

AD 2. AERODROMES**VOHS AD 2.1 AERODROME LOCATION INDICATOR AND NAME**

VOHS - RAJIV GANDHI INTERNATIONAL AIRPORT , SHAMSHABAD / INTL

VOHS AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

| | | |
|---|--|--|
| 1 | Aerodrome reference point coordinates and its site | 171426N 0782544E North of PTB, ARP elev. 601M/1972ft |
| 2 | Direction and distance of aerodrome reference point from the center of the city or town which the aerodrome serves | Bearing 210 DEG/20 KM from Husain Sagar |
| 3 | Aerodrome elevation and reference temperature | 2028 FT / 39.0 DEG C |
| 4 | Magnetic variation, date of information and annual change | 1.00 DEG W (1995) /0.016 DEG E |
| 5 | Name of aerodrome operator, address, telephone, telefax, e-mail address, AFS address, website (if available) | GMR Hyderabad International Airport Ltd. Shamshabad, Ranga Reddy- Dist, Telangana, PIN-500108, |
| | Telephone: | +91-40-67394129 |
| | Fax: | +91-40-67395559 |
| | AFS: | ---- |
| | Email: | ceo.ghial@gmrgroup.in |
| 6 | Types of traffic permitted (IFR/VFR) | IFR/VFR |
| 7 | Remarks | Air Traffic Services: General Manager (ATM) Airports Authority of India, Shamshabad, Ranga Reddy- Dist, Telangana. PIN-500108 Tel: +91-40-24008303; Fax: +91-40-24008307 Email: gmatmhial@aai.aero AD Reference Code: 4F |

VOHS AD 2.3 OPERATIONAL HOURS

| | | |
|----|----------------------------|--|
| 1 | Aerodrome Operator | Mon to Fri: 0330-1230 UTC (0900-1800 IST) Sat: 0330-0730 UTC (0900-1300 IST) Sun & Holiday: Closed |
| 2 | Custom and immigration | H24 |
| 3 | Health and sanitation | H24 |
| 4 | AIS briefing office | H24 |
| 5 | ATS reporting office (ARO) | H24 |
| 6 | MET Briefing office | H24 |
| 7 | Air Traffic Service | H24 |
| 8 | Fuelling | H24 |
| 9 | Handling | H24 Prior Arrangement |
| 10 | Security | H24 |
| 11 | De-icing | NIL |

| | | |
|----|---------|---|
| 12 | Remarks | <p>The approved hourly RWY traffic handling capacity is as follows: For RWY 27L/09R: MAX NR of ARR and DEP--33 MAX NR of ARR only --24 MAX NR of DEP only --24 For RWY 27R/09L when RWY 27L/09R is taken for schedule maintenance: Case 1- When RWY27L/09R is not available for taxiing purpose: MAX NR of ARR and DEP --18 MAX NR of ARR only --10 MAX NR of DEP only --15 Case 2- When RWY 27L/09R is available for taxiing purpose between taxiways A1 and A3 and between taxiways A8 and A10: MAX NR of ARR and DEP --22 MAX NR of ARR only --15 MAX NR of DEP only --18</p> |
|----|---------|---|

VOHS AD 2.4 HANDLING SERVICES AND FACILITIES

| | | |
|---|---|--|
| 1 | Cargo-handling facilities | By Hyderabad Menzies Air Cargo Private Ltd. |
| 2 | Fuel and Oil types | JET A1 |
| 3 | Fuelling facilities and capacity | Hydrant and bowzer (12 Dispensers + 06 Refuellers) |
| 4 | De-icing facilities | NIL |
| 5 | Hangar space for visiting aircraft | NIL |
| 6 | Repair facilities for visiting aircraft | Available with AIESL & GMRATL with Hanger facility |
| 7 | Remarks | NIL |

VOHS AD 2.5 PASSENGER FACILITIES

| | | |
|---|---|--|
| 1 | Hotel(s) at or in the vicinity of aerodrome | Novotel Business Brand Hotel with 305 rooms at a distance of 2.75km from PTB and hotels in Hyderabad city. Plaza Premium Transit Lounge at Level C (27 rooms) , Airport Dormitory Near PTC (49 beds & 7 rooms single/double) |
| 2 | Restaurant(s) at or in the vicinity of aerodrome | <p>Level C: KFC, McDonalds, Coffee Hut, Food street (Multi cuisine Restaurant). Level D: Cafe Coffee Day, Subway, Karachi Bakery, McDonalds, Coffee Hut, Hatti kapi</p> <p>Level F: At visitors' gallery- Coffee Hut, Forecourt : Coffee Café, Check In- Coffee club, Domestic SHA: Monsoon Bar, Barista coffee, Indian Paradise, KFC, Taste of India Domestic bus gates: Coffee club International SHA: Dosa Factory, Indian Paradise, Grab and Fly, Khao Gali, Coffee club</p> <p>Level B & E: Canteen (for Employees of GMR & Airlines)</p> |
| 3 | Transportation possibilities | Taxi (Prepaid & Metered) Bus services (TSRTC Town- Volvo, TSRTC Pushpak), Free shuttle bus from Airport to PTC |
| 4 | Medical Facilities | 24 hrs Medical and Dental facilities provided by Apollo Hospital Enterprises Limited (One full-fledged medical centre housing minimum 17 beds), First Aid counters at Level D, E and F. |
| 5 | Bank and post office at or in the vicinity of aerodrome | Banks: Canara Bank at Level C and State Bank of India at Level F ATM: Total 13 Nos. (Level C- 2, Level D- 6 & Level F- 5) Foreign exchange counters: Total 5 Nos. (Level F- 2, Level E- 1 & Level D- 2) |

| | | |
|---|----------------|--|
| 6 | Tourist office | TSTDC (Telangana State Tourism Development Corporation at Level D) |
| 7 | Remarks | APTDC (Andhra Pradesh Tourism Development Corporation at Level D) |

VOHS AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

| | | |
|---|---|---|
| 1 | Aerodrome category for fire fighting | Within ATS HR: CAT-9 (can be upgraded to CAT- 10 with 01 Hour prior notice) |
| 2 | Rescue equipment | Available as per Airport Services Manual Part1 for CAT- 9 |
| 3 | Capability for removal of disabled aircraft | With prior arrangement with Air India Mumbai |
| 4 | Remarks | NIL |

VOHS AD 2.7 SEASONAL AVAILABILITY CLEARING

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

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

| | | |
|---|--|--|
| 1 | Designation, surface and strength of aprons | Surface: Rigid Strength: See AD 2.23 |
| 2 | Designation, width, surface and strength of taxiways | See AD 2.23 |
| 3 | Location and elevation of altimeter checkpoints | Location All aircraft stands on the passenger terminal apron. Elevation --- |
| 4 | Location of VOR checkpoints | At Runway holding positions on TWYs A1, A2, A3 & A9. |
| 5 | Position of INS checkpoints | NIL |
| 6 | Remarks | Refer Aircraft Parking / Docking for Details |

VOHS 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 | Aircraft Stand ID signs: All stands are provided with stand identification sign and straight lead-in lines Taxiing guidance signage are provided at all intersections and straight sections as recommended by ICAO annex 14. Air Bridges: 10 (Total) -Stand No.50, 51, 52, 53, 54L, 54R, 55L, 55R, 56L, 56R Visual Docking Guidance Systems: 22 (Total) From Stand no. 45 to 53, 54L, 54, 54R, 55L, 55,55R, 56L, 56, 56R, 57, 57R, 58, 58R For proper response from VDGS pilots are advised not to exceed taxi speed of 4m per sec while docking |
|---|--|--|

| | | |
|---|--|--|
| 2 | Runway and taxiway markings and lights | <p>RWY Markings RWY 09R/27L : Designation /THR / TDZ / CL / Aiming Point / Side strip RWY 09L/27R: Designation / THR / TDZ / CL / Aiming Point / Side strip / Displaced THR Lights RWY 09R/27L: THR/EDGE/CL/END AND CAT-1 APP RWY 09L/27R: THR/THR IDENT LGT/CL/END & SALS Marking CL / EDGE / RHP / Enhanced TWY CL / Intermediate Holding PSN Markings. Enhanced taxiway centerline marking provided on taxiways A1, A2, A3, A8, A9, A10, B2, B3, B4 and B5 Mandatory instruction marking provided on Taxiways B2, B3, B4 and B5 Lights TWY A1 to A10, B3, B4 & B5 with Inset CL LGT & Elevated Edge LGT. TWY B, B1, B2, B6, E, M, K, K1, K2 & K3 with Elevated Edge LGT only. Additionally TWY Edge LGT AVBL for RWY 09L / 27R when used for Taxi Purpose</p> |
| 3 | Stop bars (if any) | <p>Provided on TWY A1, A2, A3, A8, A9 & A10 Runway Guard Lights: At every runway holding position point, both sides of taxiway with a pair of elevated guard lights flashing alternate yellow facing the taxiways (A1, A2, A3, A8, A9, A10, B2, B3, B4 & B5)</p> |
| 4 | Remarks | Surface Movement Guidance and Control radar has been provided |

VOHS 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 |
| In circling area and at AD | TOWER | 171406.0N 0782518.0E | 2224 FT | NIL | ATC Tower |

VOHS AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

| | | |
|---|---|--|
| 1 | Name of the associated meteorological office | VOHS International (AMO) |
| 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 | AMO Shamshabad (VOHS) 09 HRS & 30 HRS |
| 4 | Availability of the trend forecast for the aerodrome and interval of issuance | Trend H24. Half hourly |
| 5 | Information on how briefing and/or consultation is provided | Personal Consultation H24. Briefing provided mainly OLBS, Partial self-briefing and Telephone to Forecaster. |
| 6 | Types of flight documentation supplied and language(s) used in flight documentation | Charts, abbreviated plain language text. ENGLISH |
| 7 | Charts and other information displayed or available for briefing or consultation | SWH (National), SWM (National), SW International, Wind/Temp Charts (FL 050 to FL 530), SIGMET charts from OLBS |
| 8 | Supplementary equipment available for providing information on meteorological conditions, e.g. weather radar and receiver for satellite images; | TELE 040-24005219/24008233, FAX 040- 24008269 |

| | | |
|----|---|---|
| 9 | The air traffic services unit(s) provided with meteorological information | Shamshabad / Begumpet ATC and ACS |
| 10 | Additional information, e.g. concerning any limitation of service. | Integrated WX system RWY 09R/27L AVBL for OPR purpose. RVR INSTR RWY 09R/27L available. |

VOHS 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 |
| 09R | 88.91 DEG | 4260 x 60 M | 77/F/B/W/T 88/ R/C/W/T | THR: 171342.90N 0782446.17E |
| 27L | 268.91 DEG | 4260 x 60 M | 77/F/B/W/T 88/ R/C/W/T | THR: 171344.89N 0782710.33E |
| 09L | 88.91 DEG | 3707 x 45 M | 77/F/B/W/T | THR: 171350.35N 0782454.83E |
| 27R | 268.91 DEG | 3707 x 45 M | 77/F/B/W/T | THR: 171352.08N 0782700.31E |

| 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: 1968.5FT TDZ: 1975.1FT | 0.95% | NIL | NIL | 4380 x 300 M |
| THR: 2024.3FT TDZ: 2024.3FT | 0.95% | NIL | NIL | 4380 x 300 M |
| THR: 1971.8FT TDZ: 1978.3FT | 0.92% | NIL | NIL | 3827 x 150 M |
| THR: 2027.5FT TDZ: 2027.5FT | 0.92% | NIL | NIL | 3827 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 |
| 285M x 150M | | Existing | 0.029% (Min) 0.95% (Max) from RWY09R towards RWY27L Transverse slope 1.50% (throughout) |
| 285M x 150M | | Existing | 0.029% (Min) 0.95% (Max) from RWY09R towards RWY27L Transverse slope 1.50% (throughout) |

| 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 |
| 283M x 90M Displacement 310 M | | NIL | Instrument non- precision approach runway 0.084% (min) 0.918% (max) from RWY09L towards RWY27R transverse slope 1.5% (throughout) |
| 250M x 90M Displacement 343 M | | NIL | Instrument non- precision approach runway 0.084% (min) 0.918% (max) from RWY09L towards RWY27R transverse slope 1.5% (throughout) |

VOHS 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 |
| 09R | 4260 | 4260 | 4260 | 4260 | |
| 27L | 4260 | 4260 | 4260 | 4260 | |
| 09L | 3707 | 3707 | 3707 | 3707 | The displaced portion of RWY 09L and 27R, shall not be available as part of TORA |
| 27R | 3707 | 3707 | 3707 | 3707 | The displaced portion of RWY 09L and 27R, shall not be available as part of TORA |

VOHS 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 |
| 09R | CAT I 900 M LIH | Green | PAPI LEFT/3.00 DEG MEHT (73.82FT) | |
| 27L | CAT I 900 M LIH | Green | PAPI LEFT/3.00 DEG MEHT (73.82FT) | |
| 09L | SALS 420 M LIH | Green | PAPI LEFT/3.00 DEG MEHT (73.82FT) | |
| 27R | SALS 420 M LIH | Green | PAPI LEFT/3.00 DEG MEHT (73.82FT) | |

| 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 |
| 4260 M 30 M LIH White | 4260 M 60 M White LIH | Red | | 1.Runway centerline lights variable white from the THR to the point 900 m from the runway end; alternate red and variable white from 900 m to 300 m from the runway end; and red from 300 m to the runway end 2.Runway edge lights variable white, Last 600m yellow towards the landing direction 3. RWY 09R PAPI aligned with ILS GP |
| 4260 M 30 M LIH White | 4260 M 60 M White LIH | Red | | 1.Runway centerline lights variable white from the THR to the point 900 m from the runway end; alternate red and variable white from 900 m to 300 m from the runway end; and red from 300 m to the runway end 2.Runway edge lights variable white, Last 600m yellow towards the landing direction 3. RWY 09R PAPI aligned with ILS GP |
| 3707 M 30 M LIH White | 3707 M 60 M White LIH | Red | | 1.Runway centerline lights variable white from the THR to the point 900 m from the runway end; alternate red and variable white from 900 m to 300 m from the runway end; and red from 300 m to the runway end 2.Runway edge lights variable white, Last 600m yellow towards the landing direction 3.Threshold identification light available (flashing white) |

| 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 |
| 3707 M 30 M LIH White | 3707 M 60 M White LIH | Red | | 1.Runway centerline lights variable white from the THR to the point 900 m from the runway end; alternate red and variable white from 900 m to 300 m from the runway end; and red from 300 m to the runway end 2.Runway edge lights variable white, Last 600m yellow towards the landing direction 3.Threshold identification light available (flashing white) |

VOHS AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

| | | | |
|---|---|--|---|
| 1 | Location, characteristics and hours of operation of aerodrome beacon/identification beacon (if any) | ABN | On top of ATC Tower, 24FPM, white and green, 400,000cd Switched on only during the operation of AD Ground LGTs. |
| | | IBN | NIL |
| 2 | Location and lighting (if any) of anemometer/landing direction indicator; | LDI | Illuminated, white light between runways 09R/27L & 09L/27R, 80m east of TWY A6 & 140M north of runway 09R-27L centerline (171348.57N, 782548.14E) Horizontal and perpendicular segment are of 4m length with 11 lights each spaced equidistant. Each bulb is of 50W halogen with white lens |
| | | Anemometer | NIL |
| 3 | Taxiway edge and taxiway centre line lights; | Edge | Elevated blue lights placed at 3m from taxiway edge. The lateral distance between lights are 60m on straight section and on curved portion varies on the radius of the curve. |
| | | Centre Line | Inset Bidirectional Green Lgt with the Gap Of 30m on Straight Sections. On Rapid Exit TWY The CL LGT Are Unidirectional LGT Showing Green Towards The Runway. TWY Edge LGT Are Elevated Blue LGT Instl At 3m Fm The TWY Edge with the Gap of 60m on Straight Sections |
| 4 | Secondary power supply including switch-over time; | DG power as standby, 15 sec switchover time. Critical circuits provided with UPS for zero percent switchover time (Threshold/End/Rwy center line/Edge lights) | |
| 5 | Remarks | WDI: Three (i) North of RWY 27L Beginning (ii) South of RWY 27L Beginning (iii) North of RWY 09R Beginning. Colors: Orange & white bands & Illuminated. | |

VOHS 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 |

VOHS AD 2.17 AIR TRAFFIC SERVICE AIRSPACE

| | | |
|---|---|---|
| 1 | Airspace designation, geographical coordinates and lateral limits | CTR: Circular area centered on VOR HIA (171340N 0782421E) within a 25NM radius. |
| 2 | Vertical limits | 5500 FT |
| 3 | Airspace classification | D |
| 4 | Call sign and language(s) of the air traffic services unit providing service; | Shamshabad TWR, English |
| 5 | Transition altitude | 7000 FT |
| 6 | Hours of applicability | H24 |
| 7 | Remarks | NIL |

VOHS AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

| Service Designation | Call sign | Channel(s) | SATVOICE Number(s), if available |
|---------------------|--------------------------|-------------|----------------------------------|
| 1 | 2 | 3 | 4 |
| OTHER | Hyderabad Control/ Radar | 120.950 MHZ | |
| OTHER | Hyderabad Control/ Radar | 128.350 MHZ | |
| OTHER | Shamshabad Delivery | 121.625 MHZ | |
| TWR | Shamshabad TWR | 118.200 MHZ | |
| TWR | Shamshabad TWR | 118.450 MHZ | |
| ATIS | ---- | 126.475 MHZ | |
| ALRS | ---- | 121.500 MHZ | |
| RADAR | Hyderabad APP/Radar | 120.250 MHZ | |
| RADAR | Hyderabad APP/Radar | 125.550 MHZ | |
| SMC | Shamshabad GND | 118.200 MHZ | |
| SMC | Shamshabad GND | 121.850 MHZ | |

| Logon address, as appropriate | Hours of operation | Remarks |
|-------------------------------|--------------------|-----------------|
| 5 | 6 | 7 |
| | H24 | 200 NM Coverage |
| | H24 | 200 NM Coverage |

| Logon address, as appropriate | Hours of operation | Remarks |
|-------------------------------|--------------------|---------------------------------|
| | H24 | 5 NM Coverage |
| | H24 | (ALTN Frequency) 25 NM coverage |
| | H24 | 25 NM coverage |
| | H24 | 75NM Coverage |
| | H24 | 50 NM Coverage |
| | H24 | 75NM Coverage |
| | H24 | 75 NM Coverage |
| | H24 | ALTN Frequency 5 NM Coverage |
| | H24 | 5 NM Coverage |

VOHS 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 09R | IHBD | 108.500 MHz | H24 |
| LOC 27L | ISAM | 110.900 MHz | H24 |
| GP 09R | IHBD | 329.900 MHz | H24 |
| GP 27L | ISAM | 330.800 MHz | H24 |
| DME ILS 09R | IHBD | CH22X | |
| DME ILS 27L | ISAM | CH46X | H24 |
| VOR/DME | HIA | 113.800 MHz CH85X | 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 |
| 171345.1N 0782725.2E | | | 25NM Coverage |
| 171342.7N 0782431.3E | | | 25 NM Coverage |
| 171339.1N 0782457.7E | | | 10 NM Coverage |
| 171340.7N 0782658.1E | | | 10 NM coverage |
| 171339.1N 0782455.6E | 2014 FT | | 25 NM Coverage |
| 171340.7N 0782658.1E | 2067 FT | | 25 NM Coverage |
| 171340.1N 0782420.9E | 1985 FT | | |

VOHS AD 2.20 LOCAL AERODROME REGULATIONS

1. RWY 09L/27R AVBL only for day ops and is a dependent RWY i.e. at a time RWY 09L/27R or RWY 09R/27L can be used for LDG or TKOF.
2. ATC initiated continuous descent OPR (CDO) in vogue WI Hyderabad TMA, whenever feasible, DIST to touchdown and CLR limit will be specified by ATC for continuous descent OPR. Pilots are required to REP fuel saving for the CDO after LDG on 121.850 MHZ and send a detail debrief to email: vohs.op@aai.aero

3. Runway Capacity Enhancement Measures:

3.1 Departure Procedure

- 3.1.1 Taxiing aircraft should maintain a minimum taxiing speed of not less than 15 knots on the straight portion of taxiways and between 8-12 knots during turning manoeuvres during fair weather conditions.
- 3.1.2 ATC may alter the departure sequence of an aircraft, which is not adhering to the procedure enumerated in sub para 1.1 to optimize the runway utilization.
- 3.1.3 Based on the aircraft type and its performance characteristics, SMC will issue taxi instructions so as to depart from the nearest runway intersection from where adequate take-off run is available for departure. Pilots unable to accept departure from intersection may request SMC for alternate take off position.
- 3.1.4 Pilots shall complete all mandatory pre-departure checks before entering the active runway for departure so that the aircraft is in a position to take off immediately upon receipt of take-off clearance. Pilots not able to comply with this requirement must notify SMC/TWR before reaching the holding point.
- 3.1.5 When the aircraft is issued with a line-up and take-off clearance at the taxi holding position it shall be in a position to line up and initiate an immediate take-off in one continuous movement, if unable advise ATC.
- 3.1.6 When the aircraft is issued with a take-off clearance after lining up on the runway it shall commence take-off roll immediately. If the Controller observes a delay in respect of the departing aircraft commencing its take off run after issuance of take-off clearance, the take-off clearance shall be cancelled and the aircraft shall be advised to vacate the runway immediately at the nearest taxiway to make way for the subsequent arrival or departure. Necessary entries in this regard shall be recorded in the Log Book.

3.2 Arrival Procedure

- 3.2.1 The speed control measures published in ENR 1.6 EAIP INDIA shall be followed by flight crew.
- 3.2.2 Pilots are reminded that rapid exit from the runway enables ATC to apply minimum spacing on final approach that will achieve maximum runway utilisation and will minimise the occurrences of 'go around'.
- 3.2.3 Aircraft are expected to vacate the runway via first available RET depending on aircraft performance in order to reduce delays and maximise utilisation. Pilots not able to comply with this requirement/request should notify APP/TWR as early as feasible.

4. Standard Taxi Route (STR) Procedures:

4.1 Introduction:

The objective of establishing the standard taxi routes is to avoid long and confusing taxi instructions, reduce radio communication time and to follow standard routes for arriving and departing traffic, thereby, minimizing the conflict on the movement area, increasing safety with minimum inter/intra unit coordination. Ultimately, it aims to enhance ground control operations at RGI Airport, Shamshabad

4.2 General:

- 4.2.1 The apron has been divided into four sectors for the purpose of designing the standard taxi routes:

Parking bay division-

- a. Sector-11-12
- b. Sector-2 40-49
- c. Sector-350-59
- d. Sector-490-94

- 4.2.2 Total number of the proposed standard taxi routes are 16 which are runway specific and they have been given an alphanumeric code for identification:

- i. D- Departure
- ii. A- Arrival
- iii. R- Runway 09R
- iv. L- Runway 27L
- v. Numerical 1,2,3,4-Sectors Numbers

- 4.2.3 There are no standard taxi routes (STR) for Runway 09L/27R. Hence, only progressive taxi instructions shall be given.

4.3 Procedure:

4.3.1 Standard taxi routes (STR) shall be used for operation on movement area only under the normal visibility condition during availability of Advance Surface Movement Guidance and Control System (A-SMGCS). STR shall not be used when LVTP in vogue.

4.3.2 For departing aircraft Surface Movement Controller (SMC) shall issue STR instructions.

4.3.3 For arriving aircraft Tower (TWR) Controller shall issue STR instructions.

4.3.4 If the Pilot is unable to comply with the STR issued, he/she must advise SMC/TWR as the case may be on initial contact.

4.3.5 If the Pilot for any reason becomes uncertain of the correct STR, a request should be made for progressive taxi Instructions.

4.3.6 The Air Traffic Controller can cancel STR at any time and issue progressive taxi instructions to Aircraft due to traffic, closure of taxiways or portion of movement area or manoeuvring area.

4.3.7 It is not mandatory for the Controllers and the Pilots to use STR, however, when used it is the responsibility of the Pilots/controllers to know the details of STR.

5. Table of Standard Taxi Routes (STR) Names

Table 1: RUNWAY IN USE 09R (DEPARTURE)

| S.NO | SECTOR | TAXI INSTRUCTION | HOLDING POINT | NAME |
|------|-------------------|-------------------|-----------------|------|
| 1 | SECTOR-1 1-12 | K2-K1-E-B4-RWY27R | A8 A9 A10 | DR1 |
| 2 | SECTOR-2 40-49 | E-B4-RWY27R | A8 A9 A10 | DR2 |
| 3 | SECTOR-3 50-59 | E-B5-RWY27R | A8 A9 A10 | DR3 |
| 4 | SECTOR-4 90-94 | M- E-B5-RWY27R | A8 A9 A10 | DR4 |

Legend: D-Departure, L-Runway 09R, 1, 2, 3, 4-Sector numbers

Table 2: RUNWAY IN USE 09R (ARRIVAL)

| S.NO | SECTOR | VACATING RET | TAXI INSTRUCTION | NAME |
|------|-------------------|--------------|------------------|------|
| 1 | SECTOR-1 1-12 | A4 A5 | RWY27R-B3-K-K3 | TR1 |
| 2 | SECTOR-2 40-49 | A4 A5 | RWY27R-B3-E | TR2 |
| 3 | SECTOR-3 50-59 | A4 A5 | RWY27R-B4-E | TR3 |
| 4 | SECTOR-4 90-94 | A4 A5 | RWY27R-B5-E-M | TR4 |

Legend: T-Termination of flight, R-Runway 09R, 1, 2, 3, 4-Sector numbers

Table 3: RUNWAY IN USE 27L (DEPARTURE)

| S.NO | SECTOR | TAXI INSTRUCTION | HOLDING POINT | NAME |
|------|-------------------|-------------------|----------------|------|
| 1 | SECTOR-1 1-12 | K2-K1-E-B3-RWY09L | A1 A2 A3 | DL1 |
| 2 | SECTOR-2 40-49 | E-B3-RWY09L | A1 A2 A3 | DL2 |
| 3 | SECTOR-3 50-59 | E-B4-RWY09L | A1 A2 A3 | DL3 |

| | | | | |
|---|-------------------|---------------|----------------|-----|
| 4 | SECTOR-4 90-94 | M-E-B4-RWY09L | A1 A2 A3 | DL4 |
|---|-------------------|---------------|----------------|-----|

Legend: D-Departure, L-Runway 27L, 1, 2, 3, 4-Sector numbers

Table 4: RUNWAY IN USE 27L (ARRIVAL)

| S.NO | SECTOR | VACATING RET | TAXI INSTRUCTION | NAME |
|------|-------------------|--------------|------------------|------|
| 1 | SECTOR-1 1-12 | A6 A7 | RWY09L-B4-E-K-K3 | TL1 |
| 2 | SECTOR-2 40-49 | A6 A7 | RWY09L-B4-E | TL2 |
| 3 | SECTOR-3 50-59 | A6 A7 | RWY09L-B5-E | TL3 |
| 4 | SECTOR-4 90-94 | A6 A7 | RWY09L-B5-E-M | TL4 |

Legend: T-Termination of flight, L-Runway 27L, 1, 2, 3, 4-Sector numbers

EXAMPLE

RUNWAY IN USE 27L OR 09R [DEPARTURE]

A) Phraseology w.r.t progressive taxi instructions :-

(AIRCRAFT CALL SIGN) SHAMSHABAD GROUND:

Taxi to holding point [number] [Runway (number)] via (specific route to be followed) [Time (time)].

B) Phraseology w.r.t STR :-

(AIRCRAFT CALL SIGN) SHAMSHABAD GROUND:

Taxi to holding point [number] [Runway (number)] via [STR] [Time (time)].

RUNWAY IN USE 27L OR 09R [ARRIVAL]

A) Phraseology w.r.t progressive taxi instructions :-

(AIRCRAFT CALL SIGN) SHAMSHABAD TOWER:

Continue taxi via (specific route to be followed) bay [number]

B) Phraseology w.r.t STR :-

(AIRCRAFT CALL SIGN) SHAMSHABAD TOWER:

Taxi to Stand [number] via [STR]

VOHS AD 2.21 NOISE ABATEMENT PROCEDURES

Consistent with safety of aircraft operations and in consideration of high intensity runway operations, pilots should minimise the use of reverse thrust after landing to reduce disturbance in areas adjacent to the aerodrome.

VOHS AD 2.22 FLIGHT PROCEDURES

I. LOW VISIBILITY PROCEDURE:

1. Definitions and Abbreviations:

1.1 Low Visibility Procedures (LVP): Specific procedures applied at an aerodrome for the purpose of ensuring safe operations during Categories II and III approaches and/or low visibility take-offs.

1.2 Low visibility take-off (LVTO). A term used in relation to flight operations referring to a take-off on a runway where the RVR is less than 400 m.

1.3 Manoeuvring Area: That part of an aerodrome to be used for the take-off, landing and

taxiing of aircraft, excluding aprons.

1.4 Runway Visual Range: The range over which the pilot of an aircraft on the centerline of a runway can see the runway surface markings or the lights delineating the runway or identifying its centreline.

1.5 Aerodrome Operating Minima: The limits of usability of an aerodrome for:

- a. Take off, expressed in terms of runway visual range and / or visibility and, if necessary, cloud conditions;
- b. Landing in 2D instrument approach operations, expressed in terms of visibility and/or runway visual range; minimum descent altitude / height (MDA/H) and, if necessary, cloud conditions; and
- c. Landing in 3D instrument approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) appropriate to the type and/or category of the operation.

1.6 Safeguarding Procedures: Safeguarding Procedures are instructions for relevant airport departments and airside operators to prepare ground services and facilities for low visibility operations, in order that when LVP are implemented all Safeguarding procedures are complete and airport is configured for Low Visibility Take-offs.

1.7 Precision approach and landing operations: An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS Cat I) designed for 3D instrument approach operations Type A or B.

1.8 ILS Category I (Cat I) Operations: A decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550 m.

1.9 Runway Visual Range: The range over which the pilot of an aircraft on the centreline of a runway can see the runway surface markings or the lights delineating the runway or identifying its centreline.

1.10 Visibility: Visibility for aeronautical purposes is the greater of:

- a. the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background;
- b. The greatest distance at which lights in the vicinity of 1 000 candelas can be seen and identified against an unlit background.

Note 1: The two distances have different values in air of a given extinction coefficient, and the latter b) varies with the background illumination. The former a) is represented by the meteorological optical range (MOR).

Note 2: The definition applies to the observations of visibility in local routine and special reports, to the observations of prevailing and minimum visibility reported in METAR and SPECI and to the observations of ground visibility.

1. 11 The abbreviations used in this document have the following meanings:

AAI: Airports Authority of India

ADC: Aerodrome Control

AOCC: Airport Operation Coordination Centre

ARFF: Airport Rescue and Fire Fighting Services

ASMGCS: Advanced Surface Movement Guidance and Control System

ATC: Air Traffic Control

ATIS: Automatic Terminal Information Service

ATM: Air Traffic Management

GHIAL: GMR Hyderabad International Airport Limited

CFT: Crash Fire Tender

DATIS: Datalink Automatic Terminal Information Service

DG: Diesel Generating Set

GP: Glide Path

ILS: Instrument Landing System

ITH: Intermediate Taxi Holding Position

LOC: Localizer

LSA: Localizer Sensitive Area

LVP: Low Visibility Procedure

LVTO: Low Visibility Take-off Procedure

MET: Meteorology

R/T: Radio Telephony

RGIA: Rajiv Gandhi International Airport

RWY: Runway

RVR: Runway Visual Range

SMC: Surface Movement Control

SP: Safeguarding Procedures

Note 2: The definition applies to the observations of visibility in local routine and special reports, to the observations of prevailing and minimum visibility reported in METAR and SPECI and to the observations of ground visibility.

1. 11 The abbreviations used in this document have the following meanings:

AAI: Airports Authority of India
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ATIS: Automatic Terminal Information Service
ATM: Air Traffic Management
GHIAL: GMR Hyderabad International Airport Limited
CFT: Crash Fire Tender
DATIS: Datalink Automatic Terminal Information Service
DG: Diesel Generating Set
GP: Glide Path
ILS: Instrument Landing System
ITH: Intermediate Taxi Holding Position
LOC: Localizer
LSA: Localizer Sensitive Area
LVP: Low Visibility Procedure
LVTO: Low Visibility Take-off Procedure
MET: Meteorology
R/T: Radio Telephony
RGIA: Rajiv Gandhi International Airport
RWY: Runway
RVR: Runway Visual Range
SMC: Surface Movement Control
SP: Safeguarding Procedures
SSO : Shift Supervisory Officer
TDZ : Touchdown Zone
TWR SUP: Tower Supervisor
TWY: Taxiway
WSO : Watch Supervisory Officer

2. Introduction:

The Low Visibility Procedure (LVP) incorporates safeguarding measures and defines operational restrictions to ensure safe Airside Operations taking into account the available Aerodrome facilities.

2.1 General:

2.1.1 Rajiv Gandhi International Airport, Shamshabad is equipped with CAT 1 ILS system for RWY 09R & RWY 27L.

2.1.2 ASMGCS is operational at RGIA Shamshabad. Also, RWY and TWY centreline lights are available which can be used during LVP.

2.1.3 The following equipment shall be serviceable to the required standard to support LVP operations:

a. Aeronautical ground lighting System consisting of Runway (RWY) edge lights, RWY centreline lights, RWY end lights, Taxiway (TWY) edge lights, Stop bar lights, Approach lights.

b. The critical lighting system RWY edge, RWY centre line and RWY end lights are supported by UPS for zero switch over time.

c. Real time RVR reporting System (available for both RWYs). In case RVR equipment is unserviceable, manual RVR will be made available.

d. Switchover time for standby power for ILS and Aeronautical ground lighting system excluding critical lighting system mentioned in para 2.1.3 (b) is a maximum of 15 seconds.

2.2. Reporting RVR:

a. There are two RVR transmissometer located at Touch-down Zone (TDZ) and End Point Zone (END). The reference RVR value for the implementation and cancellation of LVP shall be the lower of the TDZ & END RVR

b. When reporting RVR to pilots the TDZ RVR shall always be intimated for the concerned Landing RWY

2.3 Safeguarding Procedures (SP):

- a.Positioning of 1 CFT each at the two predetermined positions (in front of main fire station and in front of satellite fire station on fire access road);
 - b.Stopping of all works on the manoeuvring area and the associated strip area as well as removal of all men and mobile equipment from the said area;
 - c.Implementation of secondary power supply change over time NIL second for RWY Edge, Centreline and End lights (Both circuit) as these lighting system are supported by UPS in RVR conditions less than 750 meters.
 - d.The appropriate Aeronautical ground lights must have been inspected during the hour preceding implementation of LVP, and thereafter once every two-hour period. These lighting inspections should be accorded priority and, if necessary, aircraft operations may have to be delayed.
 - e.The Duty Manager AOCC in consultation with Air Side operation shall give confirmation that SP is completed to WSO through SMC. This information may be passed on land line or on SMC frequency.
 - f.When any required facility defined in Para 2.1.3 (a) of above facilities for LVP of Rajiv Gandhi International Airport, Shamshabad becomes unserviceable during periods of LVP, TWR/SMC shall advise the aircraft and accordingly LVP operations shall be suspended and information to this effect shall be included in ATIS broadcast.
- Note: Runway Edge Lights are served by two dependent interleaved circuits. In case one circuit becomes unserviceable, the Runway Lights System will not meet the stipulated specification for any operation (Precision, Non-Precision and Non-Instrument). Hence, WSO shall take suitable action to inform all concerned regarding suspension of operations till required facilities are available.
- g.The triggers for various activities defined in the LVP procedures are based on RVR/Visibility Data. These triggers are passed to AOCC/ARFF by SMC on telephone to initiate the SP.

2.4 Aeronautical Ground Lighting System

- a.The Precision Approach lighting system for CAT-I operations are installed on RWY 27L/09R at RGI Airport, Shamshabad.
- b.During LVP operations, the generator will take over as primary power source and the mains supply becomes the backup power source.
- c.When LVP is in force the Aeronautical Ground Lighting shall comply with the following minimum serviceability requirement:

| Aeronautical Ground Lighting Facility | CAT I Un-serviceability | Restrictions |
|--|---|------------------------------------|
| Approach Lights | More than 15% of all lights are unserviceable | CAT I operations will be suspended |
| | Any two consecutive lights or more are unserviceable | |
| Runway Edge lights | More than 15% of all lights are unserviceable | CAT I operations will be suspended |
| | Any two consecutive lights or more are unserviceable | |
| | Any one of the two circuits serving the power supply goes unserviceable | |
| Runway centre line lights | More than 15% of all lights are unserviceable | CAT I operations will be suspended |
| | Any two consecutive lights or more are unserviceable | |
| | Any two consecutive lights or more are unserviceable | |
| Runway End lights | More than 15% of all lights are unserviceable | CAT I operations will be suspended |
| | Any two consecutive lights or more are unserviceable | |
| Standby Generators | Any of the generators is unserviceable | CAT I operations will be suspended |

2.5 Selection of Runway in Use:

- a. As both RWY 27L and RWY 09R are equipped with RVR instrument and RVR data is available to working controllers, Tower shall determine Runway in Use depending on prevailing wind conditions during LVP.
- b. In case of non-availability of Real time RVR, Manual RVR shall be obtained for the selected runway in use, prior to each departure.
- c. In case one of the RVR instrument is unserviceable, preference may be given to the RWY for which instrument RVR data is available during NIL wind condition.

3. Implementation of Safeguarding Procedures (SP):

3.1 Safeguarding Procedures shall be initiated:

- a. The RVR is less than 1200m or visibility is forecast to deteriorate to 750m or less; and/or
- b. The cloud ceiling is 400ft and forecast to fall to 200ft or less.

3.2. WSO will inform AOCC for co-coordinating with all the concerned agencies for implementation of Low Visibility Take-off Procedures.

3.3 When Met reported visibility reduces to 2500 Meters:

- a. Surface Movement Control in consultation with Aerodrome Control Tower shall inform ARFF and AOCC as per visibility/ Weather standby criteria.
- b. ARFF shall position 1 CFT each at the two predetermined position after obtaining permission from SMC on R/T.
- c. AOCC/Air Side Operation shall stop all work and withdraw all personnel working on the Runway strip and the manoeuvring area and inform SMC.
- d. Vehicles equipped with VEGA transponder only will be allowed on the manoeuvring area.
- e. SMC shall inform ARFF/AOCC whenever visibility improves above 2500 Meters to enable ARFF/ AOCC/Air Side Operation to resume normal operations.

3.4 When visibility reduces to 1500 Meters:

- a. SMC shall inform AOCC/Air Side Operation when visibility reduces to 1500 Meters.
- b. AOCC/Air Side Operation shall coordinate with Duty Manager, Technical Services to ensure that UPS and DG set are performing normally.
- c. AOCC/Air Side Operation shall ensure that Aeronautical light inspection is initiated and report status of Aeronautical lighting system on completion of the inspection to SMC. SMC shall permit the Aeronautical Light Inspection and accord priority for the same.
- d. Met department shall provide instrument RVR data for R 27L and R 09R to the ATC. In case of unserviceability of the RVR instrument, the same shall be intimated to ATC and manual RVR shall be provided. For this purpose, Air Side Operation shall provide Leader vehicle, whenever required and inform Security Operations Control Centre (SOCC) to give priority to the Met team to avoid any delay because of security checks near entry gate.

3.5 When RVR reduces to 750 Meters:

- a. SMC shall inform WSO/Tower Supervisor/AOCC whenever RVR reduces to 750 Meters;
- b. AOCC/Air Side Operation shall ensure that the towing of aircraft is done under escort of Leader vehicles and inform ATC of any deviation;
- c. SMC and AOCC/Air Side Operation shall not permit any ground run that needs to be performed on the manoeuvring area except idle power run on the stands;
- d. AOCC/Air Side Operation and SMC shall ensure that "Follow Me" services are provided to pilots on request;
- e. AOCC Manager shall inform all users of the Apron of the imposition/withdrawal of low visibility procedures;
- f. SMC shall inform AOCC whenever RVR improves above 750 meters;
- g. AOCC/Air Side Operation shall confirm completion of safe guarding procedures to Aerodrome Control Tower.

4. Low Visibility procedure for Departures:

The low visibility procedure for departures shall be implemented when RVR reduces below 750 Meters and/or the cloud ceiling is less than 200ft.

Note: Though LVP is implemented when RVR is less than 750 m, ILS CAT I operations will continue till TDZ RVR is not less than 550 m.

- a. The safe guarding procedure shall be completed prior to commencement of Low Visibility Procedure Operations.
- b. SMC shall inform WSO/ Tower Supervisor/ Duty Manager AOCC/Air Side Operation whenever RVR reduces below 750 Meters who in turn shall inform Duty Manager, Technical Services to switch on the DG set.
- c. When SMC gets the information from AOCC about DG set as primary power supply, SMC shall inform WSO/ Tower Supervisor/ Duty Manager AOCC/Air Side operations to start LVP operations.
- d. DG set shall be the primary power supply source when LVP becomes operational.
- e. The number of the vehicles shall be restricted to bare minimum and records of all operating on the manoeuvring area shall be maintained by AOCC. These records can be in the form of electronic records or audio records.
- f. SMC & AOCC/Air Side Operation shall permit towing of only one aircraft at a

time on the Apron under escort of Leader vehicles.

g. The following may be included in DATIS “**LOW VISIBILITY PROCEDURES IN FORCE**”.

h. TWR shall permit departures only from the beginning of the Runway in use.

i. SMC shall inform WSO/Tower Supervisor/ AOCC/Air Side Operation whenever RVR improves above 750 Meters. Duty Manager, AOCC/Air Side Operation shall inform Duty Manager, Technical Services when RVR improves above 750 Meters and trend forecast suggests upward improvement to enable transfer of power supply from DG set to Main power.

j. If instrument RVR is unserviceable during the above period, manual RVR readings shall be obtained by Meteorological Personnel prior to each departure. For this purpose, Air Side Operation shall provide necessary vehicle whenever required and inform Security Operations Control Centre (SOCC) to give priority to the Met team to avoid any delay because of security checks near entry gate.

4.1 RVR reduces below 200 Meters:

a. All operations will be stopped.

b. An aircraft may be allowed to depart below 200 metres, if within its minima.

c. Tower Controller shall make log entry of such aircraft and relevant signal to be sent to all concerned as per internal procedure.

4.2 RVR improves above 200 Meters:

a. SMC shall inform AOCC/Air Side Operation whenever RVR improves above 200 Meters.

b. The respective agencies follow the procedures mentioned in para 4 and para 3 respectively as visibility improves.

5. Summary of actions by various Units.

5.1 Actions by Air Traffic control (ATC)

a. Surface Movement Control in consultation with Aerodrome Control Tower shall inform ARFF and AOCC as per visibility/ Weather standby criteria.

b. SMC shall inform WSO/Tower Supervisor/AOCC whenever RVR reduces to 750 Meters;

c. SMC shall inform WSO/ Tower Supervisor/ Duty Manager AOCC/Air Side Operation whenever RVR reduces below 750 Meters who in turn shall inform Duty Manager, Technical Services to switch on the DG set.

d. When SMC gets the information from AOCC about DG set as primary power supply, SMC shall inform WSO/ Tower Supervisor/ Duty Manager AOCC/Air Side operations to start LVP operations.

e. The following may be included in DATIS “Low Visibility Procedures in force”.

f. TWR shall permit departures only from the beginning of the Runway in use.

g. SMC shall inform WSO/Tower Supervisor/ AOCC/Air Side Operation whenever RVR improves above 750 Meters. Duty Manager, AOCC/Air Side Operation shall inform Duty Manager, Technical Services when RVR improves above 750 Meters and trend forecast suggests upward improvement to enable transfer of power supply from DG set to Main power.

5.2 Actions by Airside operations (AOCC)

a. AOCC/Air Side Operation shall stop all work and withdraw all personnel working on the Runway strip and the manoeuvring area and inform SMC.

b. AOCC/Air Side Operation shall coordinate with Duty Manager, Technical Services to ensure that UPS and DG set are performing normally.

c. AOCC/Air Side Operation shall ensure that Aeronautical light inspection is initiated and report status of Aeronautical lighting system on completion of the inspection to SMC. SMC shall permit the Aeronautical Light Inspection and accord priority for the same.

d. Vehicles equipped with VEGA transponder only will be allowed on the manoeuvring area.

e. AOCC/Air Side Operation shall confirm completion of safe guarding procedures to Aerodrome Control Tower.

f. AOCC/Air Side Operation shall ensure that the towing of aircraft is done under escort of Leader vehicles and inform ATC of any deviation;

g. AOCC/Air Side Operation and SMC shall ensure that “Follow Me” services are provided to pilots on request;

h. AOCC Manager shall inform all users of the Apron of the imposition/withdrawal of low visibility procedures;

i. The number of the vehicles shall be restricted to bare minimum and records of all operating on the manoeuvring area shall be maintained by AOCC. These records can be in the form of electronic records or audio records.

j. If instrument RVR is unserviceable during the above period, manual RVR readings shall be obtained by Meteorological Personnel prior to each departure. For this purpose, Air Side Operation shall provide necessary vehicle whenever required and inform Security Operations Control Centre (SOCC) to give priority to the Met team to avoid any delay because of security checks near entry gate.

6. Actions by other Agencies (Airlines, Refuelling companies, catering agencies, etc.)

- a. All agencies operating in the operational area shall ensure that only those vehicles that are absolutely essential for aircraft operations operate in the operational area. The drivers of these vehicles should keep a look out for taxiing aircraft and other vehicles to prevent accidents.
- b. All the vehicles must have their Vega/obstruction lights "ON" during Low Visibility Procedures operations.
- c. Follow all instructions/sign boards provided for vehicular movement area/service roads.

7. Termination of Low Visibility Procedures:

- a. When metrological condition improves to 750M or more, cloud ceiling is 200 feet or Higher and trend is for improvement, WSO/Tower Supervisor would terminate operations of LVP. He may obtain advice from Duty Met. Officer regarding improvement in weather conditions for the purpose of termination of LVP operations.
- b. The WSO/Tower Supervisor will intimate AOCC/Air Side Operation regarding the termination of LVP operations.
- c. On cancelling LVP, Aerodrome Control shall include it in the subsequent two ATIS broadcasts that "LOW VISIBILITY PROCEDURES ARE CANCELLED".
- d. If SP are implemented and LVP are not subsequently initiated and meteorological conditions improve and the visibility/RVR is more than 1200m and/or the cloud ceiling is 400ft or higher and both are forecast to remain above the required SP criteria, WSO may cancel SP.

8. Applicability

LVTO is applicable to Airport Operator, ATS provider, and to those airline operators having specific DGCA approval as per Civil Aviation Requirements issued by DGCA India under Section 8, Series 'C', Part I. Pilots are required to report their approved take off minima (in metres) to ATC on Ground Frequency (121.85 MHz).

II. Radar Separation Minima of 3 Nm is applicable within 40 Nm of VOHS ASR/MSSR Head.

Lower Limit: GND Upper Limit: FL140

III. Transponder Operating Procedure on Ground

IV. TRANSPONDER OPERATING PROCEDURES ON GROUND

1. Introduction:

Advanced Surface Movement Guidance and Control System (A-SMGCS) using Mode-S Multi-lateration has been commissioned at Bangalore, Chennai, Delhi, Hyderabad, Kolkata & Mumbai International Airports.

The Aircraft Transponder Operating Procedures, particularly in the movement area of the airport(s), where A-SMGCS has been commissioned, is as given below:

2. DEPARTURE

i. At the Gate/Stand:

Select STBY

Enter the discrete SSR code received from Clearance Delivery/Surface Movement Control. Enter the three letter ICAO designator followed by the flight identification number (e.g. AIC748) through the FMS or the Transponder control panel, depending on the avionics.

ii. On requesting Pushback/Taxi (whichever is earlier):

Select Transponder or equivalent and AUTO if available

This action will enable the aircraft ID, used as the Call sign by ATC, to be displayed on the surveillance display of ATC. ATC can verify the data and use it for necessary identification.

iii. When Lining up:

Select TCAS

Select TCAS only after receiving the clearance to line up, to ensure that the performance of systems based on SSR frequencies (including airborne TCAS units, SSR and A-SMGCS) is not compromised.

3. ARRIVAL

1. When on the Runway:

Keep TCAS selected

2. After vacating the Runway:

Select Transponder or equivalent and AUTO if available

There is a need that the Transponder remains able to exchange data with the A-SMGCS system. However to ensure that the performance of systems

based on SSR frequencies (including airborne TCAS Unit, SSR & A-SMGCS) is not compromised, TCAS shall be deselected when vacating the Runway.

3.Parked on Stand:

Select STBY

The Transponder will not reply to interrogation. The discrete SSR Code given to that particular flight can now be recycled for other flights.

Note:When on ground the aircraft must squawk Mode C, in order to provide the altitude information to the surveillance system, and thereby prevent

i)clutter on Terminal Approach Radar Display (and)

ii>false automatic detection of departure for aircraft still on ground.

VOHS AD 2.23 ADDITIONAL INFORMATION

PARKING STANDS

| Stand No. | Surface | Strength | Co-ordinates | Remarks |
|-----------|---------|------------|------------------------|---------|
| 1 | Rigid | 62/R/C/W/T | 171408.58N 0782552.36E | |
| 2 | Rigid | 62/R/C/W/T | 171408.60N 0782553.83E | |
| 3 | Rigid | 62/R/C/W/T | 171408.62N 0782555.30E | |
| 4 | Rigid | 62/R/C/W/T | 171408.64N 0782556.78E | |
| 5 | Rigid | 62/R/C/W/T | 171408.66N 0782558.25E | |
| 6 | Rigid | 62/R/C/W/T | 171408.68N 0782559.72E | |
| 7 | Rigid | 62/R/C/W/T | 171408.70N 0782601.19E | |
| 8 | Rigid | 62/R/C/W/T | 171408.72N 0782602.66E | |
| 9 | Rigid | 62/R/C/W/T | 171408.74N 0782604.14E | |
| 10 | Rigid | 62/R/C/W/T | 171408.76N 0782605.61E | |
| 11 | Rigid | 62/R/C/W/T | 171408.78N 0782607.08E | |
| 12 | Rigid | 62/R/C/W/T | 171408.81N 0782608.55E | |
| 40 | Rigid | 88/R/C/W/T | 171403.77N 0782608.63E | |
| 41 | Rigid | 88/R/C/W/T | 171403.75N 0782607.16E | |
| 42 | Rigid | 88/R/C/W/T | 171403.73N 0782605.68E | |
| 43 | Rigid | 88/R/C/W/T | 171403.71N 0782604.21E | |
| 44 | Rigid | 88/R/C/W/T | 171403.69N 0782602.74E | |
| 45 | Rigid | 88/R/C/W/T | 171403.67N 0782601.27E | |
| 46 | Rigid | 88/R/C/W/T | 171403.65N 0782559.80E | |
| 47 | Rigid | 88/R/C/W/T | 171403.68N 0782558.32E | |
| 48 | Rigid | 88/R/C/W/T | 171403.61N 0782556.85E | |

| | | | | |
|------|-------|-------------|------------------------|-----------------|
| 49 | Rigid | 88/R/C/W/T | 171403.58N 0782555.38E | |
| 50 | Rigid | 88/R/C/W/T | 171403.55N 0782553.92E | |
| 51 | Rigid | 88/R/C/W/T | 171403.53N 0782552.45E | |
| 52 | Rigid | 88/R/C/W/T | 171403.96N 0782550.80E | |
| 53 | Rigid | 88/R/C/W/T | 171403.34N 0782549.19E | |
| 54 | Rigid | 88/R/C/W/T | 171404.05N 0782546.91E | |
| 54 L | Rigid | 88/R/C/W/T | 171403.29N 0782546.43E | |
| 54 R | Rigid | 88/R/C/W/T | 171404.24N 0782547.79E | |
| 55 | Rigid | 88/R/C/W/T | 171404.01N 0782544.20E | |
| 55 L | Rigid | 88/R/C/W/T | 171403.24N 0782543.47E | |
| 55 R | Rigid | 88/R/C/W/T | 171404.37N 0782544.82E | |
| 56 | Rigid | 88/R/C/W/T | 171403.95N 0782541.23E | |
| 56 L | Rigid | 88/R/C/W/T | 171403.19N 0782540.49E | |
| 56 R | Rigid | 88/R/C/W/T | 171404.33N 0782541.86E | |
| 57 | Rigid | 88/R/C/W/T | 171403.91N 0782538.34E | |
| 57 L | Rigid | 88/R/C/W/T | 171403.15N 0782537.64E | |
| 57 R | Rigid | 88/R/C/W/T | 171404.13N 0782539.00E | |
| 58 | Rigid | 88/R/C/W/T | 171403.87N 0782535.49E | |
| 58 L | Rigid | 88/R/C/W/T | 171403.11N 0782534.79E | |
| 58 R | Rigid | 88/R/C/W/T | 171404.06N 0782536.15E | |
| 59 | Rigid | 88/R/C/W/T | 171403.27N 0782533.35E | |
| 90 | Rigid | 62/R/C/W/T | 171408.31N 0782533.28E | |
| 91 | Rigid | 62/R/C/W/T | 171408.33N 0782534.75E | |
| 92 | Rigid | 62/R/C/W/T | 171408.36N 0782536.22E | |
| 93 | Rigid | 62/R/C/W/T | 171408.37N 0782537.70E | |
| 94 | Rigid | 62/R/C/W/T | 171408.39N 0782539.18E | |
| 100 | Rigid | 60/R/C/W/T | 171356.51N 0782701.43E | Isolation stand |
| 200 | Rigid | 114/R/B/W/T | 171403.23N 0782514.56E | Cargo stand |
| 201 | Rigid | 114/R/B/W/T | 171403.57N 0782513.76E | Cargo stand |
| 202 | Rigid | 114/R/B/W/T | 171403.37N 0782512.97E | Cargo stand |
| 203 | Rigid | 114/R/B/W/T | 171403.19N 0782511.49E | Cargo stand |
| 203L | Rigid | 114/R/B/W/T | 171403.53N 0782510.54E | Cargo stand |
| 204 | Rigid | 114/R/B/W/T | 171403.17N 0782509.86E | Cargo stand |

Size of South Apron (Stand 40 to 59) :1083 X 84M
 Size of North West Apron (Stand 90 to 94):241 X 58M
 Size of North East Apron (Stand 01 to 12) :545 X 58M
 Size of Cargo Apron :190 X 113M

Note:

- i. The stand 203L is compatible to serve aircraft up to Code-F category.
- ii. Cargo stands 201 and 203L are provided with Fixed Electrical Ground Power (FEGP) units. Number and capacity of FEGP - 2 each with the capacity of 90 KVA.

2. PUSHBACK / PULL FORWARD PROCEDURE FOR STAND NR 01-12 AND 90-94:

- i. Aircraft on Stand NR. 01-12 shall pushback facing East. Aircraft on Stand NR. 01, 02 and 03 shall pull forward till limit line marked abeam Stand NR. 04 due safety reasons i.e. to avoid JET BLAST effect on perimeter wall.
- ii. Aircraft on Stand NR. 90-94 shall pushback facing West. Aircraft on Stand NR. 92, 93 and 94 shall pull forward till limit line marked abeam Stand NR. 91 due safety reasons.
- iii. Stand NR. 01 & 94 available for Code C Aircraft. Pushback limit lines marked for Stand NR. 01 & 94. Pushback limit lines are marked with White Line.
- iv. Additional marking available for POWER IN/ POWER OUT. On Stand NR. 90 for Aircraft up to code B, on Stand NR. 91 & 92 for Aircraft up to wing span of 20M.

3. TAXIWAY:

| Designation | Length/ Width (M) | PCN | Coordinates | Remarks |
|-------------|----------------------|------------|------------------------|--------------------------|
| A1 | 427/25 | 77/F/B/W/T | 171348.40N 0782711.41E | |
| A2 | 225/25 | 77/F/B/W/T | 171348.22N 0782657.31E | |
| A3 | 225/25 | 77/F/B/W/T | 171347.94N 0782634.91E | |
| A4 | 499/25 | 77/F/B/W/T | 171347.81N 0782624.67E | RET |
| A5 | 499/25 | 77/F/B/W/T | 171347.58N 0782606.83E | RET |
| A6 | 482/25 | 77/F/B/W/T | 171347.30N 0782544.68E | RET |
| A7 | 482/25 | 77/F/B/W/T | 171347.10N 0782529.43E | RET |
| A8 | 225/25 | 77/F/B/W/T | 171346.99N 0782520.50E | |
| A9 | 225/25 | 77/F/B/W/T | 171346.57N 0782448.05E | |
| A10 | 282/25 | 77/F/B/W/T | 171346.53N 0782444.76E | |
| B | 300/25 | 77/F/B/W/T | 171356.25N 0782514.97E | Cargo Apron |
| B1 | 82/25 | 69/F/B/W/T | 171353.76N 0782701.30E | Isolation Bay |
| B2 | 165/23 | 69/F/B/W/T | 171357.22N 0782657.19E | MRO Apron |
| B3 | 272/25 | 77/F/B/W/T | 171357.19N 0782613.05E | Passenger Terminal Apron |
| B4 | 272/25 | 77/F/B/W/T | 171355.51N 0782553.79E | Passenger Terminal Apron |
| B5 | 272/25 | 77/F/B/W/T | 171355.31N 0782538.22E | Passenger Terminal Apron |
| B6 | 175/25 | 77/F/B/W/T | 171353.49N 0782520.41E | Cargo Apron |
| E | 1130/25 | 77/F/B/W/T | 171400.95N 0782552.49E | Passenger Terminal Apron |
| K | 365/25 | 77/F/B/W/T | 171405.79N 0782612.92E | Passenger Terminal Apron |

| | | | | |
|----|----------|------------|------------------------|--|
| K1 | 365/18.6 | 73/F/B/W/T | 171405.75N 0782610.13E | Passenger Terminal Apron Suitable for Acft with Max wing span up to 36M and Max outer Main Wheel gear span up to 9.6M |
| K2 | 646/18 | 73/F/B/W/T | 171410.90N 0782601.06E | Passenger Terminal Apron |
| K3 | 586/18 | 73/F/B/W/T | 171412.34N 0782601.04E | Passenger Terminal Apron |
| M | 596/18 | 73/F/B/W/T | 171410.34N 0782532.28E | Passenger Terminal Apron |

4. TWY A1, A2, A3, A8, A9, A10, CL LGT Available only at visibility conditions of RVR 1000m or less.

5. Rapid exit TWY CL LGT corresponding to the RWY in use Available during the time of OPS of aeronautical ground LGT.

6. VFR training FLT's north of Nadirgul AD in a radius of 2NM. Lower limit: GND Upper limit: 2600FT AMSL.

7. Storm Water Drain on either side of RWY 27L/09R DIST from CL 105m, Shape trapezoid, Width at the top 10m, Width at the bottom 2m to 3m, Depth 2m to 3m.

8. High Mast Antenna installed with Obstruction LGT SW of VOR HIA at location 171332.118N 0782406.066E. RDL and DIST from VOR HIA 241/0.2 NM HGT of the antenna 27.20m AGL pilots to EXER CTN

9. TWY edge lights with spacing of 60m available on RWY 09L/27R when used exclusively for taxiing purpose.

10. TWY B additional details are as follows:

Location: From TWY B6 Up to Stand 204

Shoulders: 17.5M

Edge LGTS Colour / Spacing: Blue (elevated) 60 M maximum

VOHS AD 2.24 CHARTS RELATED TO AN AERODROME

1. Aerodrome Chart
2. Aerodrome Chart- Hot Spot
3. Aircraft Parking/Docking Chart (Passenger Terminal Apron)
4. Aircraft Parking/Docking Chart (Cargo Apron)
5. Aerodrome Obstacle Chart-Type A (Operating Limitations) RWY 09/27
6. Precision Approach Terrain Chart RWY 09
7. Precision Approach Terrain Chart RWY 27
8. TORA from Different Runway Intersections – Departure RWY 09R
9. TORA from Different Runway Intersections – Departure RWY 27L
10. Locations of Different Exit Taxiways from Threshold – Arrival 09R
11. Locations of Different Exit Taxiways from Threshold – Arrival 27L
12. Isolation Bay Chart
13. ILS Procedure RWY 09R
14. ILS Procedure RWY 27L
15. VOR Procedure RWY 09R
16. VOR Procedure RWY 27L
17. VOR Procedure RWY 09L
18. VOR Procedure RWY 27R

AERODROME CHART

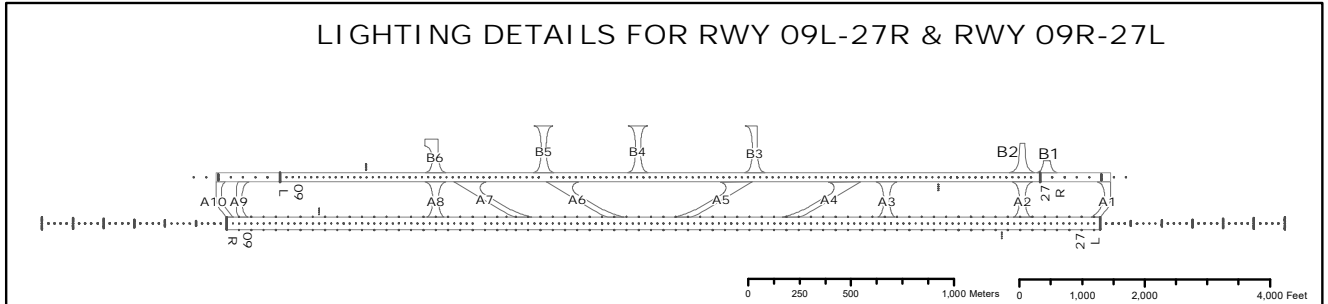
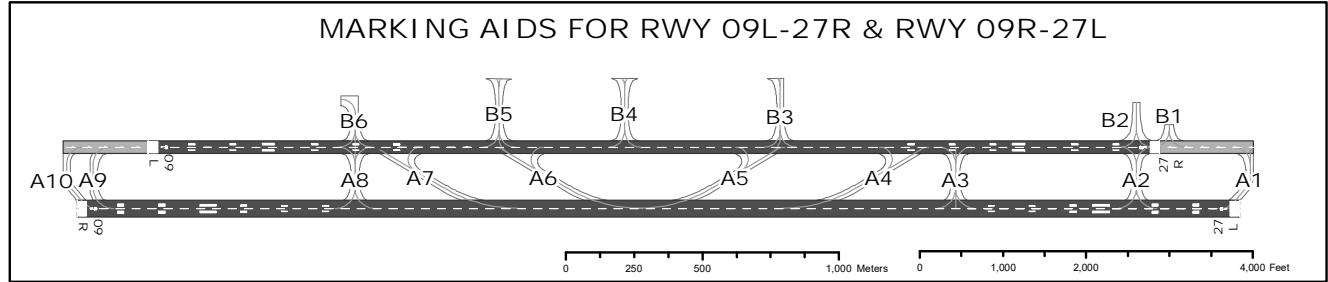
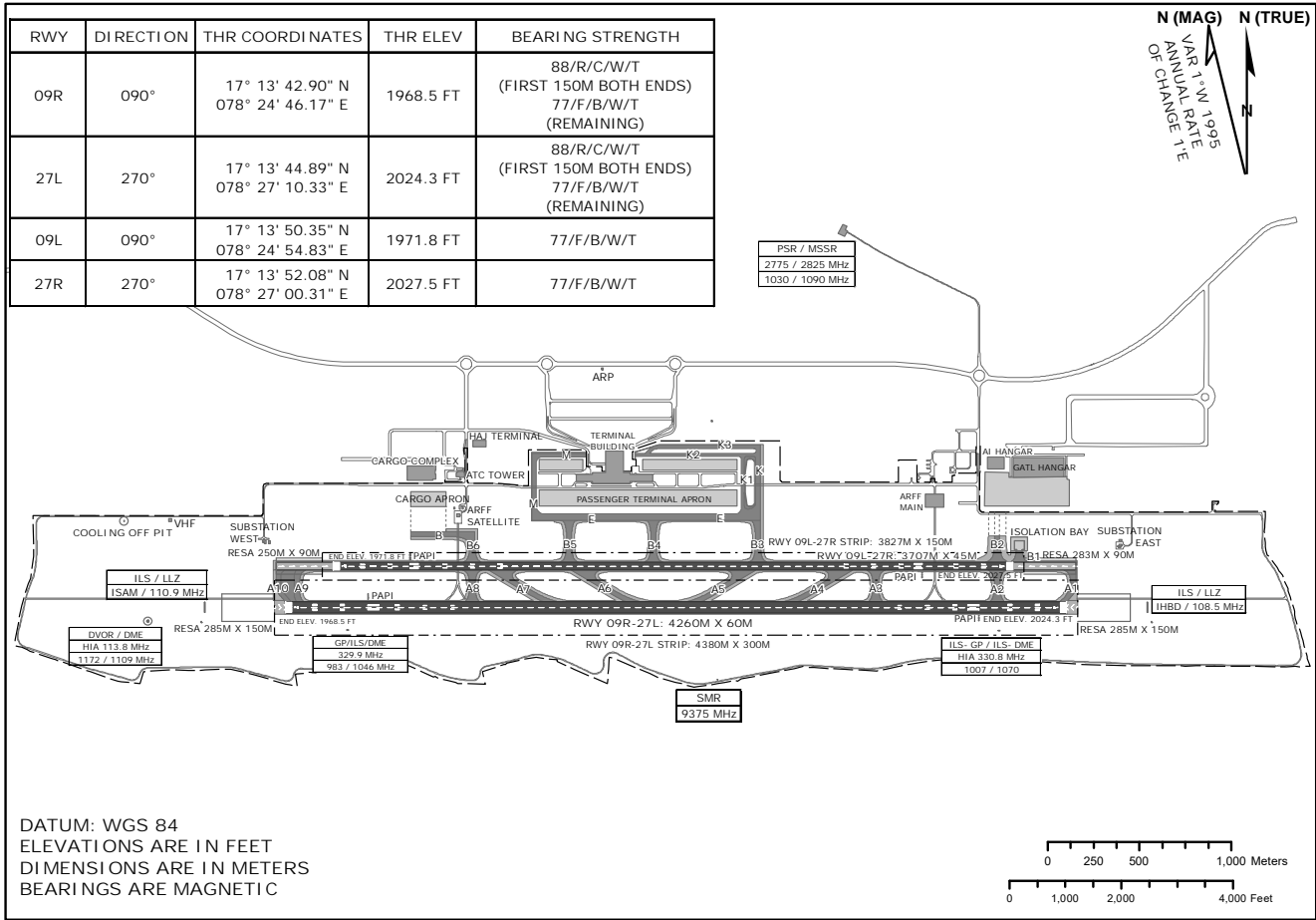
INDIA / SHAMSHABAD
(HYDERABAD)

ARP 17° 14' 26" N
078° 25' 44" E

ELEVATION:
2028 FT

TWR : 118.450 MHz
GND : 121.850 MHz

RAJIV GANDHI INTL. AIRPORT



DATE OF AERONAUTICAL INFORMATION:

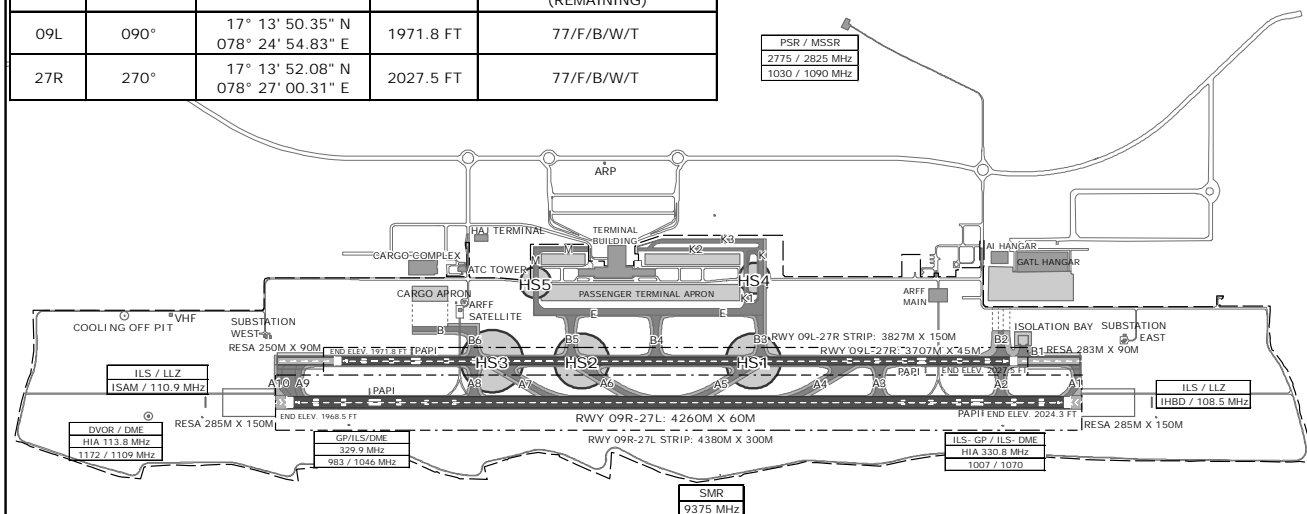
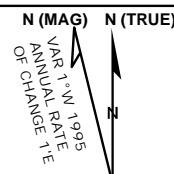
PRODUCING ORGANISATION: GMR HYDERABAD INTERNATIONAL AIRPORT LTD.

AERODROME CHART- HOT SPOTS

INDIA / SHAMSHABAD
(HYDERABAD)ARP 17° 14' 26" N
078° 25' 44" EELEVATION:
2028 FTTWR : 118.450 MHz
GND : 121.850 MHz

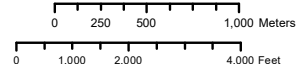
RAJIV GANDHI INTL. AIRPORT

| RWY | DIRECTION | THR COORDINATES | THR ELEV | BEARING STRENGTH |
|-----|-----------|---------------------------------------|-----------|---|
| 09R | 090° | 17° 13' 42.90" N 078° 24' 46.17" E | 1968.5 FT | 88/R/C/W/T (FIRST 150M BOTH ENDS) 77/F/B/W/T (REMAINING) |
| 27L | 270° | 17° 13' 44.89" N 078° 27' 10.33" E | 2024.3 FT | 88/R/C/W/T (FIRST 150M BOTH ENDS) 77/F/B/W/T (REMAINING) |
| 09L | 090° | 17° 13' 50.35" N 078° 24' 54.83" E | 1971.8 FT | 77/F/B/W/T |
| 27R | 270° | 17° 13' 52.08" N 078° 27' 00.31" E | 2027.5 FT | 77/F/B/W/T |

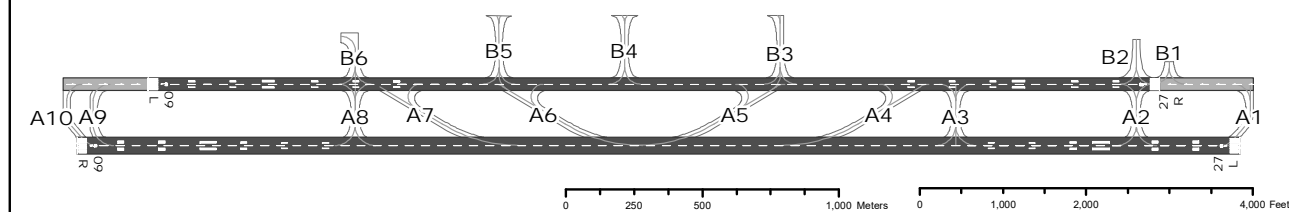
DATUM: WGS 84
ELEVATIONS ARE IN FEET
DIMENSIONS ARE IN METERS
BEARINGS ARE MAGNETIC

HOT SPOTS [Pilots must exercise caution while crossing hot spots]

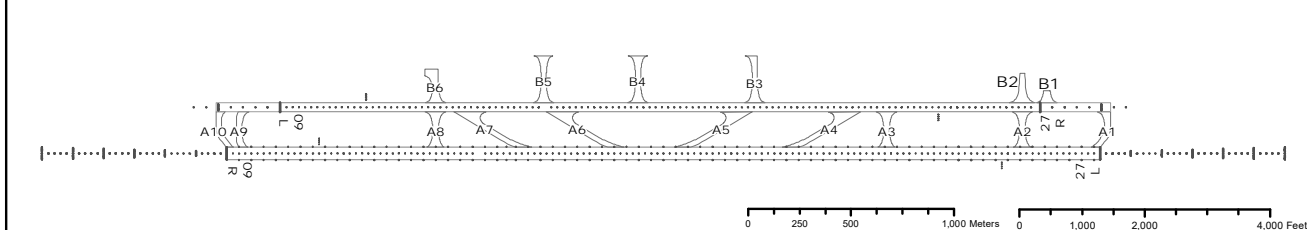
| | |
|------|--|
| HS-1 | INTERSECTION OF TWY- B3 AND TWY- A5 [RET] |
| HS-2 | INTERSECTION OF TWY- B5 AND TWY- A6 [RET] |
| HS-3 | INTERSECTION OF TWY- B6, TWY- A7 [RET] AND TWY- A8 |
| HS-4 | APRON SERVICE ROAD CROSSING TWY- K AND TWY- K1 |
| HS-5 | APRON SERVICE ROAD CROSSING TWY- M |



MARKING AIDS FOR RWY 09L-27R & RWY 09R-27L



LIGHTING DETAILS FOR RWY 09L-27R & RWY 09R-27L



DATE OF AERONAUTICAL INFORMATION:

PRODUCING ORGANISATION: GMR HYDERABAD INTERNATIONAL AIRPORT LTD.

AIRCRAFT PARKING /
DOCKING CHART

APRON ELEVATION
1991.4 FT

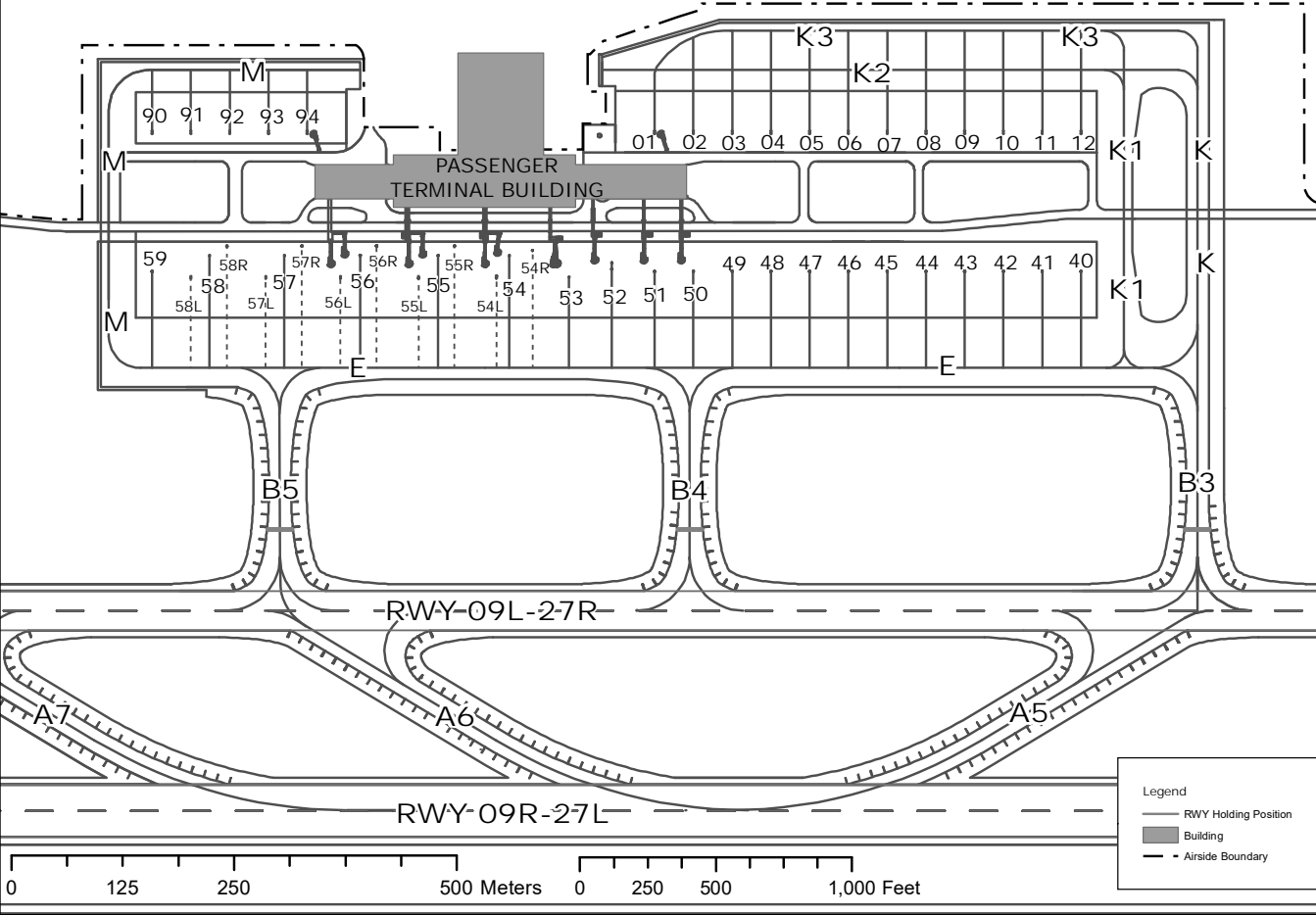
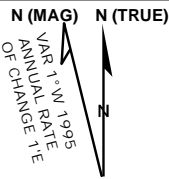
TWR : 118.450 MHz
GND : 121.850 MHz

INDIA / SHAMSHABAD
(HYDERABAD)

APRON PASSENGER TERMINAL

RAJIV GANDHI INTL. AIRPORT

DATUM: WGS 84
ELEVATIONS ARE IN FEET
DIMENSIONS ARE IN METERS
BEARINGS ARE MAGNETIC



| AIRCRAFT STAND | WGS 84 COORDINATES DD MM SS.SS | | TYPE OF AIRCRAFT |
|----------------|-----------------------------------|-------------------|------------------|
| 01 | 17° 14' 08.58" N | 078° 25' 52.36" E | CODE C |
| 02 | 17° 14' 08.60" N | 078° 25' 53.83" E | CODE C |
| 03 | 17° 14' 08.62" N | 078° 25' 55.30" E | CODE C |
| 04 | 17° 14' 08.64" N | 078° 25' 56.78" E | CODE C |
| 05 | 17° 14' 08.66" N | 078° 25' 58.25" E | CODE C |
| 06 | 17° 14' 08.68" N | 078° 25' 59.72" E | CODE C |
| 07 | 17° 14' 08.70" N | 078° 26' 01.19" E | CODE C |
| 08 | 17° 14' 08.72" N | 078° 26' 02.66" E | CODE C |
| 09 | 17° 14' 08.74" N | 078° 26' 04.14" E | CODE C |
| 10 | 17° 14' 08.76" N | 078° 26' 05.61" E | CODE C |
| 11 | 17° 14' 08.78" N | 078° 26' 07.08" E | CODE C |
| 12 | 17° 14' 08.81" N | 078° 26' 08.55" E | CODE C |

| AIRCRAFT STAND | WGS 84 COORDINATES DD MM SS.SS | | TYPE OF AIRCRAFT |
|----------------|-----------------------------------|-------------------|------------------|
| 40 | 17° 14' 03.77" N | 078° 26' 08.63" E | CODE C |
| 41 | 17° 14' 03.75" N | 078° 26' 07.16" E | CODE C |
| 42 | 17° 14' 03.73" N | 078° 26' 05.68" E | CODE C |
| 43 | 17° 14' 03.71" N | 078° 26' 04.21" E | CODE C |
| 44 | 17° 14' 03.69" N | 078° 26' 02.74" E | CODE C |
| 45 | 17° 14' 03.67" N | 078° 26' 01.27" E | CODE C |
| 46 | 17° 14' 03.65" N | 078° 25' 59.80" E | CODE C |
| 47 | 17° 14' 03.68" N | 078° 25' 58.32" E | CODE C |
| 48 | 17° 14' 03.61" N | 078° 25' 56.85" E | CODE C |
| 49 | 17° 14' 03.58" N | 078° 25' 55.38" E | CODE C |
| 50 | 17° 14' 03.55" N | 078° 25' 53.92" E | CODE C |
| 51 | 17° 14' 03.53" N | 078° 25' 52.45" E | CODE C |
| 52 | 17° 14' 03.96" N | 078° 25' 50.80" E | CODE C |
| 53 | 17° 14' 03.34" N | 078° 25' 49.19" E | CODE C |
| 54L | 17° 14' 03.29" N | 078° 25' 46.43" E | CODE C |
| 54 | 17° 14' 04.05" N | 078° 25' 46.91" E | CODE E |
| 54R | 17° 14' 04.24" N | 078° 25' 47.79" E | CODE C |
| 55L | 17° 14' 03.24" N | 078° 25' 43.47" E | CODE C |
| 55 | 17° 14' 04.01" N | 078° 25' 44.20" E | CODE F |
| 55R | 17° 14' 04.37" N | 078° 25' 44.82" E | CODE C |
| 56L | 17° 14' 03.19" N | 078° 25' 40.49" E | CODE C |
| 56 | 17° 14' 03.95" N | 078° 25' 41.23" E | CODE F |
| 56R | 17° 14' 04.33" N | 078° 25' 41.86" E | CODE C |
| 57L | 17° 14' 03.15" N | 078° 25' 37.64" E | CODE C |
| 57 | 17° 14' 03.91" N | 078° 25' 38.34" E | CODE E |
| 57R | 17° 14' 04.13" N | 078° 25' 39.00" E | CODE C |
| 58L | 17° 14' 03.11" N | 078° 25' 34.79" E | CODE C |
| 58 | 17° 14' 03.87" N | 078° 25' 35.49" E | CODE E |
| 58R | 17° 14' 04.06" N | 078° 25' 36.15" E | CODE C |
| 59 | 17° 14' 03.27" N | 078° 25' 33.35" E | CODE C |

| AIRCRAFT STAND | WGS 84 COORDINATES DD MM SS.SS | | TYPE OF AIRCRAFT |
|----------------|-----------------------------------|-------------------|------------------|
| 90 | 17° 14' 08.31" N | 078° 25' 33.28" E | CODE C |
| 91 | 17° 14' 08.33" N | 078° 25' 34.75" E | CODE C |
| 92 | 17° 14' 08.36" N | 078° 25' 36.22" E | CODE C |
| 93 | 17° 14' 08.37" N | 078° 25' 37.70" E | CODE C |
| 94 | 17° 14' 08.39" N | 078° 25' 39.18" E | CODE C |

| CONTACT AIRCRAFT STANDS | AIRCRAFT STAND | PCN |
|-------------------------|----------------|------------|
| 01 | 01 TO 12 | 62/R/C/W/T |
| 50 TO 56 | 40 TO 59 | 88/R/C/W/T |
| 94 | 90 TO 94 | 62/R/C/W/T |

| TAXIWAY DETAILS | | |
|-----------------|-------|------------|
| TAXIWAY | WIDTH | PCN |
| B3 | 25M | 77/F/B/W/T |
| B4 | 25M | 77/F/B/W/T |
| B5 | 25M | 77/F/B/W/T |
| E | 25M | 77/F/B/W/T |
| K | 25M | 77/F/B/W/T |
| K1 | 18.6M | 73/F/B/W/T |
| K2 | 18M | 73/F/B/W/T |
| K3 | 18M | 73/F/B/W/T |
| M | 18M | 73/F/B/W/T |

NOTE: AERONAUTICAL GROUND LIGHTS ARE NOT SHOWN ON THIS CHART

DATE OF AERONAUTICAL INFORMATION:

PRODUCING ORGANISATION: GMR HYDERABAD INTERNATIONAL AIRPORT LTD.

AIRCRAFT PARKING /
DOCKING CHART

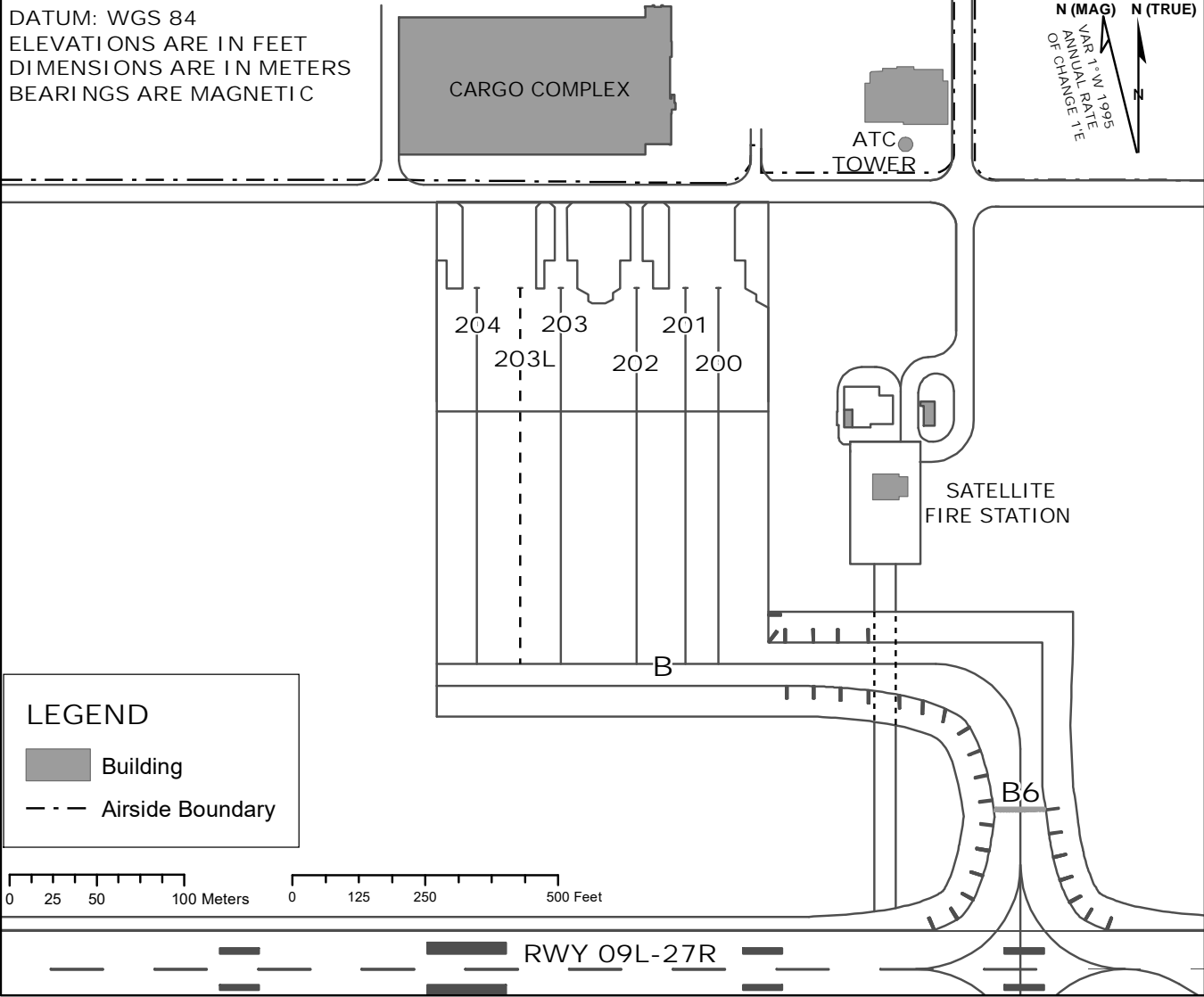
APRON ELEVATION
1971.5 FT

TWR : 118.450 MHz
GND : 121.850 MHz

INDIA / SHAMSHABAD
(HYDERABAD)

APRON CARGO

RAJIV GANDHI INTL. AIRPORT



| AIRCRAFT STAND | WGS 84 COORDINATES DD MM SS.SS | | TYPE OF AIRCRAFT | PCN | REMARKS | CONTACT/ REMOTE |
|----------------|-----------------------------------|------------------|------------------|-------------|----------------------|-----------------|
| 200 | 17° 14' 03.23" N | 078° 25' 14.56"E | CODE C | 114/R/B/W/T | POWER IN - PUSH BACK | REMOTE |
| 201 | 17° 14' 03.57" N | 078° 25' 13.76"E | CODE F | 114/R/B/W/T | POWER IN - PUSH BACK | REMOTE |
| 202 | 17° 14' 03.37" N | 078° 25' 12.97"E | CODE C | 114/R/B/W/T | POWER IN - PUSH BACK | REMOTE |
| 203 | 17° 14' 03.19" N | 078° 25' 11.49"E | CODE C | 114/R/B/W/T | POWER IN - PUSH BACK | REMOTE |
| 203L | 17° 14' 03.53" N | 078° 25' 10.54"E | CODE F | 114/R/B/W/T | POWER IN - PUSH BACK | REMOTE |
| 204 | 17° 14' 03.17" N | 078° 25' 09.86"E | CODE C | 114/R/B/W/T | POWER IN - PUSH BACK | REMOTE |

TAXIWAY DETAILS

| TAXIWAY | WIDTH | PCN |
|---------|-------|------------|
| B6 | 25M | 77/F/B/W/T |
| B | 25M | 77/F/B/W/T |

NOTE: AERONAUTICAL GROUND LIGHTS ARE NOT SHOWN ON THIS CHART

AERODROME OBSTACLE CHART

TYPE-A (OPERATING LIMITATIONS)

INDIA/HYDERABAD (Shamshabad)

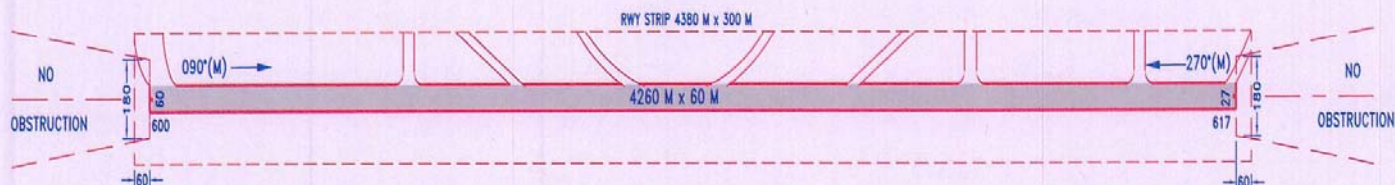
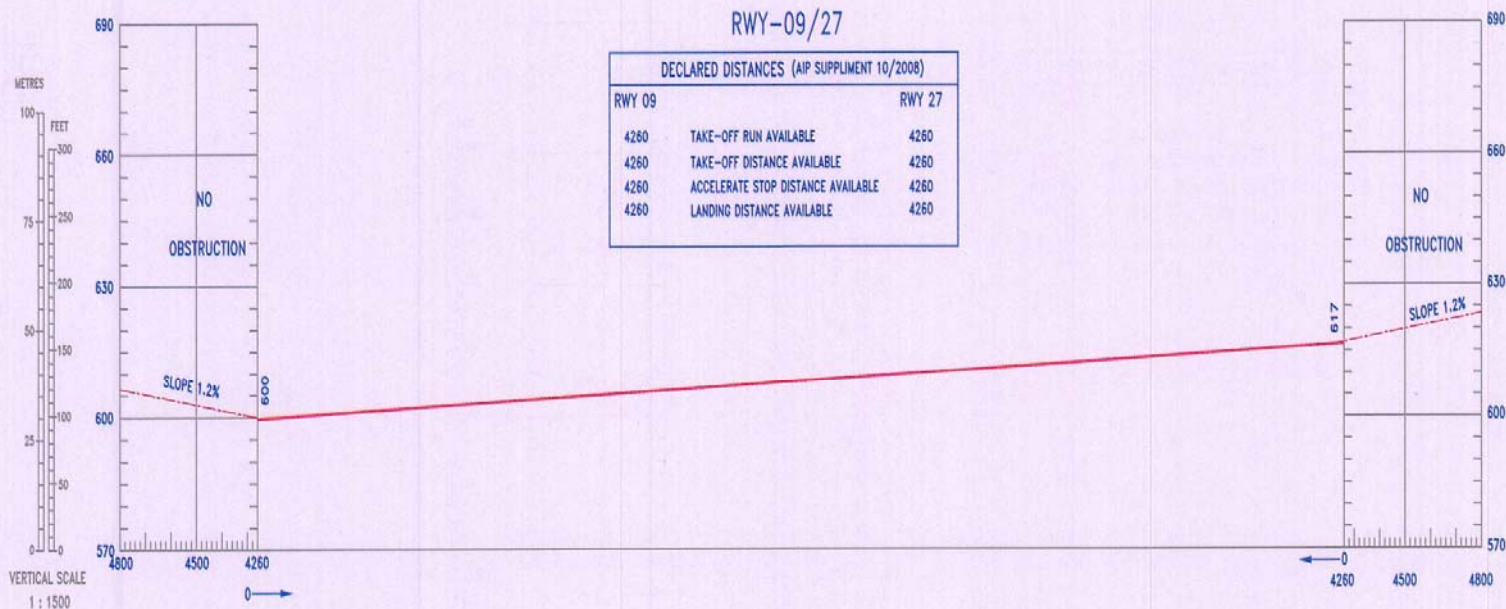
RAJIV GANDHI INTL. AIRPORT

RWY 09/27

DIMENSIONS AND ELEVATIONS IN METRES

CONSULT NOTAM FOR LATEST INFORMATION

MAGNETIC VARIATION 1°W 1995



HORIZONTAL SCALE - 1 : 15000



ORDER OF ACCURACY

| | |
|------------|------|
| HORIZONTAL | 1.0m |
| VERTICAL | 0.5m |

NOTES:

1. Datum - All Elevations are AMSL.
2. Chart prepared based on aeronautical obstacle Survey Dec.06-Jan.07 and Jan.-Feb. 08

AMENDMENT RECORD

| NO. | DATE | ENTERED BY |
|-----|------|------------|
| | | |
| | | |
| | | |

Date of Aeronautical Information-Jan.2008

Consultant: Cartography unit, Airports Authority of India
Client : GMR Hyderabad International Airport Ltd.Based on AAI Survey Jan.07 & Feb.08
and GMR HIAL data

RAJIV GANDHI INTL. AIRPORT

CONSULT NOTAM FOR LATEST INFORMATION

Based on AAI Survey Jan.07 & Feb.08
and GMR HIAL data

PRECISION APPROACH TERRAIN CHART

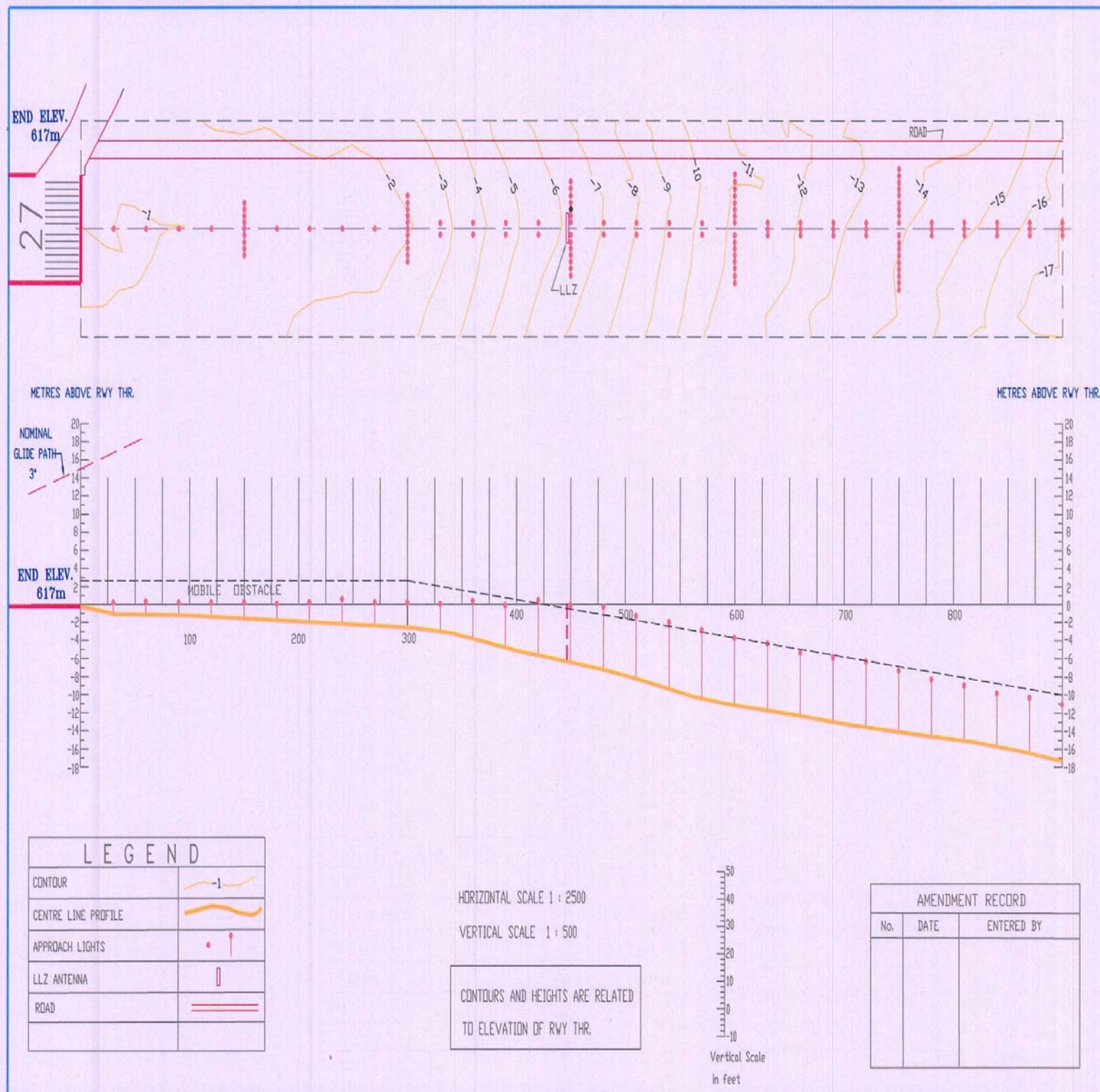
INDIA/HYDERABAD(SHAMSHABAD)

RAJIV GANDHI INTL. AIRPORT

DISTANCES AND ELEVATIONS IN METRES

CONSULT NOTAM FOR LATEST INFORMATION

RWY 27



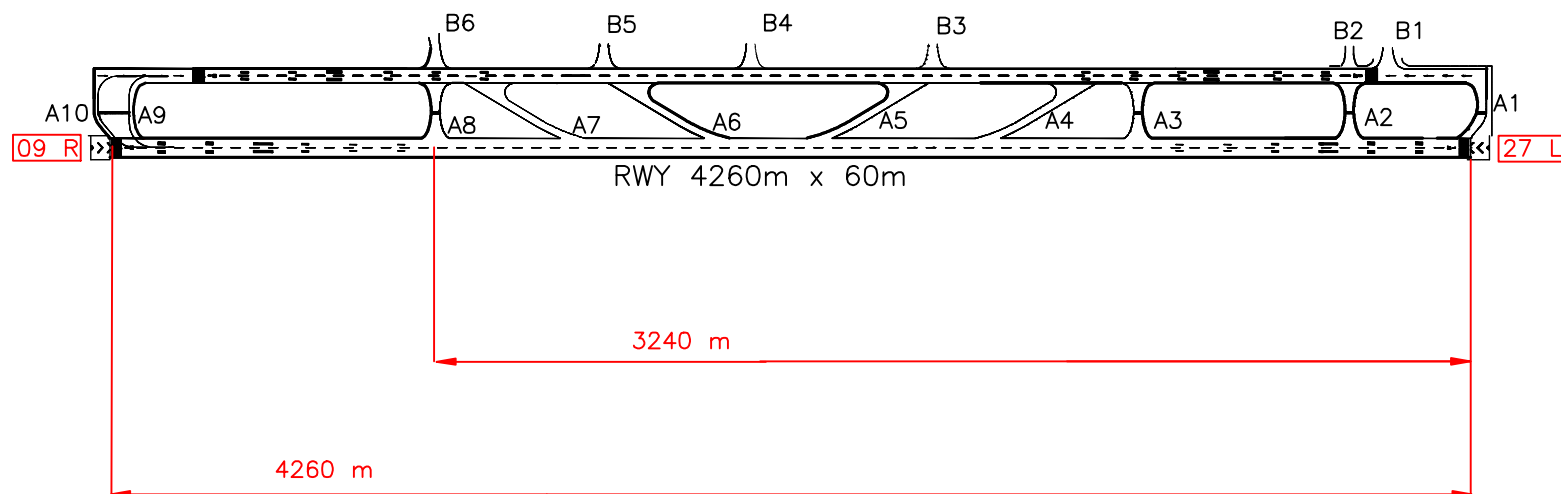
Date of Aeronautical Information—Jan.2008

Consultant: Cartography unit, Airports Authority of India
Client : GMR Hyderabad International Airport Ltd.Based on AAI Survey Jan.07 & Feb.08
and GMR HIAL data

DEPARTURE RUNWAY 09R

TAKE-OFF RUN AVAILABLE FROM DIFFERENT RUNWAY INTERSECTIONS

| RUNWAY 09R | | |
|--|---------|------|
| ENTRY TAXIWAY | A9/A10 | A8 |
| TORA (M) | 4260 | 3240 |
| ANGLE OF ENTRY TWY WITH THE RWY IN USE | 90° | 90° |
| LENGTH OF TWY (M) | 225/282 | 225 |

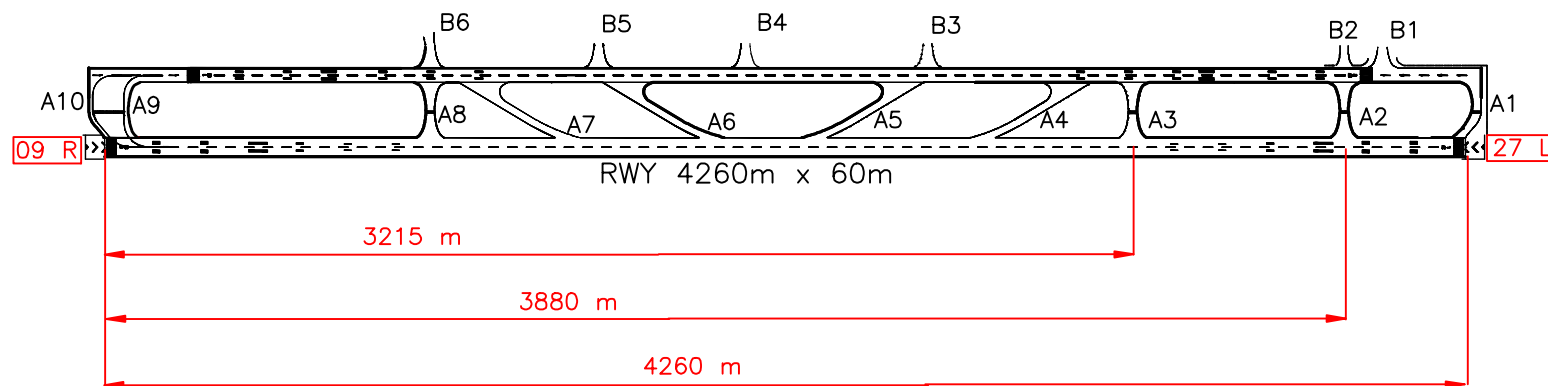


NOT TO SCALE

DEPARTURE RUNWAY 27L

TAKE-OFF RUN AVAILABLE FROM DIFFERENT RUNWAY INTERSECTIONS

| RUNWAY 27L | | | |
|--|------|------|------|
| ENTRY TAXIWAY | A1 | A2 | A3 |
| TORA (M) | 4260 | 3880 | 3215 |
| ANGLE OF ENTRY TWY WITH THE RWY IN USE | 90° | 90° | 90° |
| LENGTH OF TWY (M) | 427 | 225 | 225 |



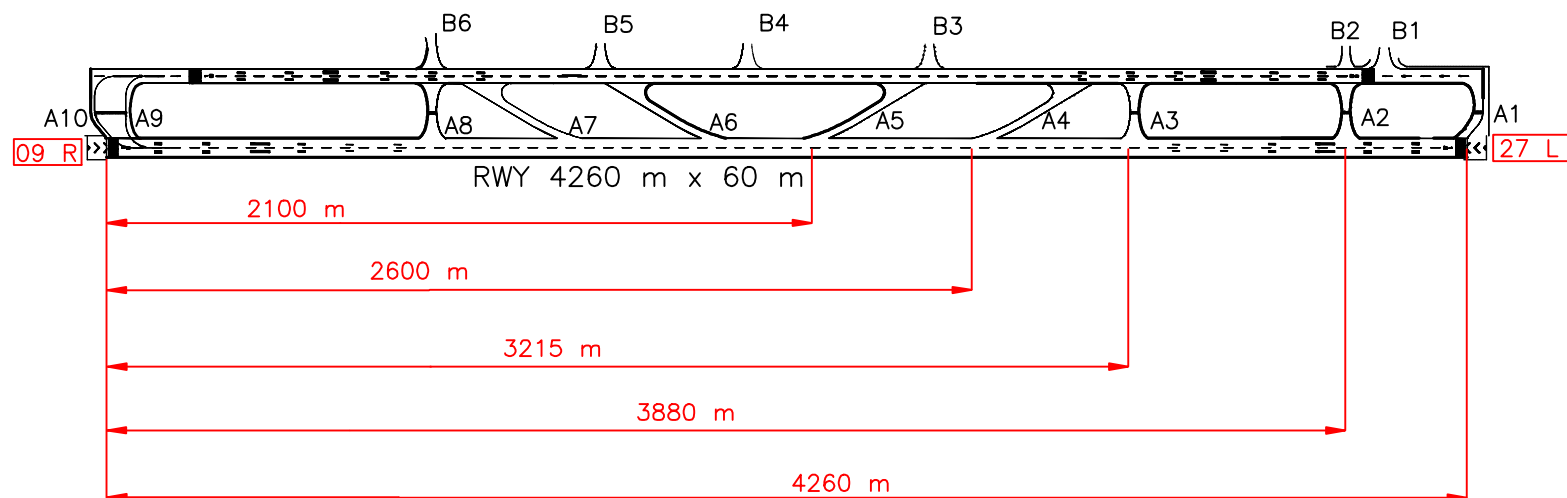
NOT TO SCALE

ARRIVAL RUNWAY 09R

LOCATION OF DIFFERENT EXIT TAXIWAYS FROM THRESHOLD

| RUNWAY 09R | | | | | |
|---------------------------------------|----------|----------|------|------|------|
| EXIT TAXIWAY | A5 (RET) | A4 (RET) | A3 | A2 | A1 |
| DISTANCE FROM THRESHOLD (M) | 2100 | 2600 | 3215 | 3880 | 4260 |
| ANGLE OF EXIT TWY WITH THE RWY IN USE | 30° | 31° | 90° | 90° | 90° |
| LENGTH OF TWY (M) | 500 | 500 | 225 | 225 | 427 |

RET—RAPID EXIT TAXIWAY



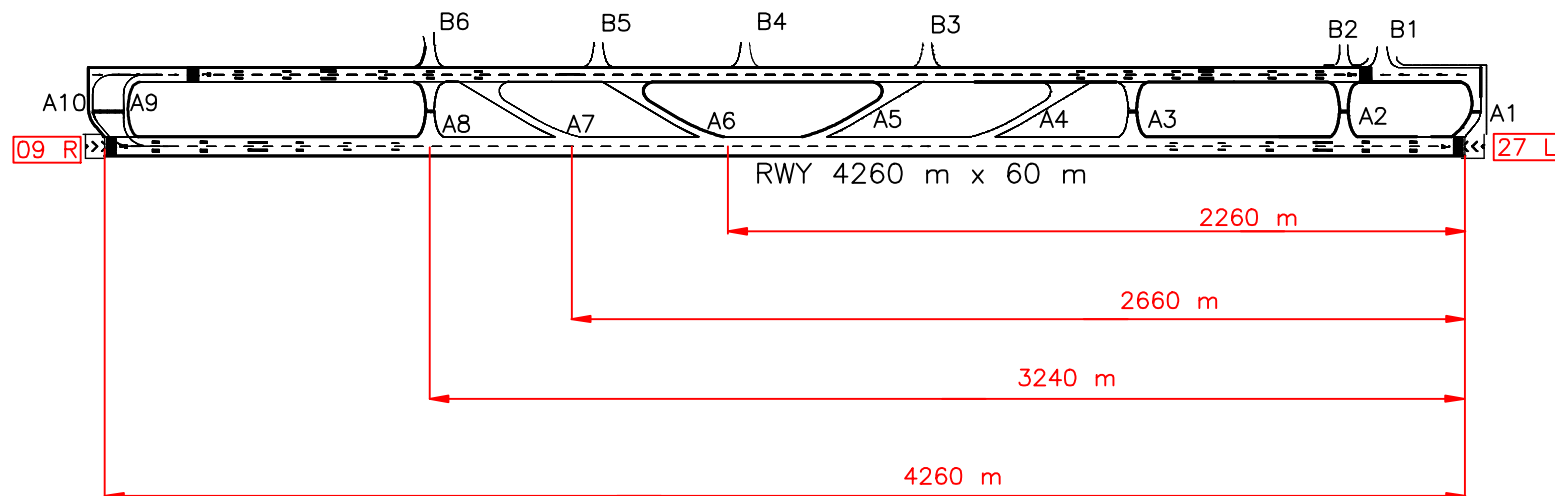
NOT TO SCALE

ARRIVAL RUNWAY 27L

LOCATION OF DIFFERENT EXIT TAXIWAYS FROM THRESHOLD

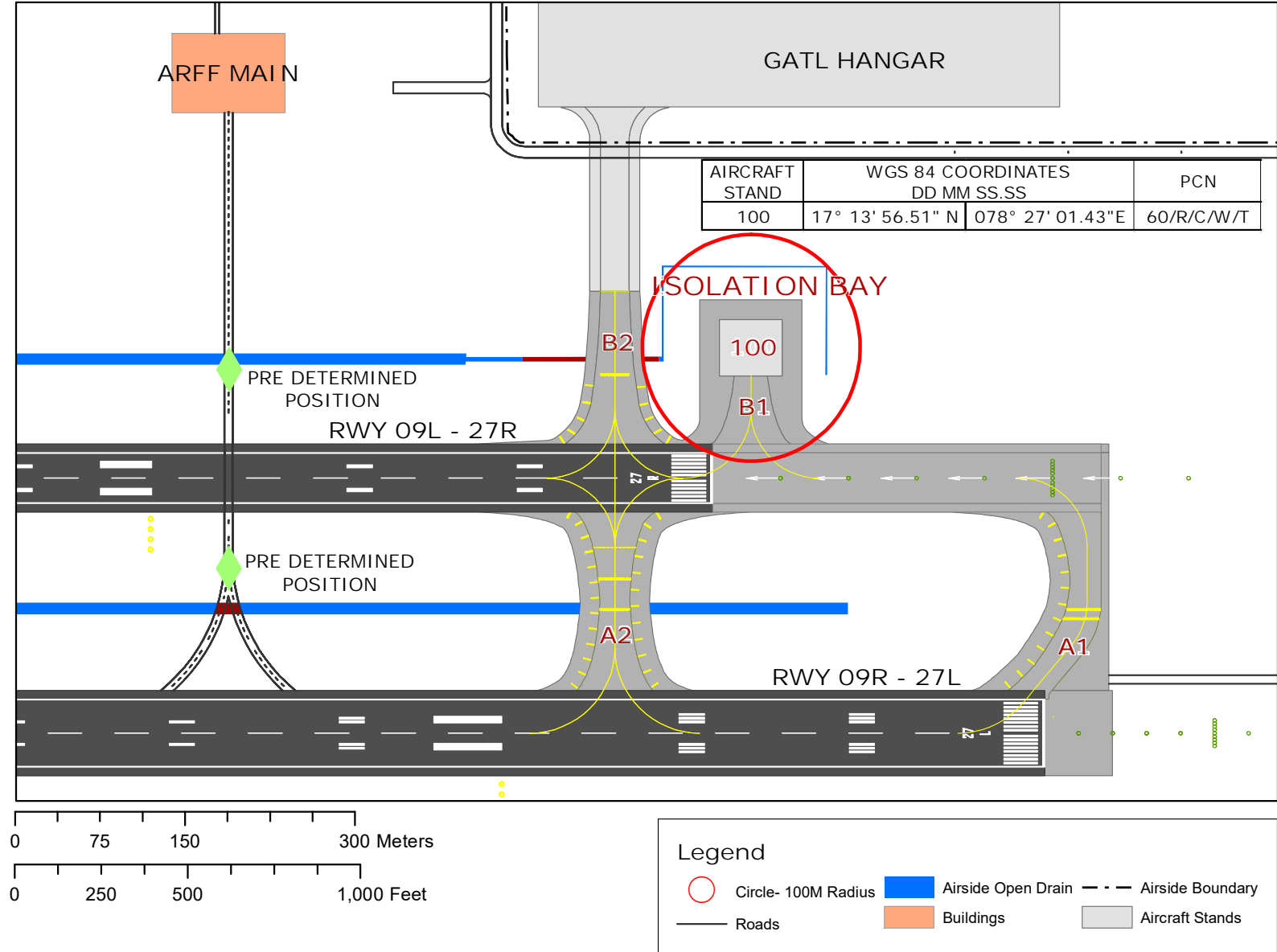
| RUNWAY 27L | | | | |
|---------------------------------------|----------|----------|------|---------|
| EXIT TAXIWAY | A6 (RET) | A7 (RET) | A8 | A9/A10 |
| DISTANCE FROM THRESHOLD (M) | 2260 | 2660 | 3240 | 4260 |
| ANGLE OF EXIT TWY WITH THE RWY IN USE | 30° | 31° | 90° | 90° |
| LENGTH OF TWY (M) | 482 | 482 | 225 | 225/282 |

RET—RAPID EXIT TAXIWAY



NOT TO SCALE

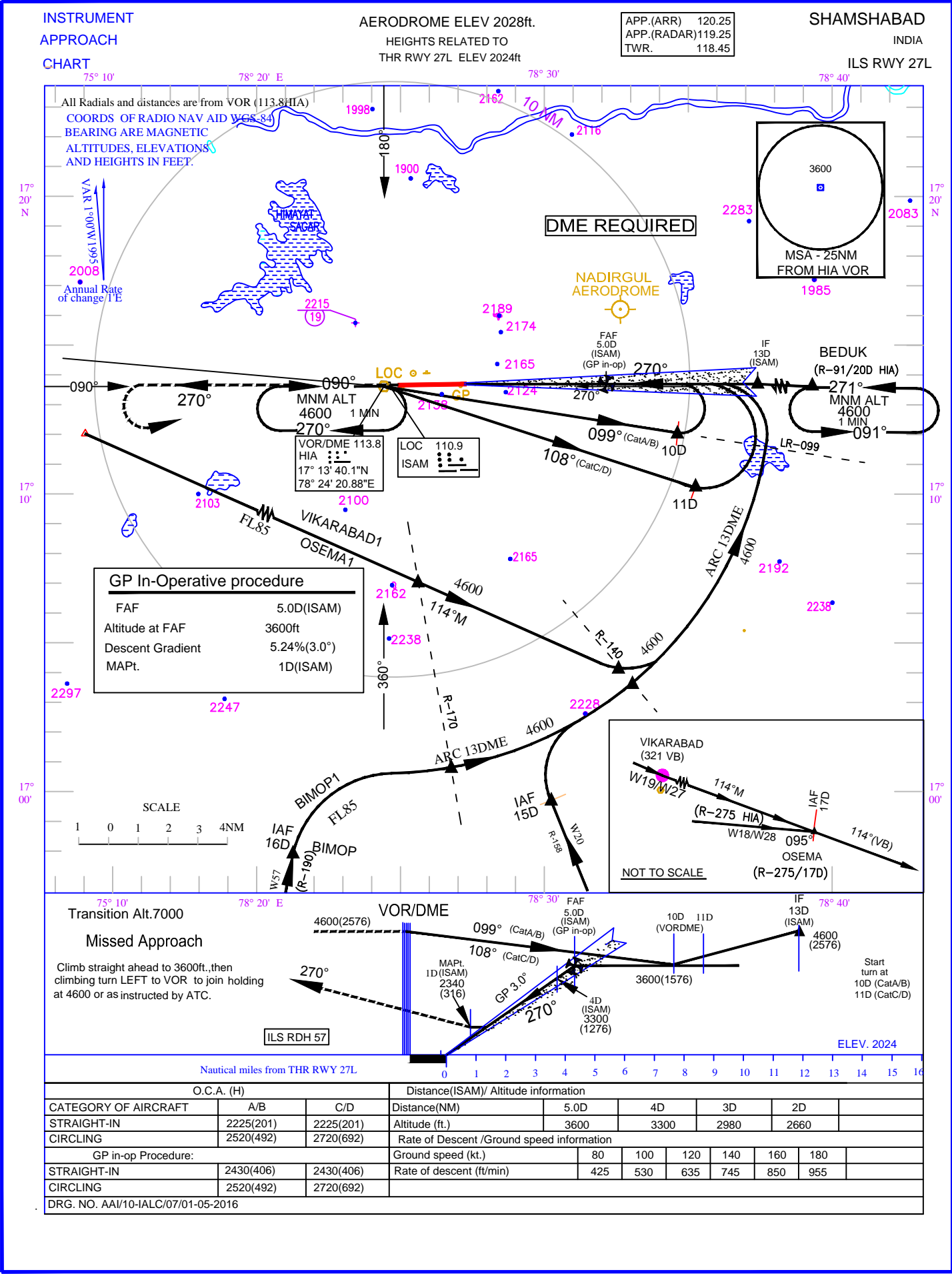
ISOLATION BAY - RGI AIRPORT, INDIA/ SHAMSHABAD (HYDERABAD)



DATE OF AERONAUTICAL INFORMATION:

PRODUCING ORGANISATION: GMR HYDERABAD INTERNATIONAL AIRPORT LTD.

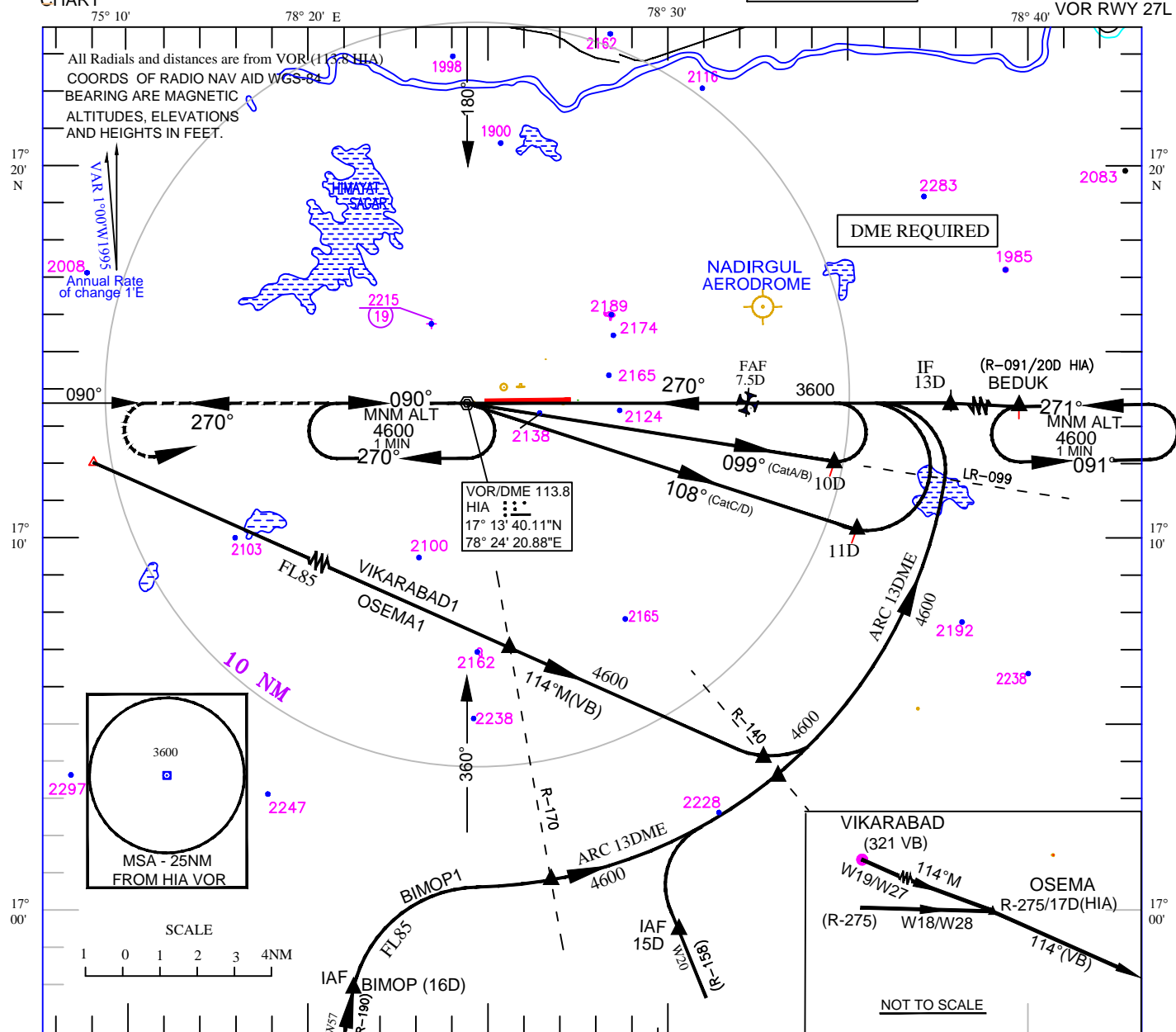






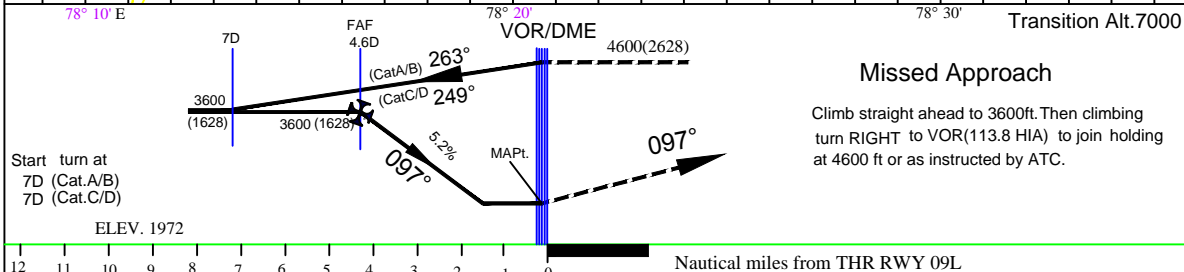
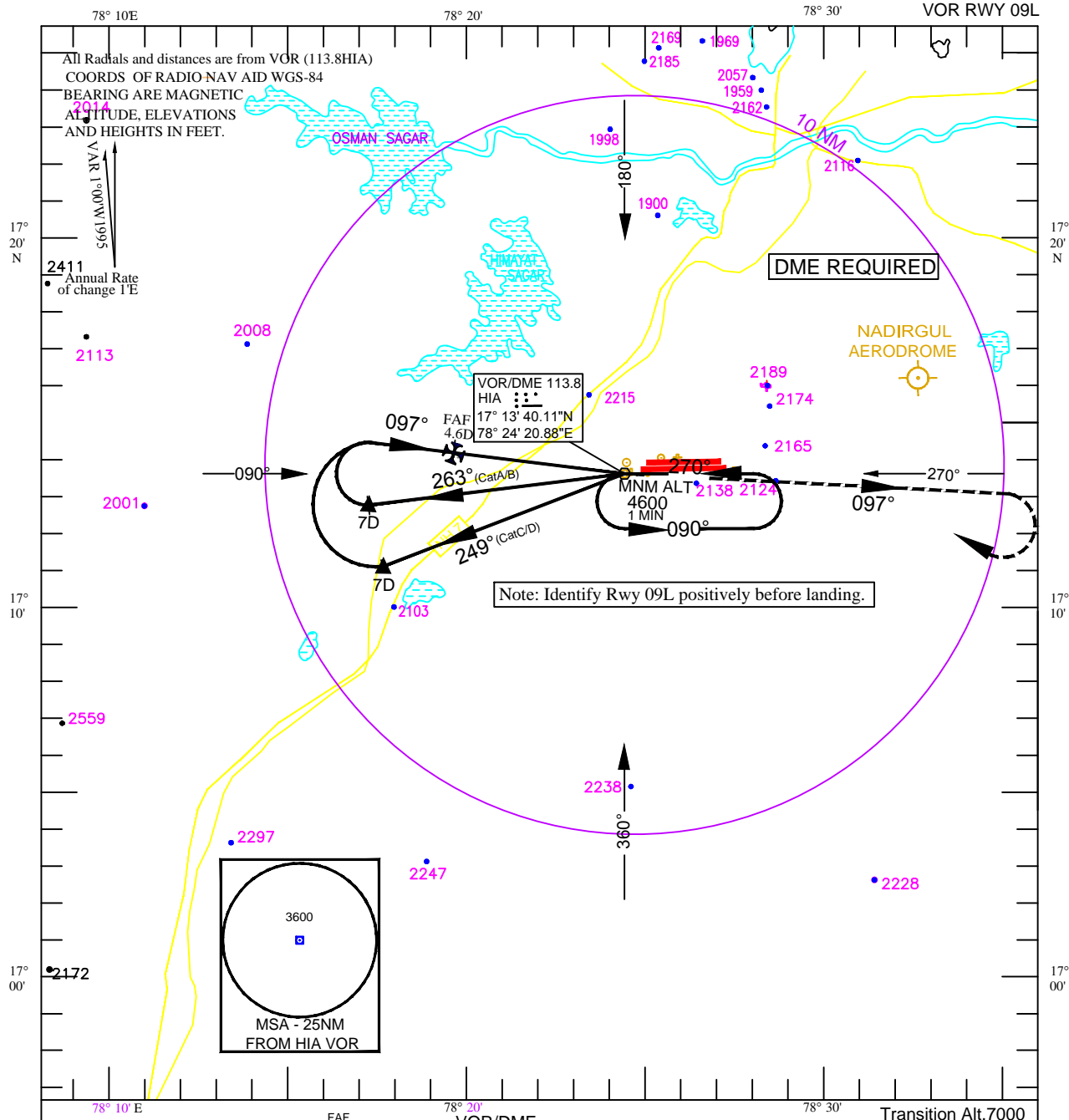
INSTRUMENT
APPROACH
CHART

AERODROME ELEV 2028ft.

HEIGHTS RELATED TO
THR RWY 27L ELEV 2024ftAPP.(ARR) 120.25
TAR 119.25
TWR. 118.45R.G.I.AIRPORT
SAMSHABAD
INDIA
VOR RWY 27L

INSTRUMENT
APPROACH
CHARTAERODROME ELEV. 2028ft.
HEIGHTS RELATED TO
THR RWY 09L ELEV.1972ftAPP.(ARR) 120.25
TAR 119.25
TWR. 118.45R.G.I.AIRPORT
SHAMSHABAD
INDIA

VOR RWY 09L



| O C A (H) | | | Distance / Altitude information | | | | | | | |
|----------------------|-----------|-----------|---|------|------|------|------|------|-----|-----|
| CATEGORY OF AIRCRAFT | A/B | C/D | Distance(NM) | 4.6D | 4D | 3D | 2D | 1D | | |
| STRAIGHT-IN | 2430(458) | 2430(458) | Altitude (ft.) | 3600 | 3470 | 3150 | 2830 | 2520 | | |
| CIRCLING | 2520(496) | 2720(696) | Rate of Descent /Ground speed information | | | | | | | |
| | | | Ground speed (kt.) | | 80 | 100 | 120 | 140 | 160 | 180 |
| | | | Rate of descent (ft/min) | | 420 | 525 | 630 | 735 | 845 | 950 |

DRG. NO. AAI/ 05-IALC/17/01.05.2016

INSTRUMENT
APPROACH
CHARTAERODROME ELEV. 2028ft.
HEIGHTS RELATED TO
THR RWY 27R ELEV.2028ftAPP.(ARR) 120.25
TAR 119.25
TWR. 118.45R.G.I.AIRPORT
SHAMSHABAD
INDIA
VOR RWY 27R