AD 2. AERODROMES

VEBS AD 2.1 AERODROME LOCATION INDICATOR AND NAME

VEBS - BHUBANESWAR AIRPORT / INTL

VEBS AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	Aerodrome reference point coordinates and its site	201448N 0854907E 342.30 DEG /668M from physical extremity of RWY 32	
2	Direction and distance of aerodrome reference point from the centre of the city or town which the aerodrome serves	BRG 224 DEG/3 KM from Bhubaneswar Railway station.	
3	Aerodrome elevation and reference temperature	138 FT / 39.0 DEG C	
4	Magnetic variation, date of information and annual change	1.10 DEG W (1985) /0.00	
5	Name of aerodrome operator, address, telephone, telefax, e-mail address, AFS address, website (if available)	The Airport Director Airports Authority of India, Biju Patnaik Airport, Bhubaneswar - 751020	
		Telephone:	+91-674-2596300 +91-9437496302
		Fax:	+91-674 – 2596302
		AFS:	VEBSYHYX
		Email:	apdbbsr@AAI.AERO
6	Types of traffic permitted (IFR/VFR)	IFR/VFR	
7	Remarks	NIL	

VEBS AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	MON-FRI 0400-1230 UTC (0930-1800 IST) SAT, SUN+ HOL : Nil	
2	Custom and immigration	NIL	
3	Health and sanitation	NIL	
4	AIS briefing office	As ATS	
5	ATS reporting office (ARO)	As ATS	
6	MET Briefing office	As ATS	
7	Air Traffic Service	Consult NOTAM for Current ATS HR.	
8	Fuelling	Daily: 0200-1700 UTC (0730-2230 IST)	
9	Handling	As ATS	
10	Security	As ATS	
11	De-icing	NIL	
12	Remarks	Outside of NOTAM/ATS hours, services are available on request with 24 HR prior notice.	
		ATS approved hourly runway traffic handling capacity	Maximum number of arrival and departure: 12 Maximum number of arrival only: 06 Maximum number of departure only -10

VEBS AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel and Oil types	JET A1 AVGAS, 100LL Oil MJO II
3	Fuelling facilities and capacity	Reliance: 5 Refuellers:16000 L (2), 11000 L (2), Preset: 700 -750 LPM, 6000L Preset: 400 LPM HPCL: 2 Refuellers: 12000L (1), 15000L (1) Preset: 1200 LPM
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

VEBS AD 2.5 PASSENGER FACILITIES

1	Hotel(s) at or in the vicinity of aerodrome	In the city.
2	Restaurant(s) at or in the vicinity of aerodrome	At AD and in the city
3	Transportation possibilities	Buses, Taxi and Car Hire from AD.
4	Medical Facilities	First aid at AD. Hospital in the city.
5	Bank and post office at or in the vicinity of aerodrome	Banks: In the city. SBI ATM at AD. Post office: within AD ADMN HR.
6	Tourist office	At AD
7	Remarks	NIL

VEBS AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	Aerodrome category for fire fighting	Within ATS HR: CAT-6
2	Rescue equipment	2 Ambulances
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

VEBS AD 2.7 SEASONAL AVAILABILITY CLEARING

1	Type(s) of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

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

1	Designation, surface and strength of aprons	Designator: NEW APRON Surface: Concrete Strength: PCN 74/R/C/W/T Designator: OLD APRON Surface: Concrete Strength: PCN 27/R/C/W/T
2	Designation, width, surface and strength of taxiways	Designator: TWY A Width: 23 M Surface: Asphalt Strength: PCN 27/R/C/W/T Designator: TWY B Width: 45 M Surface: Concrete Strength: PCN 62/R/B/W/T Designator: TWY C Width: 23 M Surface: Concrete Strength: PCN 74/R/C/W/T Designator: TWY D Width: 11 M Surface: Asphalt Strength: PCN 8/F/C/W/T
3	Location and elevation of altimeter checkpoints	Location: At Apron 201452.2N 0854905.7E Elevation: 144 FT
4	Location of VOR checkpoints	
5	Position of INS checkpoints	
6	Remarks	Remarks: - 1. New Apron Area: 54255 sqm & Shoulder: 7.5M all around. Markings: Apron edge & aircraft stand marking. Lighting: Apron flood lights. (Ramp Equipment Area: 153.5MX10M provided on East Side of the apron. Stands 1 to 6 are Power in Power out.) 2. TWY C: Length - 229M & Shoulder - 7.5M. 3. TWY D: Length 166M capable upto Type B Aircraft. 4. New combined apron is located north east of RWY 14 beginning.

VEBS AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand identification signs, taxiway guidelines and visual docking/parking guidance system at aircraft stands	Taxiing guidance provided on RTF Taxi -In and Out markings available.
2	Runway and taxiway markings and lights	RWY Markings: Designation, THR, TDZ, Centreline, Edge RWY Lights: THR, Edge, End TWY Marking: Centreline, Edge TWY Lights: Edge (TWY A, TWY B & TWY C)
3	Stop bars (if any)	NIL
4	Remarks	Apron Edge Marking, Aircraft Stand Marking

VEBS AD 2.10 AERODROME OBSTACLES

In Approach/Take-off/Circling Area and at AD					
1	**2**	**3**	**4**	**5**	**6**
RWY/Area affected	Obstacle type	Coordinates	Elevation	Marking/LGT	Remarks
32/APCH 14/TKOF	TREE	201415.0N 0854928.0E	147 FT	NIL	TREE
In circling area and at AD	BUILDING	201525.0N 0854655.0E	340 FT	LGTD	KHANDAGIRI TEMPLE

VEBS AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Name of the associated meteorological office	Bhubaneswar
2	Hours of service and, where applicable, the designation of the responsible meteorological office outside these hours	H24
3	Office responsible for preparation of TAFs and periods of validity and interval of issuance of the forecasts	Bhubaneswar 9HR
4	Availability of the trend forecast for the aerodrome and interval of issuance	Trend 30 MIN
5	Information on how briefing and/or consultation is provided	Provided
6	Types of flight documentation supplied and language(s) used in flight documentation	Tabular Form (English)
7	Charts and other information displayed or available for briefing or consultation	S, U85, U70, U50, U30, U20, MFI, WRF, Products Satellite Pictures.
8	Supplementary equipment available for providing information on meteorological conditions, e.g. weather radar and receiver for satellite images;	Telex, Telefax, Satellite display work Station, DMDD, 64 KBPS (VPN)
9	The air traffic services unit(s) provided with meteorological information	Bhubaneswar ATC and ACS
10	Additional information, e.g. concerning any limitation of service.	TS Warning, Aerodrome Warning.

VEBS AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations	TRUE Bearings	Dimensions of RWY (M)	Strength of pavement (PCN) and associated data) and surface of runway and associated stopways	Geographical coordinates for threshold and runway end
1	2	3	4	5
14	143.37 DEG	2743 x 45 M	56/F/B/W/T Asphalt	THR: 201538.80N 0854816.80E
32	323.37 DEG	2743 x 45 M	56/F/B/W/T Asphalt	THR: 201427.70N 0854914.10E
05	50.87 DEG	1379 x 45 M	18/R/C/W/T Asphalt	THR: 201427.20N 0854847.00E
23	230.87 DEG	1379 x 45 M	18/R/C/W/T Asphalt	THR: 201453.50N 0854920.90E

THR elevation and highest elevation of TDZ of precision APP RWY	Slope of runway and associated stopway	Dimensions of stopway (M)	Dimensions of clearway (M)	Dimensions of strips (M)
6	7	8	9	10
THR: 104.0FT TDZ: 124.0FT	0.11%	60 x 45 M		2863 x 150 M
THR: 122.0FT TDZ: 130.0FT	0.11%	60 x 45 M		2863 x 150 M
THR: TDZ:	0.63%	60 x 45 M		1499 x 150 M
THR: TDZ:	0.63%	60 x 45 M		1499 x 150 M

Dimensions of runway end safety areas	Location and description of arresting system (if any)	Existence of an obstacle-free zone	Remarks.
11	12	13	14
90M x 90M			NIL
90M x 90M			NIL
			Operation on RWY05/23 restricted to light aircraft only.
			Operation on RWY 05/23 restricted for light aircraft only

VEBS AD 2.13 DECLARED DISTANCES

RWY Designator	Take-off run available TORA (M)	Take-off distance available TODA (M)	Accelerate distance available ASDA (M)	Landing distance available LDA (M)	Remarks (including runway entry or start point where alternative reduced declared distances have been declared)
1	2	3	4	5	6
14	2743	2743	2803	2743	1 : 50
32	2743	2743	2803	2743	1 : 50
05					
23					

VEBS AD 2.14 APPROACH AND RUNWAY LIGHTING

Runway Designator	Type, length and intensity of approach lighting system	Runway threshold lights, colour and wing bars	Type of visual slope indicator system	Length of runway touchdown zone lights
1	2	3	4	5
14	CAT I 778 M LIH	Green	PAPI LEFT/3.00 DEG MEHT (49.55FT)	NIL
32	SALS 240 M LIH	Green	PAPI LEFT/3.00 DEG MEHT (32.80FT)	NIL
05			NIL	
23			NIL	

Length, spacing, colour and intensity of runway centre line lights	Length, spacing, colour and intensity of runway edge lights	Colour of runway end lights and wing bars	Length and colour of stopway lights	Remarks
6	7	8	9	10
	2743 M 60 M White	Red	NIL	NIL
	2743 M 60 M White	Red	NIL	NIL
				NIL
				NIL

VEBS AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	Location, characteristics and hours of operation of aerodrome beacon/identification beacon (if any)	ABN	At Tower Building, FLG W&G EV2SEC As ATS HR
		IBN	NIL
2	Location and lighting (if any) of anemometer/ landing direction indicator;	LDI	AVBL
		Anemometer	On tower building not lighted
3	Taxiway edge and taxiway centre line lights;	Edge	TWY A, B, C TWY D: NIL
		Centre Line	NIL
4	Secondary power supply including switch-over time;	Secondary Power supply to all lighting. Switch-over time: within 15 Sec.	
5	Remarks	Apron Flood Lights AVBL	

VEBS AD 2.16 HELICOPTER LANDING AREA

1	Geographical coordinates of the geometric centre of touchdown and lift-off (TLOF) or of each threshold of final approach and take-off (FATO) area	Not established
2	TLOF and/or FATO area elevation:	Not established
3	TLOF and FATO area dimensions to the nearest metre or foot, surface type, bearing strength and marking;	Not established
4	True bearings of FATO;	Not established
5	Declared distances available	Not established
6	Approach and FATO lighting;	Not established
7	Remarks	Not established

VEBS AD 2.17 AIR TRAFFIC SERVICE AIRSPACE

1	Airspace designation, geographical coordinates and lateral limits	CTR: Circular area centered on DVOR BBS (201437N 0854848E) within a 30NM radius.
2	Vertical limits	FL 50
3	Airspace classification	D
4	Call sign and language(s) of the air traffic services unit providing service;	Bhubaneswar Tower, English
5	Transition altitude	4000 FT
6	Hours of applicability	HO
7	Remarks	Caution for local (powered and glider) training flights in the AD circuit.

VEBS AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Call sign	Channel(s)	SATVOICE Number(s), if available	Logon address, as appropriate	Hours of operation	Remarks
1	2	3	4	5	6	7
APP	Bhubaneswar Tower	125.150 MHZ			AS ATS	NIL
TWR	Bhubaneswar Tower	118.150 MHZ			As ATS	Between 0115 - 1700 Daily: Standby Tower/Approach Frequency 118.15 MHZ available
TWR	Bhubaneswar Tower	125.150 MHZ			As ATS	NIL
ATIS	Bhubaneswar Information	126.800 MHZ			As ATS	NIL

VEBS AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aids, magnetic variation and type of supported operation for ILS/ MLS, basic GNSS, SBAS and GBAS, and for VOR/ILS/MLS station used for technical lineup of the aid	Identification	Frequency(ies), Channel number(s), Service provider, and reference path identifier(s) (RPI), as appropriate	Hours of operation, as appropriate;
1	2	3	4
LOC 14	----	109.100 MHz	AS ATS
GP 14	---	331.400 MHz	As ATS
DME ILS 14	DME		AS ATS
DVOR/DME	BBS	113.500 MHz CH82X	H24

Geographical coordinates of the position of the transmitting antenna	Elevation of transmitting antenna of DME/ elevation of GBAS reference point	Service volume radius from the GBAS reference point	Remarks
5	6	7	8
201421.2N 0854918.6E			CH336X
201534.2N 0854827.3E			
201534.2N 0854827.3E	127 FT		
201437.2N 0854847.7E	184 FT		

VEBS AD 2.20 LOCAL AERODROME REGULATIONS

NIL

VEBS AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

VEBS AD 2.22 FLIGHT PROCEDURES

NIL

VEBS AD 2.23 ADDITIONAL INFORMATION

1. Additional Wind sock commissioned at a distance of 200M and BRG 300 DEG from ARP. Windsock lighted during night.
2. LOC Tx-2 clearance restriction upto 32 DEG lifted. GP restricted for use upto 150 ft.
3. Aircraft stands details:

Aircraft Stand	Co-ordinate	Critical Aircraft	PCN
1	201506.80N 0854857.70E	B767-400	74/R/C/W/T
2	201509.20N 0854855.80E	B767-400	74/R/C/W/T
3	201511.70N 0854853.90E	A321	74/R/C/W/T
4	201512.80N 0854853.00E	A321	74/R/C/W/T
5	201513.80N 0854852.20E	A321	74/R/C/W/T
6	201514.90N 0854851.30E	A321	74/R/C/W/T

4. ADS-B Ground Equipment Commissioned and Operational.

VEBS AD 2.24 CHARTS RELATED TO AN AERODROME

1. ILS Procedure RWY 14
2. VOR (Z) Procedure RWY 14
3. VOR (Z) Procedure RWY 32

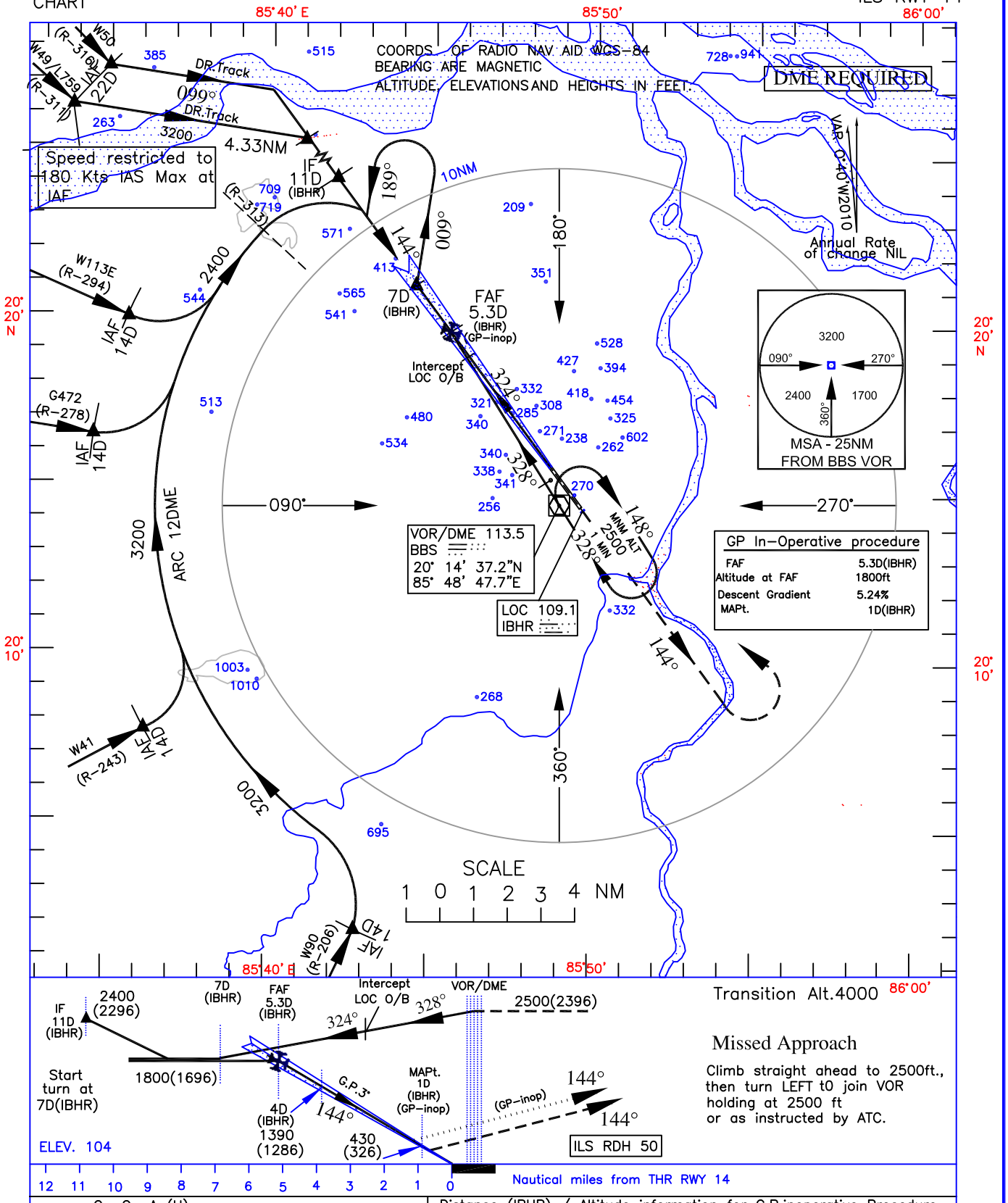
4. ATC Surveillance Minimum Altitude Chart

INSTRUMENT APPROACH CHART

AERODROME ELEV 138ft.
HEIGHTS RELATED TO
THR RWY 14 ELEV 104ft

APP.125.15
TWR.125.15

BHUBANESHWAR
INDIA
ILS RWY 14



Transition Alt.4000

Missed Approach

Climb straight ahead to 2500ft., then turn LEFT t0 join VOR holding at 2500 ft or as instructed by ATC.

O C A (H)		
CATEGORY OF AIRCRAFT	A/B	C
STRAIGHT-IN	320(216)	320(216)
VISUAL CIRCLING	900(762)	1000(862)
GP In-Operative procedure		
STRAIGHT-IN	650(546)	650(546)
VISUAL CIRCLING	900(762)	1000(862)

Distance (IBHR) / Altitude information for G.P.inoperative Procedure					
Distance(NM)	5.3D	5D	4D	3D	2D
Altitude(Ft.)	1800	1700	1390	1070	760

Time & Rate of Descent information for G.P.inoperative Procedure						
Distance from FAF to MAPt 4.3 NM						
Ground speed (kt.)	80	100	120	140	160	
Time(Min :Sec)	3:13	2:35	2:09	1:51	1:37	
Rate of descent (ft/min)	425	530	635	745	850	

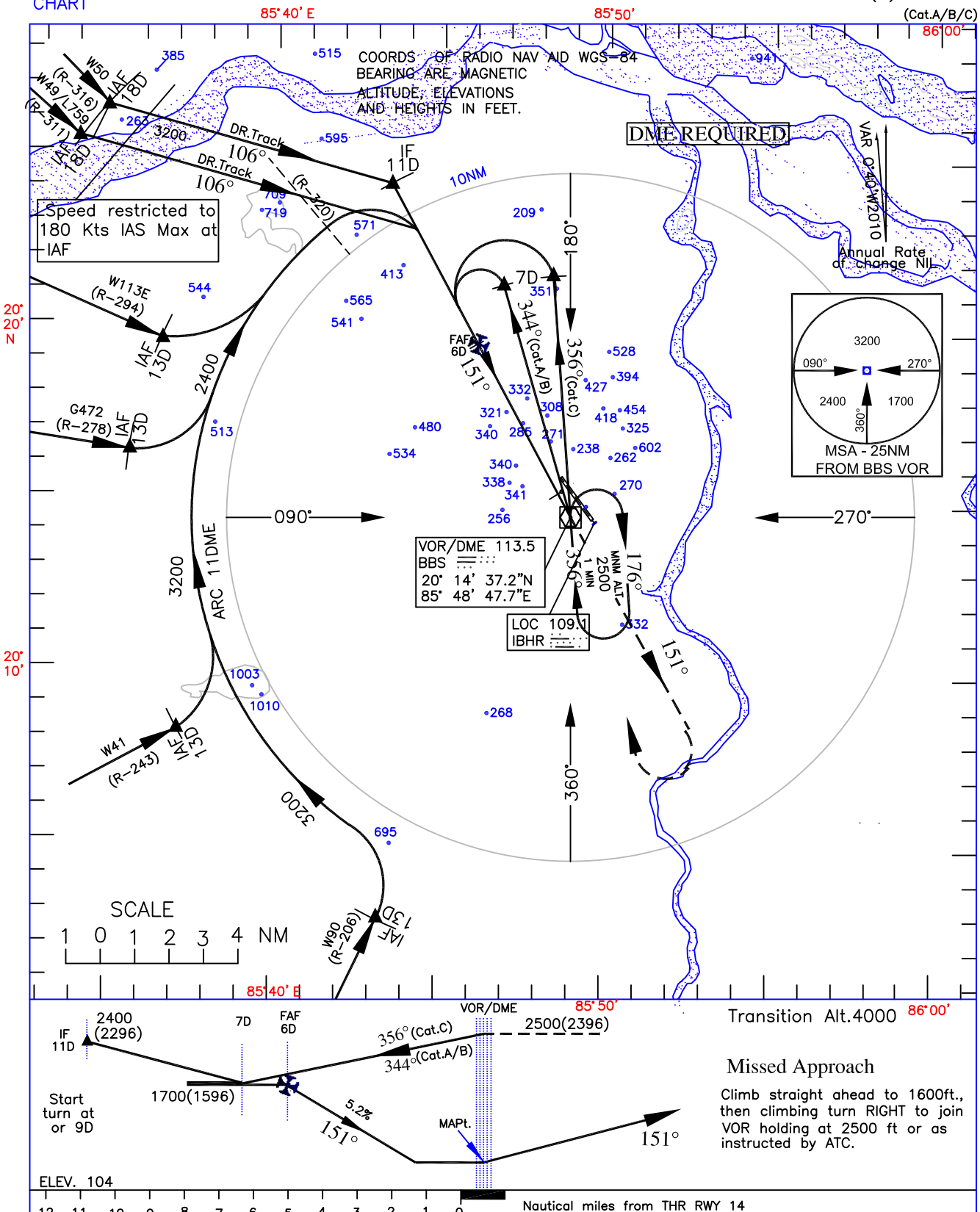
DRG. NO. AAI/15-IALC/02/01-05-2016

INSTRUMENT APPROACH CHART

AERODROME ELEV 138ft.
HEIGHTS RELATED TO
THR RWY 14 ELEV 104ft

APP.125.15
TWR.125.15

BHUBANESHWAR
INDIA
VOR (Z) RWY 14
(Cat.A/B/C)



Transition Alt.4000

Missed Approach

Climb straight ahead to 1600ft., then climbing turn RIGHT to join VOR holding at 2500 ft or as instructed by ATC.

O. C. A. (H)		
CATEGORY OF AIRCRAFT	A/B	C
STRAIGHT-IN	650(546)	650(546)
VISUAL CIRCLING	960(822)	1000(862)

Distance / Altitude information						
Distance(NM)	6D	5D	4D	3D		
Altitude(Ft.)	1700	1400	1090	770		
Rate of Descent/Ground speed information						
Ground speed (kt.)	80	100	120	140	160	
Rate of descent (ft/min)	420	525	630	735	845	

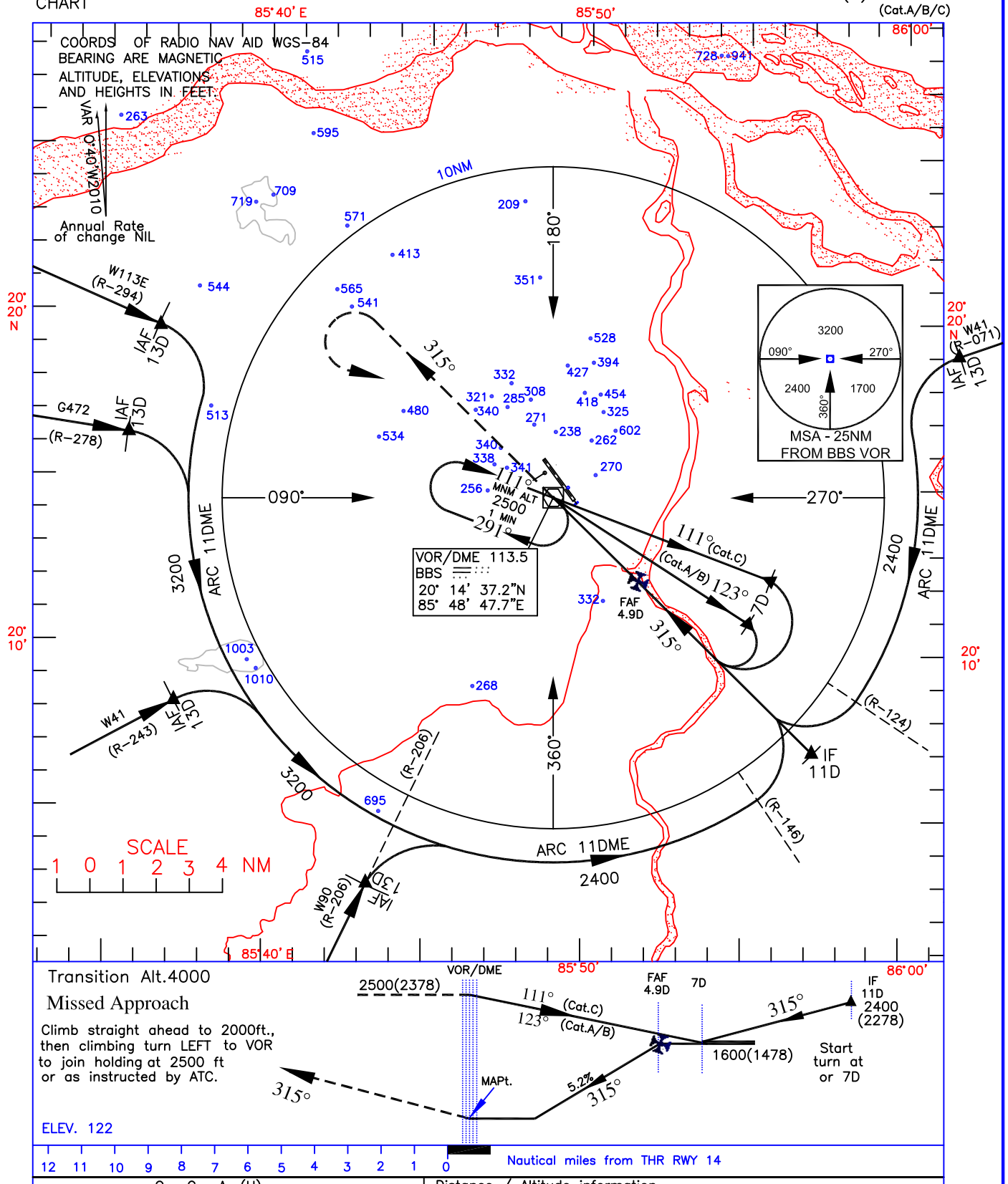
DRG. NO. AAI/14-IALC/02/01-05-2016

INSTRUMENT APPROACH CHART

AERODROME ELEV 138ft.
HEIGHTS RELATED TO
THR RWY 32 ELEV 122ft

APP.125.15
TWR.125.15

BHUBANESHWAR
INDIA
VOR (Z) RWY 32
(Cat.A/B/C)



Transition Alt.4000

Missed Approach

Climb straight ahead to 2000ft., then climbing turn LEFT to VOR to join holding at 2500 ft or as instructed by ATC.

ELEV. 122

12 11 10 9 8 7 6 5 4 3 2 1 0 Nautical miles from THR RWY 14

O. C. A. (H)			Distance / Altitude information					
CATEGORY OF AIRCRAFT	A/B	C	Distance(NM)	4.9D	4D	3D	2D	
STRAIGHT-IN	590(468)	590(468)	Altitude(Ft.)	1600	1320	1010	690	
VISUAL CIRCLING	900(762)	1000(862)	Rate of Descent/Ground speed information					
			Ground speed (kt.)	80	100	120	140	160
			Rate of descent (ft/min)	420	525	625	735	845

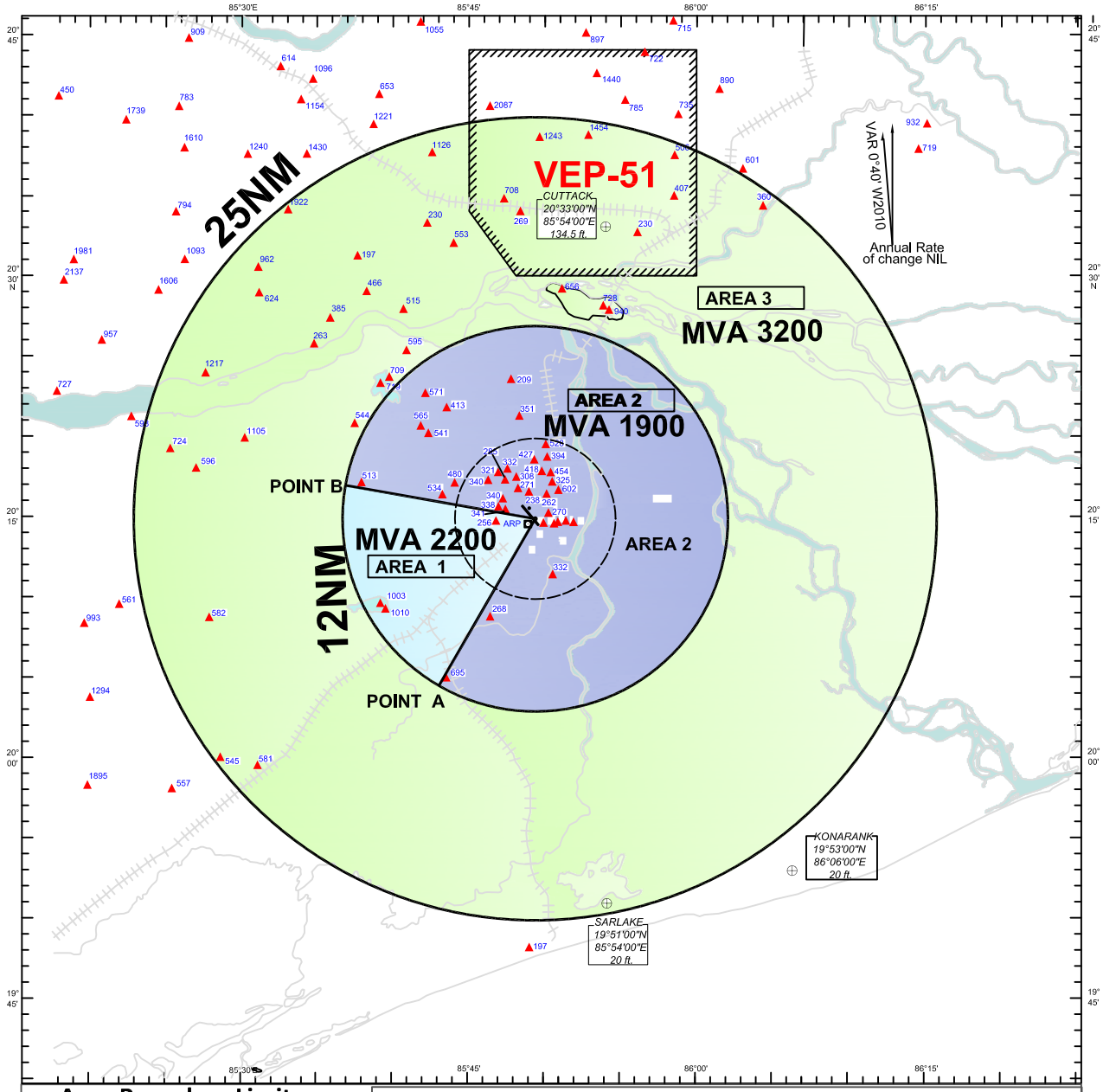
DRG. NO. AAI/13-IALC/02/01-05-2016

BHUBANESHWAR (VEBS)
ATC Surveillance Minimum Altitude Chart

Aerodrome Elev. 138ft
Transition Alt.-4000

All altitude in feet

APP. 125.15
TWR. 125.15



Area Boundary Limits

Area I D	Area Boundary Limits
Area 1 2200ft	Area bounded by ARP, point A and point B via the shorter arc of circle of radius 12NM centered at ARP
Area 2 1900ft	Area bounded by ARP, point A and point B via the longer arc of circle of radius 12NM centered at ARP.
Area 3 3200ft	Area enclosed between the circle of radii 12NM and 25 NM centered at ARP.

Sl. No	MVA Boundary Points	Coordinates	
		Latitude	Longitude
1	ARP	201448.00N	0854907.00E
2	POINT A	200416.01N	0854255.88E
3	POINT B	201416.80N	0853630.24E

Radio Communication Failure Procedure:

When providing navigational guidance to aircraft based on the use of an ATC Surveillance system for pilot interpreted final approach aid, following radio communication failure procedure shall be applicable-

1. If radio communication failure takes place prior to interception of final approach track, aircraft shall maintain the last assigned altitude or 2500Ft whichever is higher and proceed to BBS VOR via shortest route to join the holding procedure.
2. If radio communication failure occurs after interception of the final approach track, aircraft should continue the approach and land if visual or carryout the missed approach and join the BBS VOR holding at 2500Ft.
3. After joining the holding procedure aircraft shall carryout the instrument approach procedure for which navigational guidance was being provided.

NOTE:

1. Altitudes shown are based on QNH.
2. Only signficant spot elevations are shown
3. ATC Surveillance Minimum Altitudes are established within 25 NM of Bhubaneshwar ARP (*201448N 0854907E*)
4. Chart may only be used for cross-checking of altitude assigned while the aircraft is identified and is being radar vectored.

12-11-2014