

TEL: 91-11-24632950 Extn: 2219/2233 AFS : VIDDYXAX FAX : 91-11-24615508 Email: gmais@aai.aero	INDIA AERONAUTICAL INFORMATION SERVICE AIRPORTS AUTHORITY OF INDIA RAJIV GANDHI BHAVAN SAFDARJUNG AIRPORT NEW DELHI – 110003	41/2011
		13 JUL 2011

File No. AAI/ATM/AIS/09-09/2011

Following supplement is issued for information, guidance and necessary action.


V.P. AGRAWAL
CHAIRMAN

AIRPORTS AUTHORITY OF INDIA

[EFFECTIVE DATE: 25 AUG 2011]

**VOR PROCEDURE RWY 32
(DME REQUIRED)
CHHATRAPATI SHIVAJI INTERNATIONAL AIRPORT
MUMBAI**

(All distance and radial are from VOR (116.6 BBB) unless otherwise specified)

1	Holding	
1.1	BBB (116.6 VOR-DME)	One minute left hand pattern inbound track 164 Deg M. Minimum holding altitude 3700 FT.
1.2	KALAM (R-088/30D)	One minute right hand pattern inbound track 268 Deg M. Minimum holding level FL80.
1.3	SHABA (R-164/25D)	One minute left hand pattern inbound track 344 Deg M. Minimum holding level FL80.
Note: Simultaneous Holding at VOR (116.6 BBB) and KALAM/SHABA is not authorized at same level.		
2	VOR-DME / VOR-DME ARC Procedure:	
2.1	VOR-DME	Speed restricted to 185 KT (IAS) Max during base-turn Proceed outbound VOR on track 154 Deg M (R-154) for Cat A/B and 164 Deg M (R-164) for Cat C/D, descending to 2100 FT. At 8D commence level base turn left to establish on final approach track 321 Deg M (R-141). At FAF 6.1D descend to MDA/H. Cross Step-down Fix 3.4D at 1180 FT or above.

2.2	VOR-DME ARC Procedure:	After passing IAF 18D (VOR DME) on (R-186) turn left to fly 16 DME Arc descending to 5800 feet. After crossing lead radial 222 turn right to establish on final approach track 050 Deg M (R-230) descending to 5000 feet. At FAF 11D descend to MDA/H.
2.2.1	From ATS routes: A474/W10S/W12S (R-018), DCT OZAR (R-045), G450/W18/W218 (R-073), W28 (R-119)	After passing IAF 16D on respective radials turn left to fly DME arc of radius 14D maintaining 3700 FT. Crossing lead radial R-131 turn right to establish final approach track 321 Deg M (R-141) descending to 2100 FT (Speed restricted to 185 KT (IAS Max)). At FAF 6.1D descend to MDA/H. Cross Step-down Fix 3.4D at 1180 FT or above.
2.2.2	From KALAM (R-088/30D)	Leave KALAM to establish R-088 from BBB VOR. At 25D descend to 3700 FT, thereafter follow procedure as given in para 2.2.1
2.2.3	From ATS Route: B466/W56N (R-137)	After passing IAF 20D on R-137 turn left to establish final approach track 321 Deg M (R-141) descending to 3700 FT. At IF 14D descend to 2100 FT. At FAF 6.1D descend to MDA/H. Cross Step-down Fix 3.4D at 1180 FT or above.
2.2.4	From ATS route: G450 (R-241), B459 (R-219), A474 (R-203), W15N/W17N/ R461(R-183),	After passing IAF 16D on respective radials turn right to fly DME arc of radius 14D maintaining 3700 FT. Crossing lead radial R-151 turn left to establish final approach track 321 Deg M (R-141) descending to 2100 FT. At FAF 6.1D descend to MDA/H. Cross Step-down Fix 3.4D at 1180 FT or above.
2.2.5	From SHABA (R-164/25D)	Leave SHABA to establish R-164 from BBB VOR descending to 3700 FT, thereafter follow procedure as given in para 2.2.4
Note: Final Approach Track offset by 5.25 deg left of extended RWY C/L.		
2.2.6		IF – 14 D Altitude over IF – 3700 FT FAF – 6.1 D Altitude at FAF – 2100 FT Step-down Fix – 3.4 D Altitude at Step-down Fix – 1180 FT Descend Gradient – 5.7 % (3.26°) MAPt. – 1D

2.3	OCA	Straight-in with SDF – 650 FT Straight-in without SDF – 1330 FT Visual Circling Cat A/B – 1440 FT Cat C – 1480 FT Cat D – 1700 FT					
2.4	Distance (DVOR DME) - Altitude Information						
	Distance (NM)	6.1D	5D	4D	SDF 3.4 D	3D	2D
	Altitude (FT)	2100	1740	1390	1180	1050	700
2.5	Ground Speed/Rate of Descent Information (Descend Gradient 5.7%):						
	Ground Speed (Kt)	80	100	120	140	160	180
	Rate of Descent (FT/Min)	460	575	695	810	925	1040
3	Missed Approach Point	1 D					
3.1	Missed Approach Procedure	Climb straight ahead to 2600 FT, then climbing turn right to join VOR holding at 3700 FT or as instructed by ATC.					
4	MSA	Sector 340 Deg – 200 Deg --- 2600 feet upto 12 NM 3700 feet 12 NM to 25 NM Sector 200 Deg – 340 Deg---- 2600 feet upto 25 NM					

Note:

1. ATC may clear, within CTR, an aircraft established on any radial other than the promulgated radial to join 14D VOR-DME ARC procedure at or above 3700 FT.
2. Circling east of RWY 14 and north of RWY 27 of the intersecting RWY 14 & RWY 27 is prohibited.
3. Speed restricted to 185 KT (IAS) Max during base-turn and after crossing lead radial.

Caution:

1. Trombay Hill (1002 FT AMSL) and Mast on Trombay Hill (1074 FT AMSL) located west of runway extended centerline at 4NM from VOR.
2. PAPI RWY32 set at 3 Deg.

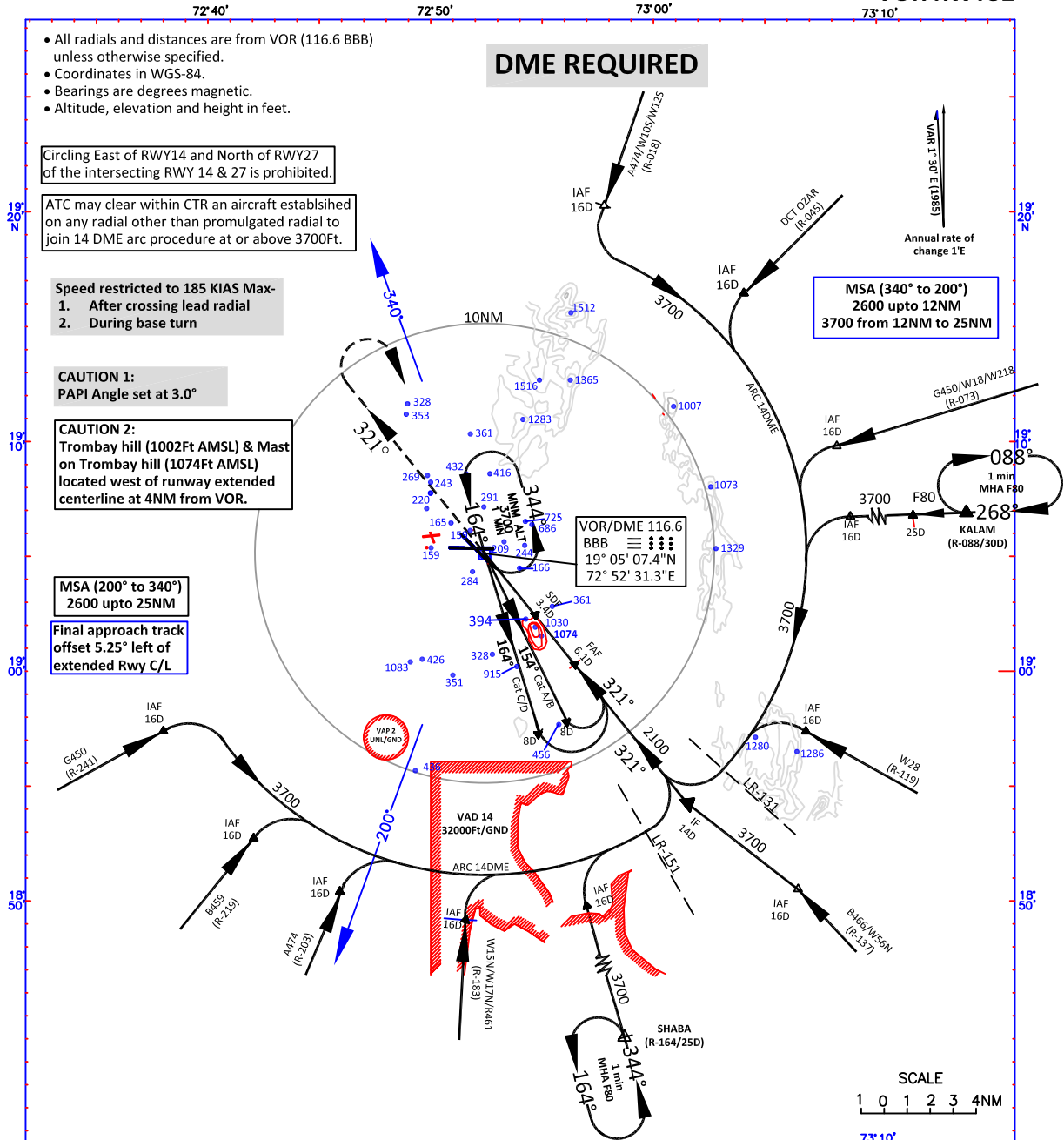
Cancellation: AIP India page AD2 VABB 107, 01 JUN 2009

INSTRUMENT APPROACH CHART

Aerodrome Elev. 37ft
Heights related to:
THR RWY32 - Elev. 26ft

APP 127.9
 TWR 118.1

MUMBAI INDIA
VOR RWY32



- All radials and distances are from VOR (116.6 BBB) unless otherwise specified.
- Coordinates in WGS-84.
- Bearings are degrees magnetic.
- Altitude, elevation and height in feet.

Circling East of RWY14 and North of RWY27 of the intersecting RWY 14 & 27 is prohibited.

ATC may clear within CTR an aircraft established on any radial other than promulgated radial to join 14 DME arc procedure at or above 3700ft.

Speed restricted to 185 KIAS Max-
 1. After crossing lead radial
 2. During base turn

CAUTION 1:
 PAPI Angle set at 3.0°

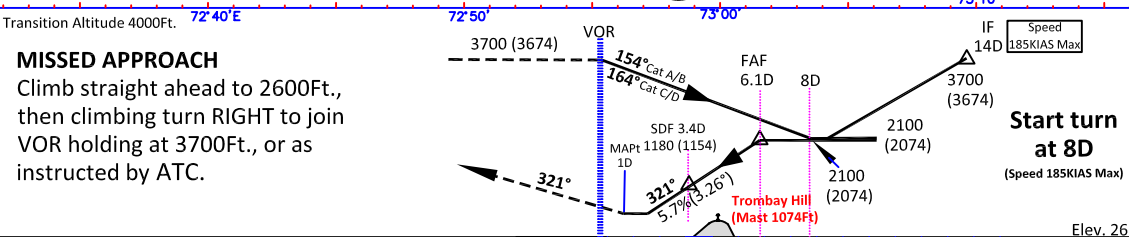
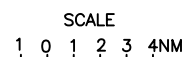
CAUTION 2:
 Trombay hill (1002ft AMSL) & Mast on Trombay hill (1074ft AMSL) located west of runway extended centerline at 4NM from VOR.

MSA (200° to 340°)
 2600 upto 25NM

Final approach track offset 5.25' left of extended Rwy C/L

VOR/DME 116.6
 BBB
 19° 05' 07.4\"/>

MSA (340° to 200°)
 2600 upto 12NM
 3700 from 12NM to 25NM



OCA (H)				DISTANCE ALTITUDE INFORMATION						Descent Gradient - 5.7%		
Category of acft	A/B	C	D	Distance (NM)	6.1D	5D	4D	SDF 3.4D	3D	2D		
Straight-in with SDF		650		Altitude (FT)	2100	1740	1390	1180	1050	700		
Straight-in without SDF		1330		RATE OF DESCENT INFORMATION						Descent Gradient - 5.7%		
Visual Circling	1440	1480	1700	Ground Speed (Kt)	80	100	120	140	160	180		
				Rate of Descent (Ft/Min)	460	575	695	810	925	1040		
AERODROME OPERATING MINIMA												
Category of aircraft	A		B		C		D					
Approach Light System	ALS	ALS Out	ALS	ALS Out	ALS	ALS Out	ALS	ALS Out	ALS	ALS Out		
Normal Minima		2400		2400		3600		4000				
Restricted Minima		2800		2800		4400		5000				
Normal Circling Minima		3600		3600		5000		5000				
Restricted Circling Minima		3600		3600		5000		5000				