

**GENERAL****Operational Hours****ATS Hours / AD ADMIN Hours:** H24**Airport Information****RFF:** CAT 9. Conform to CAT 10 requirements**PCN:** RWY 03L/21R, RWY 03R/21L: 71/F/A/W/U**Operation****Low Visibility Procedures**

Advanced Surface Movement Guidance and Control System (A-SMGCS) in use when LVP activated.

ACFT taxiing on APN during LVP shall not exceed 10KT, until APN area is vacated and ACFT is on a demarcated TWY.

When RVR below 350m, a follow-me is AVBL O/R for ARR ACFT for all TWYs that do not have CLL.

**Transponder OPS**

Transponders have to be switched off immediately after parking and only be switched on before push back/taxi. Adhere to following PROCs:

- Ensure Mode S transponders are able to operate when ACFT on GND.
- Select assigned Mode A code and activate Mode S transponder at REQ for push-back or taxi, whichever is first, and after LDG until reaching stand.

**RWY Restriction**

RWY 15/33 utilised only as TWY E.

RWY 03L/21R CLSD for MAINT:

- MON 2230 till TUE 0300
- TUE 2230 till WED 0300

RWY 03R/21L CLSD for MAINT:

- WED 2230 till THU 0300
- THU 2230 till FRI 0300

**TWY Restriction**

TWY C between INT with TWY N and THR 21R AVBL for ACFT up to code letter C.

TWY M MAX wingspan 36m / 118ft and MAX outer main gear wheel span below 9m / 30ft.

## GENERAL

**Taxi/Parking**

Inform ATC if unable to vacate RWY 03R via rapid exit TWY E.

Rapid exit TWY

Caution when vacating:

- RWY 03R via TWY RS turning left into TWY Y. Avoid that main gear running off the TWY.
- RWY 21L via TWY RR turning right into TWY Y. Avoid that main gear running off the TWY.

Code letter F ACFT must enter/exit stand D1 via TWY G8.

Code letter F ACFT taxi speed restriction 10KT or less on TWY A between TWY E and TWY L.

Code letter F ACFT must taxi with extreme caution on TWY A between TWY E and F due to building inside the safety zone for code letter F ACFT.

Use MNM PWR due to jet blast when entering APN E and F, when entering APN A and B via TWY E and when crossing RWY 03L/21R via TWY E in a westerly direction.

APN D:

Taxilane abeam stands D2-D50 only AVBL up to MAX wingspan B747-400.

Enter/exit stand D3A only via TWY G9 for ACFT with wingspan 65m / 213ft or above.

When manoeuvring on APN D remain on taxilane CL to maintain wingtip CLR and exercise caution.

DIST from taxilane CL to back off stands is 42.5m / 139ft.

APN M:

All ACFT to be towed in and out of APN M.

Only code C ACFT, wingspan below 36m / 118ft or outer main gear wheel span below 9m / 30ft, are allowed on APN taxilane.

Docking system on stands A1R-A13, C1-C8 and E1-E13.

Stands A4-A6 possibility of sunlight reflections during sunrise at automatic docking panels.

Stands G1, G3, G5, G7 power out for ACFT with MAX wingspan 23.24m / 76ft and length 32.51m / 107ft.

For ACFT PRKG in excess of 14HRS, PPR required.

**GENERAL****Hot Spots**

<b>HOT SPOT No.</b>	<b>DESCRIPTION</b>
HS 1	Intermediate TKOF point. All ACFT taxiing west of RWY 03L/21R are on GND FREQ and all ACFT vacating RWY 03L/21R or crossing that RWY from the east are on TWR FREQ. Pilots are to exercise extreme caution when entering this area.
HS 2	ACFT vacating RET RH conflict with ACFT taxiing on TWY A southbound and ACFT on TWY H crossing RWY 03L/21R. Pilots are to exercise extreme caution when entering this area.
HS 3	TWY A north of TWY G11 to THR 21R due to limited visibility from control TWR. ATC CLR issued based on known traffic. Pilots are to exercise extreme caution when entering this area.
HS 4	Portion of the manoeuvring area which is not directly visible from the control TWR. ATC CLR issued based on known traffic. Pilots are to exercise extreme caution when entering this area.
HS 5	ACFT vacating RET RE conflict with ACFT taxiing on TWY Y southbound. Pilots are to exercise extreme caution when entering this area.
HS 6	ACFT to exercise extreme caution when taxiing southbound on TWY B to RWY 03L as TWY bends to the east approximately 450m / 1476ft after passing INT TWY I and TWY M continues straight ahead.

**Engine Run-up Areas**

ENG run-ups between 2000-0400 prohibited unless in an EMERG.

**Warnings**

Iron and steel works, 5NM SE of AD releases hot gas at unspecified times by day and night, which is ignited and may cause severe turbulence to 500ft AGL.

Use caution when LDG/TKOF RWY 03L/21R due to jet blast from ACFT crossing or vacating RWY 03L/21R of intermediate intersection or when crossing TWY E intersection.

Parallel APCH authorized RWY 21L/R.

Windshear may be expected after lift-off from RWY 03L/R.

Observe high IAS-TAS difference due to high AD ELEV.

Birds and wildlife on and in vicinity of AD.

**ARRIVAL****Speed**

See STAR and in addition;

All ACFT not on a STAR, will comply with the following speed restrictions unless advised otherwise by ATC:

MAX IAS 250KT below FL100 and/or within D50 JSV VOR/DME

MAX IAS 210KT within D15 JSV VOR/DME

**Unless in an EMERG, do not request cancellation of speed restrictions.**

**Communication**

Contact APN prior to top of descent and report ACFT registration, ETA, POB and point of DEP. After LDG (vacating) give REG and prior arranged parking bay to GND.

**COM Failure**

For STARs to be used during COM Failure see separate header 'COM Failure ARRIVAL' below.

**Arrival Procedure****Arrival Notes**

All ACFT expect CLR for ILS Z APCH unless otherwise instructed by ATC.

Do not REQ RWY 03L for LDG as it is predominantly used as DEP RWY.

**MISAP** with intent of carrying out another APCH should follow the procedural MISAP instructions unless advised differently by ATC. In the event of a MISAP and intention of diverting to an ALTN AD proceed as follows:

RWY 03L/R

- W/SW: Follow RAGUL 3A SID
- SE: Follow APDAK 3A SID
- N/NW: Follow VASUR 3A SID
- E/NE: Follow EGMEN 2A SID (Jet ACFT), or EXOBI 1A SID (Prop ACFT).

RWY 21L/R

- S/SW: Follow RAGUL 3B SID
- SE: Follow APDAK 2B SID
- N/NW: Follow VASUR 3B SID
- NE: Follow EGMEN 2B SID (Jet ACFT), or EXOBI 3B SID (Prop ACFT).

**DEPARTURE****Take-off Minima**

RWY		03L/21R, 03R/21L	
A, B, C	ft - m/km	0 - 150R	-
D		0 - 200R	-

**Communication****COM Failure**

For SIDs to be used during COM Failure see separate header 'COM Failure DEPARTURE' below.

**Departure Procedure**

**NESAN 1A:** Restricted for use between 2000-0400.

**Intersection TKOF:** Not allowed between 2000-0400.

**Noise Abatement Procedure:** Use ICAO Standard NADP 2.

**COM Failure ARRIVAL****MISAP****ILS Y RWY 03L**

Climb to 9000ft ALT. Maintain RWY track to D3.5 JSI, then turn left (MAX IAS 220KT) onto HDG 300°. Crossing R210 WKV turn left onto HDG 250° to intercept R220 WKV (OUBD). At D35 WKV turn left (Max IAS 220KT) onto HDG 120° and descend to 8300ft.

Crossing R220 JSV turn left onto HDG 065° to intercept the ILS LOC RWY 03L. At D13.7 JSI descend to 8000ft and complete a straight-in ILS APCH.

**ILS X/W RWY 03R**

Climb to 8000ft. Maintain RWY track to D7.3 JN/JSV, then turn right (MAX IAS 240KT) onto track 130°.

Crossing R027 HGV turn right onto track 180° and intercept R030 HGV (INBD) at normal MISAP speed. Passing D15 JSV on R030 HGV (INBD) turn right onto 300° maintaining 8000ft. Crossing R200 JSV turn right onto 360° to intercept ILS LOC RWY 03R. Complete a straight-in ILS APCH and land RWY 03R.

**ILS X RWY 21L**

Climb to 7000ft. Maintain RWY track to D3.5 JAI, then turn left (MAX IAS 240KT) onto HDG 125°.

Once established on HDG 125° climb to 8000ft. Crossing R222 MEV turn left HDG 070° and intercept R217 MEV (INBD) resuming normal MISAP climb gradient once established.

At D7.5 MEV turn left (MAX IAS 240KT) HDG 300°. Crossing R048 JSV turn left onto HDG 255° to intercept the ILS LOC. Complete a straight-in ILS APCH and land RWY 21L.

**ILS RWY 21R**

Climb to 8000ft. Maintain RWY track to D6.8 JBI, then turn right onto HDG 350° (MAX IAS 250KT). Cross D6.8 JBI at 7000ft or above. Crossing R225 WKV turn right to intercept R230 WKV (INBD) and reduce speed to MAX IAS 220KT when established.

At D3 WKV turn right onto HDG 120°. Crossing R027 JSV turn right onto HDG 184° to intercept the LOC RWY 21R. Complete a straight-in ILS APCH and land RWY 21R.

**All PROC's**

ACFT entering TMA at FL110 and below are to enter the designated HLDG at last assigned LVL, continue routing for the STARs.

**Caution:** HLDG patterns below FL110 will be conducted partially outside controlled airspace.

**STAR's RWY 03****AVAGO 2A**

**Before AVAGO:** Proceed to AVAGO and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave AVAGO on the after AVAGO COM failure PROC.

**After AVAGO:** Continue on routing AVAGO 2A. Passing D10 JSV descend to FL90. Passing D35 WKV on R218 turn left track 121°, climb/descend to 8000ft. Crossing R221 JSV turn left to track 061°, intercept LOC RWY 03R. Complete a straight ILS APCH and LDG RWY 03R.

**AVAGO 1C**

**Before AVAGO:** Proceed to AVAGO and enter the AVAGO RNAV hold. Hold at last assigned LVL for MNM 5min, then descend to FL130 in the hold or maintain last assigned LVL if below FL130. Leave AVAGO on the after AVAGO COM failure PROC.

**After AVAGO:** Continue on the AVAGO 1C RNAV STAR. At JS035 descend to FL90, at JS037 descend to 8000ft. At JS037 proceed to VEKOP and continue with the RNAV RWY 03R to intercept the ILS LOC RWY 03R

**COM Failure ARRIVAL****AVILO 1A**

**Before AVILO:** Proceed to STV and enter the STV hold descending to FL240, or if lower than FL240, last assigned LVL and hold for MNM 5min. Leave STV on the after STV COM failure PROC.

**After AVILO:** Leave AVILO on R170 JSV (INBD) and descend to FL130. At R170/D29 JSV turn left to intercept R310 STV (OUBD) and descend to FL110. On crossing R030 HGV descend to 8000ft. Crossing R197 JSV turn right onto HDG 350° to intercept the ILS LOC RWY 03R and complete a straight-in ILS APCH and land RWY 03R.

**AVILO 1B**

**Before AVILO:** Proceed to STV and enter STANDERTON RNAV hold descending to FL240, or if lower than FL240, or last assigned LVL and hold for MNM 5min. Leave STV on the after COM Failure PROC.

**After AVILO:** Continue on the AVILO 1B RNAV STAR. At ETLIG continue on the RNAV RWY 03R to JS2F1 and intercept the ILS LOC RWY 03R and land RWY 03R.

**ESTED 2A**

**Before ESTED:** Proceed to ESTED and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave ESTED on the after ESTED COM failure PROC.

**After ESTED:** Continue on routing ESTED 2A maintain last assigned LVL. Passing D30 JSV climb/descend to FL100. Cross R221 JSV descend FL90, turn left to track 061°, intercept LOC RWY 03R. Adjust to 9000ft and complete a straight ILS APCH and LDG RWY 03R.

**NIBEX 2A**

**Before NIBEX:** Proceed to NIBEX and enter the NIBEX hold. Hold at the last assigned LVL for MNM 5min then descend to FL130 in the hold or maintain last assigned LVL if below FL130. Leave NIBEX on the "After NIBEX" Communication Failure Procedure.

**After NIBEX:** Leave NIBEX on R235 JSV (INBD). At D30 JSV turn right onto track 121° and descend to FL100. Crossing R221 JSV descend to FL090 and turn left onto track 061° to intercept ILS LOC RWY 03R. Adjust to 9000ft and complete a straight-in ILS APCH and land RWY 03R.

**NIBEX 1B**

**Before NIBEX:** Proceed to NIBEX and enter the NIBEX RNAV hold. Hold at last assigned LVL for 5min, then descend to FL130 in the hold or maintain last assigned LVL if below FL130. Leave NIBEX on the after NIBEX COM failure PROC.

**After NIBEX:** Continue on the NIBEX 1B RNAV STAR to JS012. At JS012 descend to FL100, at JS013 descend to FL090, at JS014 adjust to 9000ft. At JS015 complete a straight-in ILS APCH and land RWY 03R.

**OKPIT 4A**

**Before OKPIT:** Proceed to OKPIT and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave OKPIT on the after OKPIT COM failure PROC.

**After OKPIT:** Continue on routing for the OKPIT 4A STAR. Crossing R086 JSV, while established on R031 HGV, descend to FL100. Passing D15 JSV on R031 HGV turn right onto track 301° and descend to 8300ft. Crossing R206 JSV turn right onto track 001° to intercept LOC RWY 03R. Complete a straight-in ILS APCH and land RWY 03R.

## COM Failure ARRIVAL

**STANDERTON 6A**

**Before STV:** Proceed to STV and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave STV on the after STV COM failure PROC.

**After STV:** Leave STV on R310 STV (OUBD) and descend to FL130. Crossing R197 JSV turn right on 350° and descend to 8000ft to intercept ILS LOC RWY 03R. Complete a straight-in APCH and land RWY 03R.

**STANDERTON 1C**

**Before STV:** Proceed to STV and enter the STANDERTON RNAV hold. Hold at last assigned LVL for MNM 5min then descend to FL130 in the hold or maintain last assigned LVL if below FL130. Leave STV on the after STV COM Failure PROC.

**After STV:** Continue on the STANDERTON 1C RNAV STAR to JS017 and descend to FL130. Passing JS017 descend to 8000ft, at ETLIG continue on the RNAV STAR RWY 03R to JS2F1. Intercept ILS LOC RWY 03R and land RWY 03R.

**WITBANK 4A**

**Before WIV:** Proceed to WIV and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave WIV on the after WIV COM failure PROC.

**After WIV:** Continue on routing WIV 4A. Crossing R141 JSV established on R031 HGV climb/descend to FL90. Passing D15 JSV on R031 HGV turn right track 301°, descend to 8300ft. Crossing R206 JSV turn right to track 001°, intercept LOC RWY 03R. Complete a straight ILS APCH and LDG RWY 03R.

**STAR's RWY 21****AVAGO 2B**

**Before AVAGO:** Proceed to AVAGO and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave AVAGO on the after AVAGO COM failure PROC.

**After AVAGO:** Continue on routing AVAGO 2B. Passing D13 JSV descend to FL90. Passing D15 JSV on track 034° turn right to track 121°, descend to 8000ft. Crossing R026 JSV turn right to track 191°, intercept ILS RWY 21L. Complete a straight ILS APCH and LDG RWY 21L.

**AVAGO 1D**

**Before AVAGO:** Proceed to AVAGO and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave AVAGO on the after AVAGO COM failure PROC.

**After AVAGO:** Continue on the AVAGO 1D RNAV STAR. At JS034 proceed to UVLOG and continue on the RNAV (GNSS) RWY 21L and intercept the ILS LOC RWY 21L and land RWY 21L.

**ESTED 2B**

**Before ESTED:** Proceed to ESTED and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave

**After ESTED:** Continue on routing ESTED 2B. Crossing R281 JSV established on track 034° descend to FL90. Passing D15 JSV on track 034° turn right to track 121°, descend to 8000ft. Crossing R026 JSV turn right to track 191°, intercept LOC RWY 21L. Complete a straight ILS APCH and LDG RWY 21L.

## COM Failure ARRIVAL

**NIBEX 2C**

**Before NIBEX:** Proceed to NIBEX and enter the NIBEX hold. Hold at last assigned LVL for MNM 5min, then descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave NIBEX on the after NIBEX COM failure PROC.

**After NIBEX:** Continue on routing for the NIBEX 2C STAR. Crossing R281 JSV established on R217 WKV (INBD), descend to FL90. Passing D14.7 JSV on R217 WKV turn right onto track 121° and descend to 8000ft. Crossing R025 JSV turn right onto track 191° to intercept the ILS LOC RWY 21L. Complete a straight-in ILS APCH and land RWY 21L.

**NIBEX 1D**

**Before NIBEX:** Proceed to NIBEX and enter the NIBEX hold. Hold at last assigned LVL for MNM 5min, then descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave NIBEX on the after NIBEX COM failure PROC.

**After NIBEX:** Continue on the NIBEX 1D RNAV STAR. At JS023 descend to FL90, at UVLOG descend to 8000ft. At UVLOG continue on the RNAV RWY 21L to JS3F2 and intercept the ILS RWY 21L and land RWY 21L.

**OKPIT 4B**

**Before OKPIT:** Proceed to OKPIT and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave OKPIT on the after OKPIT COM failure PROC.

**After OKPIT:** Continue on routing for the OKPIT 4B STAR. Passing D18 JSV (INBD) descend to FL90. Passing D15 JSV (OUBD) on track 034° turn left onto track 301° and descend to 8000ft. Crossing R041 JSV turn left onto track 241° to intercept the ILS LOC RWY 21L. Complete a straight-in ILS APCH and land RWY 21L.

**STANDERTON 5B**

**Before STV:** Proceed to STV and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave STV on the after STV COM failure PROC.

**After STV:** Continue on routing for the STV 5B STAR. Established on R152 JSV (INBD) and on passing D18 JSV descend to FL90. Established on R031 HGV (OUBD) and passing D15 JSV turn left onto track 301° and descend to 8000ft. Crossing R041 JSV turn left onto track 241° to intercept the ILS LOC RWY 21L. Complete a straight-in ILS APCH and land RWY 21L.

**STANDERTON 1D**

**Before STV:** Proceed to STV and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave STV on the after STV COM failure PROC.

**After STV:** Continue on the STANDERTON 1D RNAV STAR. At STV descend to FL130. At JS025 descend to FL90. At ETGAV descend to 8000ft and continue on the RNAV RWY 21L to JS3F1 and intercept the ILS RWY 21L and land RWY 21L.

**WITBANK 3C**

**Before WIV:** Proceed to WIV and hold at last assigned LVL for MNM 5min, descend to FL130 in the hold, or maintain last assigned LVL if below FL130. Leave WIV on the after WIV COM failure PROC.

**After WIV:** Continue on routing WIV 3C. Passing D18 JSV descend to FL90. Passing D15 JSV on R031 HGV turn left track 301°, descend to 8000ft. Crossing R041 JSV turn left to track 241°, intercept ILS RWY 21L. Complete a straight ILS APCH and LDG RWY 21L.



**COM Failure DEPARTURE**

**All PROC's:** Fuel jettisoning may be done above FL110 prior to commencing the STAR.

**RWY 03**

**APDAK 3A:** Comply with APDAK 3A, climb to FL90 or maintain last assigned LVL whichever is higher. At APDAK set course as per FPL.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if last cleared LVL is below MSA. At APDAK proceed to STV and comply with the STANDERTON 6A RWY 03 STAR COM failure PROC.

**APDAK 1B:** Comply with APDAK 1B, climb to FL90 or maintain last assigned LVL whichever is higher. At APDAK set course as per FPL.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if last cleared LVL is below MSA. At APDAK proceed to STV and comply with the STANDERTON 6A RWY 03R STAR COM failure PROC.

**APDAK 2B:** Comply with APDAK 2B, climb to 8300ft or maintain last assigned LVL whichever is higher. At APDAK set course as per FPL.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if last cleared LVL is below MSA. At APDAK proceed to STV and comply with the appropriate STAR COM failure PROC.

**EGMEN 2A:** Comply with EGMEN 2A SID, climbing to FL090 or maintain last assigned, whichever is the highest. At EGMEN set course as per FPL.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if cleared LVL is below MSA. At EGMEN proceed to OKPIT and comply with OKPIT 4A RWY 03R STAR COM failure PROC.

**EGMEN 1C:** Comply with EGMEN 1C SID, climbing to FL090 or maintain last assigned, whichever is the highest. At EGMEN set course as per FPL and climb to FPL level.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if cleared LVL is below MSA. At EGMEN proceed to OKPIT and comply with OKPIT 4A RWY 03R STAR COM failure PROC.

**EXOBI 1A:** Comply with EXOBI 1A, climb to FL90 or maintain last assigned LVL whichever is higher. At EXOBI set course as per FPL.

ACFT wishing to return must continue to SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At EXOBI proceed to WIV and comply with WITBANK 4A RWY 03R STAR COM failure PROC.

**GRASMERE 5B:** Comply with GRASMERE 5B, climb to 8700ft or maintain last assigned LVL whichever is higher. At GAV set course as per FPL.

ACFT wishing to return must continue to SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At GAV proceed to NIBEX comply with NIBEX 2A RWY 03R STAR COM failure PROC.

**NESAN 1A:** Comply with NESAN 1A, climb to 8300ft or maintain last assigned LVL whichever is higher. At NESAN set course as per FPL.

ACFT wishing to return must continue to SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At NESAN proceed to OKPIT comply with OKPIT 4A RWY 03R STAR COM failure PROC

**COM Failure DEPARTURE**

**NOPIP 2A:** Comply with NOPIP 2A, climb to FL90 or maintain last assigned LVL whichever is higher. At NOPIP set course as per FPL and climb to FPL LVL.

Wishing to return must continue SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At NOPIP proceed to OKPIT comply with appropriate STAR COM failure PROC.

**NORVA 2A:** Comply with NORVA 2A, climb to FL90 or maintain last assigned LVL whichever is higher. At MEV set course as per FPL.

ACFT wishing to return must continue to SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At MEV proceed to OKPIT and comply with OKPIT 4A RWY 03R STAR COM failure PROC.

**OVALA 1A:** Comply with OVALA 1A, climb to FL90 or maintain last assigned LVL whichever is higher. At OVALA set course as per FPL.

Wishing to return must continue SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At OVALA proceed to STV comply with STANDERTON 6A RWY 03R STAR COM failure PROC.

**RAGUL 3A:** Comply with RAGUL 3A, climb to 8700ft or maintain last assigned LVL whichever is higher. At RAGUL set course as per FPL.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if last cleared LVL is below MSA. At RAGUL proceed to NIBEX and comply with NIBEX 2A RWY 03R STAR COM failure PROC.

**VASUR 3A:** Comply with VASUR 3A SID, climbing to 8700ft or maintain last assigned LVL whichever is the highest. At VASUR set course as per FPL and climb to FPL level.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if last cleared LVL is below MSA. At VASUR proceed to AVAGO and comply with AVAGO 2A RWY 03R STAR COM failure PROC.

**RWY 21**

**APDAK 2B:** Comply with APDAK 2B, climb to 8300ft or maintain last assigned LVL whichever is higher. At APDAK set course as per FPL.

Wishing to return must continue SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At APDAK proceed to STV comply with appropriate STAR COM failure PROC.

**APDAK 1C:** Comply with APDAK 1C, climb to 8000ft or maintain last assigned LVL whichever is higher. At APDAK set course as per FPL.

ACFT wishing to return must continue to SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At APDAK proceed to STV comply with STANDERTON 5B RWY 21L STAR COM failure PROC.

**APDAK 1D:** Comply with APDAK 1D, climb to 8400ft or maintain last assigned LVL whichever is higher. At APDAK set course as per FPL.

ACFT wishing to return must continue to SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At APDAK proceed to STV comply with STANDERTON 5B RWY 21L STAR COM failure PROC.

**EGMEN 2B:** Comply with EGMEN 2B SID, climbing to 8300ft or maintain last assigned LVL, whichever is the highest. At EGMEN set course as per FPL.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if cleared LVL is below MSA. At EGMEN proceed to OKPIT and comply with OKPIT 4B RWY 03R STAR COM failure PROC.

## COM Failure DEPARTURE

**EGMEN 1D:** Comply with EGMEN 1D SID, climbing to 8400ft or maintain last assigned LVL, whichever is the highest. At EGMEN set course as per FPL.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if cleared LVL is below MSA. At EGMEN proceed to OKPIT and comply with OKPIT 4B RWY 03R STAR COM failure PROC.

**EXOBI 3B:** Comply with EXOBI 3B, climb to 8300ft or maintain last assigned LVL whichever is higher. At EXOBI set course as per FPL.

ACFT wishing to return must continue to SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At EXOBI proceed to WIV and comply with WITBANK 3C RWY 21L STAR COM failure PROC.

**GEROX 1C:** Comply with GEROX 1C SID, climbing to 8400ft or maintain last assigned LVL, whichever is higher. At GEROX set course as per FPL.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if cleared LVL is below MSA. At GEROX proceed to STV and enter STV hold descending to FL240, if below FL240, hold at last assigned LVL for MNM 5min. Comply with STANDERTON 5B RWY 21L STAR COM failure PROC.

**GRASMERE 6C:** Comply with GRASMERE 6C, climb to 8300ft or maintain last assigned LVL whichever is higher. At GAV set course to next fix outside D60 JSV and climb to FPL level.

ACFT wishing to return must continue to SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At GAV proceed to NIBEX and comply with NIBEX 2C RWY 21L STAR COM failure PROC.

**HEIDELBERG 5D:** Comply with HEIDELBERG 5D, climb to 8300ft or maintain last assigned LVL whichever is higher. At HGV set course as per FPL.

ACFT wishing to return must continue SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At HGV proceed to STV and comply with STANDERTON 5B RWY 21L STAR COM failure PROC.

**LANSERIA 1C:** Comply with LANSERIA 1C, climb to 8300ft or maintain last assigned LVL whichever is higher. At VASUR set course as per FPL.

ACFT wishing to return must continue to SID termination point and climb to last assigned LVL or MSA if last cleared LVL is below MSA. At VASUR proceed to AVAGO and comply with AVAGO 2B RWY 21 STAR COM failure PROC.

**NOPIP 1B:** Comply with NOPIP 1B, climb to 8300ft or maintain last assigned LVL whichever is higher. At NOPIP set course as per FPL.

Wishing to return must continue SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At NOPIP proceed to OKPIT comply with appropriate STAR COM failure PROC.

**OVALA 1B:** Comply with OVALA 1B, climb to 8300ft or maintain last assigned LVL whichever is higher. At OVALA set course as per FPL.

ACFT wishing to return must continue to SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At OVALA proceed to STV comply with STANDERTON 5B RWY 21L STAR COM failure PROC.

**COM Failure DEPARTURE**

**RAGUL 3B:** Comply with RAGUL 1B, climb to FL100 or maintain last assigned LVL whichever is higher. Cross D12 JSV at FL090 (MNM FL90 by ATC). Cross D18 JSV at FL100 (MNM FL100 by ATC). At RAGUL set course as per FPL.

ACFT wishing to return must continue SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At RAGUL proceed to NIBEX and comply with NIBEX 2C RWY 21L STAR COM failure PROC.

**VASUR 3B:** Comply with VASUR 3B, climb to 8700ft or maintain last assigned LVL whichever is higher. At VASUR set course as per FPL.

ACFT wishing to return must continue to SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At VASUR proceed to AVAGO comply with AVAGO 2B RWY 21L STAR COM failure PROC.

**VASUR 1C** (PROP only): Comply with VASUR 1C, climb to 8700ft or maintain last assigned LVL whichever is higher. At VASUR set course as per FPL.

Wishing to return must continue SID termination point, climb to last assigned LVL or MSA if last cleared LVL is below MSA. At VASUR proceed to AVAGO comply with appropriate STAR COM failure PROC.

**Aerodrome COM Failure**

In the possible event of the Johannesburg VHF system becoming unusable, ACFT operating within the Johannesburg FIR are reminded to:

1. Contact Johannesburg ACC North on 134.000 for ACFT operating within the FAJA ACC North/South airspace.
2. Contact Johannesburg APP on 134.400 for ACFT within the FAJA APP airspace.
3. Contact FAOR TWR on 120.850 for operating within FAOR CTR.
4. For ACFT operating within the FAJA ACC East airspace, ACFT shall remain on 129.100. If 129.100 is also unusable ACFT shall contact Durban APP on 125.750.
5. For ACFT operating within FAJA ACC central airspace, ACFT shall remain on 120.300. If 120.300 is also unusable ACFT shall contact Bloemfontein APP on 124.300.

South Africa **Johannesburg** O R Tambo Intl

O R Tambo Intl **Johannesburg** South Africa

**2-10**

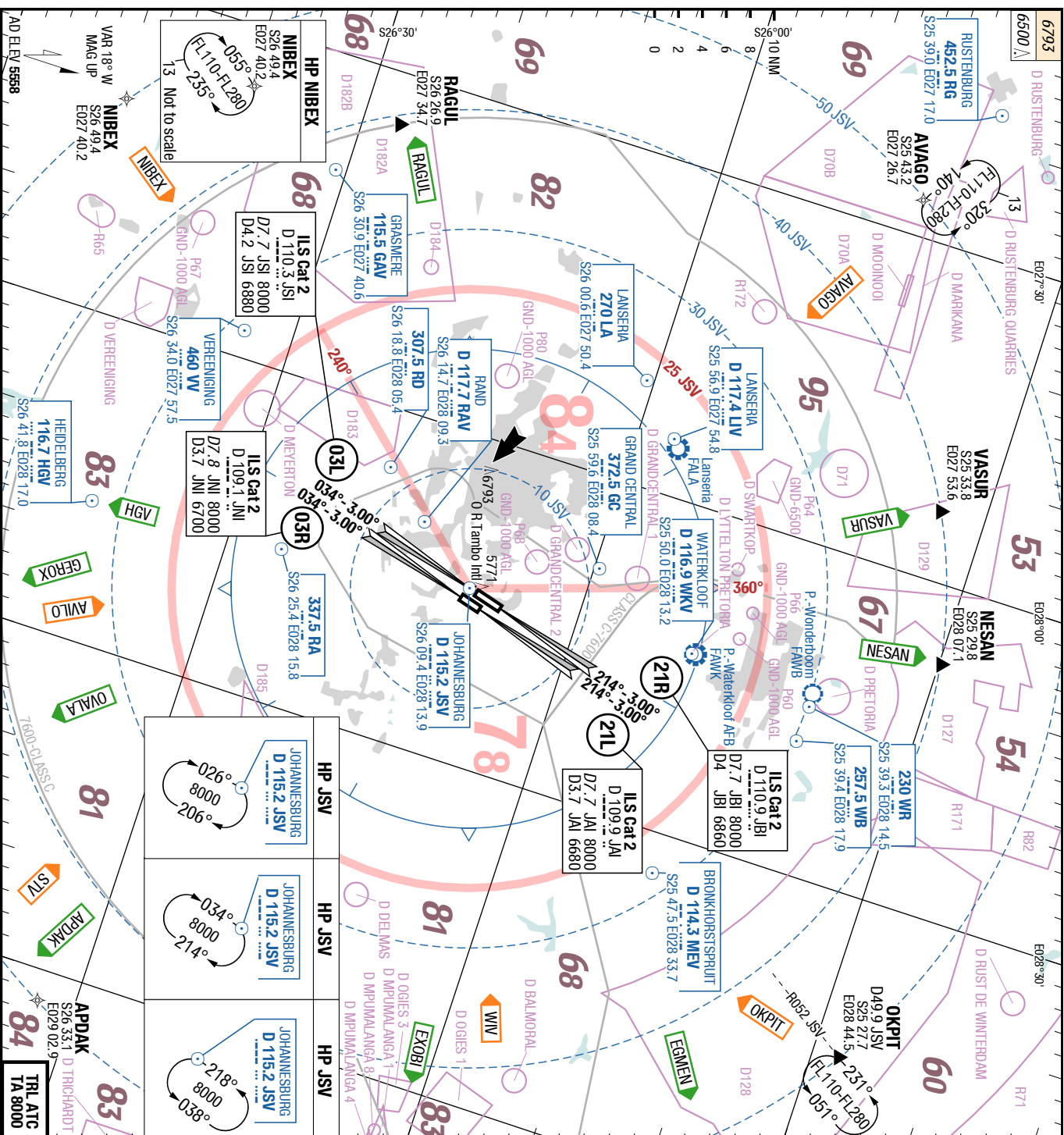


AGC  
AFC

**AFC**

**AFC**

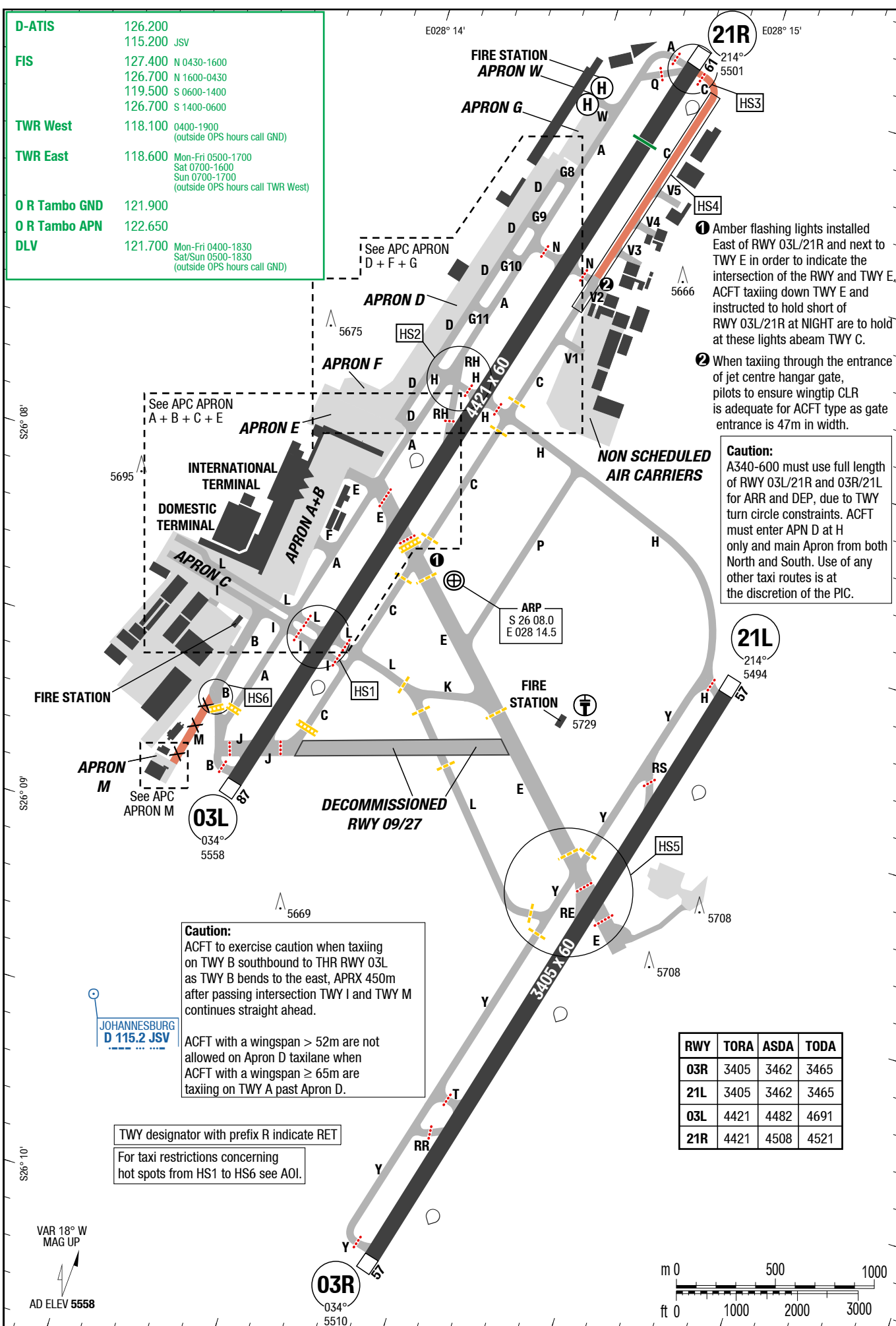
**AGC**  
**AFC**

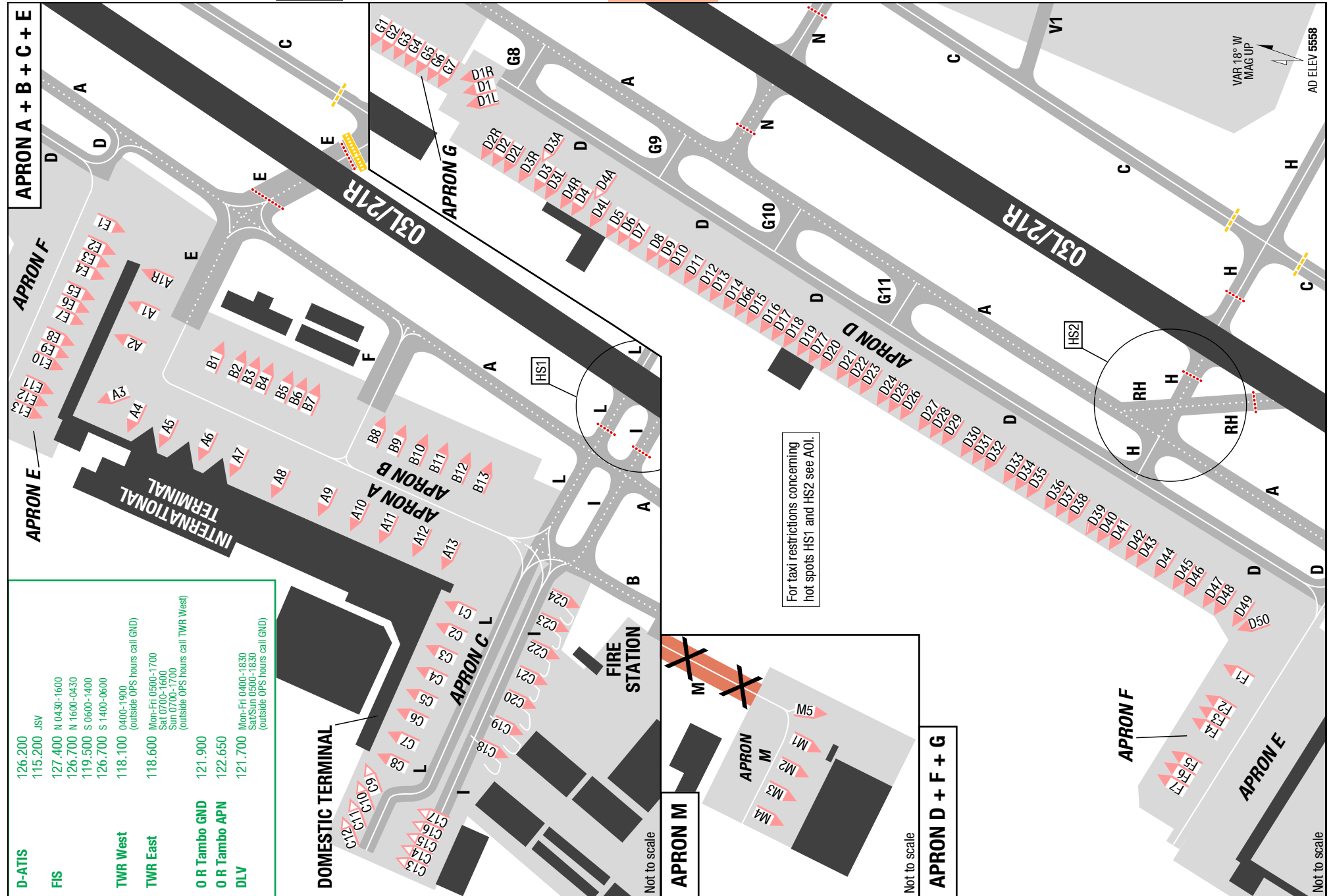


D-ATIS	126.200	
	115.200	JSV
FIS	127.400	N 0430-1600
	126.700	N 1600-0430
	119.500	S 0600-1400
	126.700	S 1400-0600
RAD	124.500	E-S
	123.700	W 0500-1700
CTL	126.700	N
	128.300	S 0430-1800
	126.700	S 1800-0430
	129.100	W
	129.125	E
DIR	120.300	
	121.400	
TWR West	118.100	0400-1900 (outside OPS hours call GND)
TWR East	118.600	Mon-Fri 0500-1700 Sat 0700-1600, Sun 0700-1700 (outside OPS hours call TWR West)
O R Tambo GND	121.900	
O R Tambo APN	122.650	
DLV	121.700	Mon-Fri 0400-1830 Sat/Sun 0500-1830 (outside OPS hours call GND)

### Landing RWY system:

[illegible]







**Stand Coordinates**

<b>A1R</b>	S26 07.8 E028 14.2	<b>E9-E13</b>	S26 07.8 E028 14.0
<b>A1, A2</b>	S26 07.8 E028 14.1	<b>F1-F5</b>	S26 07.6 E028 14.1
<b>A3</b>	S26 07.8 E028 14.0	<b>F6, F7</b>	S26 07.6 E028 14.0
<b>A4-A6</b>	S26 07.9 E028 14.0	<b>G1-G4</b>	S26 06.7 E028 14.5
<b>A7, A8</b>	S26 08.0 E028 14.0	<b>G5-G7</b>	S26 06.8 E028 14.5
<b>A9</b>	S26 08.0 E028 14.2	<b>M1, M2</b>	S26 08.9 E028 13.8
<b>A10, A11</b>	S26 08.1 E028 14.0	<b>M3, M4</b>	S26 08.9 E028 13.7
<b>A12, A13</b>	S26 08.2 E028 13.9	<b>M5</b>	S26 08.9 E028 13.8
<b>B1, B2</b>	S26 07.9 E028 14.1		
<b>B3-B7</b>	S26 08.0 E028 14.1		
<b>B8-B10</b>	S26 08.1 E028 14.1		
<b>B11-B13</b>	S26 08.2 E028 14.1		
<b>C1-C3</b>	S26 08.2 E028 13.9		
<b>C4-C7</b>	S26 08.2 E028 13.8		
<b>C8-C11</b>	S26 08.2 E028 13.7		
<b>C12-C14</b>	S26 08.2 E028 13.6		
<b>C15-C17</b>	S26 08.2 E028 13.7		
<b>C18-C20</b>	S26 08.3 E028 13.8		
<b>C21-C24</b>	S26 08.3 E028 13.9		
<b>D1</b>	S26 06.8 E028 14.5		
<b>D1L</b>	S26 06.8 E028 14.4		
<b>D1R</b>	S26 06.8 E028 14.5		
<b>D2-D3R</b>	S26 06.9 E028 14.4		
<b>D4</b>	S26 07.0 E028 14.4		
<b>D4A</b>	S26 06.9 E028 14.4		
<b>D4L-D7</b>	S26 07.0 E028 14.4		
<b>D8-D10</b>	S26 07.1 E028 14.4		
<b>D11-D14</b>	S26 07.1 E028 14.3		
<b>D15-D20</b>	S26 07.2 E028 14.3		
<b>D21-D28</b>	S26 07.3 E028 14.3		
<b>D29-D33</b>	S26 07.4 E028 14.3		
<b>D34</b>	S26 07.4 E028 14.2		
<b>D35</b>	S26 07.4 E028 14.3		
<b>D36</b>	S26 07.4 E028 14.2		
<b>D37-D44</b>	S26 07.5 E028 14.2		
<b>D45-D50</b>	S26 07.6 E028 14.2		
<b>D66</b>	S26 07.1 E028 14.3		
<b>D77</b>	S26 07.2 E028 14.3		
<b>E1, E2</b>	S26 07.8 E028 14.2		
<b>E3-E8</b>	S26 07.8 E028 14.1		

**JNB-FAOR**

SIDs RWY 03L

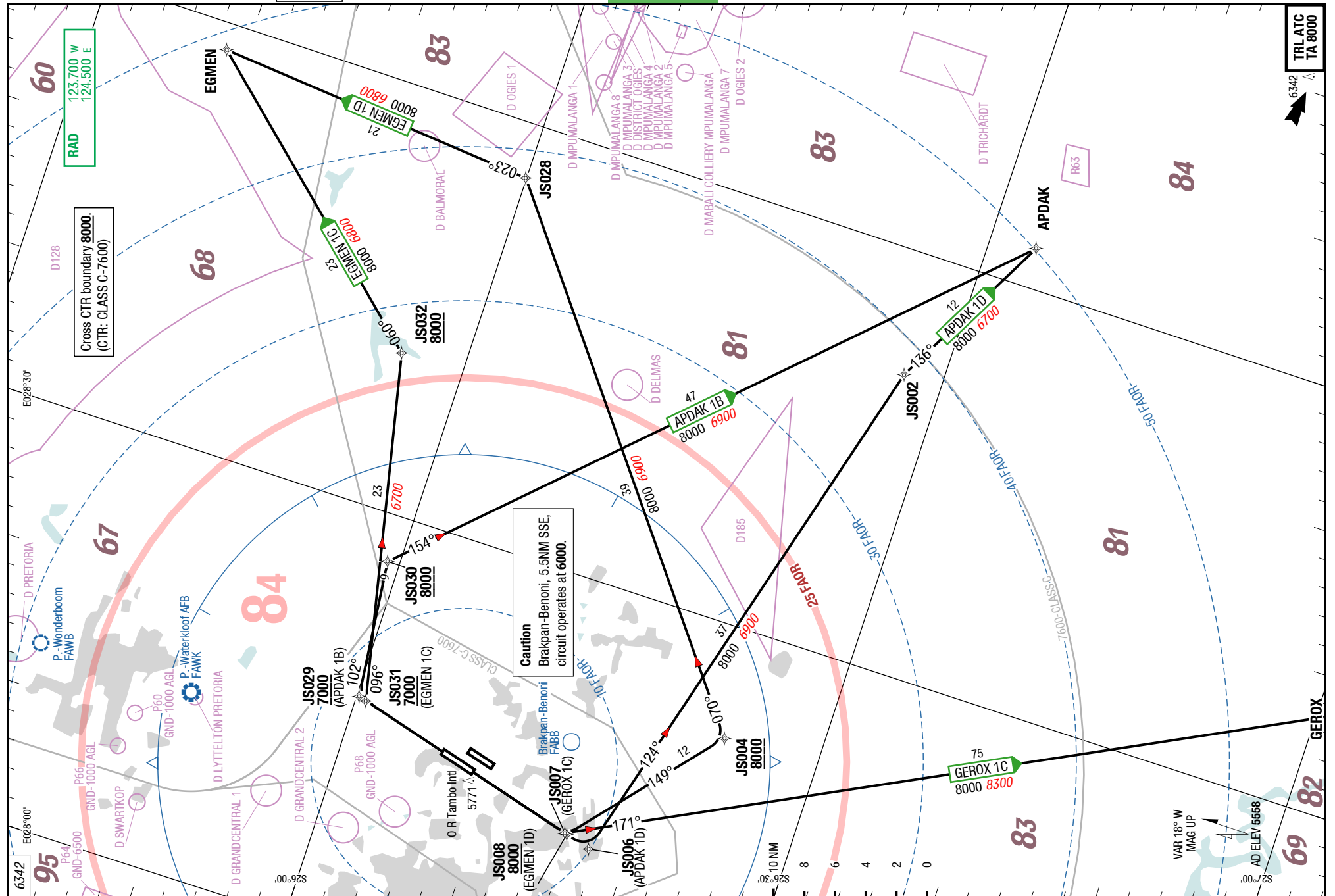
## RNAV SIDs

SID

SID

SIDs RWY 03L

## RNAV SIDs



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**JNB-FAOR**

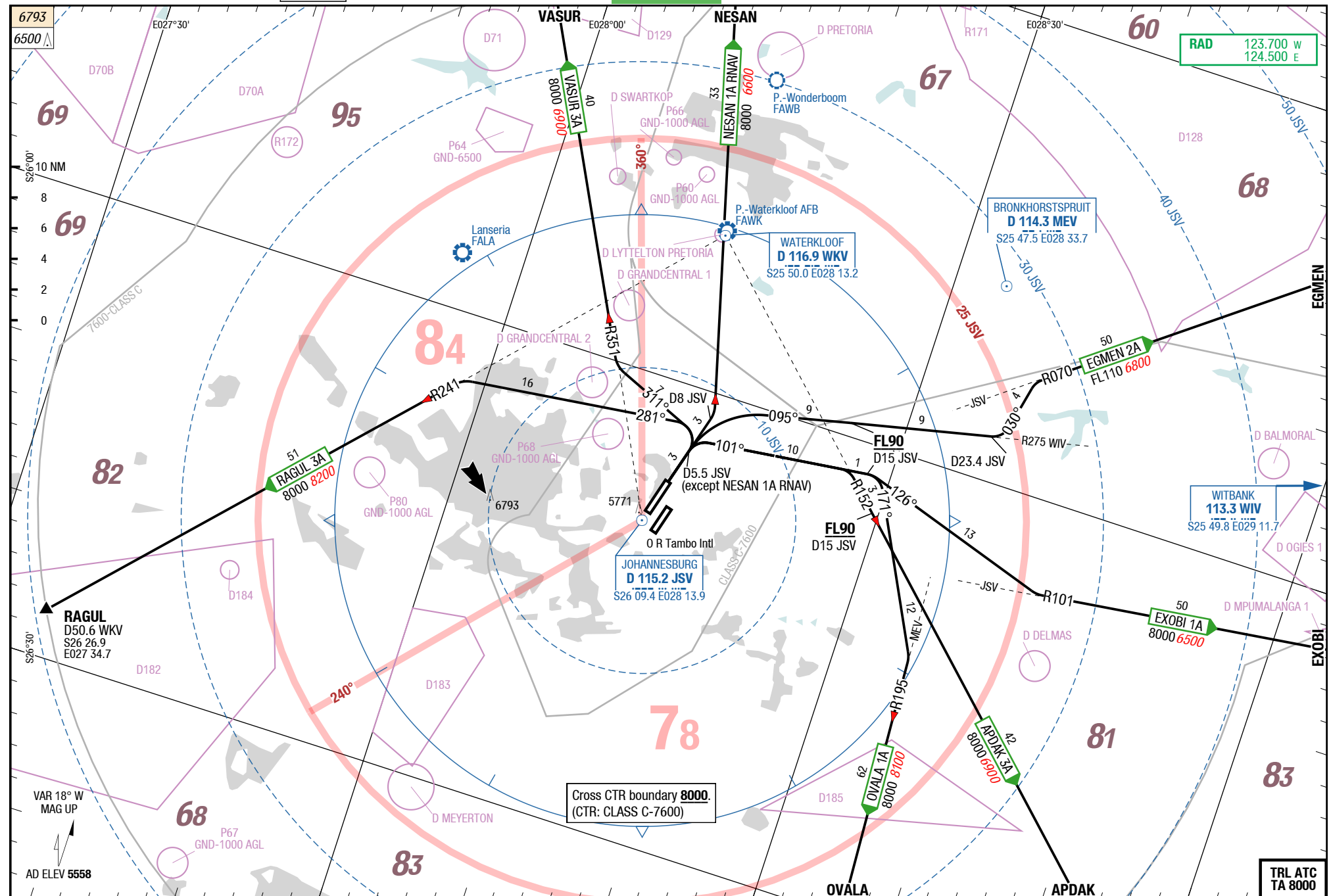
4-20

## SIDs RWY 03L

SID

SID

## SIDs RWY 03L



Changes: MGA, PROC renamed, ASP, OBST

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**JNB-FAOR**

SIDs RWY 21L

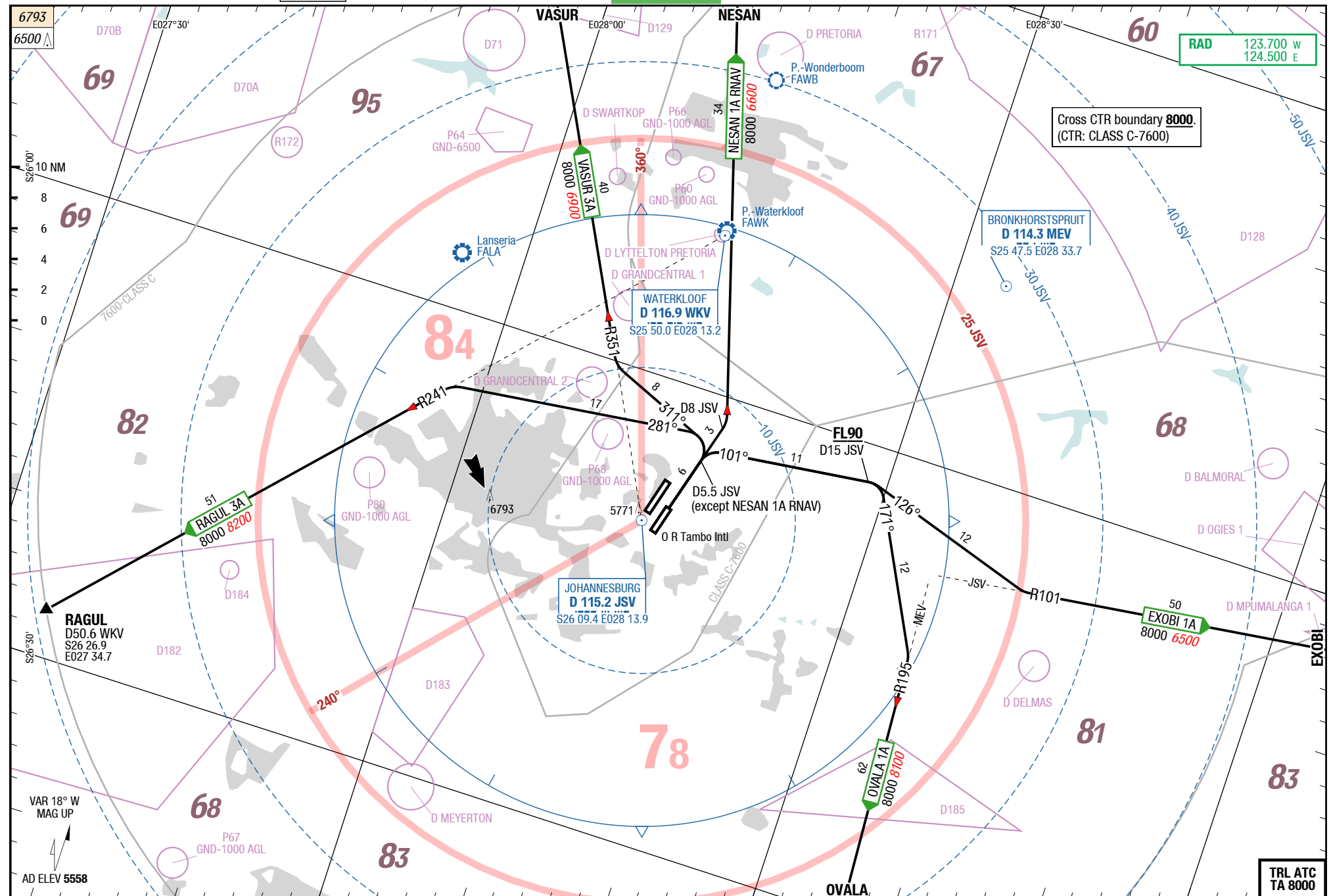
## SIDs RWY 03R

SID

SID

SIDs RWY 21L

## SIDs RWY 03R



Changes: MGA, ASP, PROC renamed, OBST

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**JNB-FAOR**

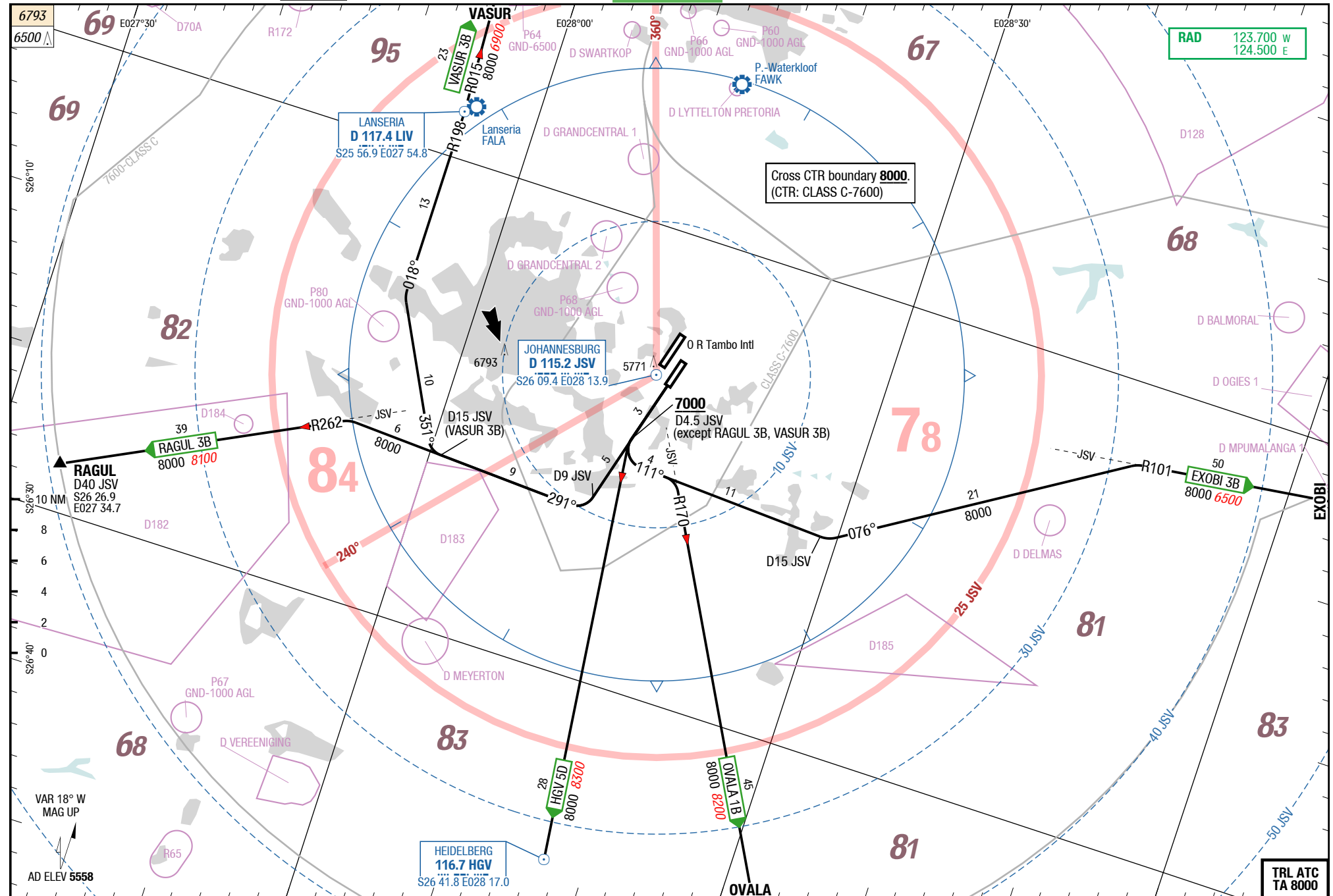
4-40

## SIDs RWY 21L

SID

SID

## SIDs RWY 21L



Changes: ASP, MGA, MTCA, OBST

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26-MAY-2016

JNB-FAOR

South Africa Johannesburg O R Tambo Intl

NIL

SID

SID

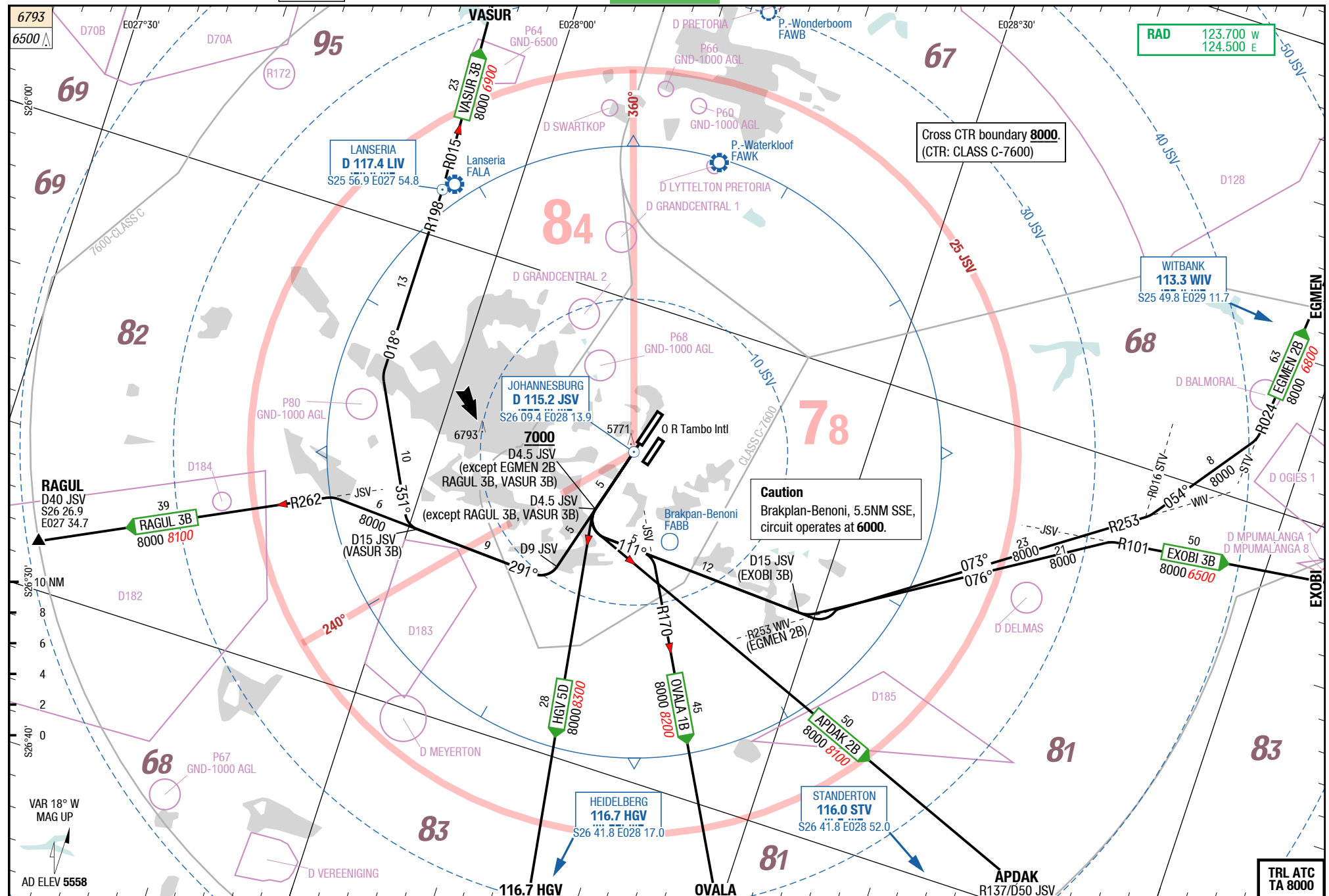
O R Tambo Intl Johannesburg South Africa

NIL

SIDs RWY 21R

4-50

SIDs RWY 21R



Changes: ASP, MGA, MTCA, OBST

26-MAY-2016

South Africa **Johannesburg** O R Tambo Intl**JNB-FAOR****5-10****RNAV SIDs****SIDPT****APDAK 1B / EGMEN 1C / APDAK 1D / EGMEN 1D / GEROX 1C**

RWYs 03L (034°) / 21R (214°)

**When passing 6500, contact Johannesburg RAD on assigned frequency.**

	GS	120	150	180	210	240	270
3.8%	ft/MIN	500	600	700	900	1000	1100
4.1%	ft/MIN	500	700	800	900	1000	1200
4.2%	ft/MIN	600	700	800	900	1100	1200

DESIGNATOR	ROUTING	ALTITUDES
	<b>Runway 03L</b>	
<b>APDAK 1B</b> 4.1% to FL90	JS029 - JS030 - APDAK	JS029 MNM <b>7000</b> CTR boundary MNM <b>8000</b> JS030 MNM <b>8000</b> <b>initial climb</b> FL90
<b>EGMEN 1C</b> 4.1% to CTR boundary	JS031 - JS032 - EGMEN	JS031 MNM <b>7000</b> CTR boundary MNM <b>8000</b> JS032 MNM <b>8000</b> <b>initial climb</b> FL90
	<b>Runway 21R</b>	
<b>APDAK 1D</b> 3.8% to CTR boundary	JS006 - JS002 - APDAK	CTR boundary MNM <b>8000</b> <b>initial climb</b> 8000
<b>EGMEN 1D</b> 3.8% to CTR boundary	JS008 - JS004 - JS028 - EGMEN	JS008 MNM <b>8000</b> CTR boundary MNM <b>8000</b> JS004 MNM <b>8000</b> <b>initial climb</b> FL90
<b>GEROX 1C</b> 4.2% to CTR boundary	JS007 - GEROX	CTR boundary MNM <b>8000</b> <b>initial climb</b> 8000

Changes: COM, PROC renamed

**APDAK 3A / EGMEN 2A / EXOBI 1A / NESAN 1A RNAV / OVALA 1A / RAGUL 3A**  
**RWY 03L (034°)**

**When passing 6500, contact Johannesburg RAD on assigned frequency.**

	GS	120	150	180	210	240	270
4.1%	ft/MIN	500	700	800	900	1000	1200
4.2%	ft/MIN	600	700	800	900	1100	1200
4.4%	ft/MIN	600	700	900	1000	1100	1300
4.5%	ft/MIN	600	700	900	1000	1100	1300

DESIGNATOR	ROUTING	ALTITUDES
	<b>Runway 03L</b>	
<b>APDAK 3A</b> 4.5% to CTR boundary	at D5.5 <b>JSV RT</b> 101° - intercept R152 <b>WKV</b> to APDAK	CTR boundary MNM <b>8000</b> D15 <b>JSV MNM FL90</b> <b>initial climb FL90</b>
<b>EGMEN 2A</b> 4.5% to CTR boundary	at D5.5 <b>JSV RT</b> - intercept R275 <b>WIV</b> inbound - at D23.4 <b>JSV LT</b> 030° - intercept R070 <b>JSV</b> to EGMEN	CTR boundary MNM <b>8000</b> D15 <b>JSV MNM FL90</b> <b>initial climb FL90</b>
<b>EXOBI 1A</b> 4.2% to CTR boundary	at D5.5 <b>JSV RT</b> 101° - at D15 <b>JSV RT</b> 126° - intercept R101 <b>JSV</b> to EXOBI	CTR boundary MNM <b>8000</b> D15 <b>JSV MNM FL90</b> <b>initial climb FL90</b>
<b>NESAN 1A RNAV</b> 4.2% to CTR boundary	at D8 <b>JSV LT</b> direct NESAN	CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>
<b>OVALA 1A</b> 4.1% to FL90	at D5.5 <b>JSV RT</b> 101° - at D15 <b>JSV RT</b> 171° - intercept R195 <b>MEV</b> to OVALA	CTR boundary MNM <b>8000</b> D15 <b>JSV MNM FL90</b> <b>initial climb FL90</b>
<b>RAGUL 3A</b> 4.4% to CTR boundary	at D5.5 <b>JSV LT</b> 281° - intercept R241 <b>WKV</b> to RAGUL	CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>



26-MAY-2016

South Africa **Johannesburg** O R Tambo Intl**JNB-FAOR****5-30****SIDs RWY 03L****SIDPT****VASUR 3A**

RWY 03L (034°)

**When passing 6500, contact Johannesburg RAD on assigned frequency.**

	GS	120	150	180	210	240	270
4.2%	ft/MIN	600	700	800	900	1100	1200

DESIGNATOR	ROUTING	ALTITUDES
	<b>Runway 03L</b>	
<b>VASUR 3A</b> 4.2% to CTR boundary	at D5.5 <b>JSV LT 311°</b> - intercept R351 <b>JSV</b> to VASUR	CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>

Changes: PROC renamed, COM

26-MAY-2016

South Africa **Johannesburg** O R Tambo Intl**JNB-FAOR****5-40****SIDs RWY 03R****SIDPT**

**EXOBI 1A / NESAN 1A RNAV / OVALA 1A / RAGUL 3A / VASUR 3A**  
**RWY 03R (034°)**

**When passing 6500, contact Johannesburg RAD on assigned frequency.**

	GS	120	150	180	210	240	270
4.1%	ft/MIN	500	700	800	900	1000	1200
4.2%	ft/MIN	600	700	800	900	1100	1200
4.4%	ft/MIN	600	700	900	1000	1100	1300

DESIGNATOR	ROUTING	ALTITUDES
	<b>Runway 03R</b>	
<b>EXOBI 1A</b> 4.2% to CTR boundary	at D5.5 <b>JSV RT</b> 101° - at D15 <b>JSV RT</b> 126° - intercept R101 <b>JSV</b> to EXOBI	CTR boundary MNM <b>8000</b> D15 <b>JSV</b> MNM <b>FL90</b> <b>initial climb FL90</b>
<b>NESAN 1A RNAV</b> 4.2% to CTR boundary	at D8 <b>JSV LT</b> direct NESAN	CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>
<b>OVALA 1A</b> 4.1% to FL90	at D5.5 <b>JSV RT</b> 101° - at D15 <b>JSV RT</b> 171° - intercept R195 <b>MEV</b> to OVALA	CTR boundary MNM <b>8000</b> D15 <b>JSV</b> MNM <b>FL90</b> <b>initial climb FL90</b>
<b>RAGUL 3A</b> 4.4% to CTR boundary	at D5.5 <b>JSV LT</b> 281° - intercept R241 <b>WKV</b> to RAGUL	CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>
<b>VASUR 3A</b> 4.2% to CTR boundary	at D5.5 <b>JSV LT</b> 311° - intercept R351 <b>JSV</b> to VASUR	CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>

Changes: PROC renamed, COM

26-MAY-2016

South Africa **Johannesburg** O R Tambo Intl**JNB-FAOR****5-50****SIDs RWY 21L****SIDPT**

**EXOBI 3B / HEIDELBERG 5D / OVALA 1B / RAGUL 3B / VASUR 3B**  
**RWY 21L (214°)**

**When passing 6500, contact Johannesburg RAD on assigned frequency.**

	GS	120	150	180	210	240	270
4.2%	ft/MIN	600	700	800	900	1100	1200
4.4%	ft/MIN	600	700	900	1000	1100	1300

DESIGNATOR	ROUTING	ALTITUDES
	<b>Runway 21L</b>	
<b>EXOBI 3B</b> 4.2% to CTR boundary	at D4.5 <b>JSV LT</b> 111° - at D15 <b>JSV LT</b> 076° - intercept R101 <b>JSV</b> to EXOBI	D4.5 <b>JSV MNM 7000</b> CTR boundary MNM <b>8000</b>  <b>initial climb 8000</b>
<b>HEIDELBERG 5D HGV 5D</b> 4.2% to CTR boundary	at D4.5 <b>JSV LT</b> direct <b>HGV</b>	D4.5 <b>JSV MNM 7000</b> CTR boundary MNM <b>8000</b>  <b>initial climb 8000</b>
<b>OVALA 1B</b> 4.2% to CTR boundary	at D4.5 <b>JSV LT</b> 111° - intercept R170 <b>JSV</b> to OVALA	D4.5 <b>JSV MNM 7000</b> CTR boundary MNM <b>8000</b>  <b>initial climb 8000</b>
<b>RAGUL 3B</b> 4.4% to CTR boundary	at D9 <b>JSV RT</b> 291° - intercept R262 <b>JSV</b> to RAGUL	CTR boundary MNM <b>8000</b>  <b>initial climb 8000</b>
<b>VASUR 3B</b> 4.2% to CTR boundary	at D9 <b>JSV RT</b> 291° - at D15 <b>JSV RT</b> 351° - intercept R198 <b>LIV</b> to <b>LIV</b> - R015 <b>LIV</b> to VASUR	CTR boundary MNM <b>8000</b>  <b>initial climb 8000</b>

Changes: COM

26-MAY-2016

South Africa **Johannesburg** O R Tambo Intl**JNB-FAOR**

5-60

**SIDs RWY 21R****SIDPT****APDAK 2B / EGMEN 2B / EXOBI 3B / HEIDELBERG 5D / OVALA 1B / RAGUL 3B / VASUR 3B**

RWY 21R (214°)

**When passing 6500, contact Johannesburg RAD on assigned frequency.**

	GS	120	150	180	210	240	270
4.2%	ft/MIN	600	700	800	900	1100	1200
4.3%	ft/MIN	600	700	800	1000	1100	1200
4.4%	ft/MIN	600	700	900	1000	1100	1300

DESIGNATOR	ROUTING	ALTITUDES
	<b>Runway 21R</b>	
<b>APDAK 2B</b> 4.2% to CTR boundary	at D4.5 <b>JSV LT</b> direct <b>APDAK</b>	D4.5 <b>JSV MNM 7000</b> CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>
<b>EGMEN 2B</b> 4.3% to CTR boundary	at D4.5 <b>JSV LT</b> 111° - intercept R253 <b>WIV</b> inbound - crossing R016 <b>STV LT</b> 054° - intercept R024 <b>STV</b> to <b>EGMEN</b>	CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>
<b>EXOBI 3B</b> 4.2% to CTR boundary	at D4.5 <b>JSV LT</b> 111° - at D15 <b>JSV LT</b> 076° - intercept R101 <b>JSV</b> to <b>EXOBI</b>	D4.5 <b>JSV MNM 7000</b> CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>
<b>HEIDELBERG 5D</b> <b>HGV 5D</b> 4.2% to CTR boundary	at D4.5 <b>JSV LT</b> direct <b>HGV</b>	D4.5 <b>JSV MNM 7000</b> CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>
<b>OVALA 1B</b> 4.2% to CTR boundary	at D4.5 <b>JSV LT</b> 111° - intercept R170 <b>JSV</b> to <b>OVALA</b>	D4.5 <b>JSV MNM 7000</b> CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>
<b>RAGUL 3B</b> 4.4% to CTR boundary	at D9 <b>JSV RT</b> 291° - intercept R262 <b>JSV</b> to <b>RAGUL</b>	CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>
<b>VASUR 3B</b> 4.2% to CTR boundary	at D9 <b>JSV RT</b> 291° - at D15 <b>JSV RT</b> 351° - intercept R198 <b>LIV</b> to <b>LIV</b> - R015 <b>LIV</b> to <b>VASUR</b>	CTR boundary MNM <b>8000</b> <b>initial climb 8000</b>

Changes: COM

12-JAN-2017  
JNB-FAOR

South Africa **Johannesburg** O R Tambo Intl

RNAV STARs RWY 21L

6-10

RNAV STARs RWY 03R

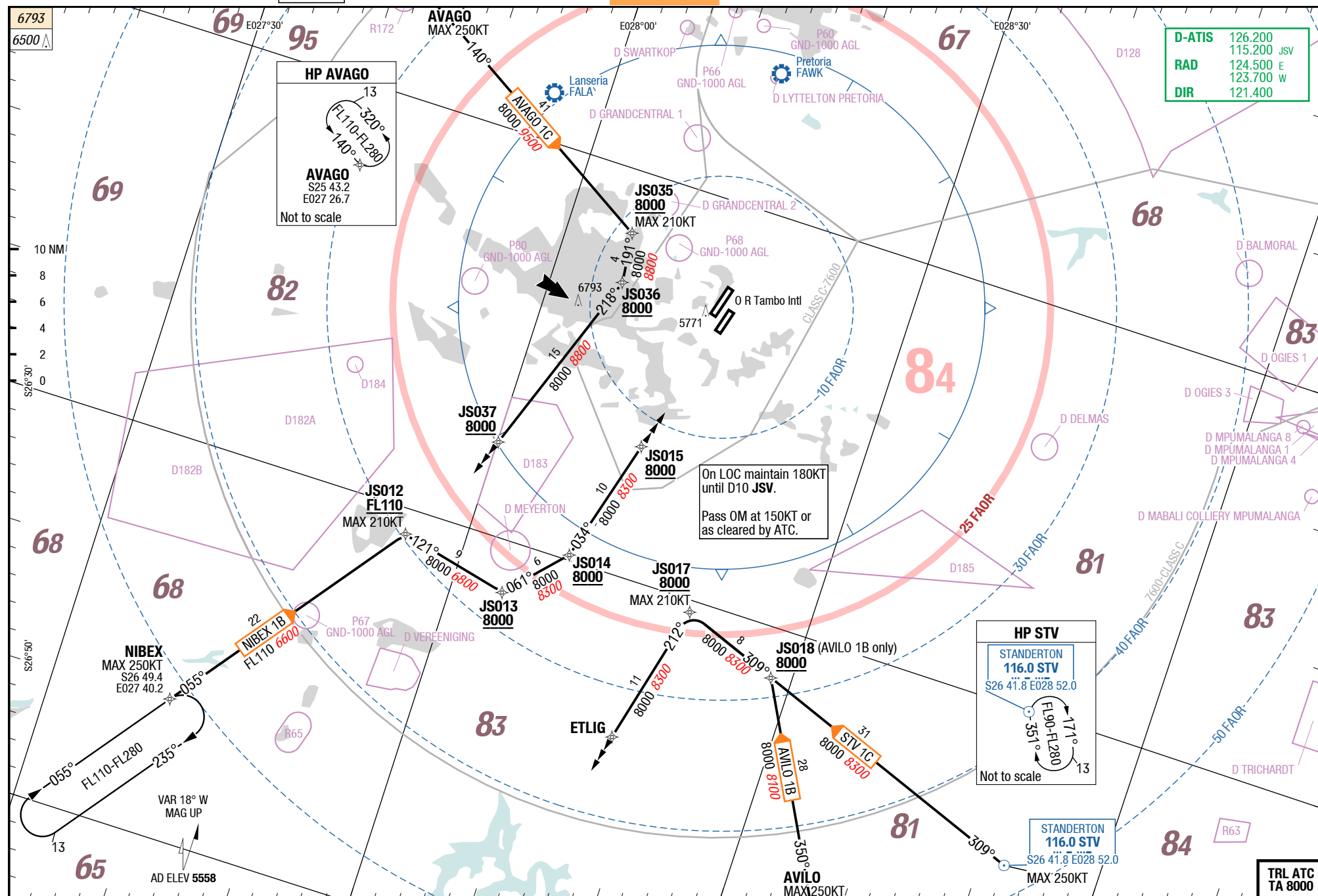
STAR

STAR

O R Tambo Intl **Johannesburg** South Africa

RNAV STARs RWY 21L

RNAV STARs RWY 03R



Changes: FREQ, ASP

**JNB-FAOR**

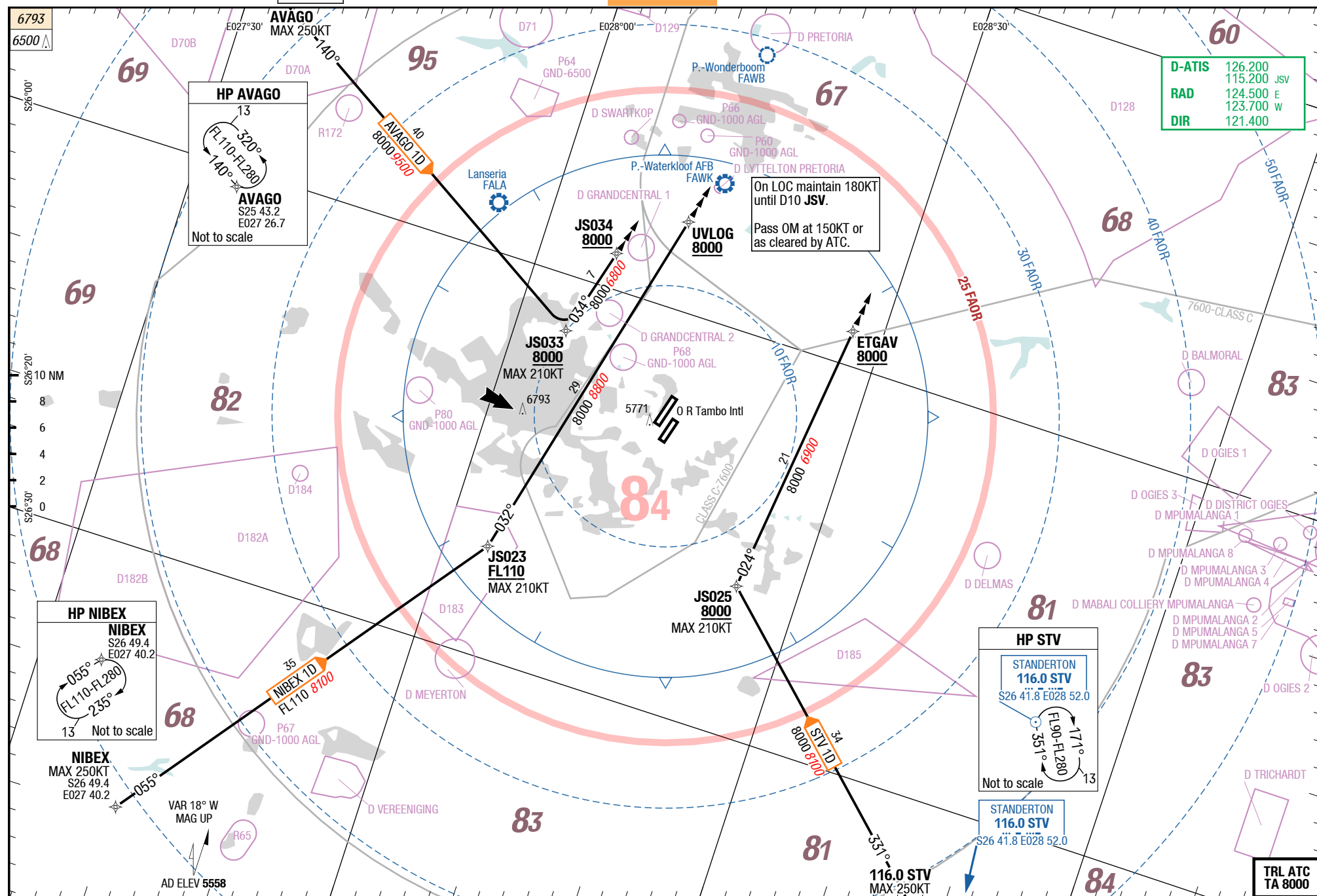
6-20

## RNAV STARs RWY 21L

# STAR

**STAR**

## RNAV STARs RWY 21L



Changes: FREQ, ASP

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**12-JAN-2017**  
**JNB-FAOR**

South Africa **Johannesburg** O R Tambo Intl

STARs RWYs 21L/R

**6-30**

## STARs RWYs 03L/R

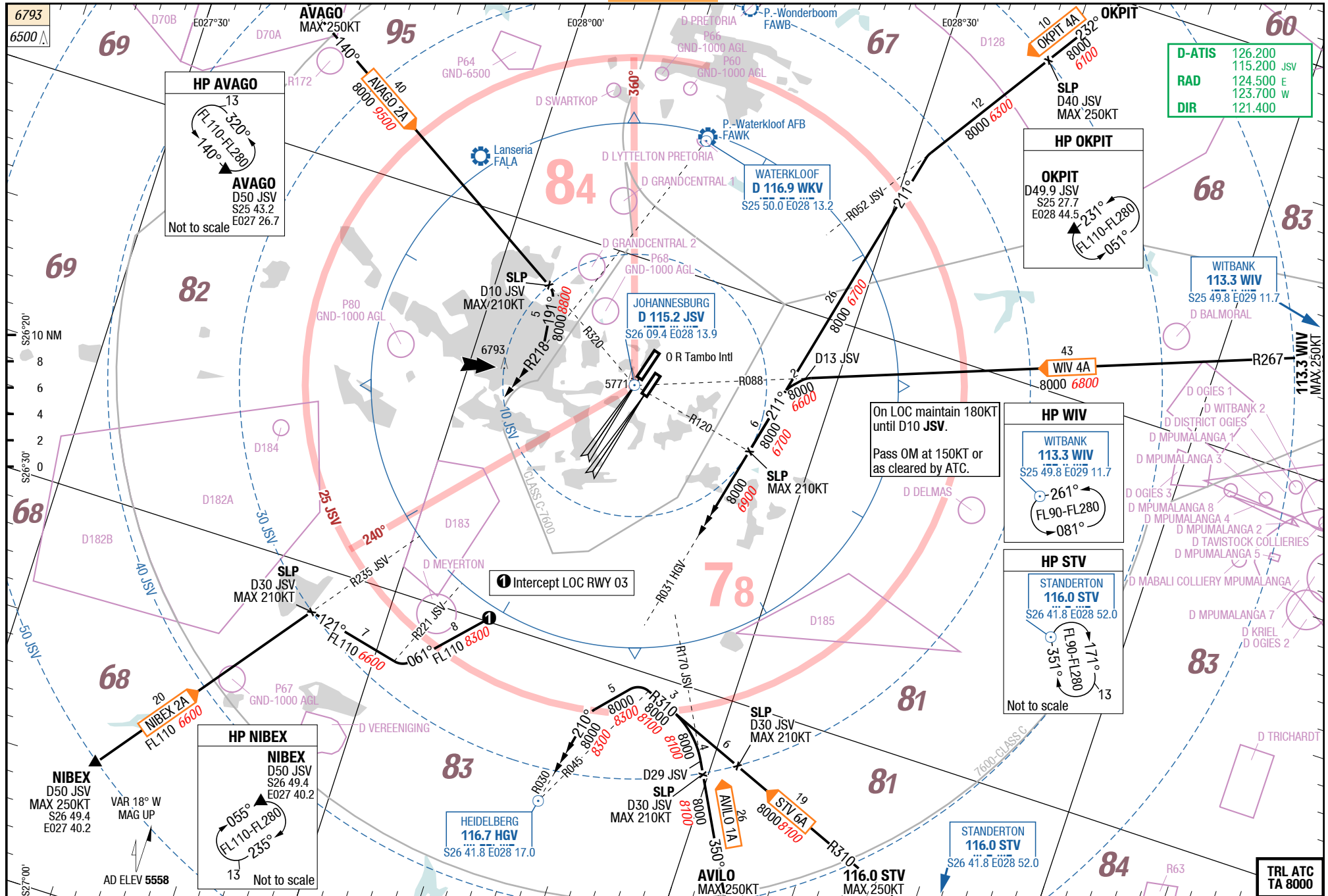
# STAR

# STAR

0 R Tambo Intl **Johannesburg** South Africa

STARs RWYs 21L/R

## STARs RWYs 03L/R



Changes: FREQ, ASP

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# JNB-FAOR

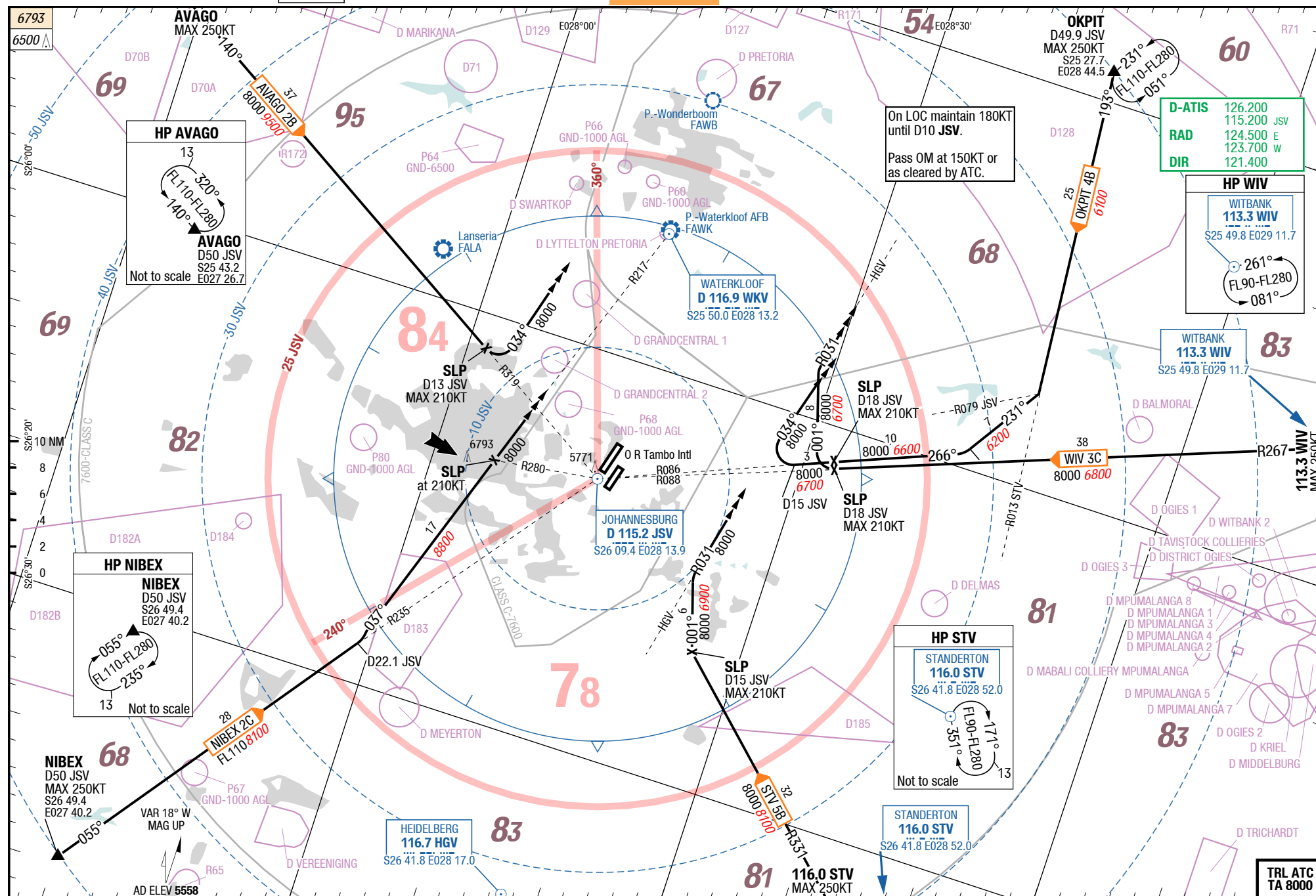
## STARs RWYs 21L/R

**STAR**

**STAR**

## STARs RWYs 21L/R

6-40



Changes: FREQ, ASP

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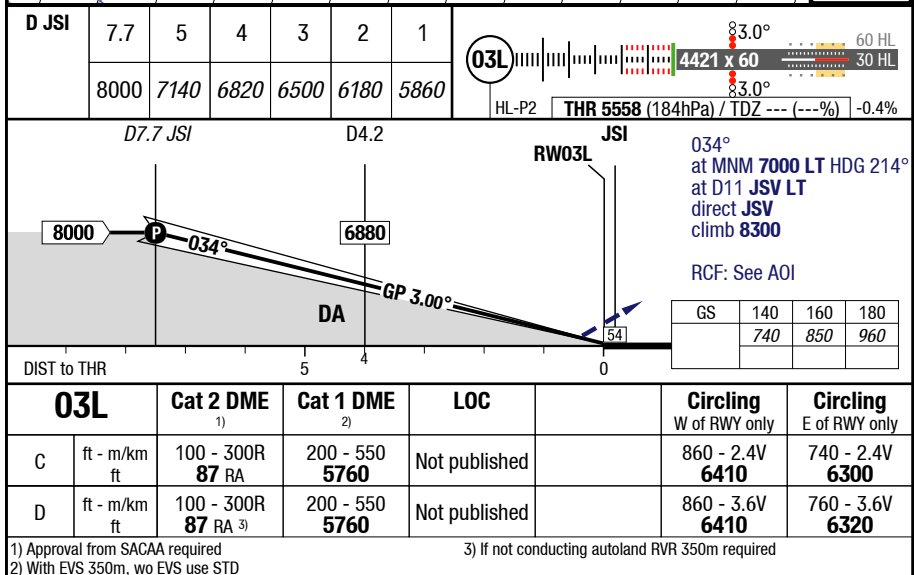
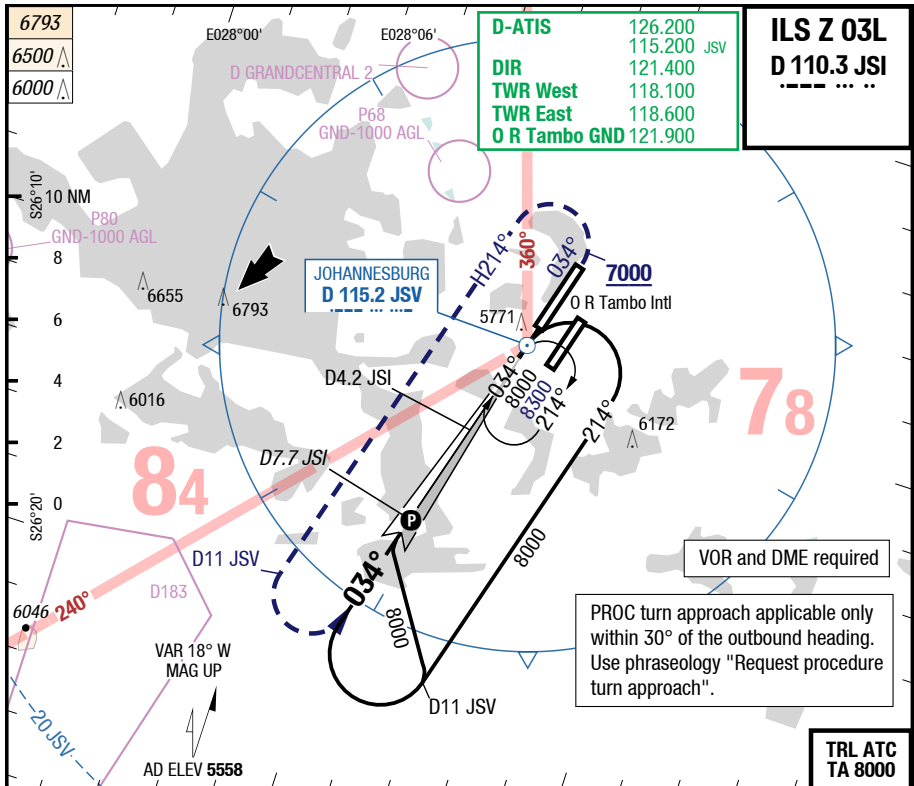


12-JAN-2017

JNB-FAOR

7-10

ILS Z 03L



12-JAN-2017

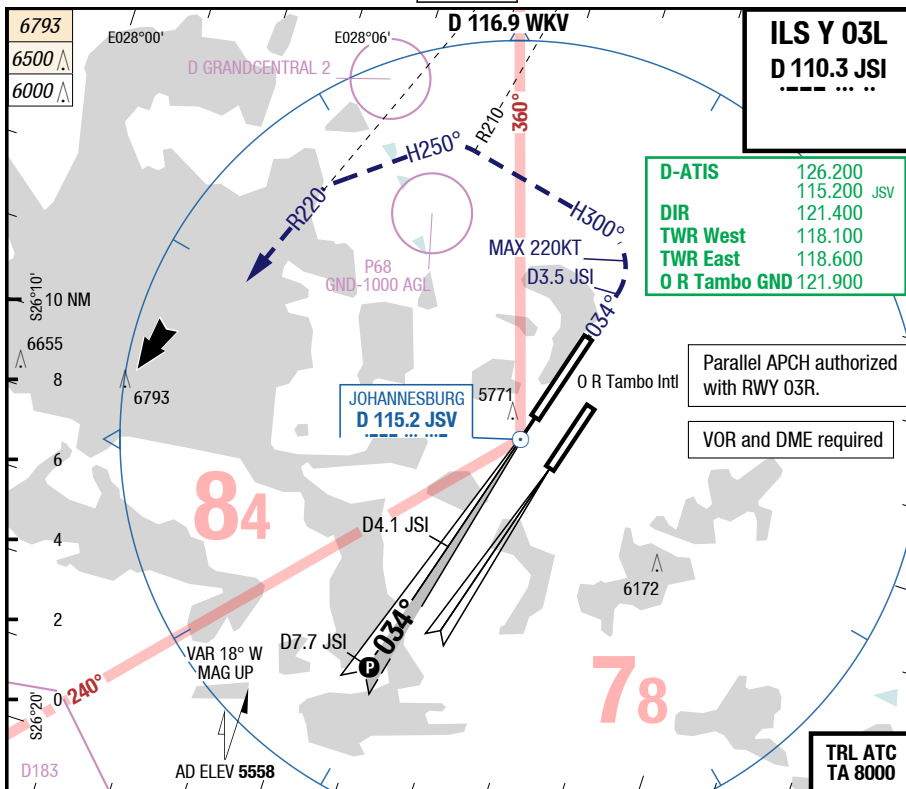
JNB-FAOR

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IAC

7-20

ILS Y 03L



Changes: APL, FREQ

**ILS Z 03R**



1) Approval from SACAA required	3) If not conducting autoland RVR 350m required
2) With EVS 350m, no EVS use STD	

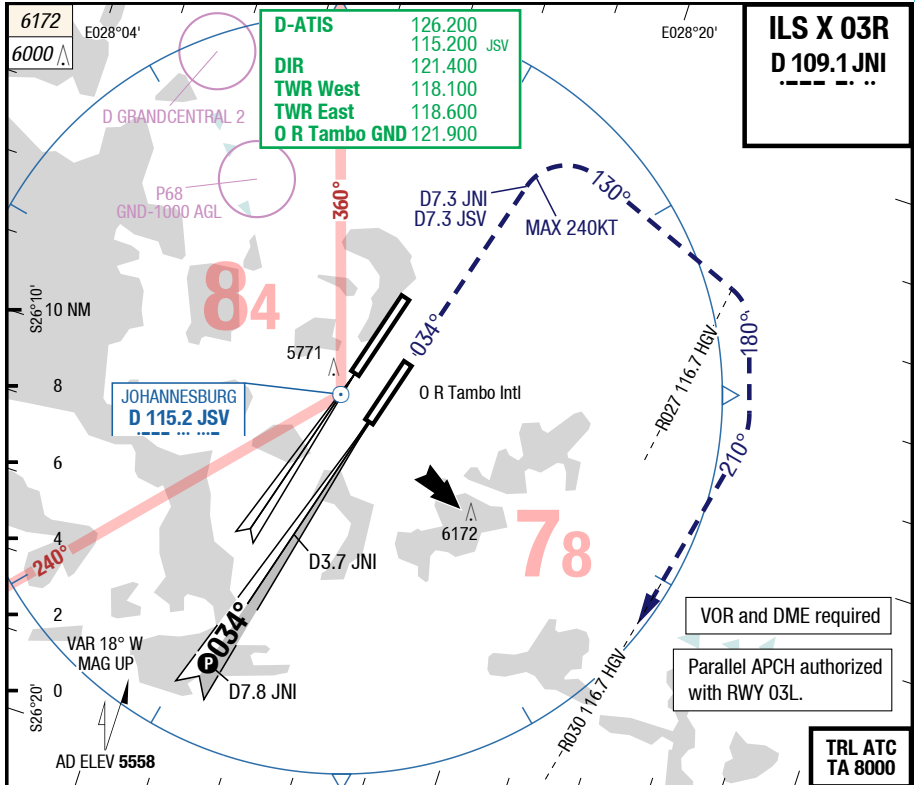
Changes: FREQ, APL

12-JAN-2017

JNB-FAOR

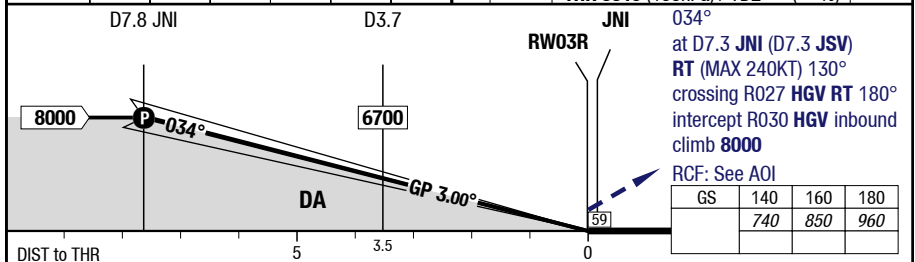
7-40

ILS X 03R



D JN1	7.8	5	4	3	2	1	
	8000	7110	6790	6470	6150	5840	

HL-P2 **THR 5510** (183hPa) / TDZ --- (---%) -0.1%

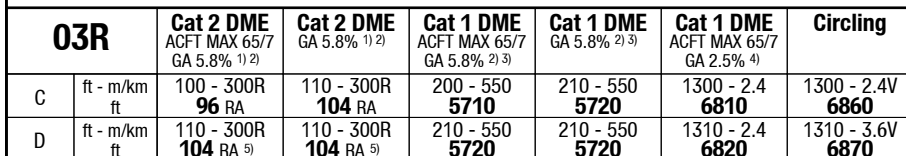


03R	Cat 2 DME ACFT MAX 65/7 GA 5.8% 1) 2)	Cat 2 DME GA 5.8% 1) 2)	Cat 1 DME ACFT MAX 65/7 GA 5.8% 2) 3)	Cat 1 DME GA 5.8% 2) 3)	Cat 1 DME ACFT MAX 65/7 GA 2.5% 4)	Circling
C	ft - m/km ft 96 RA	100 - 300R 110 - 300R 104 RA	200 - 550 210 - 550 5710	210 - 550 210 - 550 5720	1300 - 2.4 1310 - 2.4 6810	1300 - 2.4V 1310 - 3.6V 6860
D	ft - m/km ft 104 RA 5)	110 - 300R 110 - 300R 104 RA 5)	210 - 550 210 - 550 5720	210 - 550 210 - 550 5720	1310 - 2.4 1310 - 3.6V 6820	1310 - 3.6V 1310 - 3.6V 6870

1) Approval from SACAA required 2) Up to 8000ft 3) With EVS 350m, wo EVS use STD 4) With EVS 1.6km, wo EVS use STD 5) If not conducting autoland RVR 350m required

Changes: APL, FREQ

**ILS W 03R**



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Changes: APL, FREQ

12-JAN-2017

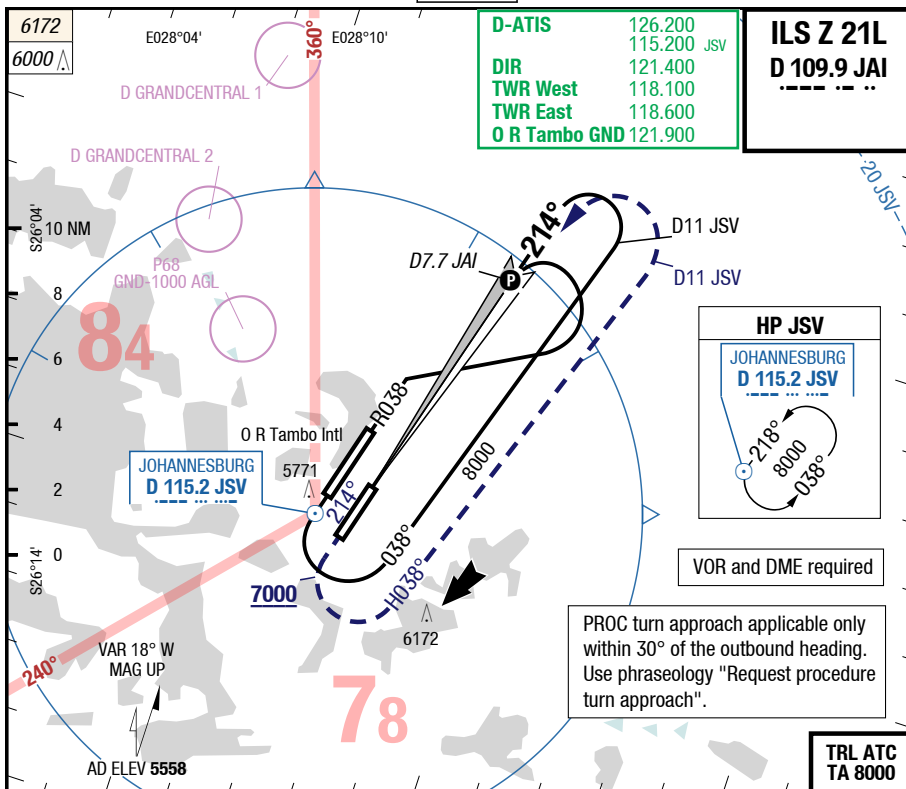
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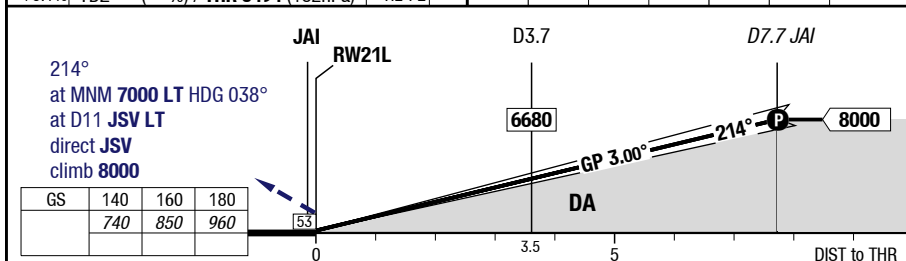
JNB-FAOR

7-60

ILS Z 21L



60 HL	3.0°	1	2	3	4	5	7.7	D JAI
30 HL	3.0°	5820	6140	6460	6780	7090	8000	
+0.1% TDZ --- (---%) / THR 5494 (182hPa) HL-P2								



21L	Cat 2 DME 1)	Cat 1 DME 2)	LOC	Circling
C	ft - m/km ft	100 - 300R 101 RA	200 - 550 5700	Not published
D	ft - m/km ft	100 - 300R 101 RA 3)	200 - 550 5700	Not published
				1170 - 2.4V 6720
				1180 - 3.6V 6740

1) Approval from SACAA required

3) If not conducting autoland RVR 350m required

2) With EVS 350m, wo EVS use STD

Changes: APL, FREQ

# ILS X 21L

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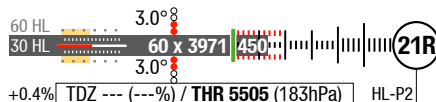
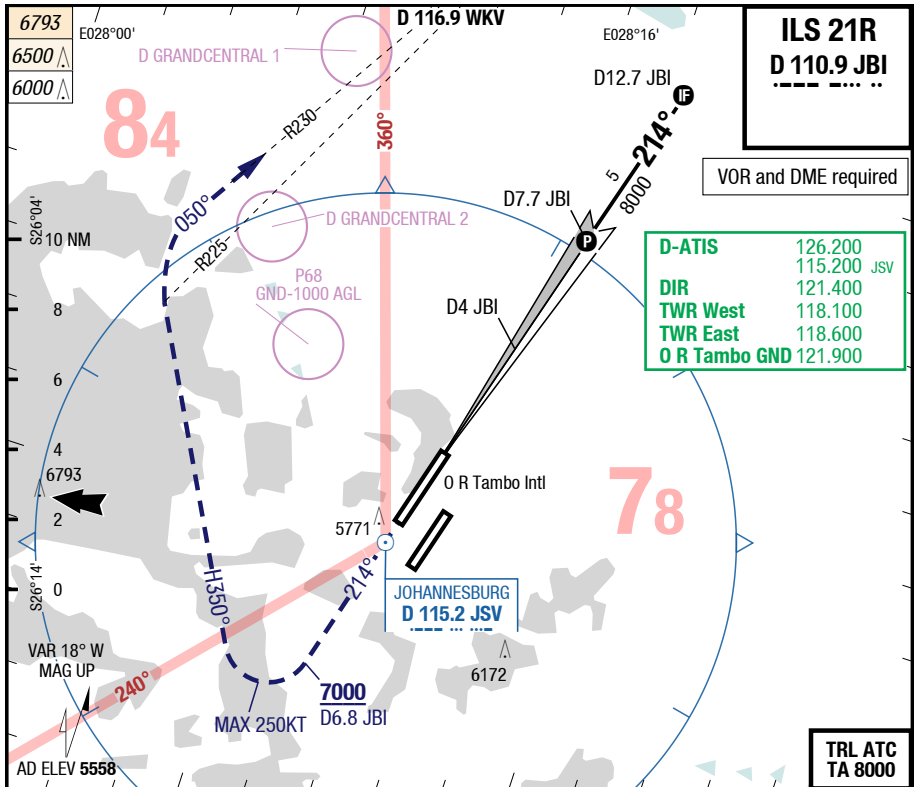
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JNB-FAOR

7-80

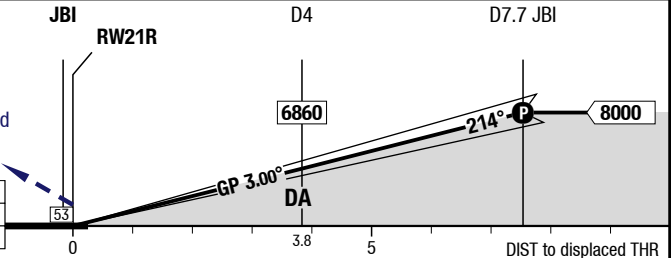
ILS 21R



1	2	3	5	6	7.7	D JBI
5830	6150	6470	7120	7450	8000	

214°  
at D6.8 JBI (MNM 7000)  
RT (MAX 250KT) HDG 350°  
crossing R225 WKV RT  
intercept R230 WKV inbound  
climb 8000

GS	140	160	180
	740	850	960



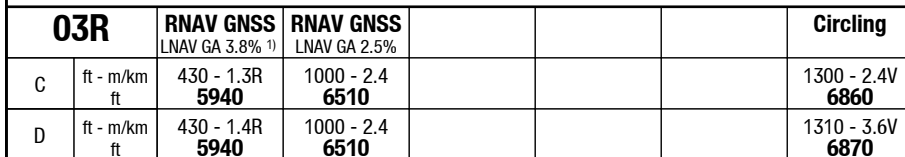
21R		Cat 2 DME GA 3.7% 1) 2)	Cat 1 DME GA 3.7% 2) 3) 4)	Cat 1 DME GA 2.5% ACFT MAX 65/7	Cat 1 DME GA 2.5% 5)	LOC	Circling
C	ft - m/km ft	100 - 300R 97 RA	200 - 550 5710	600 - 2.0 6110 6)	610 - 2.1 6120	Not published	1530 - 5.0V 7090
D	ft - m/km ft	100 - 300R 97 RA 7)	200 - 550 5710	610 - 2.1 6120 5)	610 - 2.1 6120	Not published	1530 - 5.0V 7090

1) Approval from SACAA required 2) Up to 7000ft 3) With EVS 350m, wo EVS use STD 4) FD, AP or HGS required, else RVR 750m 5) With EVS 1.4km, wo EVS use STD 6) With EVS 1.3km, wo EVS use STD 7) If not conducting autoland RVR 350m required

Changes: APL, FREQ



# RNAV (GNSS) 03R



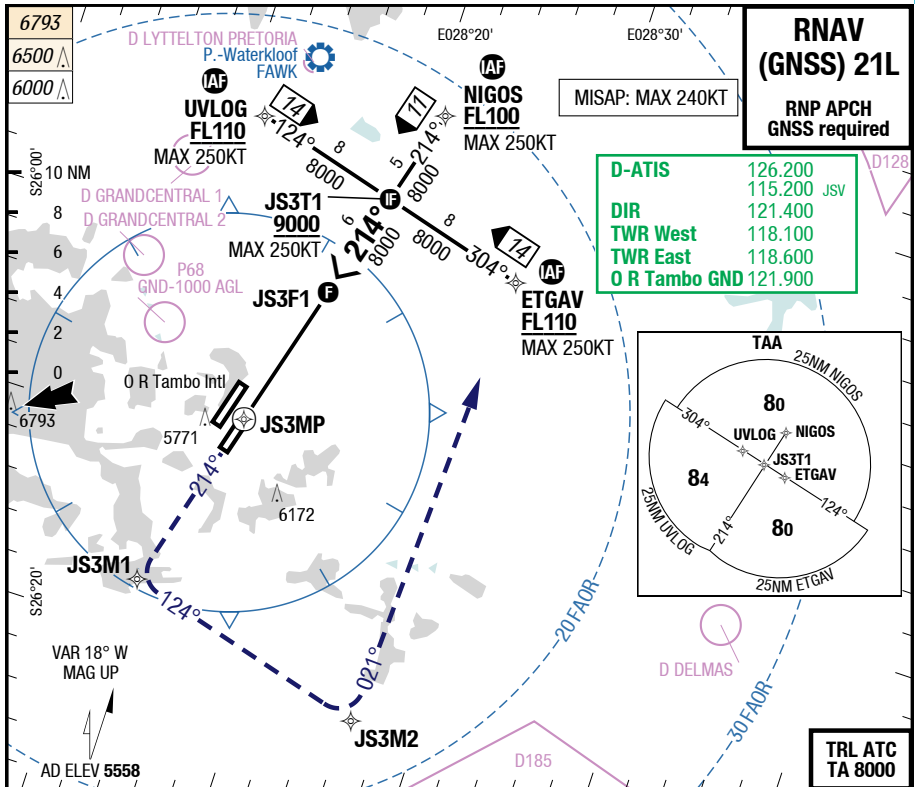
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JNB-FAOR

7-100

RNAV (GNSS) 21L






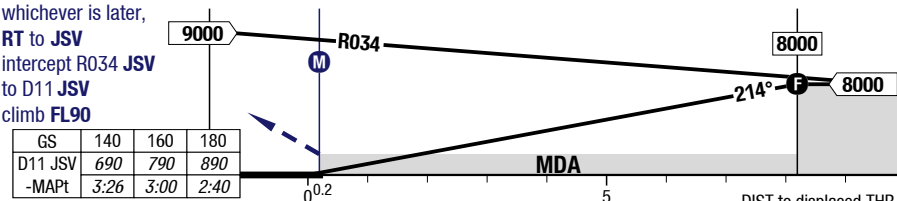
21L		RNAV GNSS LNAV GA 3.5% 1)	RNAV GNSS LNAV GA 2.5%	Circling	
C	ft - m/km ft	630 - 2.2 6120	1040 - 2.4 6530		1170 - 2.4V 6720
D	ft - m/km ft	630 - 2.2 6120	1040 - 2.4 6530		1180 - 3.6V 6740

1) Up to 7600ft

Changes: APL, FREQ

**VOR Z 21R**

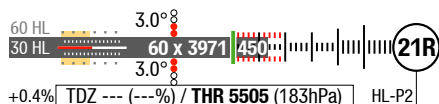
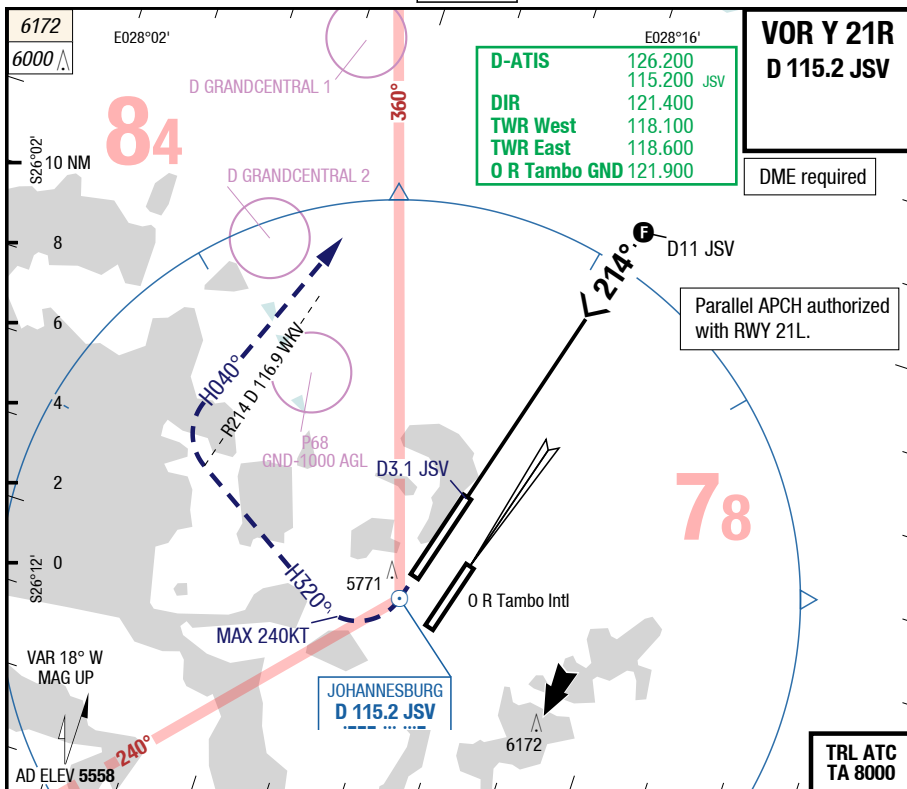


<div>60 HL  3.0° 8</div> <div>30 HL  60 x 3971 450  21R</div> <div>3.0° 8</div> <div>+0.4% TDZ --- (---%) / THR 5505 (183hPa) HL-P2</div>				5		6		7		8		9		11		2.80° D JSV											
				6210		6510		6810		7110		7410		8000													
<div>R214 JSV JSV D3 D11 JSV</div> <div>at MNM 7500 or D5 JSV, whichever is later,</div> <div>RT to JSV</div> <div>intercept R034 JSV</div> <div>to D11 JSV</div> <div>climb FL90</div> <div><table><tr><td>GS</td><td>140</td><td>160</td><td>180</td></tr><tr><td>D11 JSV</td><td>690</td><td>790</td><td>890</td></tr><tr><td>-MAPt</td><td>3:26</td><td>3:00</td><td>2:40</td></tr></table></div> <div></div>																GS	140	160	180	D11 JSV	690	790	890	-MAPt	3:26	3:00	2:40
GS	140	160	180																								
D11 JSV	690	790	890																								
-MAPt	3:26	3:00	2:40																								
21R				VOR DME								Circling															
C		ft - m/km ft		620 - 2.1 6120										1530 - 5.0V 7090													
D		ft - m/km ft		620 - 2.1 6120										1530 - 5.0V 7090													

12-JAN-2017

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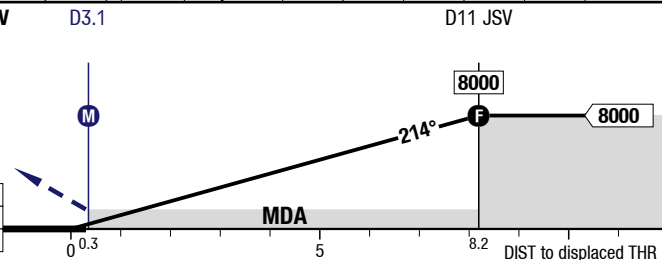
**JNB-FAOR****7-120****VOR Y 21R**

5	6	7	8	9	11	2.80° D JSV
6210	6510	6810	7110	7410	8000	

**214°**  
at **JSV RT** (MAX 240KT)  
HDG 320°  
crossing **R214 WKV RT**  
HDG 040°  
climb **8000**

RCF: See A01

GS	140	160	180
D11 JSV	690	790	890
-MAPt	3:23	2:58	2:38



<b>21R</b>		<b>VOR DME</b> GA 5.1% 1)	<b>VOR DME</b> GA 2.5%		<b>Circling</b>
C	ft - m/km ft	480 - 1.5 <b>5980</b>	1530 - 5.0 <b>7030</b>		1530 - 5.0V <b>7090</b>
D	ft - m/km ft	480 - 1.5 <b>5980</b>	1530 - 5.0 <b>7030</b>		1530 - 5.0V <b>7090</b>

1) Up to 8000ft

Changes: APL, FREQ

12-JAN-2017

**JNB-FAOR**
**7-130**
**WxMinima Overflow**

<b>03L</b>		<b>Cat 1 DME</b> ACFT MAX 65/7 GA 2.5% <sup>1)</sup>	<b>Cat 1 DME</b> GA 2.5% <sup>1)</sup>	<b>LOC</b>			
C	ft - m/km ft	740 - 2.4 <b>6300</b>	760 - 2.4 <b>6320</b>	Not published			
D	ft - m/km ft	760 - 2.4 <b>6320</b>	760 - 2.4 <b>6320</b>	Not published			
1) With EVS 1.6km, wo EVS use STD							
<b>03R</b>		<b>Cat 1 DME</b> GA 2.5% <sup>1)</sup>	<b>LOC</b>				
C	ft - m/km ft	1310 - 2.4 <b>6820</b>	Not published				
D	ft - m/km ft	1310 - 2.4 <b>6820</b>	Not published				
1) With EVS 1.6km, wo EVS use STD							
<b>21L</b>		<b>LOC</b>					
C	ft - m/km ft	Not published					
D	ft - m/km ft	Not published					

Changes: Reprint

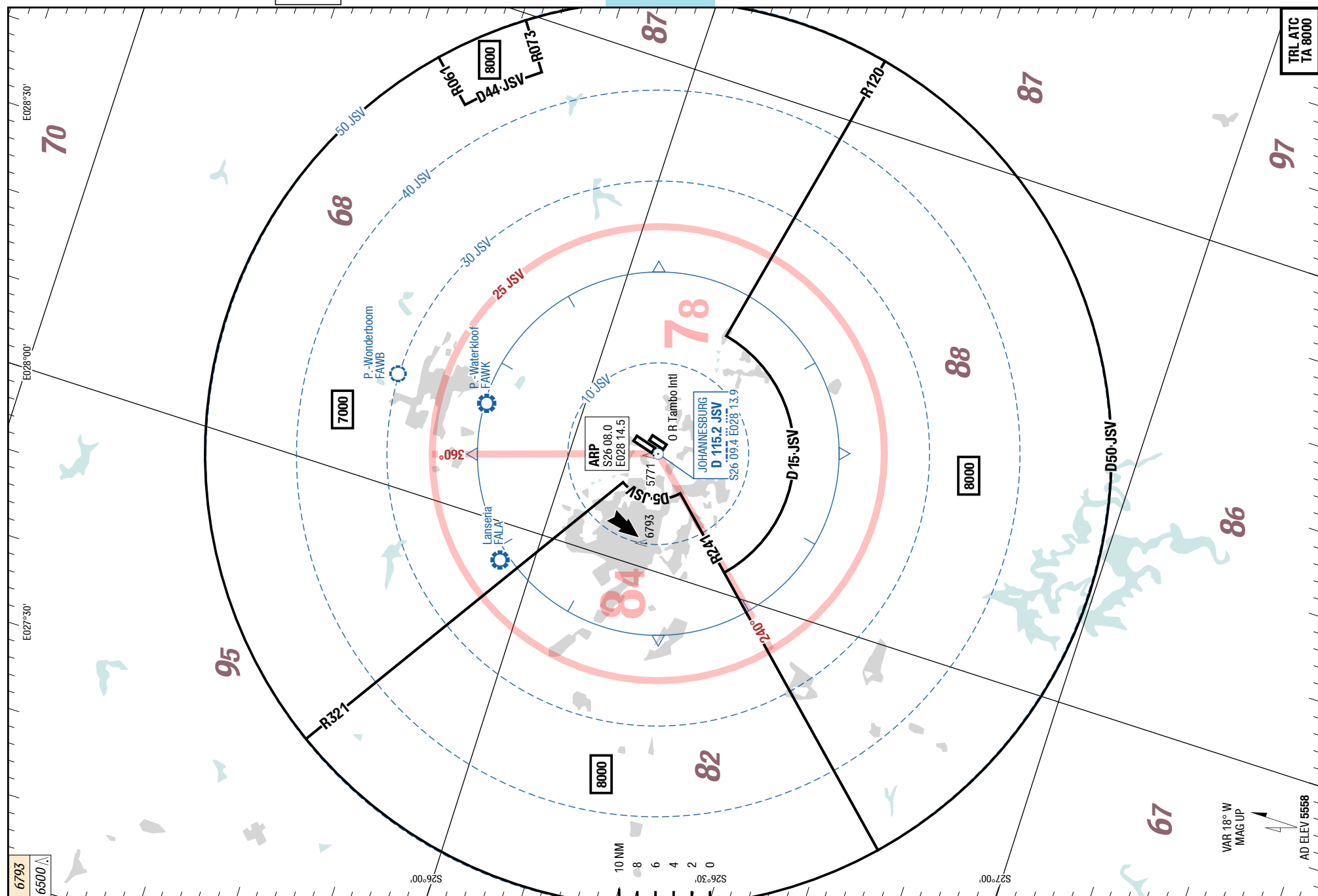
**JNB-FAOR**

**NIL**  
**MRC**

**MRC**

**MRC**

**NIL**  
**MRC**



Changes: MGA, OBST

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