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



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CHAIRMAN

AIRPORTS AUTHORITY OF INDIA

[Effective from 0803151800]

STANDARD INSTRUMENT DEPARTURE PROCEDURES (SIDs) – HIAL

Rwy 09/27 - RNAV (VOR / DME)

1. GENERAL

- (i) The SIDs are designed for Rwy 09/27 based on the provisions of DOC 8168, Volume II for aircraft equipped with RNAV capability.
- (ii) The SIDs shall be applicable under radar control environment only. In case of non-availability of radar, the non radar SIDs shall be applicable.
- (iii) The way points have been designated with reference to HIAL VOR/DME (17°13'40.11"N 078°M 24' 20.88" E). The coordinates have been specified in WGS-84 system.
- (iv) Turn points have been designated for each runway and thereafter tracks specified for aircraft to follow to a particular way point to join the designated ATS route. The coordinates of turn points are specified below :-

Rwy 09	HL 101 7.7 DME	17 13 49.09 N 078 32 23.72 E
Rwy 27	HL 106 4.6 DME	17 13 38.51 N 078 19 32.79 E

The turn points are FLY BY.

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- (v) SIDs terminate at the point where the SID designator joins the filed flight plan ATS route. All aircraft on completion of SIDs shall join the flight plan route.
- (vi) Pilots are required to fly tracks specified in SIDs by taking into account for known estimated wind conditions.
- (vii) The normal procedure design gradient 3.3% has not been mentioned in the text of SIDs.
- (viii) The following way points have been designated for development of SIDs.

Sl.No.	Name	Track and Distances (NM)	WGS-84 Coordinates	Remarks
1.	HL 101	7.7 DME	17° 13' 49.09" N 78° 32' 23.72" E	FLY BY turn point for departure Rwy 09
2.	HL 102	R-146/13.4	17° 02' 46.53" N 78° 32' 32.71" E	VABDI 4, BODEL 4, ATAPO 4, APUSU 4, BIDAR 4
3.	HL 103	R-158/20	16° 55' 14.62" N 78° 32' 38.83" E	BODEL 4 BODEL 3 VIJAYWADA 3
4.	HL 104	R-176/20	16° 53' 41.66" N 78° 26' 28.93" E	VABDI 3 VABDI 4
5.	HL 105	R-206/12	17° 02' 42.56" N 78° 19' 8.61" E	VABDI 3, BODEL 3, VIJAYWADA 3 KAMET 3
6.	HL 106	4.6 DME	17° 13' 38.51" N 78° 19' 32.79" E	FLY BY turn point for departure Rwy 27.
7.	HL 107	R-243/22.1	17° 03' 0.96" N 78° 04' 6.92" E	BIDAR 4, APUSU 4, ATAPO 4
9.	DUGOD	R-080/42.5	17° 22' 1.64" N 79° 07' 51.99" E	KAMET 4
10.	VABDI	R-176/128	15° 05' 51.18" N 78° 38' 1.51" E	VABDI 3, VABDI 4
11.	IDBAG	R-098/81.1	17° 03' 37.11" N 79° 48' 24.08" E	KAMET 3
12.	TAMIV	R-334 (GGB)/16.3	17° 33' 18.19" N 76° 40' 19.16" E	ATAPO 3,ATAPO 4 APUSU3, APUSU 4

(NOTE : All the way points are FLY BY

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- (ix) For designing the SIDs the following additional significant way points have also been designated.

S.NO	NAME	RADIAL/DISTANCE (NM) VOR DME (HIA)	WGS-84 COORDIANTES	ATS ROUTES
1.	*KHAMMAMPET NDB	-	17° 14' 33.9" N 80° 08' 24.4" E	W29/W38/W41
2.	*VIJAYWADA VOR DME	-	16° 31' 18.3" N 80° 47' 33.7" E	W26
3.	*BODEL	R-158/147	14° 58' 30.5" N 79° 25' 11.8" E	W20
4.	*GULBARGA VOR DME	-	17° 18' 48.8" N 76° 48' 11.0" E	W18/W28
5.	*BIDAR	-	17° 55' 03.6" N 77° 29' 55.6" E	W19/W27
6.	*ATAPO	-	17° 40' 27.70" N 75° 59' 56.30" E	W28
7.	*APUSU	-	18° 00' 3.60" N 76° 25' 44.10" E	W18
8.	*VIKARABAD NDB	-	17° 20' 03.88" N 77° 52' 55.50" E	W18/W28 W19/W29

(NOTE : All the way points are FLY BY)

* The coordinates have been published in AIP, INDIA.

- (x) The entire ATC clearance including the departure instructions in the form of SID shall be passed to aircraft prior to commencement of push-back/start-up.
- (xi) Pilots unable to fly the RNAV SIDs may request for alternate clearance. The Non-RNAV SIDs may be used for such a aircraft. Radar separation shall be maintained between the aircraft following the RNAV and Non-RNAV SIDs.
- (xii) After airborne pilot shall advise SID designator, level vacated rounded off to the nearest of 100 feet and SSR code to radar controller.
- (xiii) SID should not be cancelled by Radar controller until the aircraft reaches the minimum vectoring altitude 3600 feet.
- (xiv) Cancellation of SID is pre-requisite for radar vectoring. Radar controller may at his own discretion amend the flight path of the departing aircraft in order to expedite the un-interrupted climb and descent of the traffic. On completion of vectoring aircraft shall not be re-cleared to intercept SID. However, the aircraft may be cleared to proceed direct to way point of the flight plan route.

- (xv) Aircraft shall not climb above the level specified for each SID unless authorized by ATC.

(xvi) Radio Communication Failure Procedures

If the Communication Failure occurs during the departure phase of flight while either on radar vectors or on pilot navigations, the procedure to be implemented by the pilot must ensure that the aircraft remains in the controlled airspace and has the required obstacle clearance. It must also provide the ATC with sufficient time, upon recognition of the failure, to clear the other traffic from the climb out route expected to be followed by aircraft experiencing the failure. Therefore, the following communications failure procedures shall be followed :-

Transponder equipped aircraft shall squak 7600.

a) Pilot Navigation SIDs

On the recognition of communication failure maintain 7000 ft or the level assigned by ATC, whichever is higher until 25 DME (HIA) or the specified way point in the SID whichever is later. Thereafter, climb to flight plan level and continue to follow the SID until termination point. If the communication failure takes place beyond 25 DME continue to follow the SID, maintain the last assigned level by ATC, if any, or FL85 whichever is higher for 2 minutes and then climb to flight plan level.

c) When under Radar Vector

On the recognition of failure proceed as follows :-

- inside 15 DME (HIA) maintain last assigned heading until 20 DME, climb to 7000 feet or the level assigned by ATC whichever is higher. After 20 DME climb to FL85 or the last level assigned by ATC whichever is higher and proceed directly to intercept the flight plan route.
- at or beyond 15 DME (HIA) maintain last assigned heading for 2 minute, climbing to FL85 or the last level assigned by ATC whichever is higher. Then proceed directly to intercept the flight plan route.
- five minutes after recognition of failure commence climb to flight plan level

2. Standard Instrument Departure Procedure(SIDs) -Rwy 27
(RNAV VOR/DME) - HIAL

S.No	ATS ROUTES	SID DESIGNATOR	SID DESCRIPTION	REMARKS
(i)	W29/W38/ W41	KAMET 3	Climb straight ahead to HL106*. Then on track 183 Deg M to HL105. Then on track 091 Deg M to IDBAG. Then on track 062 Deg M to KHAMMAMPET NDB (340 KM) to join W29/W38/W41 outbound.	Cross 20 DME (HIA) at or below 7000 feet**.
(ii)	W26	VIJAYWADA 3	Climb straight ahead to HL106*. Then on track 183 Deg M to HL105. Then on track 121 to HL103. Then on track 102 Deg M (R-282 BBZ) to VIJAYWADA VOR DME to join W26 outbound.	Cross HL103 at or below 7000 feet**.
(iii)	W20	BODEL 3	Climb straight ahead to HL106*. Then on track 183 Deg M to HL105. Then on track 121 to HL103 to intercept R-158 to BODEL to join W20 outbound.	Cross HL103 at or below 7000 feet**.
(iv)	W57S/W71S	VABDI 3	Climb straight ahead to HL106*. Then on track 183 Deg M to HL105. Then on track 143 to HL104 to intercept R-176 to VABDI. to join W57S/W71S outbound.	1. Cross HL104 at or below 7000 feet**. 2. From VABDI proceed to BIAL VOR (112.3 BIA) on track 207 Deg M.
(v)	W18/W28	ATAPO 3 / APUSU 3	Climb straight ahead to HL106*. Then on track 286 Deg M to VIKARABAD NDB (321 VB) Then on track 282 Deg M to TAMIV and thereafter:-	Cross VIKARABAD NDB at or below 7000 feet**.

			<p>1. on track 282 Deg M to ATAPO to join W28 outbound for ATAPO 3.</p> <p>and</p> <p>2. On track 334 Deg M to APUSU to join W18 outbound for APUSU 3.</p>	
(vi)	W19/W27	BIDAR 3	<p>Climb straight ahead to HL106*. Then on track 286 Deg M to VIKARABAD NDB (321 VB). Then on track 329 Deg M to BIDAR NDB (240 BR) to join W19/W27 outbound.</p>	<p>Cross VIKARABAD NDB at or below 7000 feet**.</p>

* FLY BY way points

** Climb above 7000 feet shall be authorized by ATC.

3. Standard Instrument Departure Procedure(SIDs)- Rwy 09
(RNAV VOR/DME) - HIAL

S.No.	ATS ROUTES	SID DESIGNATOR	SID DESCRIPTION	REMARKS
(i)	W29/W38/ W41	KAMET 4	Climb straight ahead to HL101*. Then on track 078 to DUGOD. Then on track 099 Deg M to KHAMMAMPET NDB (340 KM) to join W29/W38/W41 outbound.	Cross 20DME at or below 7000 feet**.
(ii)	W26	VIJAYWADA 4	Climb straight ahead to HL101*. Then turn right on track 109 Deg M (R-289 BBZ) to VIJAYWADA VOR DME (116.2 BBZ) to join W26 outbound.	Cross 20DME at or below 7000 feet**.
(iii)	W20	BODEL 4	Climb straight ahead to HL101*. Then turn right on track 181 Deg M to HL103 to intercept R-158 to BODEL to join W20 outbound.	Cross HL103 at or below 7000 feet**.
(iv)	W57S/W71S	VABDI 4	Climb straight ahead to HL101*. Then turn right on track 181 Deg M to HL102. Then on track 214 Deg M to HL104 to intercept R-176 to VABDI to join W57S/W71S outbound.	Cross HL104 at or below 7000 feet**. From VABDI proceed to BIAL VOR (112.3 BIA) on track 207 Deg M.
(v)	W18/W28	ATAPO 4 / APUSU 4	Climb straight ahead to HL101*. Then turn right on track 181 Deg M to HL102. Then on track 272 Deg M to HL107. Then on track 329 Deg M to VIKARABAD NDB (321 VB). Then on track 282 Deg M to TAMIV and thereafter:-	Cross HL107 at or below 7000 feet**.

			<p>1. on track 282 Deg M to ATAPO to join W28 outbound for ATAPO 4.</p> <p>and</p> <p>2. On track 334 Deg M to APUSU to join W18 outbound for APUSU 4.</p>	
(vi)	W19/W27	BIDAR 4	<p>Climb straight ahead to HL101*. Then turn right on track 181 Deg M to HL102. Then on track 272 Deg M to HL107. Then on track 329 Deg M to VIKARABAD NDB (321 VB). Then on track 329 Deg M to BIDAR NDB (240 BR) to join W19/W27 outbound.</p>	<p>Cross HL107 at or below 7000 feet**.</p>

* FLY BY way points

** Climb above 7000 feet shall be authorized by ATC.

STANDARD DEPARTURE CHART
INSTRUMENT(S) RNAV(VDR/DME)

COORDINATES ARE IN WGS 84 SYSTEM
RADIALS AND TRACKS ARE MAGNETIC
DISTANCES ARE IN NAUTICAL MILES
ELEVATION ARE IN FEET

TRANSITION ALTITUDE
7000

TWR 118.55
APP(ARR.) 120.25
APP(DEP) 125.55
TAR 119.25

ALL WAYPOINTS ARE FLY BY

MSA
3600 25 NM
ALL SECTORS

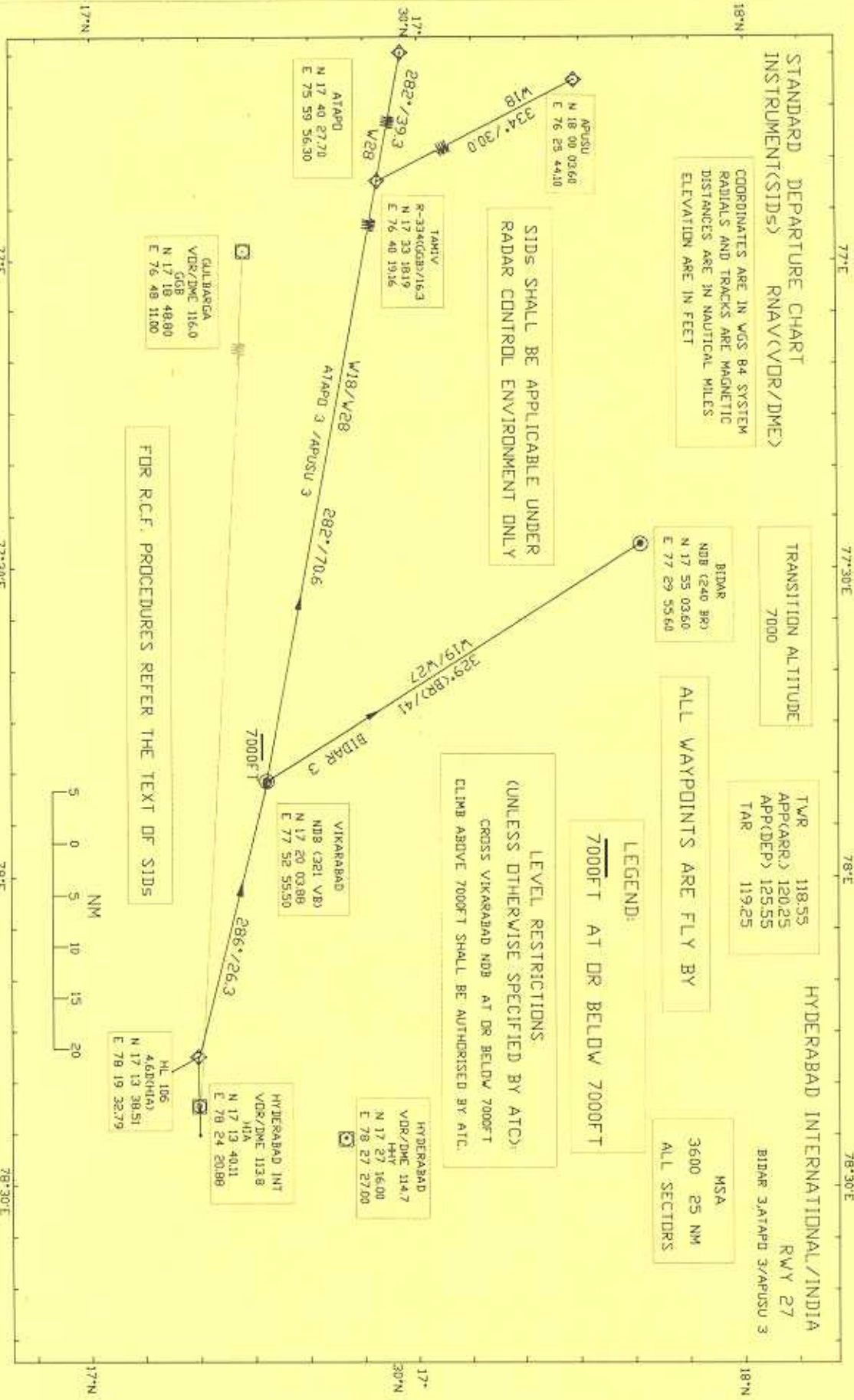
HYDERABAD INTERNATIONAL/INDIA
RWY 27

BIDAR 3/ATAPD 3/APUSU 3

SIDS SHALL BE APPLICABLE UNDER
RADAR CONTROL ENVIRONMENT ONLY

LEVEL RESTRICTIONS
(UNLESS OTHERWISE SPECIFIED BY ATIS)
CROSS VIKARABAD NDB AT DR BELDW 7000FT
CLIMB ABOVE 7000FT SHALL BE AUTHORIZED BY ATIS.

LEGEND:
7000FT AT DR BELDW 7000FT



FOR RCF PROCEDURES REFER THE TEXT OF SIDS

**STANDARD DEPARTURE CHART
INSTRUMENT(SID) RNAV(VOR/DME)**

COORDINATES ARE IN WGS 84 SYSTEM
RADIALS AND TRACKS ARE MAGNETIC
DISTANCES ARE IN NAUTICAL MILES
ELEVATION ARE IN FEET

TRANSITION ALTITUDE
7000

ALL WAYPOINTS ARE PLY BY

TWR 118.55
APP/ARR. 120.25
AP/DEP. 125.55
TAR 119.25

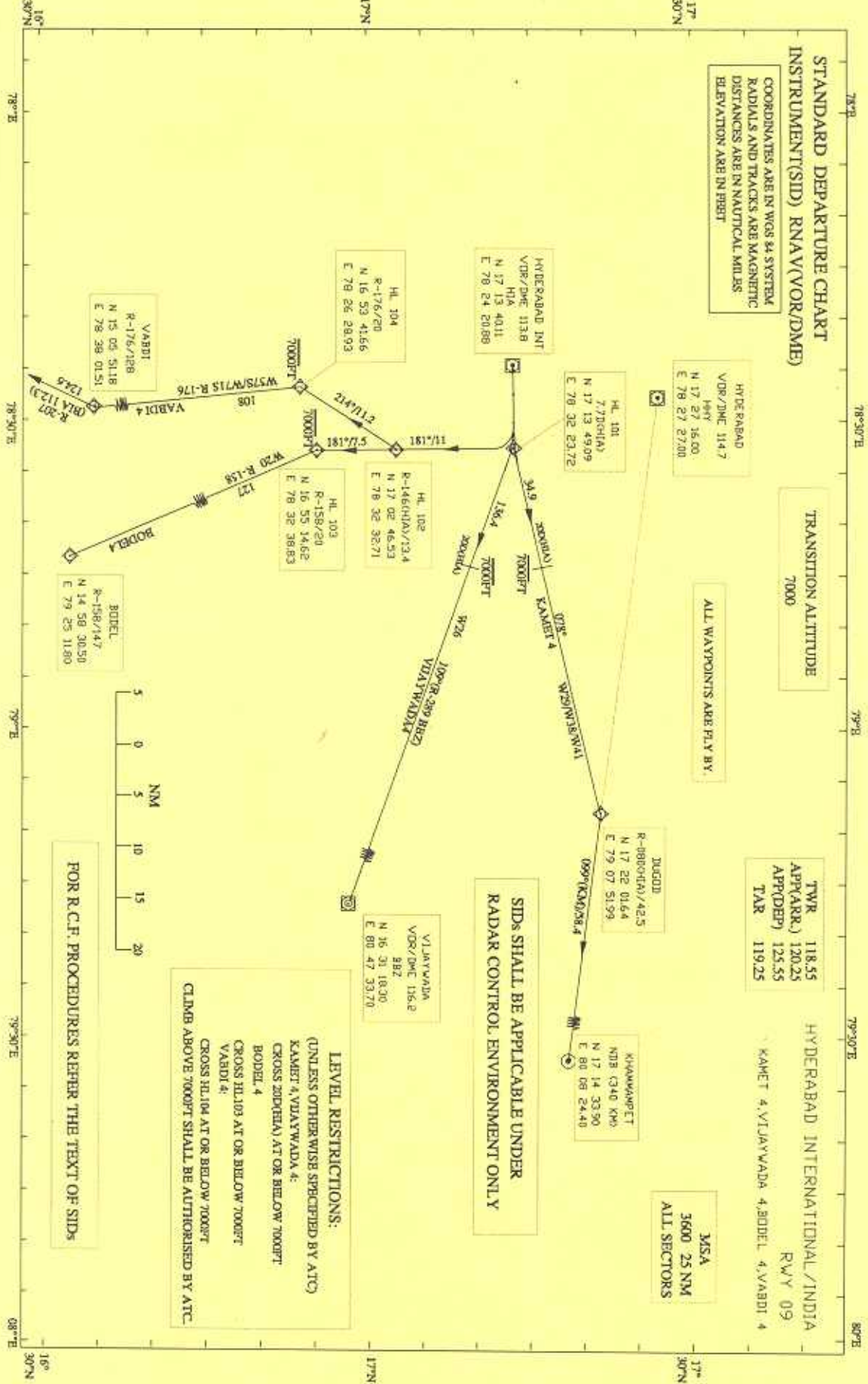
HYDERABAD INTERNATIONAL/INDIA
RWY 09
KAMET 4, VIJAYWADA 4, BODEL 4, VABDI 4

MSA
3600 25 NM
ALL SECTORS

SIDS SHALL BE APPLICABLE UNDER
RADAR CONTROL ENVIRONMENT ONLY

LEVEL RESTRICTIONS:
(UNLESS OTHERWISE SPECIFIED BY ATC)
KAMET 4, VIJAYWADA 4:
CROSS ZOD(HEA) AT OR BELOW 7000FT
BODEL 4
CROSS HL103 AT OR BELOW 7000FT
VABDI 4:
CROSS HL104 AT OR BELOW 7000FT
CLIMB ABOVE 7000FT SHALL BE AUTHORISED BY ATC

FOR R.C.P. PROCEDURES REFER THE TEXT OF SIDS



**STANDARD DEPARTURE CHART
INSTRUMENT(SID) RNAV(YOR/DME)**

COORDINATES ARE IN WGS 84 SYSTEM
RADIALS AND TRACKS ARE MAGNETIC
DISTANCES ARE IN NAUTICAL MILES
ELEVATION ARE IN FEET

TRANSITION ALTITUDE
7000

TWR 118.55
APP(ARR) 120.25
APP(DEP) 125.55
TAR 119.25

HYDERABAD INTERNATIONAL/INDIA
RMY 09

BIDAR 4 ATAPD 4/APUSU 4

BIDAR
MOR 240 BRJ
N 17 55 03.60
E 77 29 55.60

LEVEL RESTRICTIONS:
(UNLESS OTHERWISE SPECIFIED BY ATC)
CLIMB ABOVE 7000FT SHALL BE AUTHORIZED BY ATC.

MSA
3600 25 NM
ALL SECTORS

FOR R.C.F. PROCEDURES REFER THE TEXT OF SIDS

**SIDS SHALL BE APPLICABLE UNDER
RADAR CONTROL ENVIRONMENT ONLY**

LEGEND
7000FT AT OR BELOW 7000FT

ALL WAYPOINTS ARE FLY BY.

MSA
3600 25 NM
ALL SECTORS

APUSU
N 18 00 03.60
E 76 20 44.10

ATAPO
N 17 40 27.70
E 75 59 56.30

TANUV
R-334(GDB)/16.3
N 17 33 18.19
E 76 40 19.15

GULBARGA
VDR/DME 116.0
GCB
N 17 18 48.80
E 76 48 11.80

VIKARABAD
MORC21 VDB
N 17 20 03.88
E 77 52 55.58

HYDRABAD INT
HIA
VDR/DME 113.8
N 17 13 40.11
E 78 24 20.88

HYDRABAD
VDR/DME 114.7
HNY
N 17 27 16.0000
E 78 27 27.0000

HL 102
7200ft
R-146(GHA)/13.4
N 17 02 46.53
E 78 32 32.71

HL 107
R-243(GHA)/22.1
N 17 00 01.96
E 78 04 6.92

HL 102
N 17 13 49.09
E 78 32 32.72

