

List of pages in this Trip Kit

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- Terminal Charts For FAOR
- Revision Letter For Cycle 01-2015
- Change Notices
- Notebook

General Information

Location: Johannesburg Zaf
IATA Code: JNB
Lat/Long: S26° 08.0' E028° 14.5'
Elevation: 5558 ft

Airport Use: Public
Magnetic Variation: 18.4°W

Fuel Types: Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 0322 Z
Sunset: 1704 Z,

Runway Information

Runway: 03L
Length x Width: 14495 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 5558 ft
Lighting: Edge, ALS, Centerline, TDZ
Stopway: 197 ft

Runway: 03R
Length x Width: 11155 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 5510 ft
Lighting: Edge, ALS, Centerline, TDZ
Stopway: 197 ft

Runway: 21L
Length x Width: 11155 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 5494 ft
Lighting: Edge, ALS, Centerline, TDZ
Stopway: 197 ft

Runway: 21R
Length x Width: 14495 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 5505 ft

Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 1476 ft
Stopway: 197 ft

Communication Information

ATIS 126.2
Tower West Tower 118.1
Tower East Tower 118.6
O. R. Tambo Ground Control 121.9
o R Tambo Ramp/Taxi Control 122.65
Johannesburg Clearance Delivery 121.9
Johannesburg Clearance Delivery 121.7
West Approach Control 123.7
South/East Approach Control 124.5
Director Approach Control 121.4

1. GENERAL

1.1. ATIS D-ATIS 126.2

1.2. LOW VISIBILITY PROCEDURES

Pilots are requested not to exceed 10 KT when transiting or taxiing when Low Visibility Procedures are in force.

1.3. SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM

1.3.1. OPERATION OF MODE S TRANSPONDER

In order to prevent the potential risk for Multilateration (MLAT) false targets, aircrew shall adhere to the following procedures:

- ACFT operators shall ensure that Mode S transponders are able to operate when an ACFT is on the ground, transmitting Mode S squitter and replying to Mode S addressed interrogations only.
- When an ACFT is on the ground, the transponder shall be inhibited to reply to Mode S all-call interrogation and replies to Mode A/C interrogations shall also be suppressed.
- Flight crew shall select the assigned Mode A (squawk) code and activate the Mode S transponder at the request for pushback or taxi, whichever is first, and after landing until reaching the ACFT stand.
- The transponder shall be switched off immediately after parking.
- Activation of a Mode S transponder normally means selecting the AUTO or XPDR position and transponders provided with on-the-ground sensors are automatically switched in this function before take-off and after landing. If using a transponder not fitted with an on-ground-sensor then refer to the operator's guide. Selection of STAND-BY mode will not activate the Mode S transponder and selecting ON could override the required suppression of SSR Mode A replies and Mode S all-call replies when an ACFT is on the ground.

1.4. TAXI PROCEDURES

Pilots have to exercise CAUTION when taxiing on TWY B towards the holding point RWY 03L.

Any operation of B747-400 ACFT into SAA Technical area will not provide the ICAO recommended clearance distance.

No crossing of red stop bar light will be allowed unless specifically approved by ATC and accompanied by a Follow-me car.

All ACFT to be towed in and out of apron Mike.

Max code C ACFT allowed on apron Mike.

Apron C MAX wingspan less than 118'/36m.

TWY C from TWY N intersection to THR RWY 21R restricted to MAX wingspan less than 118'/36m.

MAX wingspan less than 171'/52m on Apron D taxilane, when ACFT with wingspan 213'/65m or more taxiing on TWY A past Apron D from stands D2 to D50.

ACFT with wingspan 213'/65m or more parking at stand D3A must enter and exit Apron D via TWY G9. When manoeuvring on Apron D taxilane exercise CAUTION and remain on TWY centerline to maintain wingtip clearance from other parked ACFT.

ACFT entering Apron A and B via TWY E or ACFT exiting RWY 03L/21R on TWY E in westerly direction use minimal thrust required to avoid adverse jet blast effects to ACFT taking off or landing on RWY 03L/21R.

ACFT to exercise caution when taxiing on TWY B southbound to THR RWY 03L due to Apron Taxilane M extending from TWY B in a southerly direction.

ACFT taking off or landing on RWY 03L/21R be aware of exiting and taxiing ACFT jet blast when passing TWY E intersection.

ACFT entering parking stands on Apron E or F should use the minimal thrust required to avoid adverse effects of jet blast on ground handling on the opposite Apron.

1. GENERAL

1.5. PARKING INFORMATION

Stands A1R thru A13, C1 thru C8 and E1 thru E13 equipped with APIS.

CAUTION to be exercised when docking at stands A4 thru A6 due to sunlight reflecting off the Automatic Docking panels at sunrise. Should docking information be impaired, contact Apron Control on 122.65 for assistance.

1.6. OTHER INFORMATION

Microlight ACFT operations.

2. ARRIVAL

2.1. CAT II/III OPERATIONS

RWYs 03L, 03R and 21L approved for CAT II operations, special aircrew and ACFT certification required.

2.2. TAXI PROCEDURES

HST E designed for class C ACFT.

Recommended exit speed is between 45 KT and 50 KT.

Pilots to advise ATC if unable to vacate RWY 03R via HST E.

2.3. OTHER INFORMATION

2.3.1. ALLOCATION OF PARKING BAYS

Prior to top of descent contact Apron Control on 122.65 and provide the following information:

ETA, ACFT Registration, Passengers on board and last APT departed.

The parking bay information and ACFT registration is to be transmitted to Tower, vacating the RWY for taxi instructions.

3. DEPARTURE

3.1. START-UP, PUSH-BACK & TAXI PROCEDURES

ACFT on D2, D3 and D4 must push-back to face North and exit via TWY G8 onto TWY A.

3.2. NOISE ABATEMENT PROCEDURES

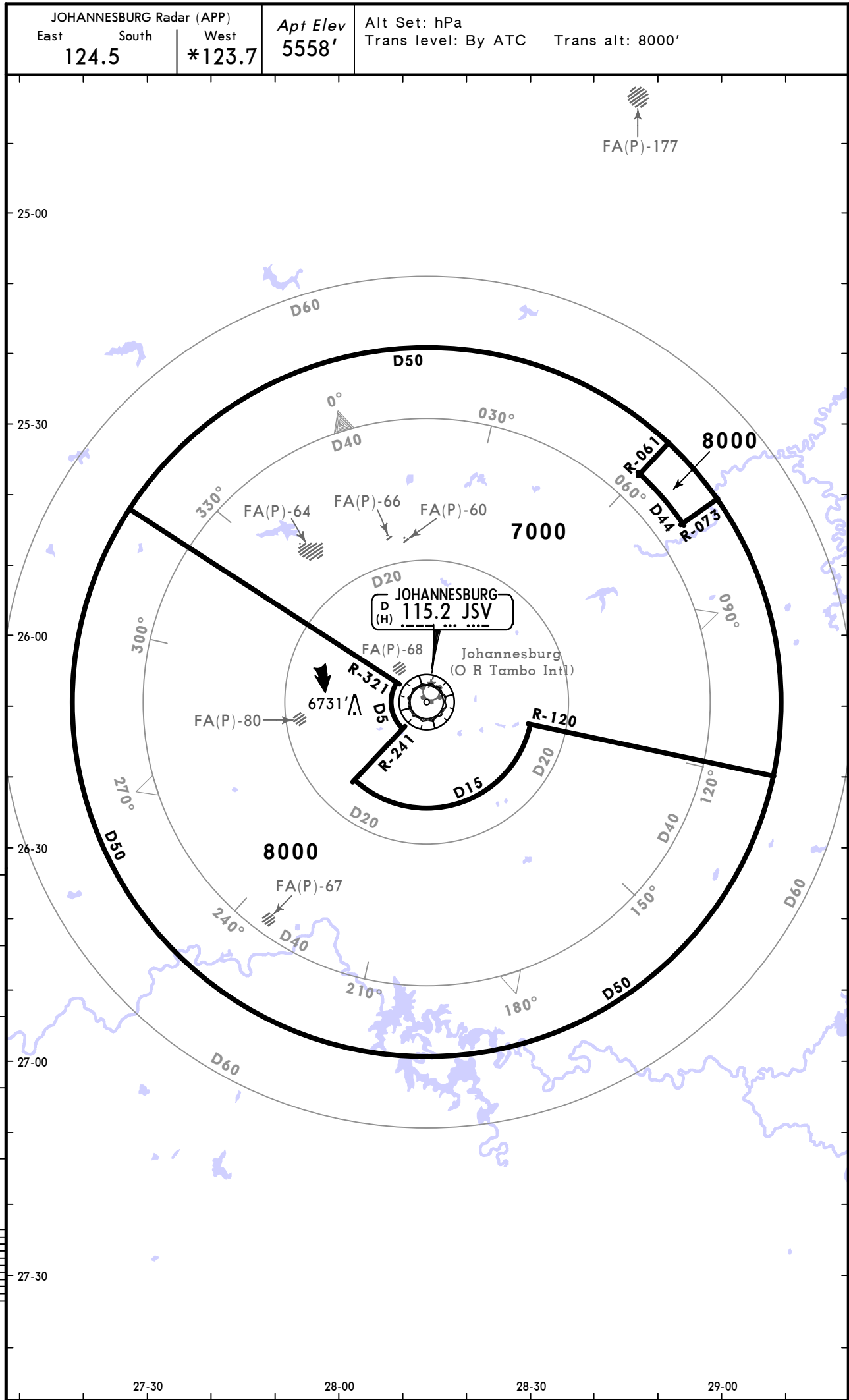
In order to minimize noise on the ground and to ensure safety of flight operations, all jet ACFT operators are to adopt NADP 2 procedure for all take-offs; procedures may be disregarded if at 3000' AGL or when leveled off by ATC, or when leveled by SIDs.

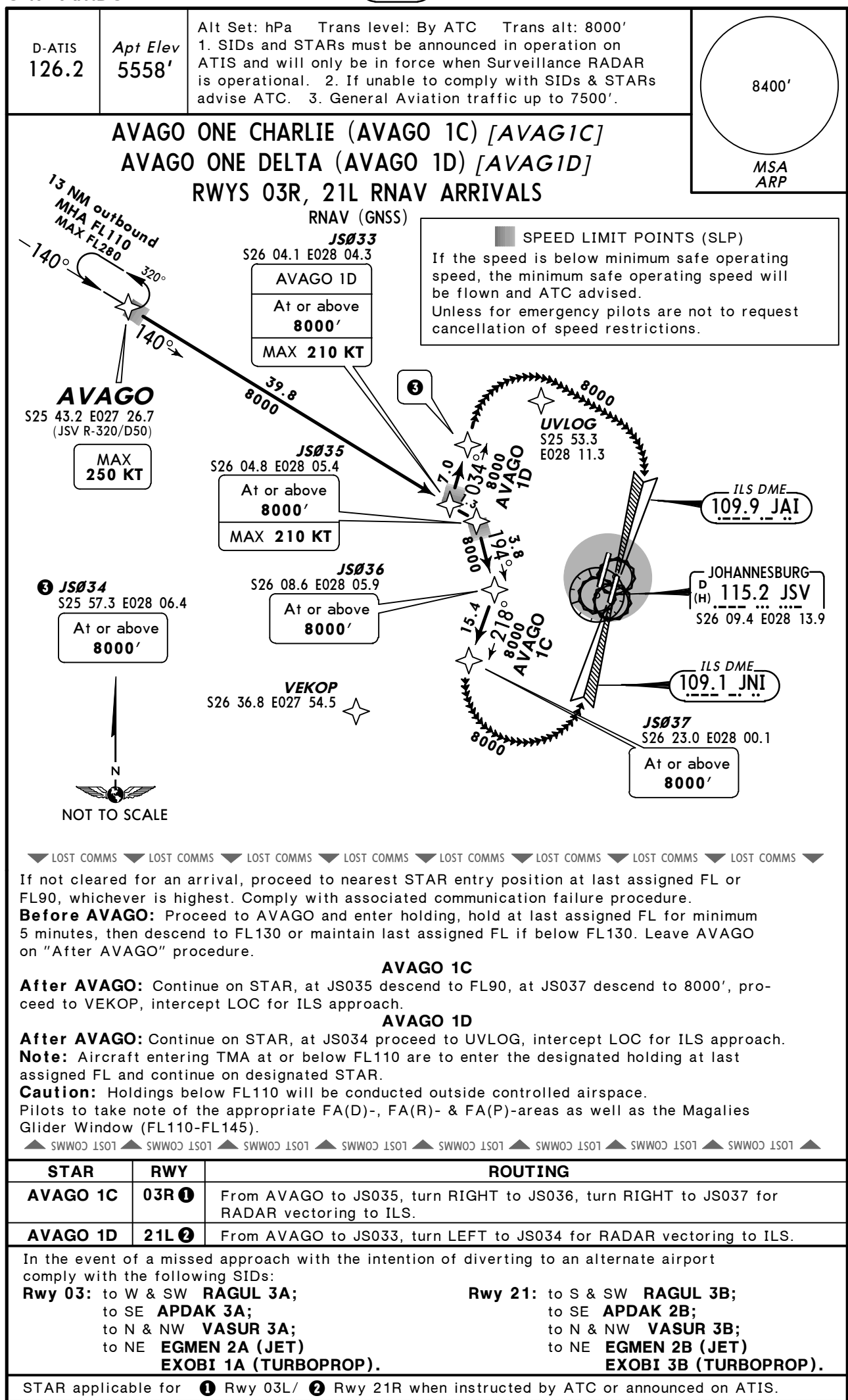
Immediately after take-off, turnouts must as far as possible be avoided and RWY heading must be maintained to a reasonable altitude.

When possible, ACFT must climb at the best angle of climb after take-off and this must be maintained until all built-up areas are overflown, or the desired altitude has been reached.

After landing reverse thrust must, as far as possible, be utilized for purposes of braking.

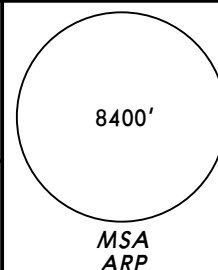
Testing and engine run-ups must, as far as possible, be avoided between 2200-0600LT.





D-ATIS
126.2Apt Elev
5558'

Alt Set: hPa Trans level: By ATC Trans alt: 8000'
1. SIDs and STARs must be announced in operation on ATIS and will only be in force when Surveillance RADAR is operational. 2. If unable to comply with SIDs & STAR advise ATC. 3. General Aviation traffic up to 7500'.



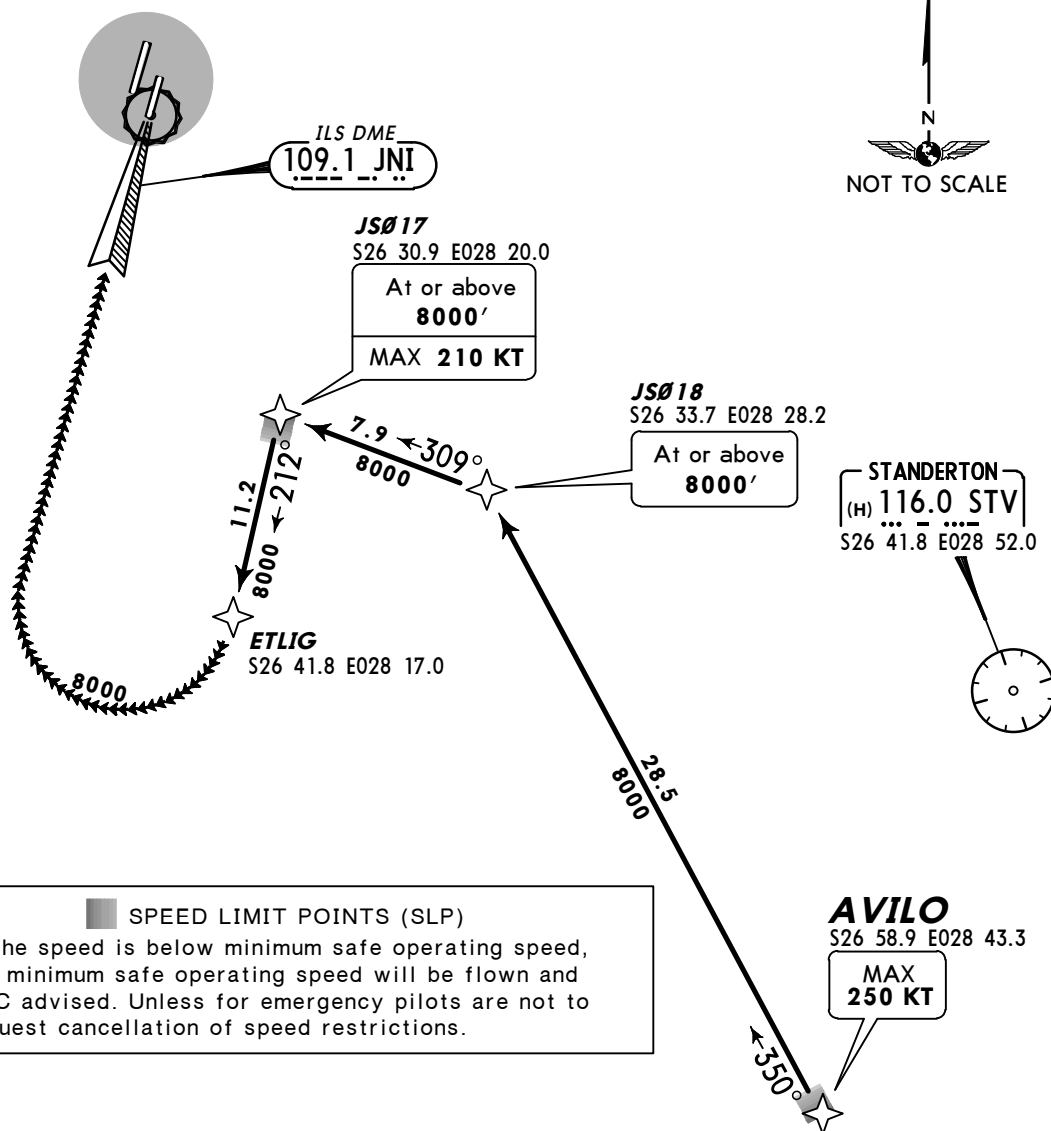
AVILO ONE BRAVO (AVILO 1B) [AVIL1B]

RWY 03R RNAV ARRIVAL

RNAV (GNSS)

STAR APPLICABLE FOR RWY 03L

WHEN INSTRUCTED BY ATC OR ANNOUNCED ON ATIS



▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

If not cleared for an arrival, proceed to nearest STAR entry position at last assigned FL or FL90, whichever is highest. Comply with associated communication failure procedure.

Before AVILO: Proceed to STV and enter holding, descend to FL240, or if below FL240, hold at last assigned FL for minimum 5 minutes. Leave STV on on "After STV" procedure.

After AVILO: Continue on STAR to ETLIG, then to JS2F1, intercept LOC for ILS approach.

Note: Aircraft entering TMA at or below FL110 are to enter the designated holding at last assigned FL and continue on designated STAR.

Caution: Holdings below FL110 will be conducted outside controlled airspace.

▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲

ROUTING

From AVILO to JS018, turn LEFT to JS017, turn LEFT to ETLIG for RADAR vetoring to ILS.

In the event of a missed approach with the intention of diverting to an alternate airport comply with the following SIDs:

Rwy 03: to S & SE **RAGUL 3A;**
to SE **APDAK 3A;**
to N & NW **VASUR 3A;**
to NE **EGMEN 2A (JET)**
EXOBI 1A (TURBOPROP).

D-ATIS
126.2Apt Elev
5558'

Alt Set: hPa Trans level: By ATC Trans alt: 8000'
1. SIDs and STARs must be announced in operation on ATIS and will only be in force when Surveillance RADAR is operational. 2. If unable to comply with SIDs & STAR advise ATC. 3. General Aviation traffic up to 7500'.

8400'

MSA
ARP

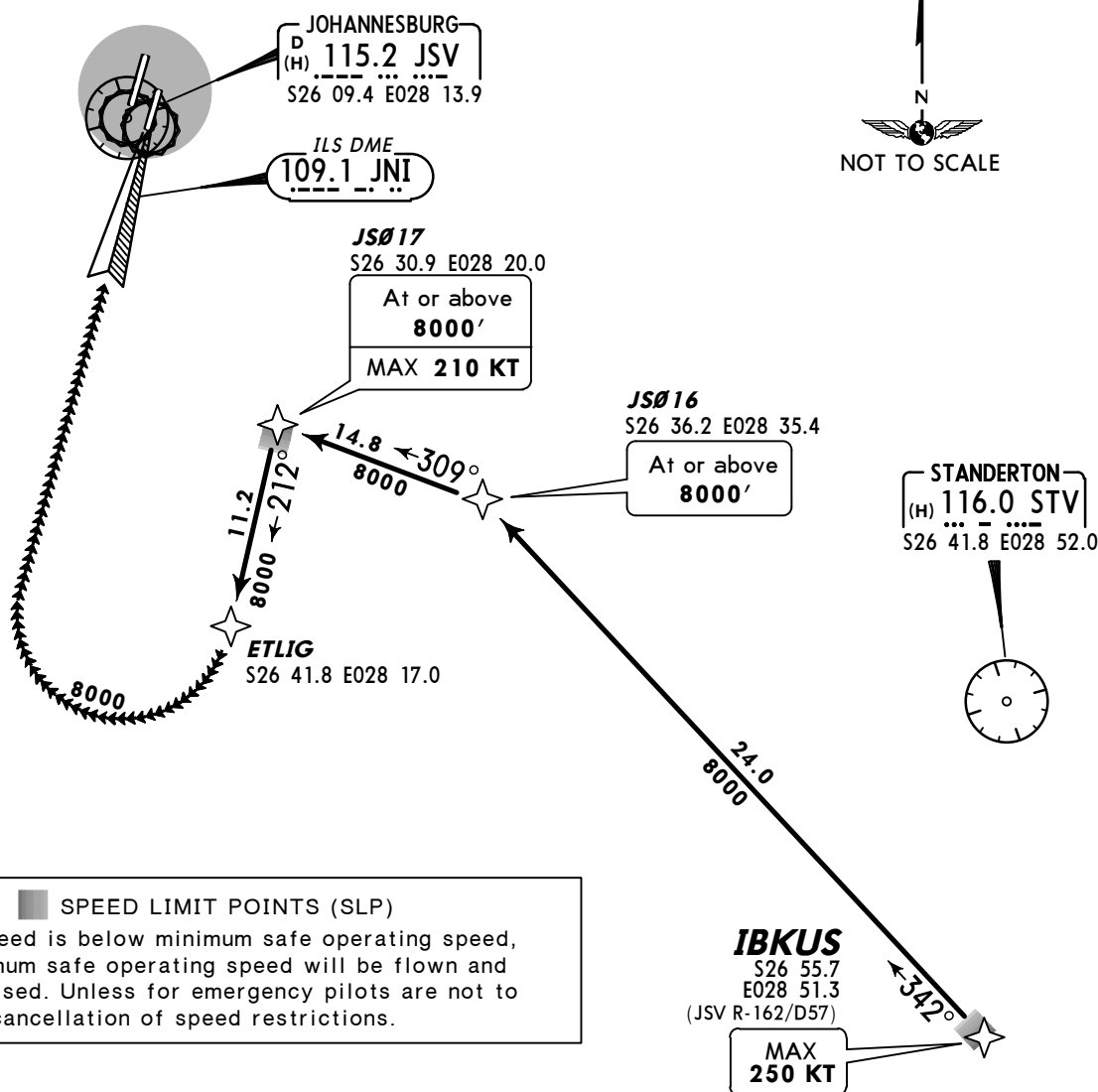
IBKUS ONE BRAVO (IBKUS 1B) [IBKU1B]

RWY 03R RNAV ARRIVAL

RNAV (GNSS)

STAR APPLICABLE FOR RWY 03L

WHEN INSTRUCTED BY ATC OR ANNOUNCED ON ATIS



SPEED LIMIT POINTS (SLP)

If the speed is below minimum safe operating speed, the minimum safe operating speed will be flown and ATC advised. Unless for emergency pilots are not to request cancellation of speed restrictions.

▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

If not cleared for an arrival, proceed to nearest STAR entry position at last assigned FL or FL90, whichever is highest. Comply with associated communication failure procedure.

Before IBKUS: Proceed to STV and enter holding, descend to FL240, or if below FL240, hold at last assigned FL for minimum 5 minutes. Leave STV on "After STV" procedure.

After IBKUS: Continue on STAR to ETLIG, then to JS2F1, intercept LOC for ILS approach.

Note: Aircraft entering TMA at or below FL110 are to enter the designated holding at last assigned FL and continue on designated STAR.

Caution: Holdings below FL110 will be conducted outside controlled airspace.

▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲ SWWOC 1S01 ▲

ROUTING

From IBKUS to JS016, turn LEFT to JS017, turn LEFT to ETLIG for RADAR vetoring to ILS.

In the event of a missed approach with the intention of diverting to an alternate airport comply with the following SIDs:

Rwy 03: to S & SE **RAGUL 3A;**
to SE **APDAK 3A;**
to N & NW **VASUR 3A;**
to NE **EGMEN 2A (JET)**
EXOBI 1A (TURBOPROP).

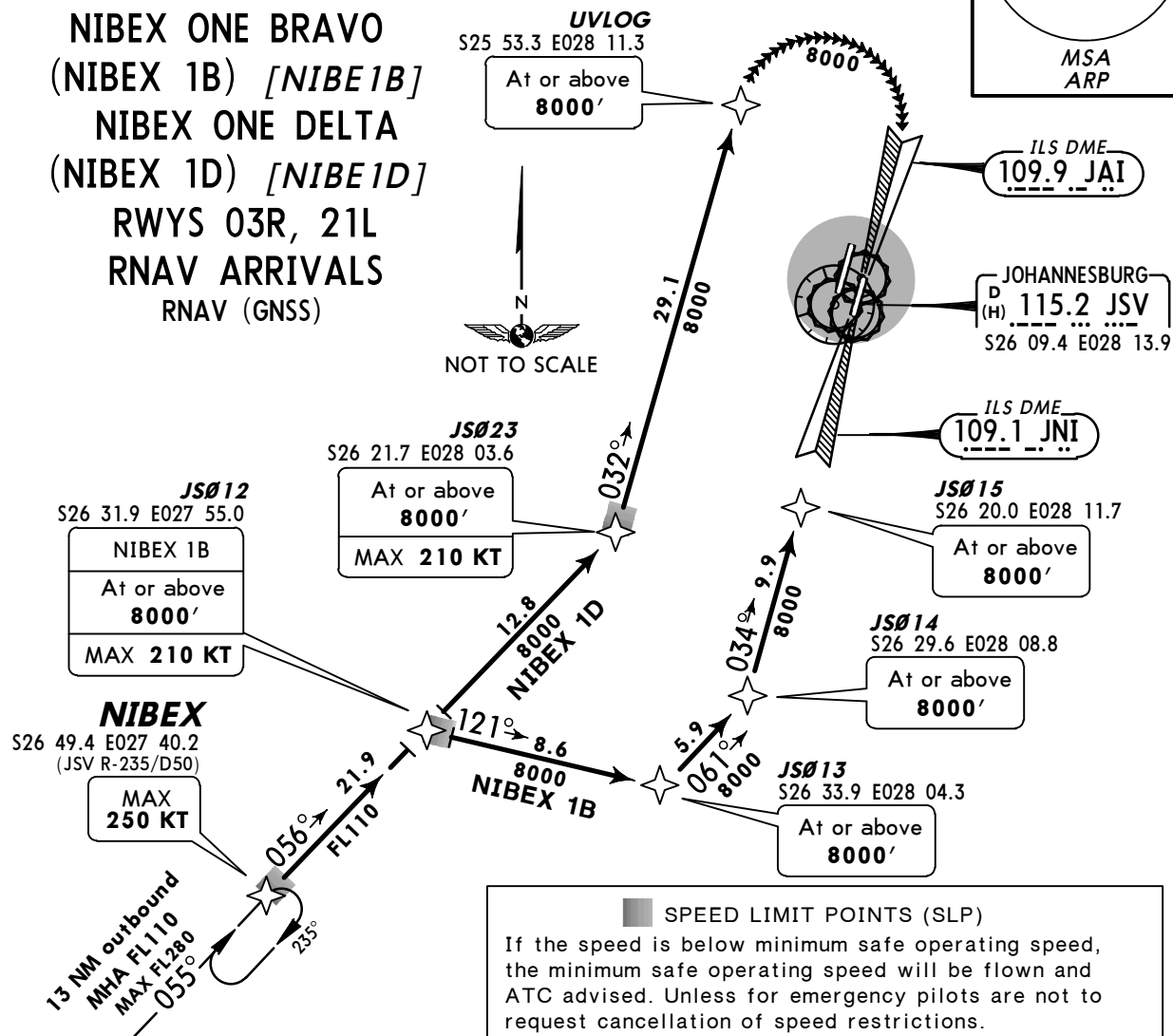
D-ATIS
126.2Apt Elev
5558'

Alt Set: hPa Trans level: By ATC Trans alt: 8000'
1. SIDs and STARs must be announced in operation on ATIS and will only be in force when Surveillance RADAR is operational. 2. If unable to comply with SIDs & STARs advise ATC. 3. General Aviation traffic up to 7500'.

8400'

MSA
ARP

NIBEX ONE BRAVO
(NIBEX 1B) [NIBE1B]
NIBEX ONE DELTA
(NIBEX 1D) [NIBE1D]
RWYS 03R, 21L
RNAV ARRIVALS
RNAV (GNSS)



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If not cleared for an arrival, proceed to nearest STAR entry position at last assigned FL or FL90, whichever is highest. Comply with associated communication failure procedure.

Before NIBEX: Proceed to NIBEX and enter holding, hold at last assigned FL for minimum 5 minutes, then descend to FL130 or maintain last assigned FL if below FL130. Leave NIBEX on "After NIBEX" procedure.

NIBEX 1B

After NIBEX: Continue on STAR to JS012 descend to FL100, then to JS013 descend to FL90, at JS014 adjust to 9000', at JS015 complete straight-in ILS approach.

NIBEX 1D

After NIBEX: Continue on STAR, at JS023 descend to FL90, at UVLOG descend to 8000', then to JS3F2, intercept ILS.

Note: Aircraft entering TMA at or below FL110 are to enter the designated holding at last assigned FL and continue on designated STAR.

Caution: Holdings below FL110 will be conducted partially outside controlled airspace.

▲ SWWOC LS01 ▲ SWWOC LS01 ▲ SWWOC LS01 ▲ SWWOC LS01 ▲ SWWOC LS01 ▲ SWWOC LS01 ▲ SWWOC LS01 ▲ SWWOC LS01 ▲

STAR	RWY	ROUTING
NIBEX 1B	03R ①	From NIBEX to JS012, turn RIGHT to JS013, turn LEFT to JS014, turn LEFT to JS015, intercept ILS.
NIBEX 1D	21L ②	From NIBEX to JS023, turn LEFT to UVLOG for RADAR vectoring to ILS.

In the event of a missed approach with the intention of diverting to an alternate airport comply with the following SIDs:

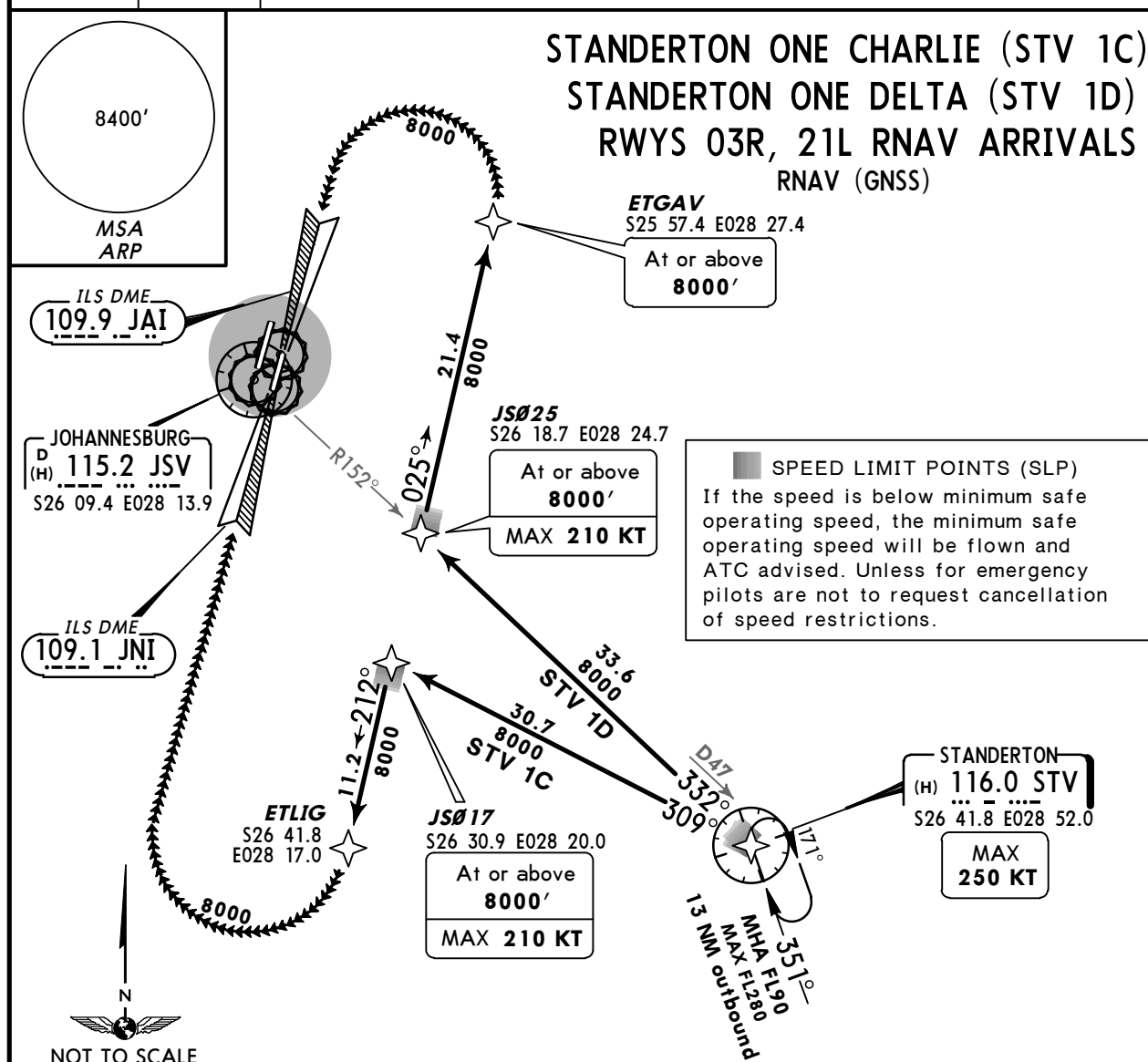
Rwy 03: to S & SE RAGUL 3A; to SE APDAK 3A; to N & NW VASUR 3A; to NE EGMEN 2A (JET) EXOBI 1A (TURBOPROP).	Rwy 21: to S & SE RAGUL 3B; to SE APDAK 2B; to N & NW VASUR 3B; to NE EGMEN 2B (JET) EXOBI 3B (TURBOPROP).
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STAR applicable for ① Rwy 03L/ ② Rwy 21R when instructed by ATC or announced on ATIS.

D-ATIS
126.2Apt Elev
5558'

Alt Set: hPa Trans level: By ATC Trans alt: 8000'

1. SIDs and STARs must be announced in operation on ATIS and will only be in force when Surveillance RADAR is operational. 2. If unable to comply with SIDs & STARs advise ATC. 3. General Aviation traffic up to 7500'.



▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

If not cleared for an arrival, proceed to nearest STAR entry position at last assigned FL or FL90 whichever is highest. Comply with associated communication failure procedure.

Before STV: Proceed to STV and enter holding, hold at last assigned FL for minimum 5 minutes, then descend to FL130 or maintain last assigned FL if below FL130. Leave STV on "After STV" procedure.

STV 1C

After STV: Continue on STAR to JS017 descend to FL130, then to ETLIG descend to 8000', then to JS2F1, intercept LOC for ILS approach.

STV 1D

After STV: Continue on STAR descend to FL130 at STV, then to JS025 descend to FL90, then to ETGAV descend to 8000', then to JS3F2, intercept ILS.

Note: Aircraft entering TMA at or below FL110 are to enter the designated holding at last assigned FL and continue on designated STAR.

Caution: Holdings below FL110 will be conducted partially outside controlled airspace.

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STAR	RWY	ROUTING
STV 1C	03R ①	From STV to JS017, turn LEFT to ETLIG for RADAR vectoring to ILS.
STV 1D	21L ②	From STV to JS025, turn RIGHT to ETGAV for RADAR vectoring to ILS.

In the event of a missed approach with the intention of diverting to an alternate airport comply with the following SIDs:

Rwy 03: to W & SW **RAGUL 3A;**

to SE **APDAK 3A;**

to N & NW **VASUR 3A;**

to E & NE **EGMEN 2A (JET)**

EXOBI 1A (TURBOPROP).

Rwy 21: to S & SW **RAGUL 3B;**

to SE **APDAK 2B;**

to N & NW **VASUR 3B;**

to NE **EGMEN 2B (JET)**

EXOBI 3B (TURBOPROP).

STAR applicable for ① Rwy 03L/ ② Rwy 21R when instructed by ATC or announced on ATIS.

RWYS 03R, 21L ARRIVALS

13 NM outbound
MHA FL110
MAX FL280

140°

D50

140°

AVAGO
S25 43.2 E027 26.7
MAX 250 KT

37
8000

D13 JSV
S26 02.6 E028 01.5
AVAGO 2B
MAX 210 KT

D10 JSV
S26 04.2 E028 04.4
MAX 210 KT

034°

AVAGO 2B

218°

AVAGO 2A

161

8000

8000

WATERKLOOF
D * 116.9 WKV
S25 50.0 E028 13.2

ILS DME
109.9 JAI

JOHANNESBURG
P (H) 115.2 JSV
S26 09.4 E028 13.9

ILS DME
109.1 JNJ

N

NOT TO SCALE

SPEED LIMIT POINTS (SLP)

If the speed is below minimum safe operating speed, the minimum safe operating speed will be flown and ATC advised.
Unless for emergency pilots are not to request cancellation of speed restrictions.

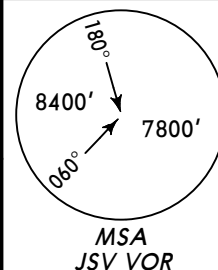
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STAR applicable for **①** Rwy 03L/ **②** Rwy 21R when instructed by ATC or announced on ATIS.

D-ATIS
126.2Apt Elev
5558'

Alt Set: hPa Trans level: By ATC Trans alt: 8000'
1. SIDs and STARs must be announced in operation on ATIS and will only be in force when Surveillance RADAR is operational. 2. If unable to comply with SIDs & STARs advise ATC. 3. General Aviation traffic up to 7500'.

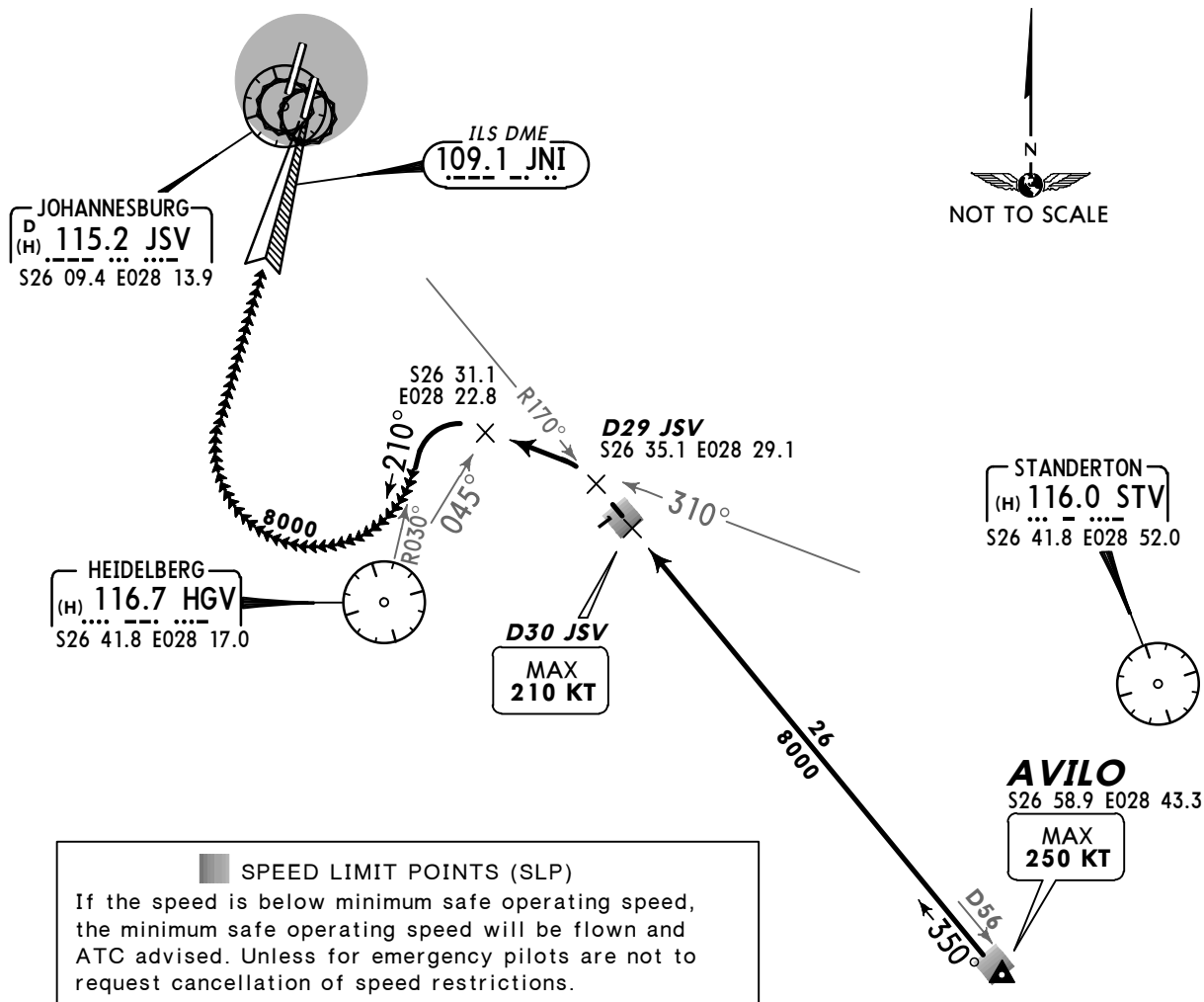


AVILO ONE ALFA (AVILO 1A) [AVIL1A]

RWY 03R ARRIVAL

STAR APPLICABLE FOR RWY 03L

WHEN INSTRUCTED BY ATC OR ANNOUNCED ON ATIS



▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

If not cleared for an arrival, proceed to nearest STAR entry position at last assigned FL or FL90, whichever is highest. Comply with associated communication failure procedure.

Before AVILO: Proceed to STV and enter holding, descend to FL240, or if below FL240, hold at last assigned FL for minimum 5 minutes. Leave STV on "After STV" procedure.

After AVILO: On JSV R-170 inbound descend to FL130, at D29 JSV turn LEFT, intercept STV R-310 descend to FL110, when passing HGV R-030 descend to 8000', when passing JSV R-197 turn RIGHT, 350° track, intercept LOC for ILS approach.

Note: Aircraft to route the STV holding in Communication Failure Procedure.

Caution: Holdings below FL110 will be conducted partially outside controlled airspace.

▲ SWW00 1501 ▲ SWW00 1501 ▲ SWW00 1501 ▲ SWW00 1501 ▲ SWW00 1501 ▲ SWW00 1501 ▲ SWW00 1501 ▲ SWW00 1501 ▲ SWW00 1501 ▲

ROUTING

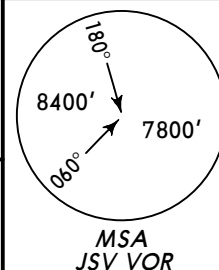
On JSV R-170 inbound to D29 JSV, turn LEFT, intercept STV R-310, when passing HGV R-045 turn LEFT, intercept HGV R-030 inbound for RADAR vectoring to ILS.

In the event of a missed approach with the intention of diverting to an alternate airport comply with the following SIDs:

Rwy 03: to W & SW **RAGUL 3A;**
to SE **APDAK 3A;**
to N & NW **VASUR 3A;**
to E & NE **EGMEN 2A (JET)**
EXOBI 1A (TURBOPROP).

D-ATIS
126.2Apt Elev
5558'

Alt Set: hPa Trans level: By ATC Trans alt: 8000'
1. SIDs and STARs must be announced in operation on ATIS and will only be in force when Surveillance RADAR is operational. 2. If unable to comply with SIDs & STAR advise ATC. 3. General Aviation traffic up to 7500'.

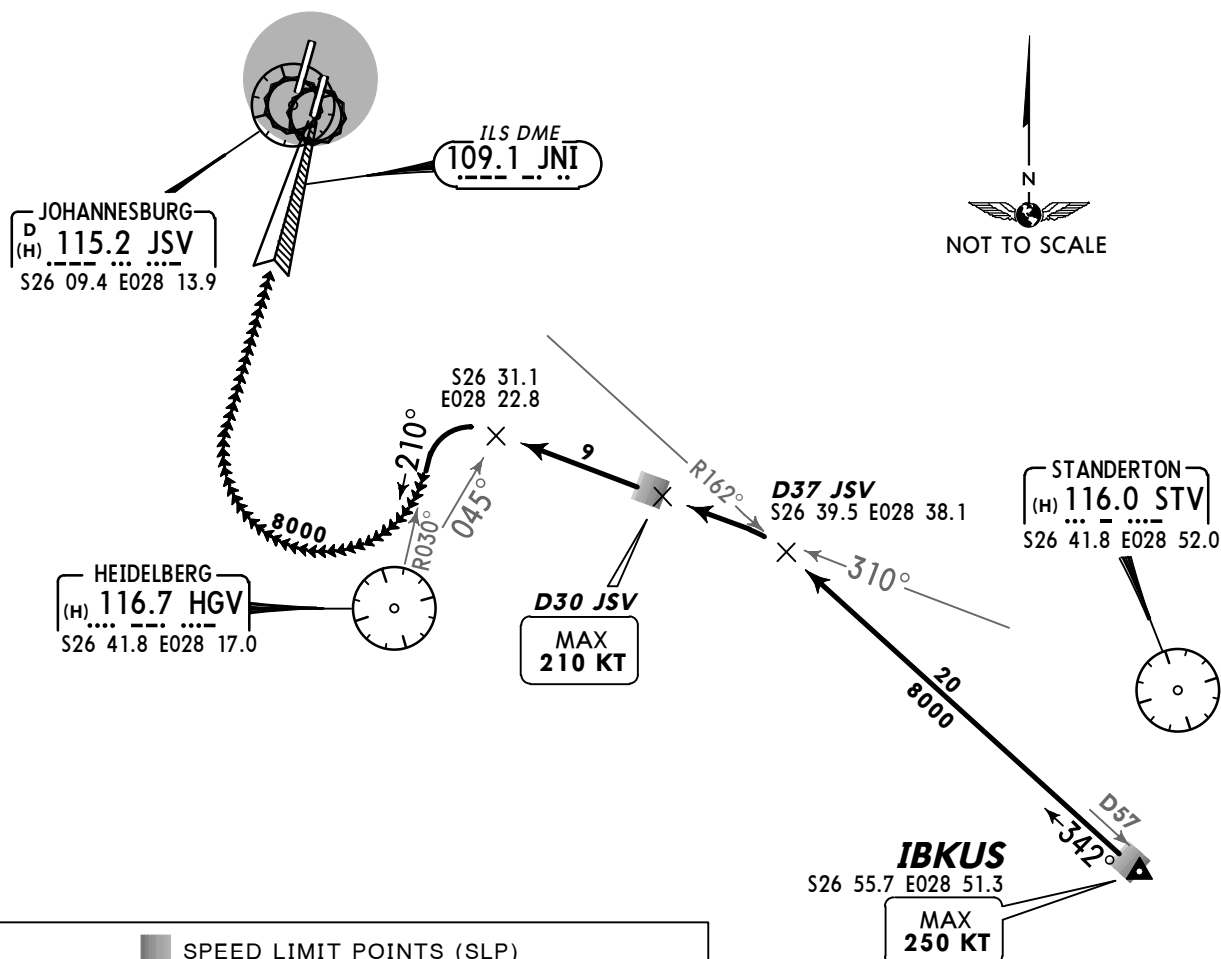


IBKUS ONE ALFA (IBKUS 1A) [IBKU1A]

RWY 03R ARRIVAL

STAR APPLICABLE FOR RWY 03L

WHEN INSTRUCTED BY ATC OR ANNOUNCED ON ATIS



SPEED LIMIT POINTS (SLP)

If the speed is below minimum safe operating speed, the minimum safe operating speed will be flown and ATC advised. Unless for emergency pilots are not to request cancellation of speed restrictions.

▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

If not cleared for an arrival, proceed to nearest STAR entry position at last assigned FL or FL90, whichever is highest. Comply with associated communication failure procedure.

Before IBKUS: Proceed to STV and enter holding, descend to FL240, or if below FL240, hold at last assigned FL for minimum 5 minutes. Leave STV on on "After STV" procedure.

After IBKUS: On JSV R-162 inbound descend to FL130, at D37 JSV turn LEFT, intercept STV R-310 descend to FL110, when passing HGV R-030 descend to 8000', when passing JSV R-197 turn RIGHT, 350° track, intercept LOC for ILS approach.

Note: Aircraft to route to STV holding in Communication Failure Procedure before IBKUS.

Caution: Holdings below FL110 will be conducted partially outside controlled airspace.

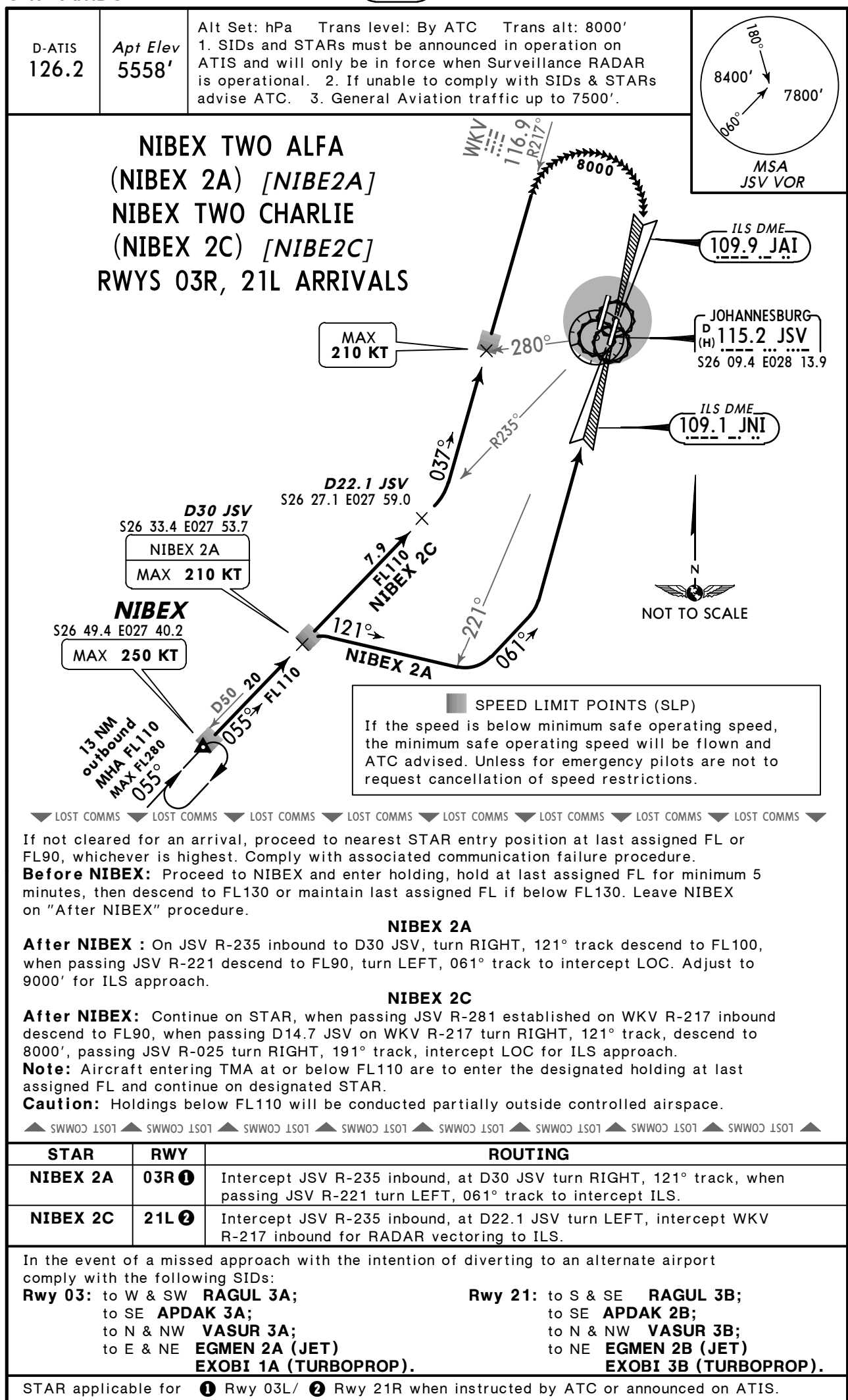
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ROUTING

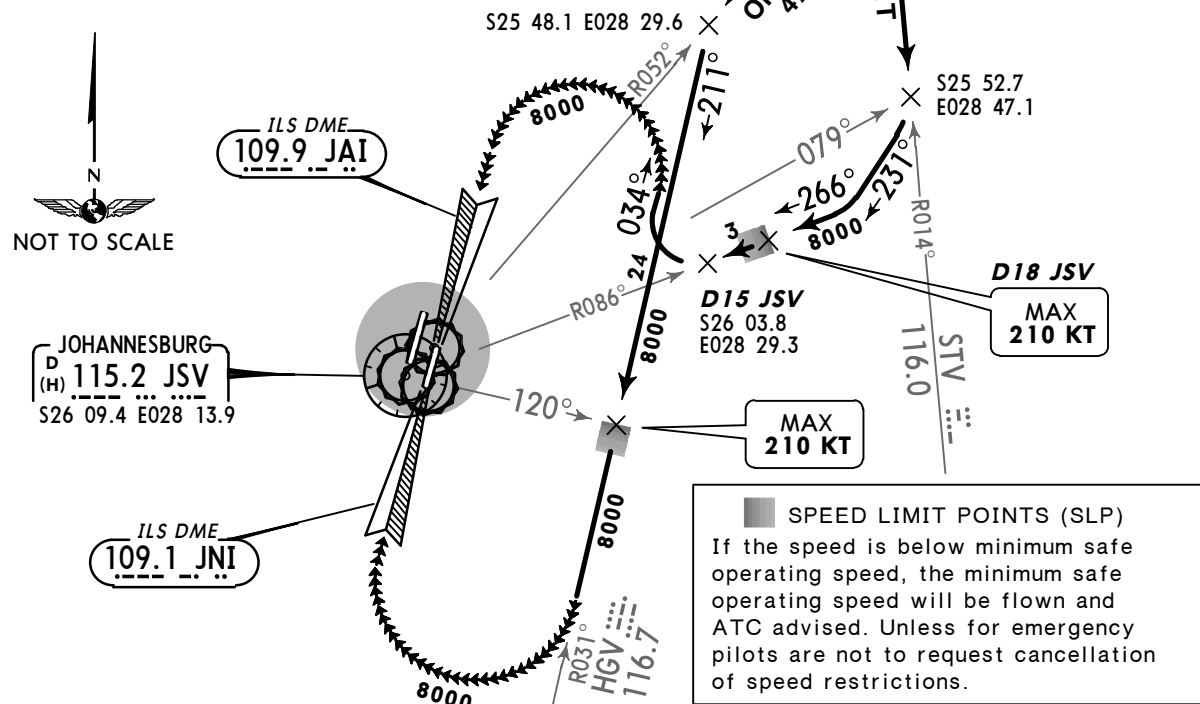
On JSV R-162 inbound to D37 JSV, turn LEFT, intercept STV R-310, when passing HGV R-045 turn LEFT, intercept HGV R-030 inbound for RADAR vectoring to ILS.

In the event of a missed approach with the intention of diverting to an alternate airport comply with the following SIDs:

Rwy 03: to W & SW **RAGUL 3A;**
to SE **APDAK 3A;**
to N & NW **VASUR 3A;**
to E & NE **EGMEN 2A (JET)**
EXOBI 1A (TURBOPROP).



**3 MHA FL110
MAX FL280**



▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

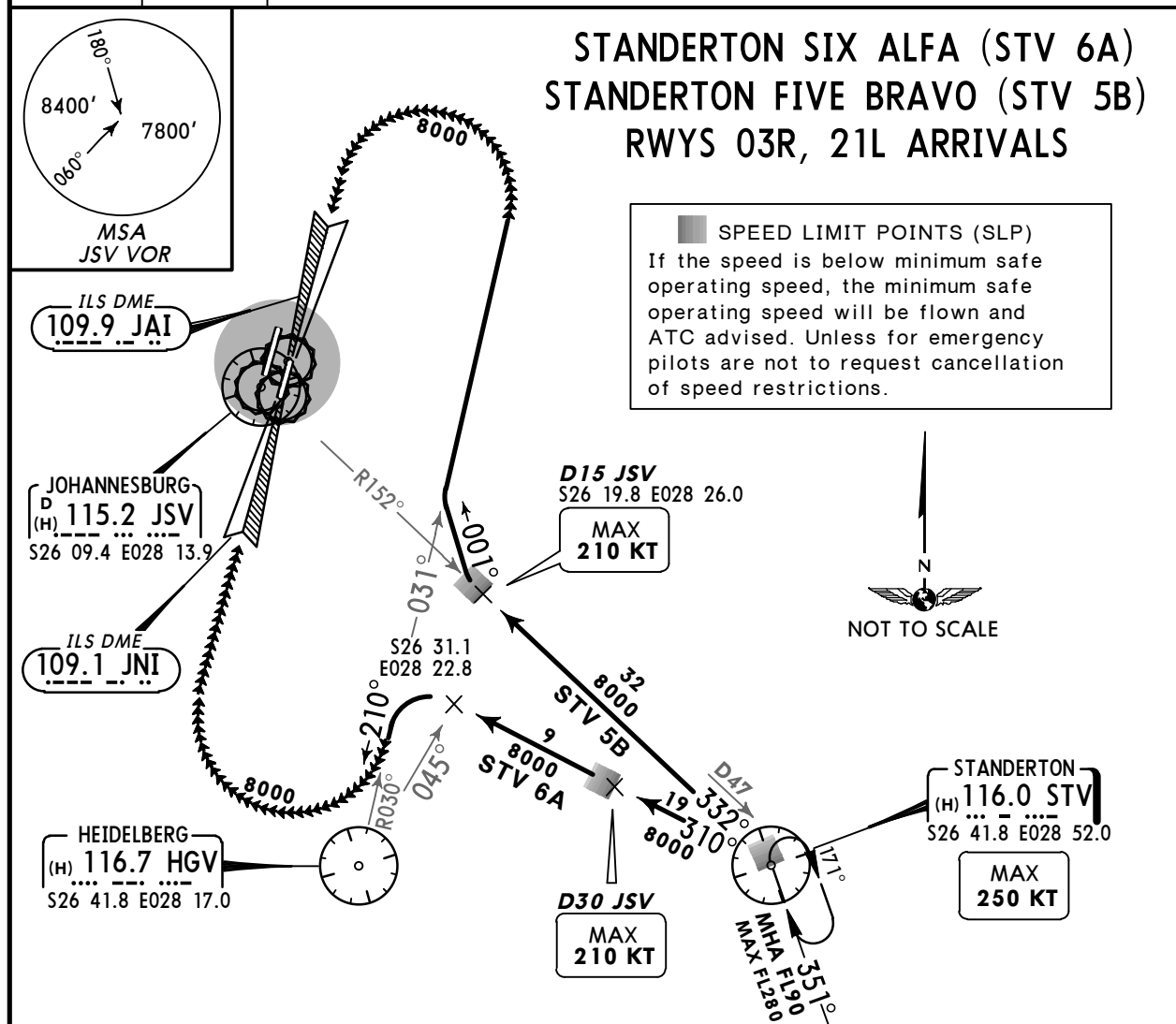
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D-ATIS
126.2Apt Elev
5558'

Alt Set: hPa Trans level: By ATC Trans alt: 8000'

1. SIDs and STARs must be announced in operation on ATIS and will only be in force when Surveillance RADAR is operational. 2. If unable to comply with SIDs & STARs advise ATC. 3. General Aviation traffic up to 7500'.



▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

If not cleared for an arrival, proceed to nearest STAR entry position at last assigned FL or FL90 whichever is highest. Comply with associated communication failure procedure.

Before STV: Proceed to STV and enter holding, hold at last assigned FL for minimum 5 minutes, then descend to FL130 or maintain last assigned FL if below FL130. Leave STV on "After STV" procedure.

STV 6A

After STV: On STV R-310 descend to FL130, when passing JSV R-197 turn RIGHT, 350° track descend to 8000', intercept LOC for ILS approach.

STV 5B

After STV: Continue on STAR, when passing D18 JSV on JSV R-152 inbound descend to FL90, when established on HGV R-031 and passing D15 JSV turn LEFT, 301° track, descend to 8000', when passing JSV R-041 turn LEFT, 241° track to intercept LOC for ILS approach.

Note: Aircraft entering TMA at or below FL110 are to enter the designated holding at last assigned FL and continue on designated STAR.

Caution: Holdings below FL110 will be conducted partially outside controlled airspace.

▲ SSWWOC 1SOT ▲ SSWWOC 1SOT ▲ SSWWOC 1SOT ▲ SSWWOC 1SOT ▲ SSWWOC 1SOT ▲ SSWWOC 1SOT ▲ SSWWOC 1SOT ▲ SSWWOC 1SOT ▲

STAR	RWY	ROUTING
STV 6A	03R ①	On STV R-310, when passing HGV R-045 turn LEFT, intercept HGV R-030 inbound for RADAR vectoring to ILS.
STV 5B	21L ②	Intercept JSV R-152 inbound, at D15 JSV turn RIGHT, 001° track, intercept HGV R-031 for RADAR vectoring to ILS.

In the event of a missed approach with the intention of diverting to an alternate airport comply with the following SIDs:

Rwy 03: to W & SW **RAGUL 3A;**

to SE **APDAK 3A;**

to N & NW **VASUR 3A;**

to E & NE **EGMEN 2A (JET)**

EXOBI 1A (TURBOPROP).

Rwy 21: to S & SW **RAGUL 3B;**

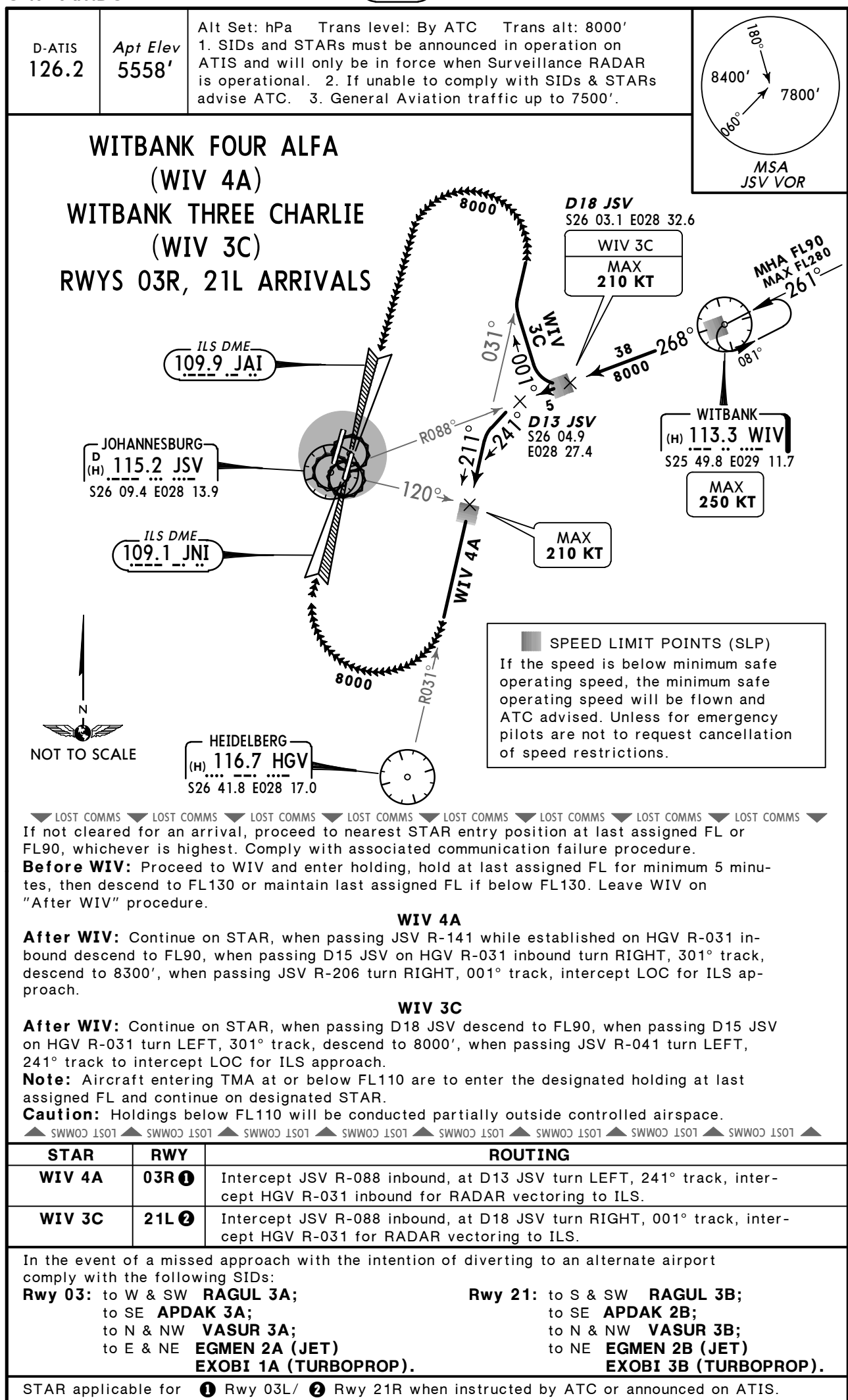
to SE **APDAK 2B;**

to N & NW **VASUR 3B;**

to NE **EGMEN 2B (JET)**

EXOBI 3B (TURBOPROP).

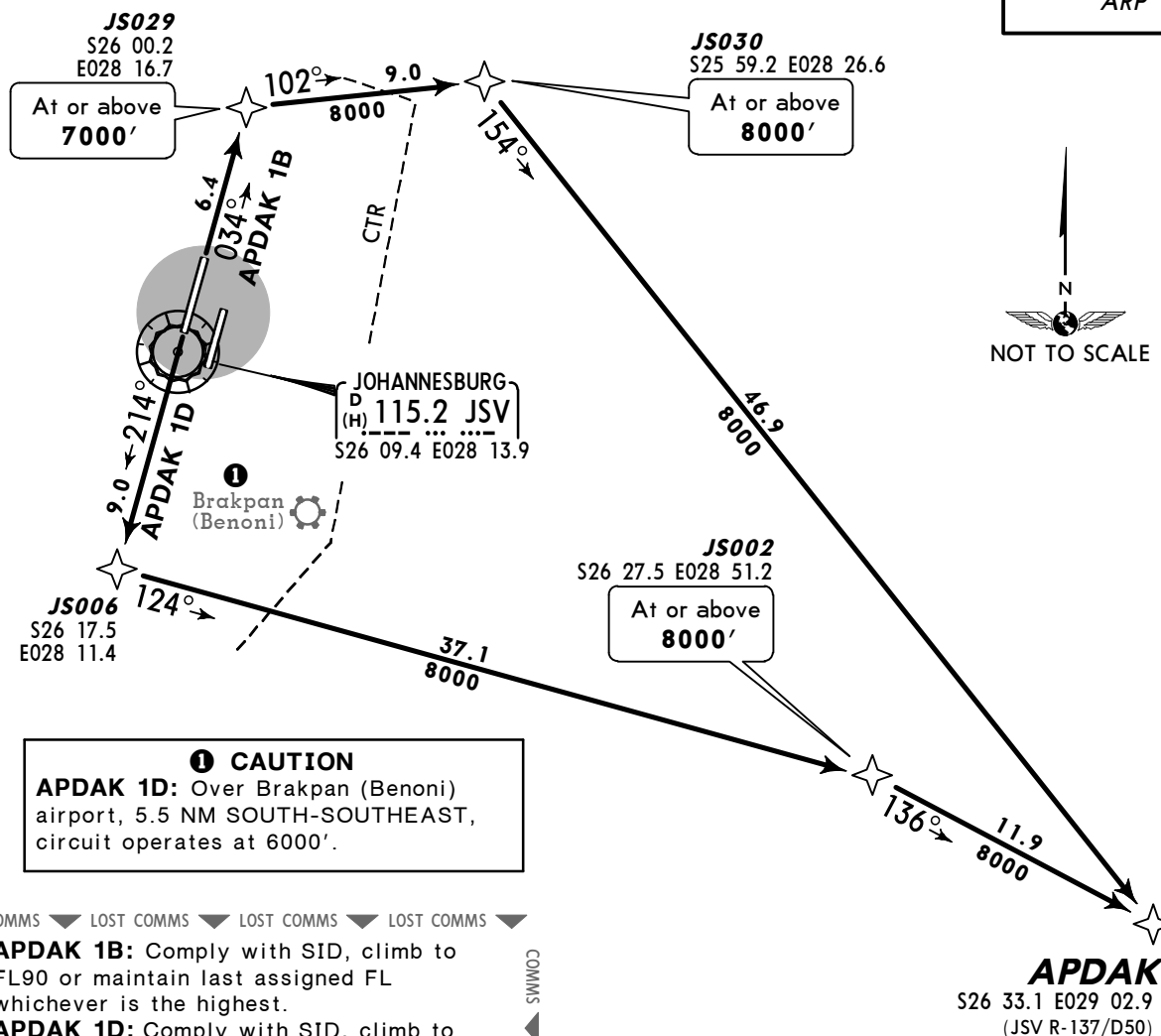
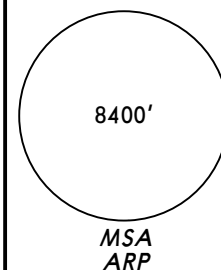
STAR applicable for ① Rwy 03L/ ② Rwy 21R when instructed by ATC or announced on ATIS.



Apt Elev
5558'

Trans level: By ATC Trans alt: 8000'
 1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.

APDAK ONE BRAVO (APDAK 1B) [APDA1B]
 APDAK ONE DELTA (APDAK 1D) [APDA1D]
 RWYS 03L, 21R RNAV DEPARTURES
 RNAV (GNSS)
~~SPEED~~ MAX 250 KT AT OR BELOW FL100



COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

APDAK 1B: Comply with SID, climb to FL90 or maintain last assigned FL whichever is the highest.
APDAK 1D: Comply with SID, climb to 8400' or maintain last assigned FL whichever is the highest.
Both SIDs: At APDAK continue as per flight plan and climb to flight plan level. Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if the last cleared FL is below MSA.
 Then proceed to STV and comply with STAR STV 6A (Rwy 03R)/STV 5B (Rwy 21L) communication failure procedure.

▲ SWWOC JS01 ▲ SWWOC JS01 ▲ SWWOC JS01 ▲ SWWOC JS01

COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

These SIDs require minimum climb gradients of

APDAK 1B: 4.1% up to FL90.
APDAK 1D: 3.8% up to CTR boundary.

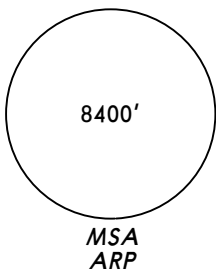
Gnd speed-KT	75	100	150	200	250	300
4.1% V/V(fpm)	311	415	623	830	1038	1246
3.8% V/V(fpm)	289	385	577	770	962	1155

APDAK 1B: Climb to **FL90**, further climb under radar control
APDAK 1D: Climb to **8000'**, further climb under radar control

SID	RWY	ROUTING
APDAK 1B	03L	Climb on runway track to JS029, turn RIGHT to JS030, turn RIGHT to APDAK, then as per flight plan.
APDAK 1D	21R	Climb on runway track to JS006, turn LEFT to JS002, turn RIGHT to APDAK, then as per flight plan.

Apt Elev
5558'

Trans level: By ATC Trans alt: 8000'
 1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.



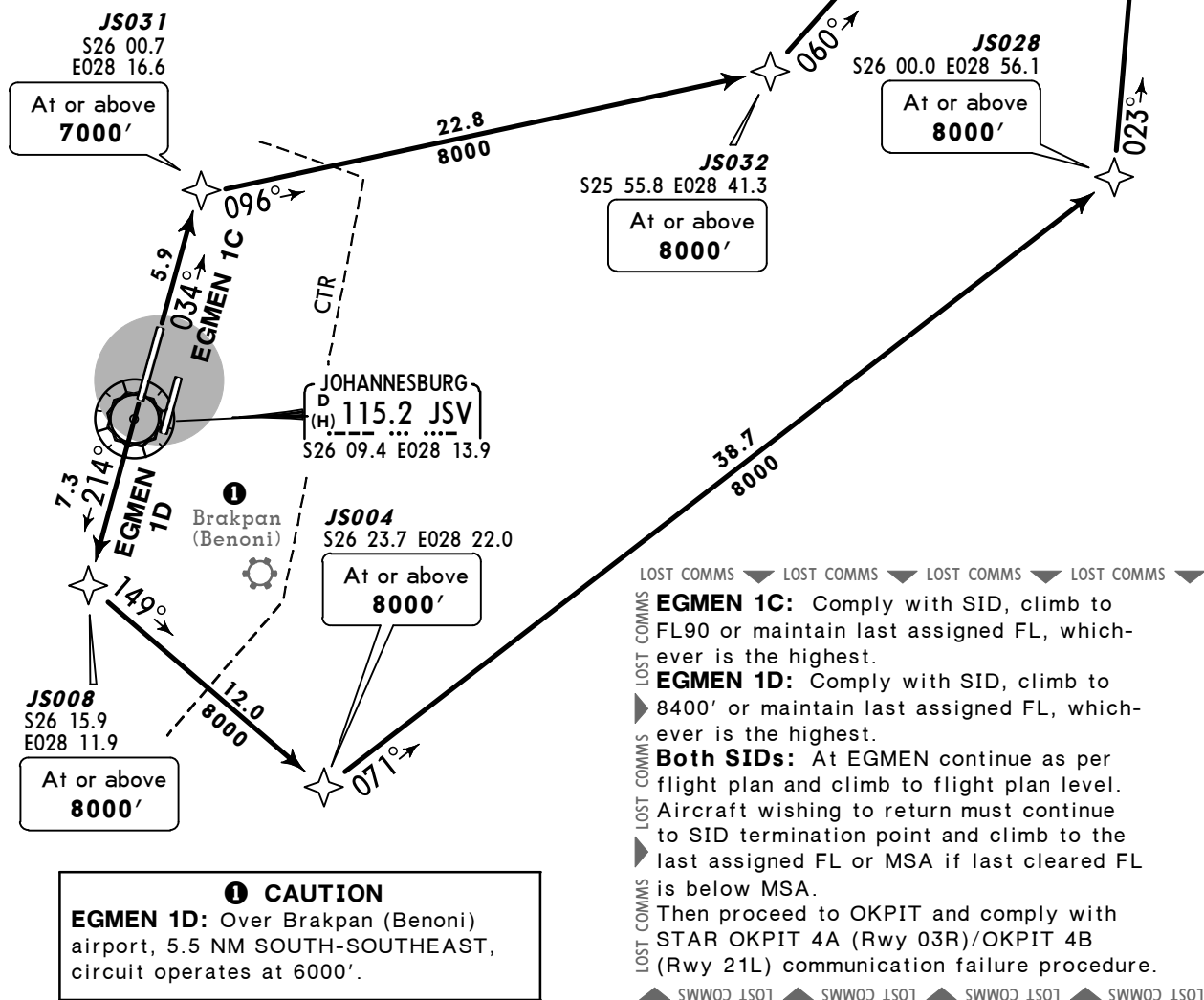
EGMEN ONE CHARLIE (EGMEN 1C) [EGME1C]
EGMEN ONE DELTA (EGMEN 1D) [EGME1D]
RWYS 03L, 21R DEPARTURES
RNAV (GNSS)
~~SPEED~~ MAX 250 KT AT OR BELOW FL100

EGMEN
 S25 38.8
 E028 58.1

These SIDs require minimum climb gradients of

EGMEN 1C: 4.1% up to CTR boundary.
EGMEN 1D: 3.8% up to CTR boundary.

Gnd speed-KT	75	100	150	200	250	300
4.1% V/V(fpm)	311	415	623	830	1038	1246
3.8% V/V(fpm)	289	385	577	770	962	1155



Climb to **FL90**, further climb under radar control

SID	RWY	ROUTING
EGMEN 1C	03L	Climb on runway track to JS031, turn RIGHT to JS032, turn LEFT to EGMEN, then as per flight plan.
EGMEN 1D	21R	Climb on runway track to JS008, turn LEFT to JS004, turn LEFT to JS028, turn LEFT to EGMEN, then as per flight plan.

Apt Elev
5558'

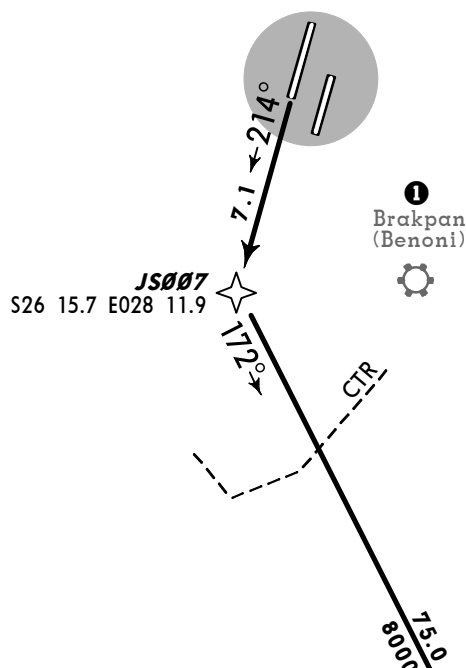
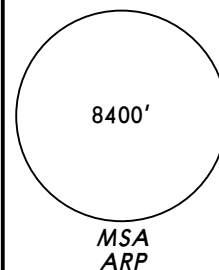
Trans level: By ATC Trans alt: 8000'
1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS. 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.

GEROX ONE CHARLIE (GEROX 1C) [GERO1C]

RWY 21R RNAV DEPARTURE

RNAV (GNSS)

~~SPEED~~ MAX 250 KT AT OR BELOW FL100



CAUTION

Over Brakpan (Benoni) airport,
5.5 NM SOUTH-SOUTHEAST, circuit
operates at 6000'.

GEROX

S27 22.8 E028 49.7

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

► Comply with SID, climb to 8400' or maintain last assigned FL, whichever is the highest. At GEROX continue as per flight plan and climb to flight plan level. Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if last cleared FL is below MSA. Then proceed to STV and enter holding, descend to FL240, if below FL240, hold at last assigned FL for minimum 5 minutes, comply with STAR STV 5B communication failure procedure.

▲ SWWOC 1501 ▲ SWWOC 1501 ▲ SWWOC 1501 ▲ SWWOC 1501

This SID requires a minimum climb gradient of 4.2% up to CTR boundary.

Gnd speed-KT	75	100	150	200	250	300
4.2% V/V(fpm)	319	425	638	851	1063	1276

Climb to **8000'**, further climb under radar control

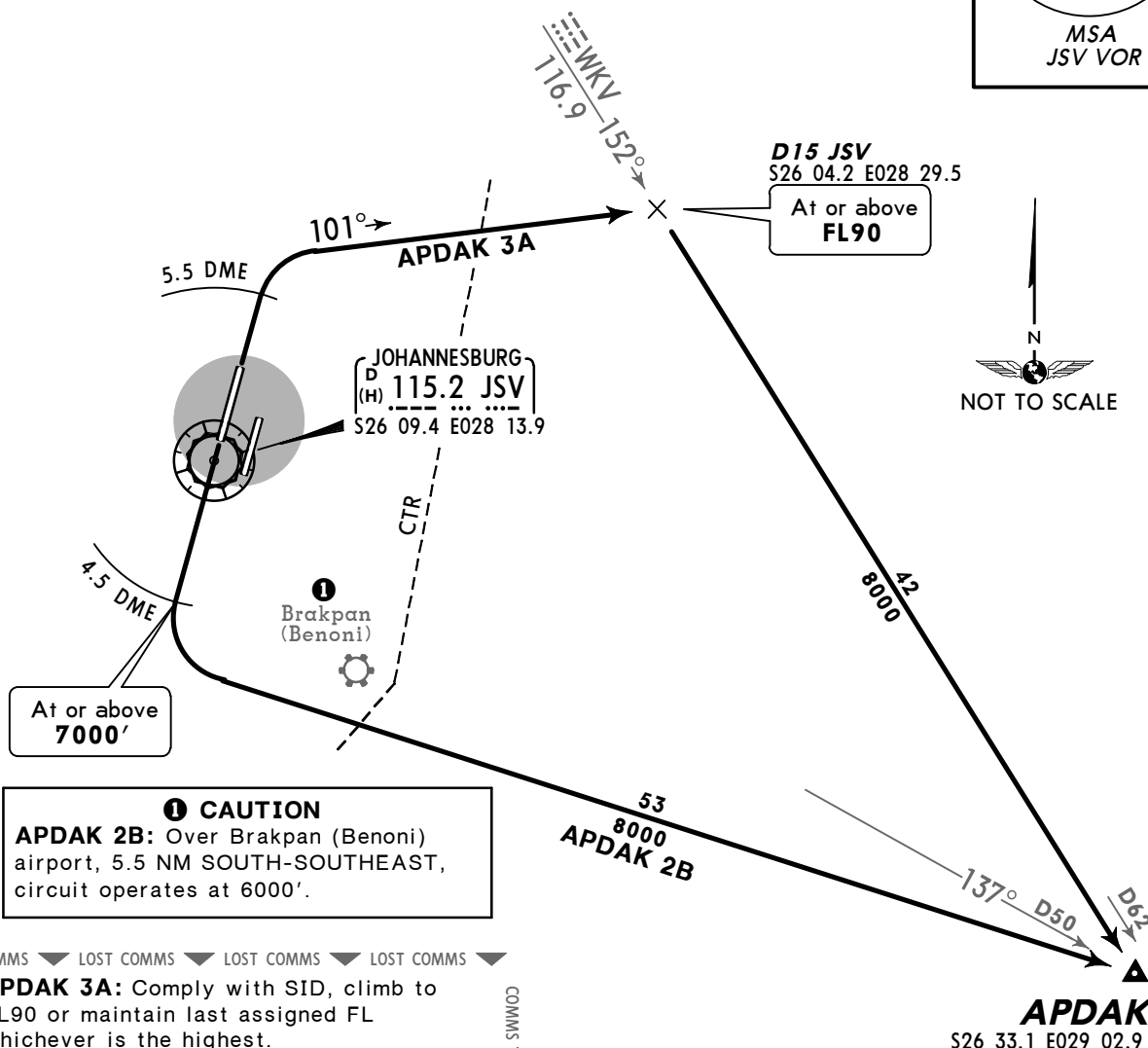
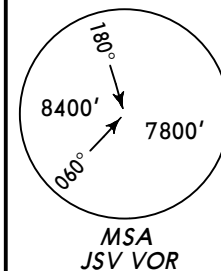
ROUTING

Climb on runway track to JS007, turn LEFT to GEROX, then as per flight plan.

Apt Elev
5558'

Trans level: By ATC Trans alt: 8000'
 1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS. 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.

APDAK THREE ALFA (APDAK 3A) [APDA3A]
 APDAK TWO BRAVO (APDAK 2B) [APDA2B]
 RWYS 03L, 21R DEPARTURES
~~SPEED~~ MAX 250 KT AT OR BELOW FL100



COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

APDAK 3A: Comply with SID, climb to FL90 or maintain last assigned FL whichever is the highest.

APDAK 2B: Comply with SID, climb to 8300' or maintain last assigned FL whichever is the highest.

Both SIDs: At APDAK continue as per flight plan and climb to flight plan level. Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if last cleared FL is below MSA.

Then proceed to STV and comply with appropriate STAR communication failure procedure.

▲ SSWWOC 1S01 ▲ SSWWOC 1S01 ▲ SSWWOC 1S01 ▲ SSWWOC

COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲

These SIDs require minimum climb gradients of

APDAK 3A: 4.5% up to CTR boundary.

APDAK 2B: 4.2% up to CTR boundary.

Gnd speed-KT	75	100	150	200	250	300
4.5% V/V(fpm)	342	456	684	911	1139	1367
4.2% V/V(fpm)	319	425	638	851	1063	1276

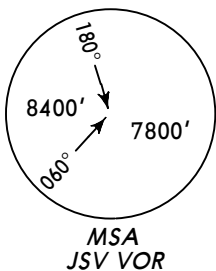
APDAK 3A: Climb to **FL90**, further climb under radar control
APDAK 2B: Climb to **8000'**, further climb under radar control

SID	RWY	ROUTING
APDAK 3A	03L	Climb on runway track to JSV 5.5 DME, turn RIGHT, 101° track, intercept WKV R-152 to APDAK.
APDAK 2B	21R	Climb on runway track to JSV 4.5 DME, turn LEFT to APDAK, then as per flight plan.

Apt Elev
5558'

Trans level: By ATC Trans alt: 8000'

1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.



EGMEN TWO ALFA (EGMEN 2A) [EGME2A]
EGMEN TWO BRAVO (EGMEN 2B) [EGME2B]
RWYS 03L, 21R DEPARTURES
~~SPEED~~ MAX 250 KT AT OR BELOW FL100

EGMEN
S25 38.8
E028 58.1

CAUTION
EGMEN 2B: Over Brakpan (Benoni) airport, 5.5 NM SOUTH-SOUTHEAST, circuit operates at 6000'.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

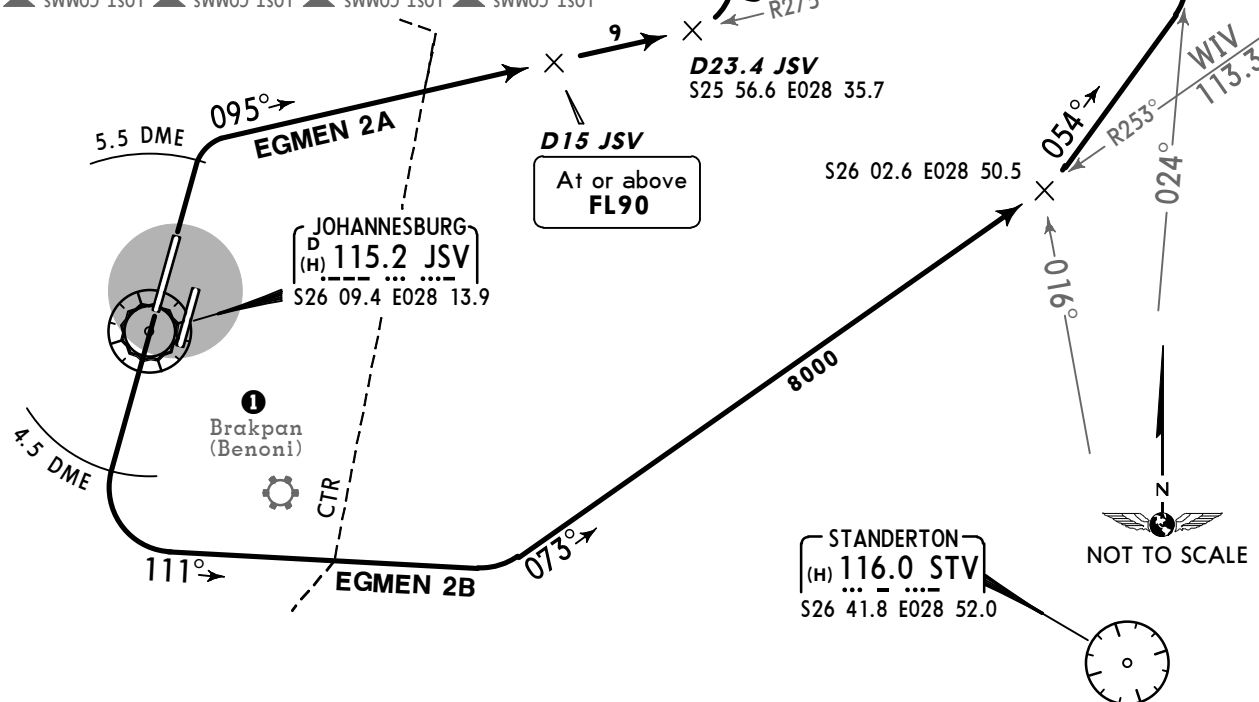
EGMEN 2A: Comply with SID, climb to FL90 or maintain last assigned FL, whichever is the highest.

EGMEN 2B: Comply with SID, climb to 8300' or maintain last assigned FL, whichever is the highest.

Both SIDs: At EGMEN continue as per flight plan and climb to flight plan level. Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if last cleared FL is below MSA.

Then proceed to OKPIT and comply with STAR OKPIT 4A (Rwy 03R)/OKPIT 4B (Rwy 21L) communication failure procedure.

▲ SSWWOC 1S01 ▲ SSWWOC 1S01 ▲ SSWWOC 1S01 ▲ SSWWOC 1S01



These SIDs require minimum climb gradients of

EGMEN 2A: 4.5% up to CTR boundary.

EGMEN 2B: 4.3% up to CTR boundary.

Gnd speed-KT	75	100	150	200	250	300
4.5% V/V(fpm)	342	456	684	911	1139	1367
4.3% V/V(fpm)	327	435	653	871	1089	1306

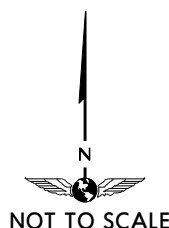
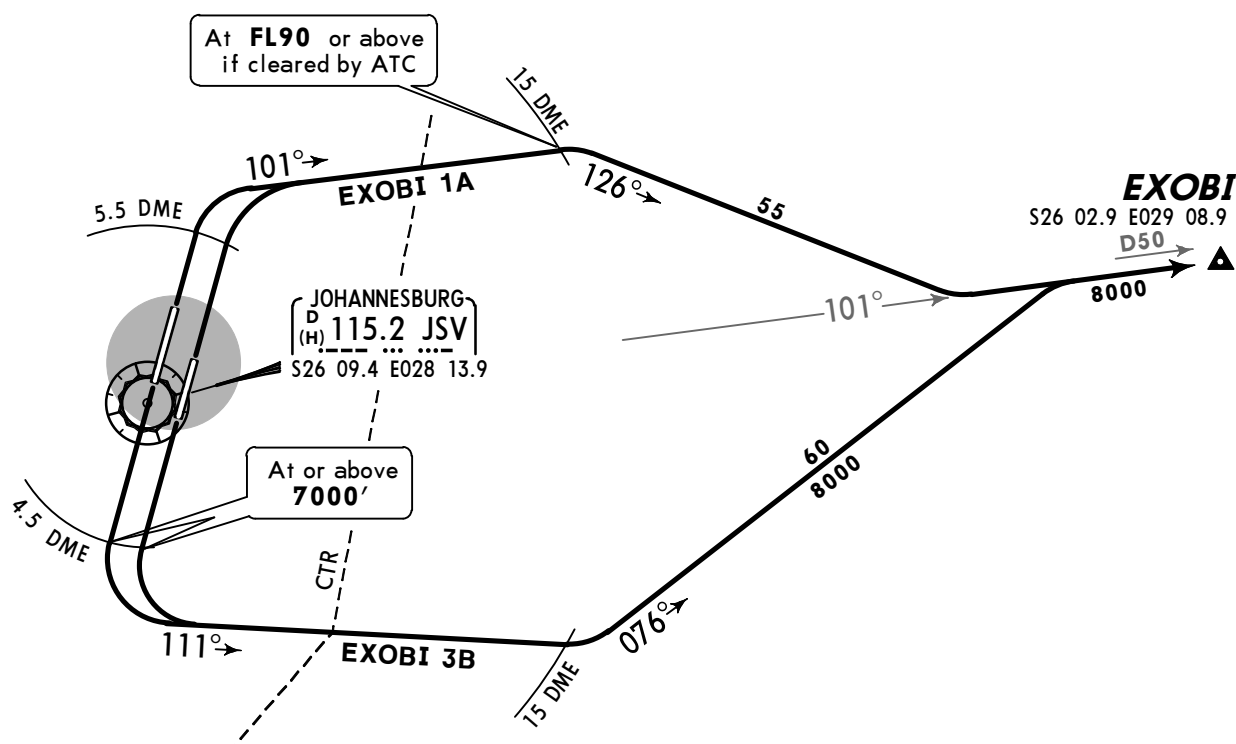
EGMEN 2A: Climb to **FL90**, further climb under radar control
EGMEN 2B: Climb to **8000'**, further climb under radar control

SID	RWY	ROUTING
EGMEN 2A	03L	Climb on runway track to JSV 5.5 DME, turn RIGHT, intercept WIV R-275 inbound to D23.4 JSV, turn LEFT, 030° track, intercept JSV R-070 to EGMEN.
EGMEN 2B	21R	Climb on runway track to JSV 4.5 DME, turn LEFT, 111° track, intercept WIV R-253 inbound, when passing STV R-016 turn LEFT, 054° track, intercept STV R-024 to EGMEN.

Trans level: By ATC Trans alt: 8000'

1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.

MSA
JSV VOR



Gnd speed-KT	75	100	150	200	250	300
4.2% V/V(fpm)	319	425	638	851	1063	1276

COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

EXOB1 1A: Comply with SID, climb to FL90 or maintain last assigned FL, whichever is the highest.

EXOB1 3B: Comply with SID, climb to 8300' or maintain last assigned FL, whichever is the highest.

Both SIDs: At EXOBI continue as per flight plan and climb to flight plan level. Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if last cleared FL is below MSA.

Then proceed to WIV and comply with STAR WIV 4A (Rwy 03R)/WIV 3C (Rwy 21L) communication failure procedure.

▲ SWW02 ISO1 ▲ SWW02 ISO1 ▲ SWW02 ISO1 ▲ SWW02

EXOB1 1A: Climb to **FL90**, further climb under radar control
EXOB1 3B: Climb to **8000'**, further climb under radar control

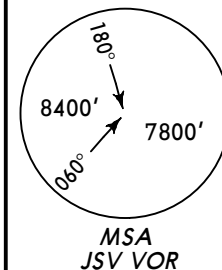
SID	RWY	ROUTING
EXOBI 1A	03L/R	Climb on runway track to JSV 5.5 DME, turn RIGHT, 101° track to JSV 15 DME, turn RIGHT, 126° track, intercept JSV R-101 to EXOBI, then as per flight plan.
EXOBI 3B	21L/R	Climb on runway track to JSV 4.5 DME, turn LEFT, 111° track to JSV 15 DME, turn LEFT, 076° track, intercept JSV R-101 to EXOBI, then as per flight plan.

Apt Elev
5558'

Trans level: By ATC Trans alt: 8000'

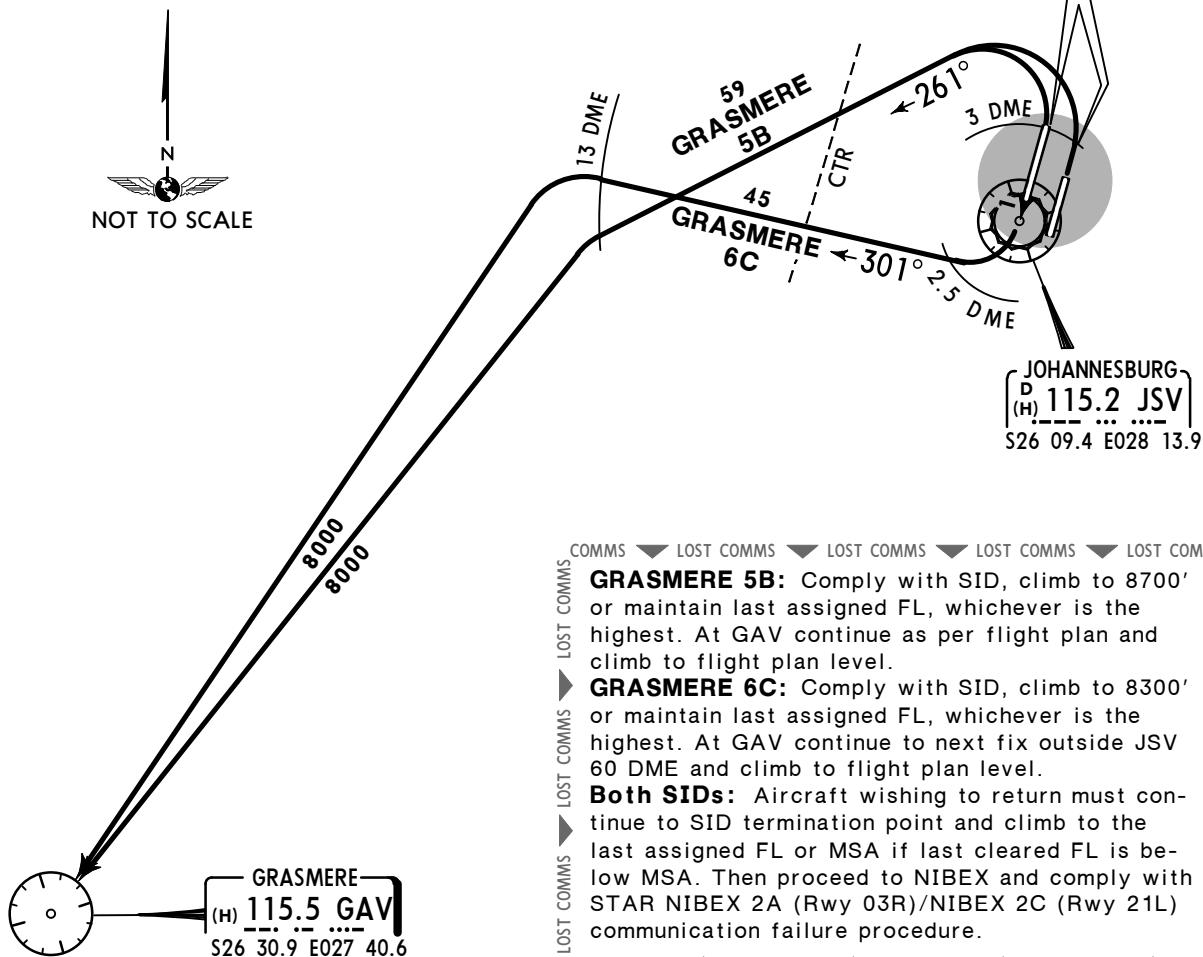
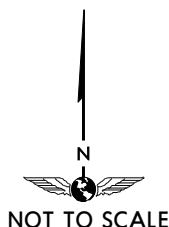
1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.

GRASMERE FIVE BRAVO (GRASMERE 5B) [GAV5B]
GRASMERE SIX CHARLIE (GRASMERE 6C) [GAV6C]
RWYS 03L/R, 21R DEPARTURES
TURBO-PROP AIRCRAFT ONLY
SPEED: MAX 250 KT AT OR BELOW FL100



CAUTION
GRASMERE 6C: Aircraft must remain well clear of obstacle west of airport.

At JSV 3 DME
or 6100'
whichever is later



COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

GRASMERE 5B: Comply with SID, climb to 8700' or maintain last assigned FL, whichever is the highest. At GAV continue as per flight plan and climb to flight plan level.

GRASMERE 6C: Comply with SID, climb to 8300' or maintain last assigned FL, whichever is the highest. At GAV continue to next fix outside JSV 60 DME and climb to flight plan level.

Both SIDs: Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if last cleared FL is below MSA. Then proceed to NIBEX and comply with STAR NIBEX 2A (Rwy 03R)/NIBEX 2C (Rwy 21L) communication failure procedure.

SWW003 1501 ▲ SWW003 1501 ▲ SWW003 1501 ▲ SWW003 1501 ▲ SWW003

These SIDs require minimum climb gradients of

GRASMERE 5B: 5% up to CTR boundary.

GRASMERE 6C: 5.3% up to CTR boundary.

Gnd speed-KT	75	100	150	200	250	300
5.3% V/V(fpm)	403	537	805	1073	1342	1610
5% V/V(fpm)	380	506	760	1013	1266	1519

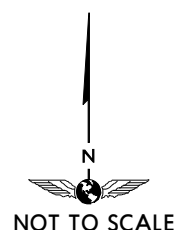
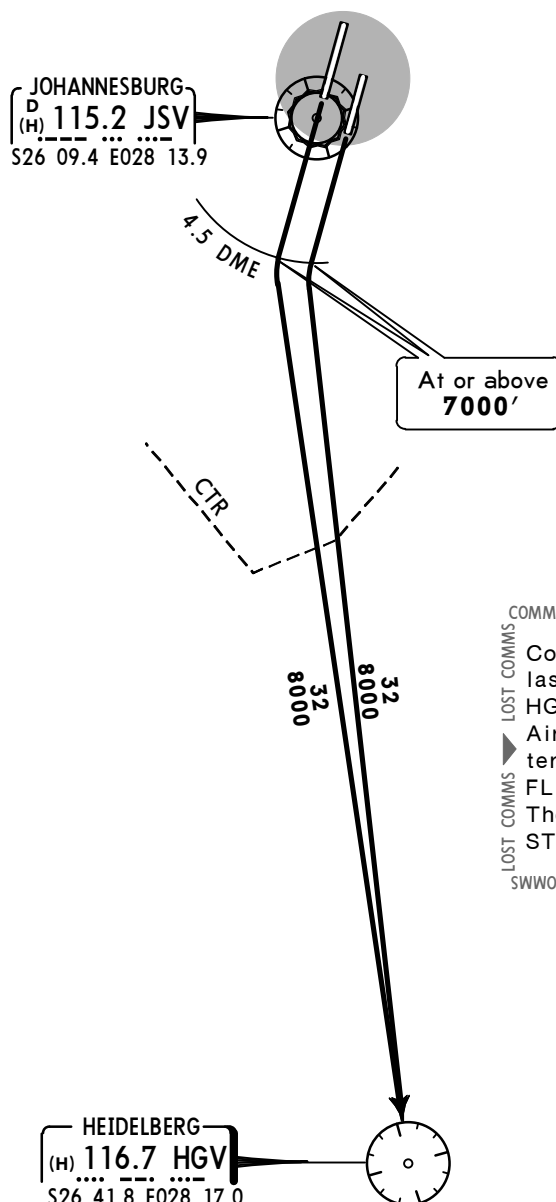
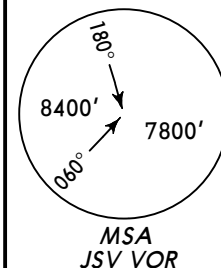
Climb to **8000'**, further climb under radar control

SID	RWY	ROUTING
GRASMERE 5B	03L/R	Climb on runway track to JSV 3 DME or 6100', whichever is later, turn LEFT, 261° track to JSV 13 DME, turn LEFT to GAV, then as per flight plan.
GRASMERE 6C	21R	Climb on runway track to JSV, turn RIGHT (remain within JSV 2.5 DME), 301° track to JSV 13 DME, turn LEFT to GAV, then as per flight plan.

Apt Elev
5558'

Trans level: By ATC Trans alt: 8000'
1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.

HEIDELBERG FIVE DELTA (HEIDELBERG 5D) [HGV5D] RWYS 21L/R DEPARTURE **SPEED: MAX 250 KT AT OR BELOW FL100**



COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

Comply with SID, climb to 8300' or maintain last assigned FL, whichever is the highest. At HGV continue as per flight plan.

Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if last cleared FL is below MSA. Then proceed to STV and comply with STAR STV 5B communication failure procedure.

LOST COMMS ▲ SWWOC LOST COMMS ▲ SWWOC LOST COMMS ▲ SWWOC LOST COMMS ▲ SWWOC

This SID requires a minimum climb gradient of 4.2% up to CTR boundary.

Gnd speed-KT	75	100	150	200	250	300
4.2% V/V(fpm)	319	425	638	851	1063	1276

Climb to 8000', further climb under radar control

ROUTING

Climb on runway track to JSV 4.5 DME, turn LEFT to HGV, then as per flight plan.

Trans level: By ATC Trans alt: 8000'

1. If unable to comply with SID or STAR notify ATC.
2. SIDs and STARs must be announced in operation on ATIS.
3. SIDs are applicable only when Surveillance RADAR operational.
4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise RADAR of level passing on first contact for mode-C check.
5. Cross CTR boundary at or above 8000'.
6. Simultaneous use of parallel runway 03L/R and 21L/R.
7. General Aviation traffic up to 7500'.



23
8000

23

0.

LANSERIA
D
(H) 117.4 LIV
S25 56.9 E027 54.8

/ 13 DME

CTR

← 301

2.5 DME

JOHANNESBURG
D 115.2 JSV
(H)
S26 09.4 E028 13.9

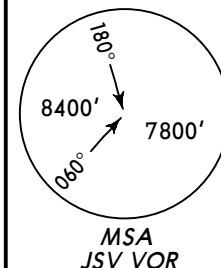
Gnd speed-KT	75	100	150	200	250	300
5.3% V/V(fpm)	403	537	805	1073	1342	1610

Climb on runway track to JSV, turn RIGHT (remain within JSV 2.5 DME), 301° track to JSV 13 DME, turn RIGHT to LIV, LIV R-015 to VASUR, then as per flight plan.

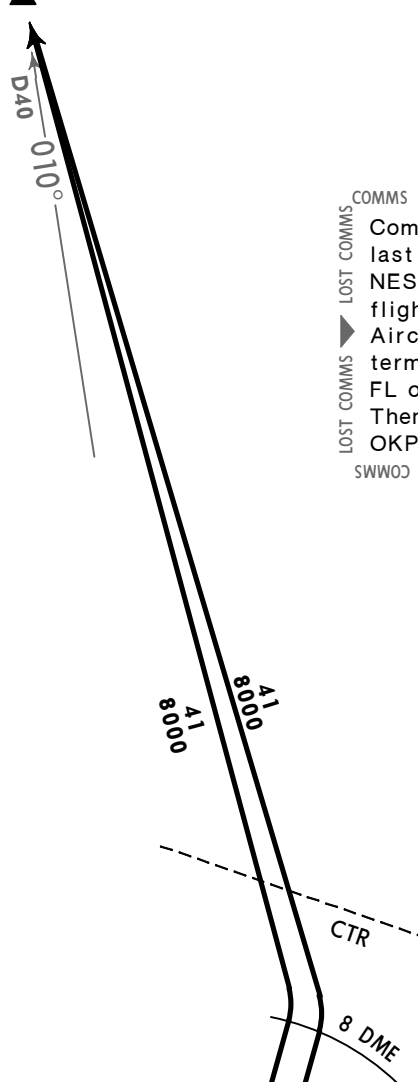
Apt Elev
5558'

- Trans level: By ATC Trans alt: 8000'
1. If unable to comply with SID or STAR notify ATC.
 2. SIDs and STARs must be announced in operation on ATIS.
 3. SIDs are applicable only when Surveillance RADAR operational.
 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'.
- Advise RADAR of level passing on first contact for mode-C check.
5. Cross CTR boundary at or above 8000'.
 6. Simultaneous use of parallel runway 03L/R and 21L/R.
 7. General Aviation traffic up to 7500'.

NESAN ONE ALFA (NESAN 1A) [NESAN 1A]
RWYS 03L/R DEPARTURE
RNAV REQUIRED
USABLE BETWEEN 0600-2200LT
~~SPEED~~ MAX 250 KT AT OR BELOW FL100



NESAN
S25 29.8 E028 07.1



COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

Comply with SID, climb to 8300' or maintain last assigned FL, whichever is the highest. At NESAN continue as per flight plan and climb to flight plan level.

► Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if last cleared FL is below MSA. Then proceed to OKPIT and comply with STAR OKPIT 4A communication failure procedure.

SWWOC JSOT ▲ SWWOC JSOT ▲ SWWOC JSOT ▲ SWWOC JSOT ▲ SWWOC JSOT



JOHANNESBURG
D (H) 115.2 JSV
S26 09.4 E028 13.9

This SID requires a minimum climb gradient of 4.2% up to CTR boundary.

Gnd speed-KT	75	100	150	200	250	300
4.2% V/V(fpm)	319	425	638	851	1063	1276

Climb to **8000'**, further climb under RADAR control

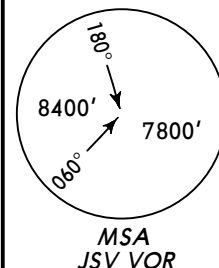
ROUTING

Climb on runway track to JSV 8 DME, turn LEFT to NESAN, then as per flight plan.

Apt Elev
5558'

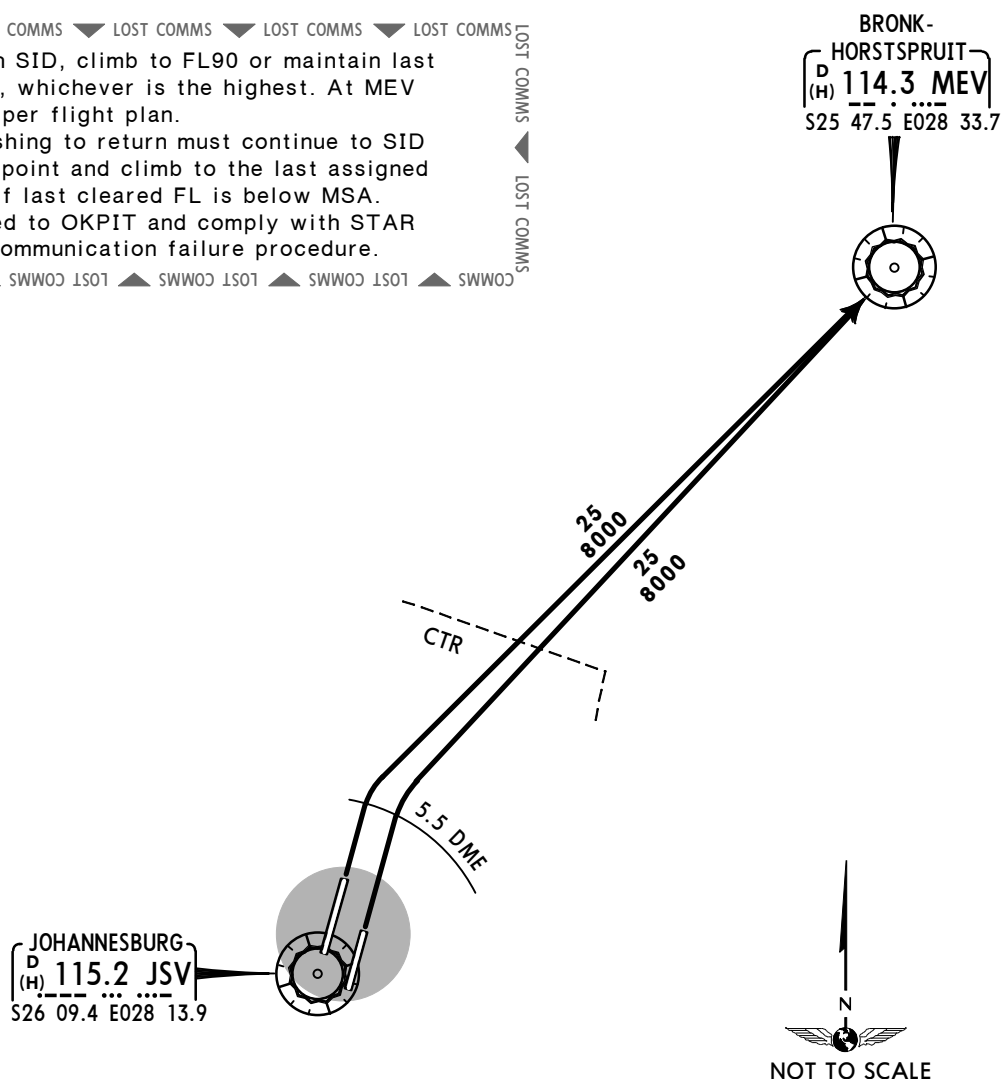
Trans level: By ATC Trans alt: 8000'
1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.

NORVA TWO ALFA (NORVA 2A) [NORV2A]
RWYS 03L/R DEPARTURE
TURBO-PROP AIRCRAFT ONLY
AT OR BELOW FL130
~~SPEED~~ MAX 250 KT AT OR BELOW FL100



COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
Comply with SID, climb to FL90 or maintain last assigned FL, whichever is the highest. At MEV continue as per flight plan.
Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if last cleared FL is below MSA. Then proceed to OKPIT and comply with STAR OKPIT 4A communication failure procedure.
SWWOC JSOT ▲ SWWOC JSOT ▲ SWWOC JSOT ▲ SWWOC JSOT ▲ SWWOC JSOT

LOST COMMS ▼ LOST COMMS



This SID requires a minimum climb gradient of 4.2% up to FL90.

Gnd speed-KT	75	100	150	200	250	300
4.2% V/V(fpm)	319	425	638	851	1063	1276

Climb to **FL90**, further climb under radar control

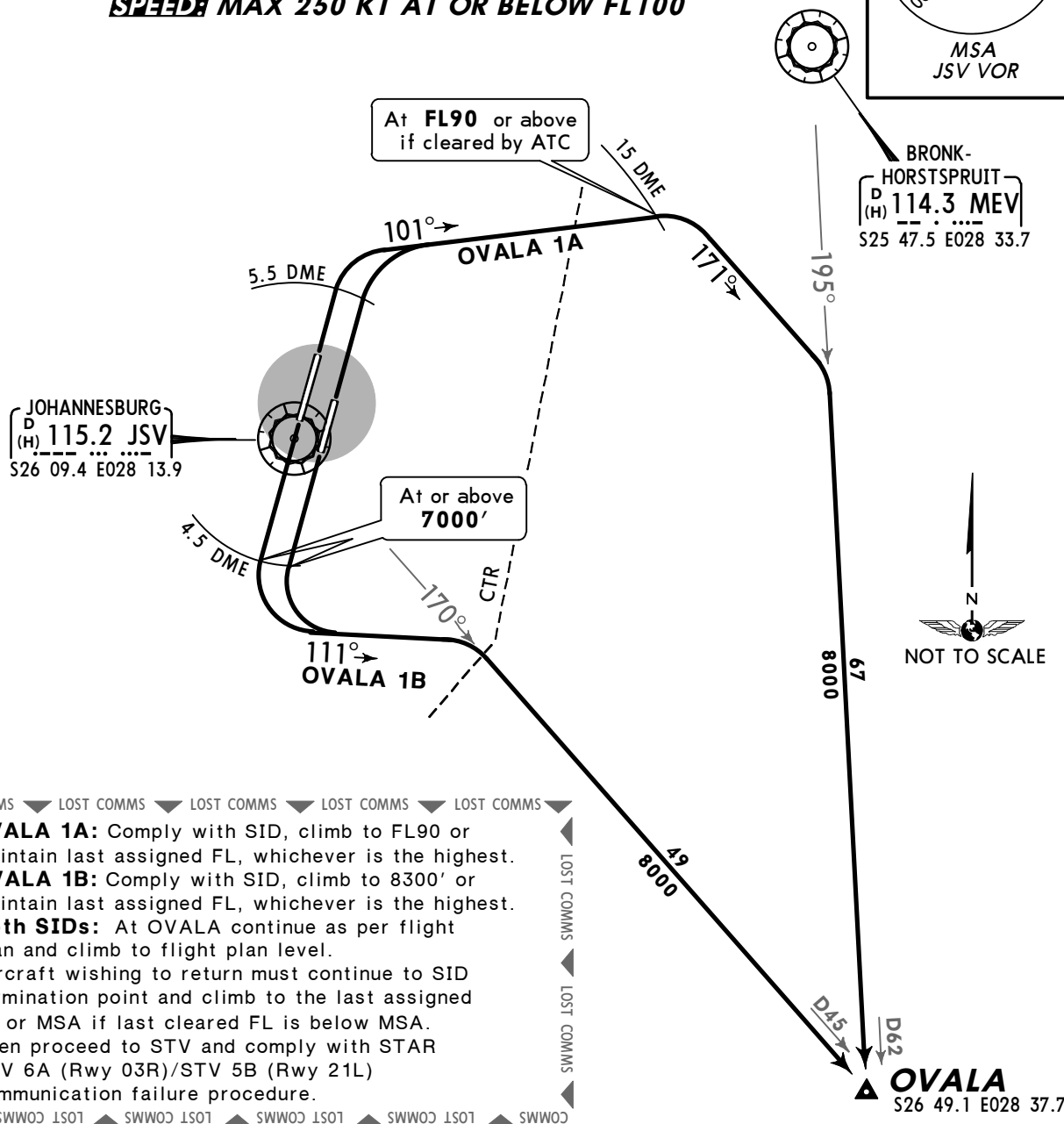
ROUTING

Climb on runway track to JSV 5.5 DME, turn RIGHT to MEV, then as per flight plan.

Apt Elev
5558'

Trans level: By ATC Trans alt: 8000'
 1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.

OVALA ONE ALFA (OVALA 1A) [OVAL1A]
OVALA ONE BRAVO (OVALA 1B) [OVAL1B]
RWYS 03L/R, 21L/R DEPARTURES
~~SPEED~~ MAX 250 KT AT OR BELOW FL100



These SIDs require minimum climb gradients of
OVALA 1A: 4.1% up to FL90.
OVALA 1B: 4.2% up to CTR boundary.

Gnd speed-KT	75	100	150	200	250	300
4.2% V/V(fpm)	319	425	638	851	1063	1276
4.1% V/V(fpm)	311	415	623	830	1038	1246

OVALA 1A: Climb to **FL90**, further climb under radar control
OVALA 1B: Climb to **8000'**, further climb under radar control

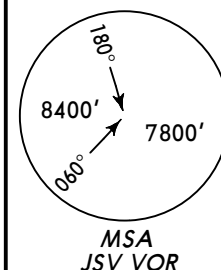
SID	RWY	ROUTING
OVALA 1A	03L/R	Climb on runway track to JSV 5.5 DME, turn RIGHT, 101° track to JSV 15 DME, turn RIGHT, 171° track, intercept MEV R-195 to OVALA, then as per flight plan.
OVALA 1B	21L/R	Climb on runway track to JSV 4.5 DME, turn LEFT, 111° track, intercept JSV R-170 to OVALA, then as per flight plan.

Apt Elev
5558'

Trans level: By ATC Trans alt: 8000'

1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.

RAGUL THREE ALFA (RAGUL 3A) [RAGU3A]
RAGUL THREE BRAVO (RAGUL 3B) [RAGU3B]
RWYS 03L/R, 21L/R DEPARTURES
~~SPEED~~ MAX 250 KT AT OR BELOW FL100



LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST

RAGUL 3A: Comply with SID, climb to 8700' or maintain last assigned FL whichever is the highest.

RAGUL 3B: Comply with SID, climb to FL100 or maintain last assigned FL, whichever is the highest. Cross JSV 12 DME at FL90 or above if cleared above FL90 by ATC, cross JSV 18 DME at FL100 or above if cleared above FL100 by ATC.

Both SIDs: At RAGUL continue as per flight plan. Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if last cleared FL is below MSA.

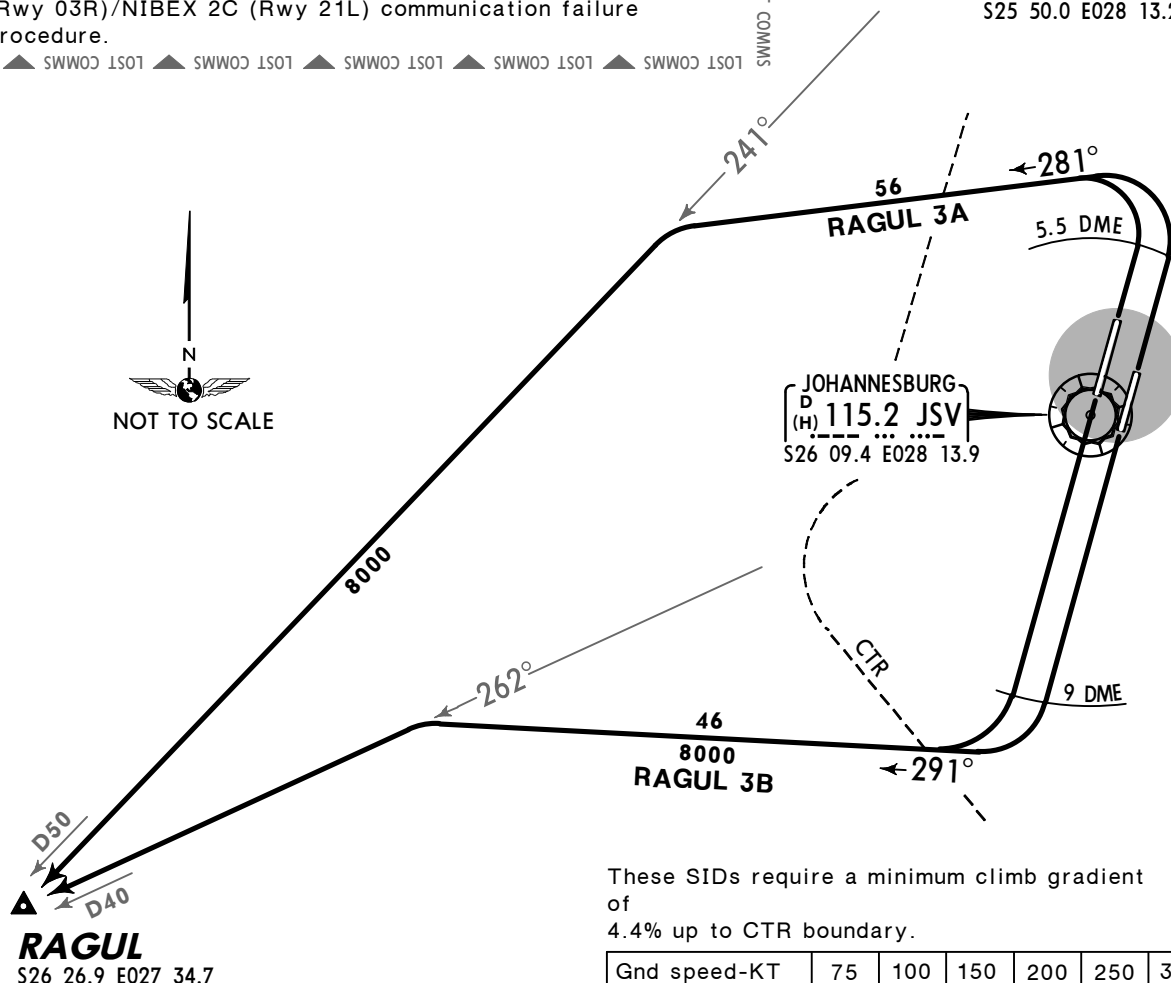
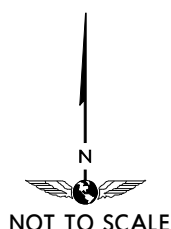
Then proceed to NIBEX and comply with STAR NIBEX 2A (Rwy 03R)/NIBEX 2C (Rwy 21L) communication failure procedure.

▲ SWW0C 1S0T ▲ SWW0C 1S0T ▲ SWW0C 1S0T ▲ SWW0C 1S0T ▲ SWW0C 1S0T

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST



WATERKLOOF
* 116.9 WKV
S25 50.0 E028 13.2



These SIDs require a minimum climb gradient of 4.4% up to CTR boundary.

Gnd speed-KT	75	100	150	200	250	300
4.4% V/V(fpm)	334	446	668	891	1114	1337

Climb to **8000'**, further climb under radar control

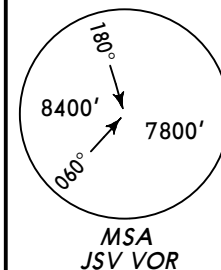
SID	RWY	ROUTING
RAGUL 3A	03L/R	Climb on runway track to JSV 5.5 DME, turn LEFT, 281° track, intercept WKV R-241 to RAGUL, then as per flight plan.
RAGUL 3B	21L/R	Climb on runway track to JSV 9 DME, turn RIGHT, 291° track, intercept JSV R-262 to RAGUL, then as per flight plan.

Apt Elev
5558'

Trans level: By ATC Trans alt: 8000'

1. If unable to comply with SID or STAR notify ATC. 2. SIDs and STARs must be announced in operation on ATIS 3. SIDs are applicable only when Surveillance Radar operational. 4. Contact JOHANNESBURG Radar on frequency provided in ATC clearance at 6500'. Advise Radar of level passing on first contact for mode-C check. 5. Cross CTR boundary at or above 8000'. 6. Simultaneous use of parallel runway 03L/R and 21L/R. 7. General Aviation traffic up to 7500'.

VASUR THREE ALFA (VASUR 3A) [VASU3A]
VASUR THREE BRAVO (VASUR 3B) [VASU3B]
RWYS 03L/R, 21L/R DEPARTURES
~~SPEED~~ MAX 250 KT AT OR BELOW FL100



LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

Comply with SID, climb to 8700' or maintain last assigned FL, whichever is the highest. At VASUR continue as per flight plan and climb to flight plan level. Aircraft wishing to return must continue to SID termination point and climb to the last assigned FL or MSA if last cleared FL is below MSA.

Then proceed to AVAGO and comply with STAR AVAGO 2A (Rwy 03L/R)/ AVAGO 2B (Rwy 21L/R) communication failure procedure.

▲ SWWOC LS01 ▲ SWWOC LS01 ▲ SWWOC LS01 ▲ SWWOC LS01

LANSERIA
D(H) 117.4 LIV
S25 56.9 E027 54.8



These SIDs require a minimum climb gradient of 4.2% up to CTR boundary.

Gnd speed-KT	75	100	150	200	250	300
4.2% V/V(fpm)	319	425	638	851	1063	1276

Climb to **8000'**, further climb under radar control

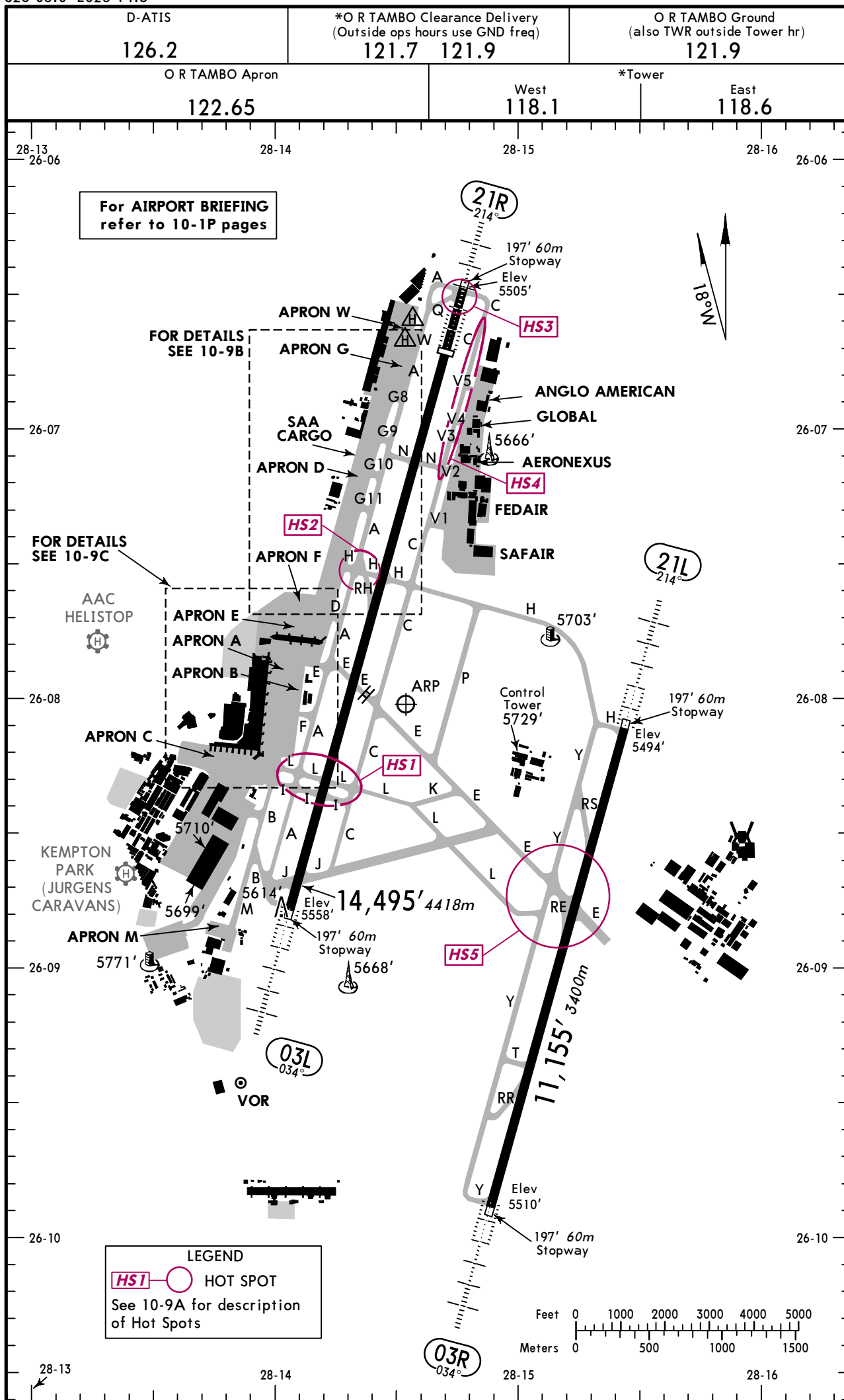
SID	RWY	ROUTING
VASUR 3A	03L/R	Climb on runway track to JSV 5.5 DME, turn LEFT, 311° track, intercept JSV R-351 to VASUR, then as per flight plan.
VASUR 3B	21L/R	Climb on runway track to JSV 9 DME, turn RIGHT, 291° track to JSV 15 DME, turn RIGHT, 351° track, intercept LIV R-198 inbound to LIV, LIV R-015 to VASUR, then as per flight plan.

FAOR/JNB
Apt Elev 5558'
S26 08.0 E028 14.5

20 JUN 14

10-9

JEPPESEN JOHANNESBURG, S AFR REP
O R TAMBO INTL



ADDITIONAL RUNWAY INFORMATION

ADDITIONAL RUNWAY INFORMATION								USABLE LENGTHS		TAKE-OFF	WIDTH
RWY								LANDING BEYOND			
								Threshold	Glide Slope		
03L	HIRL (60m) CL①(30m) HIALS-II TDZ ② HST-RH RVR								13,280' 4048m		197'
21R	HIRL (60m) CL①(30m) HIALS-II TDZ ② RVR							13,018' 3968m	12,047' 3672m		60m

❶ Operational in CAT II conditions only.

❷ PAPI (3.0°).

03R	HIRL (60m) CL ❸ (30m) HIALS-II TDZ ❹ ❺ RVR		10,304' 3141m		197'
21L	HIRL (60m) CL ❸ (30m) HIALS-II TDZ ❹ HST-RR RVR		10,244' 3122m		60m

❸ Operational in CAT II conditions only.

❹ PAPI (3.0°).

❺ HST-RE & RS

HOT SPOTS

(For information only, not to be construed as ATC instructions.)

Pilots are to exercise extreme caution when entering following areas.

Intermediate take-off point.

HS1 All ACFT taxiing West of RWY 03L/21R are on GND frequency and all ACFT vacating RWY 03L/21R or crossing that RWY from East are on TWR frequency.

HS2 ACFT vacating RET RH conflict with ACFT taxiing on TWY A southbound and ACFT on TWY H crossing RWY 03L/21R.

HS3 TWY A North of TWY G11 to THR 21R due to limited visibility from Control Tower.
ATC clearance issued based on known traffic.

HS4 Portion of the manoeuvring area is not directly visibility from Control Tower.
ATC clearance issued based on known traffic.

HS5 ACFT vacating RET RE conflict with ACFT taxiing on TWY Y southbound.

JAR-OPS

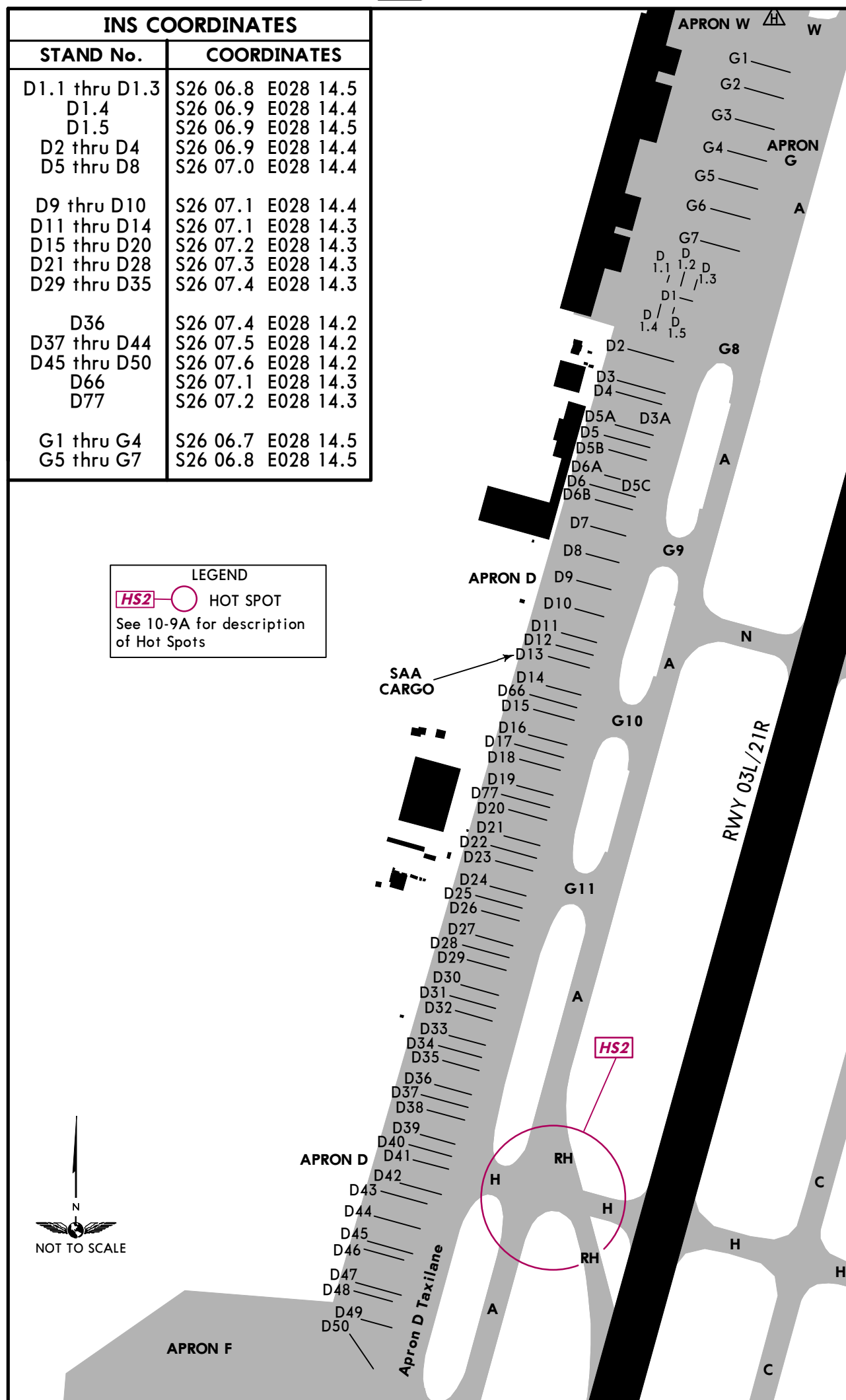
TAKE-OFF ❶

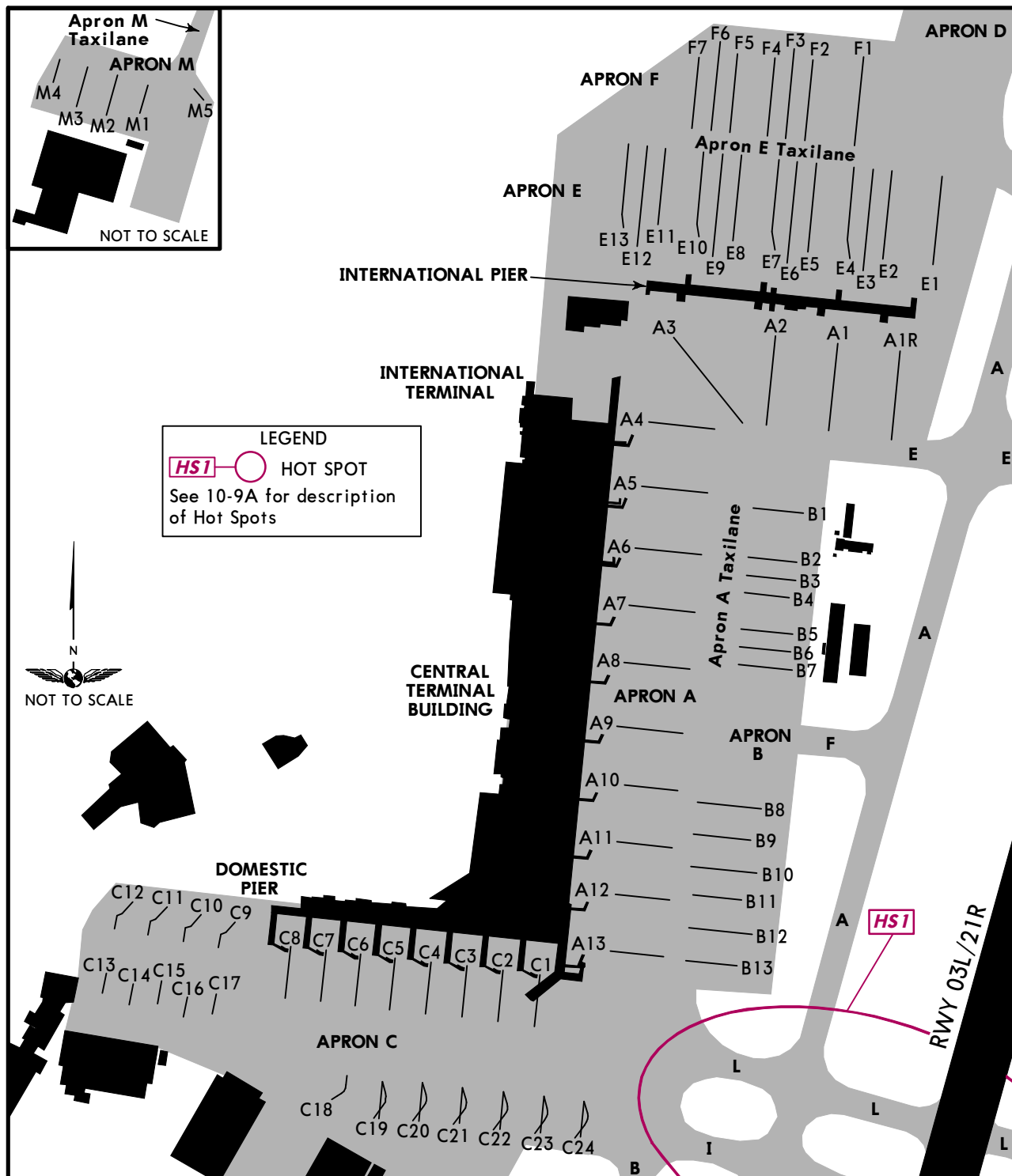
	LVP must be in Force		All Rwys		
	RL, CL & mult. RVR req	RL, CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A					
B	150m	200m	250m	400m	500m
C					
D	200m	250m	300m		

❶ Operators applying U.S. Ops Specs: CL required below 300m.

INS COORDINATES	
STAND No.	COORDINATES
D1.1 thru D1.3	S26 06.8 E028 14.5
D1.4	S26 06.9 E028 14.4
D1.5	S26 06.9 E028 14.5
D2 thru D4	S26 06.9 E028 14.4
D5 thru D8	S26 07.0 E028 14.4
D9 thru D10	S26 07.1 E028 14.4
D11 thru D14	S26 07.1 E028 14.3
D15 thru D20	S26 07.2 E028 14.3
D21 thru D28	S26 07.3 E028 14.3
D29 thru D35	S26 07.4 E028 14.3
D36	S26 07.4 E028 14.2
D37 thru D44	S26 07.5 E028 14.2
D45 thru D50	S26 07.6 E028 14.2
D66	S26 07.1 E028 14.3
D77	S26 07.2 E028 14.3
G1 thru G4	S26 06.7 E028 14.5
G5 thru G7	S26 06.8 E028 14.5

LEGEND
 HOT SPOT
 See 10-9A for description of Hot Spots





INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
A1, A1R	S26 07.8 E028 14.1	C18 thru C20	S26 08.3 E028 13.8
A2, A3	S26 07.8 E028 14.0	C21 thru C24	S26 08.3 E028 13.9
A4 thru A6	S26 07.9 E028 14.0	E1	S26 07.8 E028 14.2
A7, A8	S26 08.0 E028 14.0	E2	S26 07.7 E028 14.2
A9 thru A11	S26 08.1 E028 14.0	E3, E4	S26 07.8 E028 14.1
A12, A13	S26 08.2 E028 14.0	E5	S26 07.7 E028 14.1
B1 thru B3	S26 07.9 E028 14.1	E6, E7	S26 07.8 E028 14.1
B4, B5	S26 08.0 E028 14.1	E8	S26 07.7 E028 14.1
B6 thru B10	S26 08.1 E028 14.1	E9, E10	S26 07.8 E028 14.0
B11 thru B13	S26 08.2 E028 14.1	E11 thru E13	S26 07.7 E028 14.0
C1, C2	S26 08.2 E028 13.9	F1 thru F5	S26 07.6 E028 14.1
C3 thru C5	S26 08.2 E028 13.8	F6, F7	S26 07.6 E028 14.0
C6 thru C10	S26 08.2 E028 13.7	M1 thru M5	NOT AVAILABLE
C11 thru C14	S26 08.2 E028 13.6		
C15 thru C17	S26 08.2 E028 13.7		

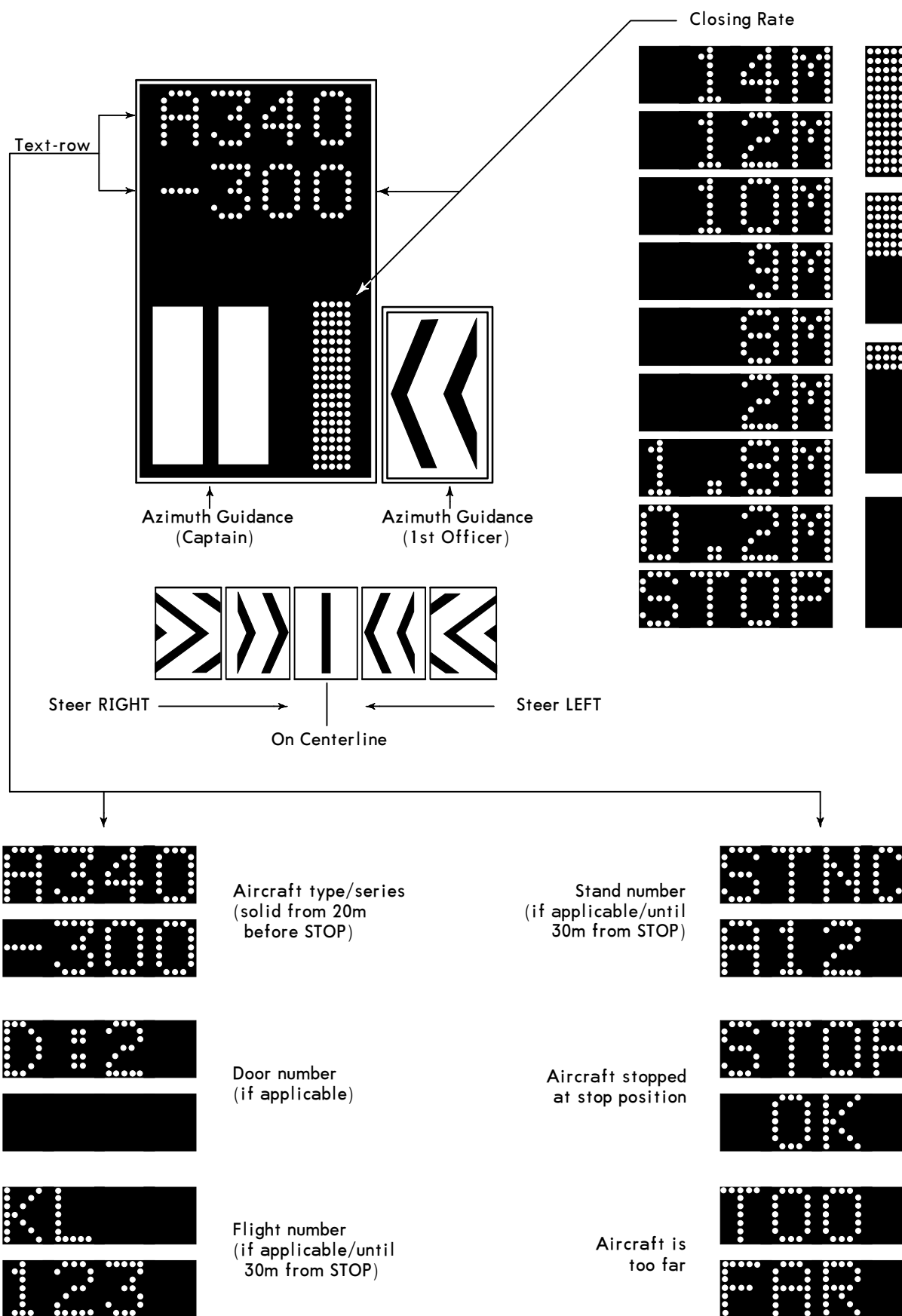
VISUAL DOCKING GUIDANCE SYSTEM "APIS++"

(Aircraft Parking and Information System)

Azimuth and stopping guidance are provided from a display unit mounted at the extension of the stand centerline.

- Intercept the centerline and follow the azimuth guidance display.
- Check correct aircraft type/series on the APIS++ display unit.

Abort docking if display shows STOP or wrong aircraft type/series, or if the azimuth guidance display is not activated.



STRAIGHT-IN RWY	A	B	C	D
03L CAT 2 ILS Z	5658' (100') RA86' R300m	5658' (100') RA86' R300m	5658' (100') RA86' R300m	5658' (100') RA86' R300m
	CAT 2 ILS Y ❶	5658' (100') RA86' R300m	5658' (100') RA86' R300m	5662' (104') RA90' R300m
	ILS Z FULL Limited ALS out	5758' (200') R550m R750m R1200m	5758' (200') R550m R750m R1200m	5758' (200') R550m R750m R1200m
	ILS Y ❶ FULL Limited ALS out	5758' (200') R550m R750m R1200m	5758' (200') R550m R750m R1200m	5758' (200') R550m R750m R1200m
	ILS Y ❷	6273' (715') R1500m	6284' (726') R1500m	6296' (738') C2400m
				6317' (759') C2400m
03R CAT 2 ILS Z	5610' (100') RA95' R300m	5610' (100') RA95' R300m	5610' (100') RA95' R300m	5610' (100') RA95' R300m
	CAT 2 ILS X, W ❸	5610' (100') RA95' R300m	5610' (100') RA95' R300m	5619' (109') RA102'R300m
	ILS Z FULL Limited ALS out	5710' (200') R550m R750m R1200m	5710' (200') R550m R750m R1200m	5710' (200') R550m R750m R1200m
	ILS X, W ❹	5710' (200') R550m R750m R1200m	5710' (200') R550m R750m R1200m	5711' (201') R600m R750m R1200m
	ILS X, W ❷	6782' (1272') R1500m	6795' (1285') R1500m	6805' (1295') C2400m
				6815' (1305') C2400m
	RNAV ❹❹	5940' (430') R1300m R1500m	5940' (430') R1300m R1500m	5940' (430') R1400m R2000m
	RNAV ❷❹	6510' (1000') R1500m	6510' (1000') R1500m	6510' (1000') C2400m
21L CAT 2 ILS Z	5594' (100') RA102'R300m	5594' (100') RA102'R300m	5594' (100') RA102'R300m	5594' (100') RA102'R300m
	CAT 2 ILS X ❸	5594' (100') RA102'R300m	5594' (100') RA102'R300m	5595' (101') RA103'R300m
	ILS Z FULL Limited ALS out	5694' (200') R550m R750m R1200m	5694' (200') R550m R750m R1200m	5694' (200') R550m R750m R1200m

❶ Missed apch climb gradient mim 3.5% up to 7600'.

❷ Missed apch climb gradient mim 2.5%.

❸ Missed apch climb gradient mim 5.8% up to 8000'.

❹ Missed apch climb gradient mim 3.8%.

❺ Continuous Descent Final Approach.

❻ Missed apch climb gradient mim 4.6% up to 8000'.

STRAIGHT-IN RWY		A	B	C	D
21L (contd)	ILS X ❶	5694'(200')	5694'(200')	5694'(200')	5694'(200')
	FULL	R550m	R550m	R550m	R550m
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	ILS X ❷	6634'(1140')	6645'(1151')	6655'(1161')	6669'(1175')
		R1500m	R1500m	C2400m	C2400m
	RNAV ❸❹	6120'(626')	6120'(626')	6120'(626')	6120'(626')
		R1500m	R1500m	C2200m	C2200m
	ALS out	R1500m	R1500m	C2400m	C2400m
	RNAV ❷❹	6530'(1036')	6530'(1036')	6530'(1036')	6530'(1036')
		R1500m	R1500m	C2400m	C2400m
21R	CAT 2 ILS ❺	5605'(100')	5605'(100')	5605'(100')	5605'(100')
		RA98'R300m	RA98'R300m	RA98'R300m	RA98'R300m
	ILS ❺	5705'(200')	5705'(200')	5705'(200')	5705'(200')
	FULL	R550m	R550m	R550m	R550m
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	ILS ❷	6084'(579')	6091'(586')	6104'(599')	6111'(606')
		R1500m	R1500m	R2000m	C2100m
	ALS out	R1500m	R1500m	C2400m	C2400m
	VOR Z ❹	6120'(615')	6120'(615')	6120'(615')	6120'(615')
		R1500m	R1500m	C2100m	C2100m
	ALS out	R1500m	R1500m	C2400m	C2400m
	VOR Y ❹❻	5980'(475')	5980'(475')	5980'(475')	5980'(475')
		R1500m	R1500m	R1500m	R1600m
	ALS out	R1500m	R1500m	C2200m	C2200m
	VOR Y ❷❹	7030'(1525')	7030'(1525')	7030'(1525')	7030'(1525')
		C5000m	C5000m	C5000m	C5000m

❶ Missed apch climb gradient mim 4.6% up to 8000'.

❷ Missed apch climb gradient mim 2.5%.

❸ Missed apch climb gradient mim 3.5%.

❹ Continuous Descent Final Approach.

❺ Missed apch climb gradient mim 3.7% up to 7000'.

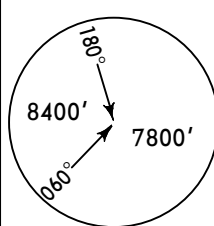
❻ Missed apch climb gradient mim 5.1% up to 8000'.

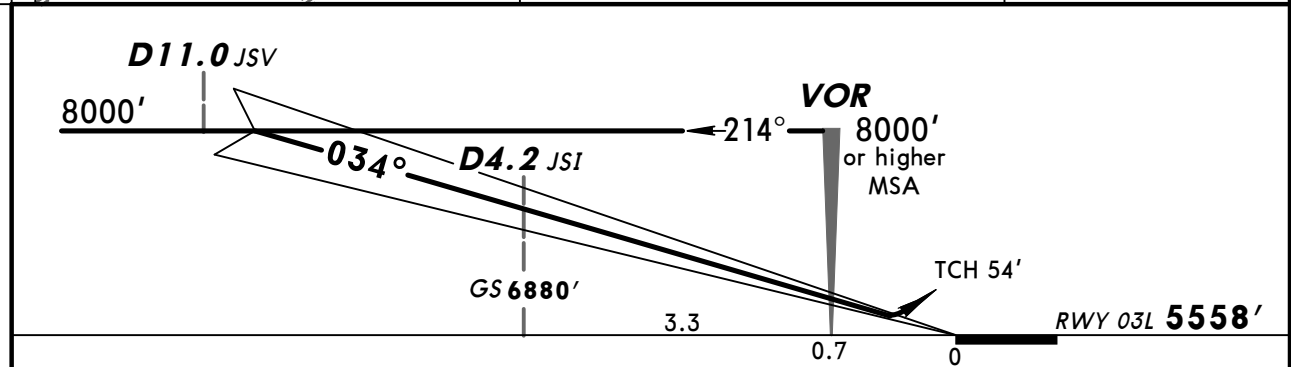
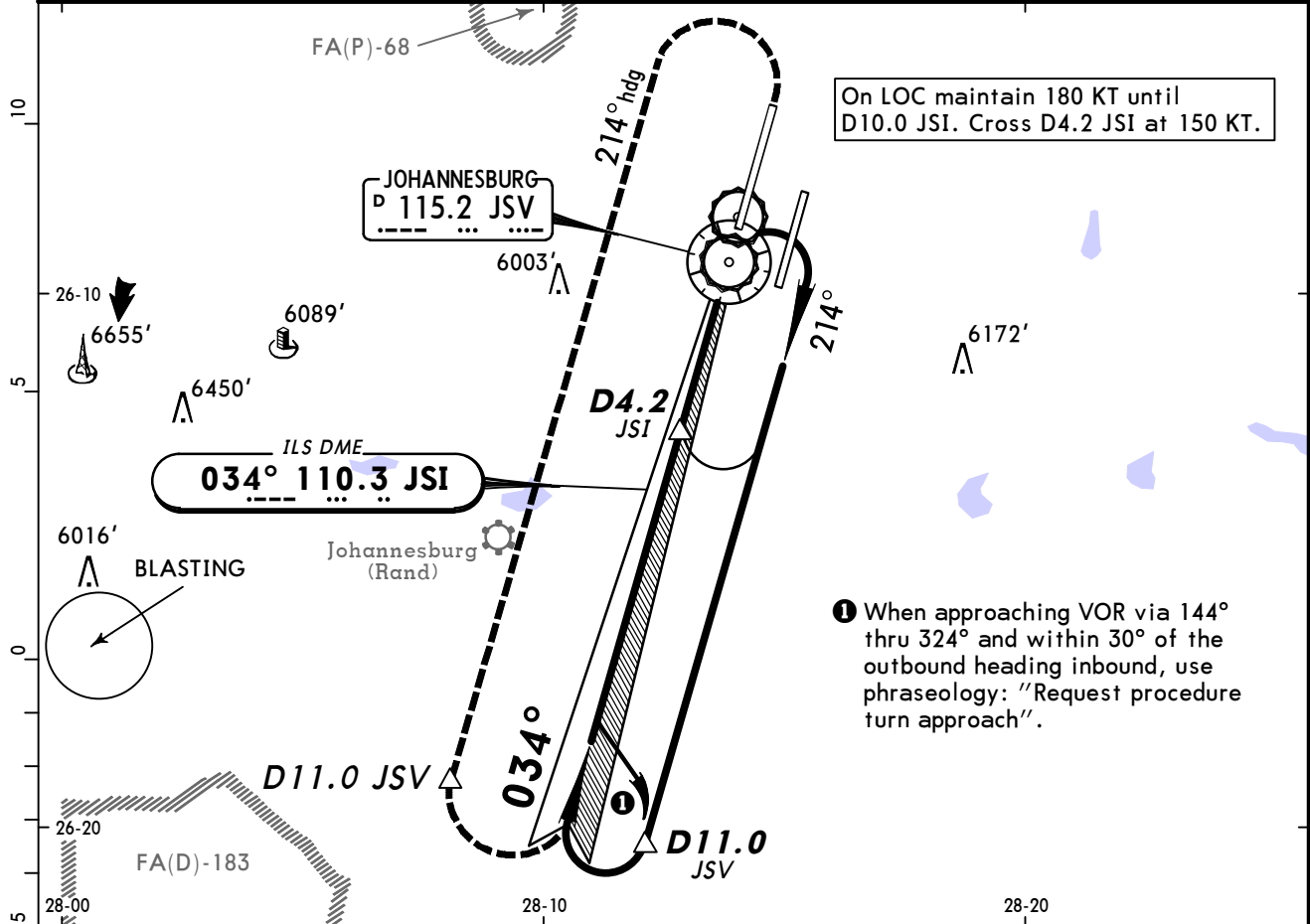
CIRCLE-TO-LAND	100 KT	135 KT	180 KT	205 KT
East of rwy	6050'(492')	6060'(502')	6250'(692')	6260'(702')
West of rwy	6070'(512')	6070'(512')	6410'(852')	6410'(852')
	V1500m ⑦	V1600m ⑦	V2400m ⑦	V3600m ⑦

⑦ or higher minimums of preceding straight-in approach

TAKE-OFF RWY 03L/R, 21L/R

LVP must be in Force				
RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A				
B	150m	200m	250m	400m
C				500m
D	200m	250m	300m	

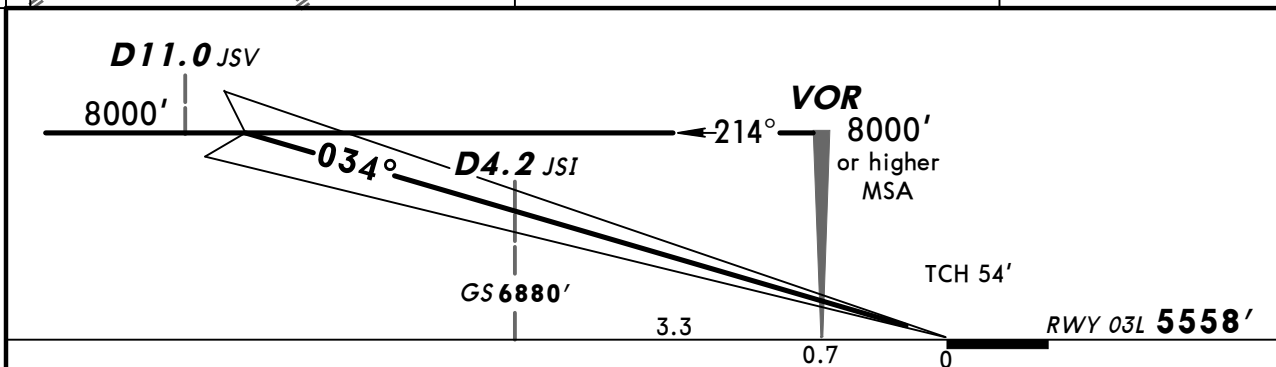
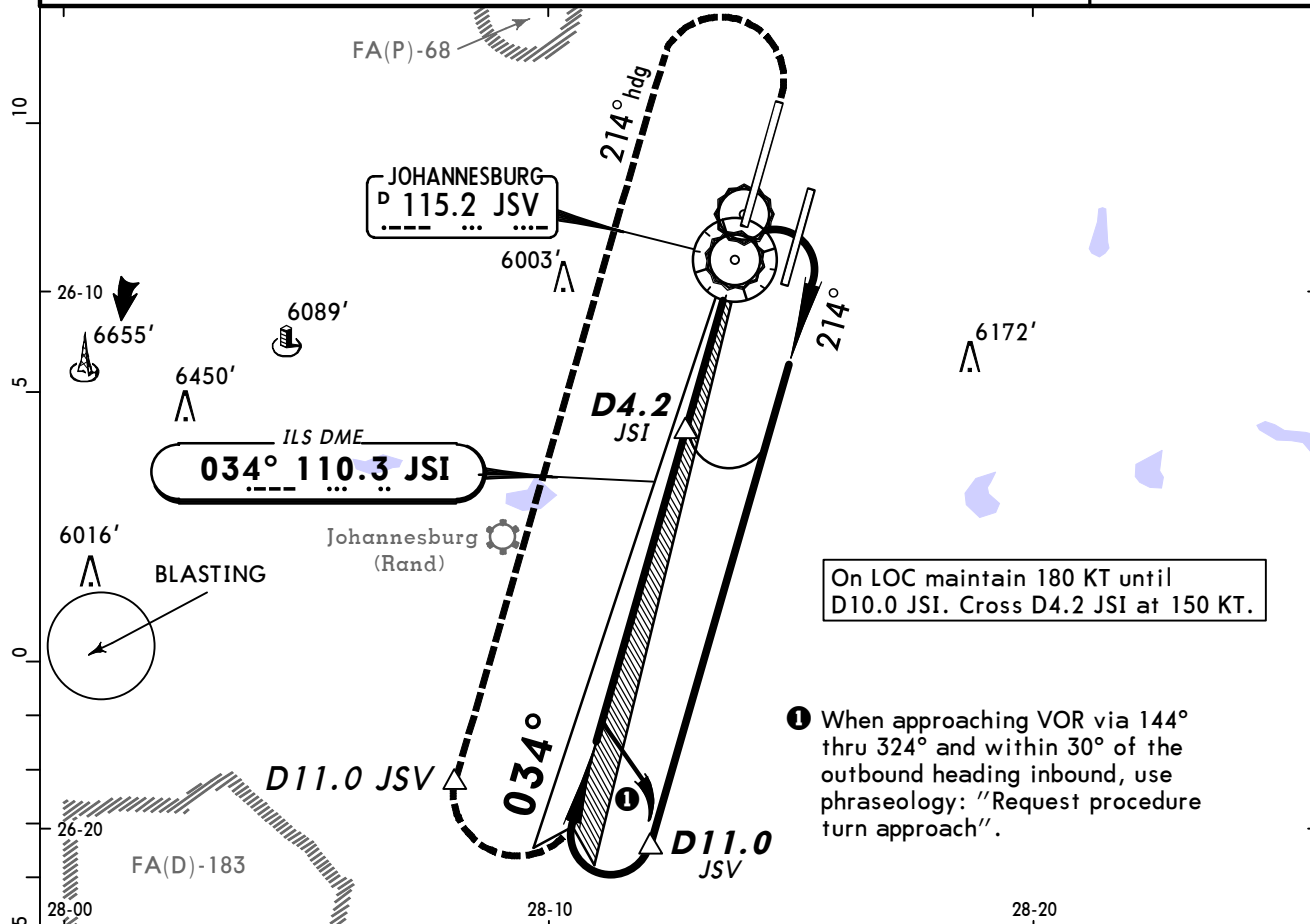
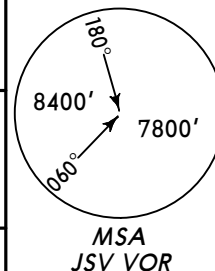
D-ATIS		*JOHANNESBURG Radar (APP)		*JOHANNESBURG Director (APP)		*O R TAMBO Tower		Ground	
West		South/East				West		East	
126.2		123.7		124.5		121.4		118.1	
								118.6	
								121.9	
LOC		Final		GS		ILS		Apt Elev 5558'	
JSI		Apch Crs		D4.2 JSI		DA(H)			
110.3		034°		6880' (1322')		5758' (200')		RWY 5558'	
MISSED APCH: Climb to 8300'. Maintain rwy track. When passing 7000' turn LEFT onto 214° heading. Passing D11.0 JSV turn LEFT direct to VOR.									
Alt Set: hPa Rwy Elev: 188 hPa Trans level: By ATC Trans alt: 8000'									
VOR and DME required.									MSA JSV VOR



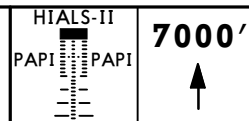
Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI PAPI	7000' ↑
GS	3.00°	377	484	538	646	753		

JAR-OPS		STRAIGHT-IN LANDING RWY 03L		CIRCLE-TO-LAND	
ILS		LOC (GS out)		East of rwy 03L/21R	
DA(H) 5758' (200')				West of rwy 03L/21R	
FULL		ALS out		MDA(H) VIS	
A				100	6050' (492') 1500m
B	RVR 550m	RVR 1000m	NOT APPLICABLE	135	6060' (502') 1600m
C				180	6250' (692') 2400m
D				205	6260' (702') 3600m

D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7 South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1 East 118.6	Ground (also Tower outside Twr hr) 121.9
LOC JSI 110.3	Final Apch Crs 034°	GS D4.2 JSI 6880' (1322')	CAT II ILS RA 86' DA(H) 5658' (100')	Apt Elev 5558' RWY 5558'
MISSED APCH: Climb to 8300'. Maintain rwy track. When passing 7000' turn LEFT onto 214° heading. Passing D11.0 JSV turn LEFT direct to VOR.				
Alt Set: hPa Rwy Elev: 188 hPa Trans level: By ATC Trans alt: 8000' 1. VOR and DME required. 2. Special Aircrew & Acft Certification Required.				



Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	484	538	646	753	861



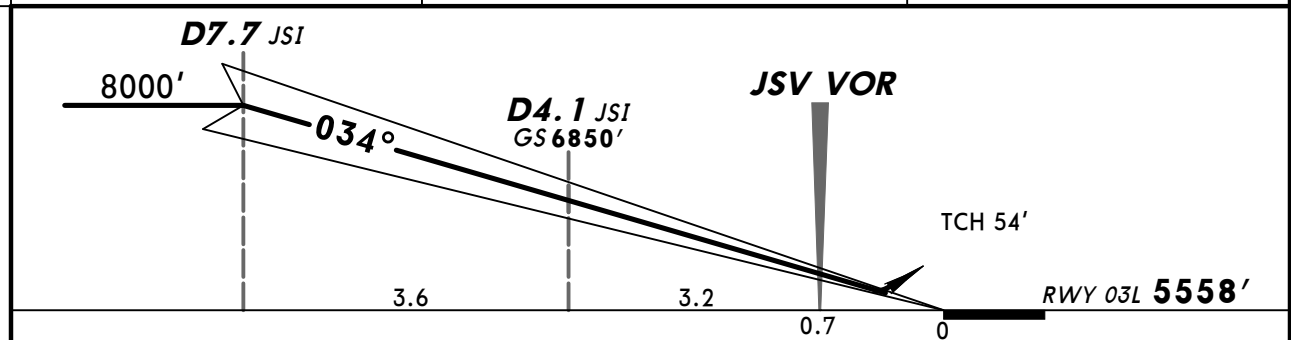
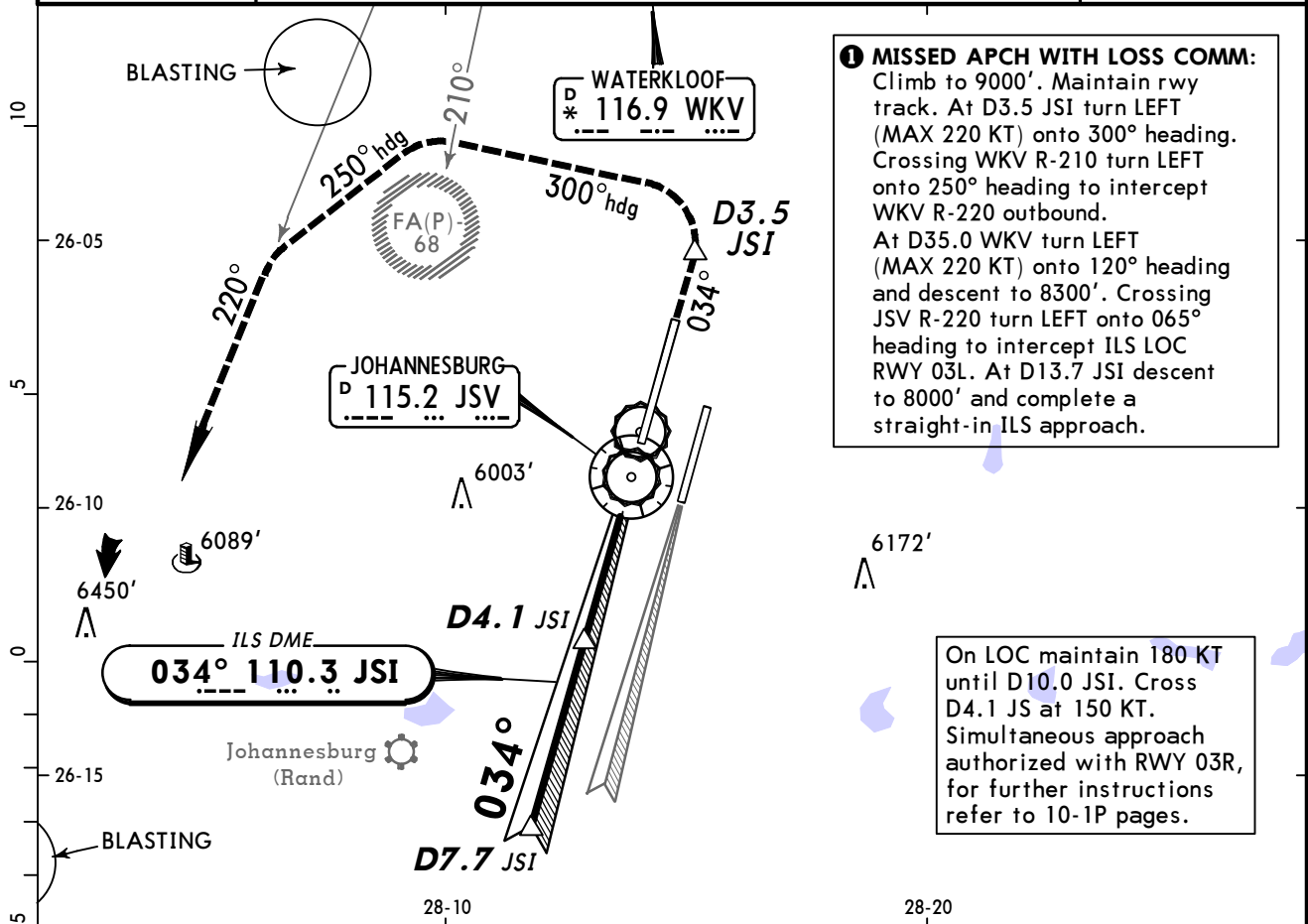
JAR-OPS	STRAIGHT-IN LANDING RWY 03L
CAT II ILS	
RA 86'	
DA(H) 5658' (100')	

RVR 300m

① Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.

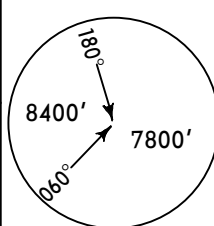
DME AND J311

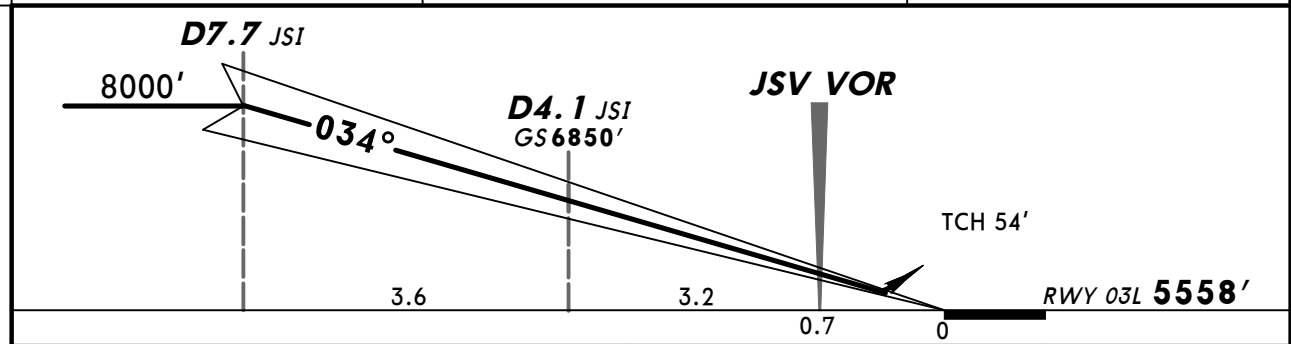
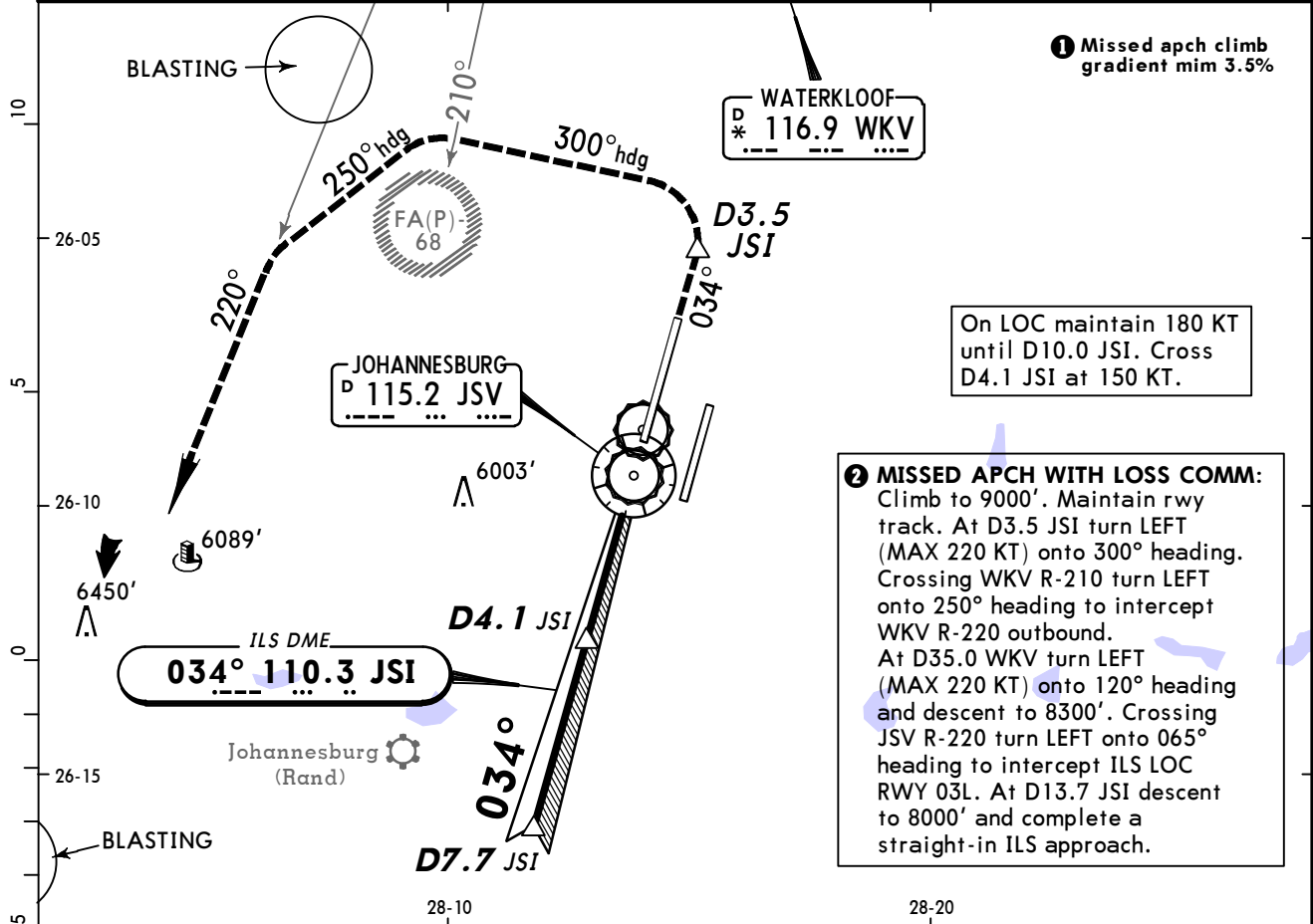
D-ATIS	*JOHANNESBURG Radar (APP) West	South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9
LOC JSI 110.3	Final Apch Crs 034°	GS D4.1 JSI 6850' (1292')	ILS DA(H) Refer to Minimums	Apt Elev 5558' RWY 5558'		MSA JSV VOR
MISSED APCH: Climb to 8000'. Maintain rwy track. At D3.5 JSI turn LEFT (MAX 220 KT) onto 300° heading. Crossing WKV R-210 turn LEFT onto 250° heading to intercept WKV R-220 for radar vectoring to ILS RWY 03L. ❶						
Alt Set: hPa		Rwy Elev: 188 hPa	Trans level: By ATC		Trans alt: 8000'	
VOR and DME required.						



Gnd speed-Kts: 70, 90, 100, 120, 140, 160 GS: 3.00°, 377, 484, 538, 646, 753, 861						HIALS-II PAPI PAPI	D3.5 JSI ↑
--	--	--	--	--	--	-----------------------	----------------------

JAR-OPS				STRAIGHT-IN LANDING RWY 03L		CIRCLE-TO-LAND			
Missed apch climb gradient mim 3.5% up to 7600'				ILS 2.5%		LOC (GS out)			
DA(H) 5758' (200')				A: 6273' (715') C: 6296' (738') B: 6284' (726') D: 6317' (759')				East of rwy 03L/21R	
FULL		ALS out		FULL		ALS out		Max Kts	MDA(H) VIS
A								100	6050' (492') 1500m
B	RVR 550m	RVR 1000m		RVR 800m	RVR 1200m	NOT APPLI- CABLE		135	6060' (502') 1600m
C								180	6250' (692') 2400m
D								205	6260' (702') 3600m
									6410' (852') 3600m

D-ATIS	*JOHANNESBURG Radar (APP) West		South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West		East	Ground (also Tower outside Twr hr)
126.2	123.7		124.5	121.4	118.1		118.6	121.9
LOC JSI 110.3		Final Apch Crs 034°		GS D4.1 JSI 6850' (1292')		CAT II ILS RA/DA(H) Refer to Minimums		Apt Elev 5558' RWY 5558'
MISSED APCH: Climb to 8000'. Maintain rwy track. At D3.5 JSI turn LEFT (MAX 220 KT) onto 300° heading. Crossing WKV R-210 turn LEFT onto 250° heading to intercept WKV R-220 for radar vectoring to ILS RWY 03L. ②								
Alt Set: hPa Rwy Elev: 188 hPa Trans level: By ATC Trans alt: 8000'								
1. VOR and DME required. 2. Special Aircrew & Acft Certification Required.								



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI PAPI	D3.5 JSI ↑
GS	3.00°	377	484	538	646	753		

JAR-OPS		STRAIGHT-IN LANDING RWY 03L	
		CAT II ILS	
		Missed apch climb gradient mim 3.5% up to 7600'	
ABC	RA 86'	D	RA 90'
DA(H)	5658' (100')	DA(H)	5662' (104')

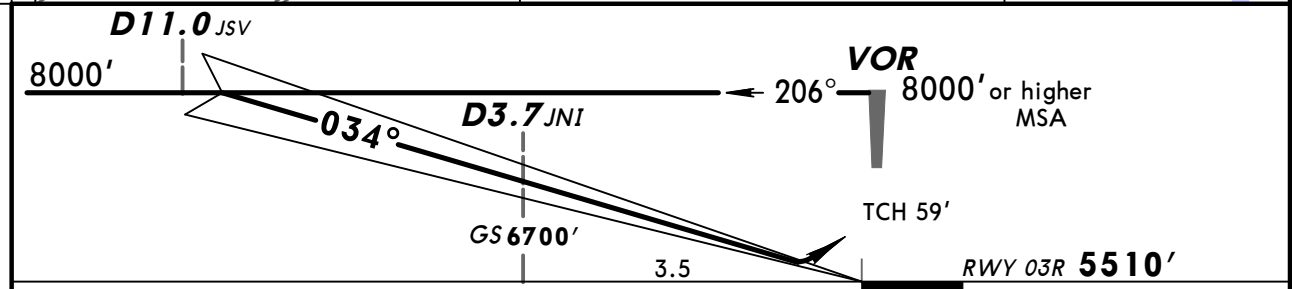
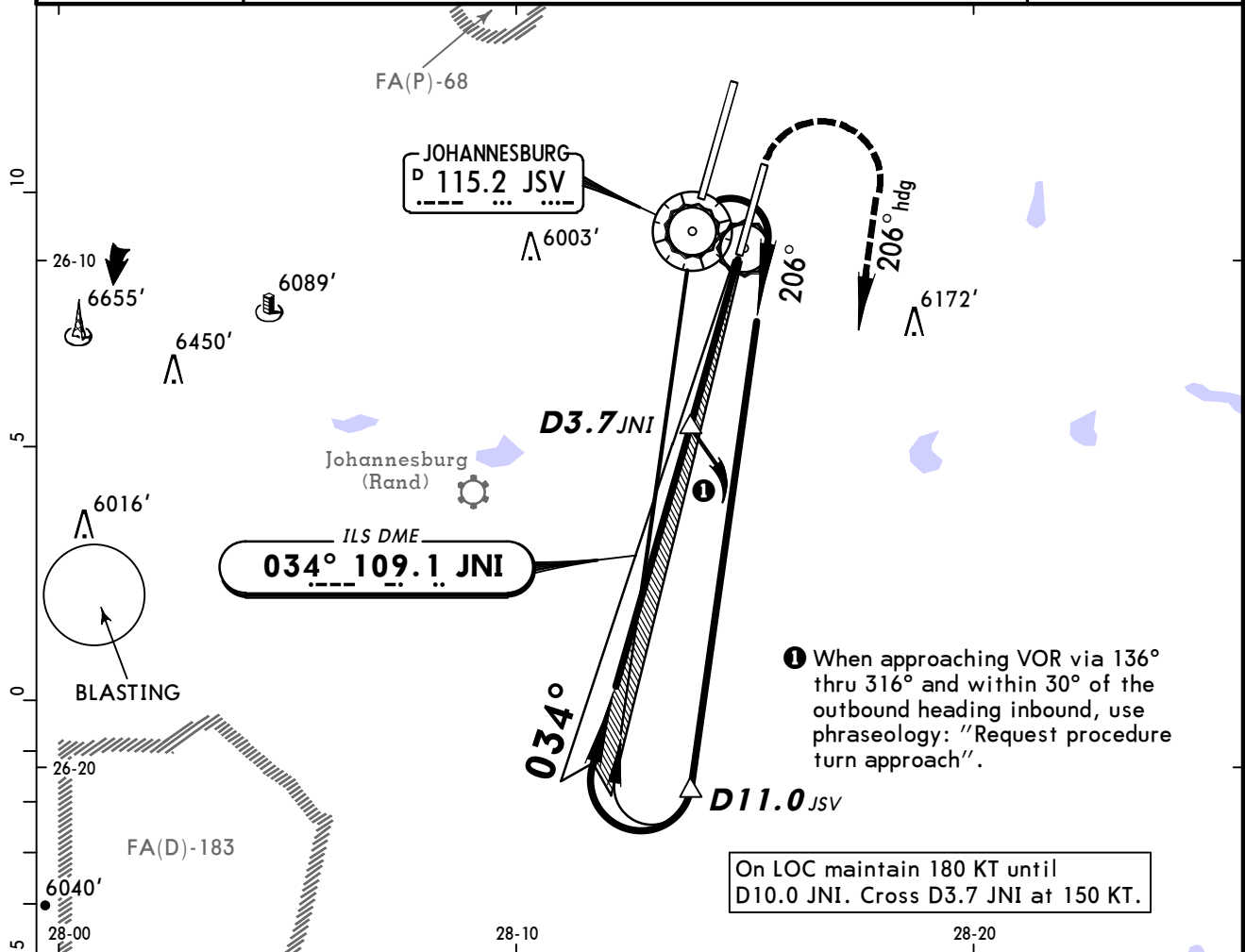
PANS OPS

RVR 300m

①

Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.

D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7 South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*OR TAMBO Tower West 118.1 East 118.6	Ground (also Tower outside Twr hr) 121.9
LOC JNI 109.1	Final Apch Crs 034°	GS D3.7 JNI 6700' (1190')	ILS DA(H) 5710' (200')	Apt Elev 5558' RWY 5510'
MISSED APCH: Climb to 8000'. Maintain rwy track. When passing 7000' turn RIGHT onto 206° heading. Passing D11.0 JSV turn RIGHT direct to VOR.				
Alt Set: hPa	Rwy Elev: 186 hPa	Trans level: By ATC	Trans alt: 8000'	MSA JSV VOR
VOR and DME required.				



Gnd speed-Kts	70	90	100	120	140	160		HIALS-II	7000'
GS	3.00°	377	484	538	646	753	861	PAPI	PAPI

JAR-OPS		STRAIGHT-IN LANDING RWY 03R		CIRCLE-TO-LAND			
		ILS		LOC (GS out)			
		DA(H) 5710' (200')				East of rwy 03R/21L	
		FULL				West of rwy 03R/21L	
		ALS out					
						Max Kts.	
						MDA(H) VIS	
						MDA(H) VIS	
A					100	6050' (492') 1500m 6070' (512') 1500m	
B	RVR 550m		RVR 1000m		135	6060' (502') 1600m 6070' (512') 1600m	
C					180	6250' (692') 2400m 6410' (852') 2400m	
D					205	6260' (702') 3600m 6410' (852') 3600m	

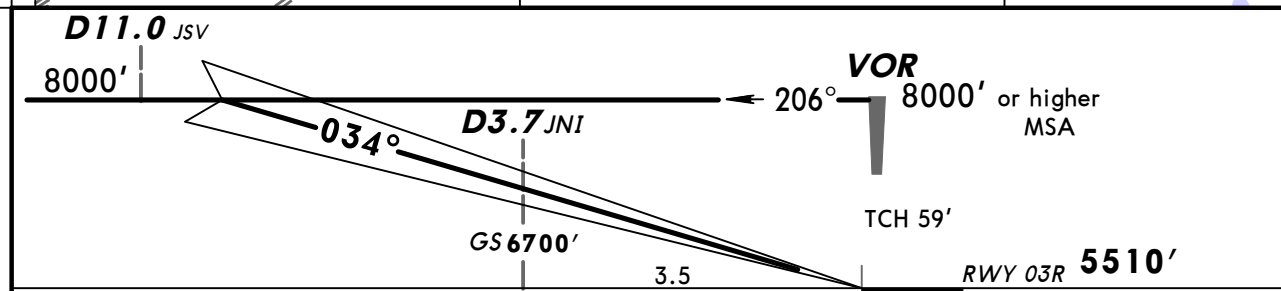
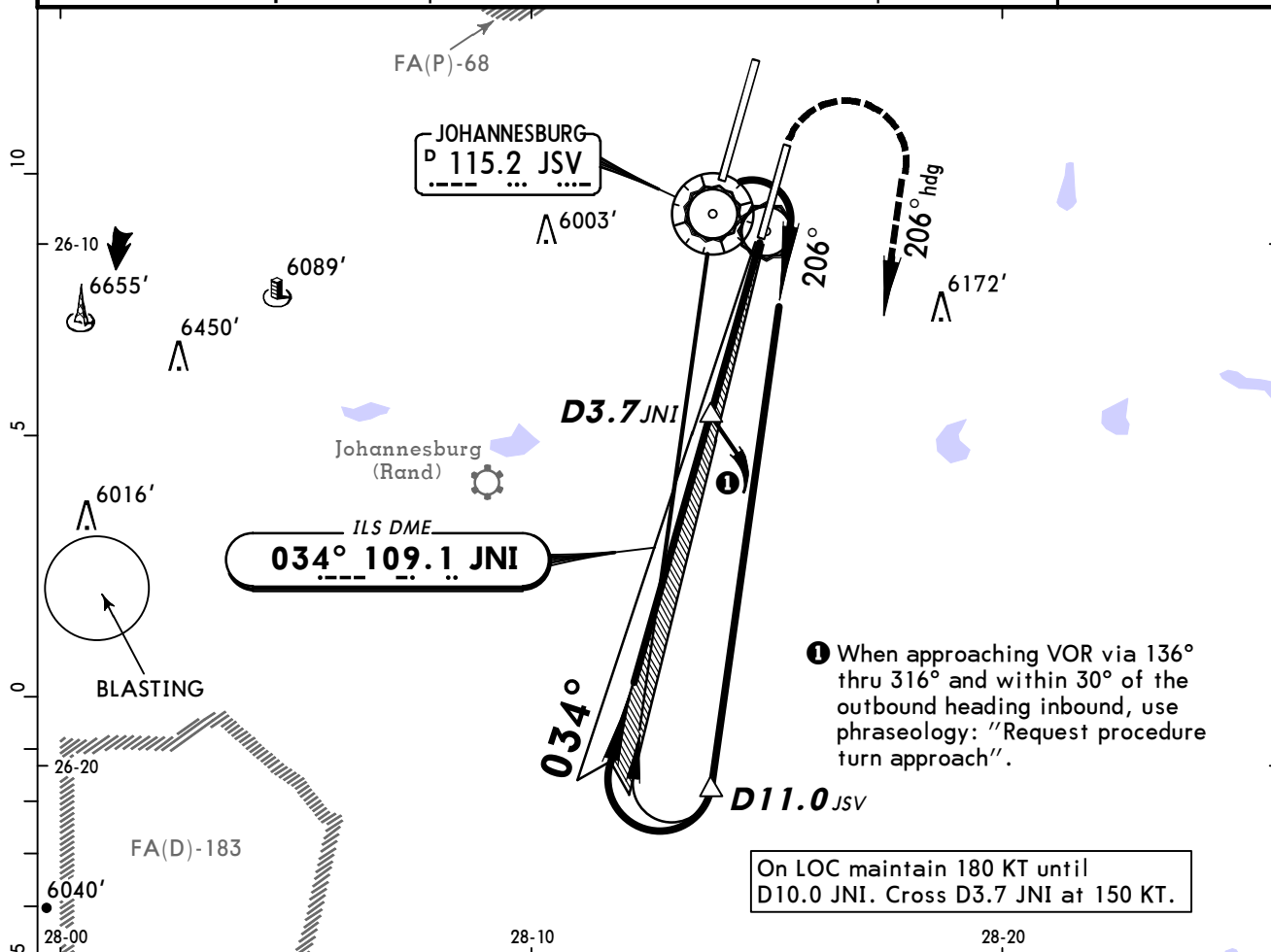
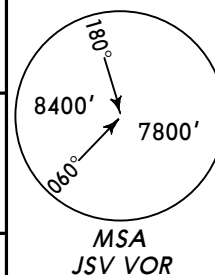
FAOR/JNB OR TAMBO INTL

28 DEC 12
Eff 10 Jan

11-3A

JEPPESSEN JOHANNESBURG, S AFR REP
CAT II ILS Z Rwy 03R

D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7 South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1 East 118.6	Ground (also Tower outside Twr hr) 121.9
LOC JNI 109.1	Final Apch Crs 034°	GS D3.7 JN1 6700' (1190')	CAT II ILS RA 95' DA(H) 5610' (100')	Apt Elev 5558' RWY 5510'
MISSED APCH: Climb to 8000'. Maintain rwy track. When passing 7000' turn RIGHT onto 206° heading. Passing D11.0 JSV turn RIGHT direct to VOR.				
Alt Set: hPa Rwy Elev: 186 hPa Trans level: By ATC Trans alt: 8000' 1. VOR and DME required. 2. Special Aircrew & Acft Certification Required.				



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II	7000'
GS	3.00°	377	484	538	646	753	PAPI	PAPI

JAR-OPS STRAIGHT-IN LANDING RWY 03R
CAT II ILS
RA 95'
DA(H) 5610' (100')

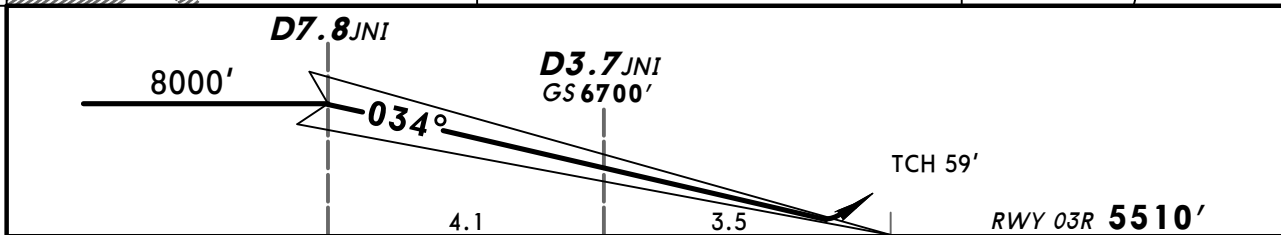
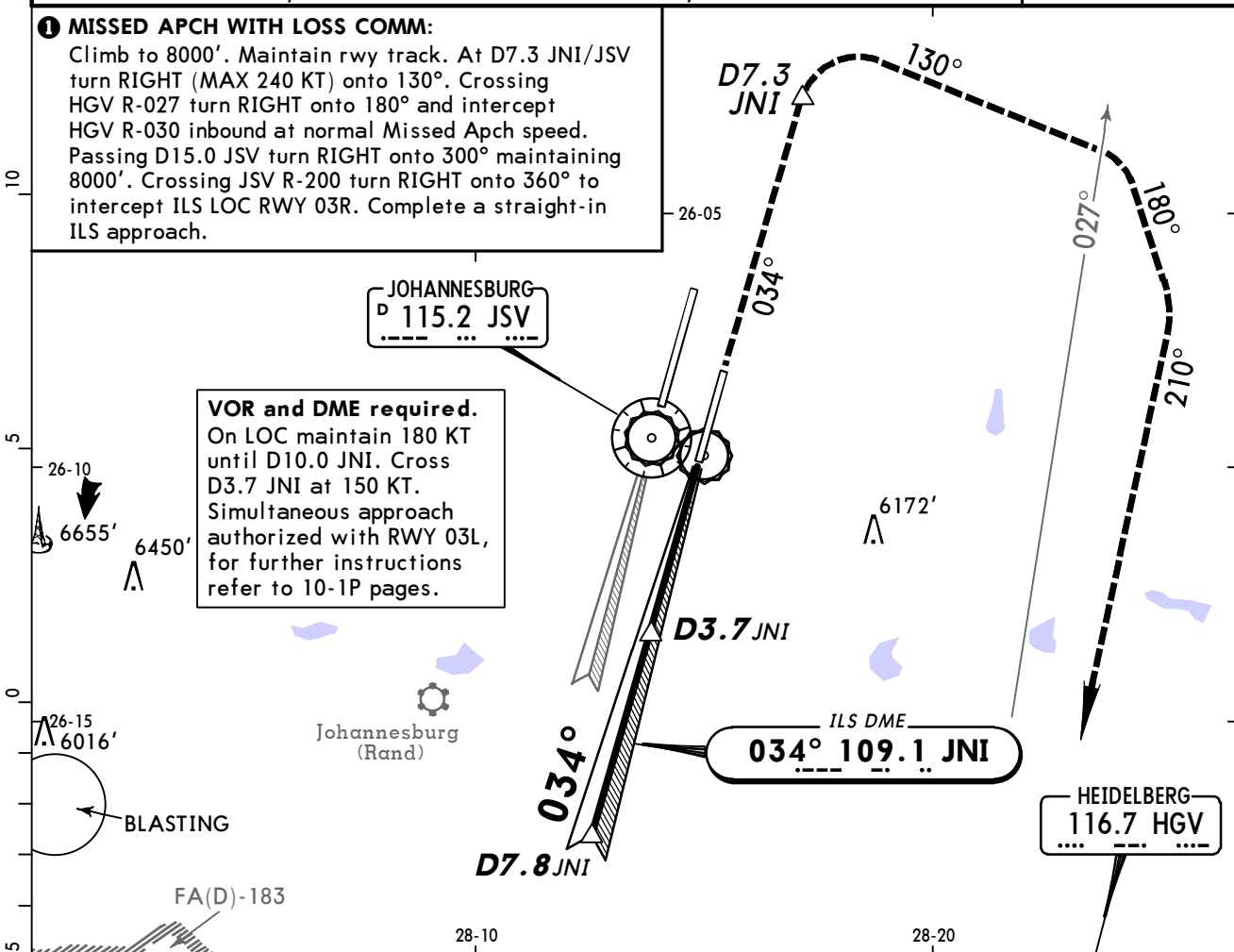
PANS OPS
RVR 300m
Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.

FAOR/JNB O R TAMBO INTL

JEPPESSEN JOHANNESBURG, S AFR REP
28 DEC 12 **11-4** Eff 10 Jan

ILS X Rwy 03R

D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7 South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1 East 118.6	Ground (also Tower outside Twr hr) 121.9
LOC JNI 109.1	Final Apch Crs 034°	GS D3.7 JNI 6700' (1190')	ILS DA(H) Refer to Minimums	Apt Elev 5558' RWY 5510'
MISSED APCH: Climb to 8000'. Maintain rwy track. At D7.3 JNI/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound for radar vectoring to ILS RWY 03R. 1				
Alt Set: hPa Rwy Elev: 186 hPa Trans level: By ATC Trans alt: 8000'				MSA JSV VOR



Gnd speed-Kts	70	90	100	120	140	160		HIALS-II PAPI PAPI	D7.3 JNV/JSV
GS	3.00°	377	484	538	646	753	861		

JAR-OPS					STRAIGHT-IN LANDING RWY 03R		LOC (GS out)		CIRCLE-TO-LAND	
Missed apch climb gradient min					5.8% up to 8000'		2.5%		East of rwy 03R/21L	
DA(H)					A: 5710' (200')		A: 6782' (1272') C: 6805' (1295')		West of rwy 03R/21L	
D: 5711' (201')					B: 6795' (1285') D: 6815' (1305')					
FULL					ALS out		FULL		MDA(H) VIS	
A					RVR 550m		RVR 800m		100 6050' (492') 1500m	
B					RVR 1000m		RVR 1200m		135 6060' (502') 1600m	
C									180 6250' (692') 2400m	
D					RVR 600m				205 6260' (702') 3600m	

CHANGES: ICAO code. Chart reindexed.

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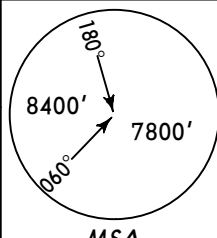
FAOR/JNB O R TAMBO INTL

28 DEC 12
Eff 10 Jan

11-4A

JEPPESEN JOHANNESBURG, S AFR REP
CAT II ILS X Rwy 03R

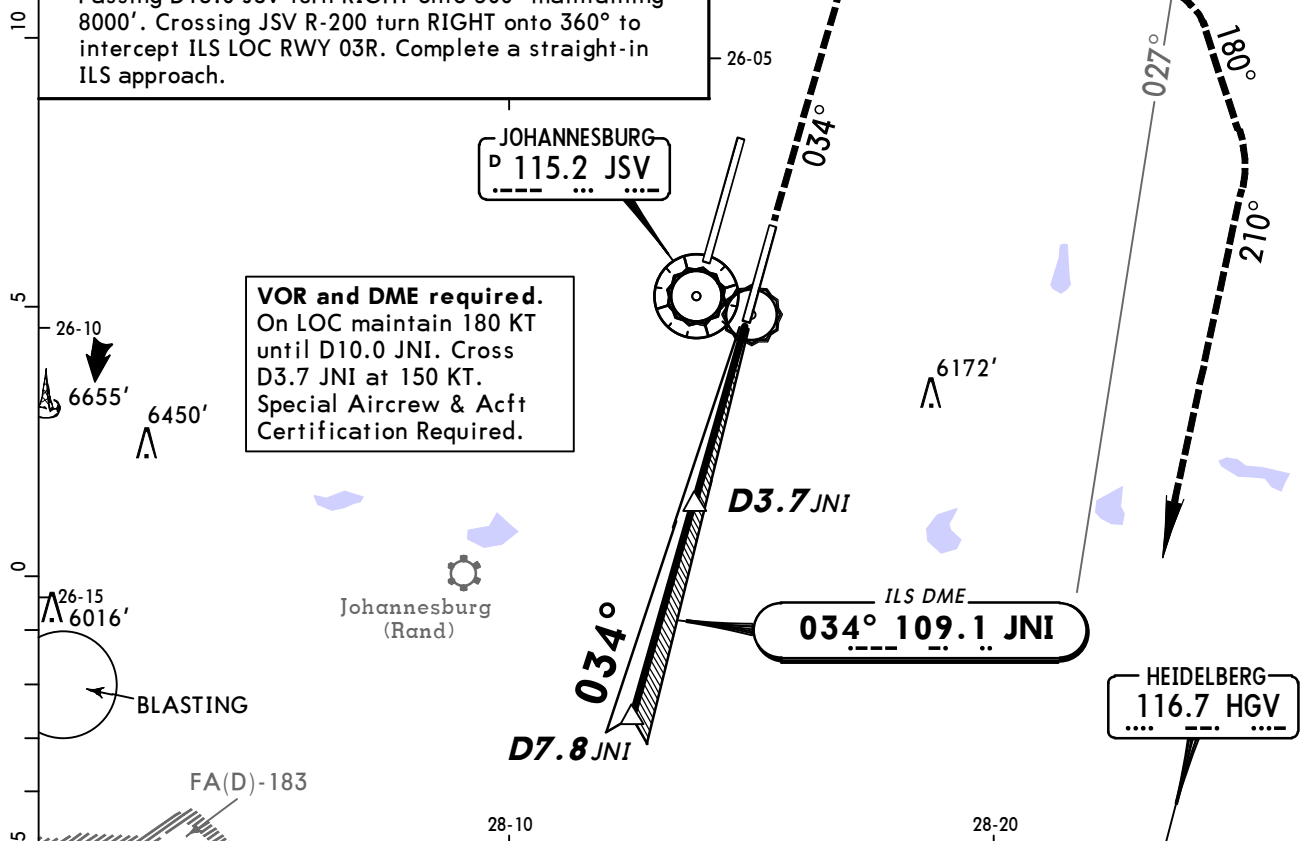
D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7 South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1 East 118.6	Ground (also Tower outside Twr hr) 121.9
LOC JNI 109.1	Final Apch Crs 034°	GS D3.7 JNI 6700' (1190')	CAT II ILS RA/DA(H) Refer to Minimums	Apt Elev 5558' RWY 5510'
MISSED APCH: Climb to 8000'. Maintain rwy track. At D7.3 JNI/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound for radar vectoring onto ILS RWY 03R. ②				
Alt Set: hPa	Rwy Elev: 186 hPa	Trans level: By ATC	Trans alt: 8000'	MSA JSV VOR



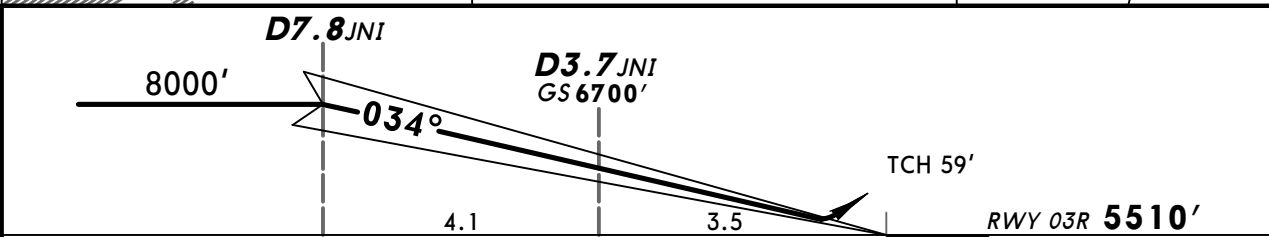
② MISSED APCH WITH LOSS COMM:

Climb to 8000'. Maintain rwy track. At D7.3 JNI/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound at normal Missed Apch speed. Passing D15.0 JSV turn RIGHT onto 300° maintaining 8000'. Crossing JSV R-200 turn RIGHT onto 360° to intercept ILS LOC RWY 03R. Complete a straight-in ILS approach.

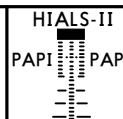
① Missed apch climb gradient mim 5.8%



VOR and DME required.
On LOC maintain 180 KT until D10.0 JNI. Cross D3.7 JNI at 150 KT. Special Aircrew & Acft Certification Required.



<i>Gnd speed-Kts</i>	70	90	100	120	140	160
GS 3.00°	377	484	538	646	753	861



D7.3 JNI/JSV

JAR-OPS

STRAIGHT-IN LANDING RWY 03R

CAT II ILS

Missed apch climb gradient mim 5.8% up to 8000'

ABC
RA 95'
DA(H) 5610' (100')

D
RA 102'
DA(H) 5619' (109')

RVR 300m

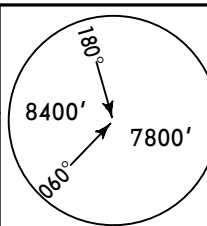
① Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.

CHANGES: ICAO code. Chart reindexed.

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FAOR/JNB O R TAMBO INTL

JEPPESSEN JOHANNESBURG, S AFR REP
28 DEC 12 **11-5** Eff 10 Jan ILS W Rwy 03R

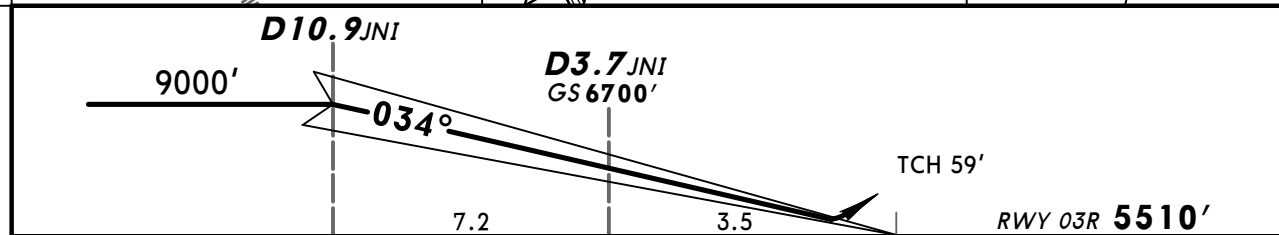
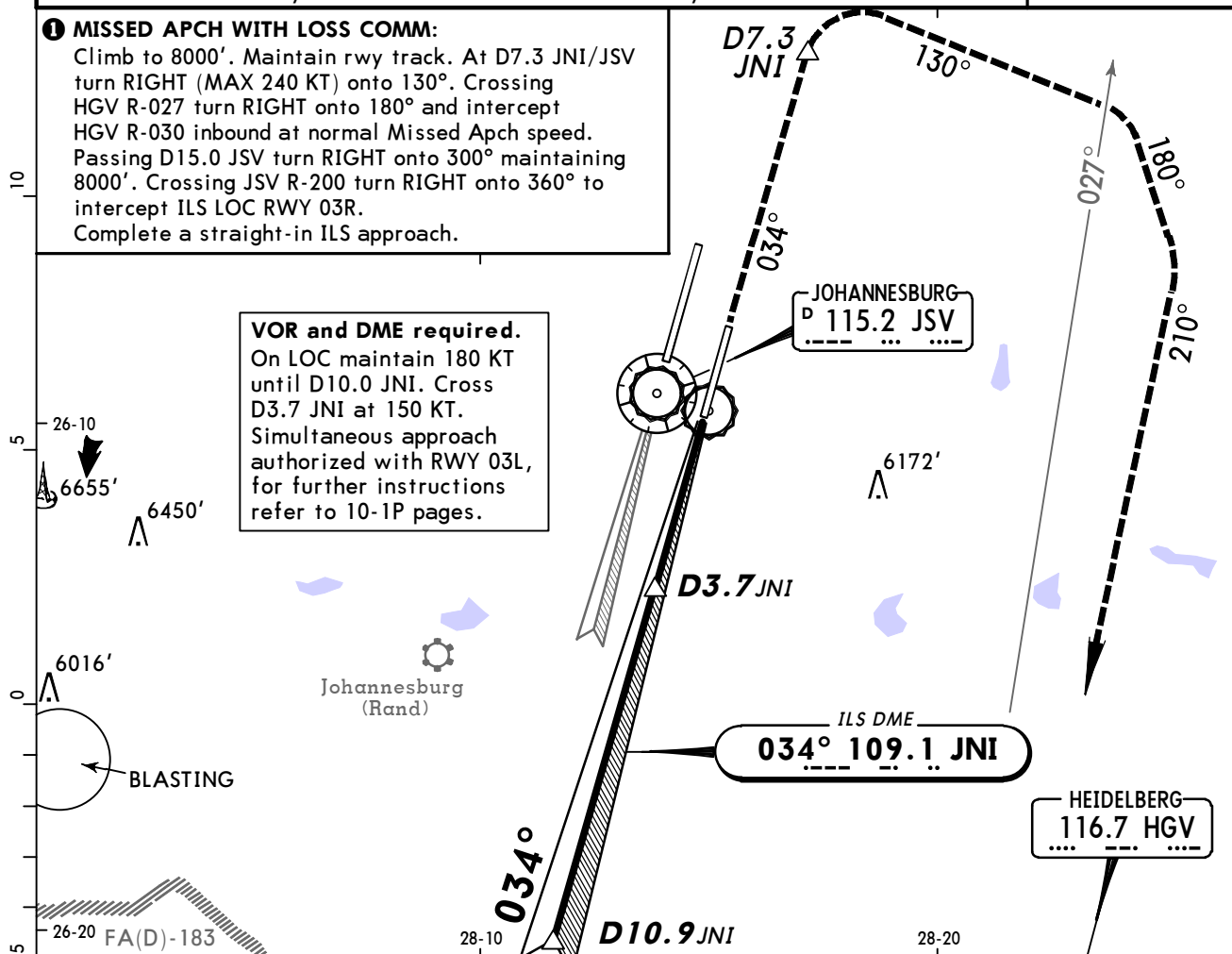
D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7	South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1	East 118.6	Ground (also Tower outside Twr hr) 121.9
LOC JNI 109.1	Final Apch Crs 034°	GS D3.7 JNI 6700' (1190')	ILS DA(H) Refer to Minimums	Apt Elev 5558' RWY 5510'		
MISSED APCH: Climb to 8000'. Maintain rwy track. At D7.3 JNI/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound for radar vectoring to ILS RWY 03R. ①						MSA JSV VOR
Alt Set: hPa	Rwy Elev: 186 hPa	Trans level: By ATC	Trans alt: 8000'			

① MISSED APCH WITH LOSS COMM:

Climb to 8000'. Maintain rwy track. At D7.3 JNI/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound at normal Missed Apch speed. Passing D15.0 JSV turn RIGHT onto 300° maintaining 8000'. Crossing JSV R-200 turn RIGHT onto 360° to intercept ILS LOC RWY 03R. Complete a straight-in ILS approach.

VOR and DME required.

On LOC maintain 180 KT until D10.0 JNI. Cross D3.7 JNI at 150 KT. Simultaneous approach authorized with RWY 03L, for further instructions refer to 10-1P pages.



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II		D7.3 JNI/JSV
GS	3.00°	377	484	538	646	753	PAPI	PAPI	

JAR-OPS					STRAIGHT-IN LANDING RWY 03R		CIRCLE-TO-LAND	
					ILS			
					Missed apch climb gradient min			
					5.8% up to 8000'			
					2.5%			
					DA(H)			
					ABC: 5710' (200')			
					D: 5711' (201')			
					A: 6782' (1272')			
					B: 6795' (1285')			
					C: 6805' (1295')			
					D: 6815' (1305')			
					FULL			
					ALS out			
					FULL			
					ALS out			
					NOT APPLI- CABLE			
					Max Kts			
					100			
					135			
					180			
					205			
					MDA(H)			
					VIS			
					MDA(H)			
					VIS			
					6050' (492')			
					1500m			
					6070' (512')			
					1500m			
					6060' (502')			
					1600m			
					6070' (512')			
					1600m			
					6250' (692')			
					2400m			
					6410' (852')			
					2400m			
					6260' (702')			
					3600m			
					6410' (852')			
					3600m			

FAOR/JNB O R TAMBO INTL

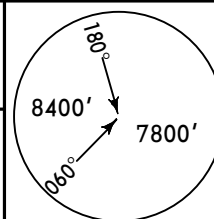
28 DEC 12
Eff 10 Jan

11-5A

JEPPESSEN JOHANNESBURG, S AFR REP
CAT II ILS W Rwy 03R

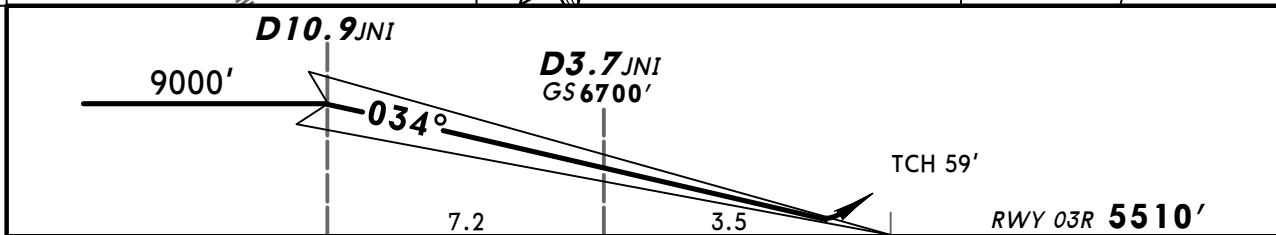
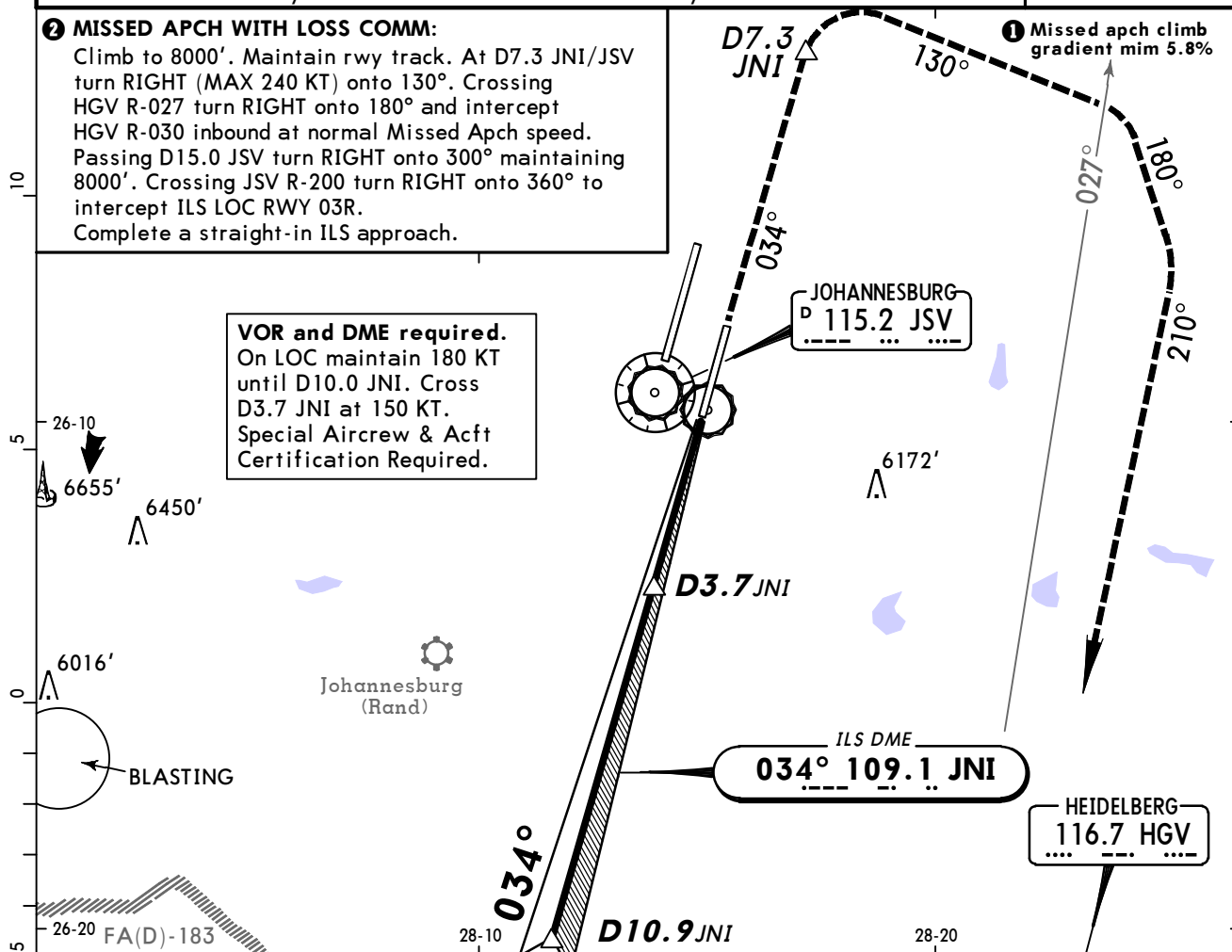
BRIEFING STRIP

D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7 South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1 East 118.6	Ground (also Tower outside Twr hr) 121.9
LOC JNI 109.1	Final Apch Crs 034°	GS D3.7 JN1 6700' (1190')	CAT II ILS RA/DA(H) Refer to Minimums	Apt Elev 5558' RWY 5510'
MISSED APCH: Climb to 8000'. Maintain rwy track. At D7.3 JN1/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound for radar vectoring to ILS RWY 03R.				
Alt Set: hPa	Rwy Elev: 186 hPa	Trans level: By ATC	Trans alt: 8000'	MSA JSV VOR



② MISSED APCH WITH LOSS COMM:
Climb to 8000'. Maintain rwy track. At D7.3 JN1/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound at normal Missed Apch speed. Passing D15.0 JSV turn RIGHT onto 300° maintaining 8000'. Crossing JSV R-200 turn RIGHT onto 360° to intercept ILS LOC RWY 03R. Complete a straight-in ILS approach.

VOR and DME required.
On LOC maintain 180 KT until D10.0 JN1. Cross D3.7 JN1 at 150 KT. Special Aircrew & Acft Certification Required.



<i>Gnd speed-Kts</i>	70	90	100	120	140	160
<i>GS</i> 3.00°	377	484	538	646	753	861

HIALS-II	D7.3 JN1/JSV
PAPI	

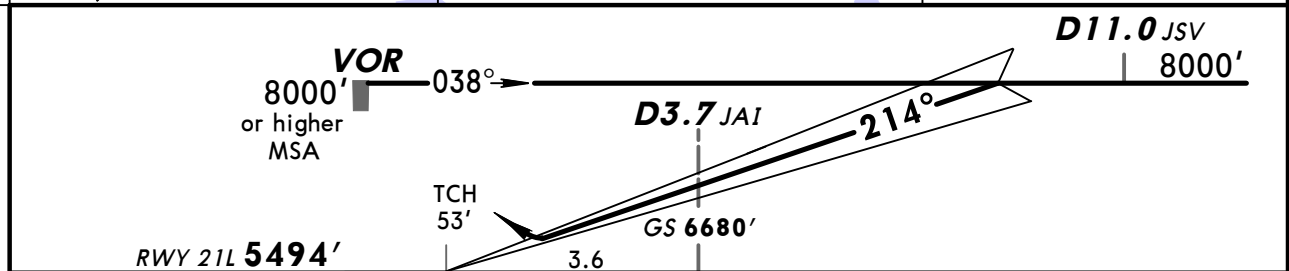
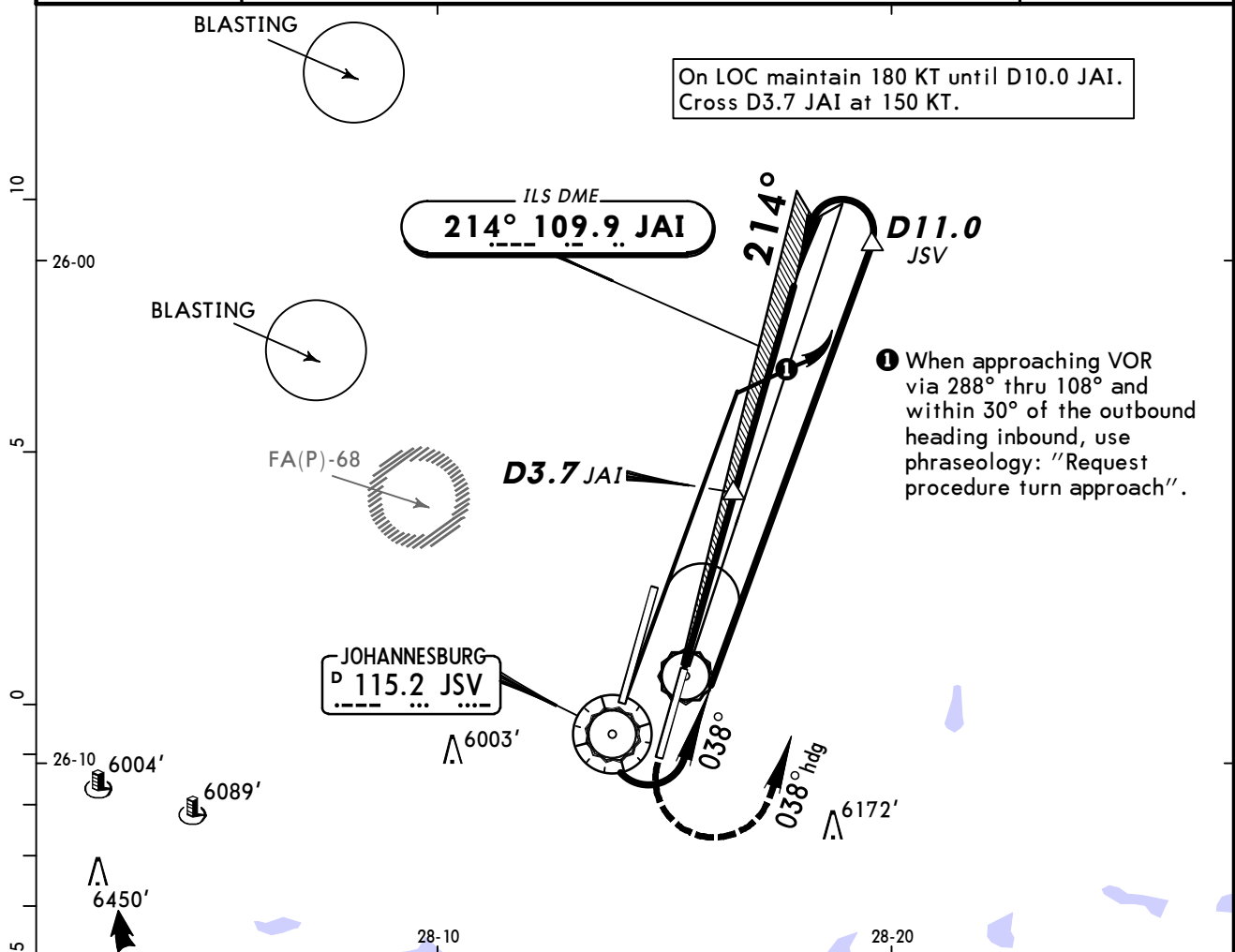
JAR-OPS		STRAIGHT-IN LANDING RWY 03R	
CAT II ILS		Missed apch climb gradient mim 5.8% up to 8000'	
ABC	RA 95'	D	RA 102'
DA(H)	5610' (100')	DA(H)	5619' (109')

RVR 300m

Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.

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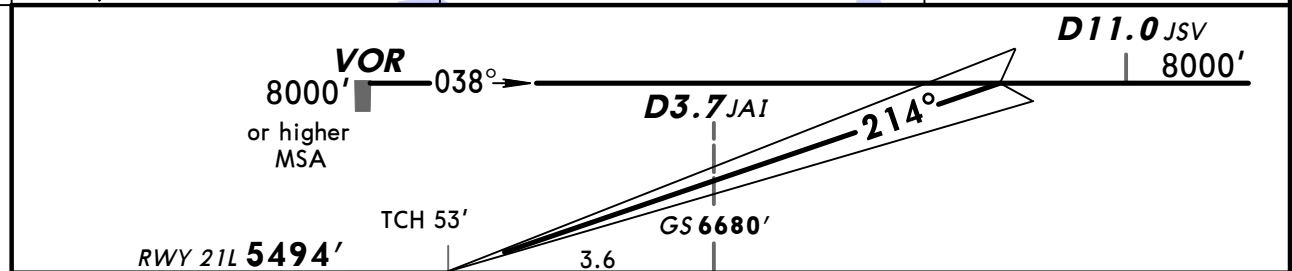
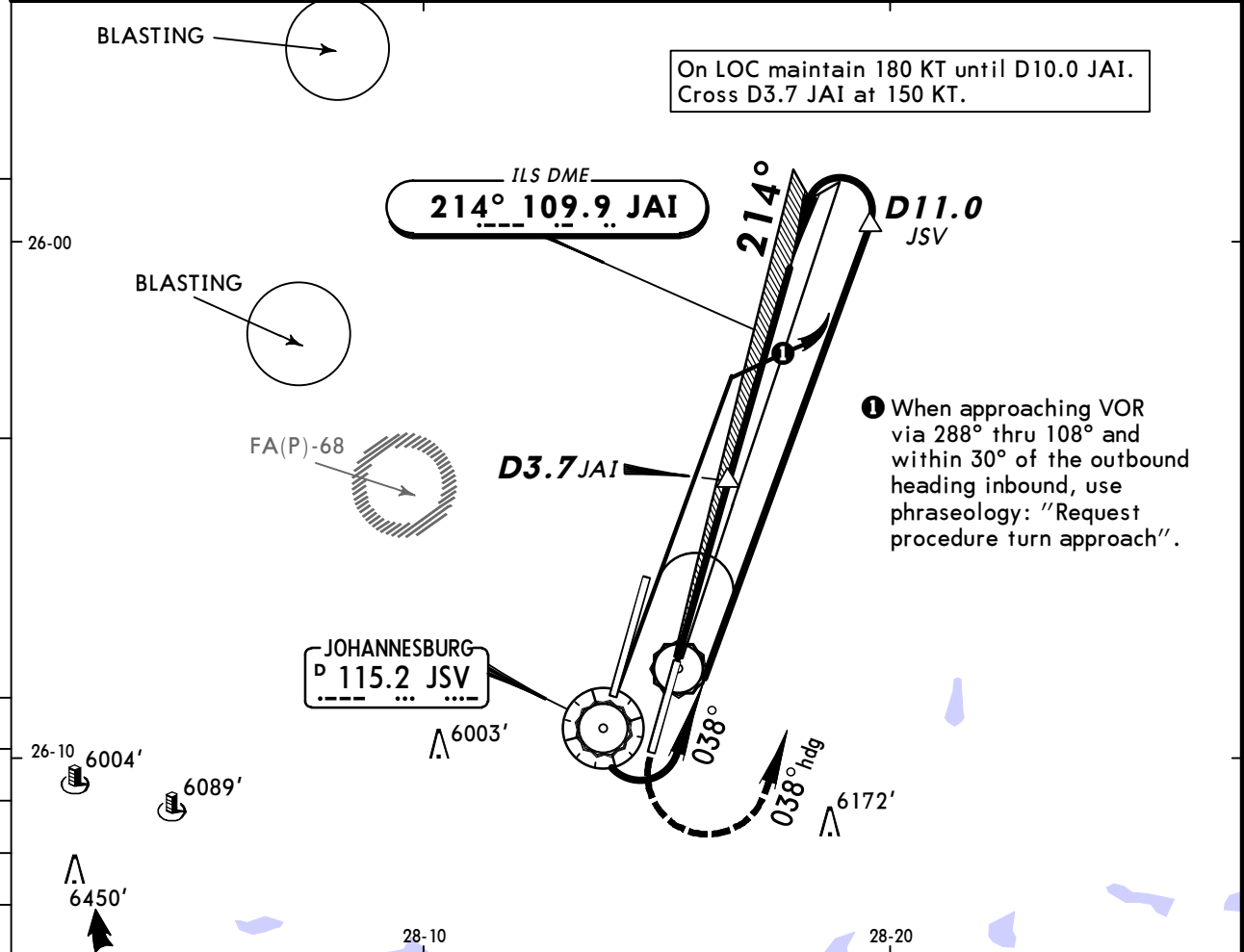
D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7 South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1 East 118.6	Ground (also Tower outside Twr hr) 121.9
LOC JAI 109.9	Final Apch Crs 214°	GS D3.7 JAI 6680' (1186')	ILS DA(H) 5694' (200')	Apt Elev 5558' RWY 5494'
MISSED APCH: Climb to 8000'. Maintain rwy track. When passing 7000' turn LEFT onto 038° heading. Passing D11.0 JSV turn LEFT direct to VOR.				
Alt Set: hPa	Rwy Elev: 186 hPa	Trans level: By ATC	Trans alt: 8000'	MSA JSV VOR
VOR and DME required.				



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI PAPI 7000'
GS	3.00°	377	484	538	646	753	

JAR-OPS		STRAIGHT-IN LANDING RWY 21L			CIRCLE-TO-LAND			
		ILS		LOC (GS out)	East of rwy 03R/21L		West of rwy 03R/21L	
		DA(H) 5694' (200')						
		FULL	ALS out		Max Kts.	MDA(H) _____ VIS _____	MDA(H) _____ VIS _____	
A					100	6050' (492') 1500m	6070' (512') 1500m	
B					135	6060' (502') 1600m	6070' (512') 1600m	
C					180	6250' (692') 2400m	6410' (852') 2400m	
D					205	6260' (702') 3600m	6410' (852') 3600m	
		RVR 550m	RVR 1000m	NOT APPLICABLE				

D-ATIS		*JOHANNESBURG Radar (APP)		*JOHANNESBURG Director (APP)		*O R TAMBO Tower		Ground	
West		South/East				West		East	
126.2		123.7		124.5		121.4		118.1	
								118.6	
								121.9	
LOC JAI		Final Apch Crs		GS D3.7 JAI		CAT II ILS RA 102'		Apt Elev 5558'	
109.9		214°		6680' (1186')		DA(H) 5594' (100')		RWY 5494'	
MISSED APCH: Climb to 8000'. Maintain rwy track. When passing 7000' turn LEFT onto 038° heading. Passing D11.0 JSV turn LEFT direct to VOR.									180° 8400' 7800' 060°
Alt Set: hPa Rwy Elev: 186 hPa Trans level: By ATC Trans alt: 8000'									
1. VOR and DME required. 2. Special Aircrew & Acft Certification Required.									
									MSA JSV VOR



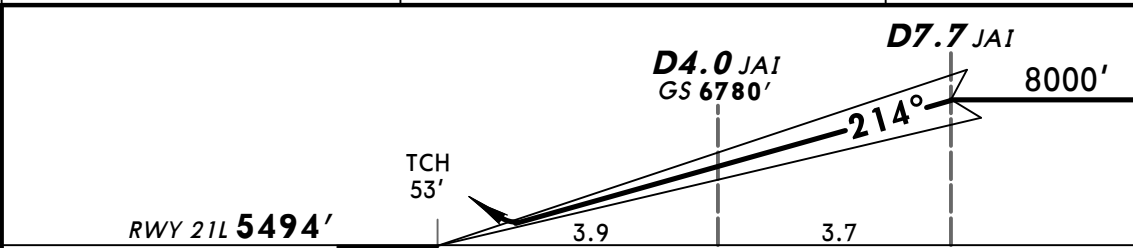
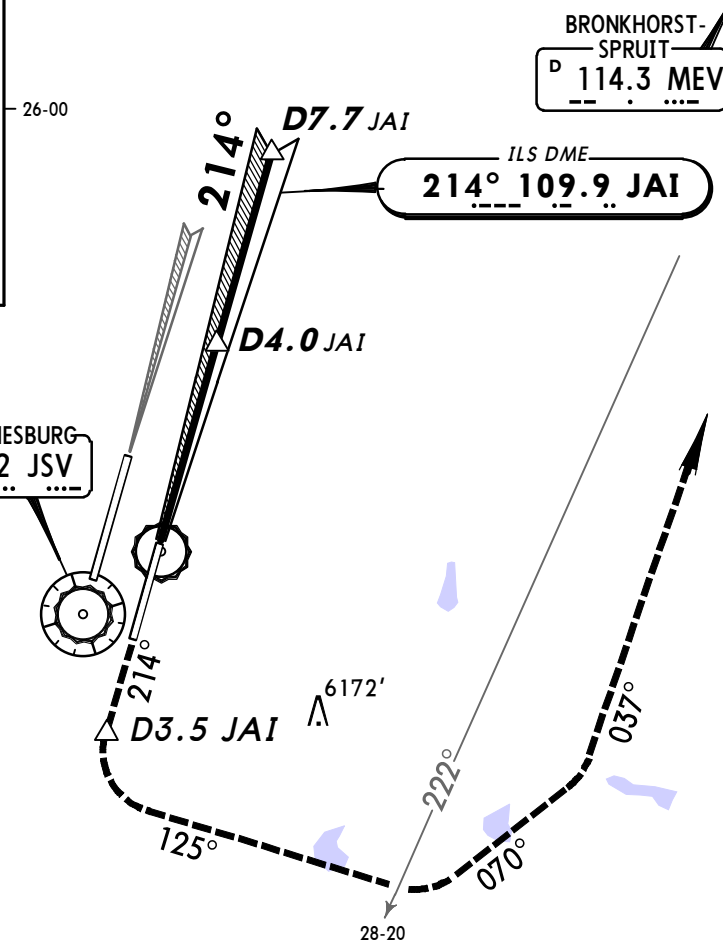
Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI PAPI	7000' ↑
GS	3.00°	377	484	538	646	753		

JAR-OPS	STRAIGHT-IN LANDING RWY 21L									
CAT II ILS										
RA 102'										
DA(H) 5594'(100')										
RVR 300m1										
1	Operators applying II S. Ops Specs: Autoland or HUD required below RVR 350m.									

D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7	South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1	East 118.6	Ground (also Tower outside Twr hr) 121.9
LOC JAI 109.9	Final Apch Crs 214°	GS D4.0 JAI 6780' (1286')	ILS DA(H) Refer to Minimums	Apt Elev 5558'	RWY 5494'	
MISSED APCH: Climb to 7000'. Maintain rwy track. At D3.5 JAI turn LEFT (MAX 240 KT) onto 125° heading, then climb to 8000'. Crossing MEV R-222 turn LEFT onto 070° heading and intercept MEV R-217 inbound for radar vectoring onto ILS RWY 21L. ①						
Alt Set: hPa	Rwy Elev: 186 hPa	Trans level: By ATC	Trans alt: 8000'	MSA JSV VOR		

① MISSED APCH WITH LOSS COMM:
Climb to 7000'. Maintain rwy track. At D3.5 JAI turn LEFT (MAX 240 KT) onto 125° heading, then climb to 8000'. Crossing MEV R-222 turn LEFT onto 070° heading and intercept MEV R-217 inbound resuming normal Missed Apch climb gradient once established. At D7.5 MEV turn LEFT (MAX 240 KT) onto 300° heading. Crossing JSV R-048 turn LEFT onto 255° heading to intercept ILS LOC RWY 21L. Complete a straight-in ILS approach.

VOR and DME required.
On LOC maintain 180 KT until D10.0 JAI. Cross D4.0 JAI at 150 KT. Simultaneous approach authorized with RWY 21R, for further instructions refer to 10-1P pages.



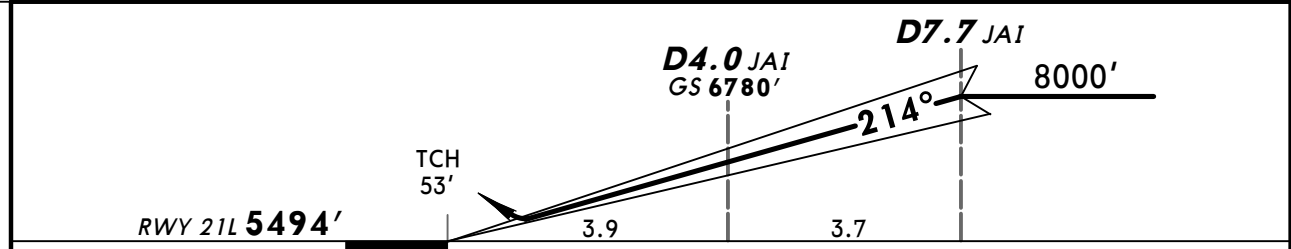
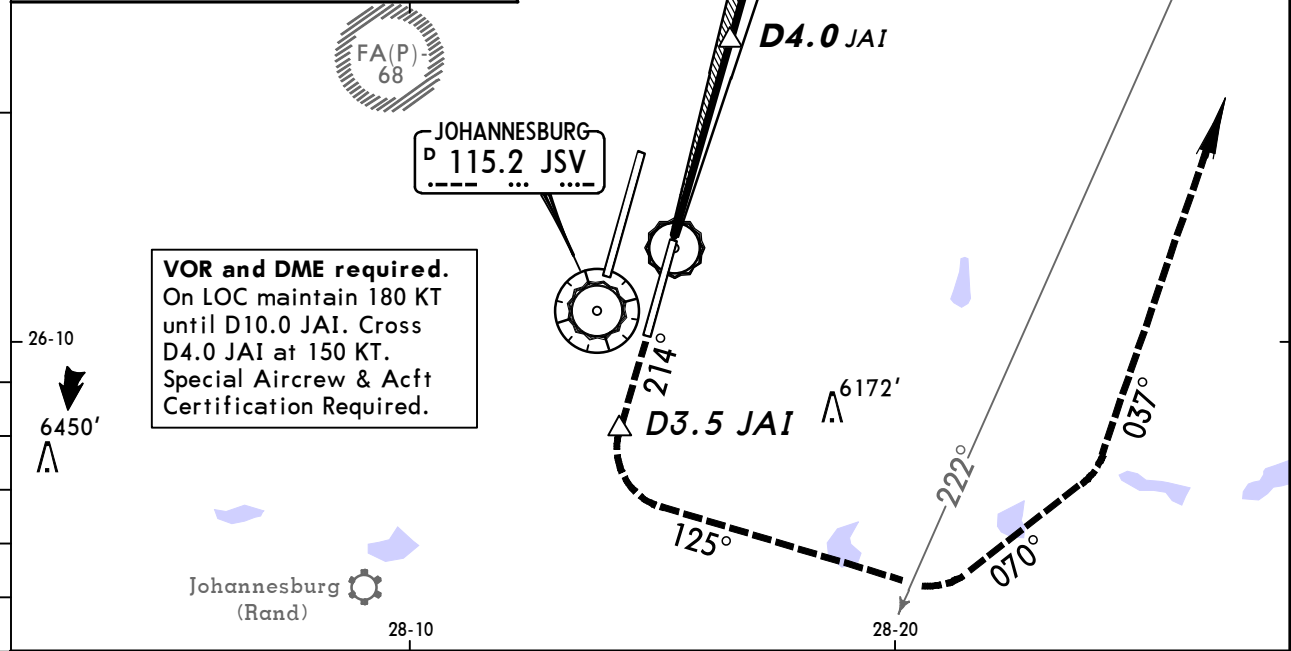
<i>Gnd speed-Kts</i>	70	90	100	120	140	160
GS 3.00°	377	484	538	646	753	861

HIALS-II PAPI	PAPI	D3.5 JAI
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JAR-OPS STRAIGHT-IN LANDING RWY 21L				CIRCLE-TO-LAND			
ILS				LOC (GS out)			
Missed apch climb gradient min 4.6% up to 8000'				East of rwy 03R/21L			
A: 6634' (1140') B: 6645' (1151') C: 6655' (1161') D: 6669' (1175')				West of rwy 03R/21L			
FULL ALS out				FULL ALS out			
A				NOT APPLI-CABLE			
B				Max Kts			
C				MDA(H) VIS			
D				MDA(H) VIS			

D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7	South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1	East 118.6	Ground (also Tower outside Twr hr) 121.9
LOC JAI 109.9	Final Aptch Crs 214°	GS D4.0 JAI 6780' (1286')	CAT II ILS RA/DA(H) Refer to Minimums	Apt Elev 5558'	RWY 5494'	
MISSED APCH: Climb to 7000'. Maintain rwy track. At D3.5 JAI turn LEFT (MAX 240 KT) onto 125° heading, then climb to 8000'. Crossing MEV R-222 turn LEFT onto 070° heading and intercept MEV R-217 inbound for radar vectoring onto ILS RWY 21L.						
Alt Set: hPa	Rwy Elev: 186 hPa	Trans level: By ATC	Trans alt: 8000'	MSA JSV VOR		

② MISSED APCH WITH LOSS COMM:
Climb to 7000'. Maintain rwy track. At D3.5 JAI turn LEFT (MAX 240 KT) onto 125° heading, then climb to 8000'. Crossing MEV R-222 turn LEFT onto 070° heading and intercept MEV R-217 inbound resuming normal Missed Apch climb gradient once established. At D7.5 MEV turn LEFT (MAX 240 KT) onto 300° heading. Crossing JSV R-048 turn LEFT onto 255° heading to intercept ILS LOC RWY 21L. Complete a straight-in ILS approach.



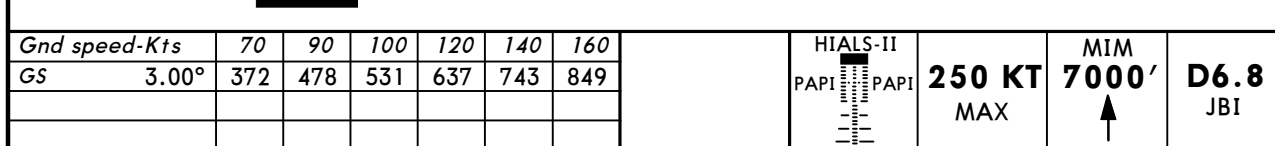
Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI PAPI	D3.5 JAI ↑
GS	3.00°	377	484	538	646	753		

JAR-OPS		STRAIGHT-IN LANDING RWY 21L CAT II ILS Missed apch climb gradient mim 4.6% up to 8000'	
ABC RA 102' DA(H) 5594' (100')		D RA 103' DA(H) 5595' (101')	

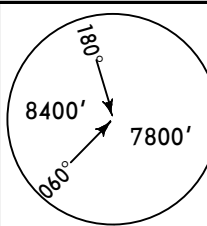
RVR 300m

Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.

BRIEFING STRIP™



PANS OPS

D-ATIS	*JOHANNESBURG Radar (APP) West	South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	East	Ground (also Tower outside Twr hr
126.2	123.7	124.5	121.4	118.1	118.6	121.9
LOC JBI	Final Apch Crs	GS D4.3 JBI	CAT II ILS RA 98'	Apt Elev 5558'		
110.9	214°	6880' (1375')	DA(H) 5605' (100')	RWY 5505'		
MISSED APCH: Climb to 8000'. Maintain rwy track. At D6.8 JBI turn RIGHT onto 350° heading. Cross D6.8 JBI at or above 7000'. Crossing WKV R-225 turn RIGHT to intercept WKV R-230 inbound for radar vectoring to ILS RWY 21R. MAX 250 KT. ②						MSA JSV VOR
Alt Set: hPa	Rwy Elev: 186 hPa	Trans level: By ATC	Trans alt: 8000'			

VOR and DME required.
On LOC maintain 180 KT until D10.0 JBI. Cross D4.3 JBI at 150 KT.

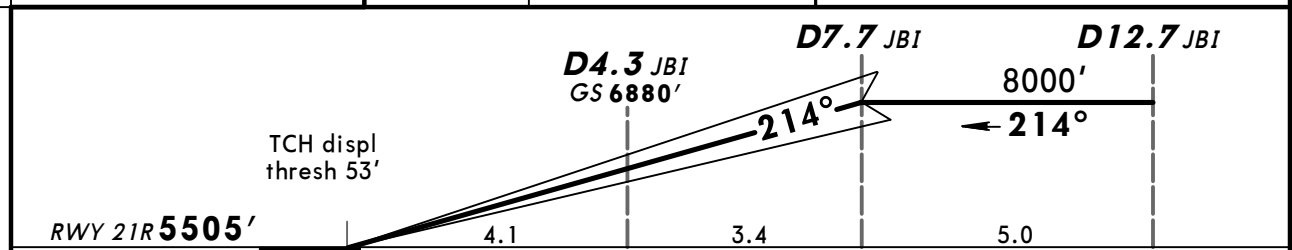
① Missed apch climb gradient mim 3.7%

BLASTING

BLASTING

JOHANNESBURG
D 115.2 JSV

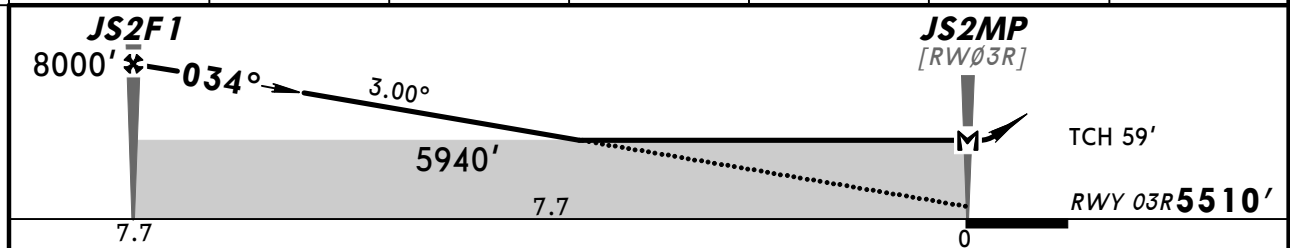
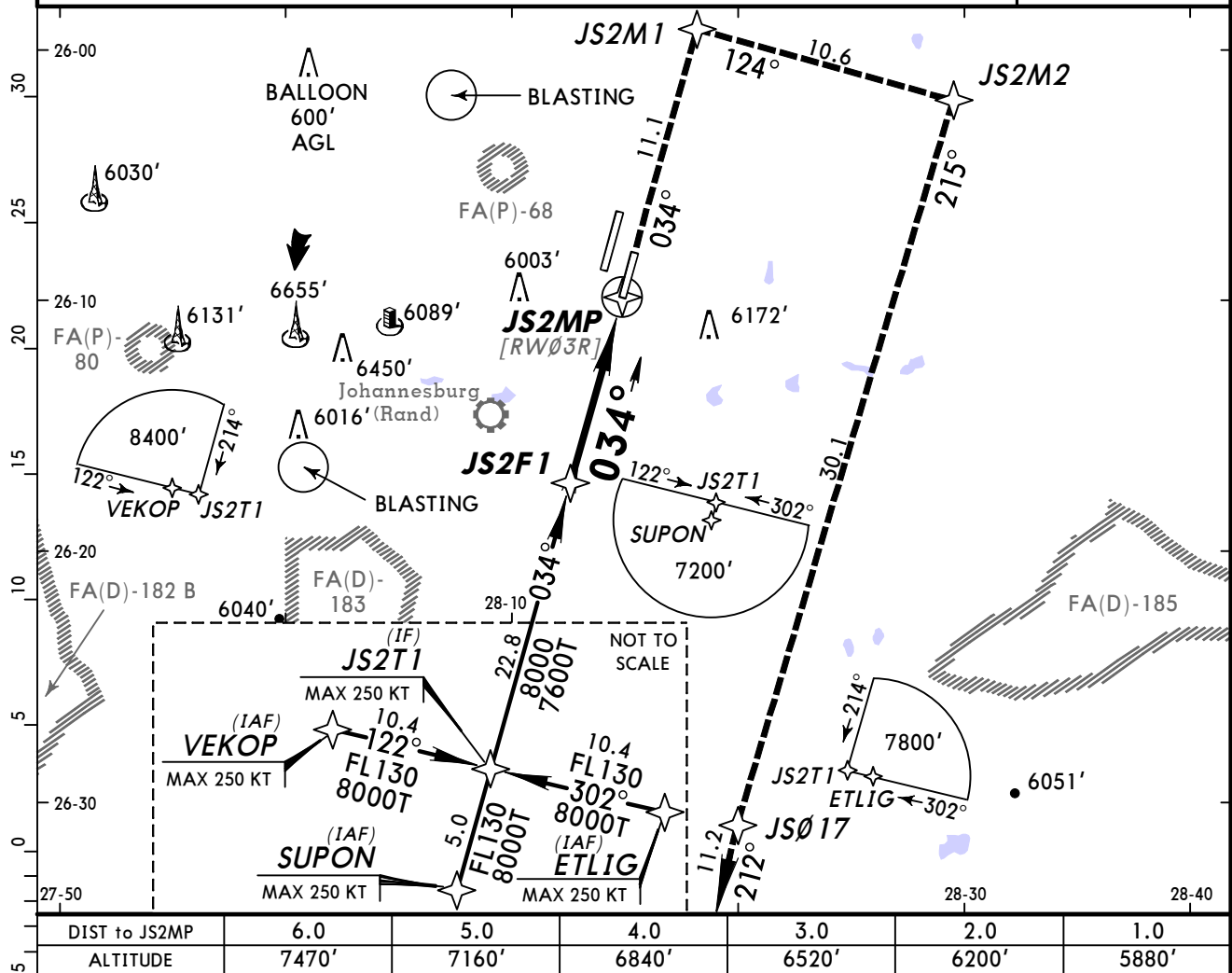
② MISSED APCH WITH LOSS COMM:
Climb to 8000'. Maintain rwy track. At D6.8 JBI turn RIGHT onto 350° heading (MAX 250 KT). Cross D6.8 JBI at or above 7000'. Crossing WKV R-225 turn RIGHT to intercept WKV R-230 inbound and reduce speed to MAX 220 KT when established. At D3.0 WKV turn RIGHT onto 120° heading. Crossing JSV R-027 turn RIGHT onto 184° heading to intercept ILS LOC RWY 21R. Complete a straight-in ILS approach.



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI PAPI		250 KT MAX	MIM 7000'	D6.8 JBI
GS	3.00°	372	478	531	637	743					

JAR-OPS	STRAIGHT-IN LANDING RWY 21R										
	CAT II ILS										
	Missed apch climb gradient mim 3.7% up to 7000'										
	RA 98'										
	DA(H) 5605' (100')										
	RVR 300m										
	① Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.										

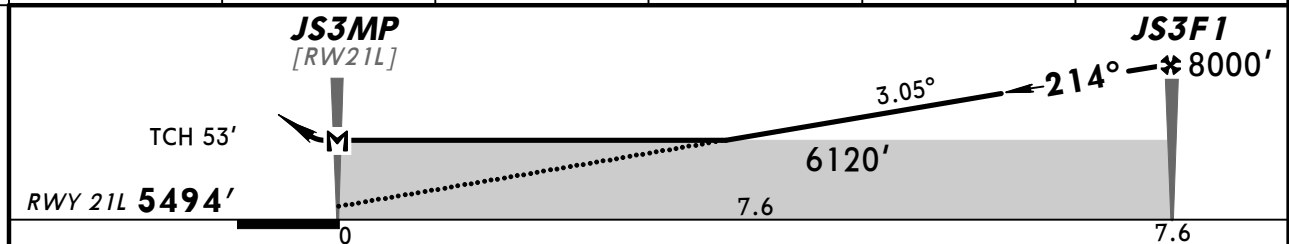
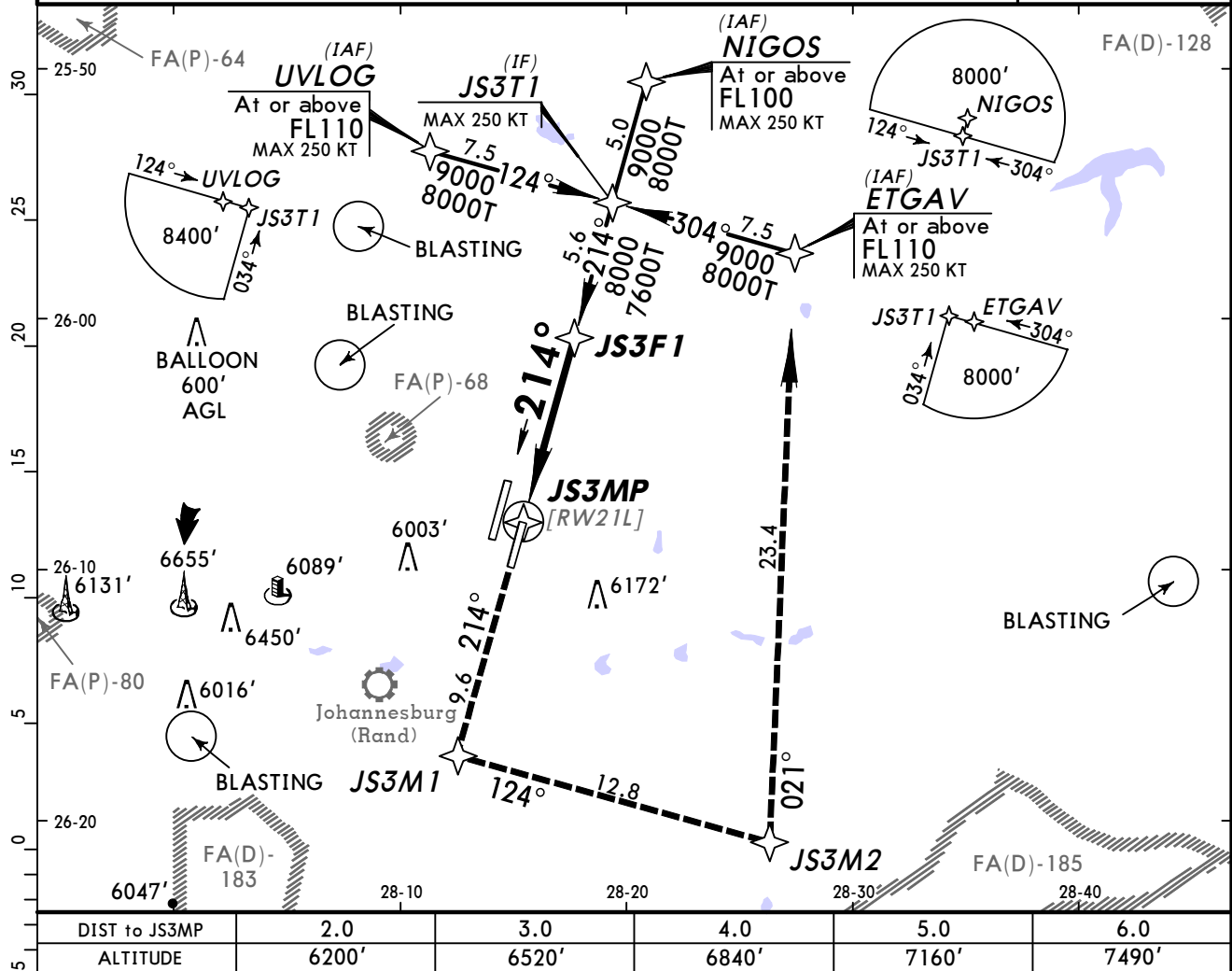
D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7 South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1 East 118.6	Ground (also Tower outside Twr hr) 121.9
RNAV	Final Apch Crs 034°	Procedure Alt JS2F1 8000' (2490')	LNAV MDA(H) Refer to Minimums	Apt Elev 5558' RWY 5510'
MISSED APCH: Climb to FL 130. Climb to JS2M1, then to JS2M2 turning RIGHT to JSØ17 and return to ETLIG, or as directed. MAX 240 KT.				
Alt Set: hPa Rwy Elev: 186 hPa Trans level: By ATC Trans alt: 8000' SPECIAL AIRCRAFT & AIRCREW AUTHORIZATION REQUIRED.				
TAA 25 NM IAF				



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at JS2MP						

JAR-OPS STRAIGHT-IN LANDING RWY 03R				CIRCLE-TO-LAND			
LNAV		LNAV		East of rwy 03R/21L		West of rwy 03R/21L	
Missed apch climb gradient mim 3.8% MDA(H) 5940' (430')		Missed apch climb gradient mim 2.5% MDA(H) 6510' (1000')		Max Kts		Max Kts	
ALS out		ALS out		MDA(H)		MDA(H)	
A	RVR 900m	RVR 1200m	RVR 1500m	100	6050' (492')	1500m	6070' (512')
B	RVR 1000m	RVR 1400m	RVR 1500m	135	6060' (502')	1600m	6070' (512')
C	RVR 1000m	RVR 1800m	RVR 2000m	180	6250' (692')	2400m	6410' (852')
D	RVR 1400m	RVR 2000m	RVR 1800m	205	6260' (702')	3600m	6410' (852')

D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7	South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1	East 118.6	Ground (also Tower outside Twr hr) 121.9
RNAV	Final Aptch Crs 214°	Procedure Alt JS3F1 8000' (2506')	RNAV MDA(H) Refer to Minimums	Apt Elev 5558' RWY 5494'	TAA 25 NM IAF	
MISSED APCH: Climb to 8000' to JS3M1, then continue via JS3M2 to ETGAV, or as directed. MAX 240 KT.						
Alt Set: hPa Rwy Elev: 186 hPa Trans level: By ATC Trans alt: 8000'						
SPECIAL AIRCRAFT & AIRCREW AUTHORIZATION REQUIRED.						

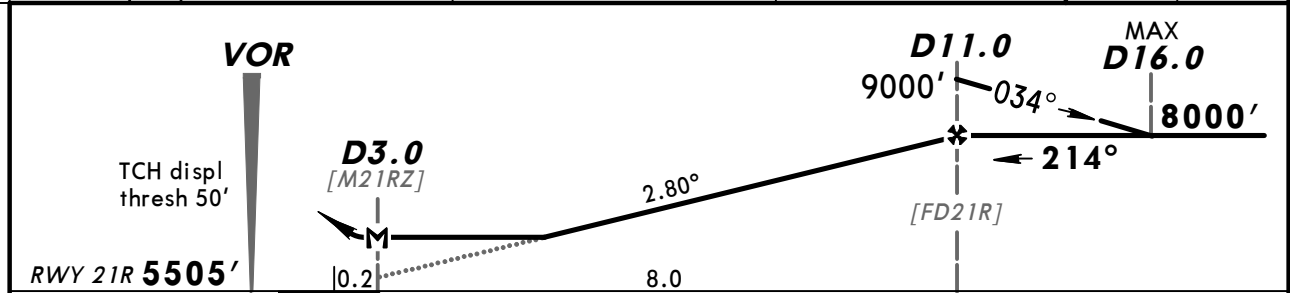
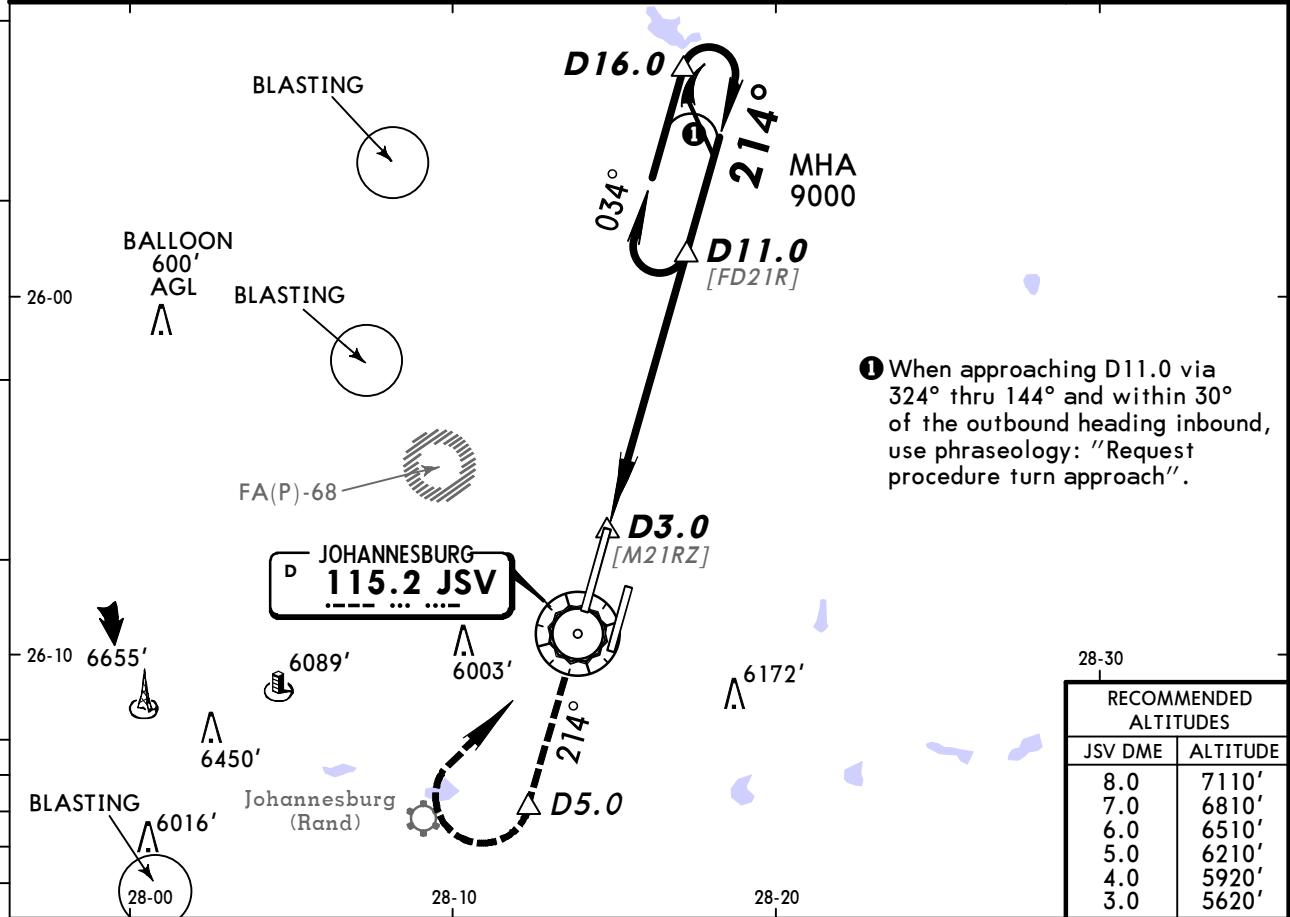


MAP at JS3MP						
HIALS-II PAPI						
MAX 240 KT						
JS3M1						

JAR-OPS STRAIGHT-IN LANDING RWY 21L				CIRCLE-TO-LAND			
Missed apch climb gradient mim 3.5% MDA(H) 6120' (626')		Missed apch climb gradient mim 2.5% MDA(H) 6530' (1036')		East of rwy 03R/21L		West of rwy 03R/21L	
ALS out		ALS out		Max Kts	MDA(H) VIS	MDA(H) VIS	
A	RVR 1000m	RVR 1200m	RVR 1500m	100	6120' (562') 1500m	6120' (562') 1500m	
B	RVR 1200m	RVR 1400m	RVR 2000m	135	6120' (562') 1600m	6120' (562') 1600m	
C	RVR 1600m	RVR 2000m	RVR 2400m	180	6250' (692') 2400m	6410' (852') 2400m	
D	RVR 1600m	RVR 1800m	RVR 3600m	205	6260' (702') 3600m	6410' (852') 3600m	

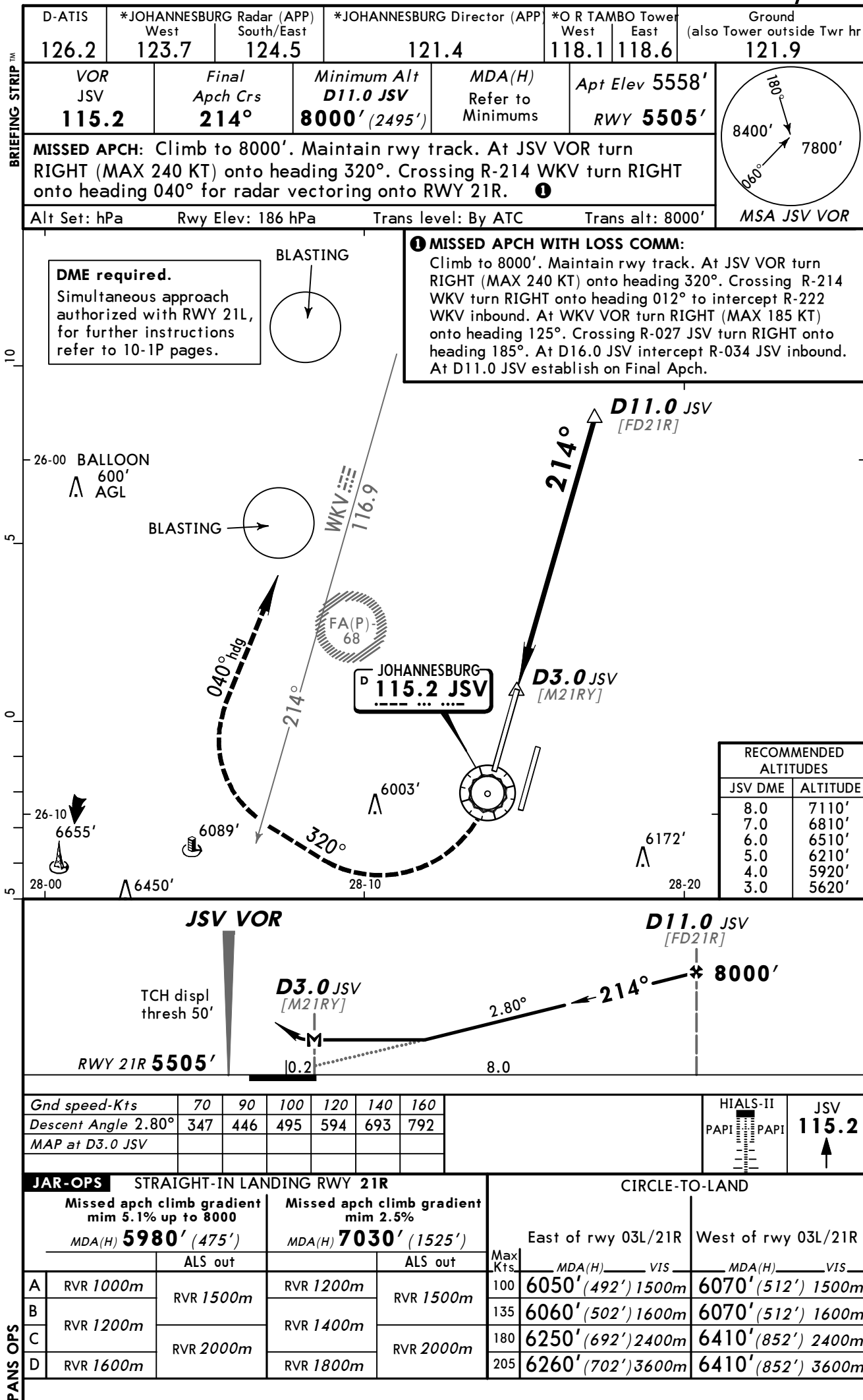
After approach with missed apch climb grad mim 2.5%: MDA(H) 6530' (972').

D-ATIS 126.2	*JOHANNESBURG Radar (APP) West 123.7 South/East 124.5	*JOHANNESBURG Director (APP) 121.4	*O R TAMBO Tower West 118.1 East 118.6	Ground (also Tower outside Twr hr) 121.9
VOR JSV 115.2	Final Apch Crs 214°	Minimum Alt D11.0 8000' (2495')	MDA(H) 6120' (615')	Apt Elev 5558' RWY 5505'
MISSED APCH: Climb on R-214 to 7500' or D5.0, whichever is later, then turn RIGHT to VOR climbing to FL 90. Intercept R-034 to D11.0 and hold, or as directed.				
Alt Set: hPa	Rwy Elev: 186 hPa	Trans level: By ATC	Trans alt: 8000'	MSA JSV VOR
DME required.				



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI	JSV 115.2 R-214	7500' D5.0 ↑ whichever later
Descent Angle 2.80°	347	446	495	594	693	792	PAPI		
MAP at D3.0									

JAR-OPS STRAIGHT-IN LANDING RWY 21R				CIRCLE-TO-LAND			
MDA(H) 6120' (615')				East of rwy 03L/21R		West of rwy 03L/21R	
ALS out				Max Kts	MDA(H) VIS	MDA(H) VIS	
A	RVR 1000m	RVR 1500m		100	6050' (492') 1500m	6070' (512') 1500m	
B	RVR 1200m			135	6060' (502') 1600m	6070' (512') 1600m	
C	RVR 1600m	RVR 2000m		180	6250' (692') 2400m	6410' (852') 2400m	
D	RVR 1600m			205	6260' (702') 3600m	6410' (852') 3600m	



JOHANNESBURG, (O.R. TAMBO INTL - FAOR)

TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport FAOR