUR	17° 28' 09.28" N	102° 53' 15.54" E
ELNET	17° 46' 25.01" N	102° 37' 45.95" E
ESGIB	17° 24' 58.25" N	102° 15' 13.93" E
GULNO	17° 19' 14.93" N	103° 17' 35.08" E
LEBOG	17° 31' 40.01" N	102° 29' 56.44" E
MOPSA	17° 12' 50.14" N	102° 25' 50.63" E
MUGNO	17° 51' 07.17" N	102° 57' 53.39" E
NUPDU	17° 07' 41.39" N	102° 46' 43.01" E
OLPES	17° 48' 02.71" N	102° 44' 42.91" E
POVEX	16° 59' 05.19" N	103° 05' 29.66" E
RIRMI	17° 23' 07.60" N	102° 31' 17.15" E
RUGBU	17° 35' 39.33" N	102° 37' 55.60" E
SURGU	17° 01' 57.87" N	102° 24' 08.06" E
TELUG	17° 29' 23.50" N	102° 34' 36.26" E
UD125	17° 25' 19.76" N	103° 00' 59.71" E
UD126	17° 10' 17.20" N	102° 52' 43.16" E

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STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO

UDON THANI / Udon Thani (VTUD)  
RNAV RWY30

ANPUS1C ELNET1C ESGIB1C  
GULNO1C MUGNO1C POVEX1C SURGU1C

TABULAR DESCRIPTION

RNAV RWY30											
Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/TCH	Navigation Specification
ANPUS1C											
010	IF	ANPUS	-	-	+0.91	-	-	-10000	-	-	RNP 1
020	TF	EMTER	-	033°(032.0°)	+0.91	8.6	-	-	-	-	RNP 1
030	TF	(IAF) OTLOR	-	033°(032.0°)	+0.91	7.0	-	-5000	-230	-	RNP 1
040	TF	(IF) MUNUR	-	028°(027.1°)	+0.91	7.0	-	+3500	-230	-	RNP 1
ELNET1C											
010	IF	ELNET	-	-	+0.91	-	-	+11000	-	-	RNP 1
020	TF	PAMVO	-	127°(125.9°)	+0.91	16.0	-	+11000	-	-	RNP 1
030	TF	SAPUR	-	118°(117.1°)	+0.91	15.2	-	-7000	-	-	RNP 1
040	TF	(IAF) ALDES	-	208°(207.1°)	+0.91	7.0	-	-5000	-230	-	RNP 1
050	TF	(IF) MUNUR	-	208°(207.1°)	+0.91	7.0	-	+3500	-230	-	RNP 1
ESGIB1C											
010	IF	ESGIB	-	-	+0.91	-	-	+11000	-	-	RNP 1
020	TF	UD307	-	106°(105.0°)	+0.91	15.9	-	+11000	-	-	RNP 1
030	TF	MOSDI	-	106°(105.1°)	+0.91	10.0	-	+10000	-	-	RNP 1
040	TF	(IAF) OTLOR	-	118°(117.0°)	+0.91	15.2	-	-5000	-230	-	RNP 1
050	TF	(IF) MUNUR	-	028°(027.1°)	+0.91	7.0	-	+3500	-230	-	RNP 1
GULNO1C											
010	IF	GULNO	-	-	+0.91	-	-	-8000	-	-	RNP 1
020	TF	(IAF) LATUR	-	255°(253.6°)	+0.91	14.1	-	-5000	-230	-	RNP 1
030	TF	(IF) MUNUR	-	298°(297.1°)	+0.91	5.0	-	+3500	-230	-	RNP 1
MUGNO1C											
010	IF	MUGNO	-	-	+0.91	-	-	+11000	-	-	RNP 1
020	TF	SAPUR	-	162°(160.9°)	+0.91	22.2	-	-7000	-	-	RNP 1
030	TF	(IAF) ALDES	-	208°(207.1°)	+0.91	7.0	-	-5000	-230	-	RNP 1
040	TF	(IF) MUNUR	-	208°(207.1°)	+0.91	7.0	-	+3500	-230	-	RNP 1
POVEX1C											
010	IF	POVEX	-	-	+0.91	-	-	-10000	-	-	RNP 1
020	TF	(IAF) LATUR	-	354°(353.1°)	+0.91	16.2	-	-5000	-230	-	RNP 1
030	TF	(IF) MUNUR	-	298°(297.1°)	+0.91	5.0	-	+3500	-230	-	RNP 1
SURGU1C											
010	IF	SURGU	-	-	+0.91	-	-	-10000	-	-	RNP 1
020	TF	VEKVA	-	084°(082.7°)	+0.91	11.0	-	-9000	-	-	RNP 1
030	TF	EMTER	-	084°(082.8°)	+0.91	15.5	-	-	-	-	RNP 1
040	TF	(IAF) OTLOR	-	033°(032.0°)	+0.91	7.0	-	-5000	-230	-	RNP 1
050	TF	(IF) MUNUR	-	028°(027.1°)	+0.91	7.0	-	+3500	-230	-	RNP 1

STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO

UDON THANI / Udon Thani (VTUD)  
RNAV RWY30

ANPUS1C ELNET1C ESGIB1C  
GULNO1C MUGNO1C POVEX1C SURGU1C

WAYPOINT LIST

RNAV RWY30		
Waypoint Identifier	Coordinates	
ALDES	17° 23' 47.70" N	103° 02' 08.55" E
ANPUS	16° 57' 59.70" N	102° 46' 51.15" E
ELNET	17° 46' 25.01" N	102° 37' 45.95" E
EMTER	17° 05' 17.82" N	102° 51' 35.56" E
ESGIB	17° 24' 58.25" N	102° 15' 13.93" E
GULNO	17° 19' 14.93" N	103° 17' 35.08" E
LATUR	17° 15' 15.09" N	103° 03' 27.72" E
MOSDI	17° 18' 12.73" N	102° 41' 20.48" E
MUGNO	17° 51' 07.17" N	102° 57' 53.39" E
MUNUR	17° 17' 32.26" N	102° 58' 48.60" E
OTLOR	17° 11' 16.76" N	102° 55' 28.89" E
PAMVO	17° 36' 59.70" N	102° 51' 19.33" E
POVEX	16° 59' 05.19" N	103° 05' 29.66" E
SAPUR	17° 30' 03.05" N	103° 05' 28.77" E
SURGU	17° 01' 57.87" N	102° 24' 08.06" E
UD307	17° 20' 49.93" N	102° 31' 15.00" E
VEKVA	17° 03' 21.41" N	102° 35' 32.58" E

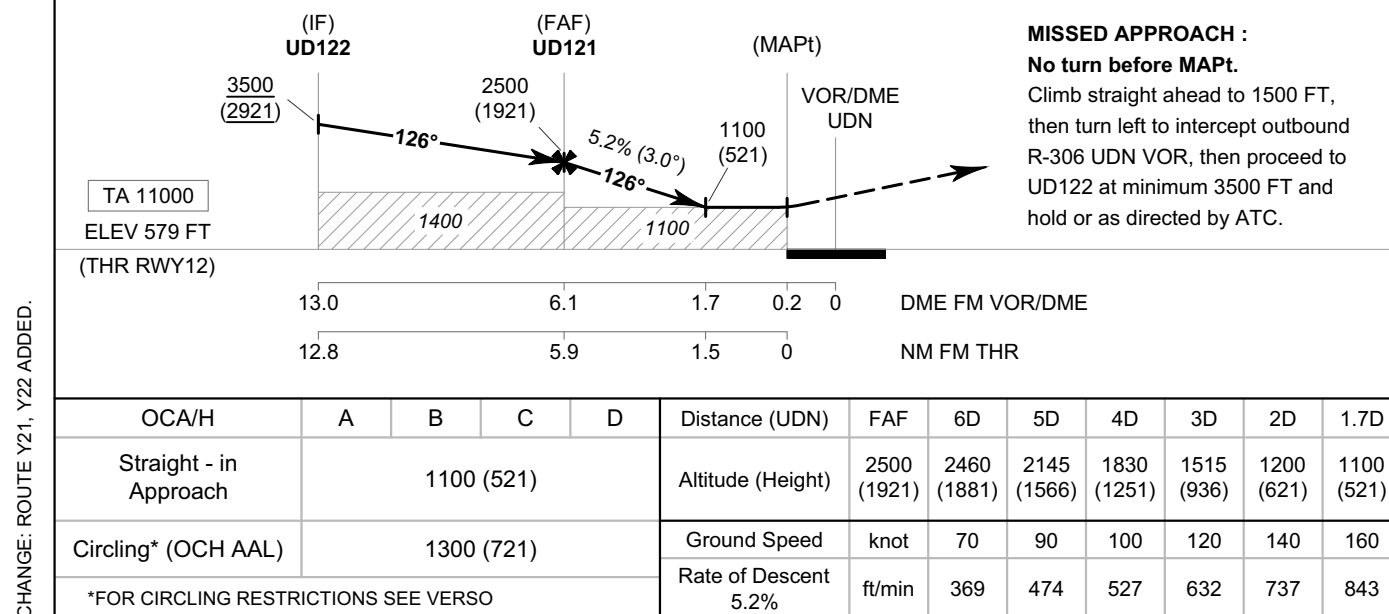
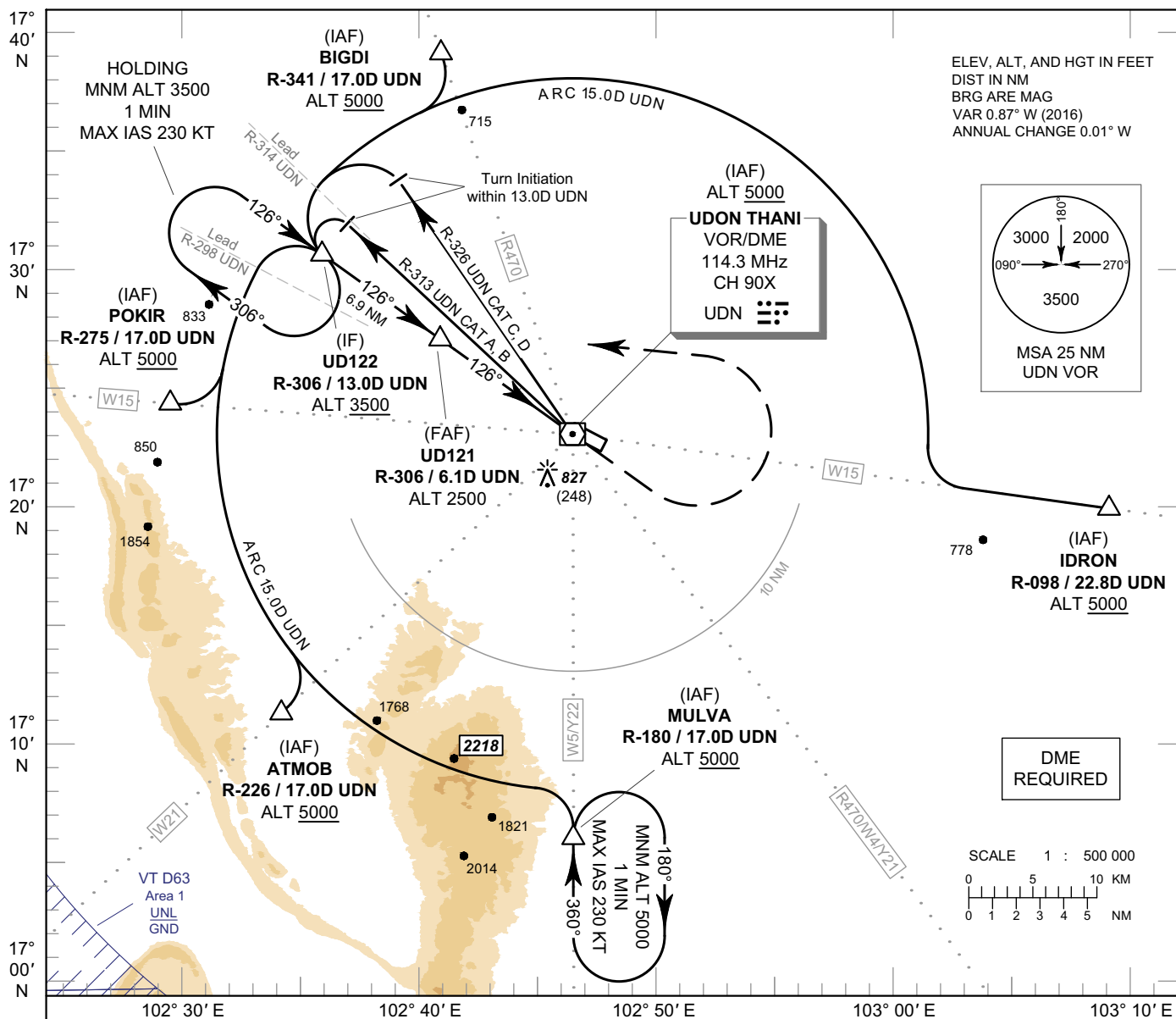
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**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 579 FT**  
HEIGHTS RELATED TO  
AERODROME ELEV

APP : 126.2, 265.9  
TWR : 122.5, 355.4  
GND : 121.9, 275.8  
ATIS : 127.6

**UDON THANI / Udon Thani (VTUD)**  
**VOR RWY12**



CHANGE: ROUTE Y21, Y22 ADDED.

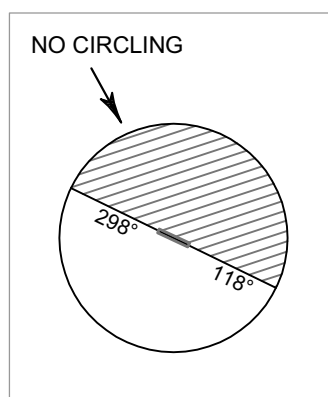
**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 579 FT  
HEIGHTS RELATED TO  
AERODROME ELEV**

**UDON THANI / Udon Thani (VTUD)**

**VOR RWY12**

Fix / Point		Coordinates	
(IAF) ATMOB	R-226 / 17.0D UDN	17° 11' 07.02" N	102° 33' 49.07" E
(IAF) BIGDI	R-341 / 17.0D UDN	17° 39' 08.16" N	102° 40' 29.65" E
(IAF) IDRON	R-098 / 22.8D UDN	17° 20' 09.96" N	103° 10' 11.12" E
(IAF) MULVA	R-180 / 17.0D UDN	17° 06' 00.16" N	102° 46' 44.42" E
(IAF) POKIR	R-275 / 17.0D UDN	17° 24' 09.53" N	102° 28' 45.58" E
(IF) UD122	R-306 / 13.0D UDN	17° 30' 32.93" N	102° 35' 21.36" E
(FAF) UD121	R-306 / 6.1D UDN	17° 26' 35.98" N	102° 41' 14.84" E
(MAPt) UD120	R-306 / 0.2D UDN	17° 23' 12.19" N	102° 46' 18.17" E
(IAF) VOR	UDN	17° 23' 04.20" N	102° 46' 30.05" E







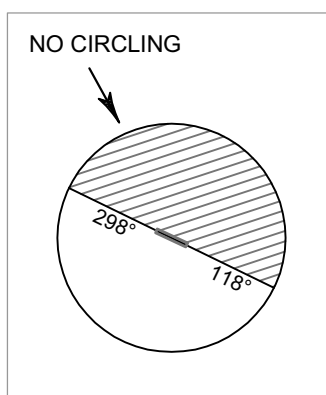
**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 579 FT**  
HEIGHTS RELATED TO  
AERODROME ELEV

**UDON THANI / Udon Thani (VTUD)**

**VOR RWY30**

Fix / Point		Coordinates	
(IAF) ATMOB	R-226 / 17.0D UDN	17° 11' 07.02" N	102° 33' 49.07" E
(IAF) BIGDI	R-341 / 17.0D UDN	17° 39' 08.16" N	102° 40' 29.65" E
(IAF) DUBMO	R-144 / 17.0D UDN	17° 09' 29.25" N	102° 57' 15.60" E
(IAF) IDRON	R-098 / 22.8D UDN	17° 20' 09.96" N	103° 10' 11.12" E
(IAF) MULVA	R-180 / 17.0D UDN	17° 06' 00.16" N	102° 46' 44.42" E
(IAF) POKIR	R-275 / 17.0D UDN	17° 24' 09.53" N	102° 28' 45.58" E
UD303	R-098 / 17.8D UDN	17° 20' 48.47" N	103° 04' 59.08" E
(IF) UD302	R-112 / 13.0D UDN	17° 18' 21.13" N	102° 59' 10.37" E
(FAF) UD301	R-112 / 7.4D UDN	17° 20' 23.92" N	102° 53' 41.25" E
(MAPt) UD300	R-112 / 1.5D UDN	17° 22' 32.24" N	102° 47' 56.10" E
(IAF) VOR	UDN	17° 23' 04.20" N	102° 46' 30.05" E

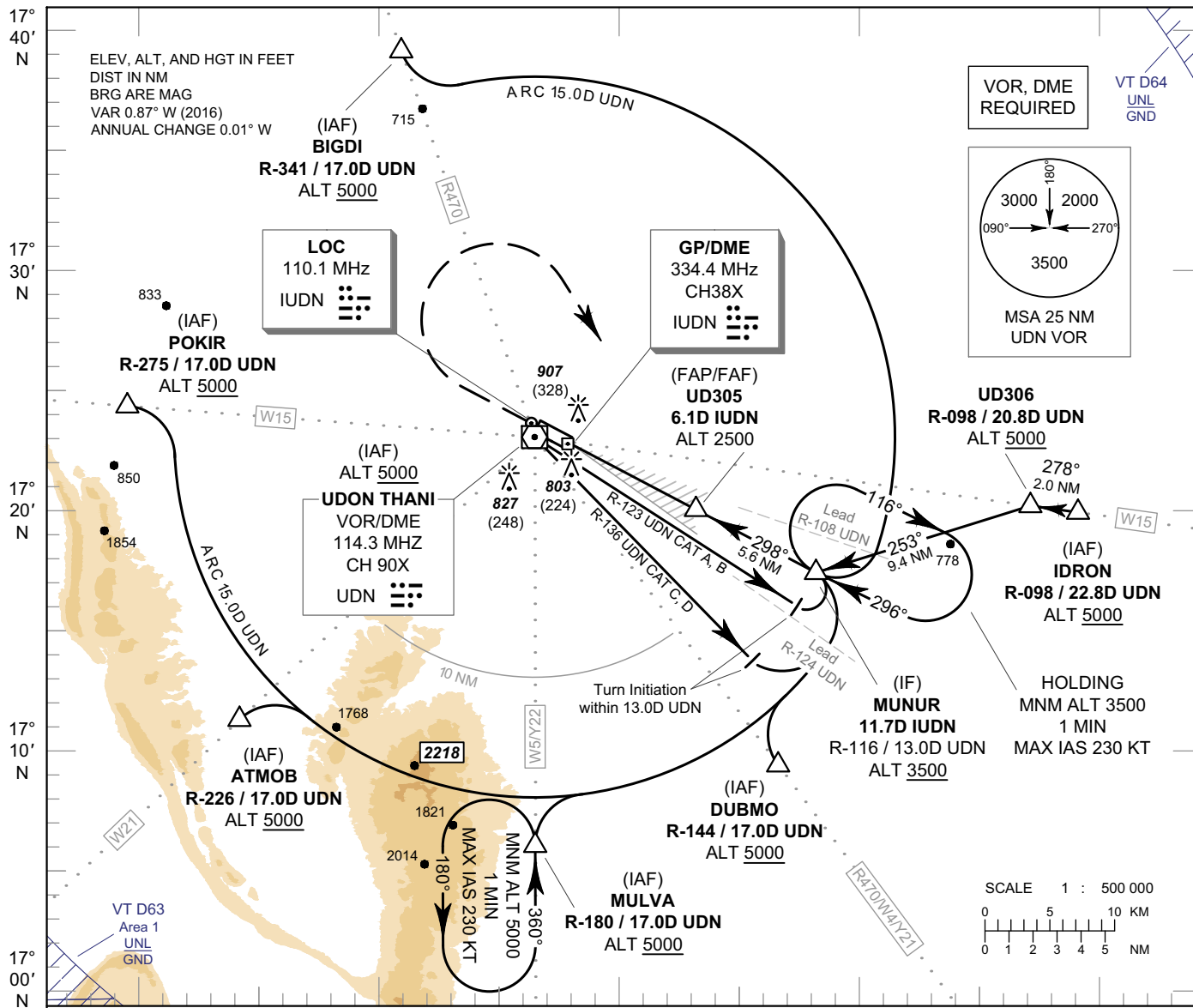


**INSTRUMENT APPROACH CHART - ICAO**

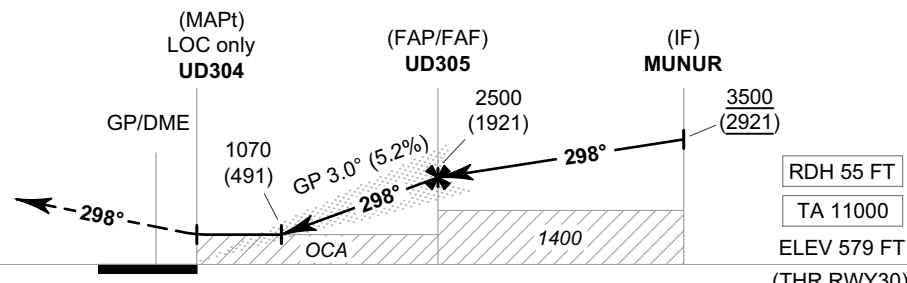
**AERODROME ELEV 579 FT**  
HEIGHTS RELATED TO  
THR RWY30 - ELEV 579 FT

APP : 126.2, 265.9  
TWR : 122.5, 355.4  
GND : 121.9, 275.8  
ATIS : 127.6

**UDON THANI / Udon Thani (VTUD)**  
ILS or LOC y RWY30



**MISSED APPROACH :**  
**No turn before MAPt (for LOC only).**  
Climb straight ahead to 1500 FT,  
then turn right to intercept outbound  
R-116 UDN VOR, then proceed to  
MUNUR at minimum 3500 FT and  
hold or as directed by ATC.



DME FM GP/DME 0 0.2 1.6 6.1 11.7  
NM FM THR 0 1.4 5.9 11.5

OCA/H		A	B	C	D	GS OUT	Distance (IUDN)	1.6D	2D	3D	4D	5D	6D	FAF
Straight - in Approach	CAT I	860	870	880	890		Altitude (Height)	1070	1200	1515	1830	2145	2460	2500
		(281)	(291)	(301)	(311)	(491)		(621)	(936)	(1251)	(1566)	(1881)	(1921)	
LOC only		1070 (491)				Ground Speed	knot	70	90	100	120	140	160	
Circling* (OCH AAL)		1300 (721)				Rate of Descent	ft/min	369	474	527	632	737	843	

CHANGE: ROUTE Y21, Y22 ADDED.

\*FOR CIRCLING RESTRICTIONS SEE VERSO

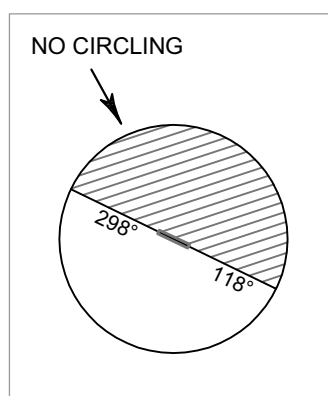
**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 579 FT  
HEIGHTS RELATED TO  
THR RWY30 - ELEV 579 FT**

**UDON THANI / Udon Thani (VTUD)**

**ILS or LOC y RWY30**

Fix / Point		Coordinates	
(IAF) ATMOB	R-226 / 17.0D UDN	17° 11' 07.02" N	102° 33' 49.07" E
(IAF) BIGDI	R-341 / 17.0D UDN	17° 39' 08.16" N	102° 40' 29.65" E
(IAF) DUBMO	R-144 / 17.0D UDN	17° 09' 29.25" N	102° 57' 15.60" E
(IAF) IDRON	R-098 / 22.8D UDN	17° 20' 09.96" N	103° 10' 11.12" E
(IAF) MULVA	R-180 / 17.0D UDN	17° 06' 00.16" N	102° 46' 44.42" E
(IAF) POKIR	R-275 / 17.0D UDN	17° 24' 09.53" N	102° 28' 45.58" E
UD306	R-098 / 20.8D UDN	17° 20' 25.33" N	103° 08' 06.70" E
(IF) MUNUR	11.7D IUDN	17° 17' 32.26" N	102° 58' 48.60" E
(FAP/FAF) UD305	6.1D IUDN	17° 20' 07.01" N	102° 53' 33.38" E
(MAPt@THR30) UD304	0.2D IUDN	17° 22' 48.62" N	102° 48' 03.73" E
LOC	IUDN	17° 23' 41.25" N	102° 46' 16.25" E
GP/DME	IUDN	17° 22' 56.70" N	102° 47' 55.94" E
(IAF) VOR	UDN	17° 23' 04.20" N	102° 46' 30.05" E

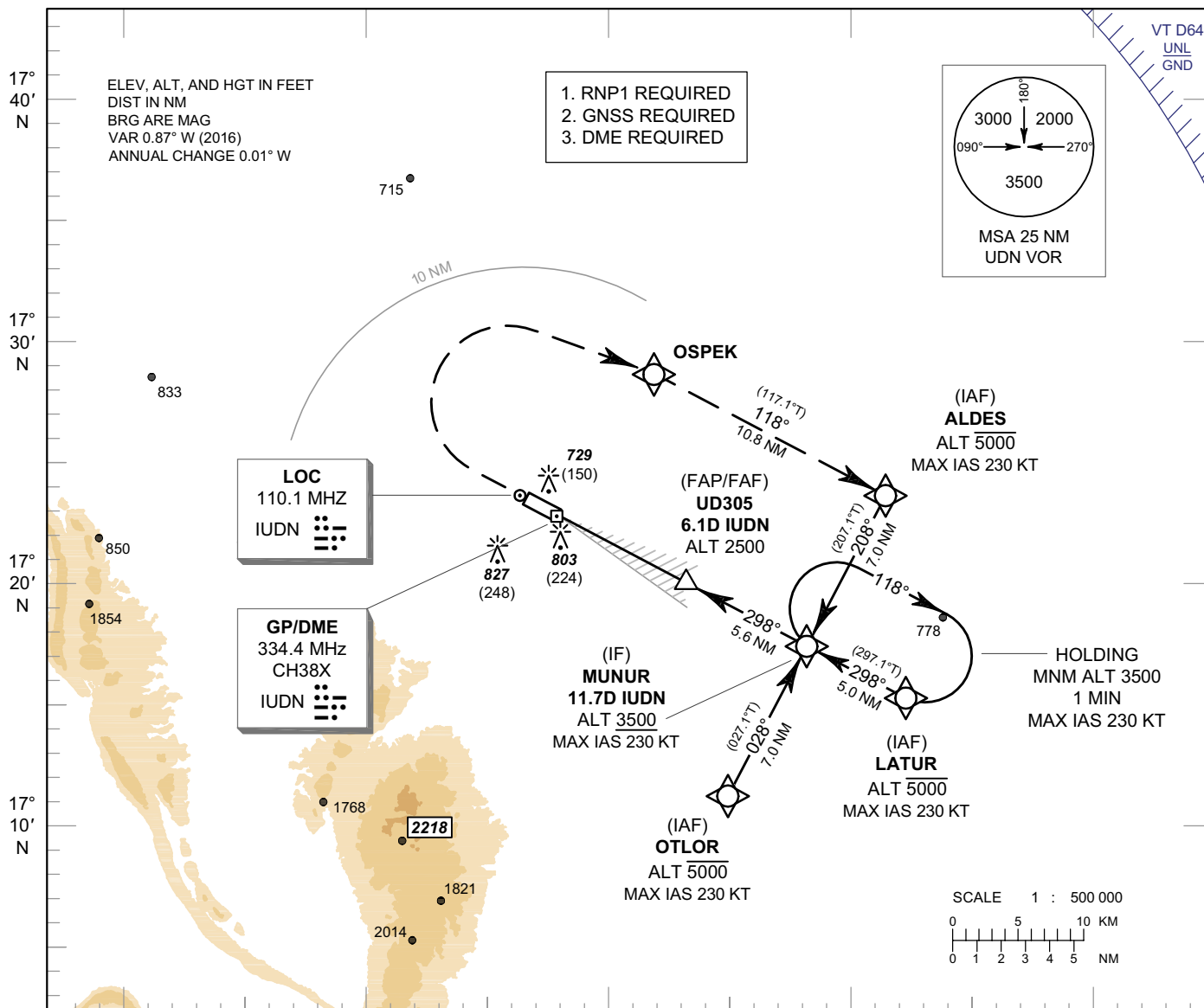


**INSTRUMENT  
APPROACH  
CHART - ICAO**

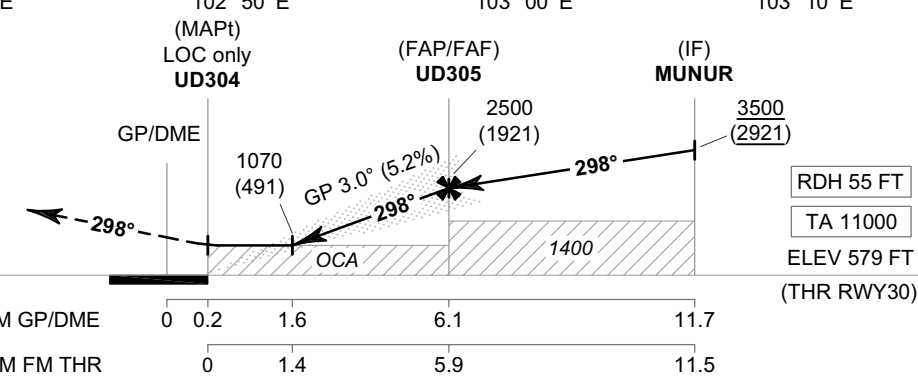
**AERODROME ELEV 579 FT  
HEIGHTS RELATED TO  
THR RWY30 - ELEV 579 FT**

APP : 126.2, 265.9  
TWR : 122.5, 355.4  
GND : 121.9, 275.8  
ATIS : 127.6

**UDON THANI / Udon Thani (VTUD)**  
**ILS or LOC z RWY30**



**MISSED APPROACH :**  
**No turn before MAPt (for LOC only).**  
Climb on track 298° to 1500 FT,  
then turn right direct to OSPEK.  
continue to ALDES then proceed to  
MUNUR at minimum 3500 FT and hold  
or as directed by ATC.



CHANGE: NEW CHART.

OCA/H		A	B	C	D	GS OUT	Distance (IUDN)	1.6D	2D	3D	4D	5D	6D	FAF
Straight - in Approach	CAT I	860 (281)	870 (291)	880 (301)	890 (311)		Altitude (Height)	1070 (491)	1200 (621)	1515 (936)	1830 (1251)	2145 (1566)	2460 (1881)	2500 (1921)
LOC only		1070 (491)				Ground Speed	knot	70	90	100	120	140	160	
Circling* (OCH AAL)		1300 (721)				Rate of Descent	5.2%	ft/min	369	474	527	632	737	843

\*FOR CIRCLING RESTRICTIONS SEE VERSO

**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 579 FT  
HEIGHTS RELATED TO  
THR RWY30 - ELEV 579 FT**

**UDON THANI / Udon Thani (VTUD)**

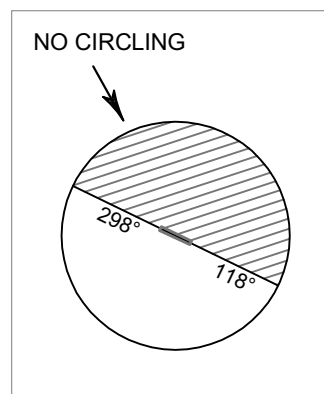
**ILS or LOC z RWY30**

**TABULAR DESCRIPTION**

ILS or LOC z RWY30											
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	(IAF) OTLOR	-	-	+0.91	-	-	-5000	-230	-	RNP 1
020	TF	(IF) MUNUR	-	028°(027.1°)	+0.91	7.0	-	+3500	-230	-	RNP 1
010	IF	(IAF) LATUR	-	-	+0.91	-	-	-5000	-230	-	RNP 1
020	TF	(IF) MUNUR	-	298°(297.1°)	+0.91	5.0	-	+3500	-230	-	RNP 1
010	IF	(IAF) ALDES	-	-	+0.91	-	-	-5000	-230	-	RNP 1
020	TF	(IF) MUNUR	-	208°(207.1°)	+0.91	7.0	-	+3500	-230	-	RNP 1
010	IF	(IF) MUNUR	-	-	+0.91	-	-	+3500	-230	-	RNP 1
TRANSITION TO ILS or LOC											
020	TF	(FAP/FAF) UD305	-	298°(297.1°)	+0.91	5.6	-	@2500	-	-	ILS
030	TF	(MAPt@THR30) UD304	Y	298°(297.1°)	+0.91	5.9	-	@634	-	-3.0/55	ILS
040	CA	-	-	298°(297.1°)	+0.91	-	-	+1500	-	-	RNP 1
050	DF	OSPEK	-	-	+0.91	-	R	-	-	-	RNP 1
060	TF	(IAF) ALDES	-	118°(117.1°)	+0.91	10.8	-	-5000	-230	-	RNP 1
070	TF	(IF) MUNUR	-	208°(207.1°)	+0.91	7.0	-	+3500	-230	-	RNP 1
080	HM	(IF) MUNUR	Y	298°(297.1°)	+0.91	1 minute	R	+3500	-230	-	RNP 1

**WAYPOINT LIST**

ILS or LOC z RWY30	
Waypoint Identifier	Coordinates
ALDES	17° 23' 47.70" N 103° 02' 08.55" E
LATUR	17° 15' 15.09" N 103° 03' 27.72" E
MUNUR	17° 17' 32.26" N 102° 58' 48.60" E
OSPEK	17° 28' 43.41" N 102° 52' 05.91" E
OTLOR	17° 11' 16.76" N 102° 55' 28.89" E
UD304	17° 22' 48.62" N 102° 48' 03.73" E
UD305	17° 20' 07.01" N 102° 53' 33.38" E



**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 579 FT  
HEIGHTS RELATED TO  
THR RWY30 - ELEV 579 FT**

**UDON THANI / Udon Thani (VTUD)**

**ILS or LOC z RWY30**

Fix / Point		Coordinates	
(IF) MUNUR	11.7D IUDN	17° 17' 32.26" N	102° 58' 48.60" E
(FAP/FAF) UD305	6.1D IUDN	17° 20' 07.01" N	102° 53' 33.38" E
(MAPt@THR30) UD304	0.2D IUDN	17° 22' 48.62" N	102° 48' 03.73" E
LOC	IUDN	17° 23' 41.25" N	102° 46' 16.25" E
GP/DME	IUDN	17° 22' 56.70" N	102° 47' 55.94" E

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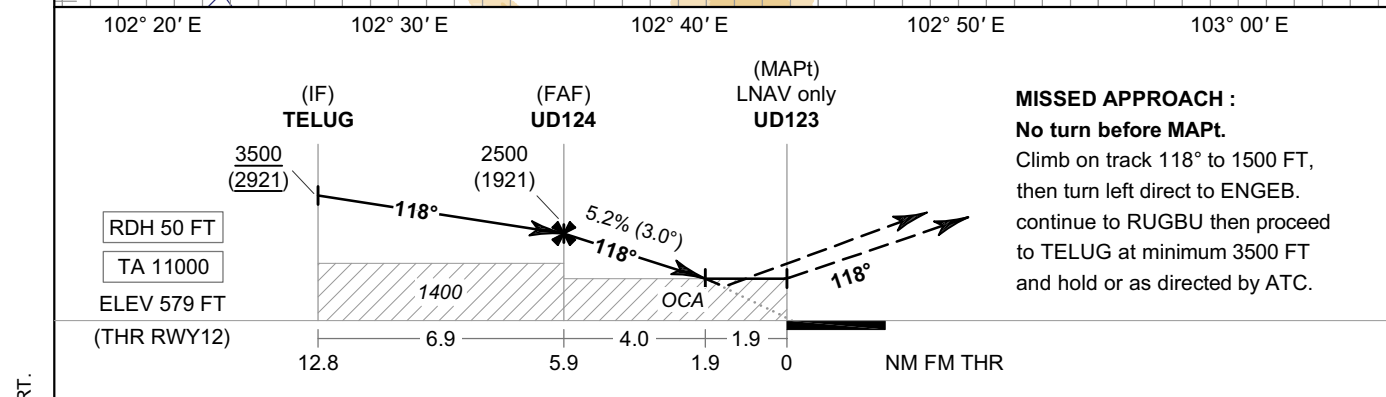
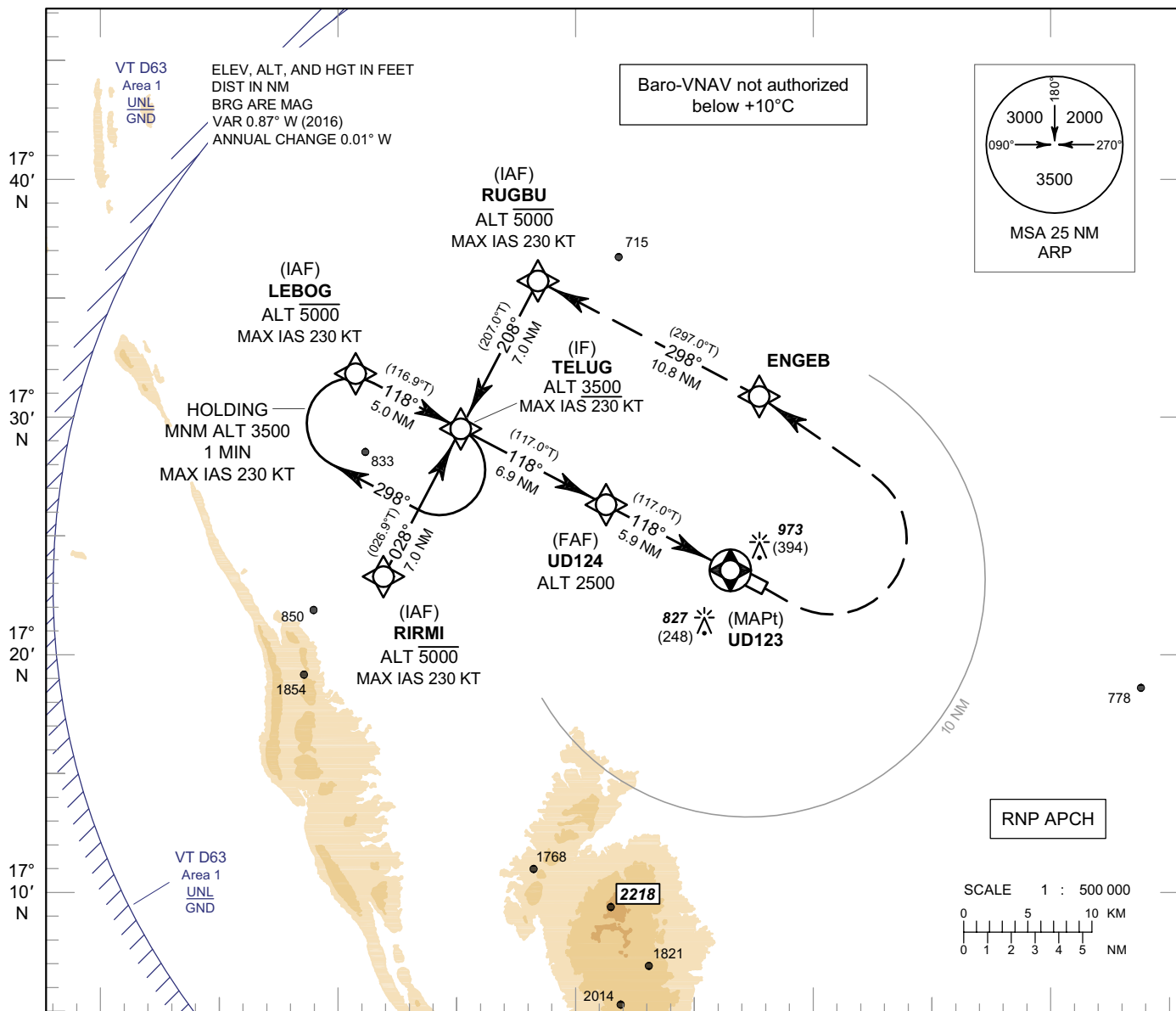


**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 579 FT  
HEIGHTS RELATED TO  
THR RWY12 - ELEV 579 FT**

APP : 126.2, 265.9  
TWR : 122.5, 355.4  
GND : 121.9, 275.8  
ATIS : 127.6

**UDON THANI / Udon Thani (VTUD)  
RNP RWY12**



CHANGE : REVISED CHART.

OCA/H	A	B	C	D	NM to NEXT WPT	FAF	5 NM	4 NM	3 NM	2 NM	1.9 NM
LNAV/VNAV	990 (411)				Altitude (Height)	2500 (1921)	2210 (1631)	1895 (1316)	1575 (996)	1260 (681)	1230 (651)
LNAV	1230 (651)				Ground Speed	knot	70	90	100	120	140
Circling* (OCH AAL)	1300 (721)				Rate of Descent	ft/min	369	474	527	632	737
*FOR CIRCLING RESTRICTIONS SEE VERSO					FAF-MAPt 5.2%						

**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 579 FT  
HEIGHTS RELATED TO  
THR RWY12 - ELEV 579 FT**

**UDON THANI / Udon Thani (VTUD)**

**RNP RWY12**

**TABULAR DESCRIPTION**

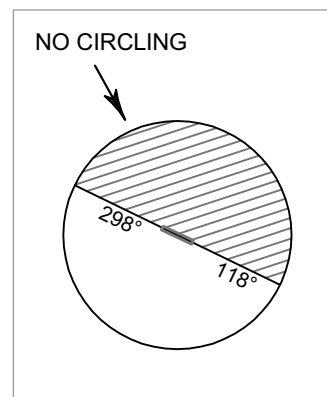
**RNP RWY12**

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	(IAF) RIRMI	-	-	+0.91	-	-	-5000	-230	-	RNP APCH
020	TF	(IF) TELUG	-	028°(026.9°)	+0.91	7.0	-	+3500	-230	-	RNP APCH
010	IF	(IAF) LEBOG	-	-	+0.91	-	-	-5000	-230	-	RNP APCH
020	TF	(IF) TELUG	-	118°(116.9°)	+0.91	5.0	-	+3500	-230	-	RNP APCH
010	IF	(IAF) RUGBU	-	-	+0.91	-	-	-5000	-230	-	RNP APCH
020	TF	(IF) TELUG	-	208°(207.0°)	+0.91	7.0	-	+3500	-230	-	RNP APCH
010	IF	(IF) TELUG	-	-	+0.91	-	-	+3500	-230	-	RNP APCH
020	TF	(FAF) UD124	-	118°(117.0°)	+0.91	6.9	-	@2500	-	-	RNP APCH
030	TF	(MAPt@THR12) UD123	Y	118°(117.0°)	+0.91	5.9	-	@629	-	-3.0/50	RNP APCH
040	CA	-	-	118°(117.0°)	+0.91	-	-	+1500	-	-	RNP APCH
050	DF	ENGEB	-	-	+0.91	-	L	-	-	-	RNP APCH
060	TF	RUGBU	-	298°(297.0°)	+0.91	10.8	-	-5000	-230	-	RNP APCH
070	TF	TELUG	-	208°(207.0°)	+0.91	7.0	-	+3500	-230	-	RNP APCH
080	HM	TELUG	Y	118°(116.9°)	+0.91	1 minute	R	+3500	-230	-	RNP APCH

**WAYPOINT LIST**

**RNP RWY12**

Waypoint Identifier	Coordinates
ENGEB	17° 30' 44.10" N 102° 47' 59.49" E
LEBOG	17° 31' 40.01" N 102° 29' 56.44" E
RIRMI	17° 23' 07.60" N 102° 31' 17.15" E
RUGBU	17° 35' 39.33" N 102° 37' 55.60" E
TELUG	17° 29' 23.50" N 102° 34' 36.26" E
UD123	17° 23' 33.72" N 102° 46' 31.65" E
UD124	17° 26' 15.13" N 102° 41' 01.80" E



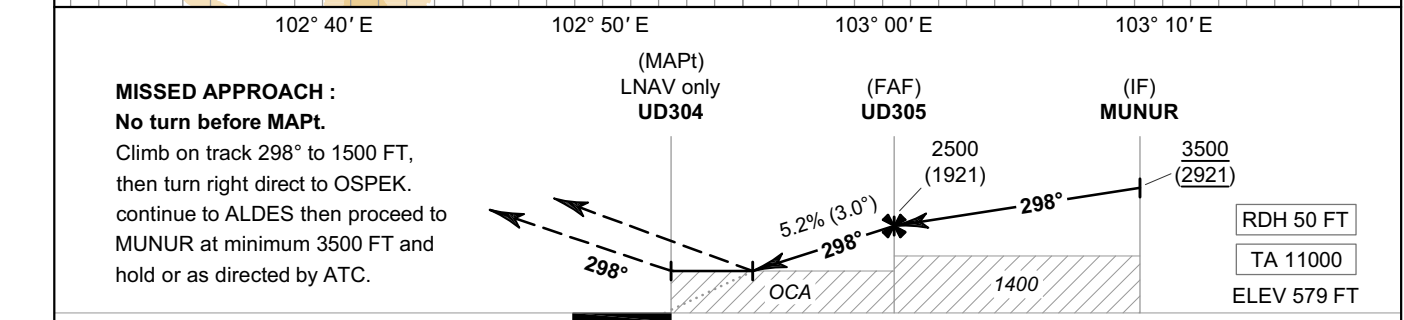
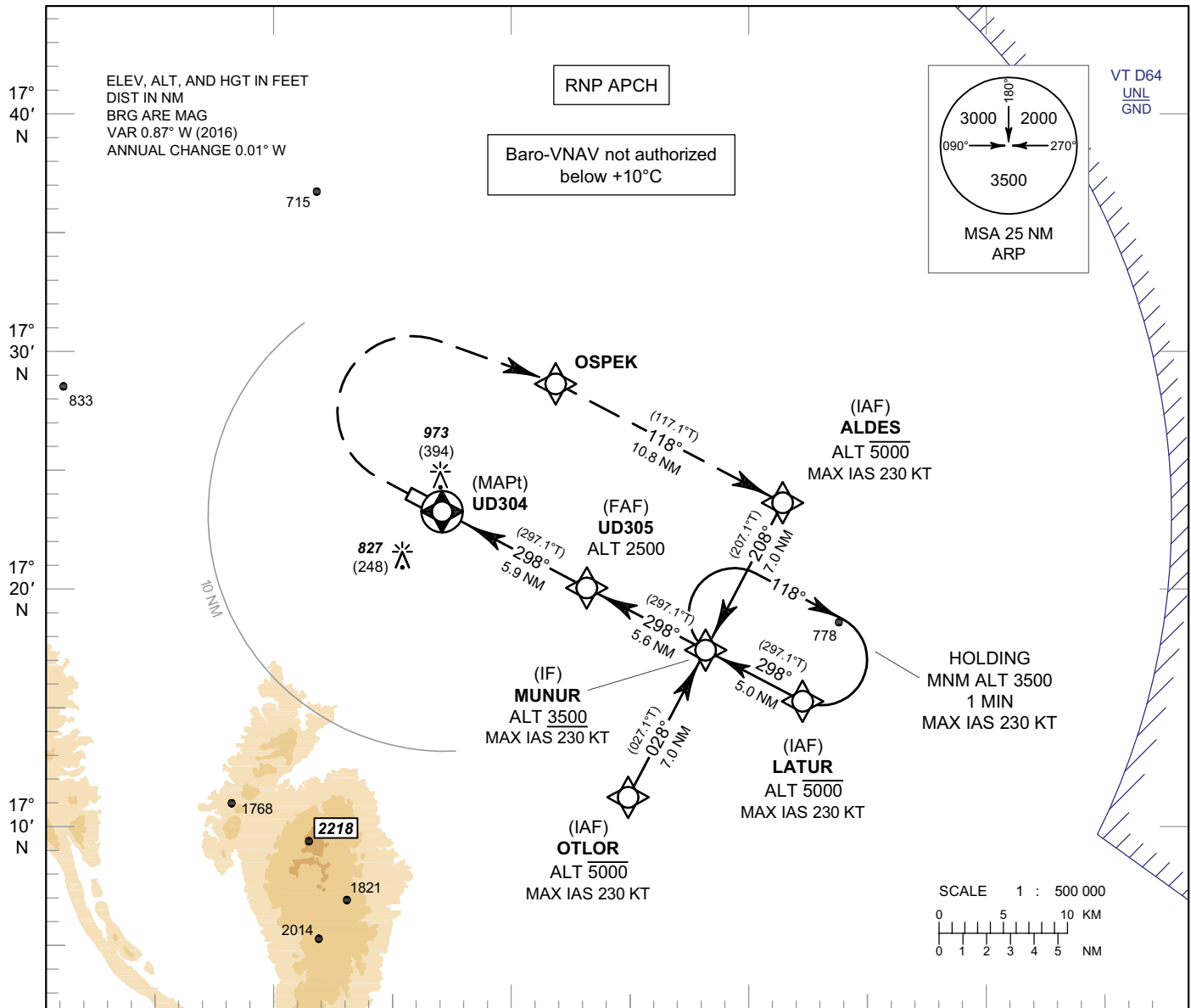
**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 579 FT  
HEIGHTS RELATED TO  
THR RWY30 - ELEV 579 FT**

APP : 126.2, 265.9  
TWR : 122.5, 355.4  
GND : 121.9, 275.8  
ATIS : 127.6

**UDON THANI / Udon Thani (VTUD)**

**RNP RWY30**



**MISSED APPROACH :**  
**No turn before MAPt.**  
Climb on track 298° to 1500 FT, then turn right direct to OSPEK. continue to ALDES then proceed to MUNUR at minimum 3500 FT and hold or as directed by ATC.

OCA/H	A	B	C	D	NM to NEXT WPT	1.6 NM	2 NM	3 NM	4 NM	5 NM	FAF	
LNAV/VNAV	1140 (561)				Altitude (Height)	1140 (561)	1260 (681)	1575 (996)	1895 (1316)	2210 (1631)	2500 (1921)	
LNAV	1300 (721)				Ground Speed	knot	70	90	100	120	140	160
Circling* (OCH AAL)	1300 (721)				Rate of Descent	ft/min	369	474	527	632	737	843

\*FOR CIRCLING RESTRICTIONS SEE VERSO

CHANGE : REVISED CHART.

**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 579 FT  
HEIGHTS RELATED TO  
THR RWY30 - ELEV 579 FT**

**UDON THANI / Udon Thani (VTUD)**

**RNP RWY30**

**TABULAR DESCRIPTION**

**RNP RWY30**

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	(IAF) OTLOR	-	-	+0.91	-	-	-5000	-230	-	RNP APCH
020	TF	(IF) MUNUR	-	028°(027.1°)	+0.91	7.0	-	+3500	-230	-	RNP APCH
010	IF	(IAF) LATUR	-	-	+0.91	-	-	-5000	-230	-	RNP APCH
020	TF	(IF) MUNUR	-	298°(297.1°)	+0.91	5.0	-	+3500	-230	-	RNP APCH
010	IF	(IAF) ALDES	-	-	+0.91	-	-	-5000	-230	-	RNP APCH
020	TF	(IF) MUNUR	-	208°(207.1°)	+0.91	7.0	-	+3500	-230	-	RNP APCH
010	IF	(IF) MUNUR	-	-	+0.91	-	-	+3500	-230	-	RNP APCH
020	TF	(FAF) UD305	-	298°(297.1°)	+0.91	5.6	-	@2500	-	-	RNP APCH
030	TF	(MAPt@THR30) UD304	Y	298°(297.1°)	+0.91	5.9	-	@629	-	-3.0/50	RNP APCH
040	CA	-	-	298°(297.1°)	+0.91	-	-	+1500	-	-	RNP APCH
050	DF	OSPEK	-	-	+0.91	-	R	-	-	-	RNP APCH
060	TF	(IAF) ALDES	-	118°(117.1°)	+0.91	10.8	-	-5000	-230	-	RNP APCH
070	TF	(IF) MUNUR	-	208°(207.1°)	+0.91	7.0	-	+3500	-230	-	RNP APCH
080	HM	(IF) MUNUR	Y	298°(297.1°)	+0.91	1 minute	R	+3500	-230	-	RNP APCH

**WAYPOINT LIST**

**RNP RWY30**

Waypoint Identifier	Coordinates
ALDES	17° 23' 47.70" N 103° 02' 08.55" E
LATUR	17° 15' 15.09" N 103° 03' 27.72" E
MUNUR	17° 17' 32.26" N 102° 58' 48.60" E
OSPEK	17° 28' 43.41" N 102° 52' 05.91" E
OTLOR	17° 11' 16.76" N 102° 55' 28.89" E
UD304	17° 22' 48.62" N 102° 48' 03.73" E
UD305	17° 20' 07.01" N 102° 53' 33.38" E

