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.

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 G10. 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 G11 onto TWYA.

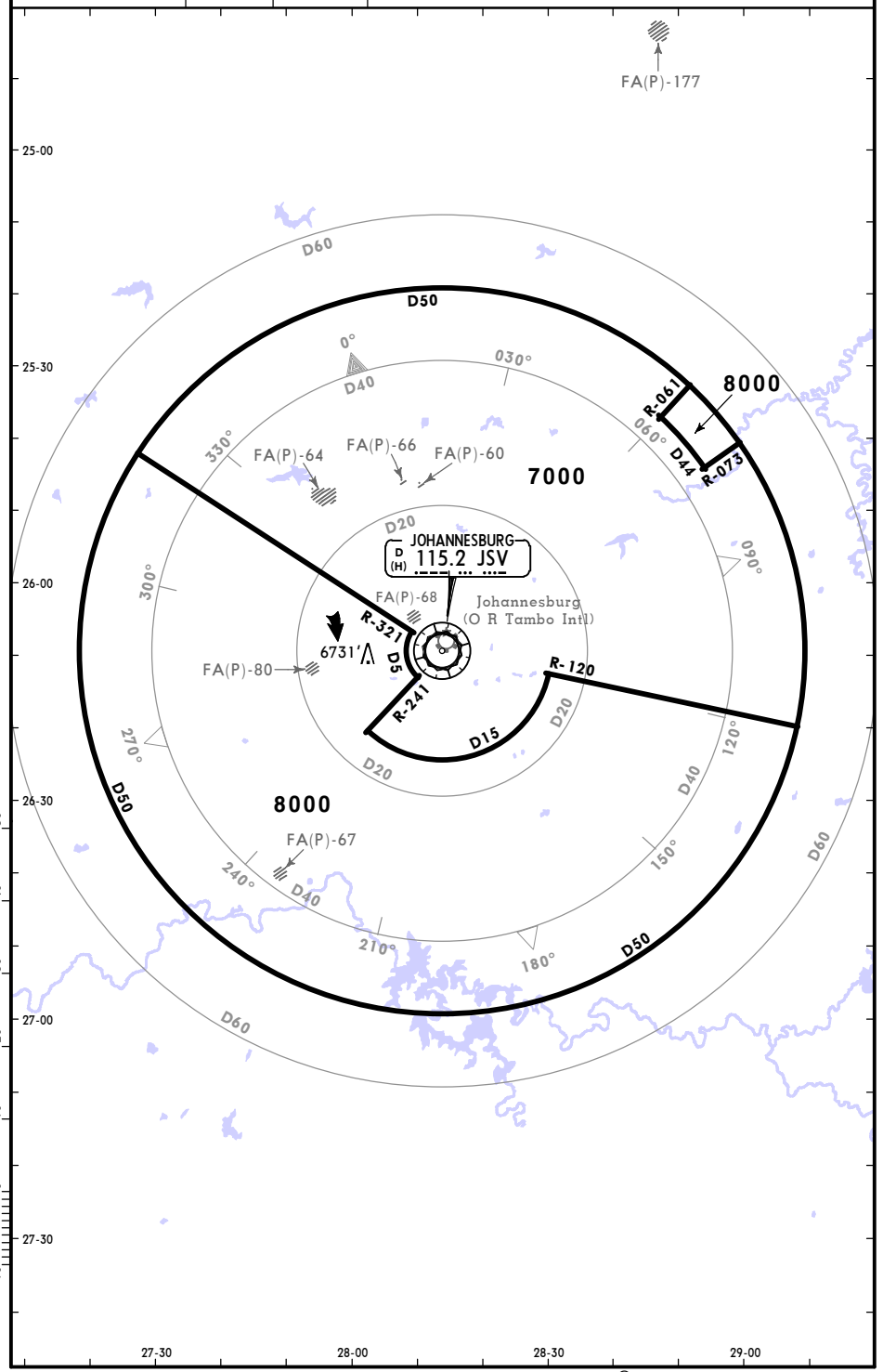
3.2. NOISE ABATEMENT PROCEDURES

The below procedures apply to jet ACFT and may be disregarded if at 8560' or when leveled off by ATC or when leveled by SID.

Take-off to 7060'	-	Take-off power. - Take-off flaps. - Climb at V_2 + 10 to 20 KT or as limited by body angle. - Depending on ACFT type, the take-off power/thrust may be reduced at a lower height.
At 7060'	-	Reduce thrust to not less than climb power/thrust.
7060' to 8560'	-	Climb at V_2 + 10 to 20 KT.
At 8560'	-	Accelerate smoothly to en-route climb speed with flap retraction on schedule.

No jet ACFT are to use RWY or TWY intersection for take-off between 2200-0600LT.

JOHANNESBURG Radar (APP) East	South	West	Apt Elev	Alt Set: hPa
124.5		*123.7	5558′	Trans level: By ATC Trans alt: 8000′

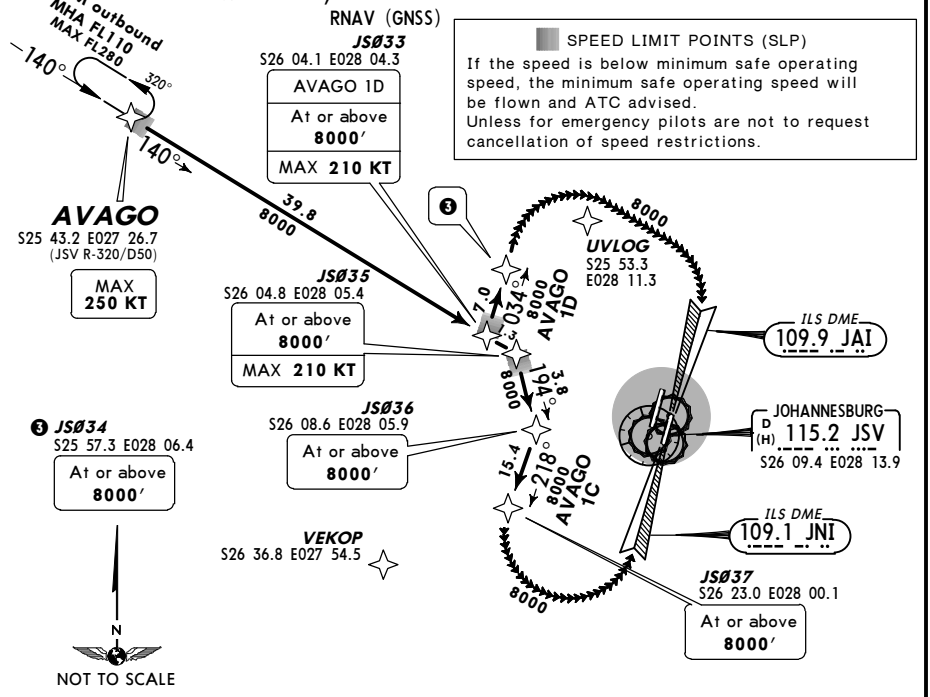


D-ATIS	Apt Elev
126.2	5558′

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

AVAGO ONE CHARLIE (AVAGO 1C) *[AVAG1C]*
AVAGO ONE DELTA (AVAGO 1D) *[AVAG1D]*
RWYS 03R, 21L RNAV ARRIVALS



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 AVAGO: Proceed to AVAGO 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 AVAGO on "After AVAGO" procedure.

AVAGO 1C

After AVAGO: Continue on STAR, at JS035 descend to FL90, at JS037 descend to 8000′, proceed to VEKOP, intercept LOC for ILS approach.

AVAGO 1D

After AVAGO: Continue on STAR, at JS034 proceed to UVLOG, 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.
Pilots to take note of the appropriate FA(D)-, FA(R)- & FA(P)-areas as well as the Magalies Glider Window (FL110-FL145).

STAR	RWY	ROUTING
AVAGO 1C	**03R** ❶	From AVAGO to JS035, turn RIGHT to JS036, turn RIGHT to JS037 for RADAR vectoring to ILS.
AVAGO 1D	**21L** ❷	From AVAGO to JS033, turn LEFT to JS034 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 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 ❶ Rwy 03L/ ❷ Rwy 21R when instructed by ATC or announced on ATIS.

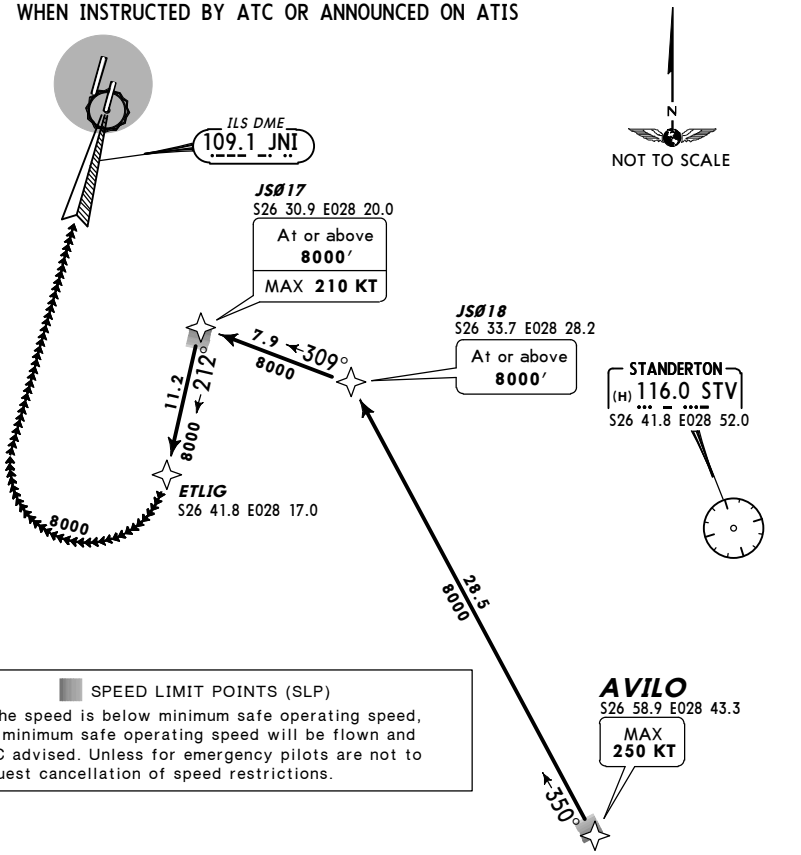
CHANGES: Location indicator.

D-ATIS	Apt Elev
126.2	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

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.

ROUTING

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

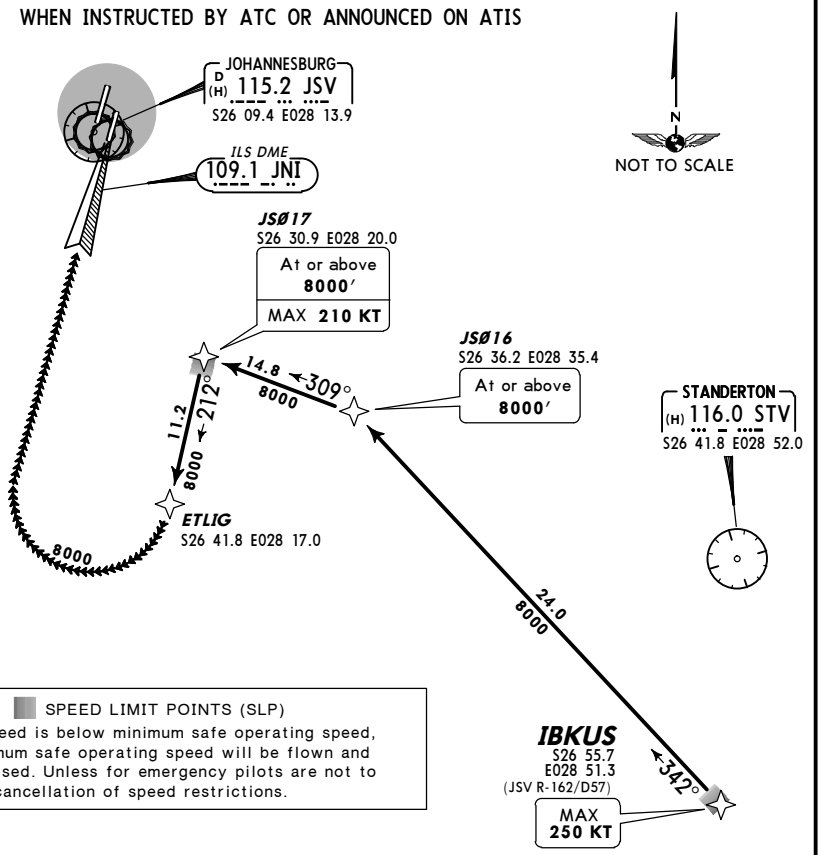
In the event of a missed approach with the intention of diverting to an alternate airport comply with the following SIDs:
Rwy 03: to S & SE **RAGUL 3A;**
to SE **APDAK 3A;**
to N & NW **VASUR 3A;**
to NE **EGMEN 2A (JET)**
EXOBI 1A (TURBOPROP).

CHANGES: Location indicator.

D-ATIS	Apt Elev	Alt Set: hPa Trans level: By ATC Trans alt: 8000′
126.2	5558′	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.

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).

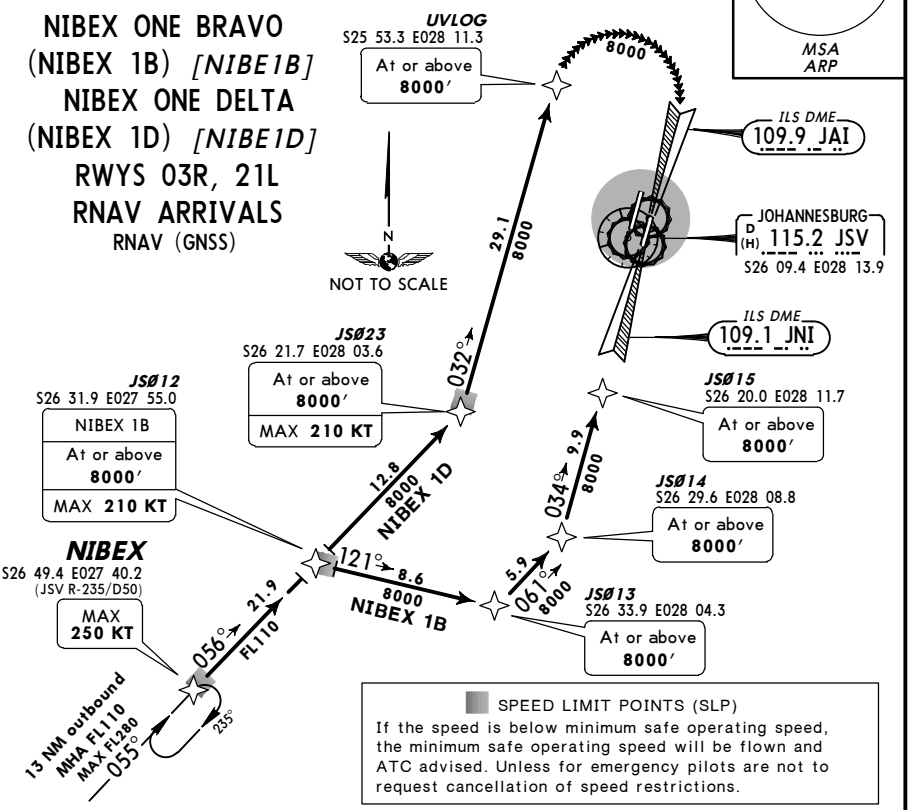
CHANGES: Location indicator.

D-ATIS	Apt Elev
126.2	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)



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 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.

STAR	RWY	ROUTING
NIBEX 1B	03R ❶	From NIBEX to JS012, turn RIGHT to JS013, turn LEFT to JS014, turn LEFT to JS015, intercept ILS.
NIBEX 1D	21L ❷	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).

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

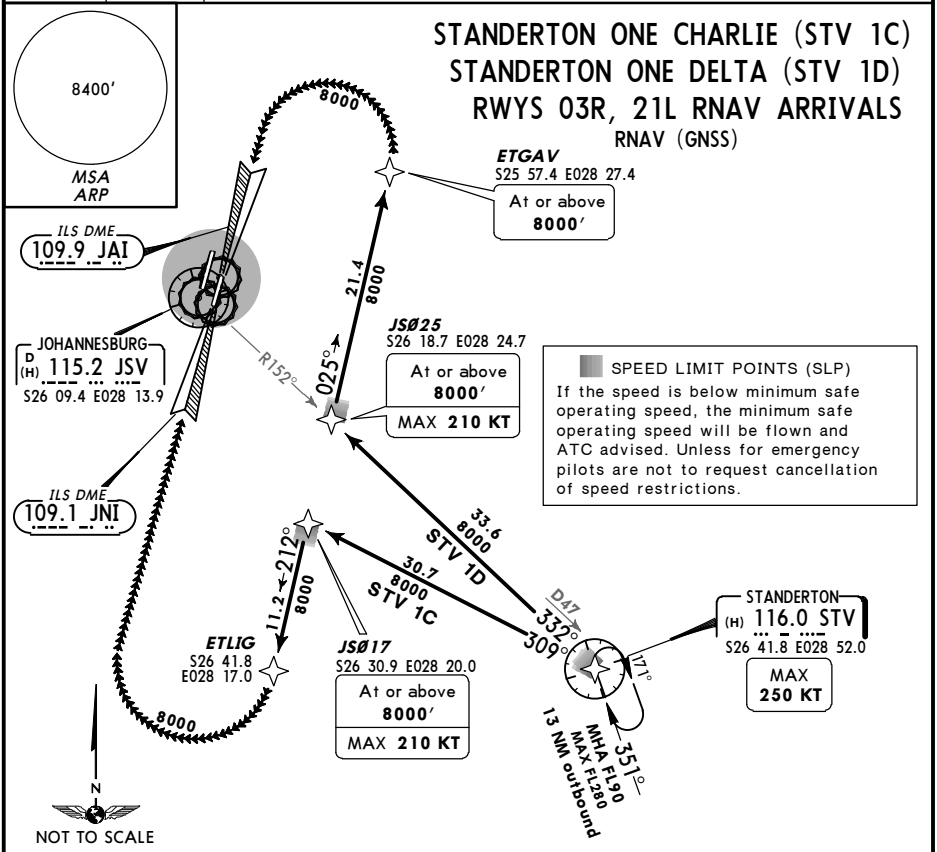
CHANGES: Location indicator.

D-ATIS	Apt Elev
126.2	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′.

STANDERTON ONE CHARLIE (STV 1C)
STANDERTON ONE DELTA (STV 1D)
RWYS 03R, 21L RNAV ARRIVALS

RNAV (GNSS)



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.

STAR	RWY	ROUTING
STV 1C	03R ❶	From STV to JS017, turn LEFT to ETLIG for RADAR vectoring to ILS.
STV 1D	21L ❷	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).

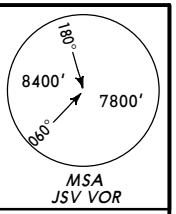
Rwy 21: to S & SW **RAGUL 3B;**
to SE **APDAK 2B;**
to N & NW **VASUR 3B;**
to NE **EGMEN 2B (JET)**
EXOBI 3B (TURBOPROP).

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

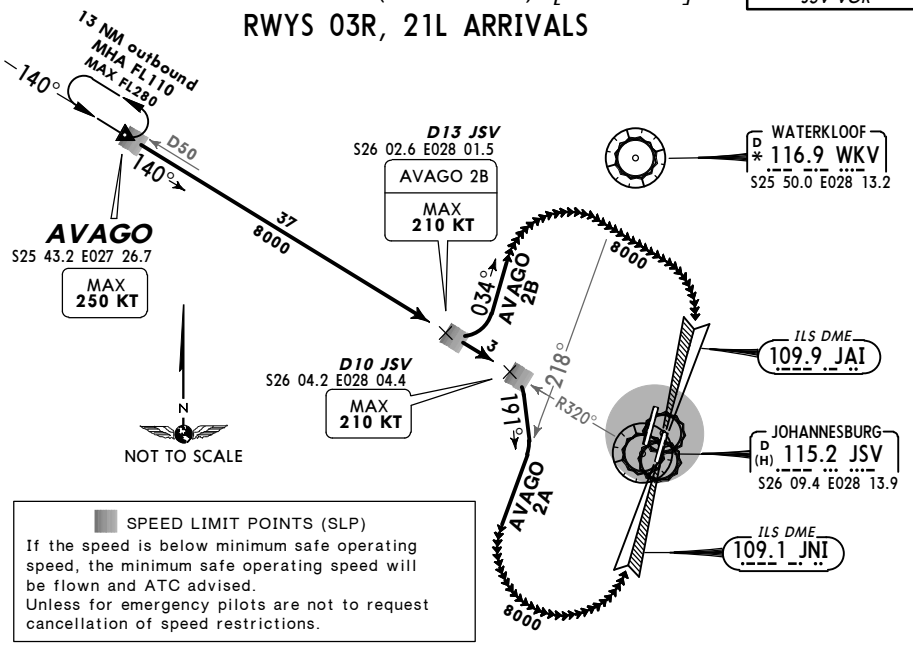
CHANGES: SID to follow after MAPCH Rwy 21 when diverting to S & SW changed.

D-ATIS	Apt Elev
126.2	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′.



AVAGO TWO ALFA (AVAGO 2A) *[AVAG2A]*
AVAGO TWO BRAVO (AVAGO 2B) *[AVAG2B]*
RWYS 03R, 21L ARRIVALS



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 AVAGO: Proceed to AVAGO 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 AVAGO on "After AVAGO" procedure.

AVAGO 2A

After AVAGO: Continue on STAR, when passing D10 JSV descend to FL90, when passing D35 WKV on WKV R-218 turn LEFT, 121° track, descend to 8000′, when passing JSV R-221 turn LEFT, 061° track, intercept LOC for ILS approach.

AVAGO 2B

After AVAGO: Continue on STAR, when passing D13 JSV descend to FL90, when passing JSV 15 DME on 034° track turn RIGHT, 121° track, descend to 8000′, when passing JSV R-026 turn RIGHT, 191° track, 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.
Pilots to take note of the appropriate FA(D)-, FA(R)- & FA(P)-areas as well as the Magalies Glider Window (FL110-FL145).

STAR	RWY	ROUTING
AVAGO 2A	03R ❶	Intercept JSV R-320 inbound, at D10 JSV turn RIGHT, 191° track, intercept WKV R-218 for RADAR vectoring to ILS.
AVAGO 2B	21L ❷	Intercept JSV R-320 inbound, at D13 JSV turn LEFT, 034° track 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).

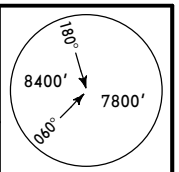
Rwy 21: to S & SE **RAGUL 3B;**
to SE **APDAK 2B;**
to N & NW **VASUR 3B;**
to NE **EGMEN 2B (JET)**
EXOBI 3B (TURBOPROP).

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

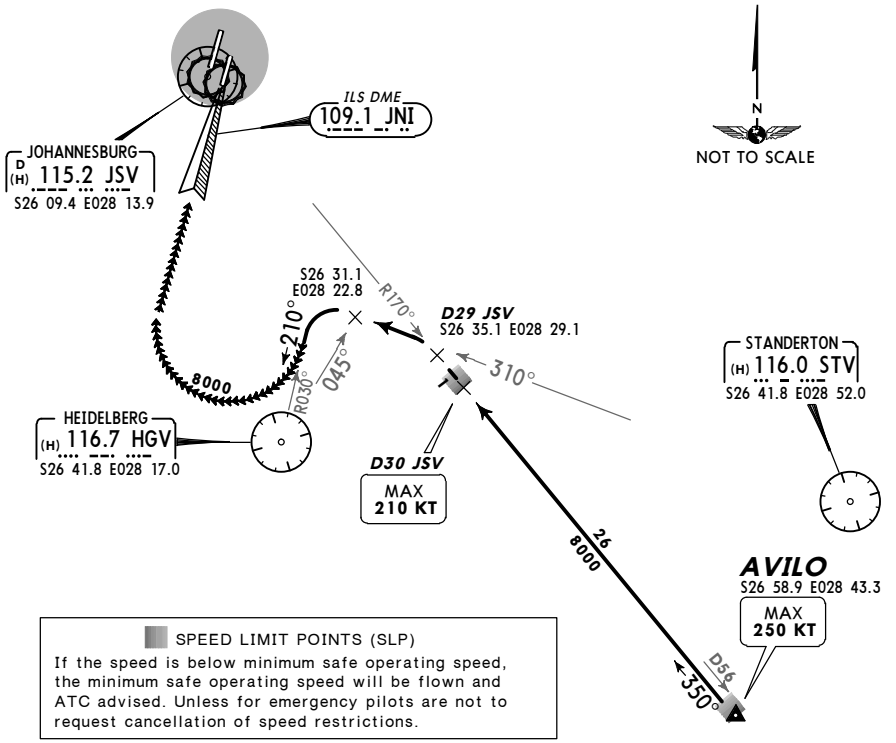
CHANGES: None.

D-ATIS	Apt Elev
126.2	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 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.

ROUTING

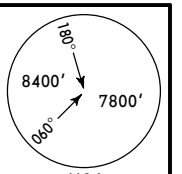
On JSV R-170 inbound to D29 JSV, turn LEFT, intercept STV R-310, when passing HGV R-045 turn LEFT, intercept HGV R-030 inbound for RADAR vetoring to ILS.

In the event of a missed approach with the intention of diverting to an alternate airport comply with the following SIDs:
Rwy 03: to W & SW **RAGUL 3A;**
to SE **APDAK 3A;**
to N & NW **VASUR 3A;**
to E & NE **EGMEN 2A (JET)**
EXOBI 1A (TURBOPROP).

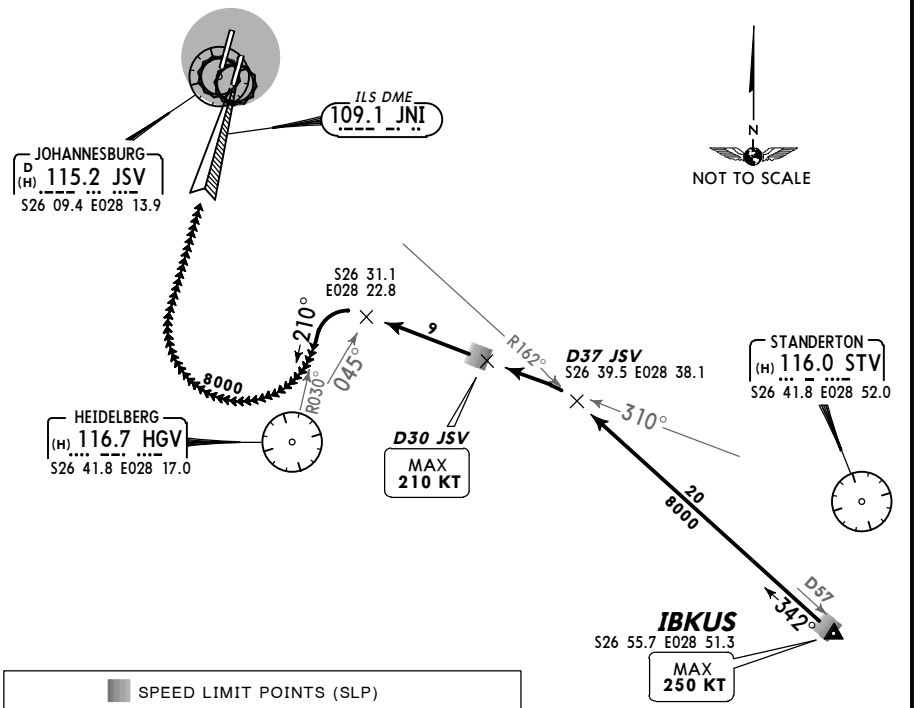
CHANGES: Location indicator.

D-ATIS	Apt Elev
126.2	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.

ROUTING

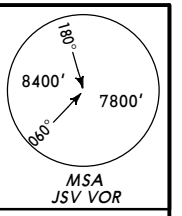
On JSV R-162 inbound to D37 JSV, turn LEFT, intercept STV R-310, when passing HGV R-045 turn LEFT, intercept HGV R-030 inbound for RADAR vetoring to ILS.

In the event of a missed approach with the intention of diverting to an alternate airport comply with the following SIDs:
Rwy 03: to W & SW **RAGUL 3A;**
to SE **APDAK 3A;**
to N & NW **VASUR 3A;**
to E & NE **EGMEN 2A (JET)**
EXOBI 1A (TURBOPROP).

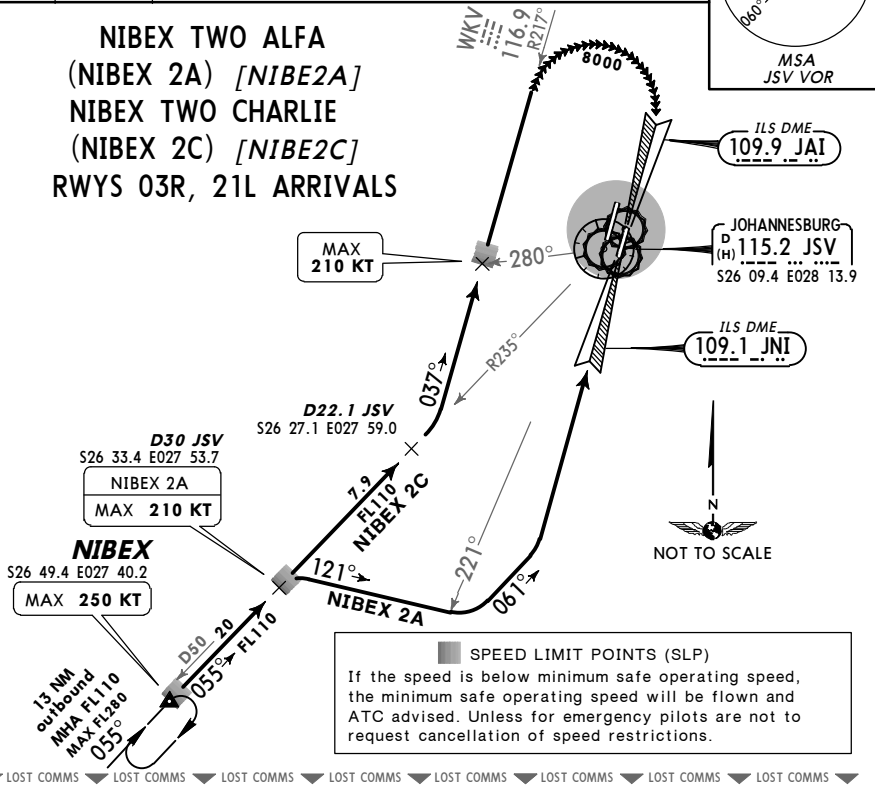
CHANGES: Location indicator.

D-ATIS	Apt Elev
126.2	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′.



NIBEX TWO ALFA (NIBEX 2A) *[NIBE2A]* NIBEX TWO CHARLIE (NIBEX 2C) *[NIBE2C]* RWYS 03R, 21L ARRIVALS



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 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 2A

After NIBEX : On JSV R-235 inbound to D30 JSV, turn RIGHT, 121° track descend to FL100, when passing JSV R-221 descend to FL90, turn LEFT, 061° track to intercept LOC. Adjust to 9000′ for ILS approach.

NIBEX 2C

After NIBEX: Continue on STAR, when passing JSV R-281 established on WKV R-217 inbound descend to FL90, when passing D14.7 JSV on WKV R-217 turn RIGHT, 121° track, descend to 8000′, passing JSV R-025 turn RIGHT, 191° track, 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.

STAR	RWY	ROUTING
NIBEX 2A	03R ❶	Intercept JSV R-235 inbound, at D30 JSV turn RIGHT, 121° track, when passing JSV R-221 turn LEFT, 061° track to intercept ILS.
NIBEX 2C	21L ❷	Intercept JSV R-235 inbound, at D22.1 JSV turn LEFT, intercept WKV R-217 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).

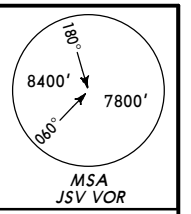
Rwy 21: to S & SE **RAGUL 3B;**
to SE **APDAK 2B;**
to N & NW **VASUR 3B;**
to NE **EGMEN 2B (JET)**
EXOBI 3B (TURBOPROP).

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

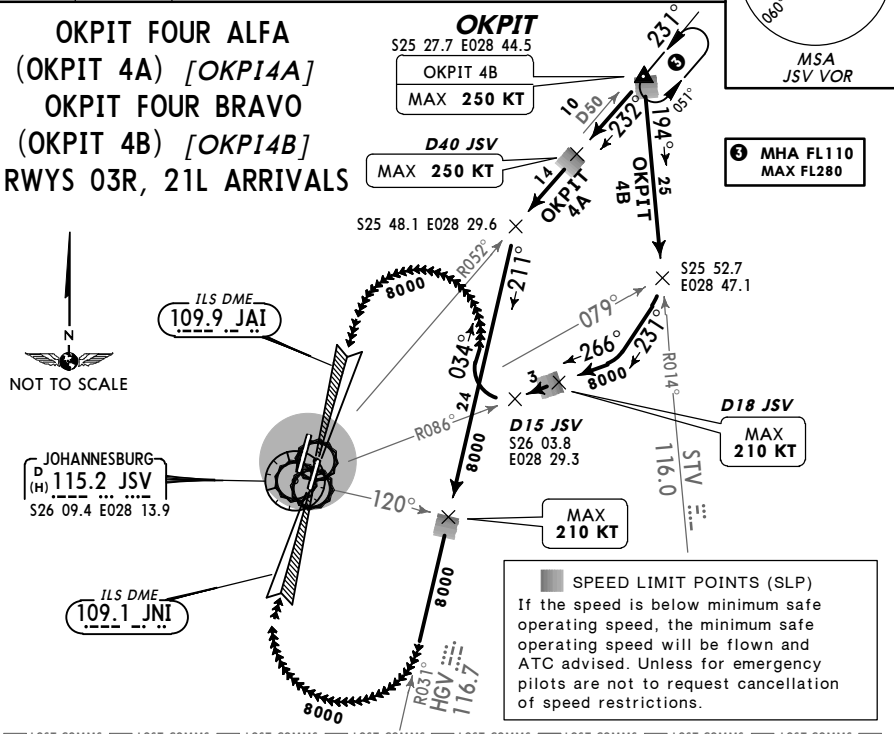
CHANGES: Location indicator.

D-ATIS	Apt Elev
126.2	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′.



OKPIT FOUR ALFA (OKPIT 4A) *[OKPI4A]*
OKPIT FOUR BRAVO (OKPIT 4B) *[OKPI4B]*
RWYS 03R, 21L ARRIVALS



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 OKPIT: Proceed to OKPIT 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 OKPIT on "After OKPIT" procedure.

OKPIT 4A

After OKPIT: Continue on STAR, when passing JSV R-086 while established on HGV R-031 inbound descend to FL100, when passing D15 JSV on HGV R-031 inbound turn RIGHT, 301° track, descend to 8300′, when passing JSV R-206 turn RIGHT, 001° track, intercept LOC for ILS approach.

OKPIT 4B

After OKPIT: Continue on STAR, when passing D18 JSV inbound descend to FL90, when passing JSV 15 DME outbound on 034° track 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 outside controlled airspace.

Pilots to take note of the appropriate FA(D)-areas.

STAR	RWY	ROUTING
OKPIT 4A	**03R ❶**	Intercept JSV R-052 inbound, intercept HGV R-031 inbound for RADAR vectoring to ILS.
OKPIT 4B	**21L ❷**	Intercept STV R-014 inbound, when passing JSV R-079 turn RIGHT, 231° track, intercept JSV R-086 inbound to D15 JSV, turn RIGHT, 034° track 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).

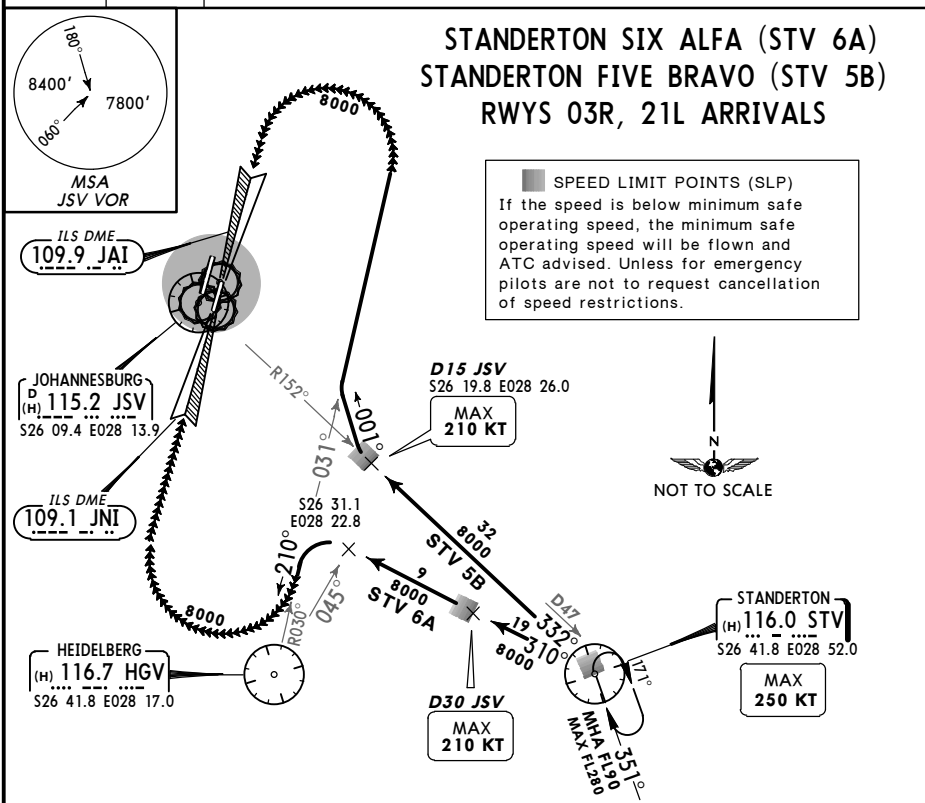
STAR applicable for ❶ Rwy 03L/ ❷ Rwy 21R when instructed by ATC or announced on ATIS.

CHANGES: Location indicator.

D-ATIS	Apt Elev
126.2	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′.

STANDERTON SIX ALFA (STV 6A)
STANDERTON FIVE BRAVO (STV 5B)
RWYS 03R, 21L ARRIVALS



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.

STAR	RWY	ROUTING
STV 6A	03R ❶	On STV R-310, when passing HGV R-045 turn LEFT, intercept HGV R-030 inbound for RADAR vectoring to ILS.
STV 5B	21L ❷	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:

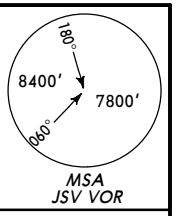
Rwy 03: to W & SW **RAGUL 3A;**
to SE **APDAK 3A;**
to N & NW **VASUR 3A;**
to E & NE **EGMEN 2A (JET)**
EXOBI 1A (TURBOPROP).

Rwy 21: to S & SW **RAGUL 3B;**
to SE **APDAK 2B;**
to N & NW **VASUR 3B;**
to NE **EGMEN 2B (JET)**
EXOBI 3B (TURBOPROP).

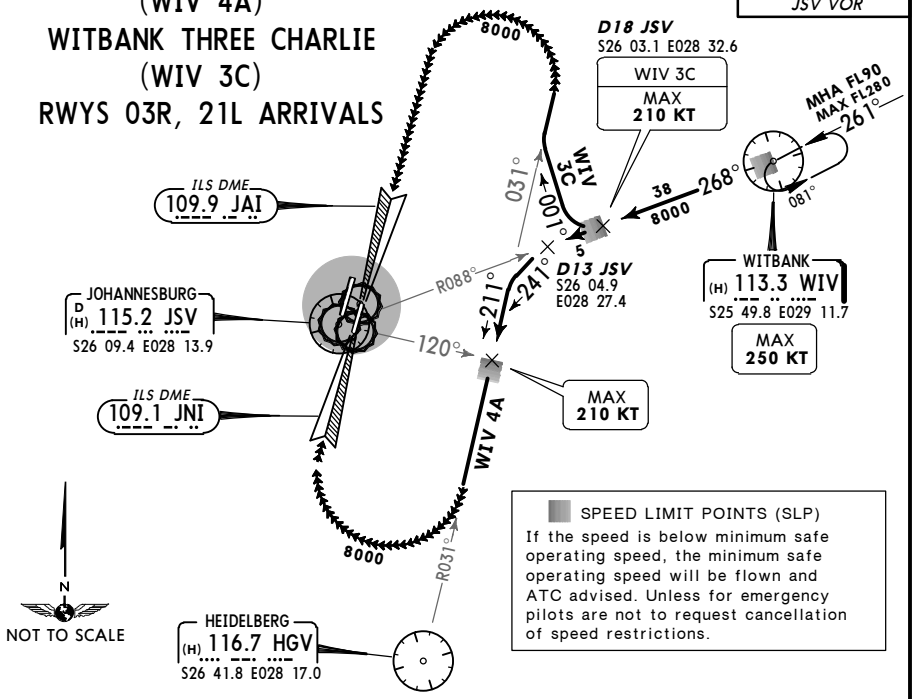
STAR applicable for ❶ Rwy 03L/ ❷ Rwy 21R when instructed by ATC or announced on ATIS.

CHANGES: Location indicator.

D-ATIS	Apt Elev	Alt Set: hPa Trans level: By ATC Trans alt: 8000′
126.2	5558′	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′.



WITBANK FOUR ALFA (WIV 4A) WITBANK THREE CHARLIE (WIV 3C) RWYS 03R, 21L ARRIVALS



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 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 WIV: Proceed to WIV 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 WIV on "After WIV" procedure.

WIV 4A

After WIV: Continue on STAR, when passing JSV R-141 while established on HGV R-031 inbound descend to FL90, when passing D15 JSV on HGV R-031 inbound turn RIGHT, 301° track, descend to 8300′, when passing JSV R-206 turn RIGHT, 001° track, intercept LOC for ILS approach.

WIV 3C

After WIV: Continue on STAR, when passing D18 JSV descend to FL90, when passing D15 JSV on HGV R-031 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.

STAR	RWY	ROUTING
WIV 4A	03R ❶	Intercept JSV R-088 inbound, at D13 JSV turn LEFT, 241° track, intercept HGV R-031 inbound for RADAR vectoring to ILS.
WIV 3C	21L ❷	Intercept JSV R-088 inbound, at D18 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 ❶ Rwy 03L/ ❷ Rwy 21R when instructed by ATC or announced on ATIS.

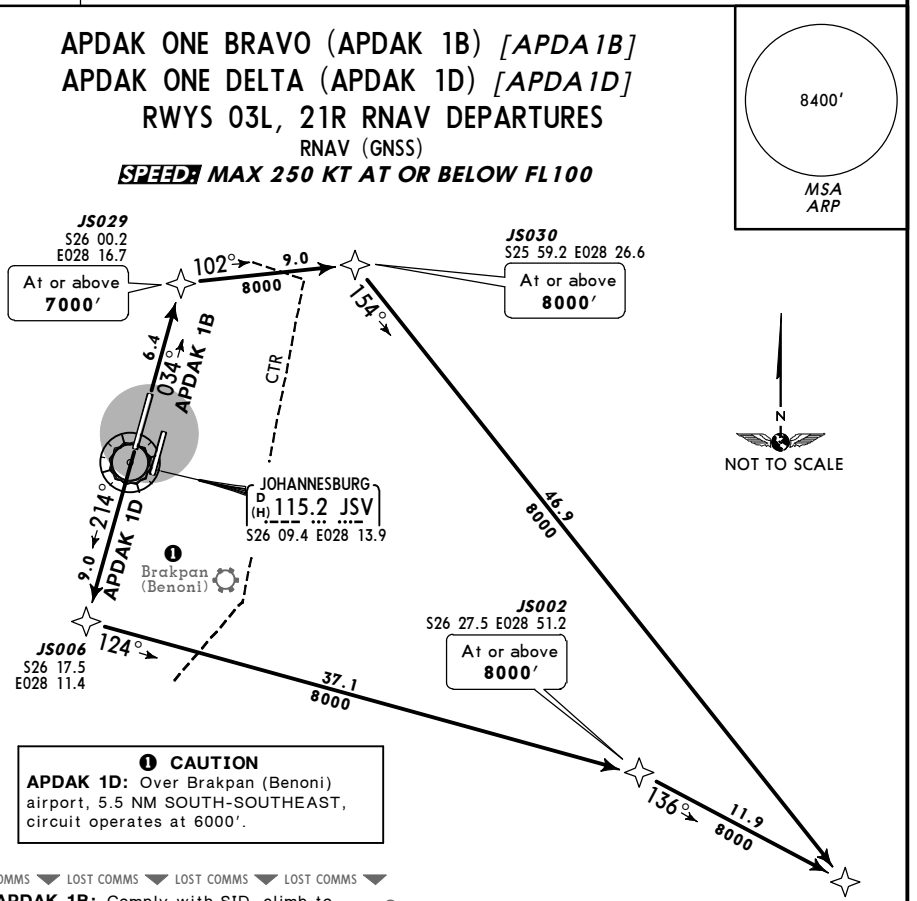
CHANGES: Location indicator.

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



❶ CAUTION
APDAK 1D: Over Brakpan (Benoni) airport, 5.5 NM SOUTH-SOUTHEAST, circuit operates at 6000′.

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.

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.

CHANGES: Location indicator.

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′.

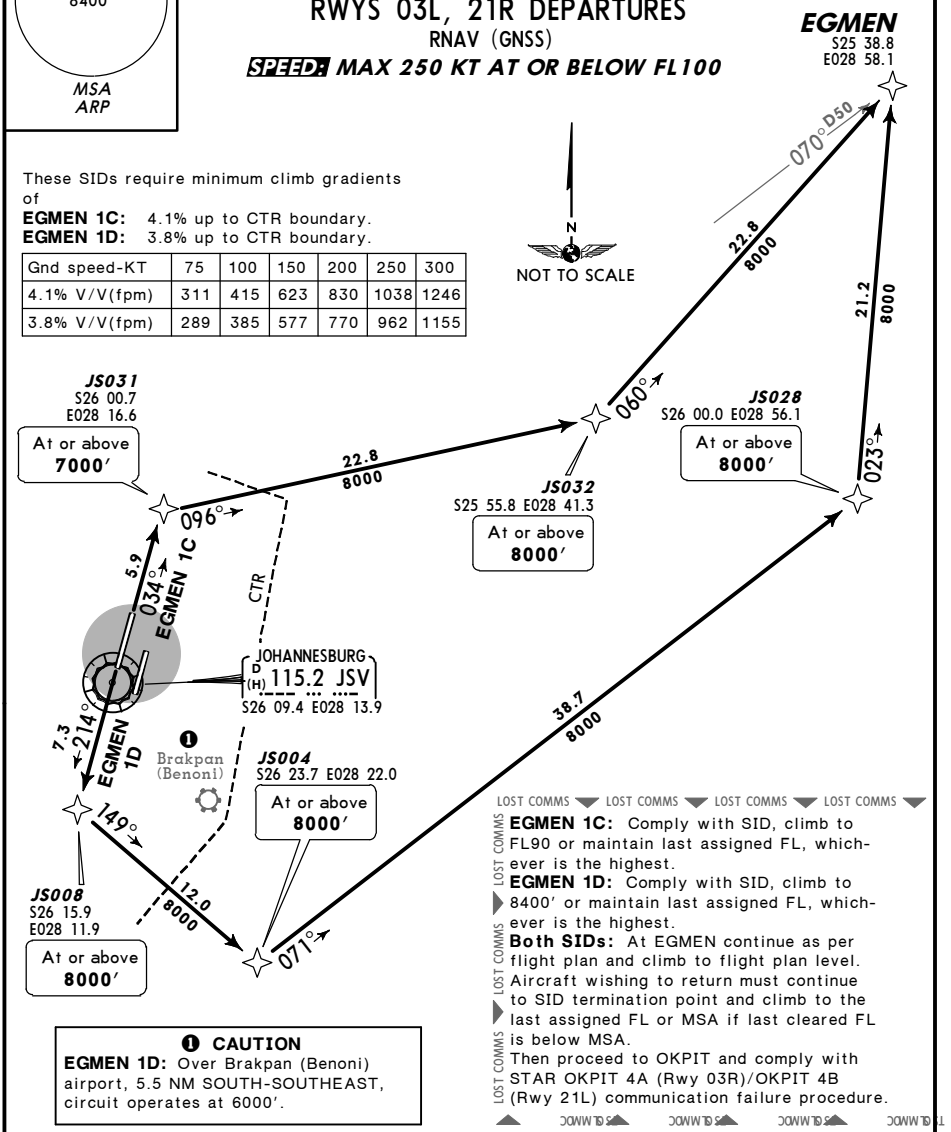
EGMEN ONE CHARLIE (EGMEN 1C) *[EGME1C]*
EGMEN ONE DELTA (EGMEN 1D) *[EGME1D]*
RWYS 03L, 21R DEPARTURES
RNAV (GNSS)

SPEED: MAX 250 KT AT OR BELOW FL100

8400′
MSA
ARP

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



❶ CAUTION
EGMEN 1D: Over Brakpan (Benoni) airport, 5.5 NM SOUTH-SOUTHEAST, circuit operates at 6000′.

LOST COMMS
EGMEN 1C: Comply with SID, climb to FL90 or maintain last assigned FL, whichever is the highest.
EGMEN 1D: Comply with SID, climb to 8400′ 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.

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

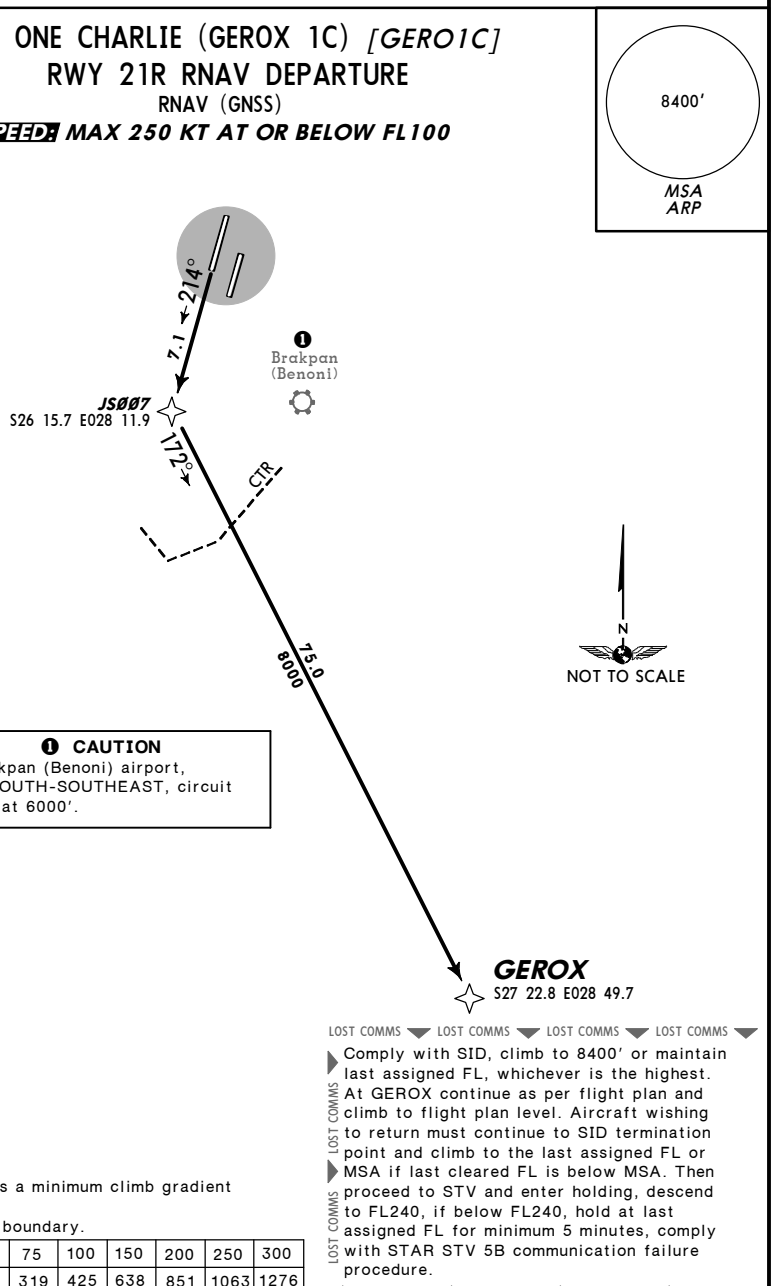
SID	RWY	ROUTING
EGMEN 1C	03L	Climb on runway track to JS031, turn RIGHT to JS032, turn LEFT to EGMEN, then as per flight plan.
EGMEN 1D	21R	Climb on runway track to JS008, turn LEFT to JS004, turn LEFT to JS028, turn LEFT to EGMEN, then as per flight plan.

CHANGES: Location indicator.

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



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

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.

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.

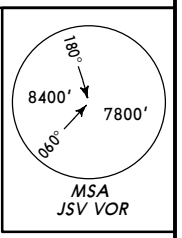
CHANGES: Location indicator.

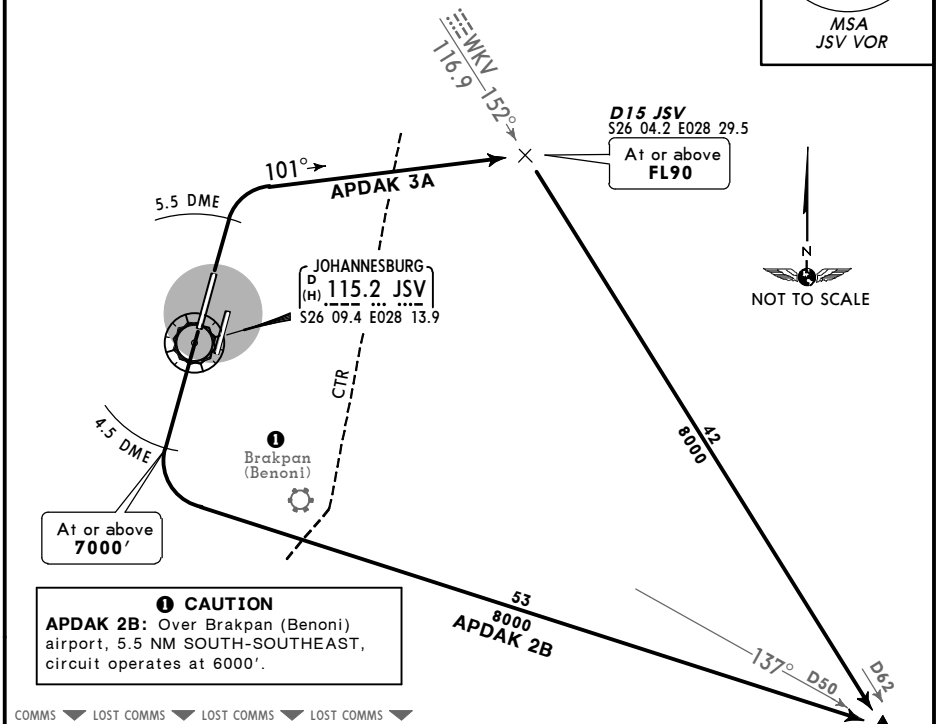
Apt Elev 5558′

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





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

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.

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

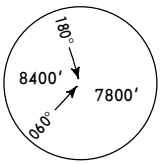
APDAK 3A: Climb to **FL90,** further climb under radar control
APDAK 2B: Climb to **8000′,** further climb under radar control

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.

CHANGES: Location indicator.

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

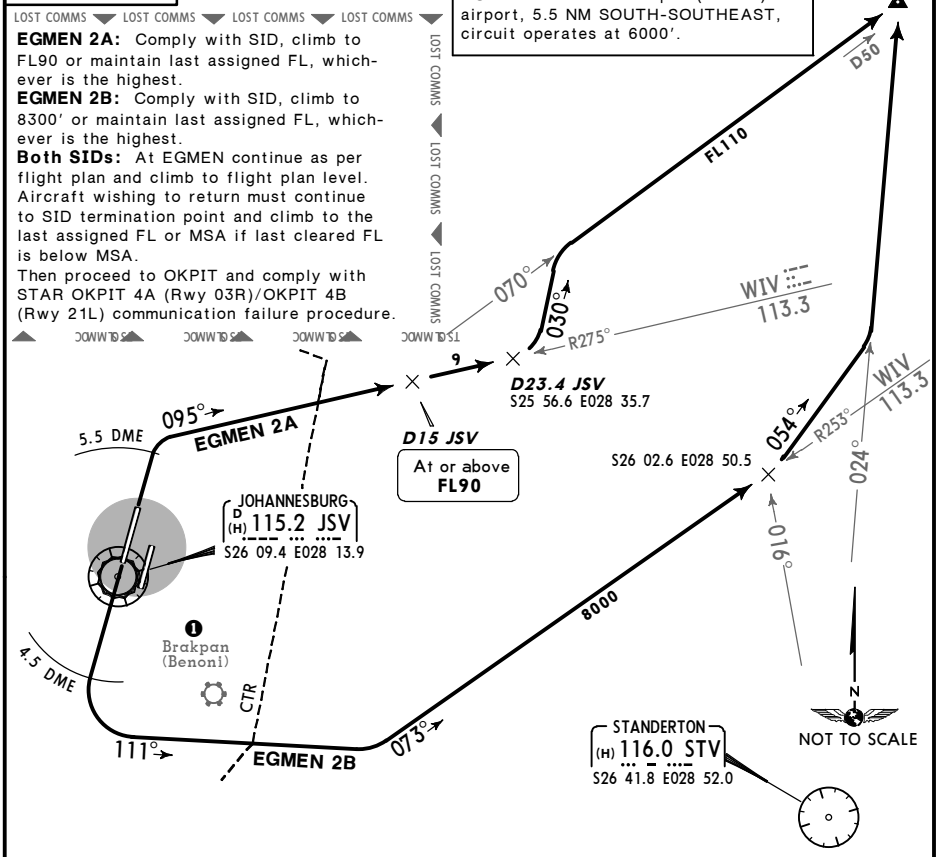
EGMEN
S25 38.8
E028 58.1

❶ 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.

LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS



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

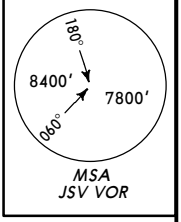
SID	RWY	ROUTING
EGMEN 2A	**03L**	Climb on runway track to JSV 5.5 DME, turn RIGHT, intercept WIV R-275 inbound to D23.4 JSV, turn LEFT, 030° track, intercept JSV R-070 to EGMEN.
EGMEN 2B	**21R**	Climb on runway track to JSV 4.5 DME, turn LEFT, 111° track, intercept WIV R-253 inbound, when passing STV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

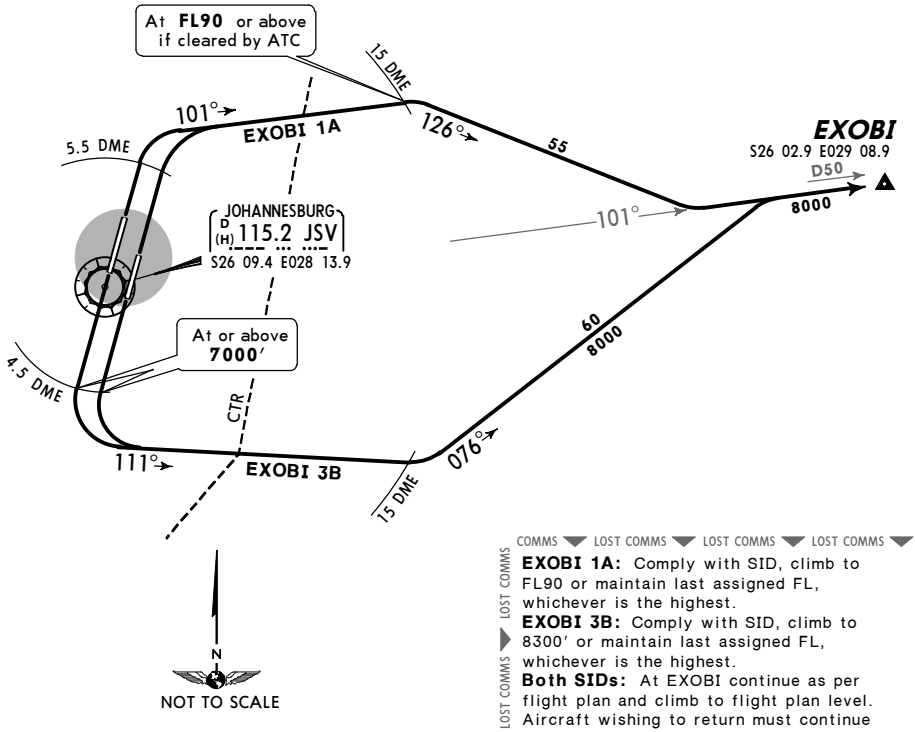
CHANGES: Location indicator.

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′.

EXOBI ONE ALFA (EXOBI 1A) *[EXOB1A]*
EXOBI THREE BRAVO (EXOBI 3B) *[EXOB3B]*
RWYS 03L/R, 21L/R DEPARTURES
SPEED: MAX 250 KT AT OR BELOW FL100





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

COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

LOST COMMS ▶ **EXOBI 1A:** Comply with SID, climb to FL90 or maintain last assigned FL, whichever is the highest.

LOST COMMS ▶ **EXOBI 3B:** Comply with SID, climb to 8300′ or maintain last assigned FL, whichever is the highest.

LOST COMMS ▶ **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.

EXOBI 1A: Climb to **FL90,** further climb under radar control
EXOBI 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.

CHANGES: Location indicator.

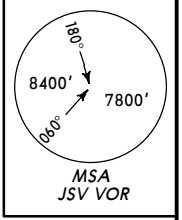
Apt Elev 5558′

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′.

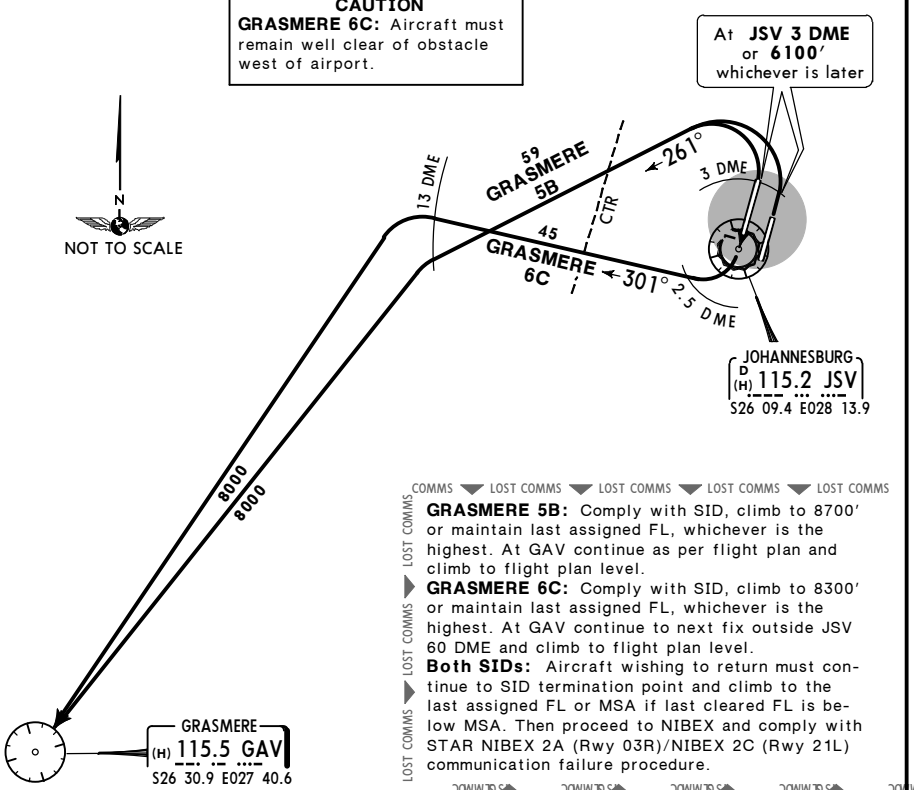
GRASMERE FIVE BRAVO (GRASMERE 5B) *[GAV5B]*
GRASMERE SIX CHARLIE (GRASMERE 6C) *[GAV6C]*
RWYS 03L/R, 21R DEPARTURES

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.



LOST 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.

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

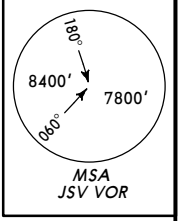
Climb to **8000′,** further climb under radar control

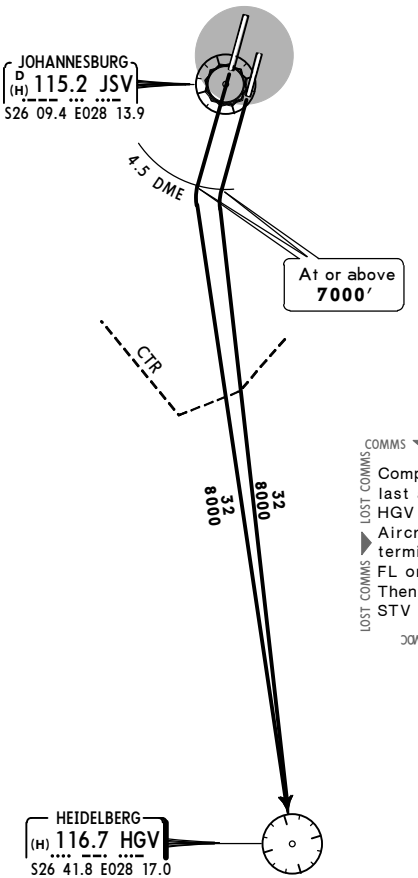
SID	RWY	ROUTING
GRASMERE 5B	**03L/R**	Climb on runway track to JSV 3 DME or 6100′, whichever is later, turn LEFT, 261° track to JSV 13 DME, turn LEFT to GAV, then as per flight plan.
GRASMERE 6C	**21R**	Climb on runway track to JSV, turn RIGHT (remain within JSV 2.5 DME), 301° track to JSV 13 DME, turn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

CHANGES: Location indicator.

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

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.

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

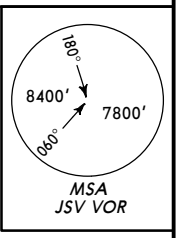
Climb on runway track to JSV 4.5 DME, turn LEFT to HGV, then as per flight plan.

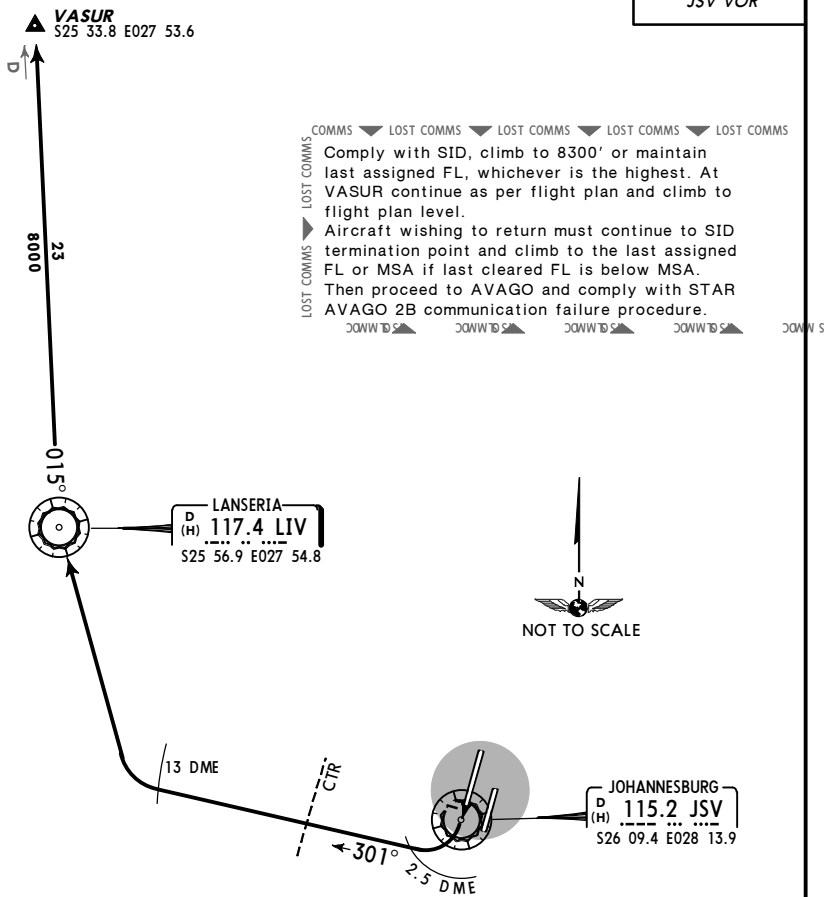
CHANGES: Location indicator.

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′.

LANSERIA ONE CHARLIE (LANSERIA 1C) *[LIV1C]*
RWY 21R DEPARTURE
TURBO-PROP AIRCRAFT ONLY
SPEED: MAX 250 KT AT OR BELOW FL100





This SID requires a minimum climb gradient of
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

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

ROUTING

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.

CHANGES: None.

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′.

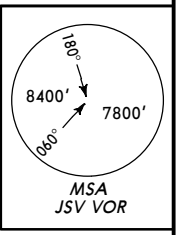
NESAN ONE ALFA (NESAN 1A) *[NESA1A]*

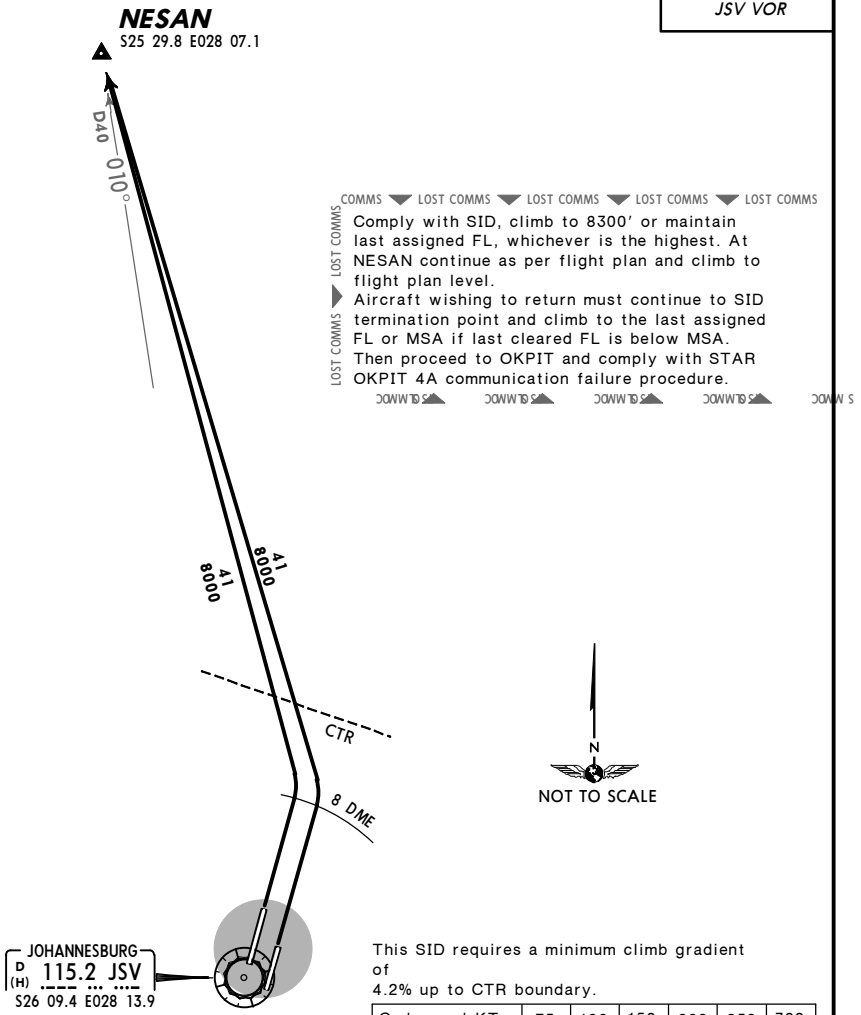
RWYS 03L/R DEPARTURE

RNAV REQUIRED

USABLE BETWEEN 0600-2200LT

SPEED: MAX 250 KT AT OR BELOW FL100





LOST 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.

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

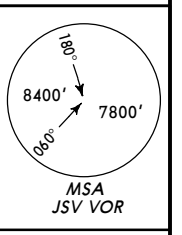
ROUTING

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

CHANGES: SID availability.

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′.

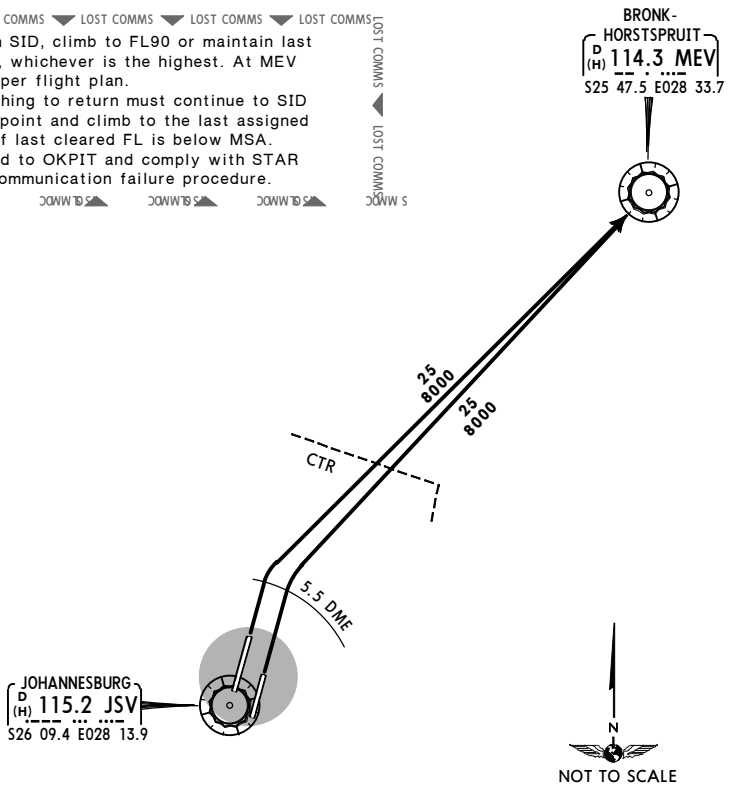
NORVA TWO ALFA (NORVA 2A) *[NORV2A]*
RWYS 03L/R DEPARTURE
TURBO-PROP AIRCRAFT ONLY
AT OR BELOW FL130
SPEED: MAX 250 KT AT OR BELOW FL100



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.

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

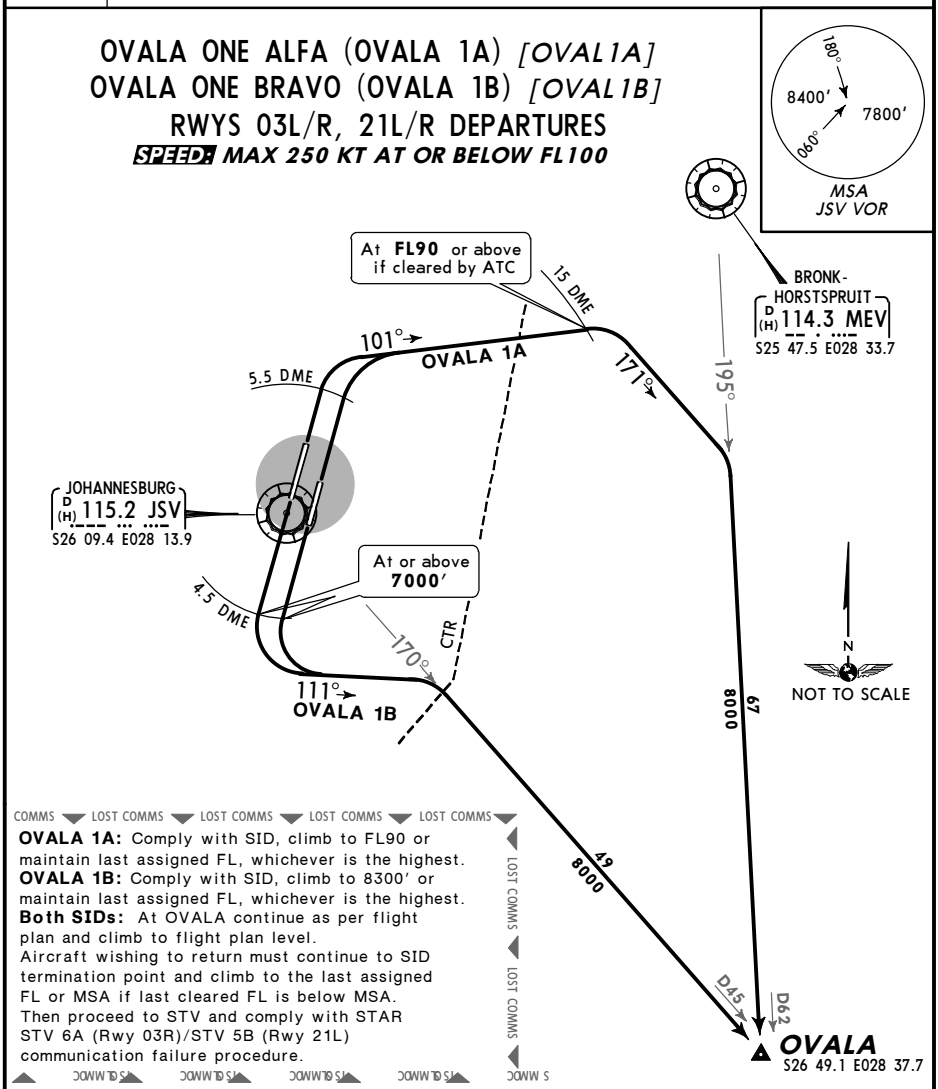
Climb on runway track to JSV 5.5 DME, turn RIGHT to MEV, then as per flight plan.

CHANGES: Location indicator.

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



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

OVALA 1A: Comply with SID, climb to FL90 or maintain last assigned FL, whichever is the highest.
OVALA 1B: Comply with SID, climb to 8300′ or maintain last assigned FL, whichever is the highest.
Both SIDs: At OVALA 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 STAR STV 6A (Rwy 03R)/STV 5B (Rwy 21L) communication failure procedure.

LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS

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

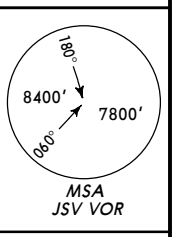
OVALA 1A: Climb to **FL90,** further climb under radar control
OVALA 1B: Climb to **8000′,** further climb under radar control

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.

CHANGES: Location indicator.

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



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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.

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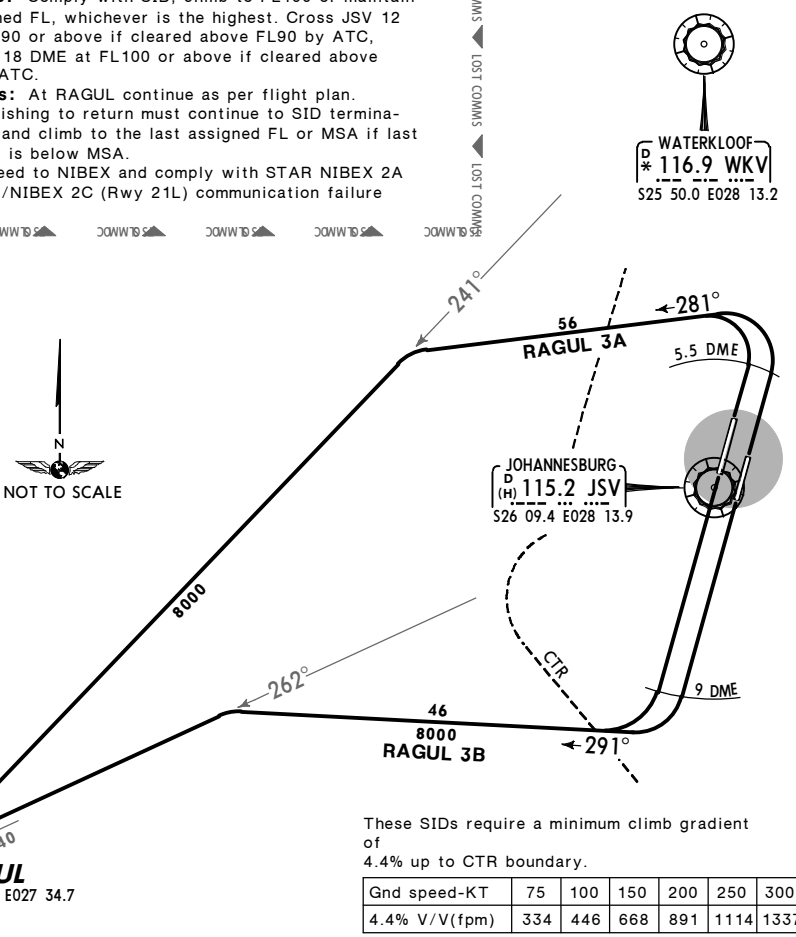


These SIDs require a minimum climb gradient of
4.4% up to CTR boundary.

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

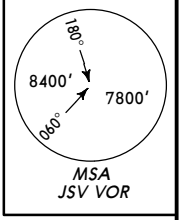
SID	RWY	ROUTING
RAGUL 3A	**03L/R**	Climb on runway track to JSV 5.5 DME, turn LEFT, 281° track, intercept WKV R-241 to RAGUL, then as per flight plan.
RAGUL 3B	**21L/R**	Climb on runway track to JSV 9 DME, turn RIGHT, 291° track, intercept JSV R-262 to RAGUL, then as per flight plan.

CHANGES: Location indicator.

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.

LOST COMMS ◀ LOST COMMS ◀

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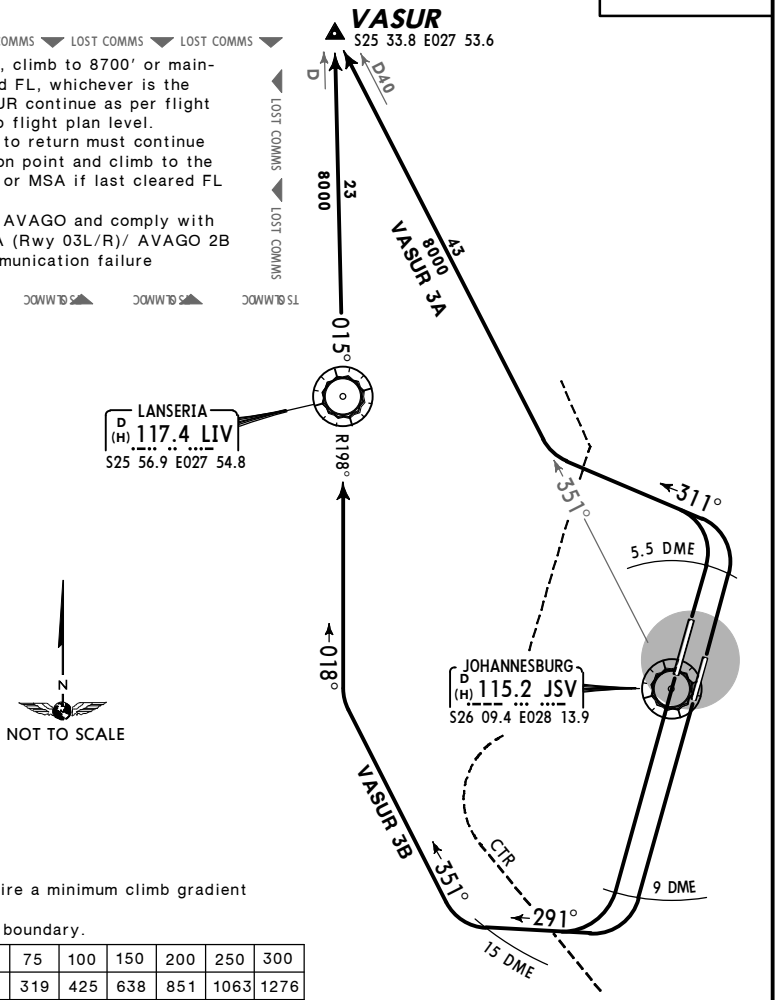


These SIDs require a minimum climb gradient of
4.2% up to CTR boundary.

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.

CHANGES: Location indicator.

D-ATIS	*O R TAMBO Clearance Delivery (Outside ops hours use GND freq)	O R TAMBO Ground (also TWR outside Tower hr)
126.2	121.7 121.9	121.9

O R TAMBO Apron	*Tower	
	West	East
122.65	118.1	118.6

For AIRPORT BRIEFING refer to 10-1P pages

21R 214°
197′ 60m Stopway
Elev 5505′
HS3
APRON W
APRON G
FOR DETAILS SEE 10-9B
SAA CARGO
APRON D
HS2
FOR DETAILS SEE 10-9C
APRON F
ANGLO AMERICAN
GLOBAL
5666′
AERONEXUS
HS4
FEDAIR
SAFAIR
18°W
21L 214°
AAC HELISTOP
APRON E
APRON A
APRON B
APRON C
5703′
ARP
Control Tower 5729′
197′ 60m Stopway
Elev 5494′
HS1
5710′
KEMPTON PARK (JURGENS CARAVANS)
5699′
5614′
Elev 5558′
14,495′ 4418m
197′ 60m Stopway
5668′
APRON M
5771′
HS5
11,155′ 3400m
03L 034°
VOR
Elev 5510′
197′ 60m Stopway
03R 034°

LEGEND
HS1 HOT SPOT
See 10-9A for description of Hot Spots

Feet 0 1000 2000 3000 4000 5000
Meters 0 500 1000 1500

28-13 28-14 28-15 28-16
26-06 26-07 26-08 26-09 26-10

CHANGES: Twy designation.

ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING: Threshold	USABLE LENGTHS — BEYOND: Glide Slope	TAKE-OFF	WIDTH
03L	HIRL *(60m)* CL❶*(30m)* HIALS-II TDZ ❷ HST-RH RVR		13,280' *4048m*		197' *60m*
21R	HIRL *(60m)* CL❶*(30m)* HIALS-II TDZ ❷ RVR	13,018' *3968m*	12,047' *3672m*		

❶ Operational in CAT II conditions only.
❷ PAPI (3.0°).

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

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.

HS1 Intermediate take-off point.
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 fequency.

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.

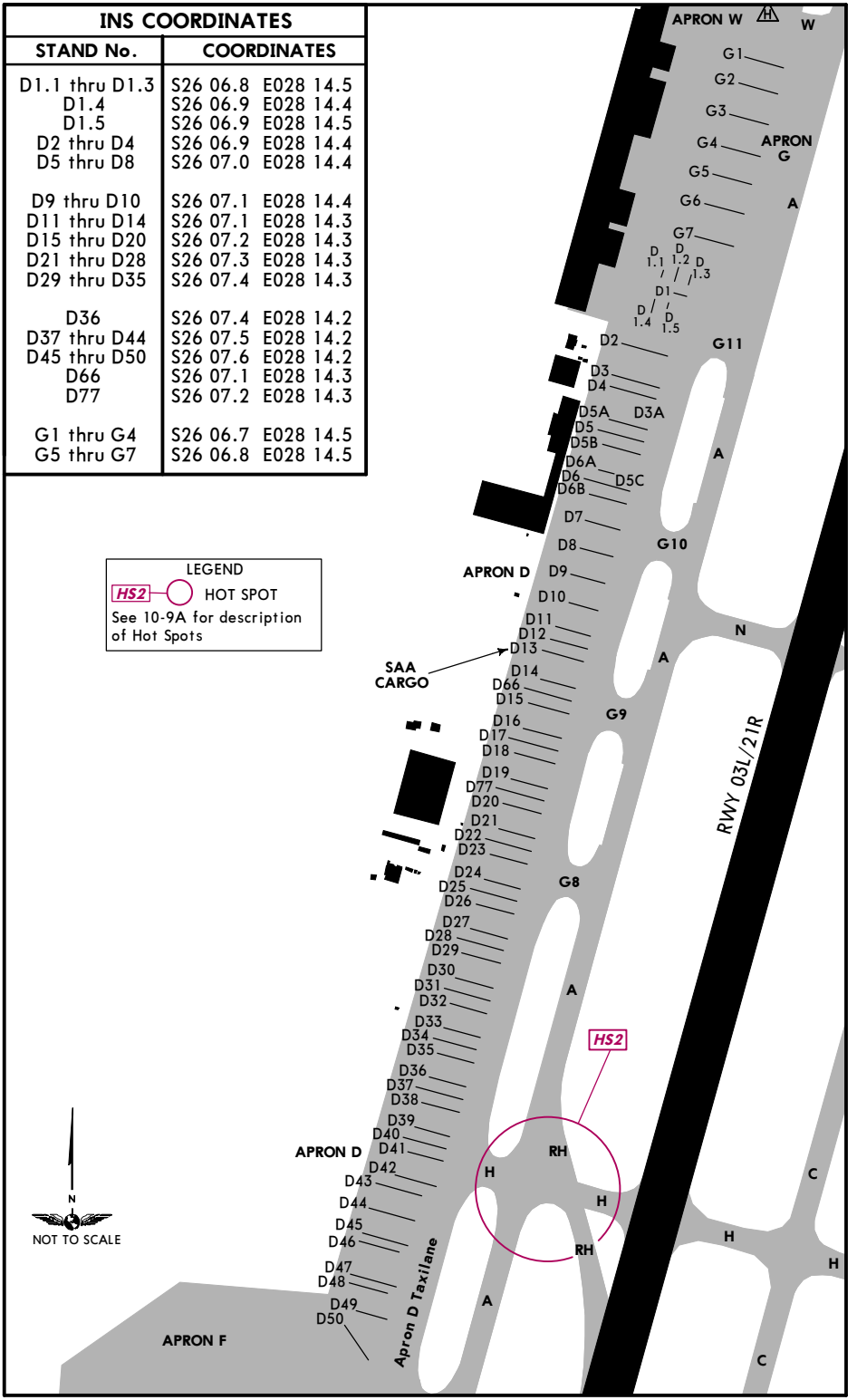
JAR-OPS TAKE-OFF 1

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

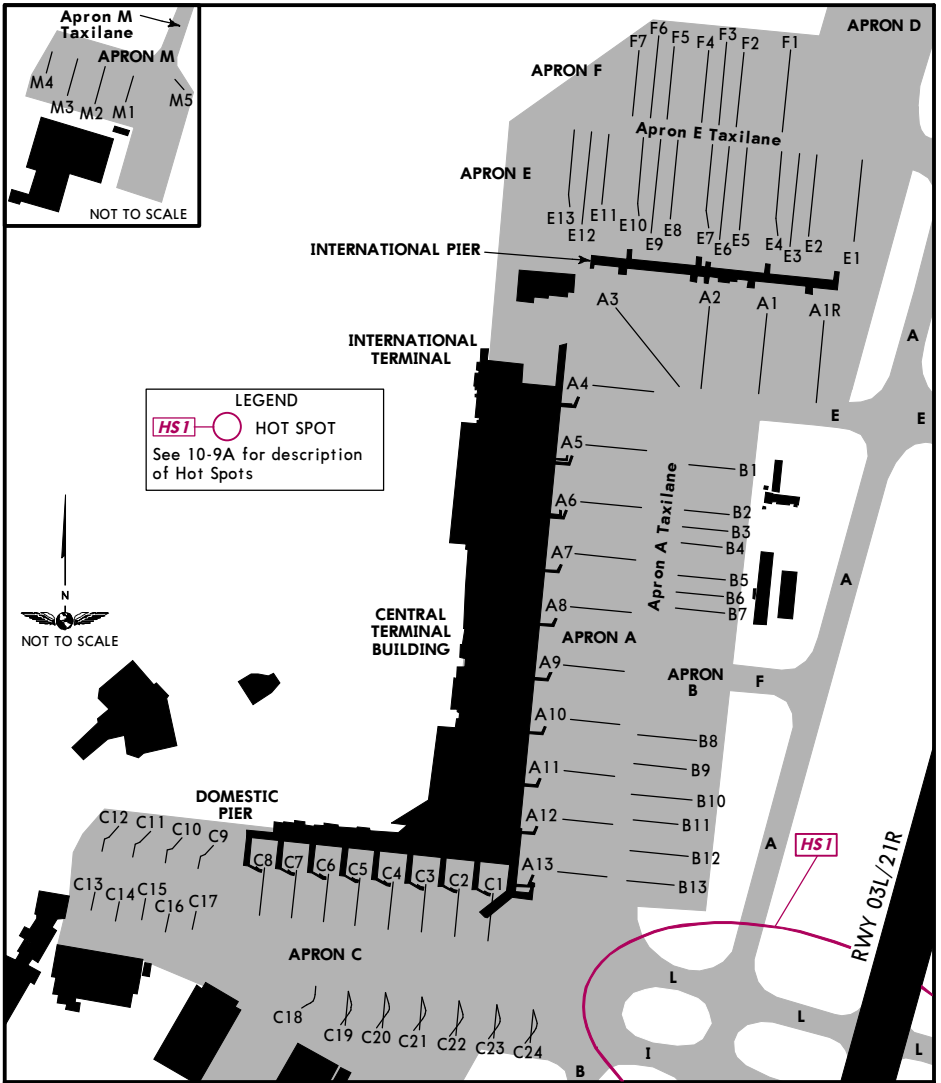
1 Operators applying U.S. Ops Specs: CL required below 300m.

CHANGES: None.

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



CHANGES: Twy designation.



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		

CHANGES: None.

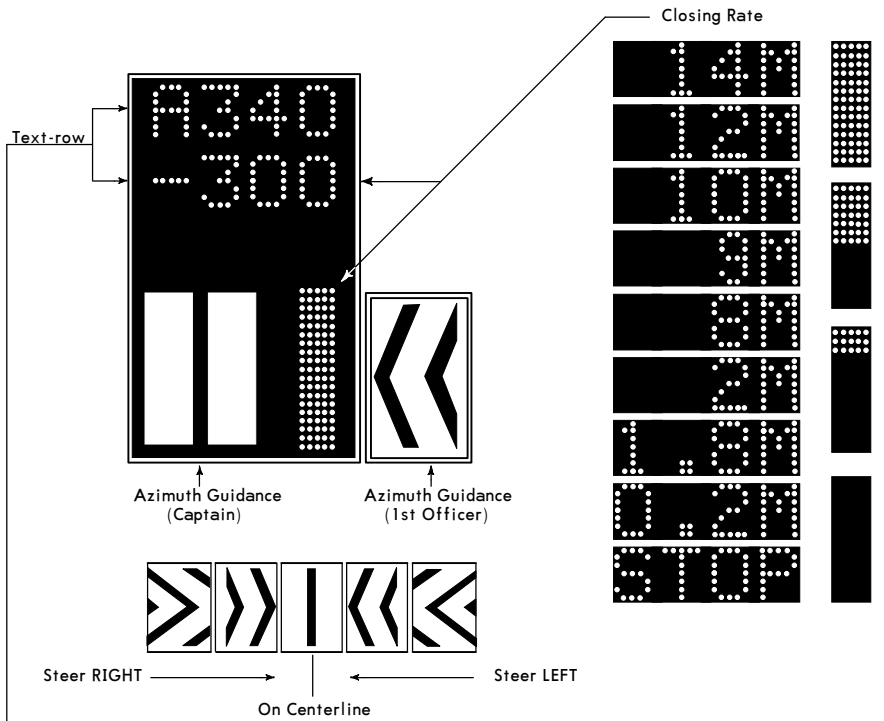
VISUAL DOCKING GUIDANCE SYSTEM "APIS++"

(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.



Aircraft type/series
(solid from 20m
before STOP)

Stand number
(if applicable/until
30m from STOP)

Door number
(if applicable)

Aircraft stopped
at stop position

Flight number
(if applicable/until
30m from STOP)

Aircraft is
too far

JOHANNESBURG, S AFR REP
O R TAMBO INTL

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

CHANGES: None.

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 ❼	V1600m ❼	V2400m ❼	V3600m ❼

❼ 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	150m	200m	250m	400m	500m
B					
C					
D	200m	250m	300m		

CHANGES: Minimums.

FAOR/JNB
O R TAMBO INTL

JEPPESEN 28 DEC 12 (11-1) Eff 10 Jan

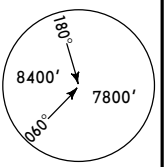
JOHANNESBURG, S AFR REP
ILS Z Rwy 03L

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP TM

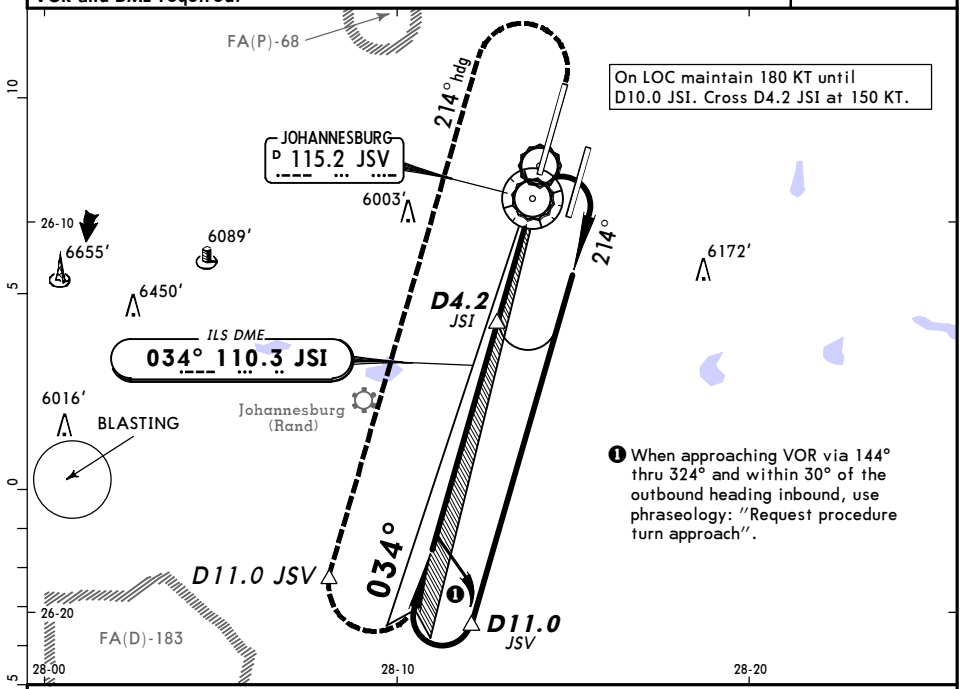
LOC JSI	Final Apch Crs	GS D4.2 JSI	ILS DA(H)	Apt Elev 5558′
110.3	034°	6880′ (1322′)	5758′ (200′)	RWY 5558′

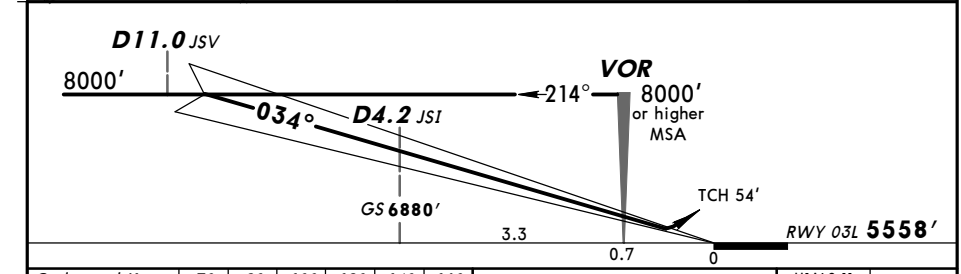
MISSED APCH: Climb to 8300′. Maintain rwy track. When passing 7000′ turn LEFT onto 214° heading. Passing D11.0 JSV turn LEFT direct to VOR.



MSA
JSV VOR

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 7000′

PANS OPS

JAR-OPS STRAIGHT-IN LANDING RWY **03L**

	ILS DA(H) 5758′ (200′) FULL	ILS DA(H) 5758′ (200′) ALS out	LOC (GS out)
A	RVR 550m	RVR 1000m	NOT APPLICABLE
B			
C			
D			

CIRCLE-TO-LAND

Max Kts	East of rwy 03L/21R MDA(H)	East of rwy 03L/21R VIS	West of rwy 03L/21R MDA(H)	West of rwy 03L/21R VIS
100	6050′ (492′)	1500m	6070′ (512′)	1500m
135	6060′ (502′)	1600m	6070′ (512′)	1600m
180	6250′ (692′)	2400m	6410′ (852′)	2400m
205	6260′ (702′)	3600m	6410′ (852′)	3600m

CHANGES: ICAO code.

FAOR/JNB
O R TAMBO INTL

28 DEC 12
Eff 10 Jan

JEPPESEN

11-1A

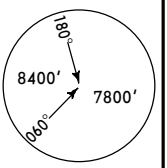
JOHANNESBURG, S AFR REP
CAT II ILS Z Rwy 03L

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP

LOC JSI	Final Apch Crs	GS	CAT II ILS	Apt Elev
110.3	034°	D4.2 JSI 6880′ (1322′)	RA 86′ DA(H) 5658′ (100′)	5558′
				RWY 5558′

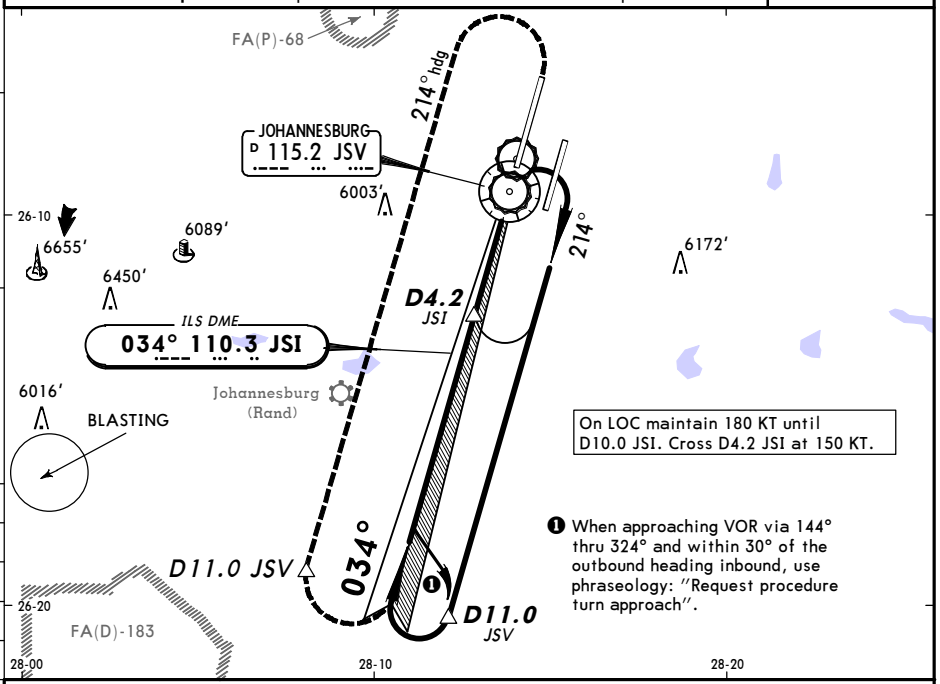
MISSED APCH: Climb to 8300′. Maintain rwy track. When passing 7000′ turn LEFT onto 214° heading. Passing D11.0 JSV turn LEFT direct to VOR.

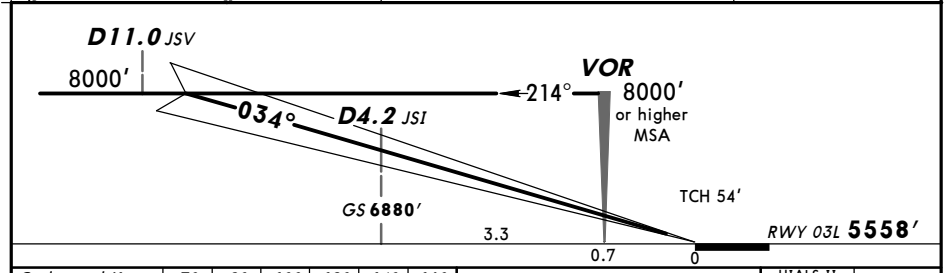


MSA
JSV VOR

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

HIALS-II
PAPI PAPI

7000′

PANS OPS

JAR-OPS

STRAIGHT-IN LANDING RWY **03L**

CAT II ILS

RA 86′

DA(H) **5658′** (100′)

RVR 300m ❶

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

CHANGES: ICAO code.

FAOR/JNB
O R TAMBO INTL

JEPPESEN 28 DEC 12 (11-2) Eff 10 Jan

JOHANNESBURG, S AFR REP
ILS Y Rwy 03L

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

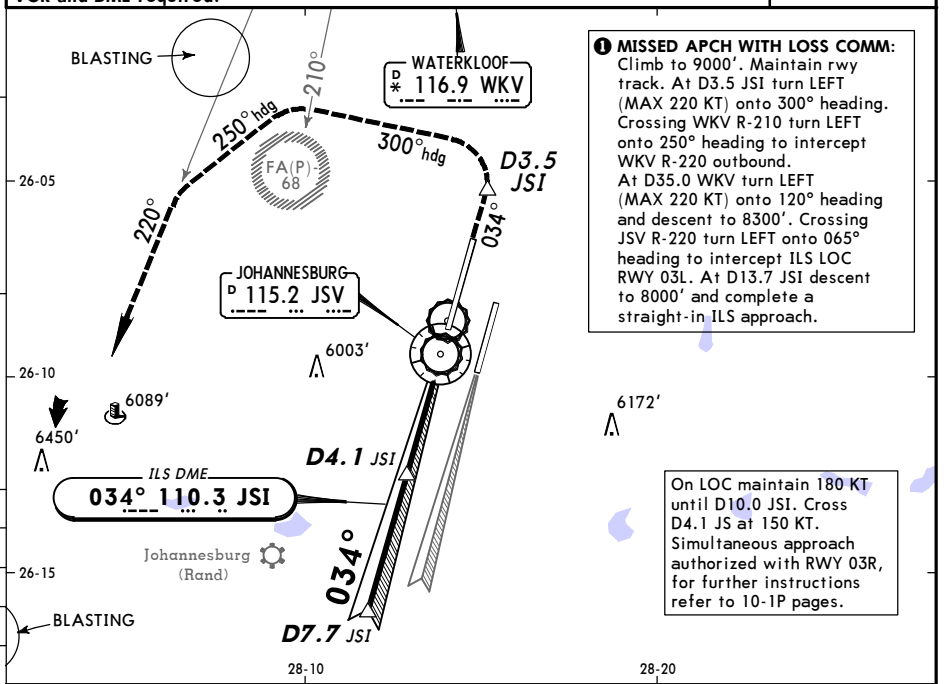
LOC JSI	Final Apch Crs	GS D4.1 JSI	ILS DA(H)	Apt Elev 5558′
110.3	034°	6850′ (1292′)	Refer to Minimums	RWY 5558′

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. ❶

MSA JSV VOR: 180°, 8400′, 7800′, 060°

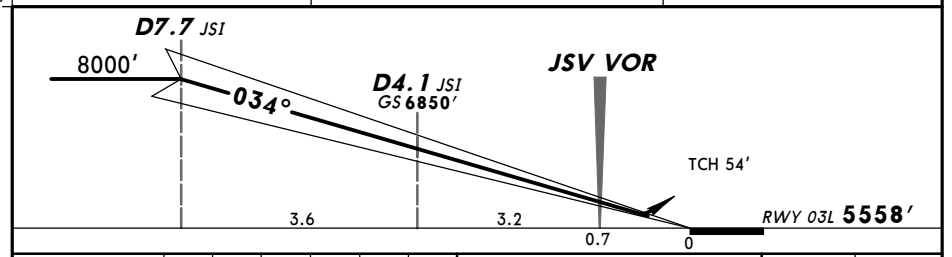
Alt Set: hPa Rwy Elev: 188 hPa Trans level: By ATC Trans alt: 8000′

VOR and DME required.



❶ **MISSED APCH WITH LOSS COMM:** Climb to 9000′. 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 outbound. At D35.0 WKV turn LEFT (MAX 220 KT) onto 120° heading and descent to 8300′. Crossing JSV R-220 turn LEFT onto 065° heading to intercept ILS LOC RWY 03L. At D13.7 JSI descent to 8000′ and complete a straight-in ILS approach.

On LOC maintain 180 KT until D10.0 JSI. Cross D4.1 JS at 150 KT. Simultaneous approach authorized with RWY 03R, for further instructions refer to 10-1P pages.



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**

ILS
Missed apch climb gradient mim
3.5% up to 7600 DA(H) 5758′ (200′)
DA(H) 2.5%
A: 6273′ (715′) C: 6296′ (738′)
B: 6284′ (726′) D: 6317′ (759′)

PANS OPS	FULL	ALS out	FULL	ALS out	LOC (GS out)
A	RVR 550m	RVR 1000m	RVR 800m	RVR 1200m	NOT APPLI-CABLE
B					
C					
D					

CIRCLE-TO-LAND

Max Kts	East of rwy 03L/21R MDA(H)	East of rwy 03L/21R VIS	West of rwy 03L/21R MDA(H)	West of rwy 03L/21R VIS
100	6050′ (492′)	1500m	6070′ (512′)	1500m
135	6060′ (502′)	1600m	6070′ (512′)	1600m
180	6250′ (692′)	2400m	6410′ (852′)	2400m
205	6260′ (702′)	3600m	6410′ (852′)	3600m

CHANGES: ICAO code.

FAOR/JNB
O R TAMBO INTL

28 DEC 12
Eff 10 Jan

JEPPESEN

11-2A

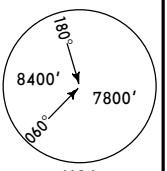
JOHANNESBURG, S AFR REP
❶ CAT II ILS Y Rwy 03L

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

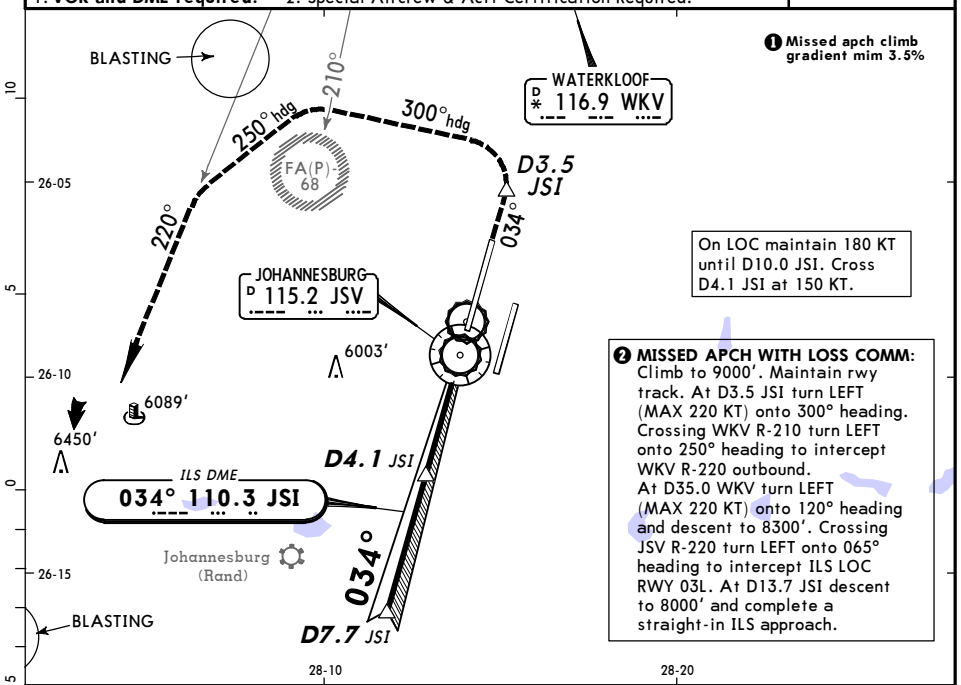
BRIEFING STRIP

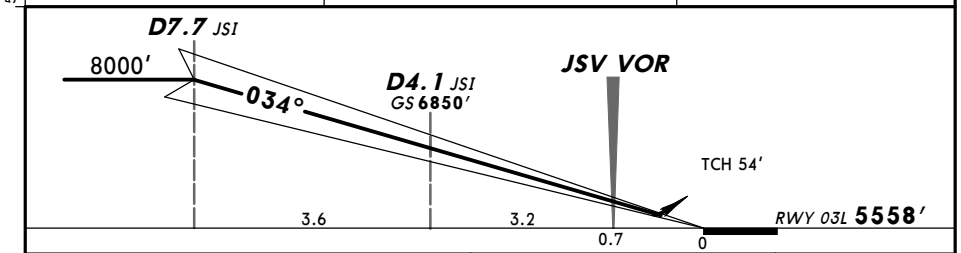
LOC JSI	Final Apch Crs	GS D4.1 JSI	CAT II ILS RA/DA(H)	Apt Elev 5558′
110.3	034°	6850′ (1292′)	Refer to Minimums	RWY 5558′

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. ❷



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

HIALS-II PAPI PAPI D3.5 JSI

PANS OPS

JAR-OPS

STRAIGHT-IN LANDING RWY **03L**
CAT II ILS
Missed apch climb gradient mim 3.5% up to 7600′

ABC	D
RA 86′	**RA 90′**
DA(H) **5658′** (100′)	DA(H) **5662′** (104′)

RVR 300m ❶

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

CHANGES: ICAO code.

FAOR/JNB
O R TAMBO INTL

JEPPESEN 28 DEC 12 (11-3) Eff 10 Jan

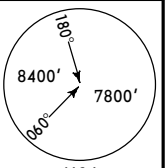
JOHANNESBURG, S AFR REP
ILS Z Rwy 03R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP TM

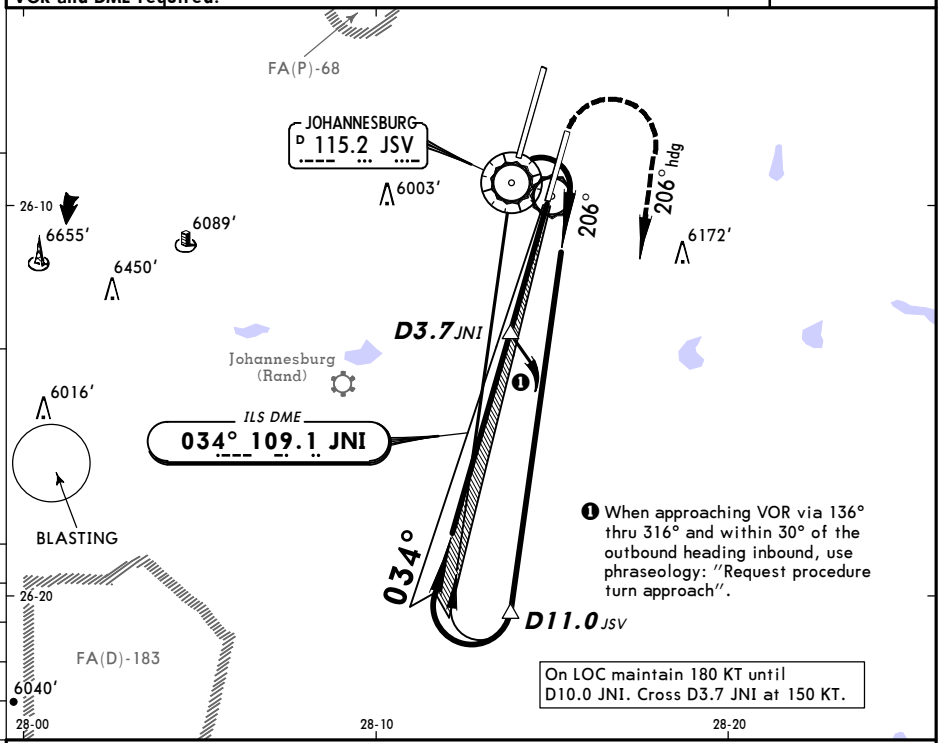
LOC JNI	Final Apch Crs	GS D3.7 JNI	ILS DA(H)	Apt Elev 5558′
109.1	034°	6700′ (1190′)	5710′ (200′)	RWY 5510′

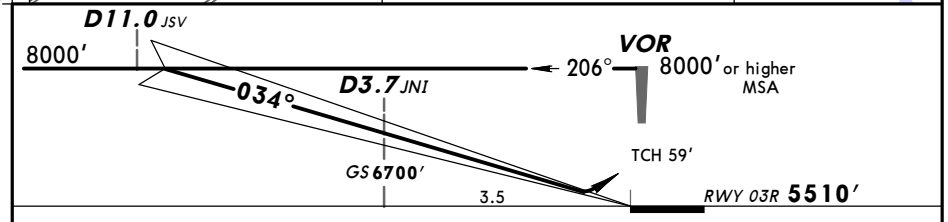
MISSED APCH: Climb to 8000′. Maintain rwy track. When passing 7000′ turn RIGHT onto 206° heading. Passing D11.0 JSV turn RIGHT direct to VOR.



MSA
JSV VOR

Alt Set: hPa Rwy Elev: 186 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 7000′

PANS OPS

JAR-OPS STRAIGHT-IN LANDING RWY **03R**

	ILS DA(H) 5710′ (200′) FULL	ILS DA(H) 5710′ (200′) ALS out	LOC (GS out)
A	RVR 550m	RVR 1000m	NOT APPLICABLE
B			
C			
D			

CIRCLE-TO-LAND

Max Kts	East of rwy 03R/21L MDA(H)	East of rwy 03R/21L VIS	West of rwy 03R/21L MDA(H)	West of rwy 03R/21L VIS
100	6050′ (492′)	1500m	6070′ (512′)	1500m
135	6060′ (502′)	1600m	6070′ (512′)	1600m
180	6250′ (692′)	2400m	6410′ (852′)	2400m
205	6260′ (702′)	3600m	6410′ (852′)	3600m

CHANGES: ICAO code.

FAOR/JNB
O R TAMBO INTL

JEPPESEN

28 DEC 12
Eff 10 Jan

(11-3A)

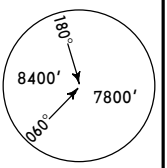
JOHANNESBURG, S AFR REP
CAT II ILS Z Rwy 03R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP

LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev
JNI		D3.7 JNI	RA 95′	5558′
109.1	034°	6700′ (1190′)	DA(H) 5610′ (100′)	RWY 5510′

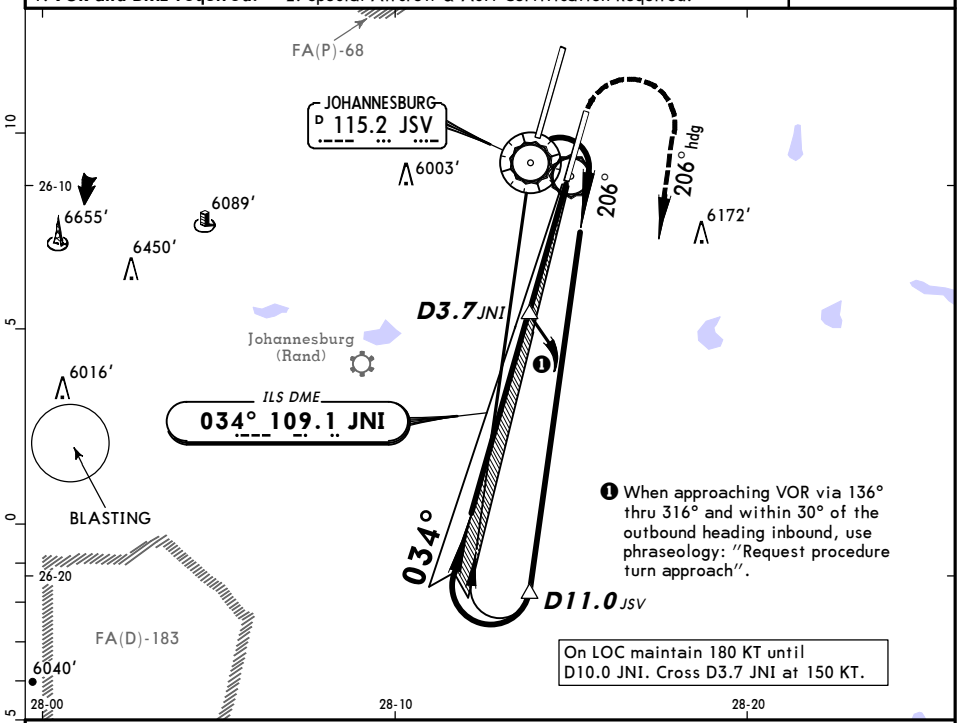
MISSED APCH: Climb to 8000′. Maintain rwy track. When passing 7000′ turn RIGHT onto 206° heading. Passing D11.0 JSV turn RIGHT direct to VOR.

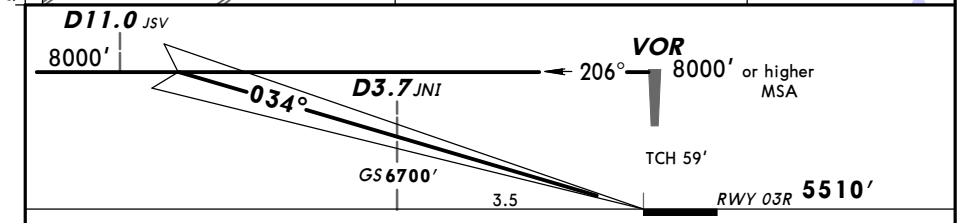


MSA
JSV VOR

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
GS 3.00°	377	484	538	646	753	861

HIALS-II
PAPI PAPI

7000′

PANS OPS

JAR-OPS

STRAIGHT-IN LANDING RWY **03R**

CAT II ILS

RA 95′

DA(H) **5610′** (100′)

RVR 300m 1

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

CHANGES: ICAO code.

FAOR/JNB
O R TAMBO INTL

JEPPESEN 28 DEC 12 (11-4) Eff 10 Jan

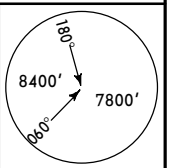
JOHANNESBURG, S AFR REP
ILS X Rwy 03R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP TM

LOC JNI	Final Apch Crs	GS	ILS DA(H)	Apt Elev 5558′
109.1	034°	D3.7 JNI 6700′ (1190′)	Refer to Minimums	RWY 5510′

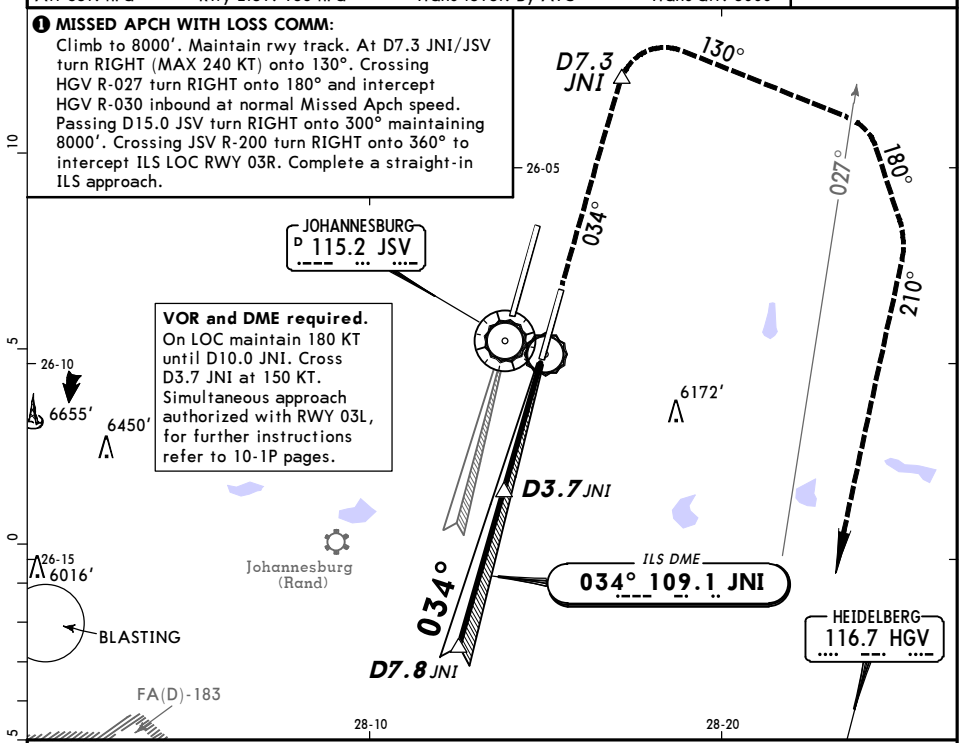
MISSED APCH: Climb to 8000′. Maintain rwy track. At D7.3 JNI/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound for radar vectoring to ILS RWY 03R. ❶

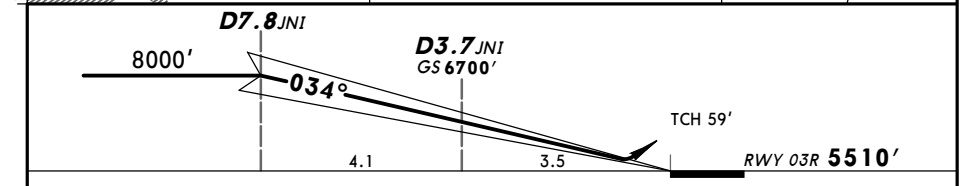


MSA
JSV VOR

Alt Set: hPa | Rwy Elev: 186 hPa | Trans level: By ATC | Trans alt: 8000′

❶ **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 for radar vectoring to ILS RWY 03R. Complete a straight-in ILS approach.





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

HIALS-II PAPI PAPI

D7.3 JNI/JSV

JAR-OPS

STRAIGHT-IN LANDING RWY 03R

ILS

Missed apch climb gradient mim 5.8% up to 8000′ 2.5%

DA(H)
ABC: 5710′ (200′) D: 5711′ (201′)

DA(H)
A: 6782′ (1272′) B: 6795′ (1285′) C: 6805′ (1295′) D: 6815′ (1305′)

	FULL	ALS out	FULL	ALS out	LOC (GS out)
A	RVR 550m	RVR 1000m	RVR 800m	RVR 1200m	NOT APPLI-CABLE
B					
C					
D	RVR 600m				

PANS OPS

CIRCLE-TO-LAND

Max Kts	East of rwy 03R/21L MDA(H)	VIS	West of rwy 03R/21L MDA(H)	VIS
100	6050′ (492′)	1500m	6070′ (512′)	1500m
135	6060′ (502′)	1600m	6070′ (512′)	1600m
180	6250′ (692′)	2400m	6410′ (852′)	2400m
205	6260′ (702′)	3600m	6410′ (852′)	3600m

CHANGES: ICAO code. Chart reindexed.

FAOR/JNB
O R TAMBO INTL

JEPPESEN
28 DEC 12
Eff 10 Jan
11-4A

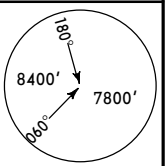
JOHANNESBURG, S AFR REP
❶ CAT II ILS X Rwy 03R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP TM

LOC JNI	Final Apch Crs	GS	CAT II ILS RA/DA(H)	Apt Elev 5558′
109.1	034°	D3.7 JNI 6700′ (1190′)	Refer to Minimums	RWY 5510′

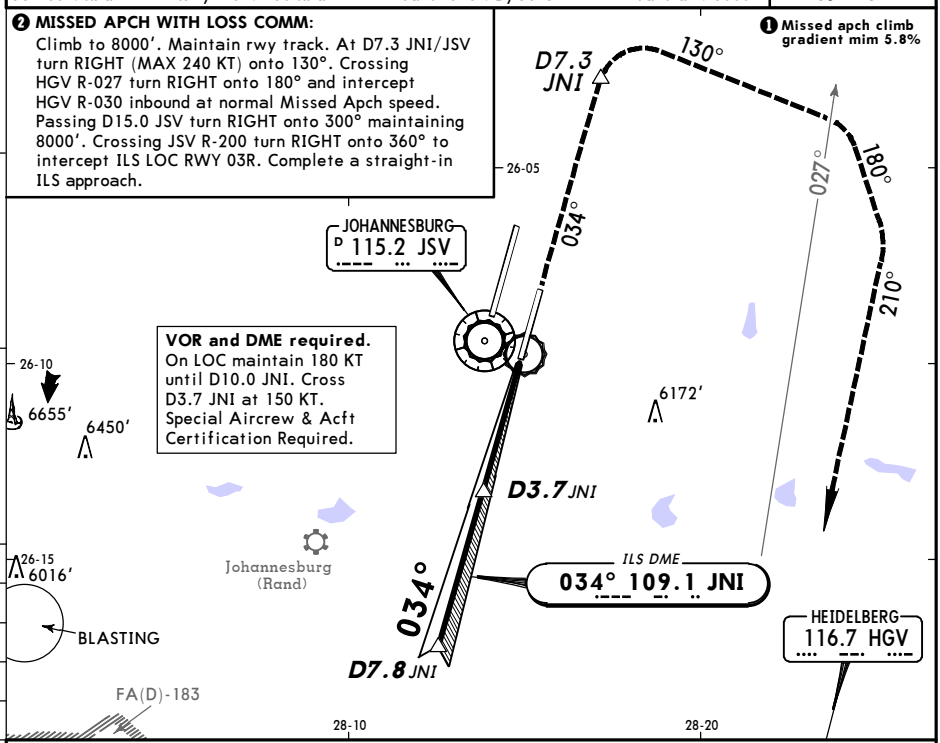
MISSED APCH: Climb to 8000′. Maintain rwy track. At D7.3 JNI/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound for radar vectoring onto ILS RWY 03R. ❷

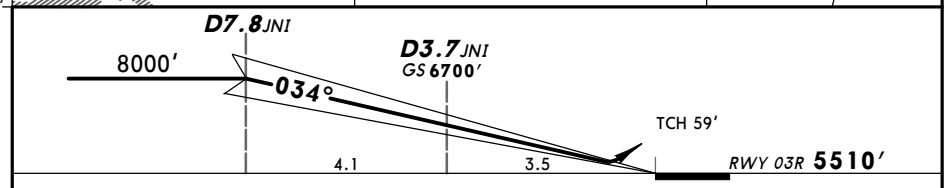


Alt Set: hPa | Rwy Elev: 186 hPa | Trans level: By ATC | Trans alt: 8000′

❷ **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.

❶ Missed apch climb gradient mim 5.8%





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

HIALS-II PAPI PAPI

D7.3 JNI/JSV

PANS OPS

JAR-OPS

STRAIGHT-IN LANDING RWY **03R**
CAT II ILS
Missed apch climb gradient mim 5.8% up to 8000′

ABC	D
RA 95′	**RA 102′**
DA(H) **5610′** (100′)	DA(H) **5619′** (109′)

RVR 300m ❶

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

CHANGES: ICAO code. Chart reindexed.

FAOR/JNB
O R TAMBO INTL

JEPPESEN 28 DEC 12 (11-5) Eff 10 Jan

JOHANNESBURG, S AFR REP
ILS W Rwy 03R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP TM

LOC JNI	Final Apch Crs	GS	ILS DA(H)	Apt Elev 5558′
109.1	034°	D3.7 JNI 6700′ (1190′)	Refer to Minimums	RWY 5510′

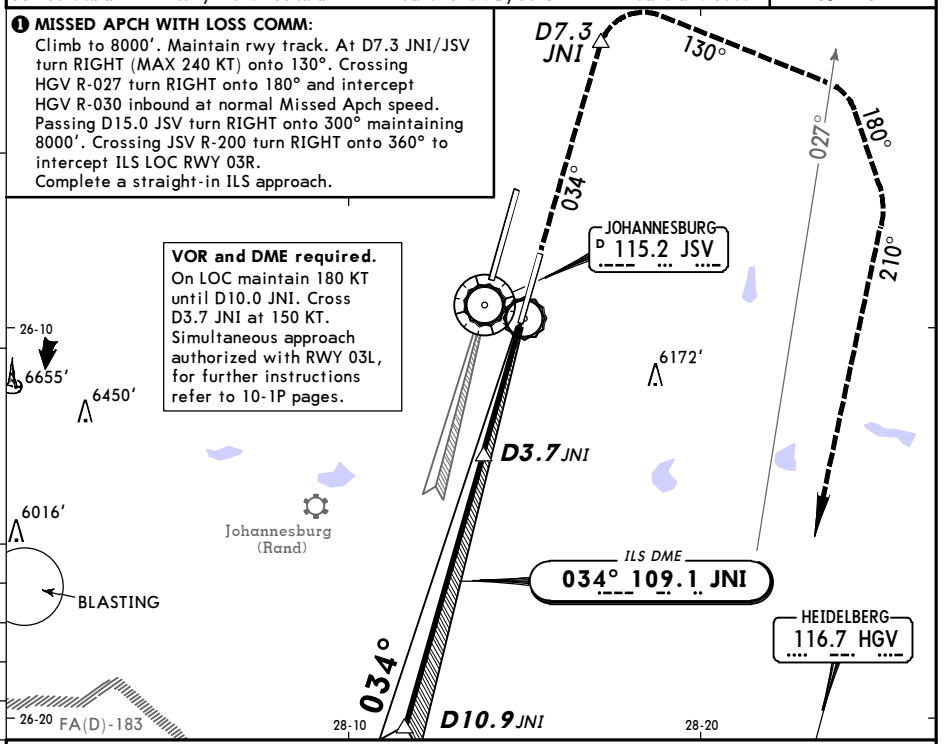
MISSED APCH: Climb to 8000′. Maintain rwy track. At D7.3 JNI/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound for radar vectoring to ILS RWY 03R. ❶

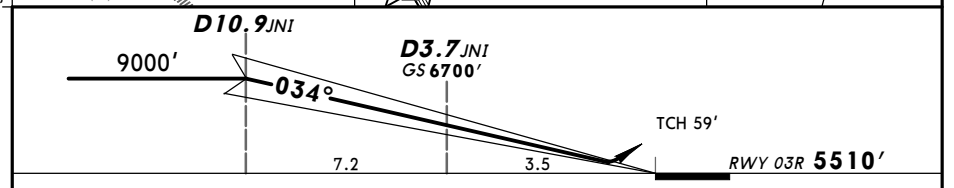
MSA JSV VOR: 180°–8400′, 060°–7800′

Alt Set: hPa | Rwy Elev: 186 hPa | Trans level: By ATC | Trans alt: 8000′

❶ **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 for radar vectoring to ILS RWY 03R. 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
GS	3.00°	377	484	538	646	753	861

HIALS-II PAPI PAPI — D7.3 JNI/JSV

JAR-OPS — STRAIGHT-IN LANDING RWY 03R

ILS — Missed apch climb gradient mim: 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	LOC (GS out)
A	RVR 550m	RVR 1000m	RVR 800m	RVR 1200m	NOT APPLI-CABLE
B					
C					
D	RVR 600m				

CIRCLE-TO-LAND

Max Kts	East of rwy 03R/21L MDA(H)	East of rwy 03R/21L VIS	West of rwy 03R/21L MDA(H)	West of rwy 03R/21L VIS
100	6050′ (492′)	1500m	6070′ (512′)	1500m
135	6060′ (502′)	1600m	6070′ (512′)	1600m
180	6250′ (692′)	2400m	6410′ (852′)	2400m
205	6260′ (702′)	3600m	6410′ (852′)	3600m

PANS OPS

CHANGES: ICAO code. Chart reindexed.

FAOR/JNB
O R TAMBO INTL

JEPPESEN
28 DEC 12
Eff 10 Jan
(11-5A)

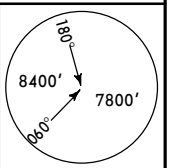
JOHANNESBURG, S AFR REP
❶ CAT II ILS W Rwy 03R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP TM

LOC	Final Apch Crs	GS	CAT II ILS RA/DA(H)	Apt Elev 5558′
JNI 109.1	034°	D3.7 JNI 6700′ (1190′)	Refer to Minimums	RWY 5510′

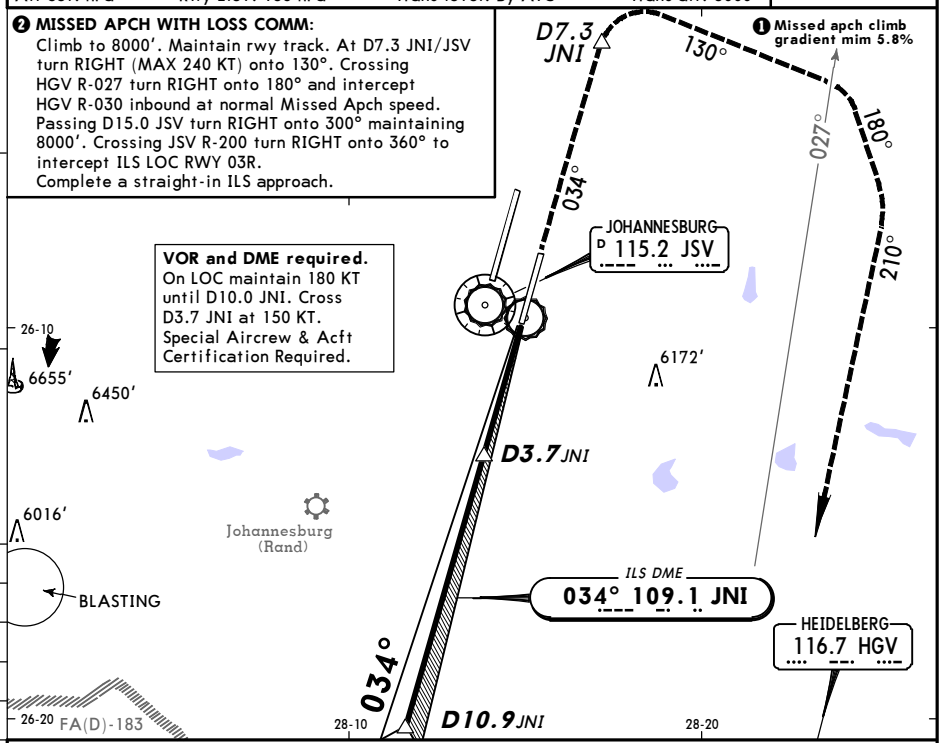
MISSED APCH: Climb to 8000′. Maintain rwy track. At D7.7 JNI/JSV turn RIGHT (MAX 240 KT) onto 130°. Crossing HGV R-027 turn RIGHT onto 180° and intercept HGV R-030 inbound for radar vectoring to ILS RWY 03R. ❷

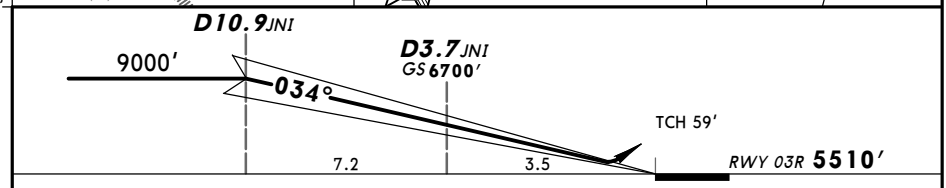


Alt Set: hPa | Rwy Elev: 186 hPa | Trans level: By ATC | Trans alt: 8000′

❷ **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 for radar vectoring to ILS 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.
Special Aircrew & Acft Certification Required.





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

HIALS-II PAPI PAPI

D7.3 JNI/JSV

PANS OPS

JAR-OPS

STRAIGHT-IN LANDING RWY **03R**
CAT II ILS
Missed apch climb gradient mim 5.8% up to 8000′

ABC	D
RA 95′	**RA 102′**
DA(H) **5610′** (100′)	DA(H) **5619′** (109′)

RVR 300m ❶

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

CHANGES: ICAO code. Chart reindexed.

FAOR/JNB
O R TAMBO INTL

JEPPESEN 28 DEC 12 (11-6) Eff 10 Jan

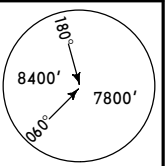
JOHANNESBURG, S AFR REP
ILS Z Rwy 21L

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP TM

LOC JAI	Final Apch Crs	GS D3.7 JAI	ILS DA(H)	Apt Elev 5558′
109.9	214°	6680′ (1186′)	5694′ (200′)	RWY 5494′

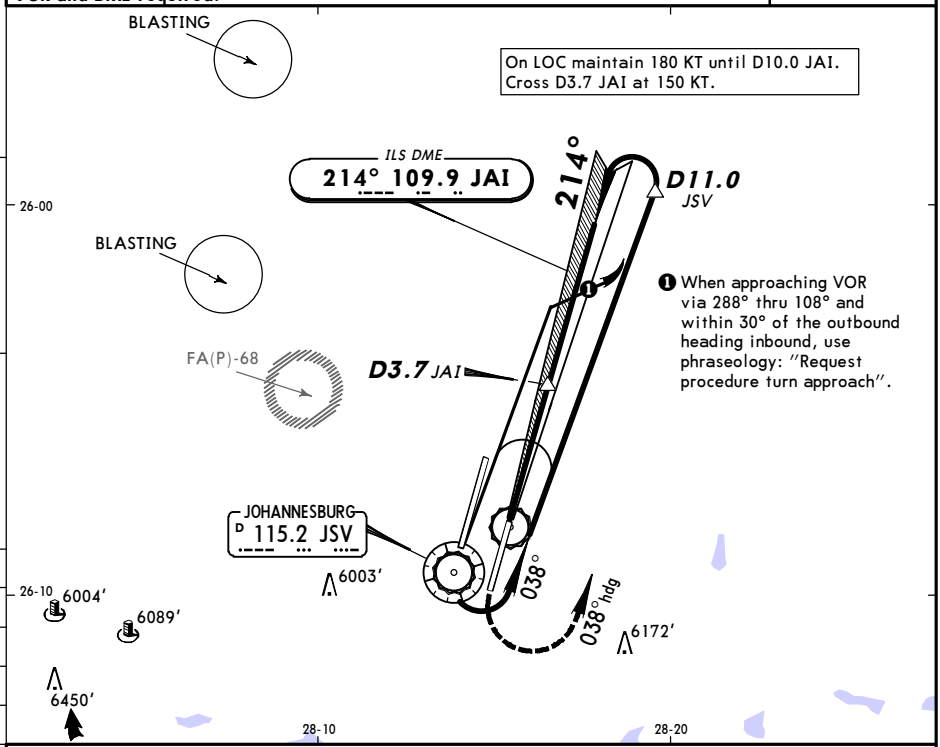
MISSED APCH: Climb to 8000′. Maintain rwy track. When passing 7000′ turn LEFT onto 038° heading. Passing D11.0 JSV turn LEFT direct to VOR.

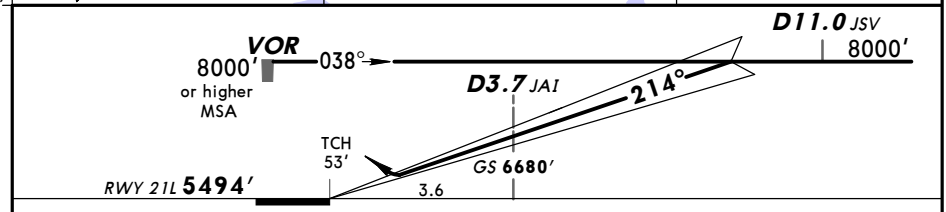


MSA
JSV VOR

Alt Set: hPa Rwy Elev: 186 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

7000′

PANS OPS

JAR-OPS STRAIGHT-IN LANDING RWY 21L

	ILS DA(H) 5694′ (200′) FULL	ILS DA(H) 5694′ (200′) ALS out	LOC (GS out)
A	RVR 550m	RVR 1000m	NOT APPLICABLE
B			
C			
D			

CIRCLE-TO-LAND

Max Kts	East of rwy 03R/21L MDA(H)	East of rwy 03R/21L VIS	West of rwy 03R/21L MDA(H)	West of rwy 03R/21L VIS
100	6050′ (492′)	1500m	6070′ (512′)	1500m
135	6060′ (502′)	1600m	6070′ (512′)	1600m
180	6250′ (692′)	2400m	6410′ (852′)	2400m
205	6260′ (702′)	3600m	6410′ (852′)	3600m

CHANGES: ICAO code. Chart reindexed.

FAOR/JNB
O R TAMBO INTL

28 DEC 12
Eff 10 Jan

JEPPESEN

11-6A

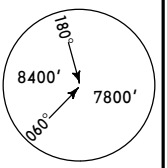
JOHANNESBURG, S AFR REP
CAT II ILS Z Rwy 21L

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP

LOC	Final	GS	CAT II ILS	Apt Elev
JAI	Apch Crs	D3.7 JAI	RA 102′	5558′
109.9	214°	6680′ (1186′)	DA(H) 5594′ (100′)	RWY 5494′

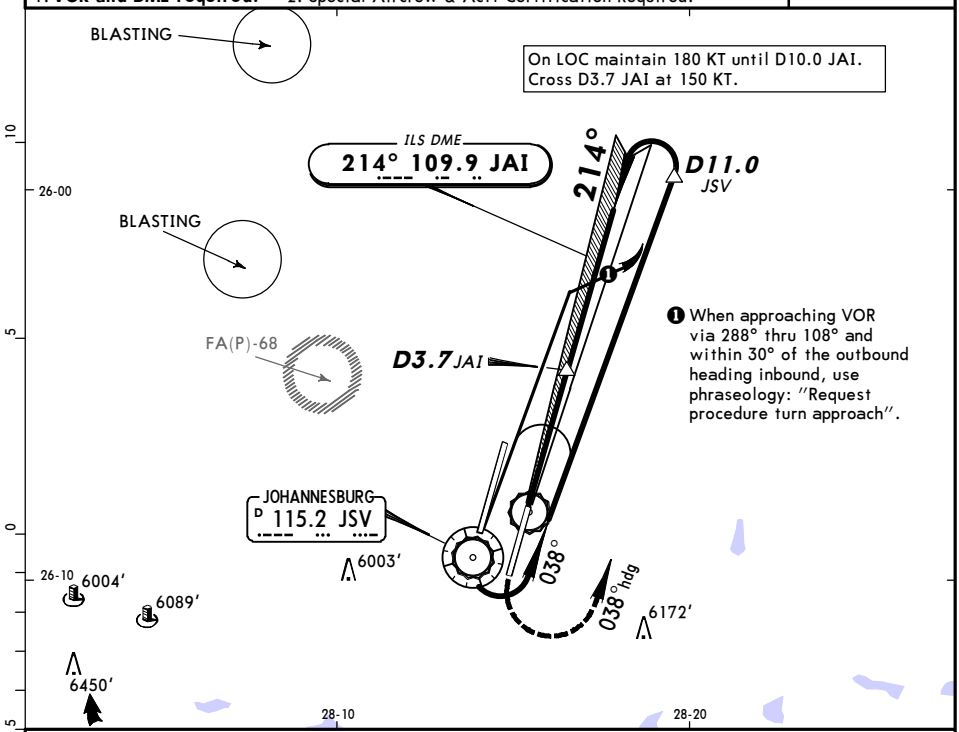
MISSED APCH: Climb to 8000′. Maintain rwy track. When passing 7000′ turn LEFT onto 038° heading. Passing D11.0 JSV turn LEFT direct to VOR.

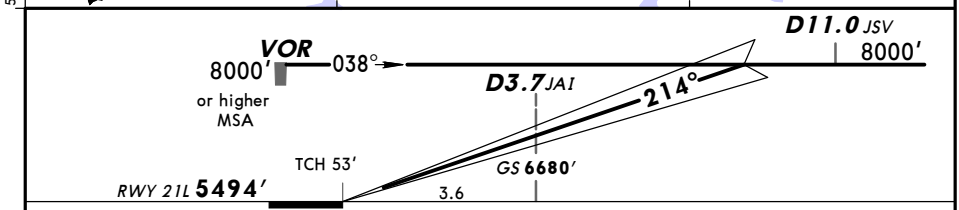


MSA
JSV VOR

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
GS 3.00°	377	484	538	646	753	861

HIALS-II
PAPI PAPI

7000′

PANS OPS

JAR-OPS

STRAIGHT-IN LANDING RWY **21L**

CAT II ILS

RA 102′

DA(H) **5594′** (100′)

RVR 300m 1

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

CHANGES: ICAO code. Chart reindexed.

FAOR/JNB
O R TAMBO INTL

JEPPESEN 28 DEC 12 (11-7) Eff 10 Jan

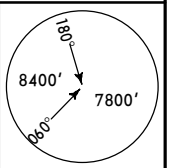
JOHANNESBURG, S AFR REP
ILS X Rwy 21L

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP TM

LOC JAI	Final Apch Crs	GS	ILS DA(H)	Apt Elev / RWY
109.9	214°	D4.0 JAI 6780′ (1286′)	Refer to Minimums	Apt Elev 5558′ RWY 5494′

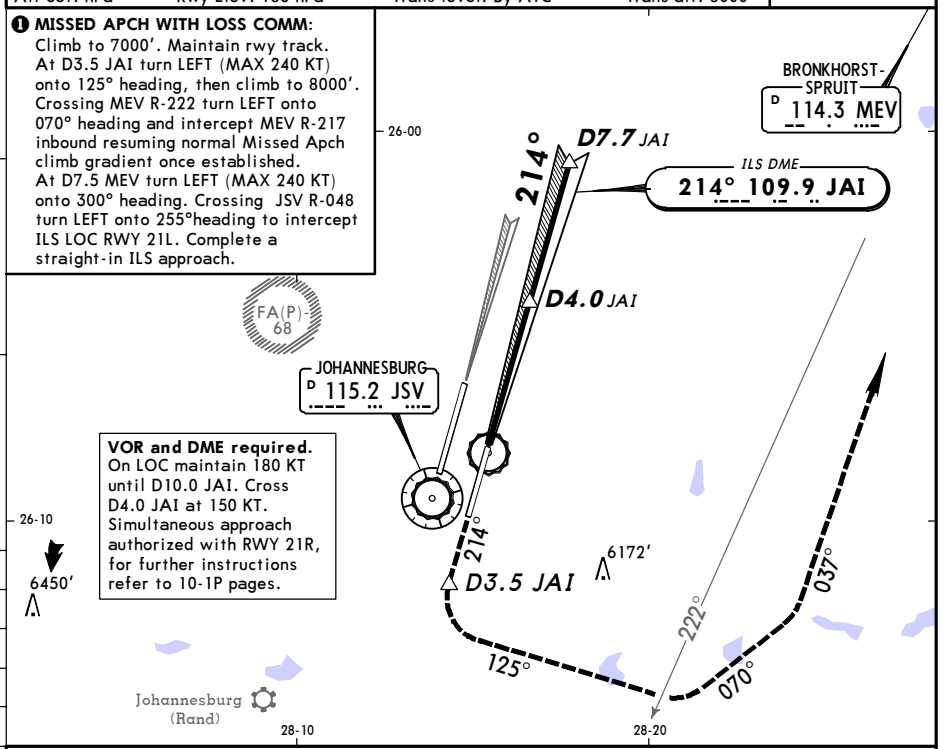
MISSED APCH: Climb to 7000′. Maintain rwy track. At D3.5 JAI turn LEFT (MAX 240 KT) onto 125° heading, then climb to 8000′. Crossing MEV R-222 turn LEFT onto 070° heading and intercept MEV R-217 inbound for radar vectoring onto ILS RWY 21L. ❶

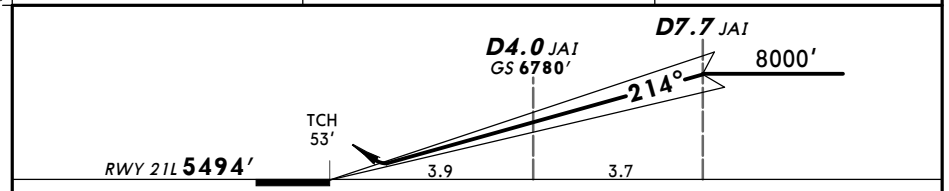


MSA
JSV VOR

Alt Set: hPa | Rwy Elev: 186 hPa | Trans level: By ATC | Trans alt: 8000′

❶ **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
GS	3.00°	377	484	538	646	753	861

D3.5 JAI

JAR-OPS STRAIGHT-IN LANDING RWY 21L

ILS
Missed apch climb gradient mim
4.6% up to 8000′ DA(H) 5694′ (200′)
2.5% DA(H) A: 6634′ (1140′) B: 6645′ (1151′) C: 6655′ (1161′) D: 6669′ (1175′)

PANS OPS	FULL	ALS out	FULL	ALS out	LOC (GS out)
A	RVR 550m	RVR 1000m	RVR 800m	RVR 1200m	NOT APPLI-CABLE
B					
C					
D					

CIRCLE-TO-LAND

Max Kts	East of rwy 03R/21L MDA(H)	East of rwy 03R/21L VIS	West of rwy 03R/21L MDA(H)	West of rwy 03R/21L VIS
100	6050′ (492′)	1500m	6070′ (512′)	1500m
135	6060′ (502′)	1600m	6070′ (512′)	1600m
180	6250′ (692′)	2400m	6410′ (852′)	2400m
205	6260′ (702′)	3600m	6410′ (852′)	3600m

CHANGES: ICAO code. Chart reindexed.

FAOR/JNB
O R TAMBO INTL

28 DEC 12
Eff 10 Jan

JEPPESEN

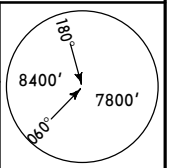
11-7A

JOHANNESBURG, S AFR REP
❶ CAT II ILS X Rwy 21L

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

LOC	Final Apch Crs	GS	CAT II ILS RA/DA(H)	Apt Elev	RWY
JAI 109.9	214°	D4.0 JAI 6780′ (1286′)	Refer to Minimums	5558′	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. ❷



Alt Set: hPa | Rwy Elev: 186 hPa | Trans level: By ATC | Trans alt: 8000′

❷ **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.

❶ Missed apch climb gradient mim 4.6%

BRONKHORST-SPRUIT
D 114.3 MEV

26-00

214° D7.7 JAI

ILS DME
214° 109.9 JAI

D4.0 JAI

FA(P)-68

JOHANNESBURG
D 115.2 JSV

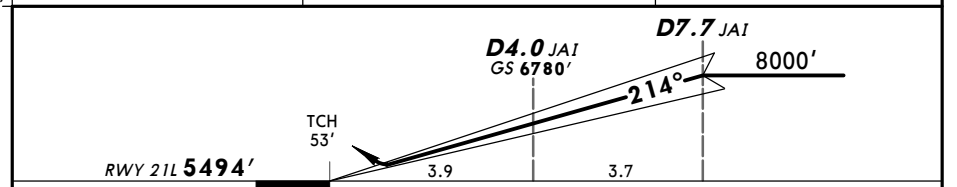
VOR and DME required.
On LOC maintain 180 KT until D10.0 JAI. Cross D4.0 JAI at 150 KT.
Special Aircrew & Acft Certification Required.

26-10
6450′

214°
D3.5 JAI
6172′
125°
222°
037°
070°

Johannesburg (Rand)

28-10
28-20



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

HIALS-II
PAPI PAPI
D3.5 JAI

JAR-OPS

STRAIGHT-IN LANDING RWY 21L
CAT II ILS
Missed apch climb gradient mim 4.6% up to 8000′

ABC	D
RA 102′	RA 103′
DA(H) 5594′ (100′)	DA(H) 5595′ (101′)

RVR 300m ❶

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

BRIEFING STRIP TM

PANS OPS

CHANGES: ICAO code. Chart reindexed.

FAOR/JNB
O R TAMBO INTL

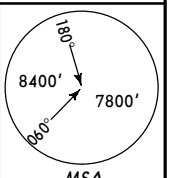
JEPPESEN 17 JAN 14 (11-8)

JOHANNESBURG, S AFR REP
ILS Z Rwy 21R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP™

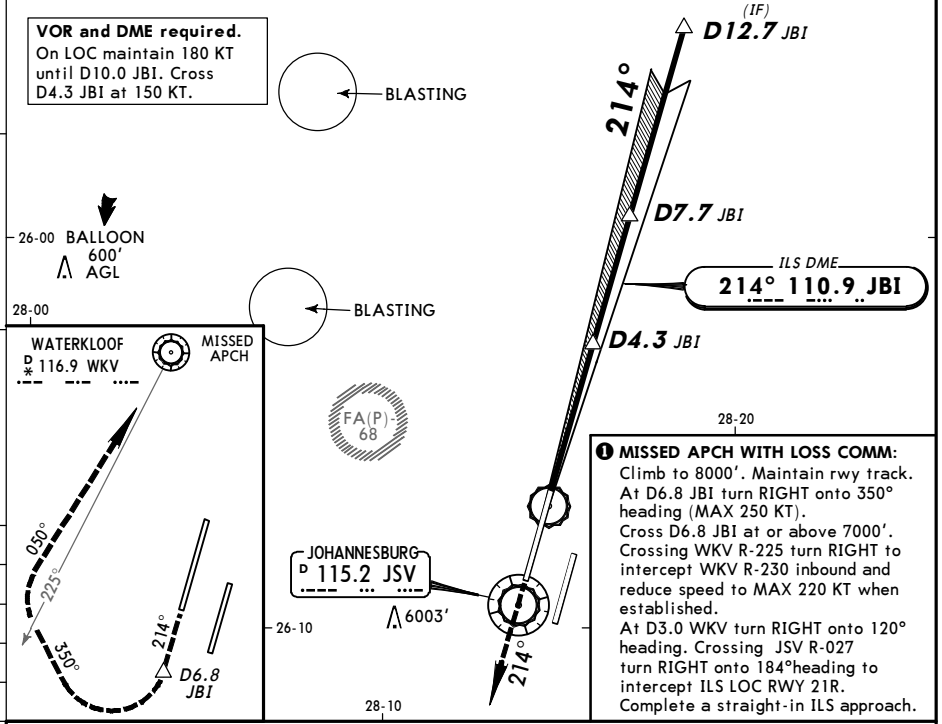
LOC JBI	Final Apch Crs	GS D4.3 JBI	ILS DA(H) Refer to Minimums	Apt Elev 5558′
110.9	214°	6880′ (1375′)		RWY 5505′



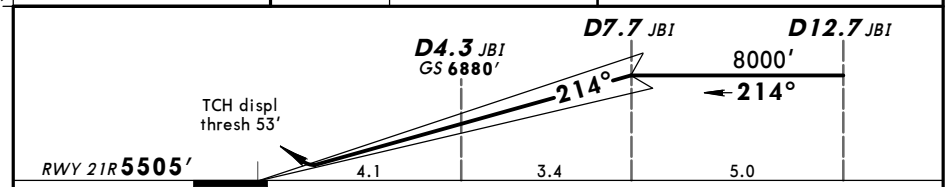
MISSED APCH: Climb to 8000′. Maintain rwy track. At D6.8 JBI turn RIGHT onto 350° heading. Cross D6.8 JBI at or above 7000′. Crossing WKV R-225 turn RIGHT to intercept WKV R-230 inbound for radar vectoring to ILS RWY 21R. MAX 250 KT. ❶

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.



❶ **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
GS	3.00°	372	478	531	637	743	849

HIALS-II PAPI PAPI | 250 KT MAX | MIM 7000′ | D6.8 JBI

JAR-OPS STRAIGHT-IN LANDING RWY 21R

ILS
Missed apch climb gradient mim
3.7% up to 7000 DA(H) 5705′ (200′)
2.5% DA(H) A: 6084′ (579′) B: 6091′ (586′) C: 6104′ (599′) D: 6111′ (606′)

PANS OPS	FULL	ALS out	FULL	ALS out	LOC (GS out)
A	RVR 550m	RVR 1000m	RVR 800m	RVR 1200m	NOT APPLI-CABLE
B					
C					
D					

CIRCLE-TO-LAND

Max Kts	East of rwy 03L/21R MDA(H)	East of rwy 03L/21R VIS	West of rwy 03L/21R MDA(H)	West of rwy 03L/21R VIS
100	6050′ (492′)	1500m	6070′ (512′)	1500m
135	6060′ (502′)	1600m	6070′ (512′)	1600m
180	6250′ (692′)	2400m	6410′ (852′)	2400m
205	6260′ (702′)	3600m	6410′ (852′)	3600m

CHANGES: None.

FAOR/JNB
O R TAMBO INTL

JEPPESEN 17 JAN 14 (11-8A)

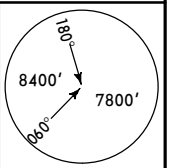
JOHANNESBURG, S AFR REP
❶ CAT II ILS Z Rwy 21R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

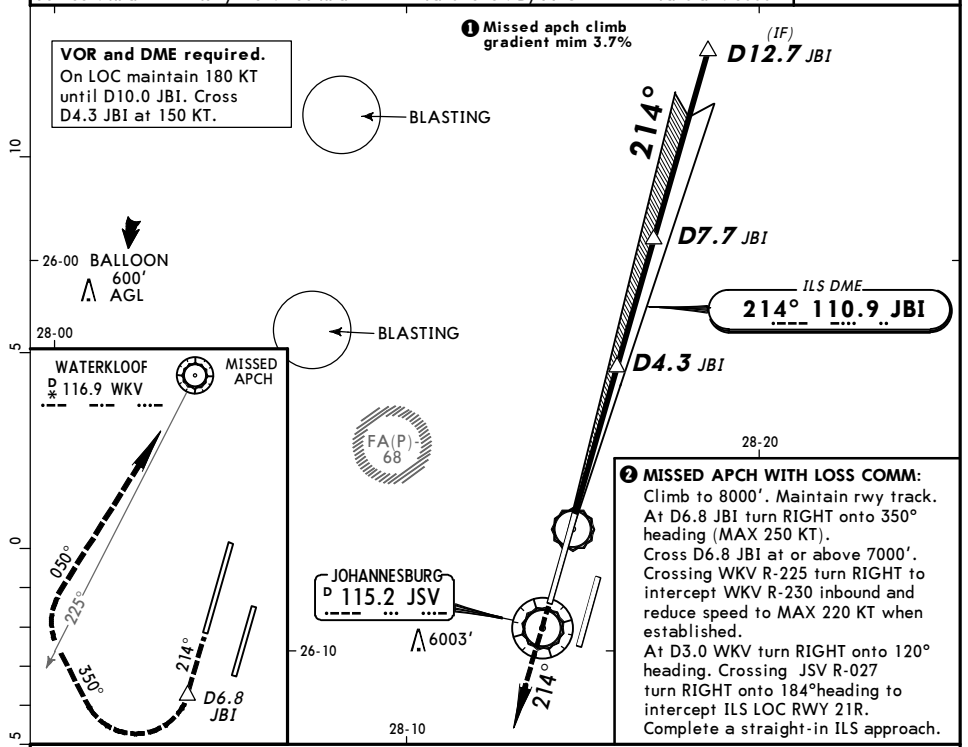
BRIEFING STRIP™

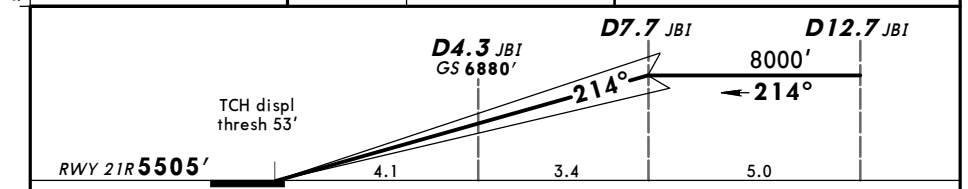
LOC JBI	Final Apch Crs	GS	CAT II ILS	Apt Elev
110.9	214°	D4.3 JBI 6880′ (1375′)	RA 98′ DA(H) 5605′ (100′)	5558′ RWY 5505′

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. ❷



Alt Set: hPa | Rwy Elev: 186 hPa | Trans level: By ATC | Trans alt: 8000′





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

HIALS-II PAPI PAPI

250 KT MAX

MIM 7000′

D6.8 JBI

PANS OPS

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 ❶

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

CHANGES: New procedure.

FAOR/JNB
O R TAMBO INTL

JEPPESEN

28 FEB 14 (12-1) Eff 6 Mar

JOHANNESBURG, S AFR REP
RNAV (GNSS) Rwy 03R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

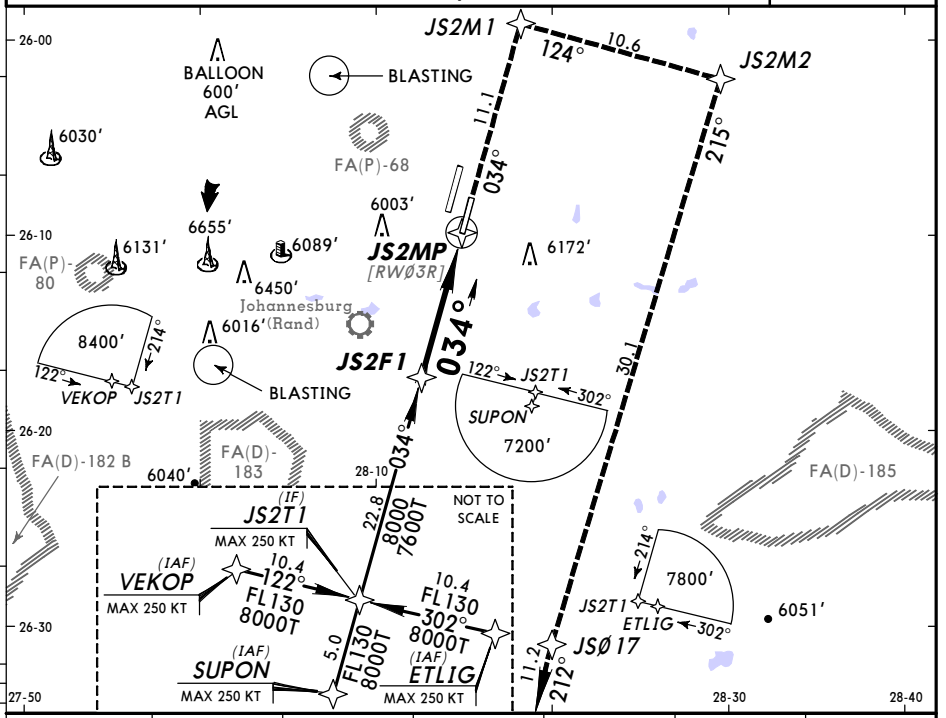
BRIEFING STRIP TM

RNAV	Final Apch Crs	Procedure Alt	LNAV MDA(H)	Apt Elev	TAA
	034°	JS2F1 8000′ (2490′)	Refer to Minimums	5558′ RWY 5510′	25 NM IAF

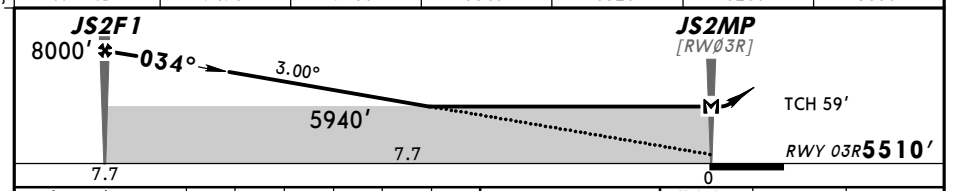
MISSED APCH: Climb to FL 130. Climb to JS2M1, then to JS2M2 turning RIGHT to JSØ17 and return to ETLIG, or as directed. MAX 240 KT.

Alt Set: hPa Rwy Elev: 186 hPa Trans level: By ATC Trans alt: 8000′

SPECIAL AIRCRAFT & AIRCREW AUTHORIZATION REQUIRED.



DIST to JS2MP	6.0	5.0	4.0	3.0	2.0	1.0
ALTITUDE	7470′	7160′	6840′	6520′	6200′	5880′



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

HIALS-II PAPI PAPI

MAX 240 KT

JS2M1

PANS OPS

JAR-OPS STRAIGHT-IN LANDING RWY **03R**

LNAV

		Missed apch climb gradient mim 3.8% MDA(H) 5940′(430′)		Missed apch climb gradient mim 2.5% MDA(H) 6510′(1000′)	
			ALS out		ALS out
A	RVR 900m	RVR 1500m		RVR 1200m	RVR 1500m
B	RVR 1000m			RVR 1400m	
C			RVR 1800m		RVR 2000m
D	RVR 1400m	RVR 2000m		RVR 1800m	

CIRCLE-TO-LAND

Max Kts	East of rwy 03R/21L MDA(H)	East of rwy 03R/21L VIS	West of rwy 03R/21L MDA(H)	West of rwy 03R/21L VIS
100	6050′(492′)	1 1500m	6070′(512′)	1 1500m
135	6060′(502′)	1 1600m	6070′(512′)	1 1600m
180	6250′(692′)	1 2400m	6410′(852′)	1 2400m
205	6260′(702′)	1 3600m	6410′(852′)	1 3600m

1 After approach with missed apch climb grad mim 2.5%: MDA(H) 6510′(952′).

CHANGES: None.

FAOR/JNB
O R TAMBO INTL

JEPPESEN

28 FEB 14 (12-2) Eff 6 Mar

JOHANNESBURG, S AFR REP
RNAV (GNSS) Rwy 21L

BRIEFING STRIP

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

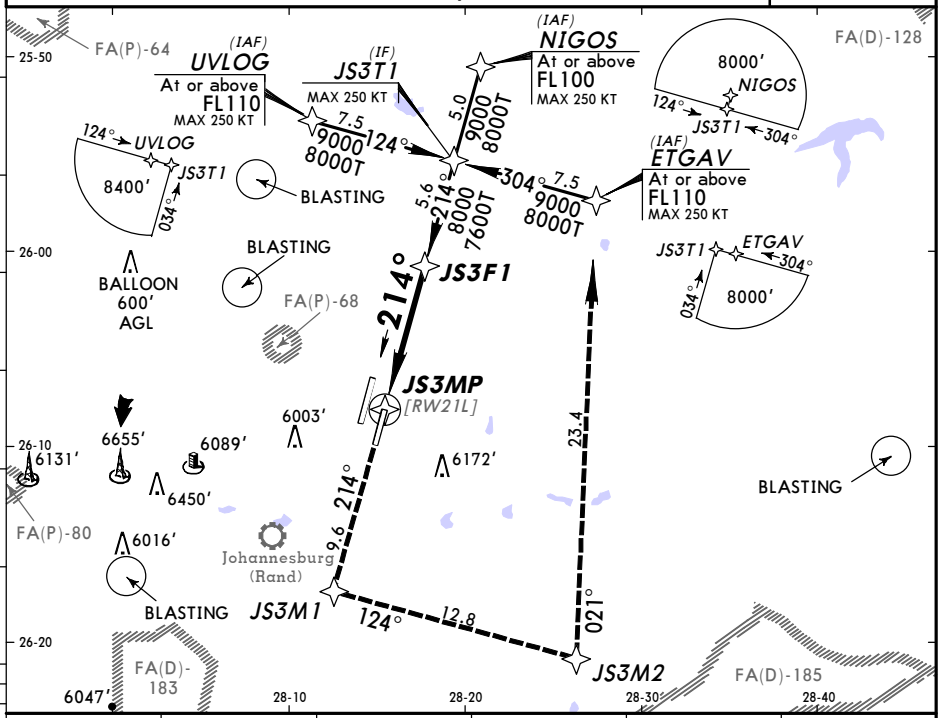
RNAV	Final Apch Crs	Procedure Alt	LNAV MDA(H)	Apt Elev 5558′
	214°	JS3F1 8000′ (2506′)	Refer to Minimums	RWY 5494′

TAA
25 NM
IAF

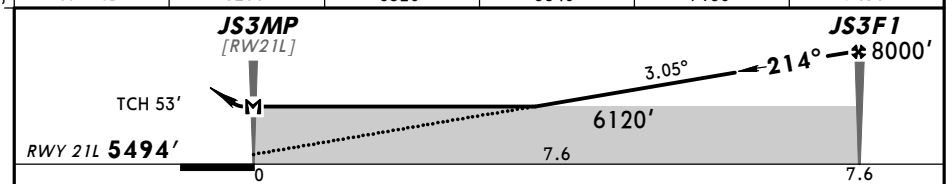
MISSED APCH: Climb to 8000′ to JS3M1, then continue via JS3M2 to ETGAV, or as directed. MAX 240 KT.

Alt Set: hPa Rwy Elev: 186 hPa Trans level: By ATC Trans alt: 8000′

SPECIAL AIRCRAFT & AIRCREW AUTHORIZATION REQUIRED.



DIST to JS3MP	2.0	3.0	4.0	5.0	6.0
ALTITUDE	6200′	6520′	6840′	7160′	7490′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.05°	378	486	540	648	755	863
MAP at JS3MP						

HIALS-II PAPI PAPI

MAX 240 KT

JS3M1

PANS OPS

JAR-OPS STRAIGHT-IN LANDING RWY 21L

LNAV

		Missed apch climb gradient mim 3.5% MDA(H) 6120′(626′)		Missed apch climb gradient mim 2.5% MDA(H) 6530′(1036′)	
			ALS out		ALS out
A	RVR 1000m	RVR 1200m	RVR 1500m	RVR 1200m	RVR 1500m
B					
C	RVR 1200m	RVR 1400m	RVR 2000m	RVR 1400m	RVR 2000m
D	RVR 1600m	RVR 1800m		RVR 1800m	

CIRCLE-TO-LAND

Max Kts	East of rwy 03R/21L MDA(H)	East of rwy 03R/21L VIS	West of rwy 03R/21L MDA(H)	West of rwy 03R/21L VIS
100	6120′(562′)	1 1500m	6120′(562′)	1 1500m
135	6120′(562′)	1 1600m	6120′(562′)	1 1600m
180	6250′(692′)	1 2400m	6410′(852′)	1 2400m
205	6260′(702′)	1 3600m	6410′(852′)	1 3600m

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

CHANGES: Waypoint designations.

FAOR/JNB
O R TAMBO INTL

JEPPESEN

28 DEC 12 (13-1) Eff 10 Jan

JOHANNESBURG, S AFR REP
VOR Z Rwy 21R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP

VOR JSV	Final Apch Crs	Minimum Alt D11.0	MDA(H)	Apt Elev 5558′
115.2	214°	8000′ (2495′)	6120′ (615′)	RWY 5505′

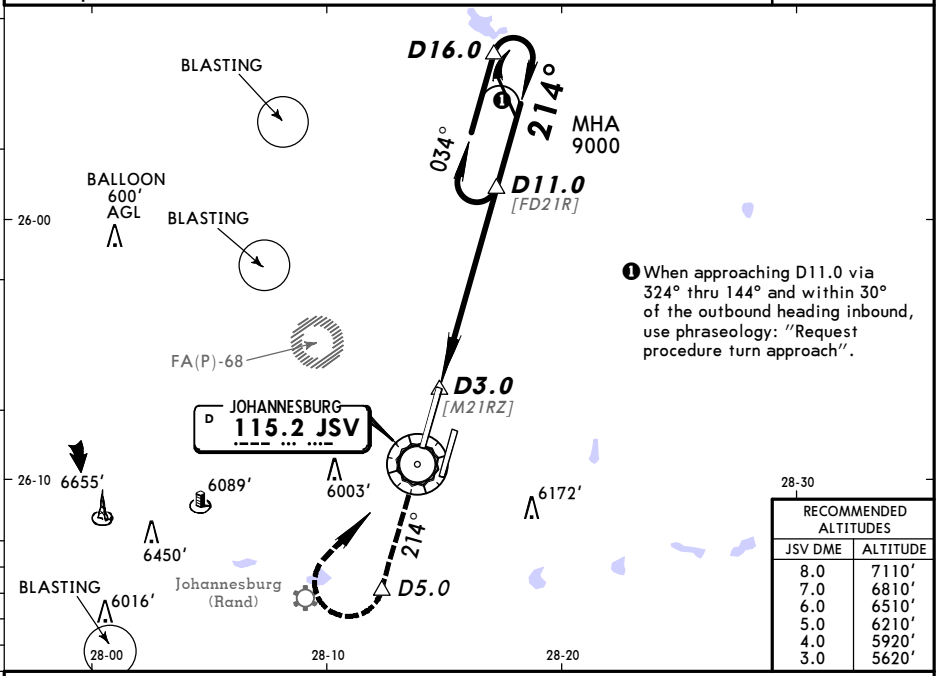
MISSED APCH: Climb on R-214 to 7500′ or D5.0, whichever is later, then turn RIGHT to VOR climbing to FL 90. Intercept R-034 to D11.0 and hold, or as directed.

MSA JSV VOR

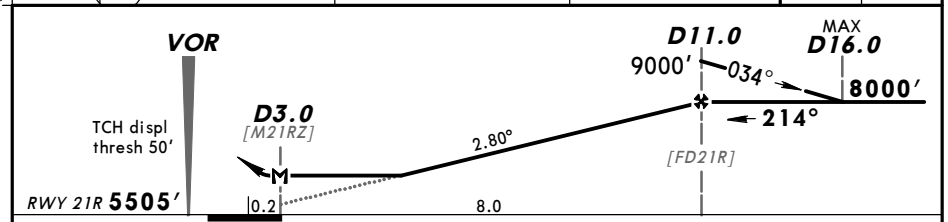
180° 8400′ 7800′ 060°

Alt Set: hPa Rwy Elev: 186 hPa Trans level: By ATC Trans alt: 8000′

DME required.



RECOMMENDED ALTITUDES	
JSV DME	ALTITUDE
8.0	7110′
7.0	6810′
6.0	6510′
5.0	6210′
4.0	5920′
3.0	5620′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 2.80°	347	446	495	594	693	792
MAP at D3.0						

HIALS-II PAPI PAPI

JSV 115.2 R-214

7500′ D5.0 whichever later

PANS OPS

JAR-OPS STRAIGHT-IN LANDING RWY **21R**

MDA(H) **6120′** (615′)

		ALS out
A	RVR 1000m	RVR 1500m
B	RVR 1200m	
C		RVR 2000m
D	RVR 1600m	

CIRCLE-TO-LAND

Max Kts	East of rwy 03L/21R MDA(H)	East of rwy 03L/21R VIS	West of rwy 03L/21R MDA(H)	West of rwy 03L/21R VIS
100	6050′ (492′)	1500m	6070′ (512′)	1500m
135	6060′ (502′)	1600m	6070′ (512′)	1600m
180	6250′ (692′)	2400m	6410′ (852′)	2400m
205	6260′ (702′)	3600m	6410′ (852′)	3600m

CHANGES: ICAO code.

FAOR/JNB
O R TAMBO INTL

JEPPESEN 28 DEC 12 (13-2) Eff 10 Jan

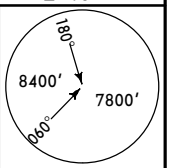
JOHANNESBURG, S AFR REP
VOR Y Rwy 21R

D-ATIS	*JOHANNESBURG Radar (APP) West	*JOHANNESBURG Radar (APP) South/East	*JOHANNESBURG Director (APP)	*O R TAMBO Tower West	*O R TAMBO Tower East	Ground (also Tower outside Twr hr)
126.2	123.7	124.5	121.4	118.1	118.6	121.9

BRIEFING STRIP™

VOR JSV	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 5558′
115.2	214°	D11.0 JSV 8000′ (2495′)	Refer to Minimums	RWY 5505′

MISSED APCH: Climb to 8000′. Maintain rwy track. At JSV VOR turn RIGHT (MAX 240 KT) onto heading 320°. Crossing R-214 WKV turn RIGHT onto heading 040° for radar vectoring onto RWY 21R. ❶

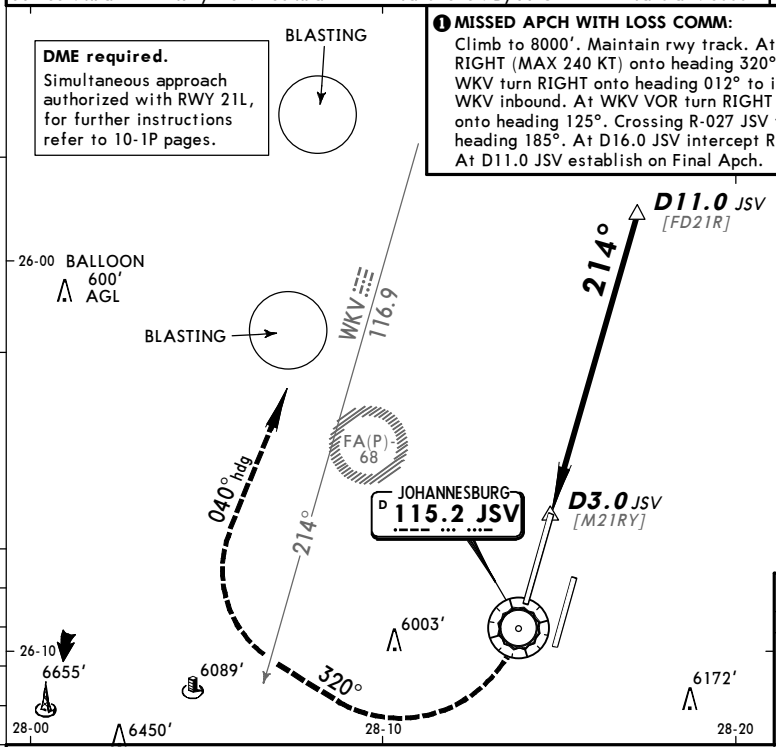


MSA JSV VOR

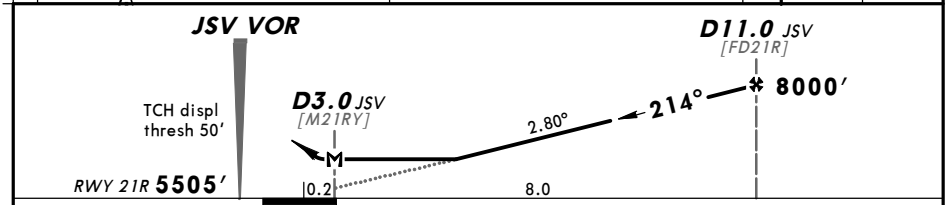
Alt Set: hPa | Rwy Elev: 186 hPa | Trans level: By ATC | Trans alt: 8000′

DME required.
Simultaneous approach authorized with RWY 21L, for further instructions refer to 10-1P pages.

❶ **MISSED APCH WITH LOSS COMM:**
Climb to 8000′. Maintain rwy track. At JSV VOR turn RIGHT (MAX 240 KT) onto heading 320°. Crossing R-214 WKV turn RIGHT onto heading 012° to intercept R-222 WKV inbound. At WKV VOR turn RIGHT (MAX 185 KT) onto heading 125°. Crossing R-027 JSV turn RIGHT onto heading 185°. At D16.0 JSV intercept R-034 JSV inbound. At D11.0 JSV establish on Final Apch.



RECOMMENDED ALTITUDES	
JSV DME	ALTITUDE
8.0	7110′
7.0	6810′
6.0	6510′
5.0	6210′
4.0	5920′
3.0	5620′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 2.80°	347	446	495	594	693	792
MAP at D3.0 JSV						

HIALS-II PAPI PAPI JSV 115.2

PANS OPS

JAR-OPS STRAIGHT-IN LANDING RWY **21R**

	Missed apch climb gradient mim 5.1% up to 8000 MDA(H) 5980′ (475′)		Missed apch climb gradient mim 2.5% MDA(H) 7030′ (1525′)	
		ALS out		ALS out
A	RVR 1000m	RVR 1500m	RVR 1200m	RVR 1500m
B	RVR 1200m		RVR 1400m	
C		RVR 2000m		RVR 2000m
D	RVR 1600m		RVR 1800m	

CIRCLE-TO-LAND

Max Kts	East of rwy 03L/21R MDA(H) VIS	West of rwy 03L/21R MDA(H) VIS
100	6050′ (492′) 1500m	6070′ (512′) 1500m
135	6060′ (502′) 1600m	6070′ (512′) 1600m
180	6250′ (692′) 2400m	6410′ (852′) 2400m
205	6260′ (702′) 3600m	6410′ (852′) 3600m

CHANGES: ICAO code.