

AD 2. AERODROME**VNCG AD 2.1 AERODROME LOCATION INDICATOR AND NAME****VNCG – CHANDRAGADHI/Domestic****VNCG AD 2.2 AERODROME GEOGRAPHICAL AND
ADMINISTRATIVE DATA**

1.	ARP Coordinates and site at AD	263411 N 0880438 E *
2.	Direction and Distance from (city)	Adjoining to the North of Bhadrapur City
3.	Elevation/Reference Temperature	96.4m. (316ft.)/-
4.	MAG VAR/Annual Change	0 ° W
5.	AD Administration, address Telephone, Telefax, Telex AFS	Civil Aviation Authority of Nepal Chandragadhi Civil Aviation Office, Chandragadhi, Jhapa Te1- 977-23-452075 Fax - 977-23-453801 AFS - VNCGYDYX
6.	Types of traffic permitted (IFR/VFR)	IFR/VFR
7.	Remarks	-

VNCG AD 2.3 OPERATIONAL HOURS

1.	AD Administration	SUN-THU 10:00 -17:00 LT (SUMMER), 10:00-1600 LT (WINTER), FRI 10:00-1500 LT
2.	Customs and immigration	NIL
3.	Health and sanitation	NIL
4.	AIS Briefing Office	NIL
5.	ATS Reporting Office (ARO)	NIL
6.	MET Briefing	NIL
7.	ATS	1) From 16 Feb - 15 Nov (0015 - 1815) UTC** 2) From 16 Nov - 15 Feb (0045 - 1815) UTC**
8.	Fuelling	Jet A1 During Operation Hours
9.	Handling (Cargo)	NIL
10.	Security	H-24
11.	Remarks	Any change will be notified by NOTAM

* WGS 84 Coordinates

** For operations other than above, Prior Co-ordination is required

VNCG AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Available with local airlines operator
2.	Fuel/Oil Types	Jet A1/Not Available
3.	Fuelling facilities/capacity	Storage Capacity (KL): Physical -NIL, Mobile-28 Storage Type: Refueller Refueller Details: AR24 (16 KL), AR22 (12 KL)
4.	De-icing facilities	NIL
5.	Hangar space for visiting aircraft	NIL
6.	Repair facilities for visiting aircraft	NIL
7.	Remarks	-

VNCG AD 2.5 PASSENGER FACILITIES

1.	Hotels	in the city
2.	Restaurants	in the city
3.	Transportation	Taxi Service, Rickshaw from AD
4.	Medical Facilities	First Aid at AD, Hospitals in the city.
5.	Bank and Post Office	NIL
6.	Tourist Office	-
7.	Remarks	-

VNCG AD 2.6 RESCUE AND FIRE FIGHTING SERVICE

1.	AD category for fire fighting	Nil
2.	Rescue equipment	Available
3.	Capability for removal of disabled aircraft	Nil
4.	Remarks	Complementary Extinguishing Agents and Fire Extinguishers (wheel type fire extinguishers also) Available. Small Fire Vehicle Available

VNCG AD 2.7 SEASONAL AVAILABILITY

Aerodrome is available throughout the year.

VNCG AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATION DATA

1.	Apron surface and strength	Surface - Asphalt Concrete, Strength - ...
2.	Taxiway width, surface and strength	Width - 22m Surface – Asphalt, Strength - 27/F/C/Y/T
3.	Altimeter check point location and elevation	

VNCG 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	Taxiing guidance signs at TWY and RWY
2.	RWY and TWY markings and LGT	RWY: RWY10/28, THR, TDZ, Center line, RWY edge marked and RWY end, THR, RWY edge have lights. TWY: Center line, holding positions at TWY/RWY intersection marked and TWY edge with blue lights.
3.	Stop bars	NIL
4.	Remarks	NIL

VNCG AD 2.10 AERODROME OBSTACLES

In area 2						
OBST ID/ Designation	OBST Type	OBST Position		Elevation (m/ft)	Marking/type color	Remarks
a	b	c	d	e	f	g
CG7001	ATC Tower	26°34'10.517"N	088°04'39.504"E	108.79/356.94		
CG7002	CDO Office	26°34'16.502"N	088°04'12.608"E	110.98/364.12		
CG7003	Bamboo	26°34'28.942"N	088°04'52.931"E	104.06/341.42		
CG7004	Chimney	26°34'13.391"N	088°05'49.780"E	114.53/375.77		
CG7005	Tree	26°33'58.999"N	088°05'37.911"E	110.74/363.34		
CG7006	NTC Tower	26°32'54.738"N	088°05'18.695"E	163.32/535.85		
CG7007	Mobile Tower	26°33'53.613"N	088°04'04.567"E	129.94/426.33		
CG7008	Water Tank	26°34'13.545"N	088°03'54.158"E	123.68/405.79		
CG7009	Tree	26°34'28.873"N	088°03'50.061"E	119.17/390.10		
CG7010	Water Tank	26°34'59.261"N	088°03'25.065"E	126.73/415.80		
CG7011	Chimney	26°35'41.541"N	088°02'24.596"E	126.73/415.80		
CG7012	Water Tank	26°35'15.174"N	088°04'13.120"E	136.91/449.20		
CG7013	Chimney	26°35'24.895"N	088°05'13.204"E	129.09/423.54		
CG7014	Charali Forest Edge	26°36'11.885"N	088°04'36.483"E	139.24/456.85		
CG7015	Tree	26°34'09.567"N	088°04'51.959"E	103.96/341.09		
CG7016	Tree	26°34'12.501"N	088°04'39.942"E	107.90/354.02		
CG7017	Tree	26°34'10.993"N	088°04'29.637"E	118.12/387.55		
CG7018	Tree	26°34'10.064"N	088°05'04.332"E	112.19/368.09		
CG7019	Scout Building	26°34'16.051"N	088°04'14.646"E	107.79/353.66		
CG7020	Tree	26°34'11.048"N	088°05'18.456"E	109.30/358.61		
CG7022	Cement Factory	26°36'08.871"N	088°04'43.813"E	118.91/390.14		
CG7024	Bamboo	26°34'11.421"N	088°05'16.653"E	101.65/333.51		
CG7025	Nagarik FM Tower	26°33'19.269"N	088°05'21.286"E	125.36/411.31		
CG7026	Electric Pole	26°34'18.373"N	088°04'13.431"E	106.14/348.24		

VNCG AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1.	Associated MET Office	---
2.	Hours of service MET office outside hours	As ATS
3.	Office responsible for TAF preparation periods of validity	NIL
4.	Type of landing forecast interval of issuance	NIL
5.	Briefing/Consultation provided	NIL
6.	Flight documentation language(s) used	NIL
7.	Charts and other information available for briefing or consultation	NIL
8.	Supplementary equipment available for providing information	NIL
9.	ATS units provided with information	Chandragadhi TWR
10.	Additional information (limitation of service, etc.)	NIL

VNCG AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY NR	TRUE & MAG BRG	Dimensions of RWY (M)	Strength(PCN) and surface of RWY and SWY	THR Coordinates	THR elevation
1	2	3	4	5	6
10	100 ⁰	1500x 30	16/F/D/Y/T Bitumen	263419.185N* 0880417.774E	96.4 m (316 ft.)
28	280 ⁰	1500x30	16/F/D/Y/T Bitumen	263410.581N* 0880511.119E	93.1m (305 ft.)
Slope of RWY-SWY	SWY Dimensions (M)	CWY Dimensions (M)	Strip Dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
.....					

VNCG AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
10	1500	1500	1500	1500	
28	1500	1500	1500	1500	

VNCG AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT color WBAR	VASIS PAPI	TDZ LGT LEN	RWY Center Line LGT Length, spacing color, INTST	RWY edge LGT LEN, spacing color INTST	RWY End LGT color WBAR	SWY LGT LEN M color	Remarks
1	2	3	4	5	6	7	8	9	10
10	NIL	Green	PAPI 3.00°	NIL	NIL	1500m, 60m, White, LIM	Red	NIL	
28	NIL	Green	PAPI 3.00°	NIL	NIL	1500m, 60m, White, LIM	Red	NIL	

VNCG AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1.	ABN Location, characteristics and hours of operation	ABN: at above Aerodrome Control Tower, Green flashes alternating with white flashes, 28 flashes per minute normally after Sunset.
2.	LDI Location and LGT Anemometer Location and LGT	
3.	TWY edge and Centre line lighting	Edge: All TWY Centre Line : NIL
4.	Secondary power supply / switch over time	Stand-by Diesel Generator to all lighting and Uninterrupted Power Supply to Airfield Ground Lighting (AGL) System at AD. with 30 minutes back up.
5.	Runway Threshold Identification Light (RTIL) Location and Characteristics	Location: RWY Threshold 10/28, Flashing white light with flash frequency 120 per minute.

VNCG AD 2.16 HELICOPTER LANDING AREA*Not specified***VNCG AD 2.17 ATS AIRSPACE**

1. Designation and lateral limits	Chandragadhi <u>ATZ</u> : An area of a circle of 5 NM radius centered at Chandragadhi ARP and to the East up to VNSM FIR. Chandragadhi <u>CTR</u> : An area bounded by (262617N; 0875024E) then along an arc of a circle of 15 NM radius centered at Chandragadhi ARP to (264810N; 0881049E) and along Kathmandu FIR (VNSM) to (262617N; 0875024E).
2. Vertical Limits	ATZ: <u>2000' AGL</u> GND CTR : <u>9500' AMSL</u> GND
3. Airspace classification	C
4. ATS units call sign/languages(s)	Chandragadhi TWR/English
5. Transition Altitude	13500' AMSL
6. Remarks	-

VNCG AD 2.18 ATS COMMUNICATION FACILITIES

Service Designation	Call Sign	Frequency	Hours of Operation**	Remarks
1	2	3	4	5
TWR	Chandragadhi Tower	122.5 MHZ	1) From 16 Feb - 15 Nov (0015 - 1815) UTC** 2) From 16 Nov - 15 Feb (0045 -1815) UTC** .	

VNCG AD 2.19 RADIO NAV NAVIGATION AND LANDING AID

Type of Aid MAG VAR Type of supported OP (for VOR/ILS/MLS give declinations)	ID	Frequency	OPR Hours	Position of Transmitting Antenna Coordinates	Elevation of DME Transmitting Antenna	Remarks
1	2	3	4	5	6	7
.....						

VNCG AD 2.20 LOCAL TRAFFIC REGULATIONS

To be Developed

VNCG AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

** For operations other than above, Prior Co-ordination is required

VNCG AD 2.22 FLIGHT PROCEDURES

To be developed

VNCG AD 2.23 ADDITIONAL INFORMATION

TO BE DEVELOPED

VNCG AD 2.24 CHARTS & PROCEDURES RELATED TO CHANDRAGADHI AIRPORT

Aerodrome Chart

VNCG AD 2-10

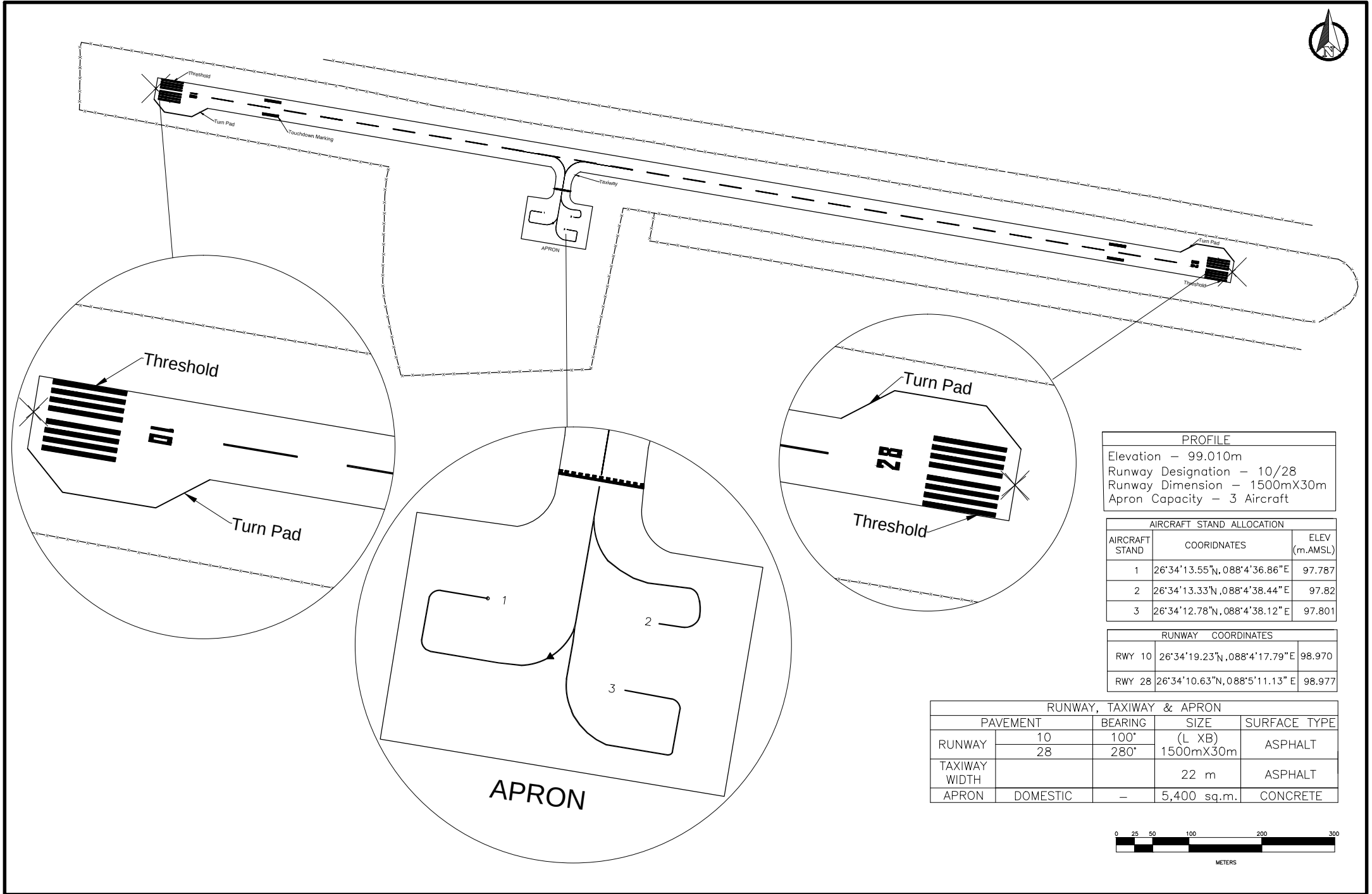
Control Zone (CTR) and Aerodrome Traffic Zone (ATZ)

VNCG AD 2-11

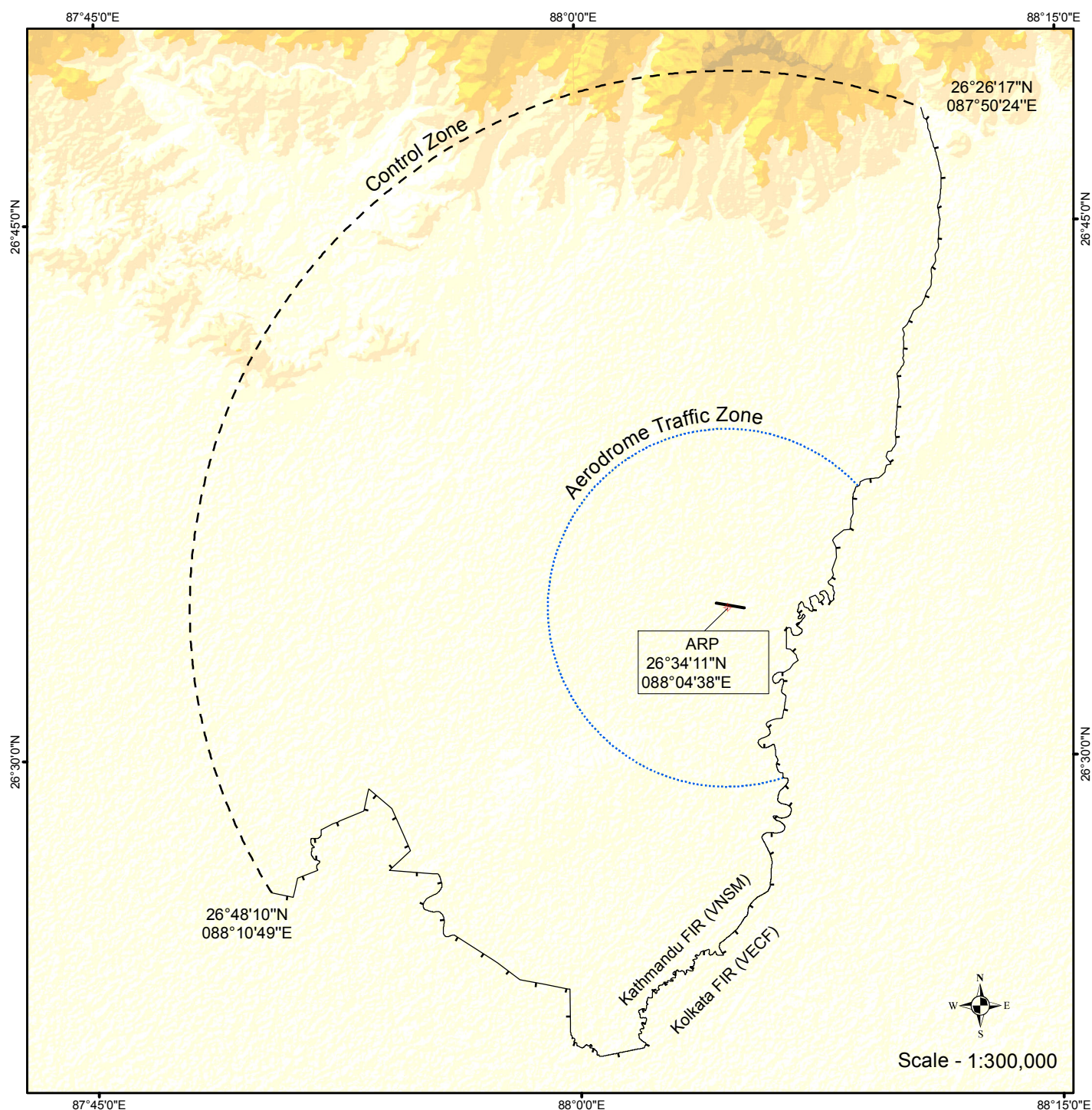
VFR Holdings

VNCG AD 2-12

RNAV GNSS approach procedure at Chandragadhi Airport VNCG AD 2-13 - VNCG AD 2-18

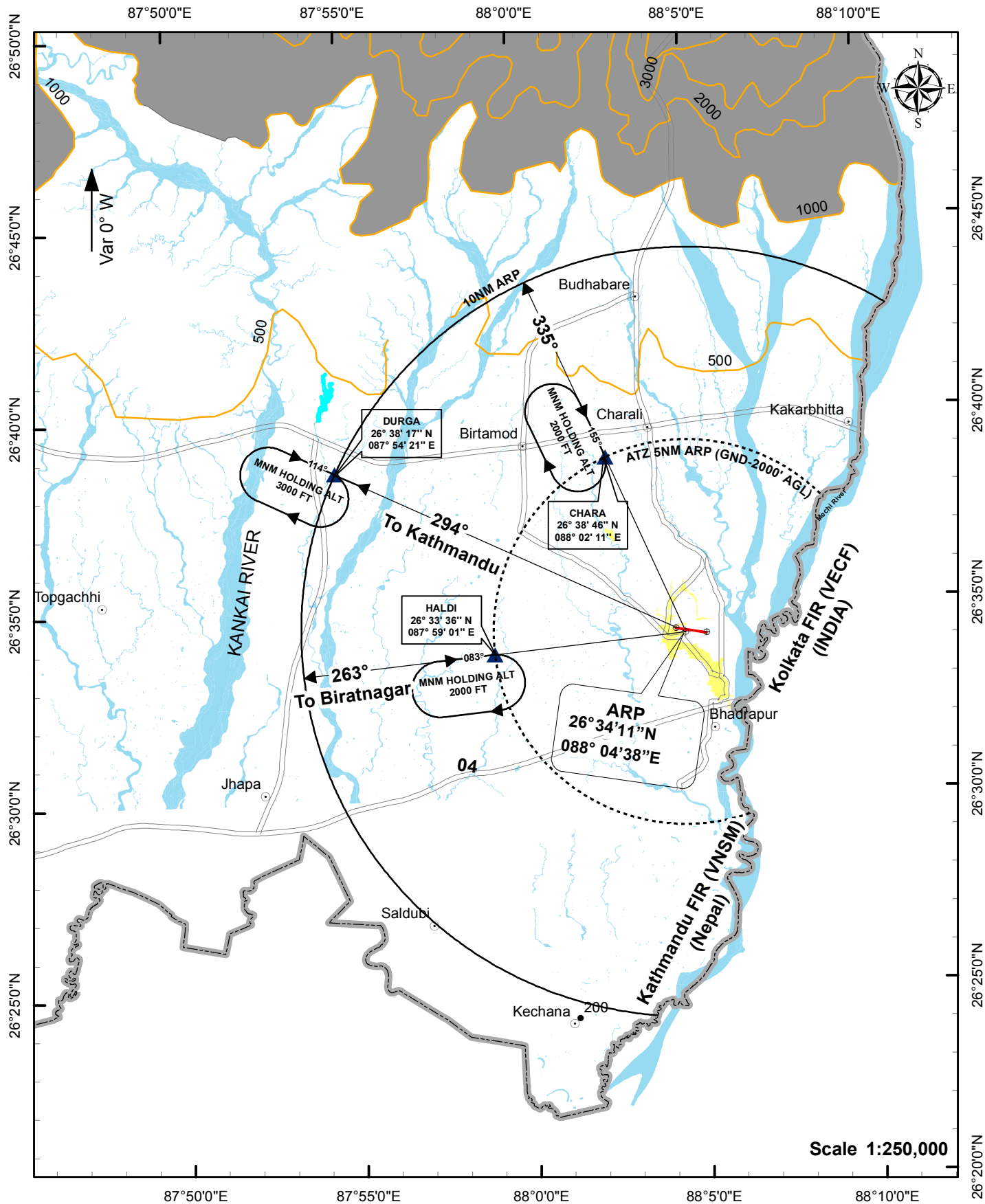


Control Zone (CTR) and Aerodrome Traffic Zone (ATZ) Chandragadhi Airport



AIRSPACE	IDENT	Lateral Limit	Vertical Limit
Aerodrome Traffic Zone	ATZ	An area of a circle of 5 NM radius centered at Chandragadhi ARP and to the East up to VNSM FIR.	<u>2000 ft AGL</u> GND
Control Zone	CTR	An area bounded by (26°26'17"N; 087°50'24"E) then along an arc of a circle of 15 NM radius centered at Chandragadhi ARP to (26°48'10"N; 088°10'49"E) and along Kathmandu FIR (VNSM) to (26°26'17"N; 087°50'24"E).	<u>9500 ft AMSL</u> GND

Visual Holdings



RNAV GNSS approach procedures at Chandragadhi Airport (VNCG)

1. INTRODUCTION

- 1.1 The following RNP1 SIDs/STARs and RNP APCH and associated Missed Approach Procedures are designed for VNCG in accordance with the criteria as stipulated in the ICAO PANS-OPS (DOC 8168 Vol. II).
- 1.2 The RNP1 SIDs/STARs and RNP APCH Procedures at VNCG is designed to enhance the safety and efficiency of the aircraft operations to materialize the National PBN Implementation Plan of Nepal.
- 1.3 One RNAV (GNSS) approach procedure with LNAV Specification only along with two RNP1 STARs and two RNP1 SIDs have been designed utilizes GNSS as a navigation system as stipulated in ICAO PBN Manual DOC 9613.
- 1.4 A full arrival, approach and missed approach trajectories along with associated holding have been designed.

2. APPROVED USERS, EQUIPMENT AND OPERATIONS

- 2.1 For the RNP1 SIDs/STARs, RNP APCH and associated Missed Approach, the operators shall ensure that they hold the all necessary operational approvals from Civil Aviation Authority of Nepal (CAAN).
- 2.2 The aircraft shall be equipped with GNSS as specified in Nepalese Flight Operations Requirements (FOR) and governed by the AIC 001/2011 dated 01 August 2011 (ATS Requirements for PBN in Nepalese Airspace).
- 2.3 All necessary navigation system are to installed onboard so as to keep the track keeping accuracy while commencing RNP1, RNP APCH and associated Missed Approach.
- 2.4 Before commencing the procedure, pilot in command must ensure that the navigation database is current and the aircraft's capability of conducting the procedure like GNSS availability, system performance, etc.

3. NAMING OF PROCEDURES

There are two RNP1 STARs, two RNP1 SIDs and one RNP APCH (LNAV only) procedures to Chandragadhi Runway 10 and are named in accordance with the ICAO naming convention as tabulated below.

RWY	SIDs	STARs	APPROACH
10	DHARA 1A MAHES 1A	CHURE 1R RANGA 1R	RNP RWY 10 (LNAV Only)

4. RNP CAPABILITY LOST

If the RNP Approach capability is lost, ATC shall be informed as soon as possible the alternate course of action from the pilots of the concerned aircraft.

5. List of Significant points :

Waypoint Identifier	Coordinates	
CHURE	26°51'48.0"N	086°39'07.0"E
RANGA	26°30'03.4"N	087°28'17.2"E
DHARA	26°52'11.0"N	087°14'56.1"E
DAMAK	26°41'15.7"N	087°40'04.7"E
TAHAR	26°32'27.9"N	087°36'53.0"E
MAHES	26°36'26.0"N	087°51'07.0"E
CG481	26°34'51.0"N	088°01'00.1"E
CG482	26°35'33.3"N	087°56'36.5"E
CG483	26°44'03.1"N	088°03'14.7"E
CG484	26°49'03.7"N	087°53'33.9"E
CG485	26°50'07.2"N	087°40'12.2"E
MAPt (RW10)	26°34'19.1"N	088°04'17.7"E
TH28	26°34'10.5"N	088°05'11.1"E

6. Coding Table: CHURE 1R Arrival

Serial No.	Path Descriptor	Waypoint Identifier	Fly-over	Course/Track (°M/°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kts)	VPA/TCH	Navigation Specification
1	IF	CHURE	-	-	-	-	-	+11500	-	-	RNP-1
2	TF	DHARA	-	089°	-	32.1	R	+9500	-	-	RNP-1
3	TF	DAMAK	-	116°	-	25.0	-	+8500	-	-	RNP-1
4	TF	MAHES	-	116°	-	11.0	-	+4000	-	-	RNP-1

7. Coding Table: RANGA 1R Arrival

Serial No.	Path Descriptor	Waypoint Identifier	Fly-over	Course/Track (°M/°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kts)	VPA/TCH	Navigation Specification
1	IF	RANGA	-	-	-	-	-	+4000	-	-	RNP-1
2	TF	TAHAR	-	073°	-	8.1	-	+4000	-	-	RNP-1
3	TF	MAHES	-	073°	-	13.4	-	+4000	-	-	RNP-1

8. Coding Table: RNP RWY 10 (LNAV Only)

Serial No.	Path Descriptor	Waypoint Identifier	Fly-over	Course/Track (°M/°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kts)	VPA/TCH	Navigation Specification
001	IF	MAHES (IAF)	-	-	-	-	-	+4000	-	-	RNP APCH
002	TF	CG482 (IF)	-	100°	-	5.0	-	@2600	-	-	RNP APCH
003	TF	CG481 (FAF)	-	100°	-	4.0	-	@1300	-	-	RNP APCH
004	TF	RW10 (MAPt)	Y	100°	-	3.0	L	@346	-	2.94/50	RNP APCH
005	DF	MAHES	-	-	-	-	-	+4000	-160	-	RNP APCH
	HM	MAHES (MAHF)	-	-	-	-	L	+4000	-180	-	RNP-1

9. Coding Table: SID DHARA 1A RWY 10

Serial No.	Path Descriptor	Waypoint Identifier	Flyover	Course/Track (°M/°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kts)	VPA/TCH	Navigation Specification
1	CA	-	-	100°	-	-	L	@700	-	-	RNP-1
2	DF	CG483	-	-	-	-	L	+4500	-160	-	RNP-1
3	TF	CG484	-	300°	-	10.0	L	+7500	-180	-	RNP-1
4	TF	CG485	-	275°	-	12.0	-	+10500	-	-	RNP-1
5	TF	DHARA	-	275°	-	22.7	-	+12500	-	-	RNP-1

10. Coding Table: SID MAHES 1A RWY 10

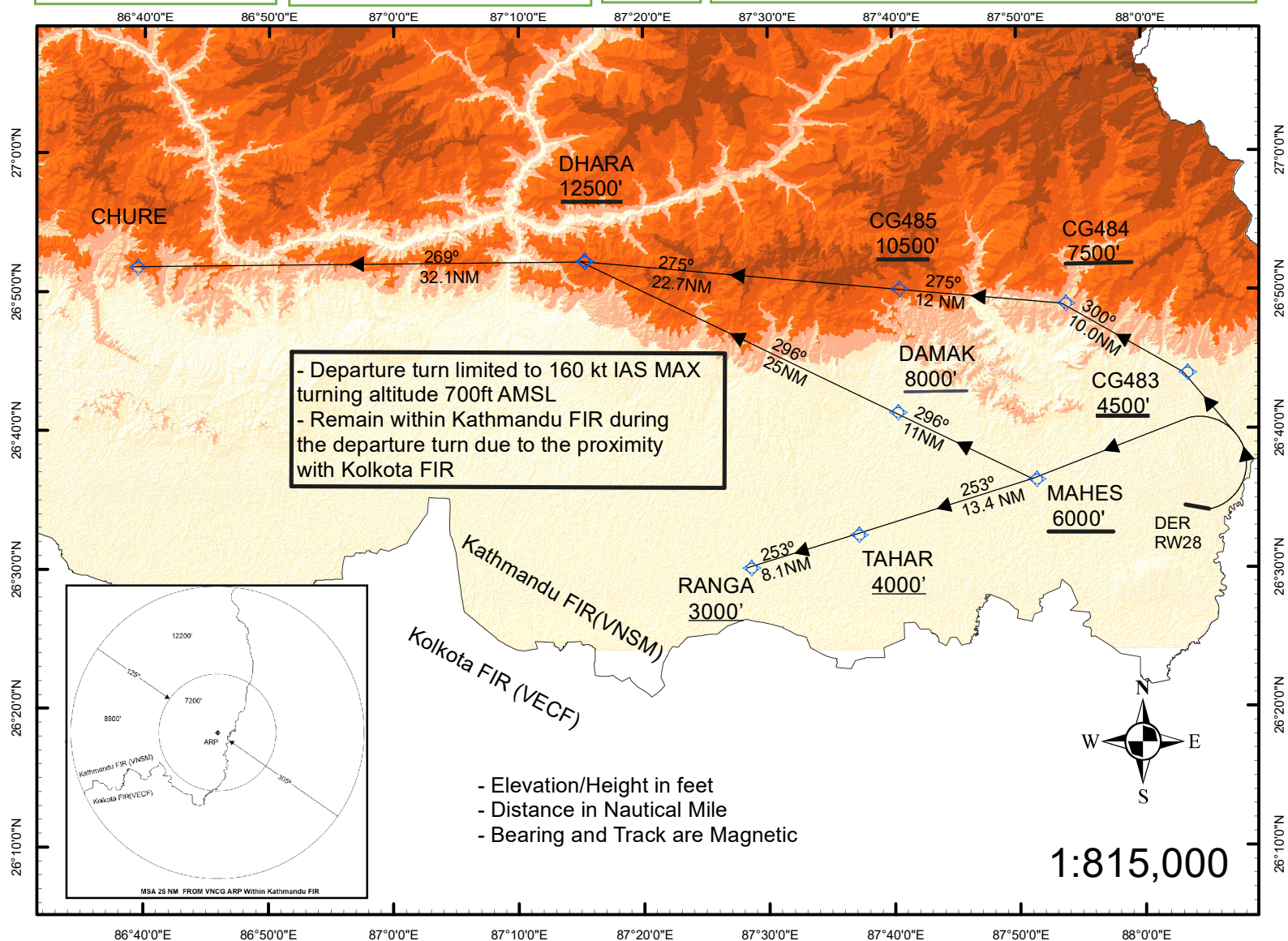
Serial No.	Path Descriptor	Waypoint Identifier	Flyover	Course/Track (°M/°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kts)	VPA/TCH	Navigation Specification
1	CA	-	-	100°	-	-	L	@700	-	-	RNP-1
2	DF	MAHES	-	-	-	-	-	+6000	-160	-	RNP-1

STANDARD
DEPARTURE
CHART -
INSTRUMENT (SID)-
ICAO

AERODROME ELEV 317'
TRANS LEVEL: FL150'
TRANS ALT: 13500' ft.
Mag Var. 0°W

TWR
122.5

CHANDRAGADI/CHANDRAGADI AIRPORT (VNCG)
RWY 10
RNP 1 SID
DHARA 1A, MAHES 1A



DHARA 1A RWY 10 (PDG 6.5%)

(Maximum departure turn limited to 160 Kt)

Climb on runway axis. At 700ft AMSL, turn left direct to CG483 at or above 4500ft AMSL. Then track 300° to CG484 at or above 7500ft AMSL. Then track 275° to CG485 at or above 10500ft AMSL. Then to DHARA at or above 12500 ft AMSL.

Transition to R344

Transition to R344 : From *DHARA* track 269° to join R344 at *CHURE*.

MAHES 1A RWY 10 (PDG 6.5%)

(Maximum departure turn limited to 160 Kt)

Climb on runway axis. At 700ft AMSL, turn left direct to MAHES at or above 6000ft AMSL.

Transition to RANGA : From *MAHES* track 253° to *TAHAH* at or above 4000ft AMSL then *RANGA* at or above 3000ft AMSL

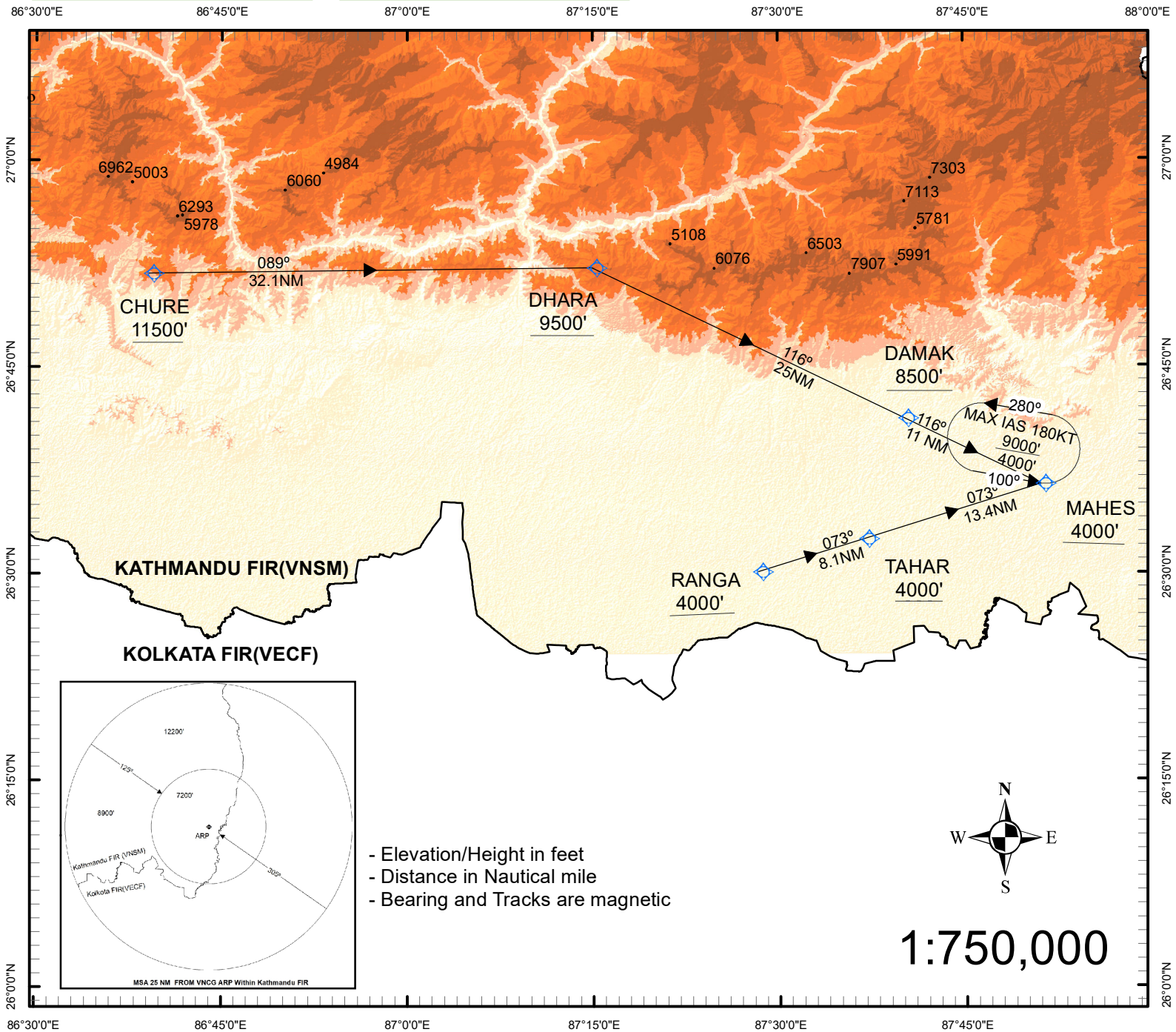
Transition to R344: From *MAHES* track 296° to *DAMAK* at or above 8000ft AMSL then *DHARA* at or above 12500ft AMSL then track 269 ° to *CHURE*.

STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

AERODROME ELEV 317'
TRANS LEVEL: FL150
TRANS ALT: 13500 ft.
Mag Var. 0°W

TWR
122.5

CHANDRAGADHI, NEPAL/
CHANDRAGADHI AIRPORT
RNP 1 STAR
CHURE 1R, RANGA 1R



STAR	ROUTING
CHURE 1R	From CHURE track 089° to DHARA at or above 9500 ft. AMSL. Then track 116° to DAMAK at or above 8500ft AMSL. Then to MAHES at or above 4000ft. AMSL
RANGA 1R	From RANGA track 073° to TAHAR at or above 4000ft AMSL. Then to MAHES at above 4000ft AMSL

**INSTRUMENT
APPROACH
CHART - ICAO**

**AERODROME ELEV 317'
TRANS LEVEL: FL150
TRANS ALT: 13500 ft.
Mag Var. 0°W**

TWR 122.5

**CHANDRAGADHI, NEPAL
CHANDRAGADHI AIRPORT
RNP RWY 10 (LNAV Only)**

