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Revision Letter For Cycle 04-2012
Change Notices
Notebook

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General Information

Location: Bautzen Deu
IATA Code:
Lat/Long: N51° 11.6' E014° 31.2'
Elevation: 568 ft

Airport Use: Public
Magnetic Variation: 3.2°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: No
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes
Pattern Altitude: 750 ft AGL

Sunrise: 0552 Z
Sunset: 1638 Z,

Runway Information

Runway: 07
Length x Width: 7218 ft x 164 ft
Surface Type: concrete
TDZ-Elev: 568 ft
Lighting: Edge

Runway: 25
Length x Width: 7218 ft x 164 ft
Surface Type: concrete
TDZ-Elev: 530 ft
Lighting: Edge, ALS

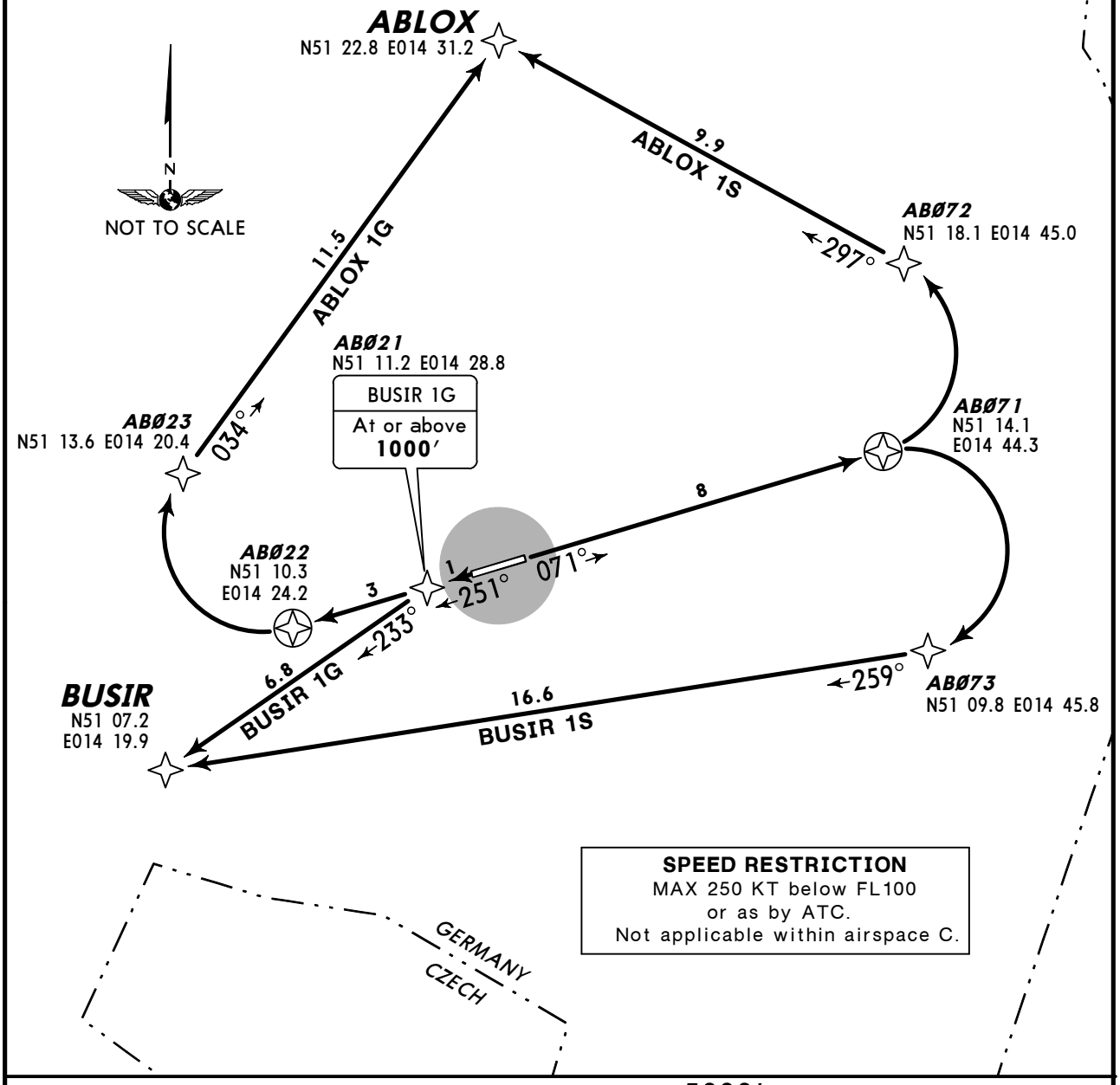
Communication Information

Munich Radar Approach Control 125.625
Bautzen Information 120.6 At or below 4000 ft Out to 15 mi. AFIS

*BAUTZEN Info 120.6	Apt Elev 568′	Trans level: By ATC Trans alt: 5000′ 1. Departures entering controlled airspace when passing 2500′ GND. 2. Report passing 3100′ to BAUTZEN Info and contact MUNICH Radar. 3. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory. 4. Runway 25: EXPECT close-in obstacles.
MUNICH Radar 125.62		

3700′
MSA
ARP
Applicable over German territory only.

ABLOX ONE GOLF (ABLOX 1G) *[ABLO1G]*
ABLOX ONE SIERRA (ABLOX 1S) *[ABLO1S]*
BUSIR ONE GOLF (BUSIR 1G) *[BUSI1G]*
BUSIR ONE SIERRA (BUSIR 1S) *[BUSI1S]*
RWYS 25, 07 RNAV DEPARTURES
RNAV (GPS)



Initial climb clearance **5000′**

SID	RWY	ROUTING
ABLOX 1G ❶	**25**	**(1000+)** - AB022 - AB023 - ABLOX.
ABLOX 1S ❶	**07**	**(1000+)** - AB071 - AB072 - ABLOX.
BUSIR 1G	**25**	AB021 **(1000+)** - BUSIR.
BUSIR 1S	**07**	**(1000+)** - AB071 - AB073 - BUSIR.

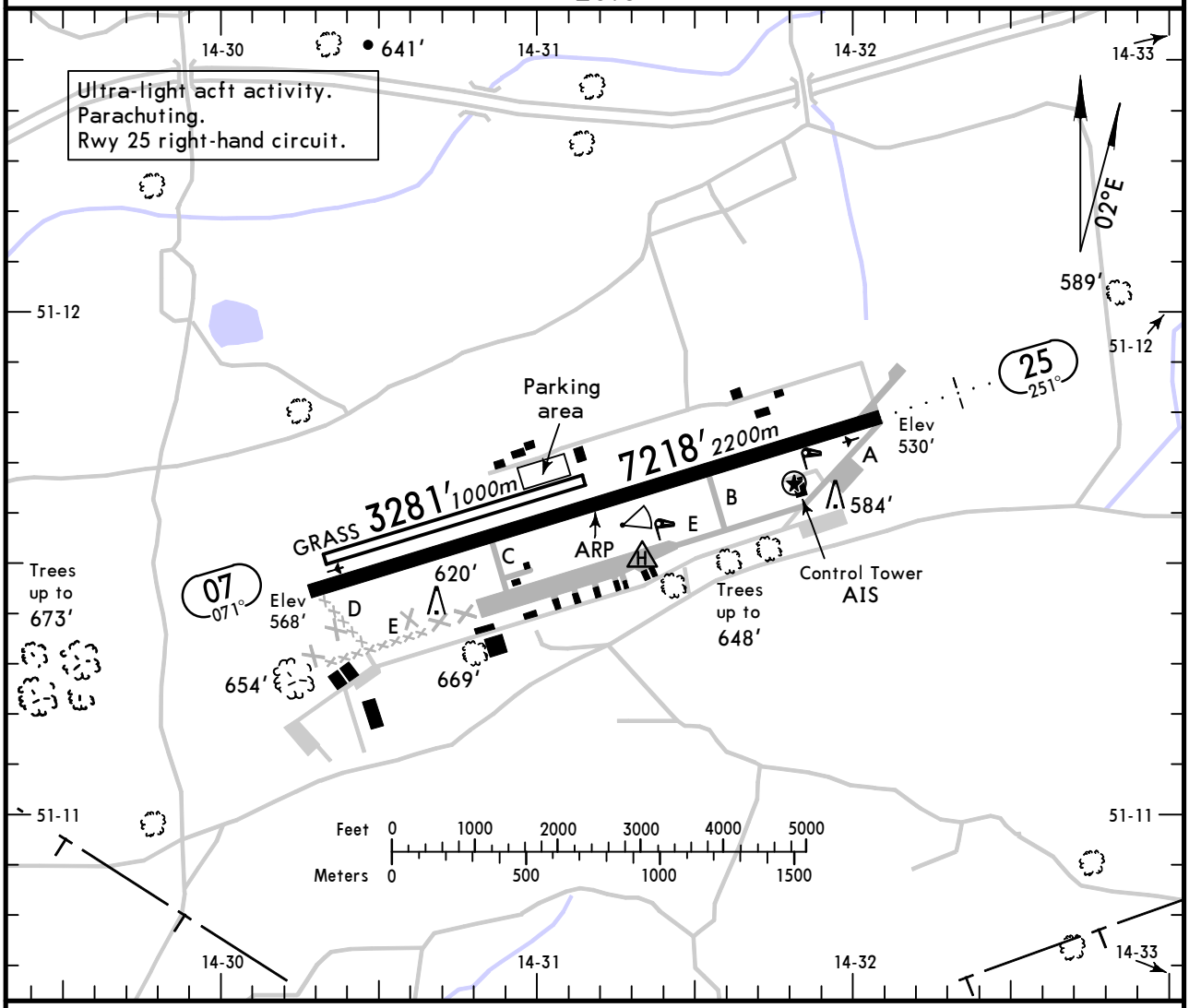
❶ Only for traffic to EDDB & EDDT.

CHANGES: General instructions & ballnote revised.

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*BAUTZEN Info

120.6



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
07	HIRL RVR				164′ *50m*
25	HIRL HIALS RVR				
07	Grass runway				131′ *40m*
25					

Standard TAKE-OFF 1

	LVP must be in Force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	NOT APPLICABLE		

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

CHANGES: None.

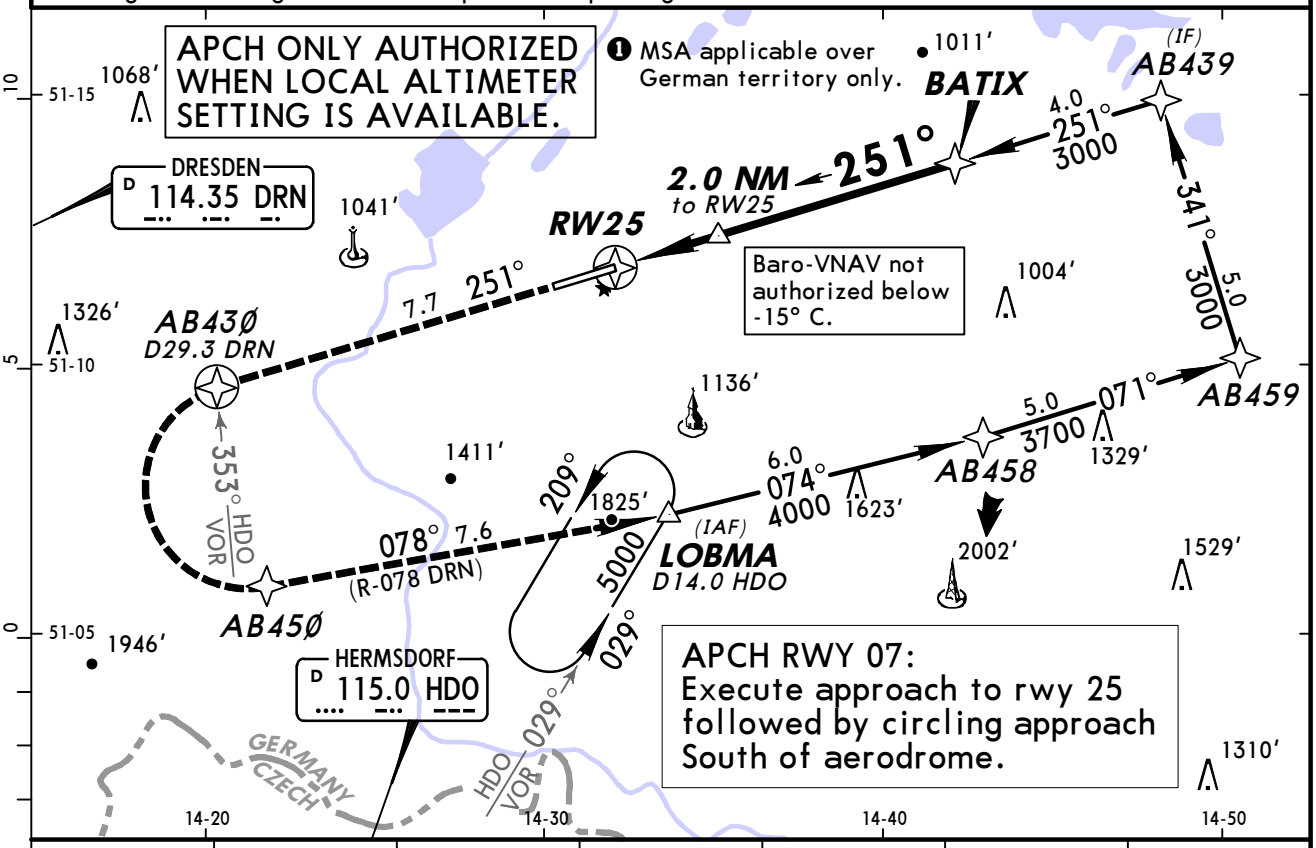
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BRIEFING STRIP™

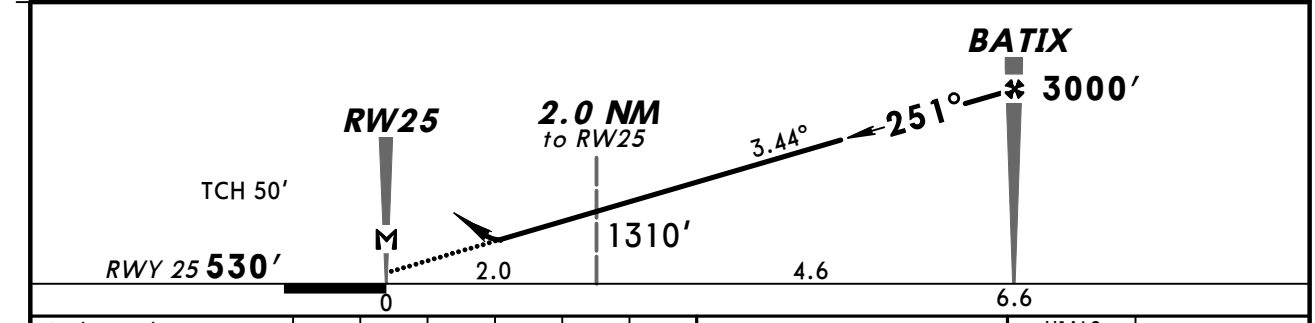
MUNICH Radar (APP) 125.62			*BAUTZEN Info 120.6		
RNAV	Final Apch Crs **251°**	Minimum Alt **BATIX** **3000′** (2470′)	LNAV/VNAV Refer to Minimums	Apt Elev 568′ RWY **530′**	3700′ MSA ARP ❶

MISSED APCH: RNAV: Climb on track 251° to 5000′. When passing 3000′ or AB43Ø, whichever is later, turn LEFT via AB45Ø on track 078° to LOBMA. **NON-RNAV:** Climb STRAIGHT AHEAD to 5000′. When passing 3000′ or R-353 HDO/D29.3 DRN, whichever is later, turn LEFT to intercept R-078 DRN to LOBMA.

Alt Set: hPa (IN on req) Rwy Elev: 19 hPa Trans level: By ATC Trans alt: 5000′
Arriving acft leaving controlled airspace when passing 2500′ AGL.



NM to RW25	1.0	2.0	3.0	4.0	5.0	6.0
ALTITUDE	950′	1310′	1680′	2040′	2410′	2770′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.44°	426	548	609	730	852	974
MAP at RW25						

HIALS

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **25**

	LNAV/VNAV		LNAV	
	A: DA(H) **860′** (330′) BC: DA(H) **880′** (350′)		DA(H) **950′** (420′)	
		ALS out		ALS out
A	RVR 1100m	RVR 1500m	RVR 1500m	
B	RVR 1200m	RVR 1600m		
C			RVR 1500m	RVR 1900m
D	NOT APPLICABLE			

CIRCLE-TO-LAND

Not authorized North of airport

	Max Kts	MDA(H)	VIS
A	100	1190′ (622′)	1500m
B	135	1270′ (702′)	1600m
C	180	1530′ (962′)	2400m
D		NOT APPLICABLE	

PANS OPS 4

CHANGES: Minimums.

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General Information

Location: Leipzig-Altenburg Deu
IATA Code: AOC
Lat/Long: N50° 58.9' E012° 30.4'
Elevation: 640 ft

Airport Use: Public
Magnetic Variation: 2.6°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0600 Z
Sunset: 1646 Z,

Runway Information

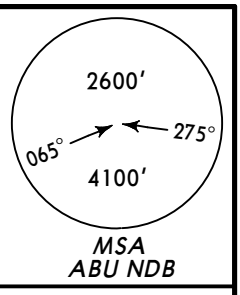
Runway: 04
Length x Width: 7989 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 639 ft
Lighting: Edge, ALS, REIL
Displaced Threshold: 853 ft

Runway: 22
Length x Width: 7989 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 605 ft
Lighting: Edge, ALS, REIL
Displaced Threshold: 1640 ft

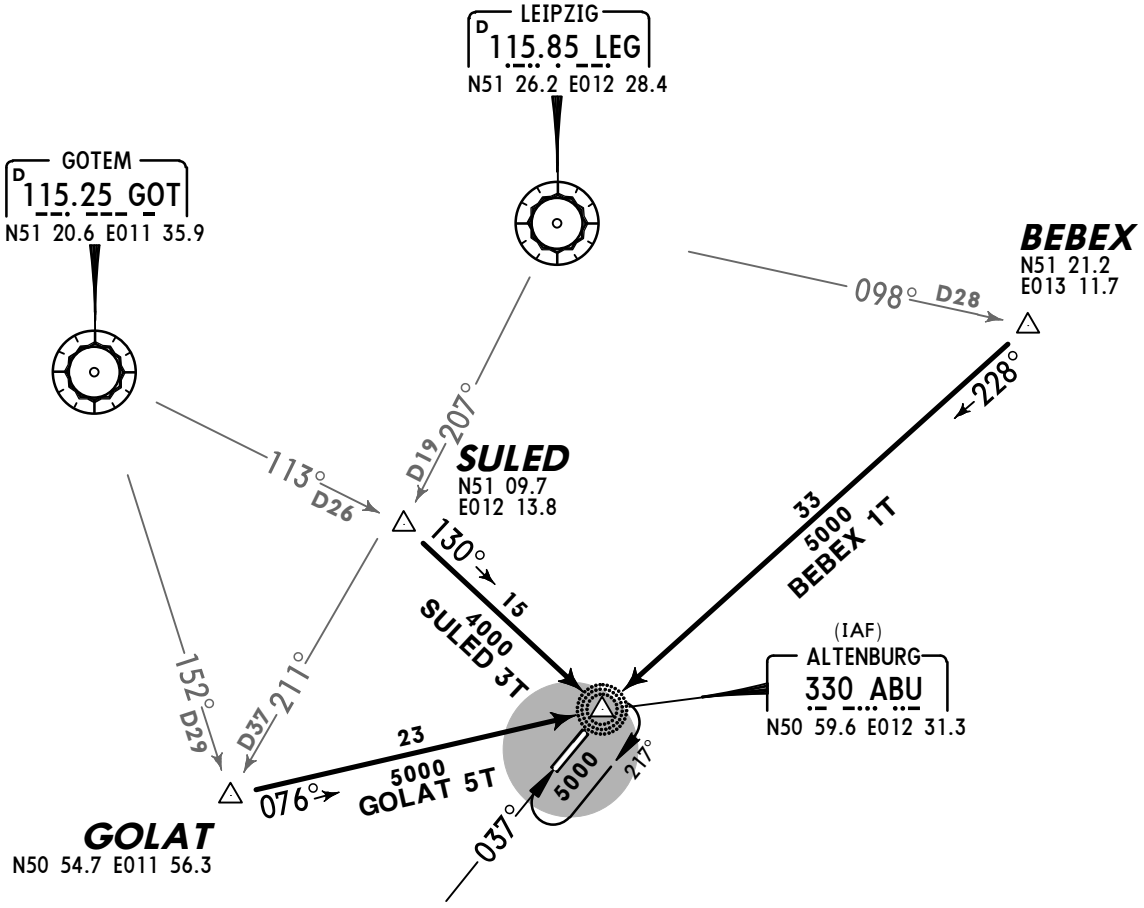
Communication Information

Altenburg Tower 123.575 At or below 4000 ft Out to 25 mi.
Altenburg Information 123.575 At or below 4000 ft Out to 25 mi. AFIS

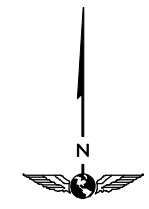
Apt Elev	Alt Set: hPa (IN on request)
640′	Trans level: By ATC Trans alt: 5000′



BEBEX ONE TANGO (BEBEX 1T) *[BEBE1T]*
GOLAT FIVE TANGO (GOLAT 5T) *[GOLA5T]*
SULED THREE TANGO (SULED 3T) *[SULE3T]*
RWYS 04, 22 ARRIVALS



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



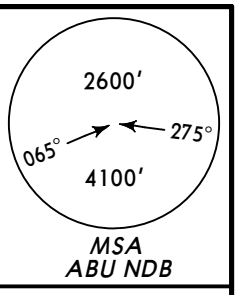
NOT TO SCALE

CHANGES: Location & airport name; chart reindexed.

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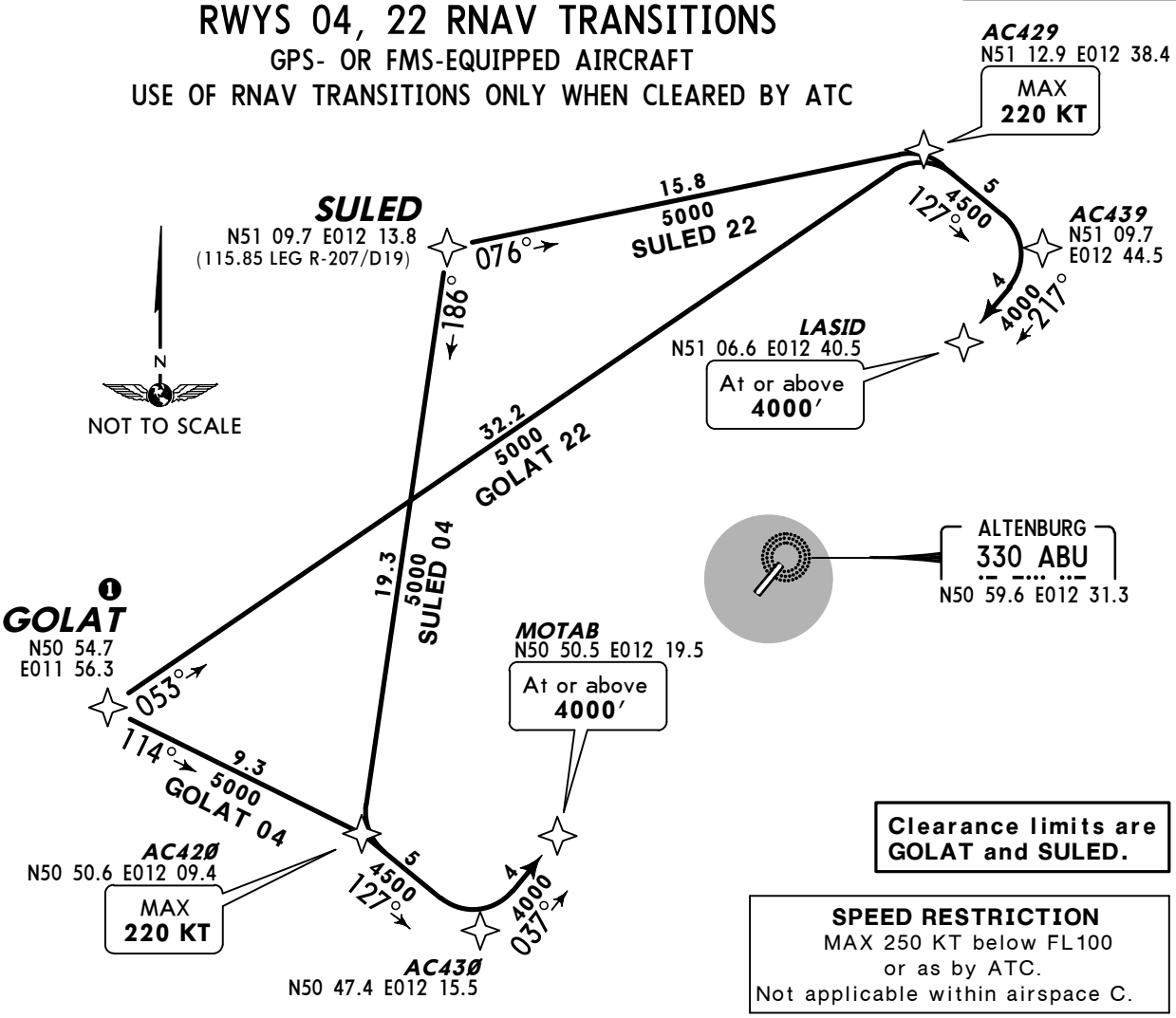
Apt Elev 640′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. Speed restrictions on transition are always mandatory, unless cancelled by ATC.
2. Altitude assignments will be issued by ATC.



GOLAT 04 [GOLØ4], GOLAT 22 [GOL22]
SULED 04 [SULØ4], SULED 22 [SUL22]
RWYS 04, 22 RNAV TRANSITIONS

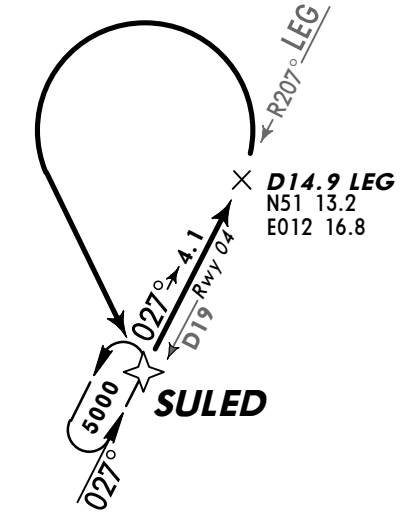
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC



Clearance limits are GOLAT and SULED.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

HOLDING OVER SULED



1 When reaching clearance limit GOLAT proceed to SULED and hold.
Expect GPS/FMS RNAV Transition or Radar Vectoring to final.

GPS/FMS CLEARANCE PHRASEOLOGY

1. **"Cleared xxx Transition":**
Permission to fly the lateral GPS/FMS-route, including assigned speeds. Altitudes will be assigned separately.
2. **"Cleared xxx Transition and Profile":**
Permission to fly the GPS/FMS-route, including assigned speeds and altitudes.
3. **"Cleared direct waypoint xxx" and/or "Cleared via waypoints xxx, ... and zzz":**
Permission to fly from the present position direct to one and/or a combination of waypoints, including the continuation of the flight on the lateral part of a GPS/FMS route adjoining the last waypoint, including assigned speeds. Altitudes will be assigned separately.

TRANSITION	RWY	ROUTING
GOLAT 04	04	GOLAT - AC420 (K220-) - AC430 - MOTAB **(4000+).**
GOLAT 22	22	GOLAT - AC429 (K220-) - AC439 - LASID **(4000+).**
SULED 04	04	SULED - AC420 (K220-) - AC430 - MOTAB **(4000+).**
SULED 22	22	SULED - AC429 (K220-) - AC439 - LASID **(4000+).**

CHANGES: Location & airport name; chart reindexed.

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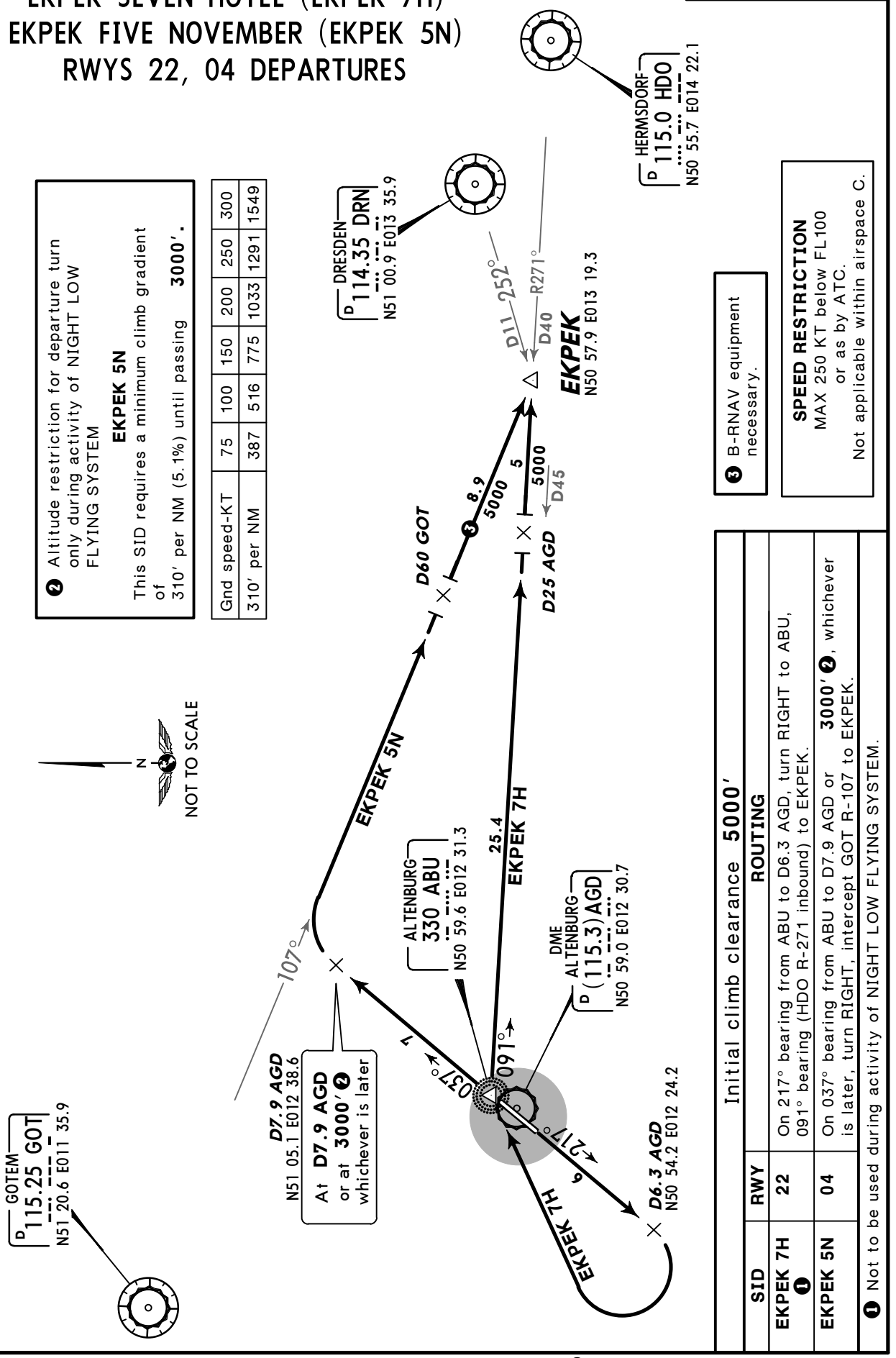
MUNICH Radar	Apt Elev
126.17	640′

Trans level: By ATC Trans alt: 5000′

1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.
3. EXPECT close-in obstacles.

MSA ABU NDB
2600′ 275° 4100′ 065°

EKPEK SEVEN HOTEL (EKPEK 7H)
EKPEK FIVE NOVEMBER (EKPEK 5N)
RWYS 22, 04 DEPARTURES



❷ Altitude restriction for departure turn only during activity of NIGHT LOW FLYING SYSTEM
EKPEK 5N
This SID requires a minimum climb gradient of 310′ per NM (5.1%) until passing **3000′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

❸ B-RNAV equipment necessary.

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

At **D7.9 AGD** or at **3000′** ❷ whichever is later

Initial climb clearance **5000′**

SID	RWY	ROUTING
EKPEK 7H ❶	22	On 217° bearing from ABU to D6.3 AGD, turn RIGHT to ABU, 091° bearing (HDO R-271 inbound) to EKPEK.
EKPEK 5N	04	On 037° bearing from ABU to D7.9 AGD or **3000′** ❷, whichever is later, turn RIGHT, intercept GOT R-107 to EKPEK.

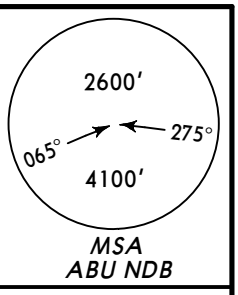
❶ Not to be used during activity of NIGHT LOW FLYING SYSTEM.

CHANGES: Communication frequency.

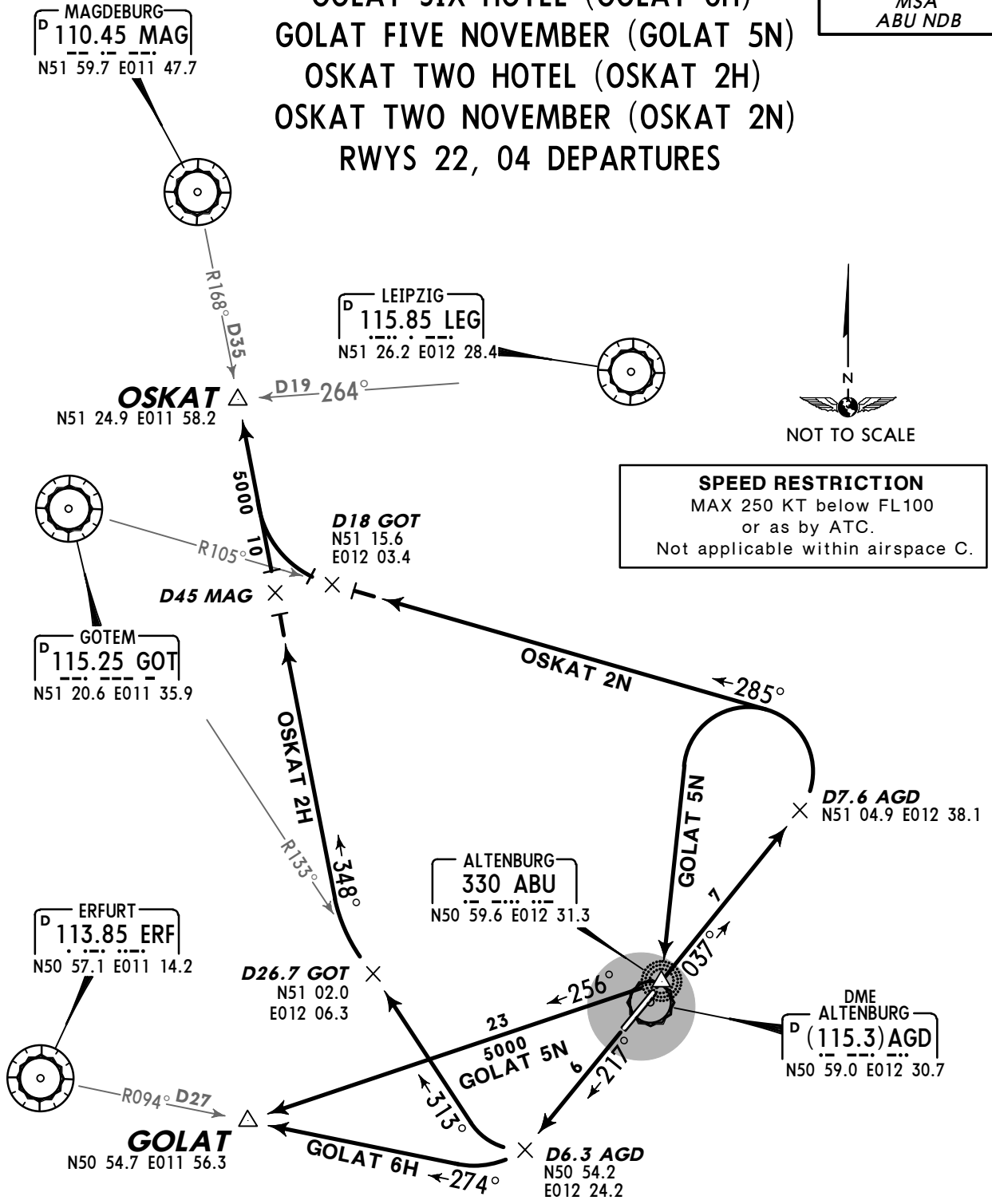
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MUNICH Radar	Apt Elev
126.17	640′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.
3. EXPECT close-in obstacles.



GOLAT SIX HOTEL (GOLAT 6H)
GOLAT FIVE NOVEMBER (GOLAT 5N)
OSKAT TWO HOTEL (OSKAT 2H)
OSKAT TWO NOVEMBER (OSKAT 2N)
RWYS 22, 04 DEPARTURES



Initial climb clearance **5000′**

SID	RWY	ROUTING
GOLAT 6H ❶	22	On 217° bearing from ABU to D6.3 AGD, turn RIGHT, intercept ERF R-094 inbound to GOLAT.
GOLAT 5N	04	On 037° bearing from ABU to D7.6 AGD, turn LEFT to ABU, 256° bearing to GOLAT.
OSKAT 2H ❶	22	On 217° bearing from ABU to D6.3 AGD, turn RIGHT, intercept GOT R-133 inbound to D26.7 GOT, turn RIGHT, intercept MAG R-168 inbound to OSKAT.
OSKAT 2N	04	On 037° bearing from ABU to D7.6 AGD, turn LEFT, intercept GOT R-105 inbound to D18 GOT, turn RIGHT, intercept MAG R-168 inbound to OSKAT.

❶ Not to be used during activity of NIGHT LOW FLYING SYSTEM.

CHANGES: Communication frequency.

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MUNICH Radar 126.17	*Apt Elev* 640′

Trans level: By ATC Trans alt: 5000′

1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.
3. EXPECT close-in obstacles.

MSA ABU NDB
2600′ 275° 065° 4100′

EKPEK SEVEN HOTEL (EKPEK 7H) *[EKPE7H]*
EKPEK FIVE NOVEMBER (EKPEK 5N) *[EKPE5N]*
RWYS 22, 04 RNAV DEPARTURES (OVERLAY 20-3)

❷ Altitude restriction for departure turn only during activity of NIGHT LOW FLYING SYSTEM
EKPEK 5N
This SID requires a minimum climb gradient of 310′ per NM (5.1%) until passing **3000′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

HERMSDORF D 115.0 HDO N50 55.7 E014 22.1
DRESDEN D 114.35 DRN N51 00.9 E013 35.9
EKPEK N50 57.9 E013 19.3
D11 252° R271° D40
D60 GOT 8.9 5000 5 5000 D45
D25 AGD
17.1
25.4
EKPEK 7H
NOT TO SCALE
AC044 N51 06.6 E012 40.5 At or above 3000′ ❷
107°
EKPEK 5N 9.1
037° 091° 160°
DME ALTENBURG D (115.3) AGD N50 59.0 E012 30.7
ALTENBURG 330 ABU N50 59.6 E012 31.3
EKPEK 5N At or above 1100′
GOTEM D 115.25 GOT N51 20.6 E011 35.9
EKPEK TH 5.1 217° 074° 1
AC221 N50 54.2 E012 24.2
AC224 N50 57.9 E012 20.5

Initial climb clearance **5000′**

SID	RWY	ROUTING
EKPEK 7H❶	22	(1100+) - AC221 - AC224 - ABU - EKPEK.
EKPEK 5N	04	ABU (1100+) - AC044 (3000+❷) - EKPEK.

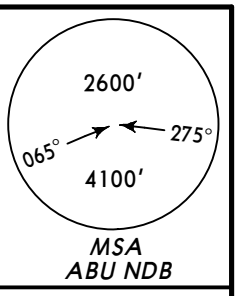
❶ Not to be used during activity of NIGHT LOW FLYING SYSTEM.

CHANGES: Communication frequency.

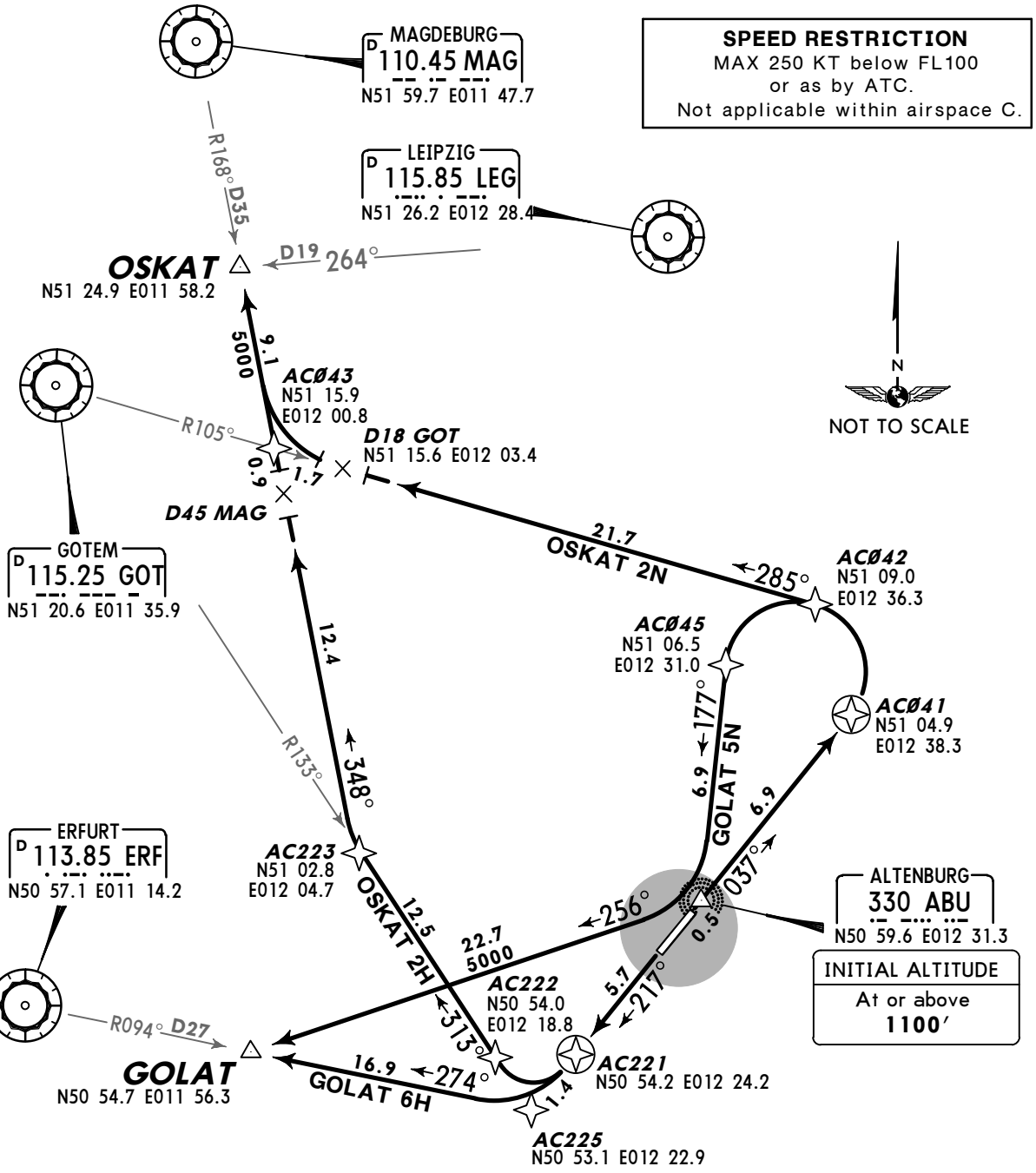
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MUNICH Radar	Apt Elev
126.17	640′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.
3. EXPECT close-in obstacles.



GOLAT SIX HOTEL (GOLAT 6H) *[GOLA6H]*
GOLAT FIVE NOVEMBER (GOLAT 5N) *[GOLA5N]*
OSKAT TWO HOTEL (OSKAT 2H) *[OSKA2H]*
OSKAT TWO NOVEMBER (OSKAT 2N) *[OSKA2N]*
RWYS 22, 04 RNAV DEPARTURES (OVERLAY 20-3A)



Initial climb clearance **5000′**

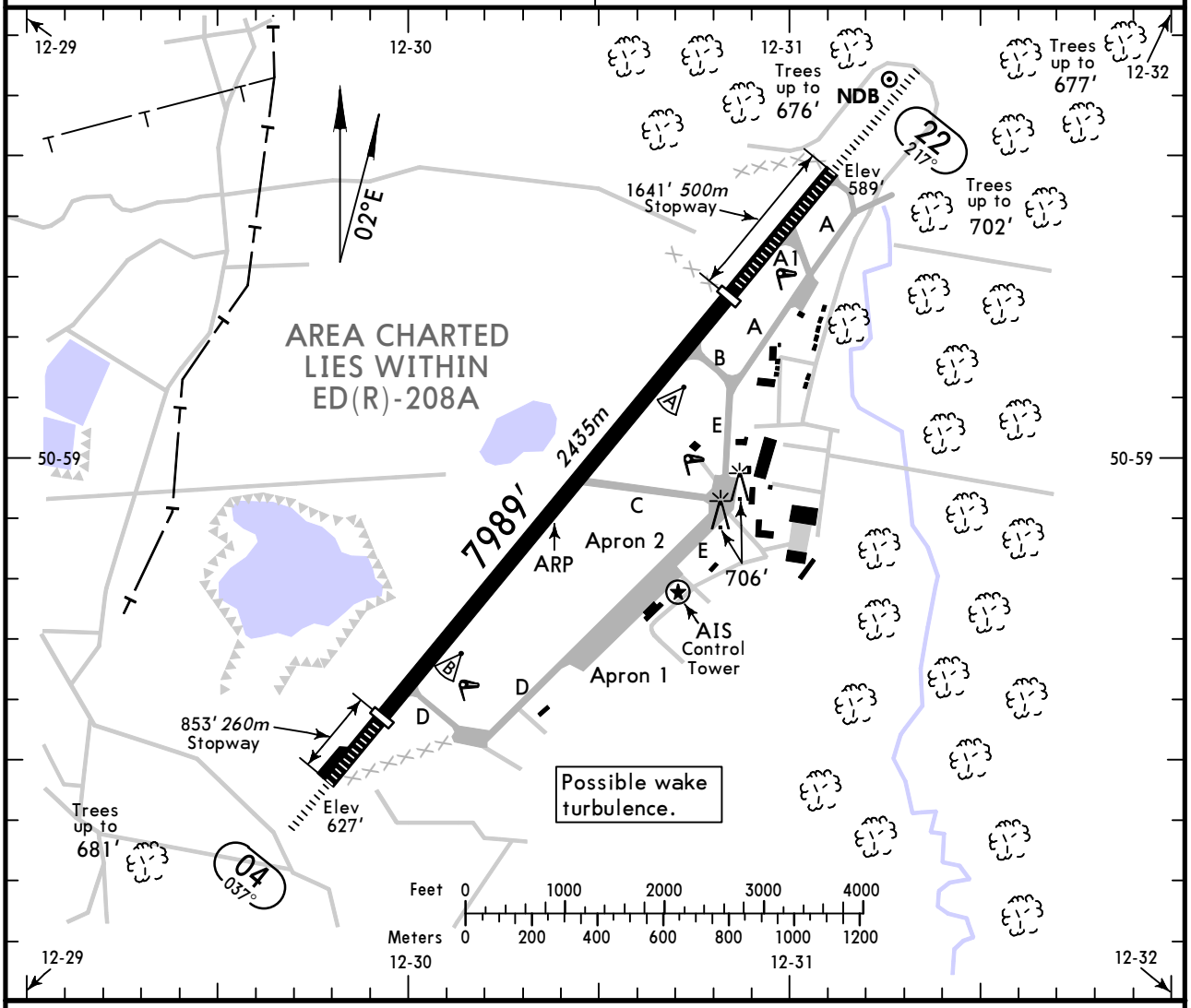
SID	RWY	ROUTING
GOLAT 6H ❶	22	**(1100+)** - AC225 - GOLAT.
GOLAT 5N	04	ABU **(1100+)** - AC041 - AC045 - ABU - GOLAT.
OSKAT 2H ❶	22	**(1100+)** - AC221 - AC222 - AC223 - OSKAT.
OSKAT 2N	04	ABU **(1100+)** - AC041 - AC042 - AC043 - OSKAT.

❶ Not to be used during activity of NIGHT LOW FLYING SYSTEM.

CHANGES: Communication frequency.

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*ALTENBURG Tower	*ALTENBURG Info (outside TWR hr)
123.57	123.57



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
04	HIRL HIALS SFL REIL PAPI-L (3.0°) RVR	7136′ *2175m*		❶	148′ *45m*
22	HIRL HIALS SFL REIL PAPI-L (3.3°) RVR	6348′ *1935m*	5535′ *1687m*		

❶ TAKE-OFF RUN AVAILABLE

RWY 04:
From rwy head 6348′(1935m)
twy D int 5102′ (1555m)

RWY 22:
From rwy head 7136′(2175m)
twy A1 int 6480′ (1975m)
twy B int 4806′ (1465m)

Standard TAKE-OFF 1

	All Rwys		
	LVP must be in force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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

CHANGES: Rwy 22 end elev.

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20-9X LEIPZIG-ALTENBURG, GERMANY

LEIPZIG-ALTENBURG

STRAIGHT-IN RWY		A	B	C	D
04	NDB	**1150**′(511′)	**1150**′(511′)	**1150**′(511′)	**1150**′(511′)
		R1400m	**R1500m**	**R1600m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m
22	ILS	**805**′(200′)	**805**′(200′)	**805**′(200′)	**805**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1060**′(455′)	**1060**′(455′)	**1060**′(455′)	**1060**′(455′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**1060**′(455′)	**1060**′(455′)	**1060**′(455′)	**1150**′(455′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

TAKE-OFF RWY 04, 22

	LVP must be in Force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

CHANGES: New page.

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EDAC/AOC
LEIPZIG-ALTENBURG

JEPPESEN 4 SEP 09 (21-1)

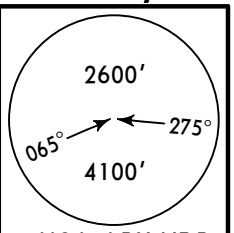
LEIPZIG-ALTENBURG, GERMANY
ILS or LOC Rwy 22

BRIEFING STRIP

MUNICH Radar	*ALTENBURG Tower	*ALTENBURG Info (outside TWR hr)
126.17	123.57	123.57

LOC IALW	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev 640′
108.7	217°	2060′ (1455′)	805′ (200′)	RWY 605′

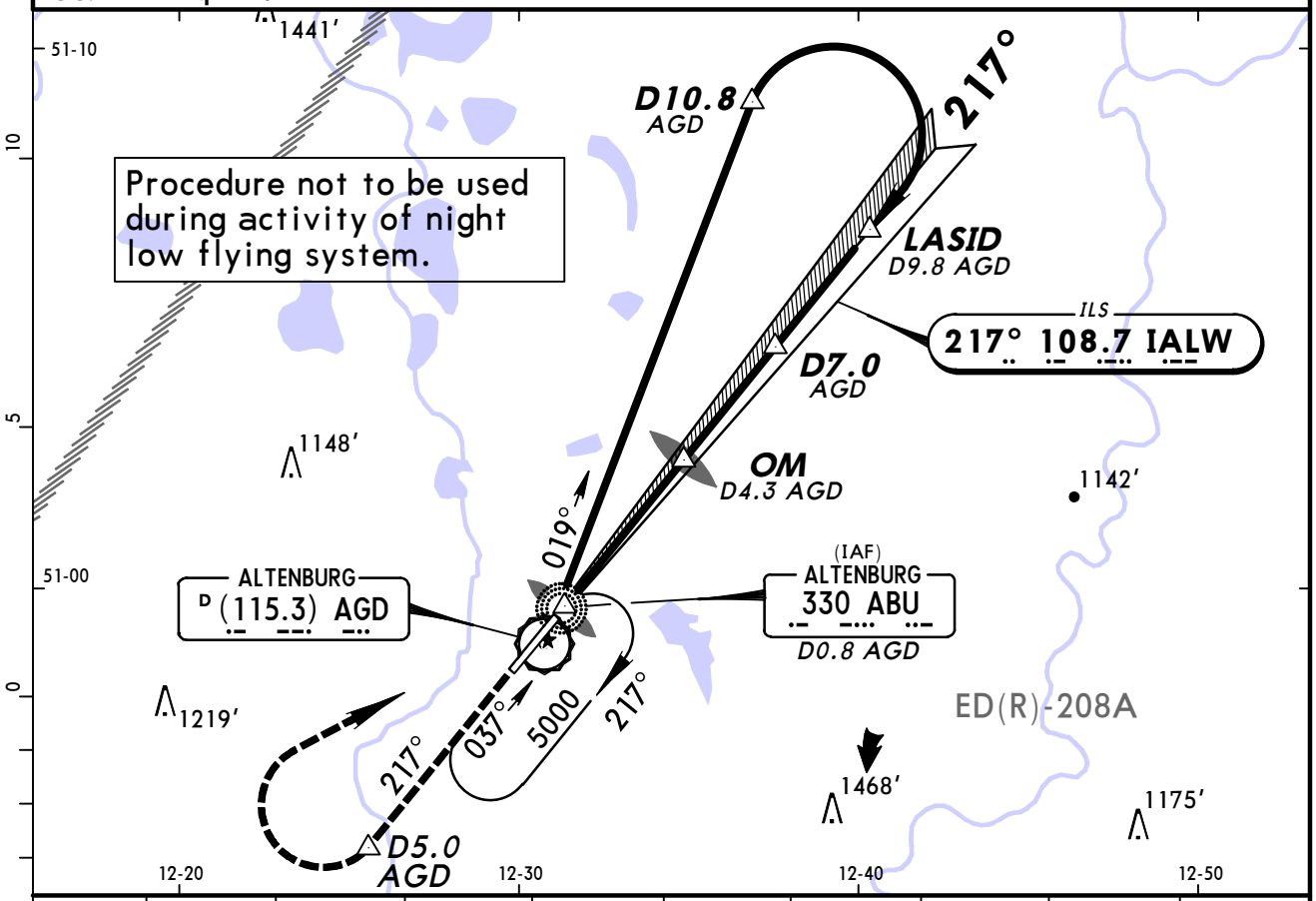
MISSED APCH: Climb on track 217° to D5.0 AGD, then turn RIGHT to NDB climbing to 5000′.



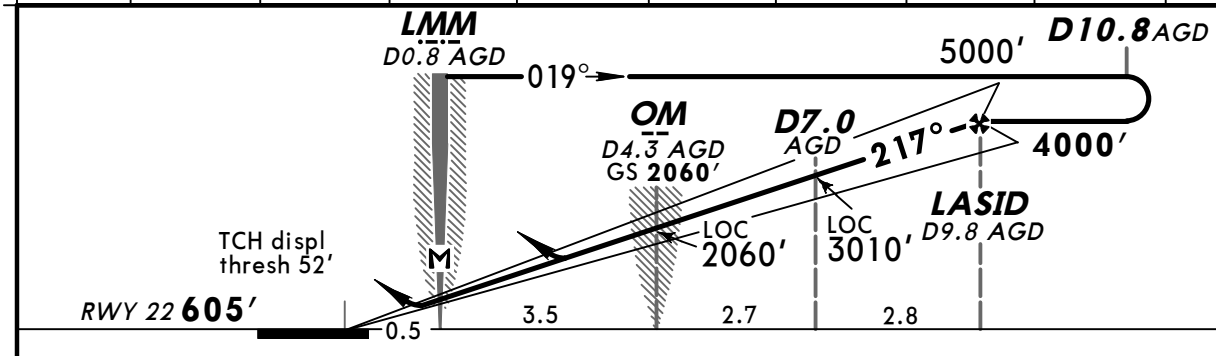
MSA ABU NDB

Alt Set: hPa (IN on req) | Rwy Elev: 22 hPa | Trans level: By ATC | Trans alt: 5000′

LOC: **DME required.**



LOC (GS out)	AGD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	1260′	1610′	1960′	2310′	2660′	3010′	3360′	3710′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.30°	414	532	591	710	828	946
MAP at LMM/D0.8 AGD						

HIALS
REIL
PAPI

D5.0 AGD on 217°

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 22

	ILS DA(H) 805′ (200′)			LOC (GS out) DA(H) 1060′ (455′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

CHANGES: Minimums.

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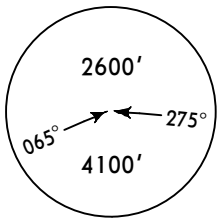
BRIEFING STRIP ™

MUNICH Radar	*ALTENBURG Tower	*ALTENBURG Info (outside TWR hr)
126.17	123.57	123.57

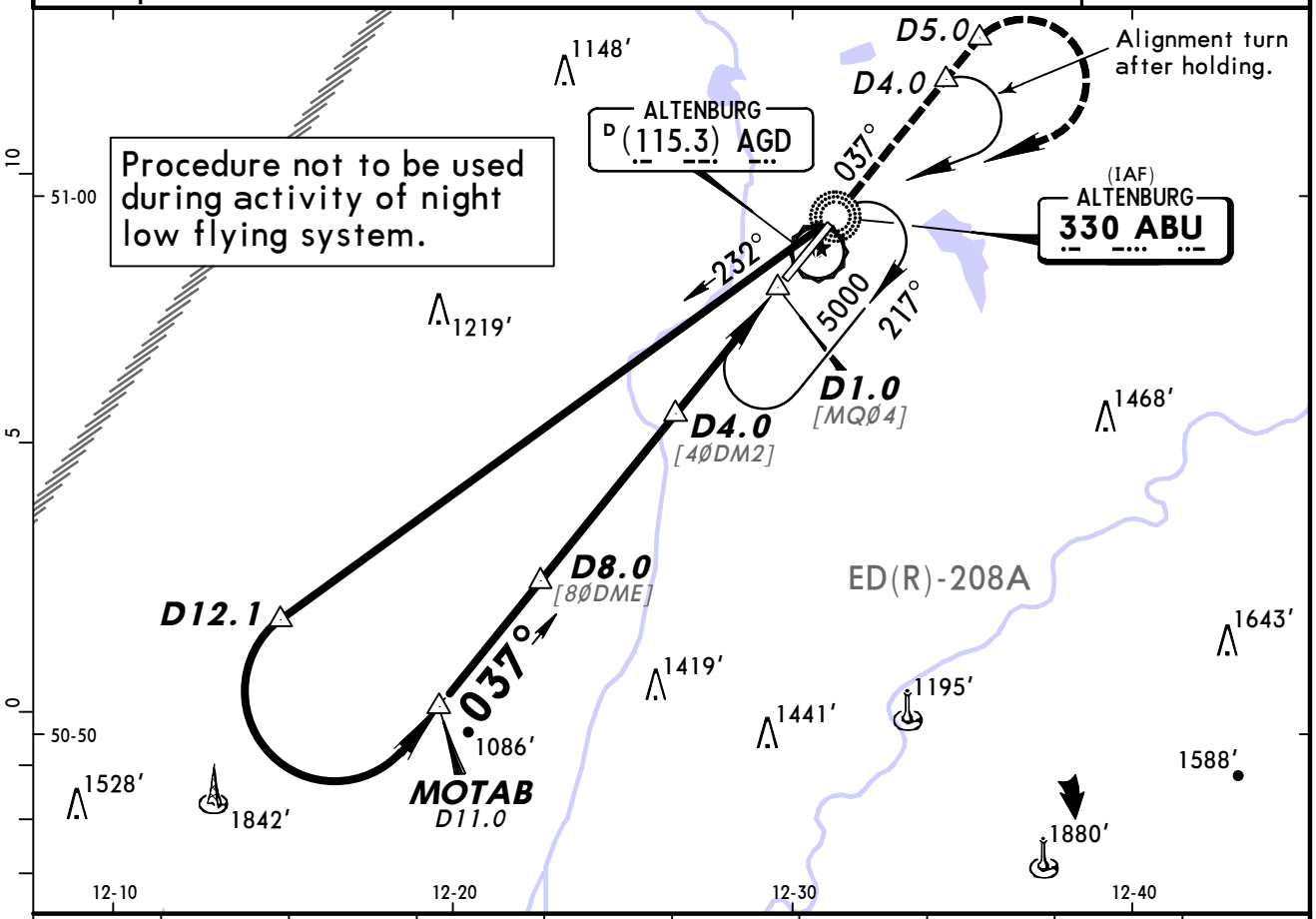
NDB	Final	Minimum Alt	DA(H)	Apt Elev 640′
ABU	Apch Crs	MOTAB	1150′ (511′)	RWY 639′
330	037°	4000′ (3361′)		

MISSED APCH: Climb on track 037° to D5.0, then turn RIGHT to NDB climbing to 5000′.

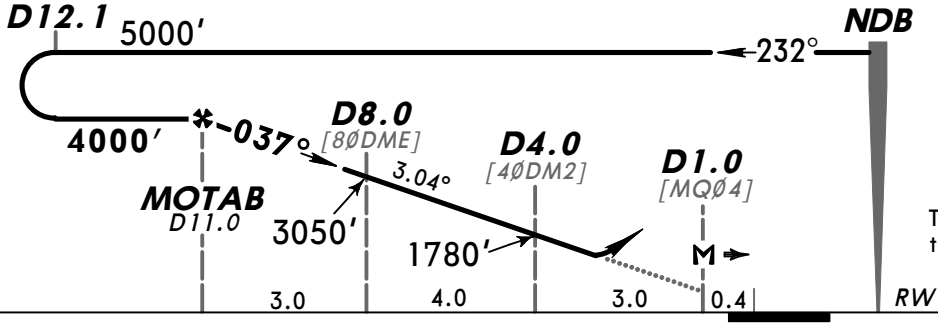
Alt Set: hPa (IN on req) Rwy Elev: 23 hPa Trans level: By ATC Trans alt: 5000′
DME required.



MSA
ABU NDB



AGD DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3690′	3370′	3050′	2730′	2410′	2090′	1780′	1460′	1140′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.04°	376	484	538	645	753	861
MAP at D1.0						

HIALS
REIL
PAPI

D5.0 on 037°

Standard STRAIGHT-IN LANDING RWY **04**

DA(H) **1150′** (511′)

	ALS out
A, B	RVR 1500m
C, D	RVR 1900m / CMV 2400m

PANS OPS 4

CHANGES: DA(H).

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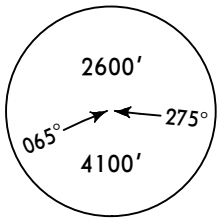
BRIEFING STRIP

MUNICH Radar	*ALTENBURG Tower	*ALTENBURG Info (outside TWR hr)
126.17	123.57	123.57

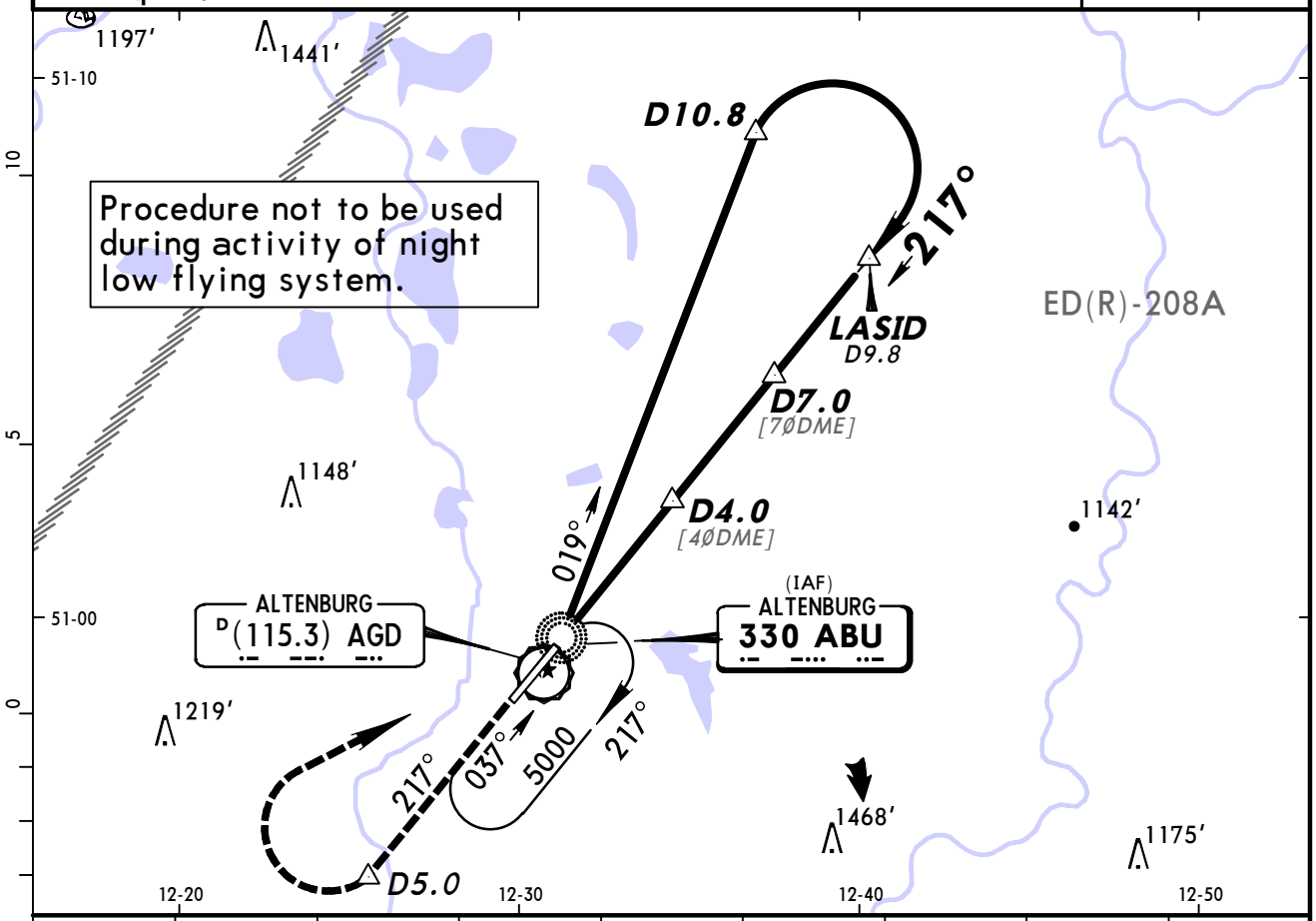
NDB	Final	Minimum Alt	DA(H)	Apt Elev 640′
ABU	Apch Crs	LASID	1060′ (455′)	RWY 605′
330	217°	4000′ (3395′)		

MISSED APCH: Climb on track 217° to D5.0, then turn RIGHT to NDB climbing to 5000′.

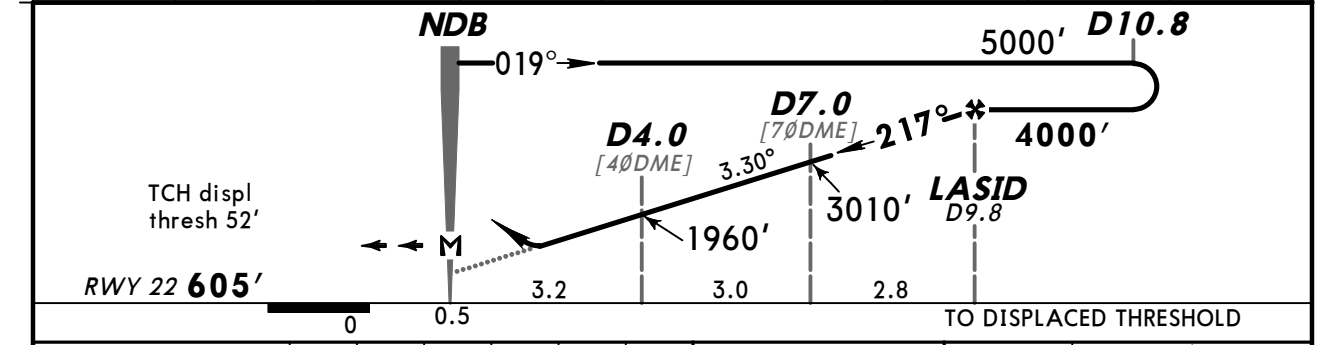
Alt Set: hPa (IN on req) Rwy Elev: 22 hPa Trans level: By ATC Trans alt: 5000′
DME required.



MSA
ABU NDB



AGD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	1260′	1610′	1960′	2310′	2660′	3010′	3360′	3710′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.30°	410	527	586	703	820	937
MAP at NDB						

HIALS
REIL
PAPI

D5.0 on 217°

Standard STRAIGHT-IN LANDING RWY **22**

DA(H) **1060′** (455′)

	RVR 1400m	ALS out
A		RVR 1500m
B		
C		CMV 2100m
D		

PANS OPS 4

CHANGES: Minimums.

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JEPPESEN
JeppView for Windows

General Information

Location: Heringsdorf Deu
IATA Code: HDF
Lat/Long: N53° 52.7' E014° 09.1'
Elevation: 93 ft

Airport Use: Public
Magnetic Variation: 3.2°E

Fuel Types: 100 Octane (LL), Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0558 Z
Sunset: 1635 Z,

Runway Information

Runway: 10
Length x Width: 7562 ft x 115 ft
Surface Type: asphalt
TDZ-Elev: 77 ft
Lighting: Edge, ALS

Runway: 28
Length x Width: 7562 ft x 115 ft
Surface Type: asphalt
TDZ-Elev: 89 ft
Lighting: Edge, ALS

Communication Information

Heringsdorf Tower 132.825 At or below 4000 ft Out to 25 mi.
Heringsdorf Information 132.825 AFIS

Apt Elev 93′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′

PENET TWO HOTEL (PENET 2H) *[PENE2H]*
UDAXI ONE HOTEL (UDAXI 1H) *[UDAX1H]*
RWYS 10, 28 ARRIVALS

2000′

MSA
HC NDB
applicable over
German territory only

TRENT
D (L) 108.45 TRT
N54 30.7 E013 15.0

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

143° D30

PENET
N54 06.0
E013 43.7

127°

21
4000
PENET 2H

(IAF)
HERINGSDORF
330 HC
N53 52.4 E014 10.9

N

NOT TO SCALE

3000

246°

18
4000
UDAXI 1H

POLAND
GERMANY

066°

087° D5

UDAXI
N53 45.8
E013 42.3

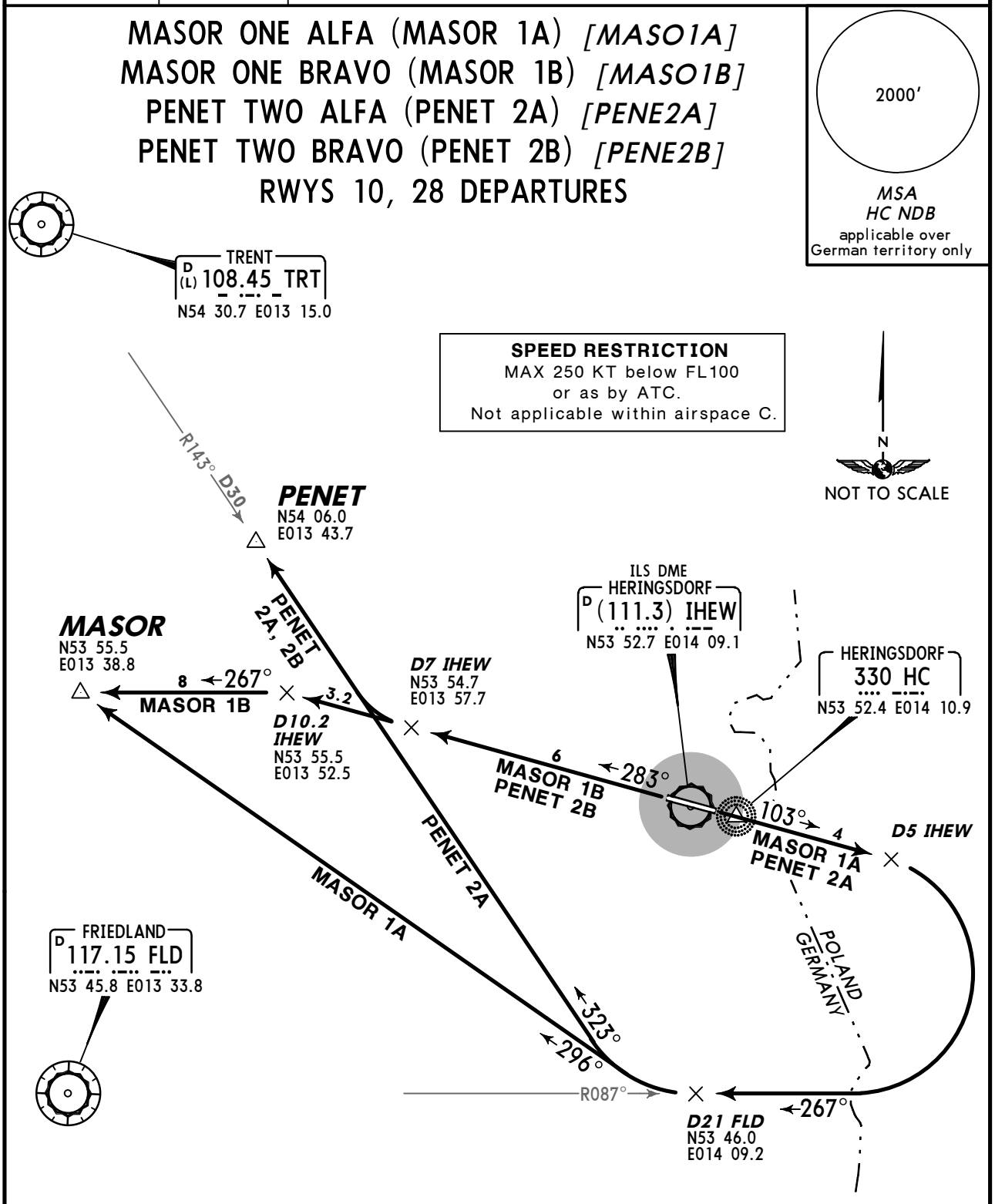
FRIEDLAND
D 117.15 FLD
N53 45.8 E013 33.8

CHANGES: MSA.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
124.17	93′	1. Contact BREMEN Radar when passing 1500′. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

MASOR ONE ALFA (MASOR 1A) *[MASO1A]*
MASOR ONE BRAVO (MASOR 1B) *[MASO1B]*
PENET TWO ALFA (PENET 2A) *[PENE2A]*
PENET TWO BRAVO (PENET 2B) *[PENE2B]*
RWYS 10, 28 DEPARTURES



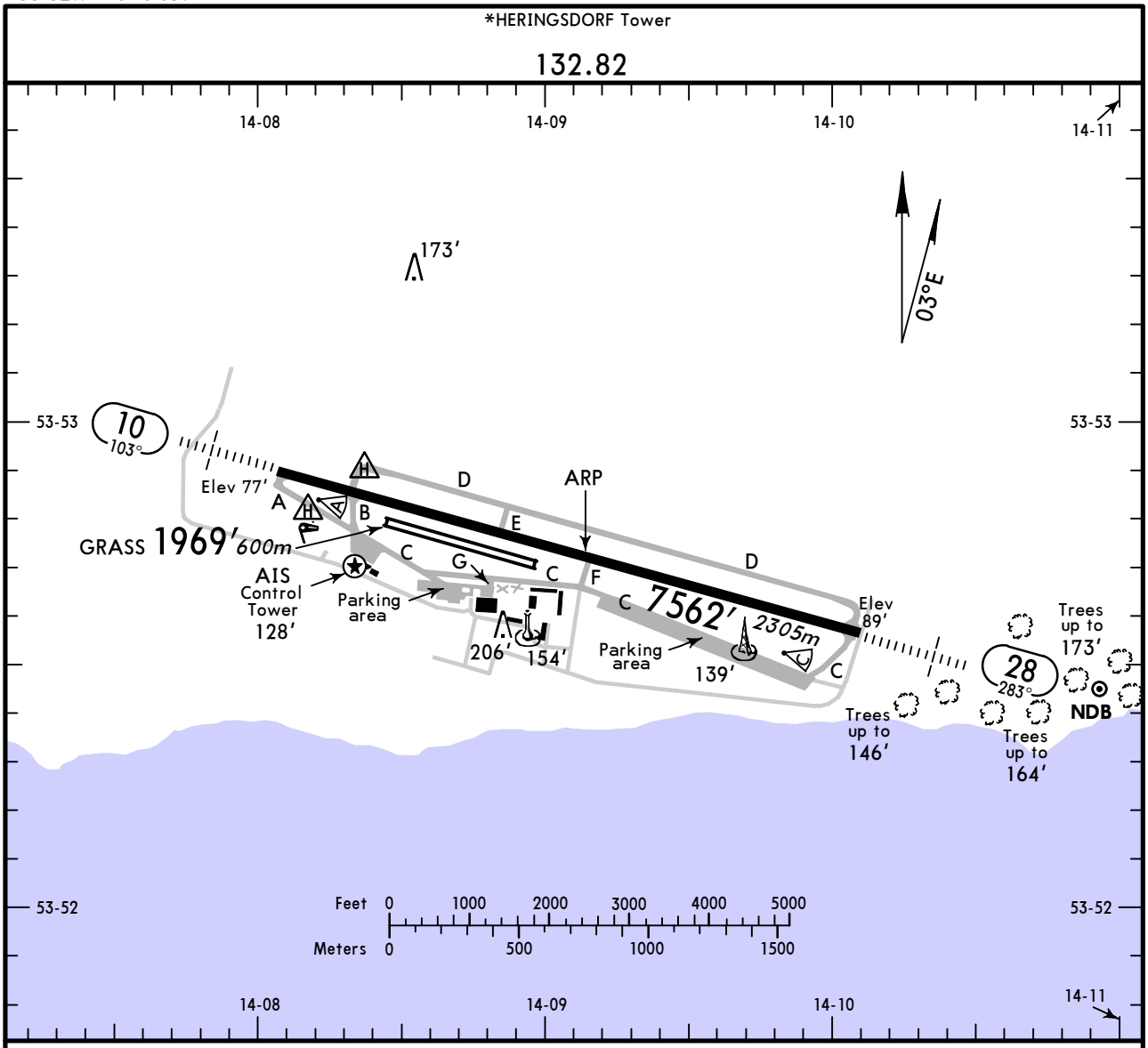
Initial climb clearance **5000′**

SID	RWY	ROUTING
MASOR 1A	**10**	On 103° bearing via HC to D5 IHEW, turn RIGHT, intercept FLD R-087 inbound to D21 FLD ❶, turn RIGHT, 296° track to MASOR.
MASOR 1B	**28**	On 283° bearing from HC to D10.2 IHEW ❷, turn LEFT, 267° track to MASOR.
PENET 2A	**10**	On 103° bearing via HC to D5 IHEW, turn RIGHT, intercept FLD R-087 inbound to D21 FLD, turn RIGHT, intercept TRT R-143 inbound to PENET.
PENET 2B	**28**	On 283° bearing from HC to D7 IHEW, turn RIGHT, intercept TRT R-143 inbound to PENET.

❶ After passing D21 FLD BRNAV equipment necessary.
❷ After passing D10.2 IHEW BRNAV equipment necessary.

CHANGES: MSA.

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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
10 28	HIRL HIALS PAPI-L (angle 3.0°) RVR		6590′ *2009m*	❶	115′ *35m*
10 28	Grass runway				98′ *30m*

❶ TAKE-OFF RUN AVAILABLE

RWY 10:
From rwy head 7562′ (2305m)
twy B int 6417′ (1956m)
twy F int 3442′ (1049m)

RWY 28:
From rwy head 7562′ (2305m)
twy F int 4072′ (1241m)
twy E int 2861′ (872m)

Standard TAKE-OFF ❶

	LVP must be in force RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

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

CHANGES: None.

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BRIEFING STRIP™

BREMEN Radar above 1200′	*HERINGSDORF Tower (within 25 NM up to 4000′)
124.17	132.82

LOC IHEW	Final Apch Crs	GS	ILS DA(H)	Apt Elev / RWY
111.3	283°	D5.0 IHEW 1740′ (1651′)	Refer to Minimums	93′ / RWY 89′

MISSED APCH: Climb STRAIGHT AHEAD to 1500′, then turn RIGHT to NDB climbing to 3000′.

Alt Set: hPa (IN on req) Rwy Elev: 3 hPa Trans level: By ATC Trans alt: 5000′
1. DME required. 2. ILS DME reads zero at rwy 28 threshold.

2000′ ❶
MSA HC NDB

❶ Applicable over German territory only.

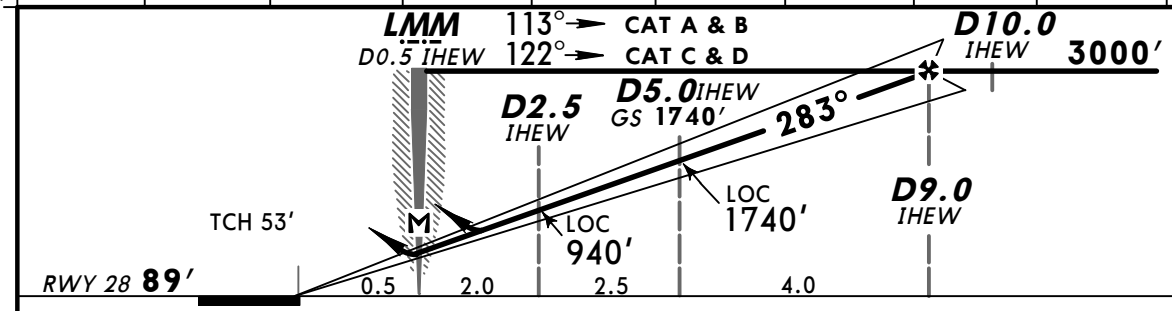
PROCEDURE AVAILABLE ONLY DURING ACTIVITY OF CTR

(IAF) HERINGSDORF 330 HC
D0.5 IHEW

066° 3000
246°
D2.5 IHEW
D5.0 IHEW
ILS DME 283° 111.3 IHEW
D9.0 IHEW
122° CAT C & D
113° CAT A & B
486′
283°
D10.0 IHEW
EP(R)-22
POLAND GERMANY

54-00
53-50
14-00
14-10
14-20
14-30

LOC (GS out)	IHEW DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
	ALTITUDE	460′	780′	1100′	1420′	1740′	2060′	2380′	2690′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	372	478	531	637	743	849
MAP at LMM/D0.5 IHEW						

HIALS
PAPI

1500′ ↑
3000′ RT
HC 330

Standard STRAIGHT-IN LANDING RWY 28

DA(H) ILS		LOC (GS out)	
A: 291′ (202′)	C: 316′ (227′)	DA(H) 650′ (561′)	
B: 301′ (212′)	D: 326′ (237′)		

	FULL/Limited	ALS out		ALS out
A	800m	1200m	1500m	
B				
C			2200m	2400m
D				

CIRCLE-TO-LAND

Not authorized North of airport

Max Kts	MDA(H)	VIS
100	660′ (567′)	1500m
135	660′ (567′)	1600m
180	740′ (647′)	2400m
205	800′ (707′)	3600m

PANS OPS 4

CHANGES: MSA.

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BRIEFING STRIP ™

BREMEN Radar above 1200′	*HERINGSDORF Tower (within 25 NM up to 4000′)
124.17	132.82

NDB HC	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
330	103°	D9.0 3000′ (2923′)	650′ (573′)	Apt Elev 93′ RWY 77′

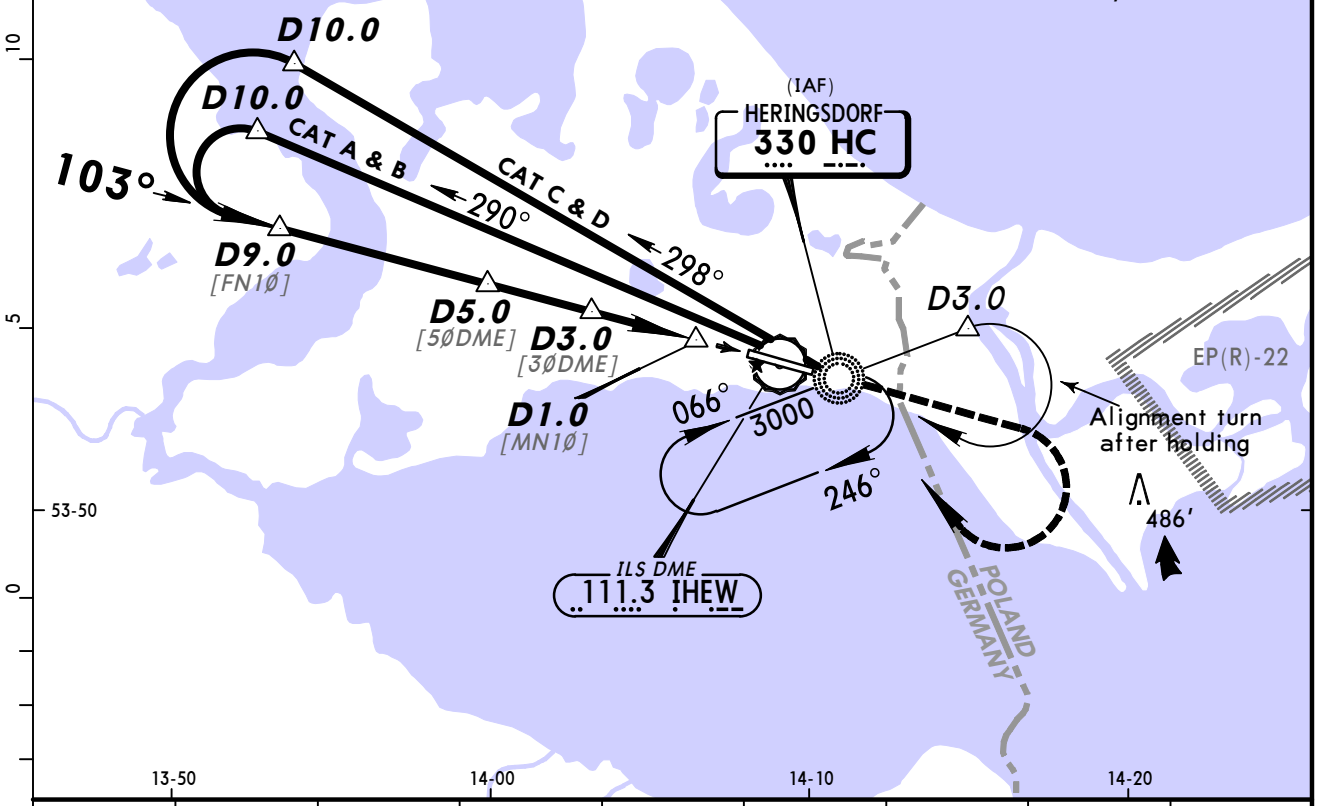
MISSED APCH: Climb STRAIGHT AHEAD to 1500′, then turn RIGHT to NDB climbing to 3000′.

Alt Set: hPa (IN on req) Rwy Elev: 3 hPa Trans level: By ATC Trans alt: 5000′
1. DME required. 2. ILS DME reads zero at rwy 10 threshold.

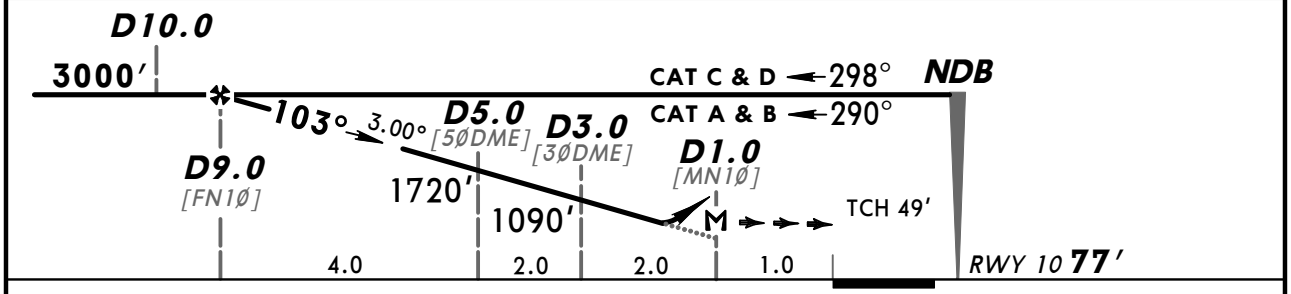
2000′ ❶
MSA HC NDB

PROCEDURE AVAILABLE ONLY DURING ACTIVITY OF CTR

❶ Applicable over German territory only.



IHEW DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3000′	2680′	2360′	2040′	1720′	1400′	1090′	770′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.0						

HIALS
PAPI

1500′	3000′	HC
↑	RT	330

Standard STRAIGHT-IN LANDING RWY **10**

DA(H) **650′** (573′)

	ALS out
A B	RVR 1500m
C D	CMV 2200m / CMV 2400m

PANS OPS 4

CHANGES: MSA.

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BRIEFING STRIP ™

BREMEN Radar above 1200′	*HERINGSDORF Tower (within 25 NM up to 4000′)
124.17	132.82

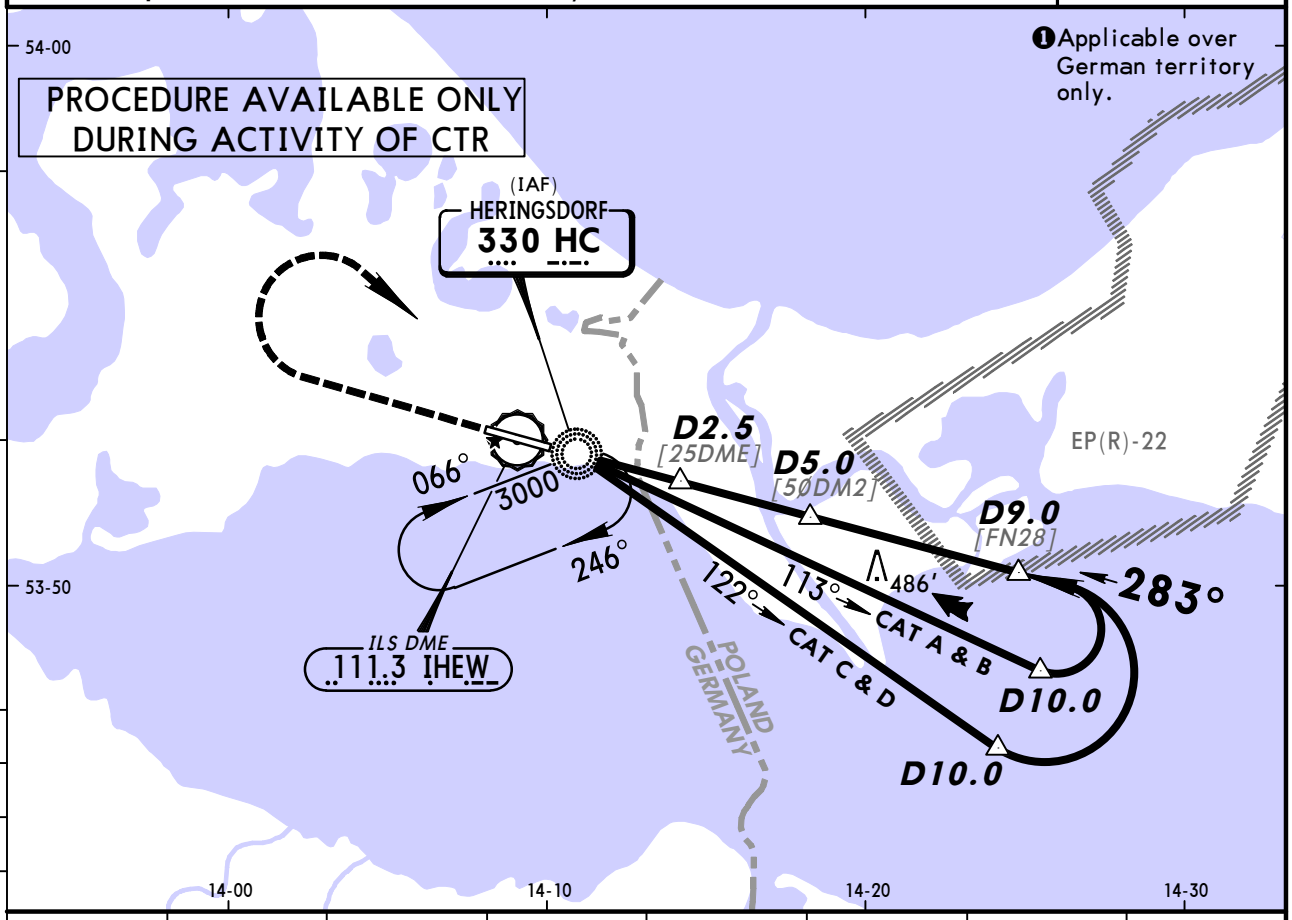
NDB HC	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
330	283°	D9.0 3000′ (2911′)	650′ (561′)	Apt Elev 93′ RWY 89′

MISSED APCH: Climb STRAIGHT AHEAD to 1500′, then turn RIGHT to NDB climbing to 3000′.

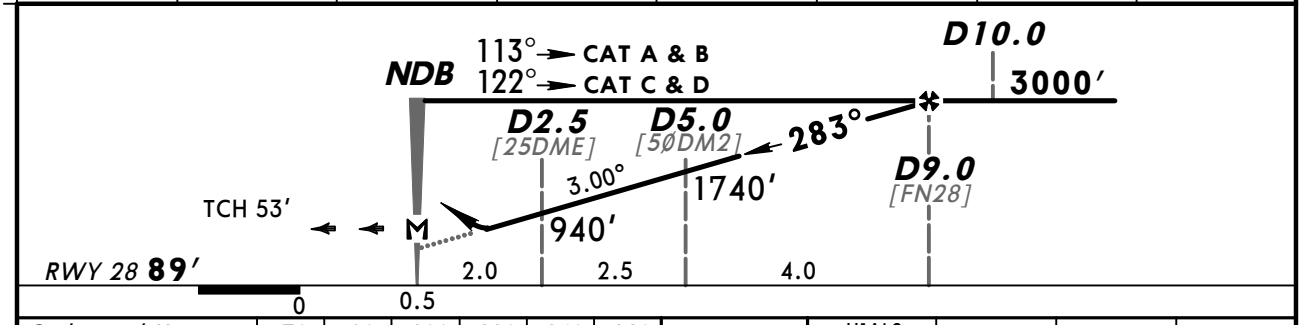
Alt Set: hPa (IN on req) Rwy Elev: 3 hPa Trans level: By ATC Trans alt: 5000′

1. DME required. 2. ILS DME reads zero at rwy 28 threshold.

2000′ ❶
MSA HC NDB



IHEW DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	780′	1100′	1420′	1740′	2060′	2380′	2690′



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

HIALS
PAPI

1500′ ↑ | 3000′ RT | HC 330

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **28**

DA(H) **650′** (561′)

ALS out

A	RVR 1500m	
B		
C	CMV 2200m	CMV 2400m
D		

CIRCLE-TO-LAND

Not authorized North of airport

Max Kts	MDA(H)	VIS
100	660′ (567′)	1500m
135	660′ (567′)	1600m
180	740′ (647′)	2400m
205	800′ (707′)	3600m

CHANGES: MSA.

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General Information

Location: Magdeburg/Cochstedt Deu
IATA Code: CSO
Lat/Long: N51° 51.4' E011° 25.1'
Elevation: 601 ft

Airport Use: Public
Magnetic Variation: 2.3°E

Fuel Types: 100 Octane (LL), Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: No
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0605 Z
Sunset: 1649 Z,

Runway Information

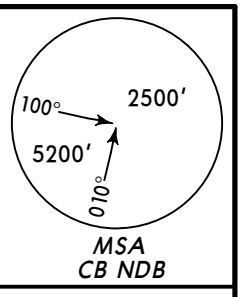
Runway: 08
Length x Width: 8202 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 584 ft
Lighting: Edge, ALS, Centerline, REIL

Runway: 26
Length x Width: 8202 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 596 ft
Lighting: Edge, ALS, Centerline, REIL

Communication Information

Cochstedt Ground Tower 121.825
Cochstedt Tower 131.125

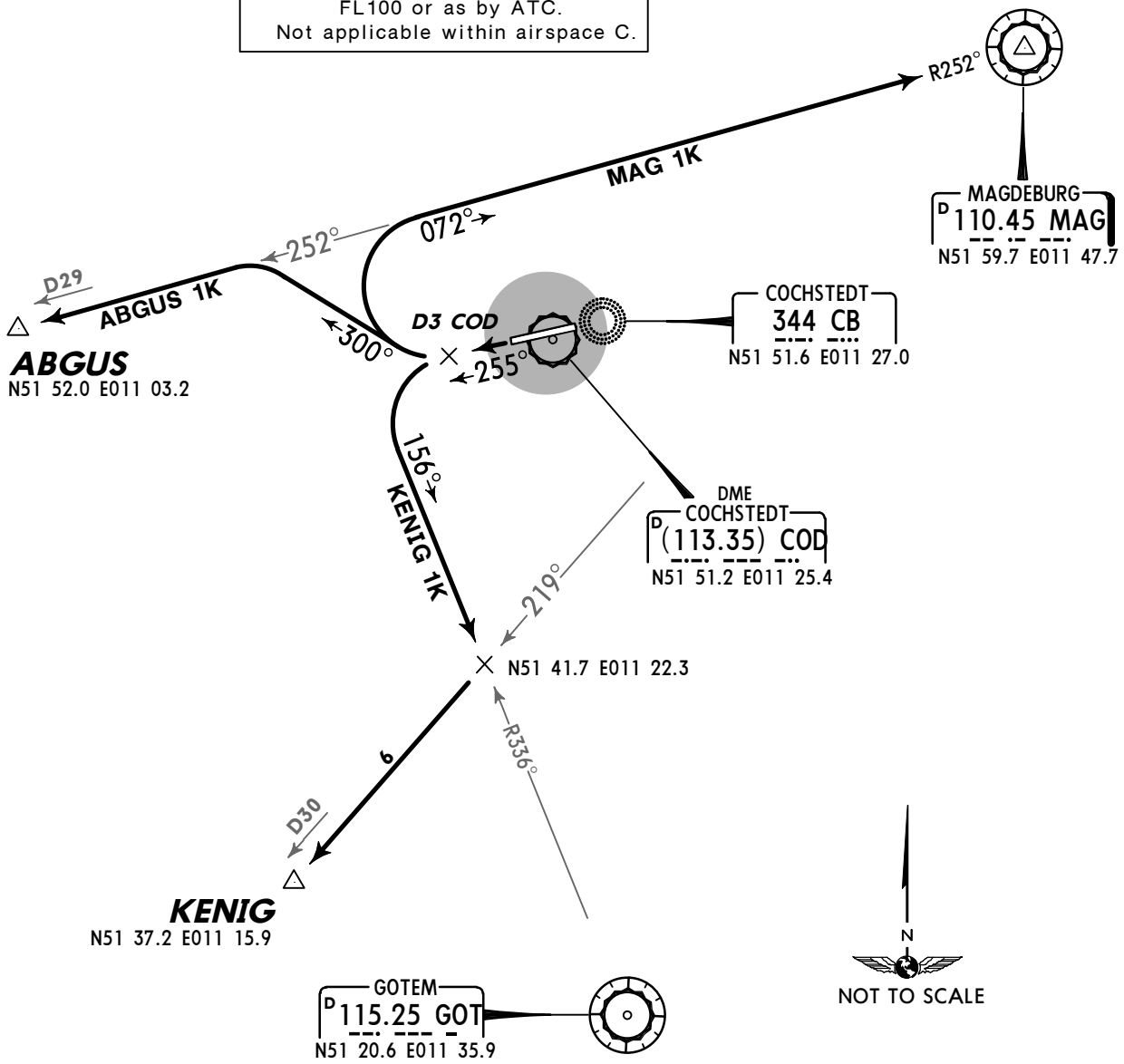
BREMEN Radar 123.22	Apt Elev 601′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory.



ABGUS ONE KILO (ABGUS 1K)
KENIG ONE KILO (KENIG 1K)
MAGDEBURG ONE KILO (MAG 1K)
RWY 26 DEPARTURES

NOT TO BE USED DURING ACTIVITY OF NIGHT LOW FLYING SYSTEM

SPEED RESTRICTION
MAX 250 KT below
FL100 or as by ATC.
Not applicable within airspace C.



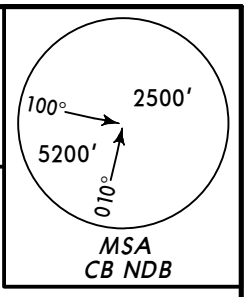
MAG 1K: Initial climb clearance **4000′**
ABGUS 1K, KENIG 1K: Initial climb clearance **5000′**

SID	ROUTING
ABGUS 1K	Intercept 255° bearing from CB to D3 COD, turn RIGHT, 300° track, intercept MAG R-252 to ABGUS.
KENIG 1K	Intercept 255° bearing from CB to D3 COD, turn LEFT, intercept GOT R-336 inbound, intercept MAG R-219 to KENIG.
MAG 1K	Intercept 255° bearing from CB to D3 COD, turn RIGHT, intercept MAG R-252 inbound to MAG.

CHANGES: New procedures at this airport.

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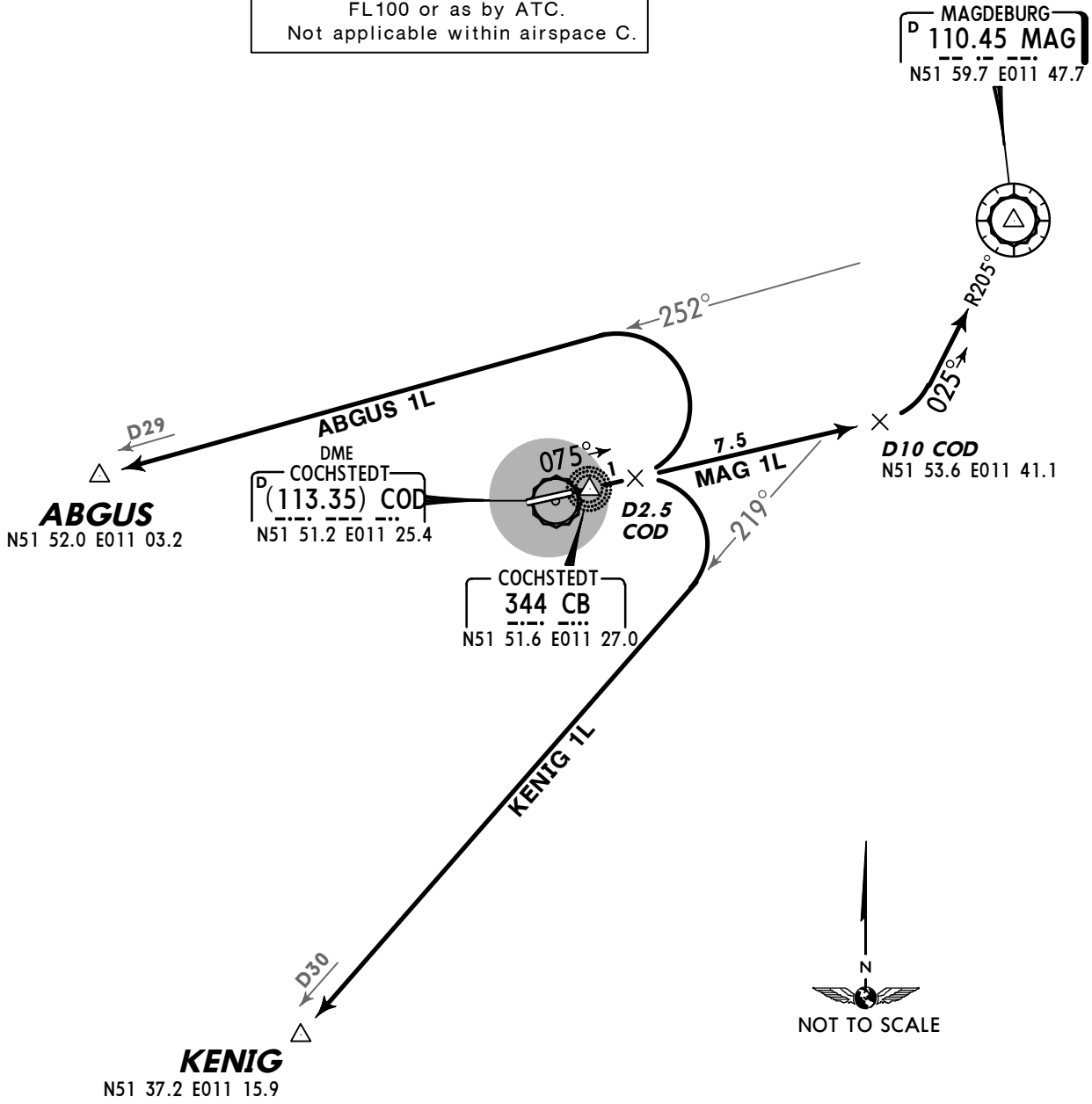
BREMEN Radar 123.22	Apt Elev 601′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory.



ABGUS ONE LIMA (ABGUS 1L)
KENIG ONE LIMA (KENIG 1L)
MAGDEBURG ONE LIMA (MAG 1L)
RWY 08 DEPARTURES

NOT TO BE USED DURING ACTIVITY OF NIGHT LOW FLYING SYSTEM

SPEED RESTRICTION
MAX 250 KT below
FL100 or as by ATC.
Not applicable within airspace C.



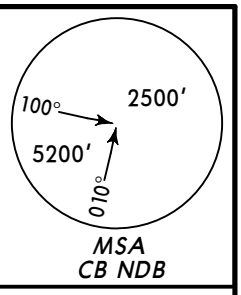
Initial climb clearance **4000′**

SID	ROUTING
ABGUS 1L	On 075° bearing via CB to D2.5 COD, turn LEFT, intercept MAG R-252 to ABGUS.
KENIG 1L	On 075° bearing via CB to D2.5 COD, turn RIGHT, intercept MAG R-219 to KENIG.
MAG 1L	On 075° bearing via CB to D10 COD, turn LEFT, intercept MAG R-205 inbound to MAG.

CHANGES: New procedures at this airport.

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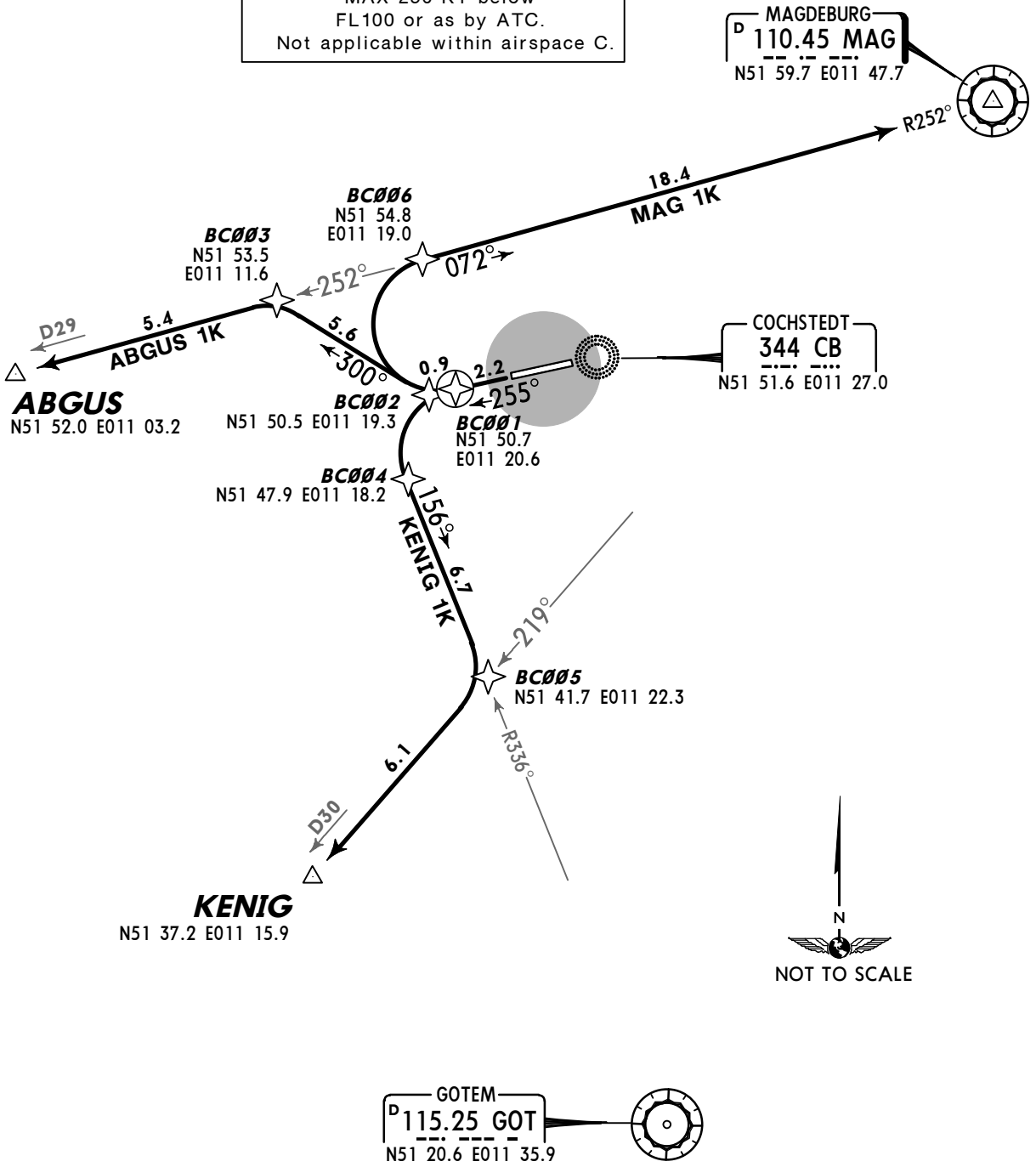
BREMEN Radar 123.22	Apt Elev 601′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory.



ABGUS ONE KILO (ABGUS 1K)*[ABGU1K]*
KENIG ONE KILO (KENIG 1K)*[KENI1K]*
MAGDEBURG ONE KILO (MAG 1K)
RWY 26 RNAV DEPARTURES (OVERLAY 10-3)

NOT TO BE USED DURING ACTIVITY OF NIGHT LOW FLYING SYSTEM

SPEED RESTRICTION
MAX 250 KT below
FL100 or as by ATC.
Not applicable within airspace C.



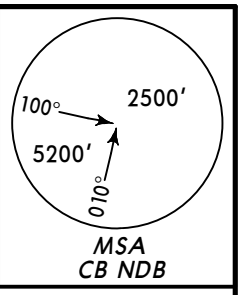
MAG 1K: Initial climb clearance **4000′**
ABGUS 1K, KENIG 1K: Initial climb clearance **5000′**

SID	ROUTING
ABGUS 1K	**(1000+)** - BC002 - BC003 - ABGUS.
KENIG 1K	**(1000+)** - BC001 - BC004 - BC005 - KENIG.
MAG 1K	**(1000+)** - BC001 - BC006 - MAG.

CHANGES: New procedures at this airport.

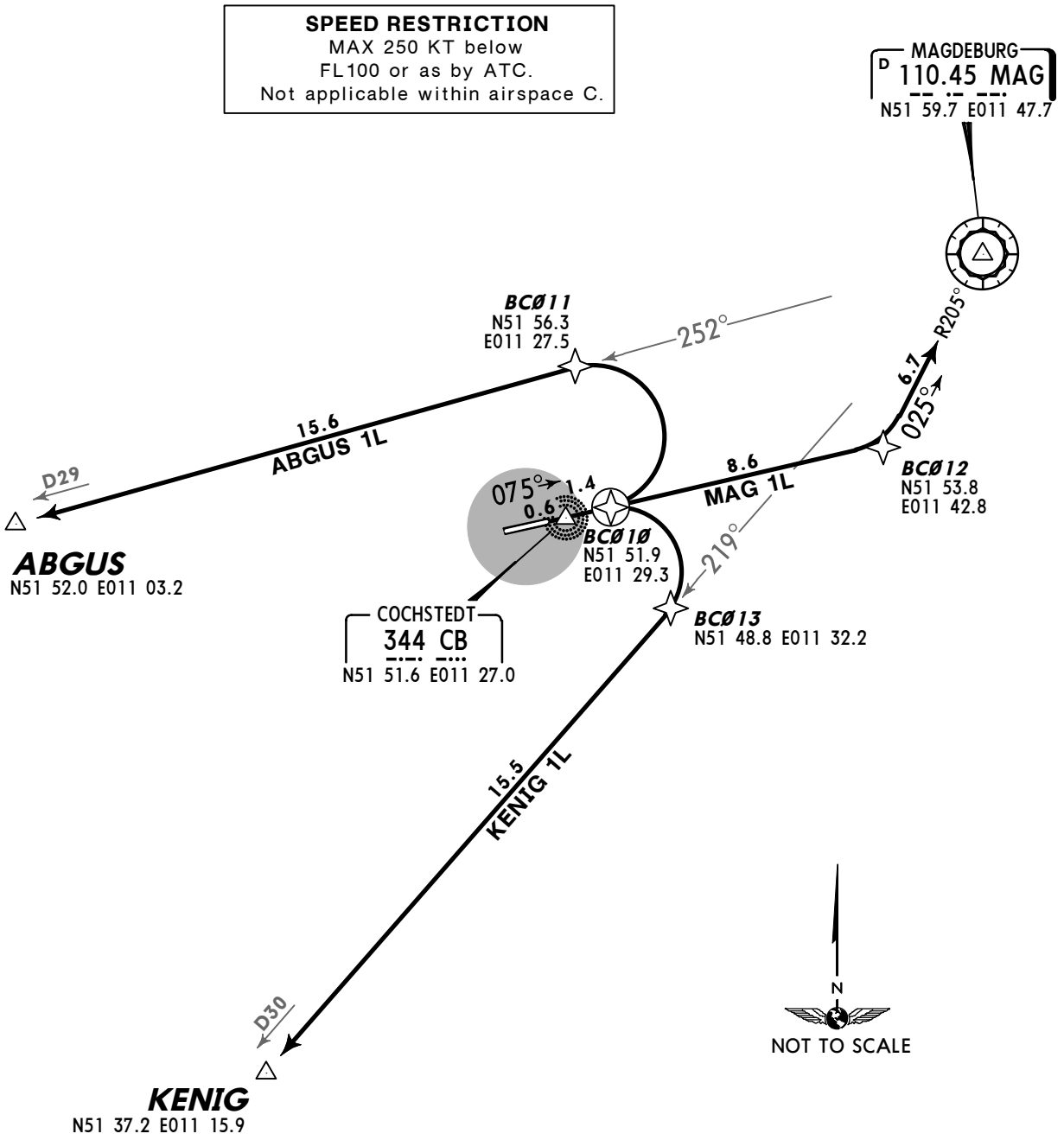
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BREMEN Radar 123.22	Apt Elev 601′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory.



ABGUS ONE LIMA (ABGUS 1L)*[ABGU1L]*
KENIG ONE LIMA (KENIG 1L)*[KENI1L]*
MAGDEBURG ONE LIMA (MAG 1L)
RWY 08 RNAV DEPARTURES (OVERLAY 10-3A)

NOT TO BE USED DURING ACTIVITY OF NIGHT LOW FLYING SYSTEM



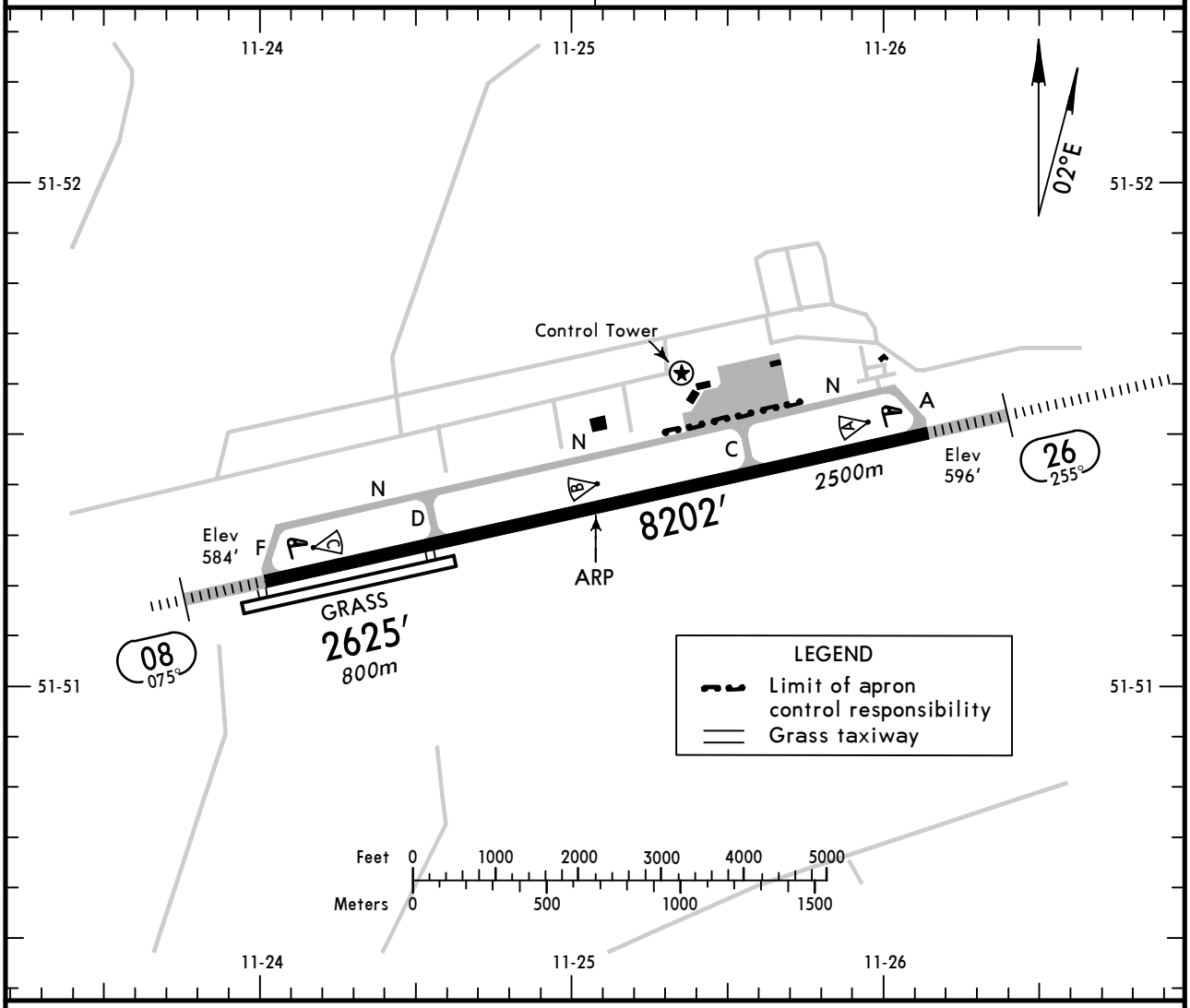
Initial climb clearance **4000′**

SID	ROUTING
ABGUS 1L	**(1000+)** - CB - BC010 - BC011 - ABGUS.
KENIG 1L	**(1000+)** - CB - BC010 - BC013 - KENIG.
MAG 1L	**(1000+)** - CB - BC012 - MAG.

CHANGES: New procedures at this airport.

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*COCHSTEDT Ground	*Tower
121.82	131.12



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
08	HIRL ❶ CL ❷ HIALS REIL PAPI-L (3.0°) RVR				148′ *45m*
26	HIRL ❶ CL ❷ HIALS SFL REIL PAPI-L (3.0°) RVR		7169′ *2185m*		
08 26	Grass runway				131′ *40m*

❶ spacing 60m
❷ spacing 15m

Standard TAKE-OFF 1

All Rwys
LVP must be in force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: None.

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EDBC/CSO MAGDEBURG/COCHSTEDT

JEPPESEN 15 APR 11 (21-1)

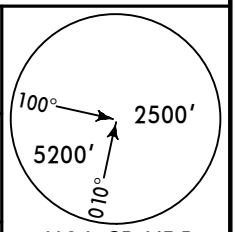
MAGDEBURG/COCHSTEDT, GERMANY ILS or LOC Rwy 26

BREMEN Radar	*COCHSTEDT Tower	*Ground
123.22	131.12	121.82

BRIEFING STRIP™

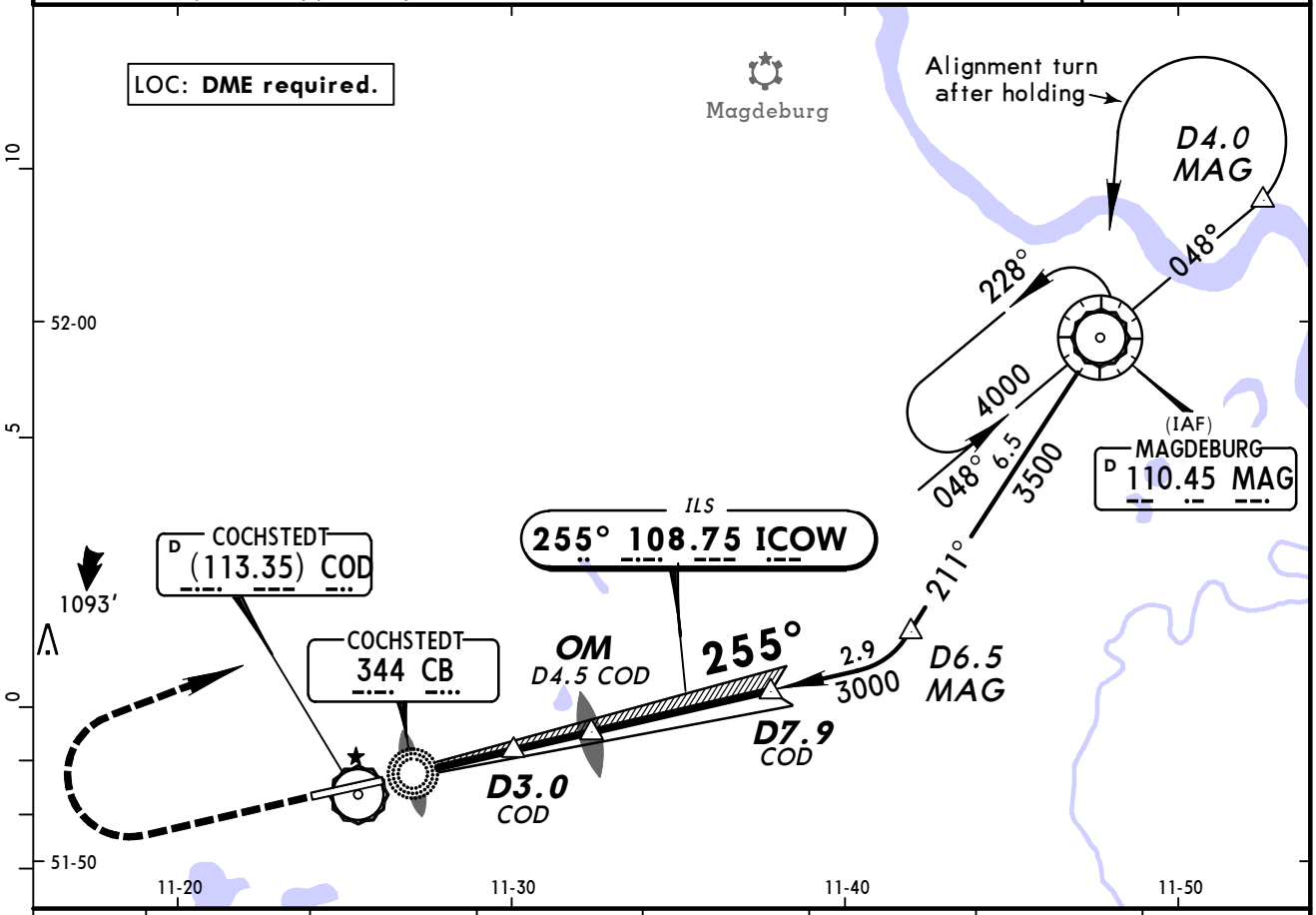
LOC ICOW	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev 601′
108.75	255°	1930′ (1334′)	Refer to Minimums	RWY 596′

MISSED APCH: Climb STRAIGHT AHEAD to 2000′, then turn RIGHT to VOR climbing to 4000′.

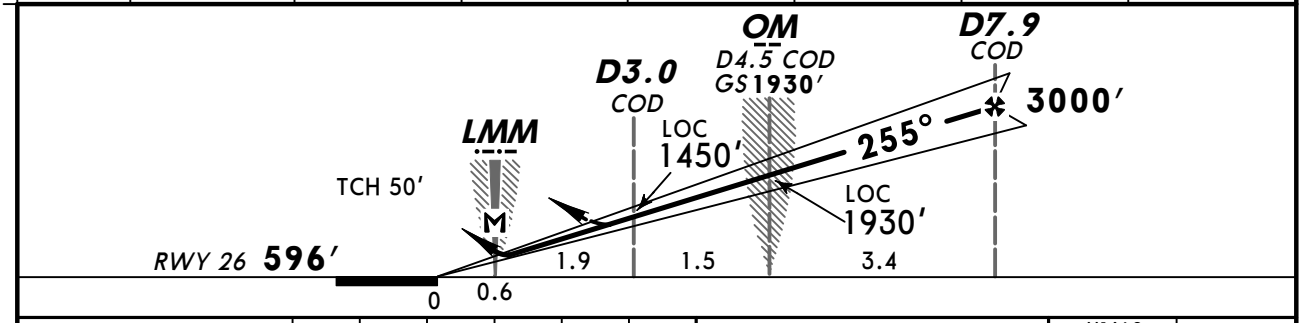


MSA CB NDB

Alt Set: hPa (IN on req.) Rwy Elev: 22 hPa Trans level: By ATC Trans alt: 5000′



LOC (GS out)	COD DME	2.0	3.0	4.0	5.0	6.0	7.0
	ALTITUDE	1130′	1450′	1770′	2080′	2400′	2720′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Desc angle 3.00°	377	484	538	646	753	861
MAP at LMM						

HIALS
REIL
PAPI

2000′

Standard STRAIGHT-IN LANDING RWY 26

CIRCLE-TO-LAND

	ILS DA(H) ABC: 796′ (200′) D: 799′ (203′) FULL	ILS Limited	ILS ALS out	LOC (GS out) DA(H) 980′ (384′)	LOC (GS out) ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1100m	RVR 1500m
B					
C					RVR 1800m
D					

Max Kts	MDA(H)	VIS
100	1180′ (579′)	1500m
135	1220′ (619′)	1600m
180	1350′ (749′)	2400m
205	1350′ (749′)	3600m

PANS OPS 4

CHANGES: Minimums.

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EDBC/CSO MAGDEBURG/COCHSTEDT

JEPPESEN 13 MAY 11 (26-1)

MAGDEBURG/COCHSTEDT, GERMANY NDB Rwy 08

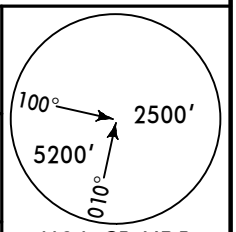
BREMEN Radar	*COCHSTEDT Tower	*Ground
123.22	131.12	121.82

BRIEFING STRIP™

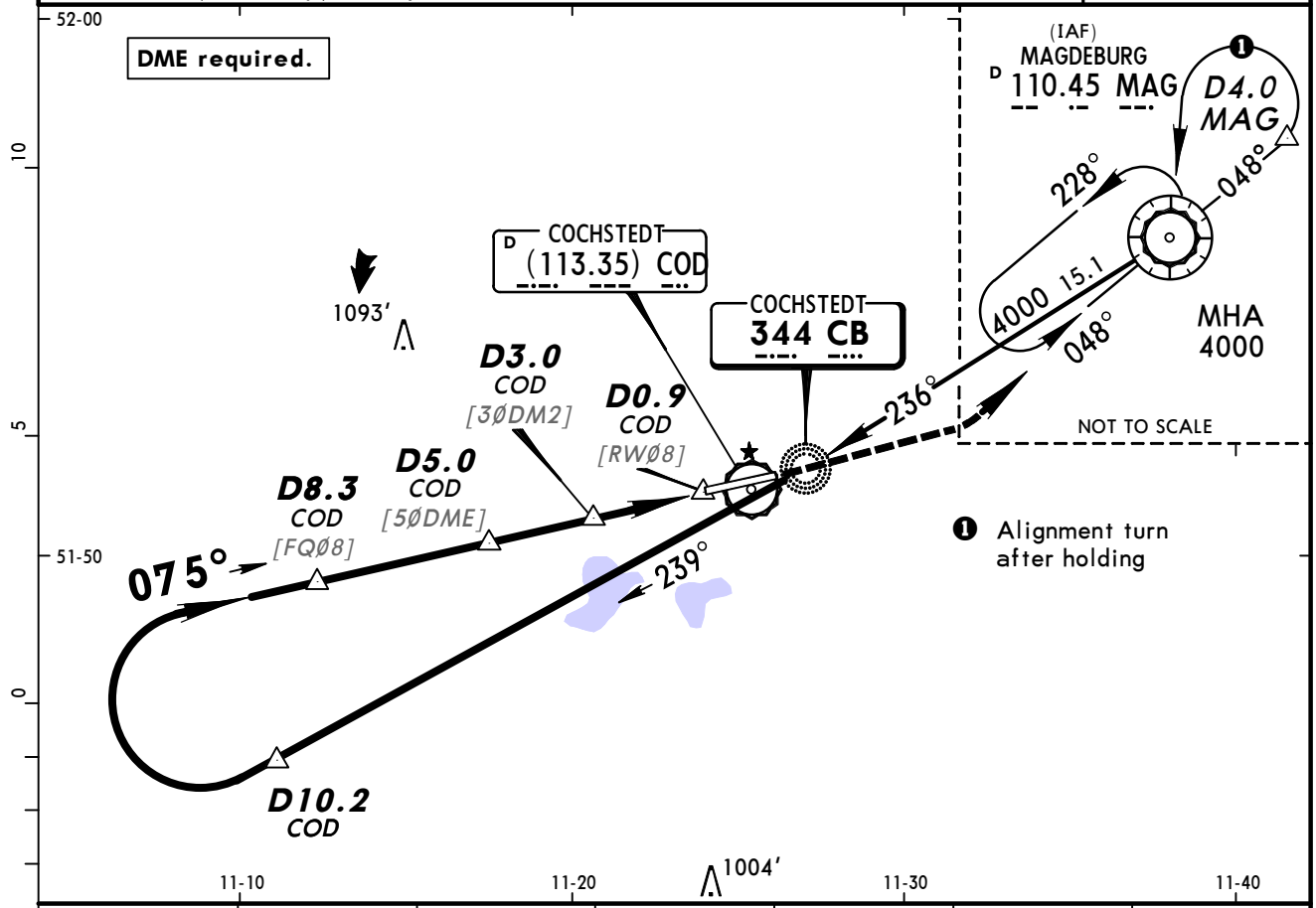
NDB CB	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
344	075°	D8.3 COD 3000′ (2416′)	1120′ (536′)	Apt Elev 601′ RWY 584′

MISSED APCH: Climb STRAIGHT AHEAD to 2000′, then turn LEFT to VOR climbing to 4000′.

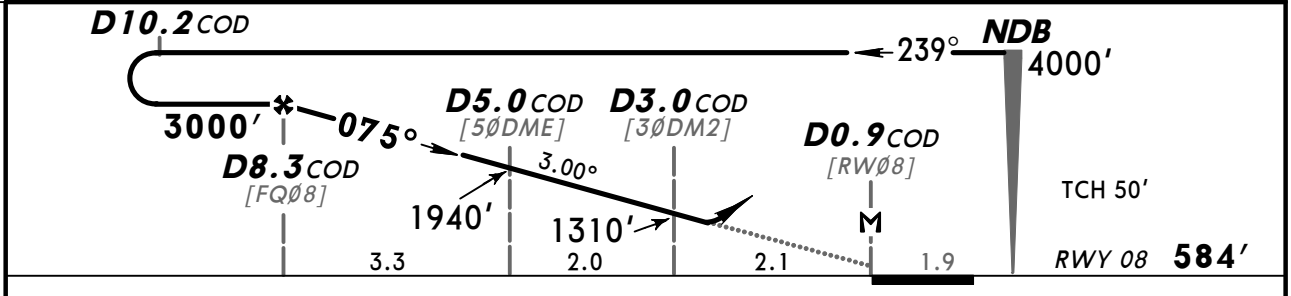
Alt Set: hPa (IN on req.) Rwy Elev: 21 hPa Trans level: By ATC Trans alt: 5000′



MSA CB NDB



COD DME	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2900′	2580′	2260′	1940′	1630′	1310′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D0.9 COD						

HIALS
REIL
PAPI

2000′

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08**

DA(H) **1120′** (536′)

	ALS out	Max Kts	MDA(H)	VIS
A	RVR 1500m	100	1140′ (539′)	1500m
B		135	1220′ (619′)	1600m
C	RVR 2000m	180	1350′ (749′)	2400m
D	CMV 2400m	205	1350′ (749′)	3600m

CIRCLE-TO-LAND

CHANGES: Minimums.

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EDBC/CSO MAGDEBURG/COCHSTEDT

JEPPESEN 13 MAY 11 (26-2)

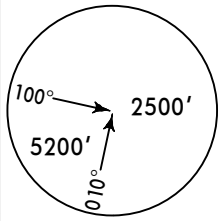
MAGDEBURG/COCHSTEDT, GERMANY NDB Rwy 26

BREMEN Radar	*COCHSTEDT Tower	*Ground
123.22	131.12	121.82

BRIEFING STRIP ™

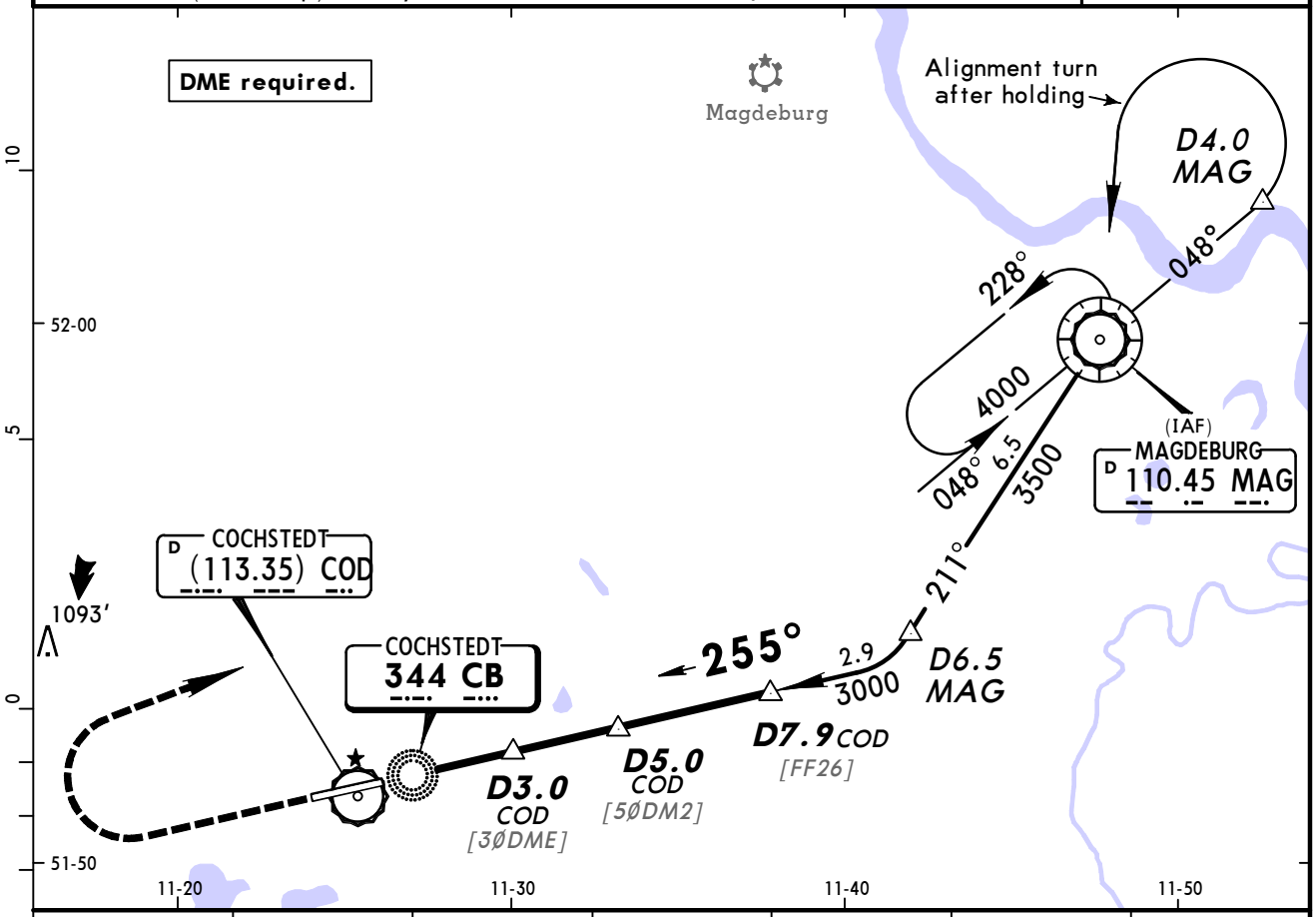
NDB CB	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
344	255°	D7.9 COD 3000′ (2404′)	1130′ (534′)	601′ / RWY 596′

MISSED APCH: Climb STRAIGHT AHEAD to 2000′, then turn RIGHT to VOR climbing to 4000′.

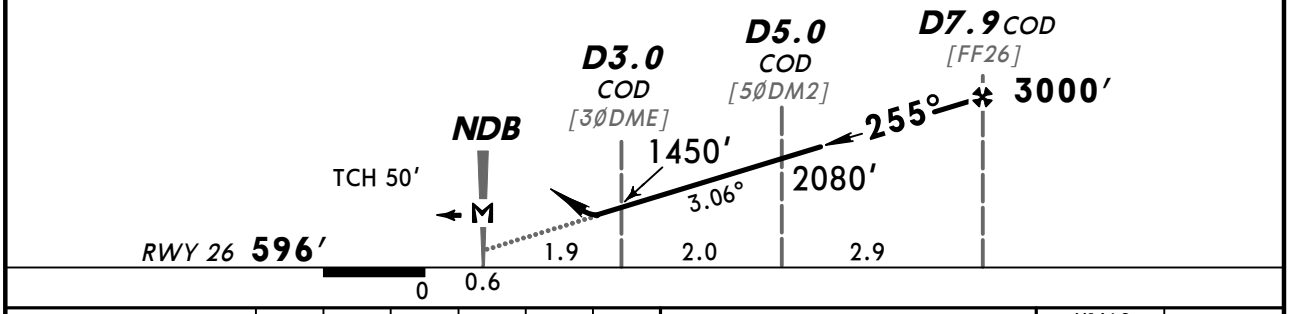


MSA CB NDB

Alt Set: hPa (IN on req.) Rwy Elev: 22 hPa Trans level: By ATC Trans alt: 5000′



COD DME	2.0	3.0	4.0	5.0	6.0	7.0
ALTITUDE	1130′	1450′	1770′	2080′	2400′	2720′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.06°	379	487	541	650	758	866
MAP at NDB							

HIALS
REIL
PAPI
2000′

Standard STRAIGHT-IN LANDING RWY **26** CIRCLE-TO-LAND

DA(H) **1130′** (534′)

ALS out

			Max Kts	MDA(H)	VIS
A	RVR 1500m		100	1140′ (539′)	1500m
B			135	1220′ (619′)	1600m
C	RVR 1700m	CMV 2400m	180	1350′ (749′)	2400m
D			205	1350′ (749′)	3600m

PANS OPS 4

CHANGES: Circling minimums.

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General Information

Location: Cottbus-Drewitz Deu
IATA Code: CBU
Lat/Long: N51° 53.4' E014° 31.9'
Elevation: 274 ft

Airport Use: Public
Magnetic Variation: 3.2°E

Fuel Types: 100 Octane (LL), Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: No
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes
Pattern Altitude: 829 ft AGL

Sunrise: 0553 Z
Sunset: 1637 Z,

Runway Information

Runway: 07
Length x Width: 8150 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 251 ft
Lighting: Edge, ALS

Runway: 25
Length x Width: 8150 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 271 ft
Lighting: Edge, ALS

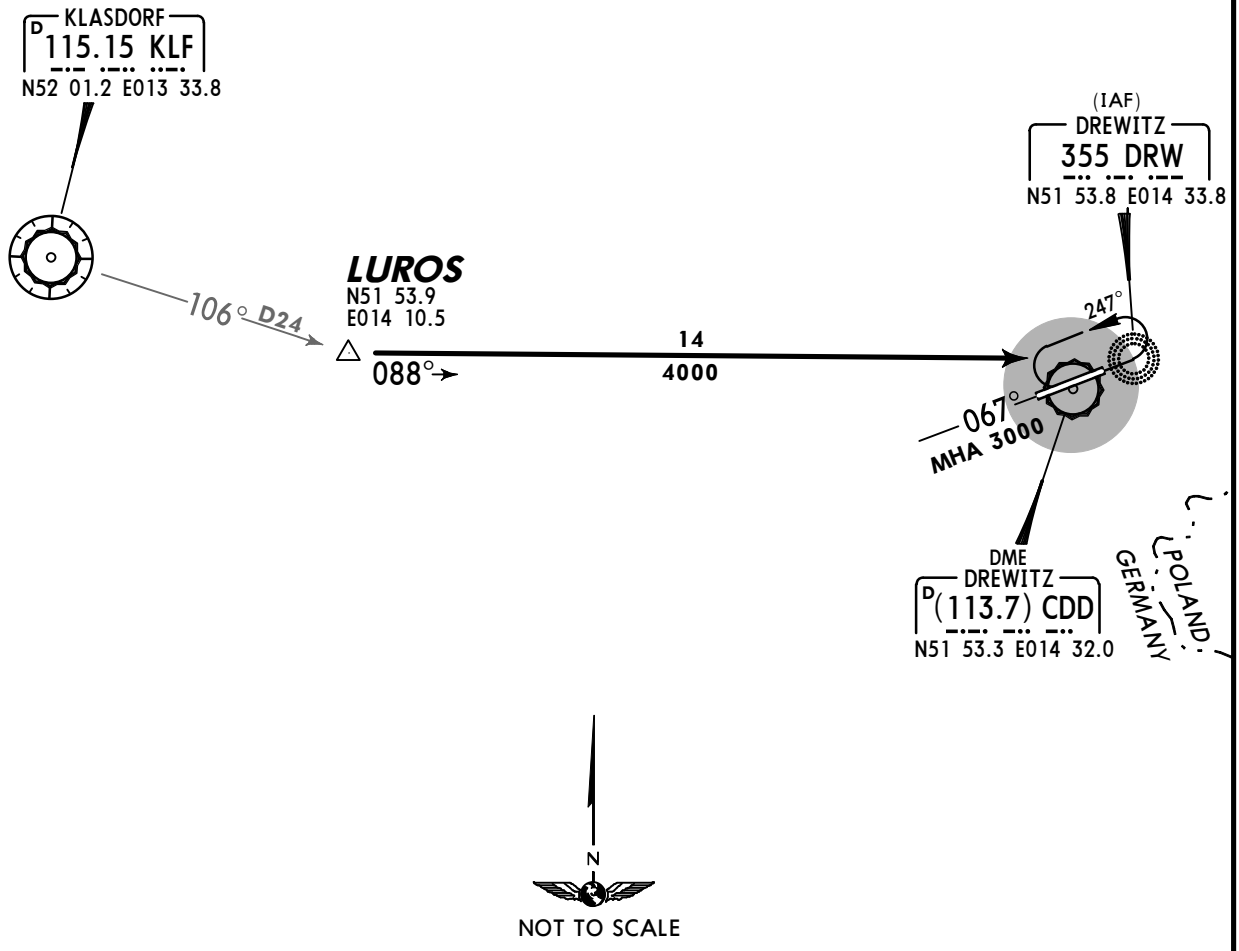
Communication Information

Drewitz Information 118.125 At or below 4000 ft Out to 25 mi. AFIS Non-English

Apt Elev	Alt Set: hPa (IN on request)
274′	Trans level: By ATC Trans alt: 5000′

2500′
MSA
CDD DME
applicable over
German territory only

LUROS ONE ALFA (LUROS 1A) *[LURO1A]*
RWYS 07, 25 ARRIVAL



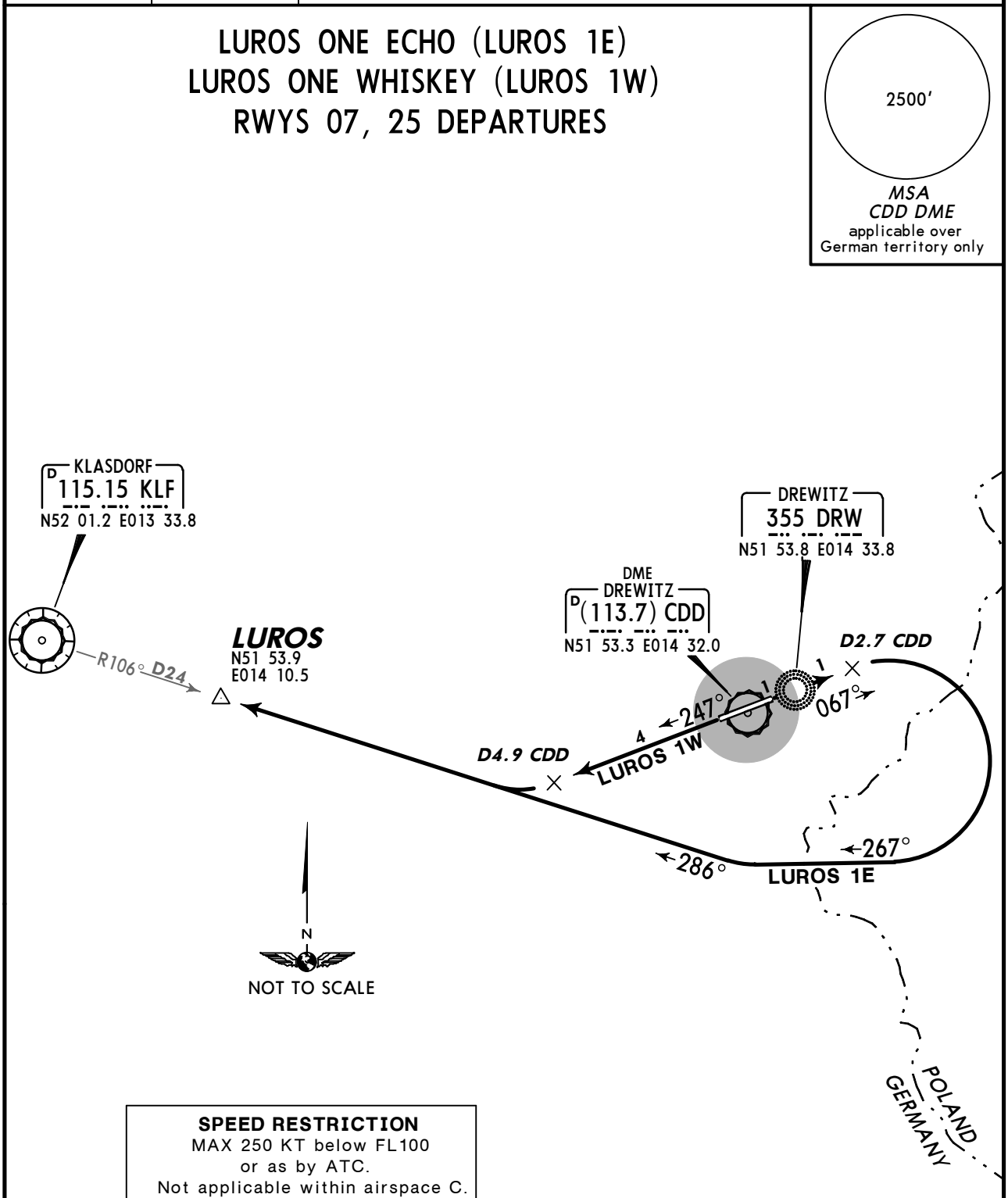
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

CHANGES: CDD frequency.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
126.42	274′	**1.** Contact BREMEN Radar immediately after take-off. **2.** Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

LUROS ONE ECHO (LUROS 1E)
LUROS ONE WHISKEY (LUROS 1W)
RWYS 07, 25 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
LUROS 1E	**07**	Intercept 067° bearing via DRW to D2.7 CDD, turn RIGHT, 267° track, intercept KLF R-106 inbound to LUROS.
LUROS 1W	**25**	Intercept 247° bearing from DRW to D4.9 CDD, turn RIGHT, intercept KLF R-106 inbound to LUROS.

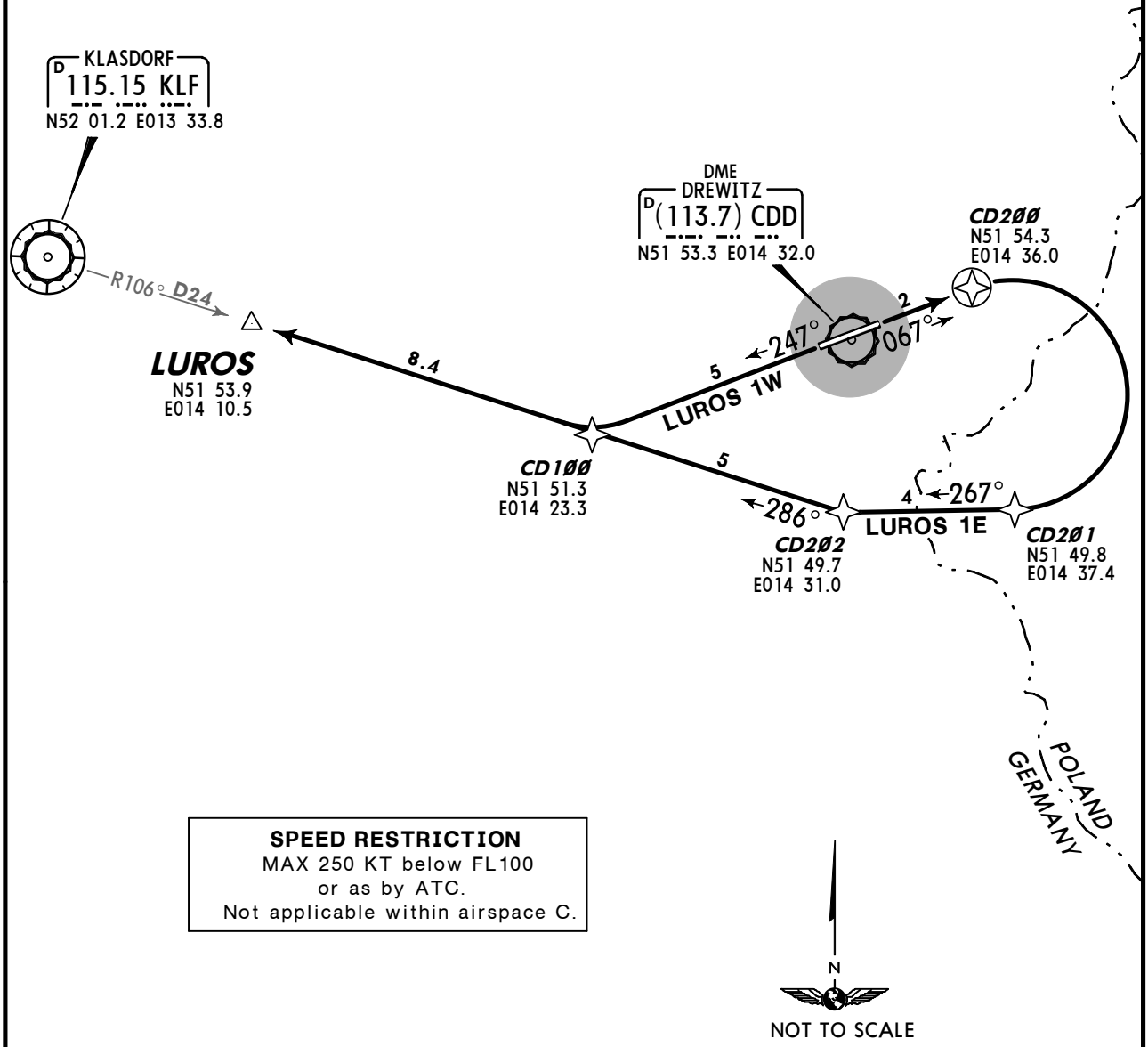
CHANGES: Communication; CDD frequency.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
126.42	274′	**1.** Contact BREMEN Radar immediately after take-off. **2.** Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

LUROS ONE ECHO (LUROS 1E) *[LURO1E]*
LUROS ONE WHISKEY (LUROS 1W) *[LURO1W]*
RWYS 07, 25 RNAV DEPARTURES
(OVERLAY 10-3)

2500′
MSA
CDD DME
applicable over
German territory only



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

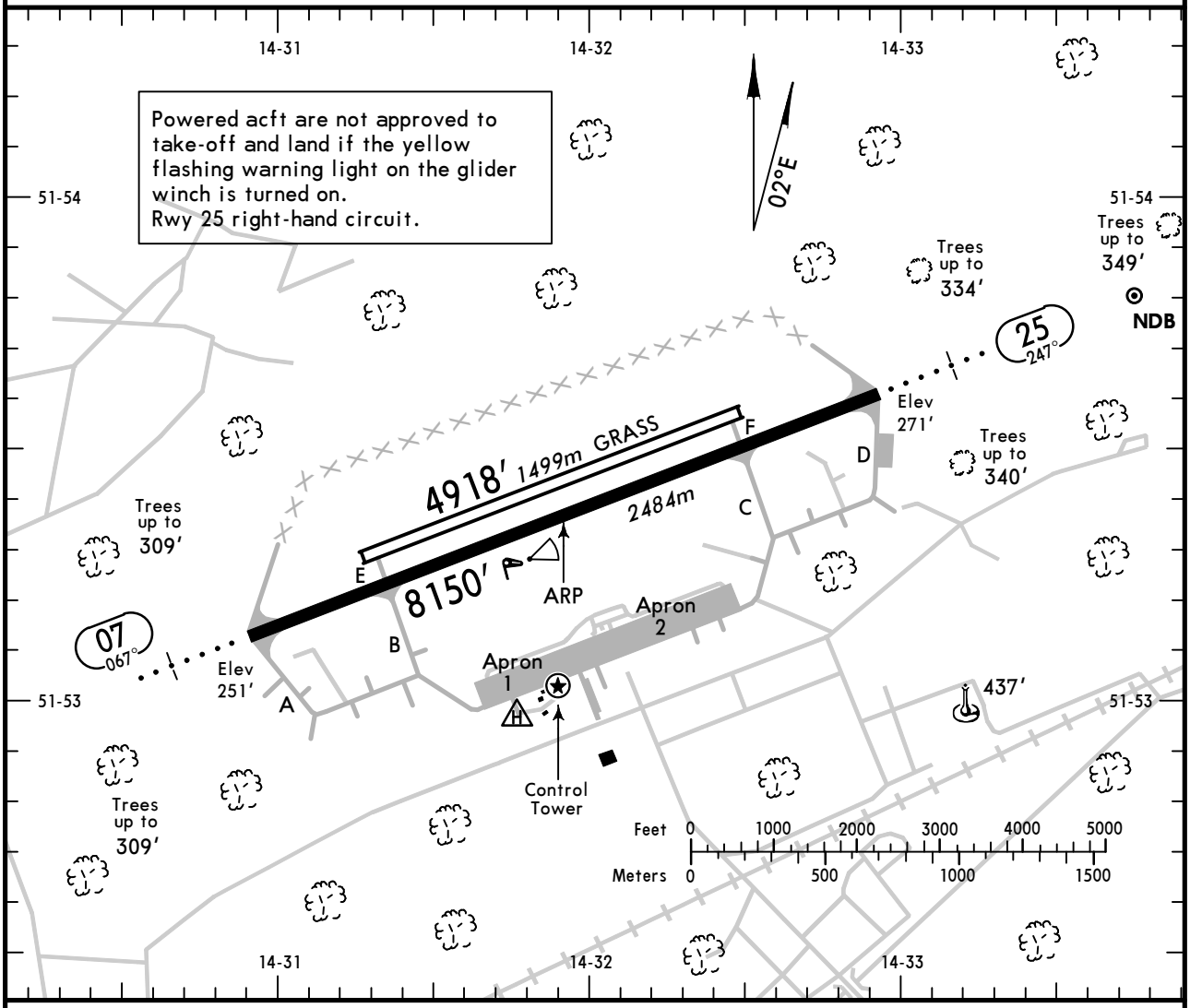
Initial climb clearance **5000′**

SID	RWY	ROUTING
LUROS 1E	**07**	**(700+)** - CD200 - CD201 - CD202 - LUROS.
LUROS 1W	**25**	**(700+)** - CD100 - LUROS.

CHANGES: Communication; CDD frequency.

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*DREWITZ Info
within 25 NM up to 4000′ AGL
118.12



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
07 25	HIRL *(60m)* HIALS PAPI-L (3.0°) RVR				148′ *45m*
07 25	Grass runway				164′ *50m*

Standard

TAKE-OFF [1]

	LVP must be in force RCLM (DAY only) or RL	All Rwys RCLM (DAY only) or RL	 NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

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

CHANGES: Grass runway length. Taxiways. Minimums.

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EDCD/CBU
COTTBUS-DREWITZ

JEPPESEN 5 AUG 11 (16-1)

COTTBUS-DREWITZ, GERMANY
NDB Rwy 07

BRIEFING STRIP™

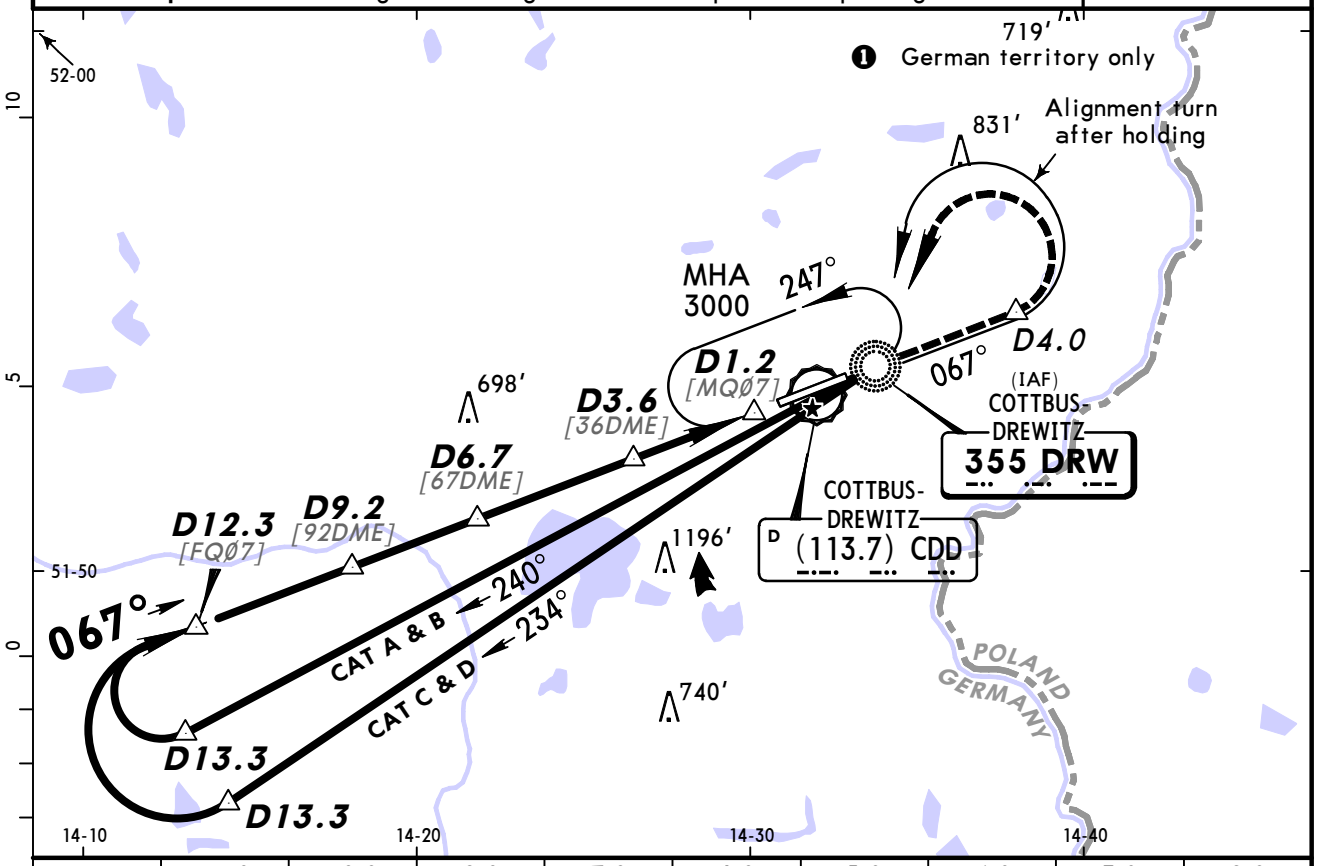
BREMEN Radar	*DREWITZ Info within 25 NM up to 4000' AGL
126.42	118.12

NDB	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
DRW 355	067°	D12.3 4000' (3749')	850' (599')	Apt Elev 274' RWY 251'

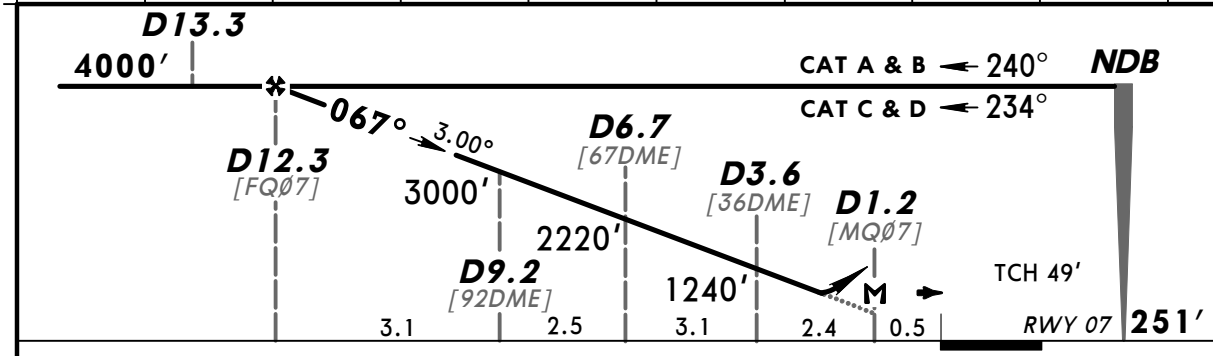
MISSED APCH: Climb STRAIGHT AHEAD to D4.0, then turn LEFT to NDB climbing to 4000'.

Alt Set: hPa (IN on req) Rwy Elev: 9 hPa Trans level: By ATC Trans alt: 5000'
1. DME required. 2. Arriving acft leaving controlled airspace when passing 2500' AGL.

2500' ❶
MSA CDD DME



CDD DME	11.0	10.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3580'	3270'	2630'	2310'	1990'	1670'	1360'	1040'	720'



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.2						

HIALS
PAPI

D4.0	4000' LT	DRW 355

Standard STRAIGHT-IN LANDING RWY **07**

DA(H) **850'** (599')

	ALS out	
A	RVR 1500m	
B		
C	CMV 2300m	CMV 2400m
D		

CIRCLE-TO-LAND

Not authorized South of airport

Max Kts	MDA(H)	VIS
100	880' (606')	1500m
135	890' (616')	1600m
180	1100' (826')	2400m
205	1100' (826')	3600m

PANS OPS 4

CHANGES: Minimums.

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BRIEFING STRIP ™

BREMEN Radar	*DREWITZ Info within 25 NM up to 4000' AGL
126.42	118.12

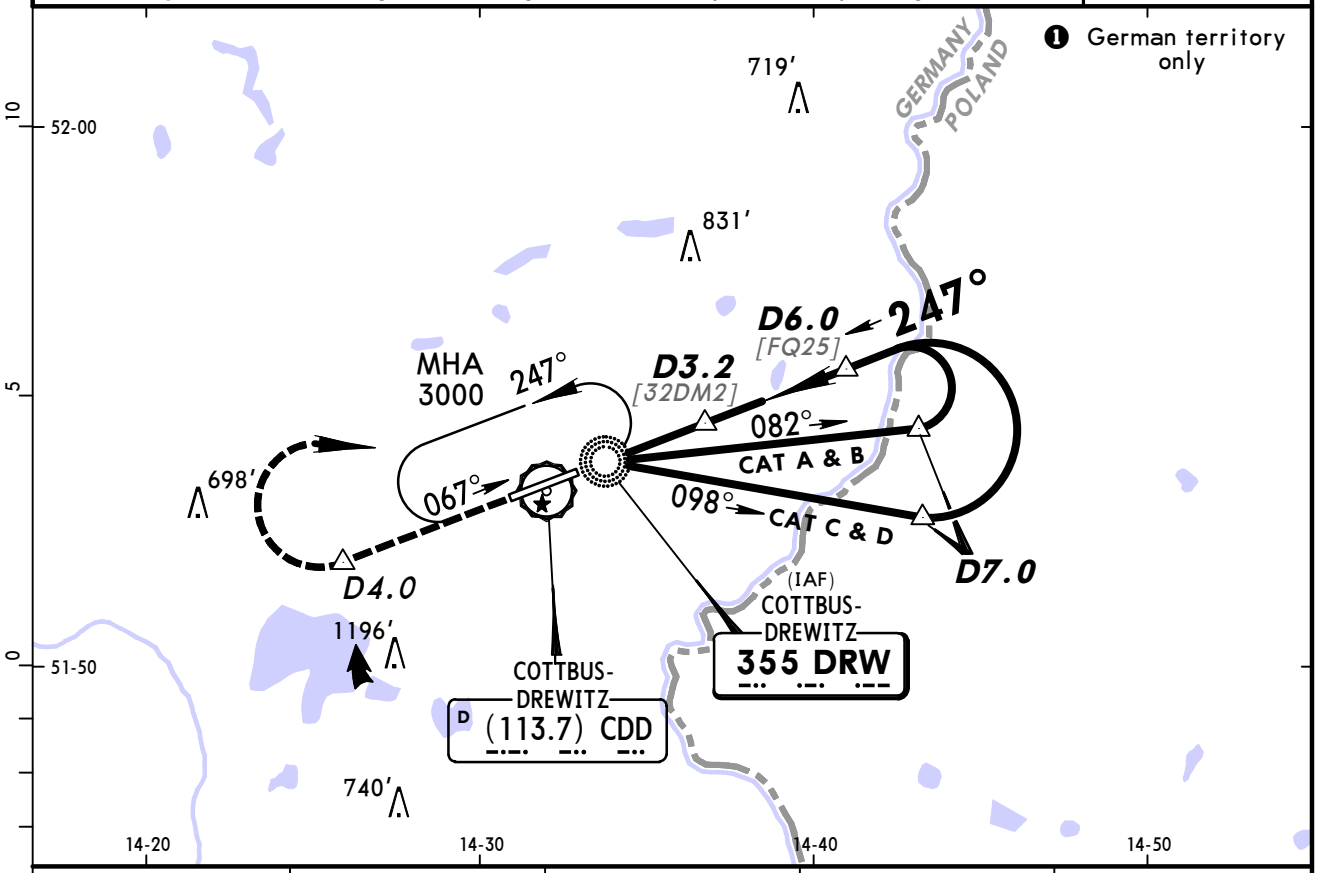
NDB DRW	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
355	247°	D6.0 2000' (1729')	810' (539')	274' / 271'

MISSED APCH: Climb STRAIGHT AHEAD to D4.0, then turn RIGHT to NDB climbing to 3000'.

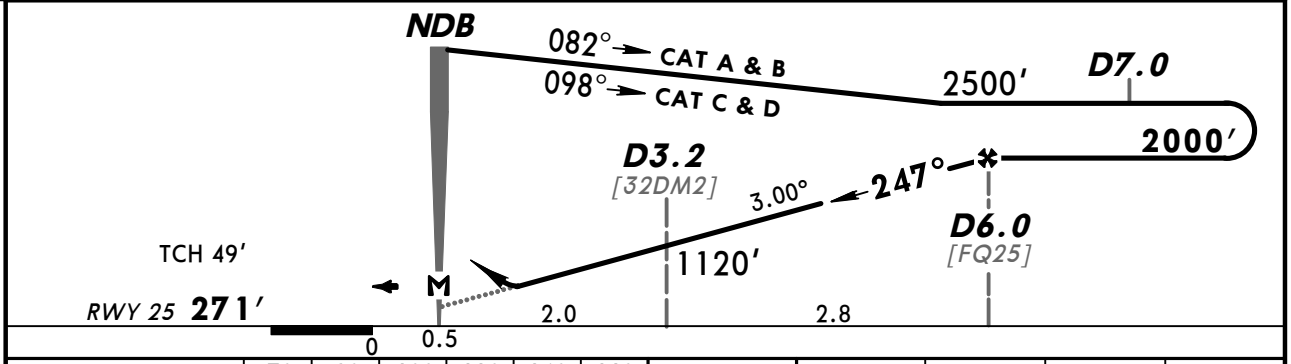
Alt Set: hPa (IN on req) Rwy Elev: 10 hPa Trans level: By ATC Trans alt: 5000'

1. DME required. 2. Arriving acft leaving controlled airspace when passing 2500' AGL.

2500' ❶
MSA CDD DME



CDD DME	2.0	3.0	4.0	5.0
ALTITUDE	740'	1060'	1380'	1690'



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

HIALS
PAPI

D4.0	3000' RT	DRW 355

Standard STRAIGHT-IN LANDING RWY **25**

DA(H) **810'** *(539')*

	ALS out
A	RVR *1500m*
B	
C	RVR *2000m* / CMV *2400m*
D	

CIRCLE-TO-LAND

Not authorized South of airport

Max Kts	MDA(H)	VIS
100	820' (546')	1500m
135	890' (616')	1600m
180	1100' (826')	2400m
205	1100' (826')	3600m

PANS OPS 4

CHANGES: Minimums.

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General Information

Location: Berlin Deu
IATA Code: SXF
Lat/Long: N52° 21.7' E013° 30.0'
Elevation: 157 ft

Airport Use: Public
Magnetic Variation: 2.9°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 0558 Z
Sunset: 1640 Z,

Runway Information

Runway: 07
Length x Width: 9842 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 146 ft
Lighting: Edge, ALS, Centerline, TDZ
Stopway: 984 ft

Runway: 25
Length x Width: 9842 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 155 ft
Lighting: Edge, ALS, Centerline, TDZ
Stopway: 984 ft

Communication Information

ATIS 124.95
Schonefeld Tower 120.025
Schonefeld Tower 119.575
Schonefeld Tower 118.85
Schonefeld Tower 39.685 Military
Schonefeld Ground Control 121.8
Schonefeld Ground Control 121.6
Bremen Radar Approach Control 126.425
Bremen Radar Approach Control 120.625 Departure Service
Bremen Radar Approach Control 119.625

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Bremen Radar Approach Control 119.5
Bremen Radar Approach Control 39.857 Military
Bremen Radar Approach Control 31.35 Military
Berlin Director Approach Control 136.1
Berlin Director Approach Control 121.125

1. GENERAL

1.1. ATIS

D-ATIS 124.95

1.2. NOISE ABATEMENT PROCEDURES

For additional depiction refer to 20-4.

1.2.1. NIGHT FLYING RESTRICTIONS

Jet ACFT not licensed in accordance with ICAO Annex 16 and licensed in accordance with ICAO Annex 16, Volume 1,Chapter 2

- Take-offs and landings are not permitted between 2200 (2150 off blocks)-0600LT.

Jet ACFT licensed in accordance with ICAO Annex 16, Volume 1, Chapter 3

- Take-offs and landings of jet ACFT not included in the BMVBS Bonus list (Nfl 1-83/03) are not permitted between 2400 (2350 off blocks)-0600LT.
- For delayed landings in scheduled air services and scheduled charter services permission for exemption from flying restrictions until 0100LT is considered granted in connection with provably unavoidable delays.
  The unavoidability of the delays shall be explained to the Aviation Supervision Office of the airport in each individual case and proved.

Exceptions:

- Landings of ACFT provably approaching the APT as alternate aerodrome for meteorological, technical and other safety reasons.
- Take-offs and landings of ACFT rendering medical assistance or on disasters mission or operated for flight checks and control flights.

Deviating from the above regulations, the approving authority may grant additional exceptions in justified individual cases, especially if necessary to avoid considerable disturbance of air traffic or in cases of special public interest.
If appropriate, applications shall be directed to:

Oertliche Luftaufsichtsstelle des
Flughafens Berlin - Schoenefeld
Flughafen
12521 Berlin - Germany
Tel.: (030) 6091 - 3288 or 3290
Fax: (030) 6091 - 3287

Clearance for take-offs during closing times issued by ATC do not comprise the necessary exceptional permission of the Approving Authority. Generally, exceptional permission for night landings during closing times will not be granted by ATC via radio telephony. Accordingly clearances issued by ATC for safety reasons will not necessarily include the decision of the Approving Authority about the admissibility of a night landing. In case of a delayed or premature landing not approved by the Approving Authority, the pilot shall appear at the Aviation Supervision Office immediately after landing in order to justify admissibility of the night landing.

1.2.2. REVERSE THRUST

Reverse thrust other than idle thrust shall only be used between 2200-0600LT as far as necessary for safety reasons.

1.2.3. RUN-UP TESTS

Engine test-runs are permitted only on test run areas provided in the APT regulations.
Between 2200-0600LT engine test runs are permitted with permission by the Aviation Supervision Office prior to take-off in the early morning if they are necessary due to repair work on aircraft for safety reasons which cannot be postponed.
Idle thrust test runs are excluded from these regulations.

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1. GENERAL

1.3. TAXI PROCEDURES

Taxiing South of RWY with Follow-me only.
TWY K5 for ACFT up to code letter C only.

TWYs L6, L7 and D between TWYs L7 and Y or ACFT up to code letter E and CAT I operations only.
TWY Y for ACFT up to code letter C and wheel base of less than 59'/18m only.
Taxiing onto apron 4a to Beechcraft hangar only for ACFT up to code letter B with a restricted wing span of MAX 62'/19m.

1.4. OTHER INFORMATION

CAUTION: Birds in vicinity of APT.
RWY 07/25 with antiskid layer.

2. ARRIVAL

2.1. CAT II/III OPERATIONS

RWY 07/25 approved for CAT II/III operations, special aircrew and ACFT certification required.

2.2. RWY OPERATIONS

Exit RWY 07 via TWY K5 not allowed.

3. DEPARTURE

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

Taxiing of ACFT from Aprons 1, 2 and 3 is only approved with minimum thrust.
After completion of de-icing process, ACFT have to taxi immediately to intermediate holding position on TWY H or TWY K4.

3.2. OTHER INFORMATION

3.2.1. DATALINK DEPARTURE CLEARANCE (DCL)

Temporal parameters:

t_i 25 min prior to EOBT for unregulated flights.
30 min prior to CTOT for ATFM regulated flights.

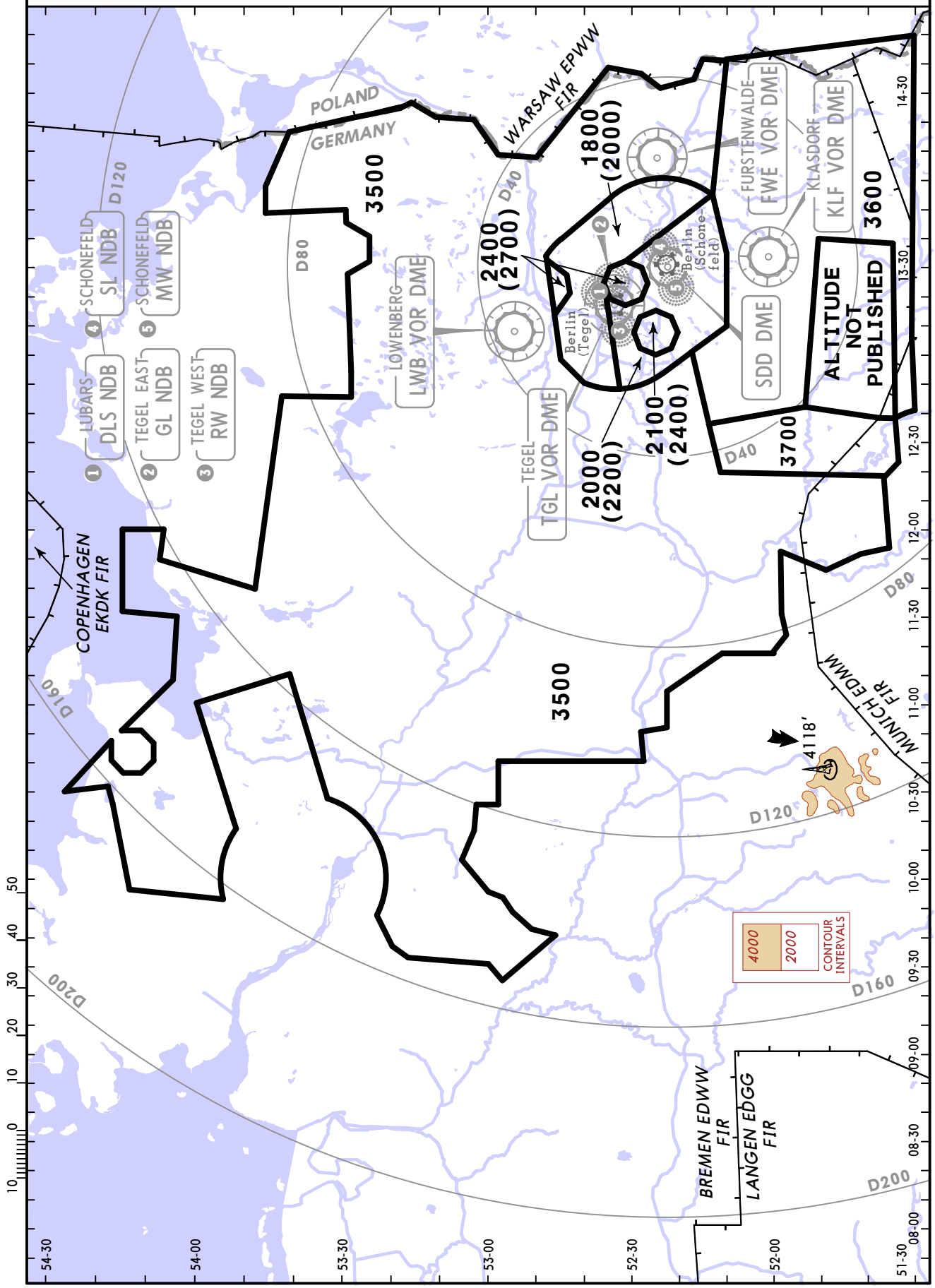
t_t 11 min prior to EOBT for unregulated flights.
16 min prior to CTOT for ATFM regulated flights.

t_l 5 min

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BREMEN Radar (APP)				Apt Elev	Alt Set: hPa (IN on request)
119.62	126.42	120.62	119.5	157′	Trans level: By ATC Trans alt: 5000′

The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000′ above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500′). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only. Altitudes in brackets apply for the period from AIRAC date in November until AIRAC date in March in order to meet required obstacle clearance at cold temperatures.



CHANGES: Sectors & altitudes.

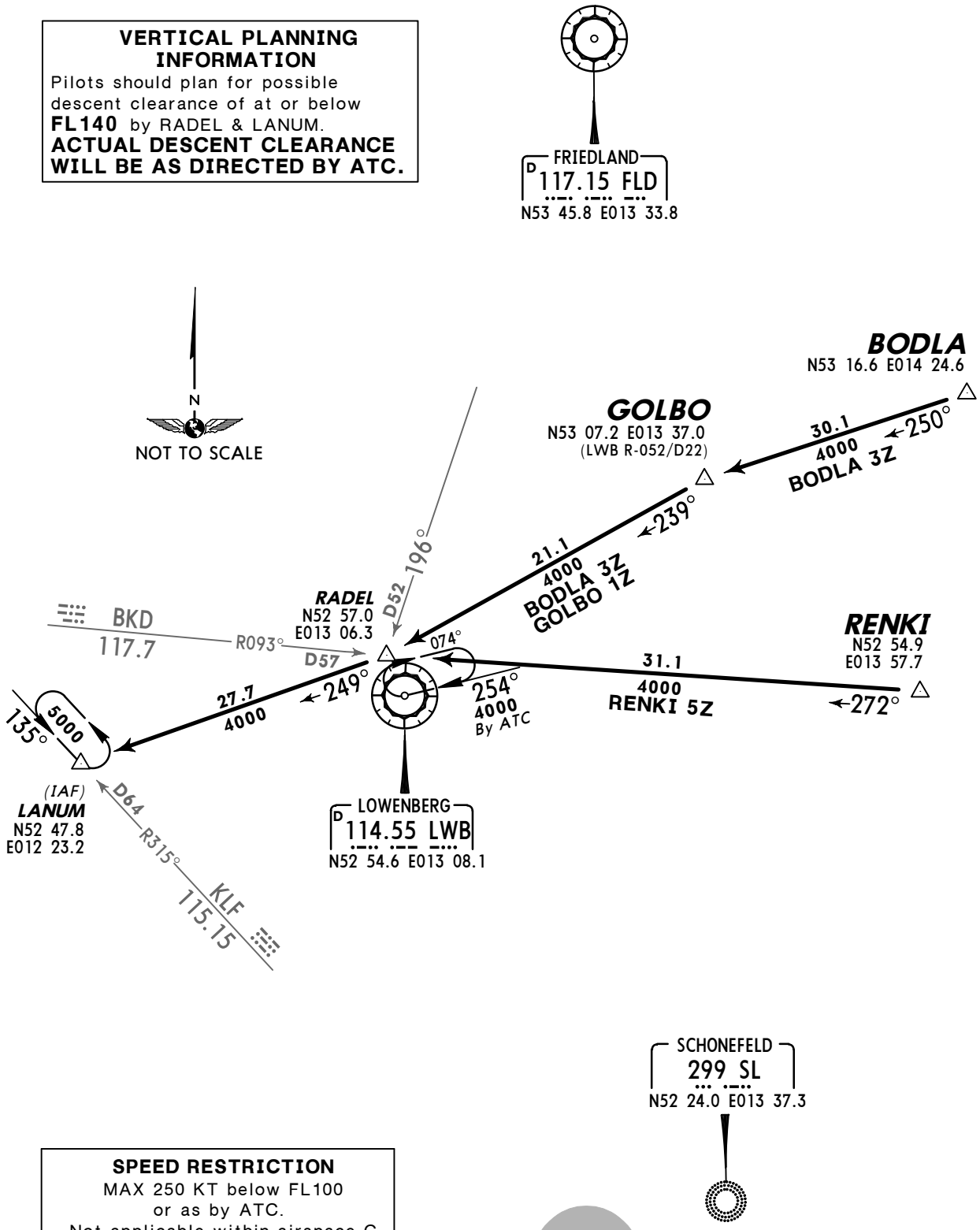
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D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
124.95	157′	Trans level: By ATC Trans alt: 5000′

2400′
MSA
SL NDB

BODLA THREE ZULU (BODLA 3Z) *[BODL3Z]*
GOLBO ONE ZULU (GOLBO 1Z) *[GOLB1Z]*
RENKI FIVE ZULU (RENKI 5Z) *[RENK5Z]*
RWY 07 ARRIVALS
FROM NORTHEAST
BRNAV EQUIPMENT NECESSARY

VERTICAL PLANNING INFORMATION
Pilots should plan for possible descent clearance of at or below **FL140** by RADEL & LANUM.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

CHANGES: RWY designation.

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D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
124.95	157′	Trans level: By ATC Trans alt: 5000′

2400′
MSA
SL NDB

BODLA TWO VICTOR (BODLA 2V) *[BODL2V]*
GOLBO ONE VICTOR (GOLBO 1V) *[GOLB1V]*
RENKI FOUR VICTOR (RENKI 4V) *[RENK4V]*
RWY 25 ARRIVALS
FROM NORTHEAST
BRNAV EQUIPMENT NECESSARY

FRIEDLAND
D 117.15 FLD
N53 45.8 E013 33.8

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

HOLDING OVER TERDA
161°
RENKI
4000
TERDA
D25
R341°
FWE

BODLA
N53 16.6 E014 24.6
215°
27.1
4000
BODLA 2V

175°
D39
GOLBO
N53 07.2 E013 37.0
147°
21.9
4000
GOLBO 1V

RENKI
N52 54.9
E013 57.7
D33
6.5
4000
189°
BODLA 2V
RENKI 4V

VERTICAL PLANNING INFORMATION
Pilots should plan for possible descent clearance of at or below **FL100** by TERDA.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

047°
(IAF)
TERDA
N52 48.5
E013 55.7
D25
341°

N
NOT TO SCALE

TEGEL
D 112.3 TGL
N52 33.7 E013 17.3

SCHONEFELD
299 SL
N52 24.0 E013 37.3

FURSTENWALDE
D 113.3 FWE
N52 24.7 E014 07.8

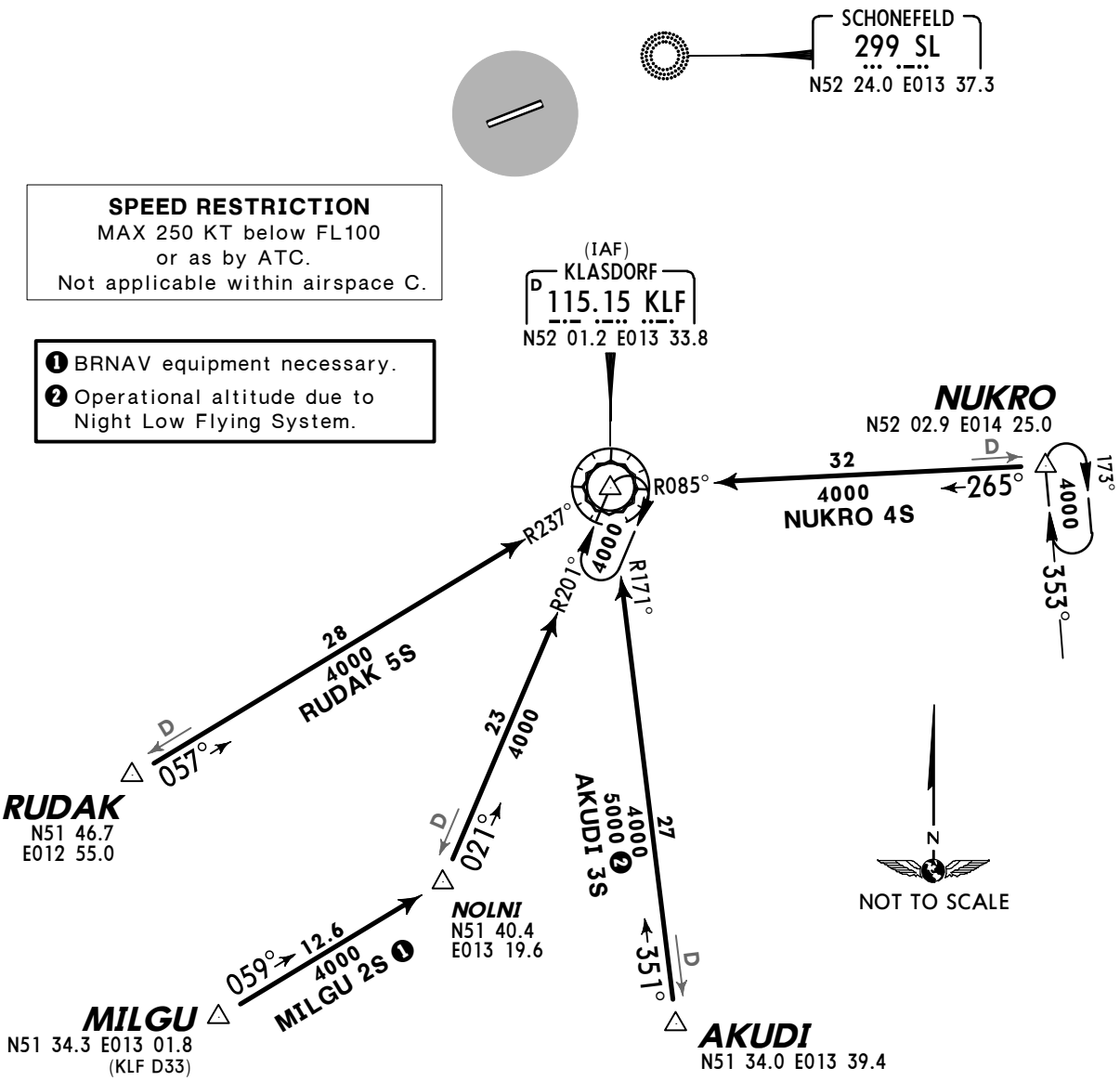
CHANGES: RWY designation.

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D-ATIS	Apt Elev	
124.95	157′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′

2400′
MSA
SL NDB

AKUDI THREE SIERRA (AKUDI 3S) *[AKUD3S]*
MILGU TWO SIERRA (MILGU 2S) *[MILG2S]*❶
NUKRO FOUR SIERRA (NUKRO 4S) *[NUKR4S]*
RUDAK FIVE SIERRA (RUDAK 5S) *[RUDA5S]*
RWY 07 ARRIVALS
FROM SOUTH



VERTICAL PLANNING INFORMATION

Pilots should plan for possible descent clearance as follows:
AKUDI 3S, MILGU 2S, RUDAK 5S: at or below **FL90** by KLF.
NUKRO 4S: at or below **FL140** by NUKRO,
at or below **FL90** by KLF.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

CHANGES: RWY designation.

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D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
124.95	157′	Trans level: By ATC Trans alt: 5000′

2400′
MSA
SL NDB

AKUDI FOUR VICTOR (AKUDI 4V) *[AKUD4V]* ❶
MILGU THREE VICTOR (MILGU 3V) *[MILG3V]* ❶
NUKRO THREE VICTOR (NUKRO 3V) *[NUKR3V]*
RUDAK FIVE VICTOR (RUDAK 5V) *[RUDA5V]*
RWY 25 ARRIVALS
FROM SOUTH

❶ BRNAV equipment necessary.

SCHONEFELD
299 SL
N52 24.0 E013 37.3

(IAF)
FURSTENWALDE
D 113.3 FWE
N52 24.7 E014 07.8

N
NOT TO SCALE

(IAF)
KLASDORF
D 115.15 KLF
N52 01.2 E013 33.8

❷ Operational altitude due to Night Low Flying System.

NUKRO
N52 02.9 E014 25.0

(IAF)
ATGUP
N51 55.4 E013 47.3

RUDAK
N51 46.7 E012 55.0

MILGU
N51 34.3 E013 01.8

AKUDI
N51 34.0 E013 39.4

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

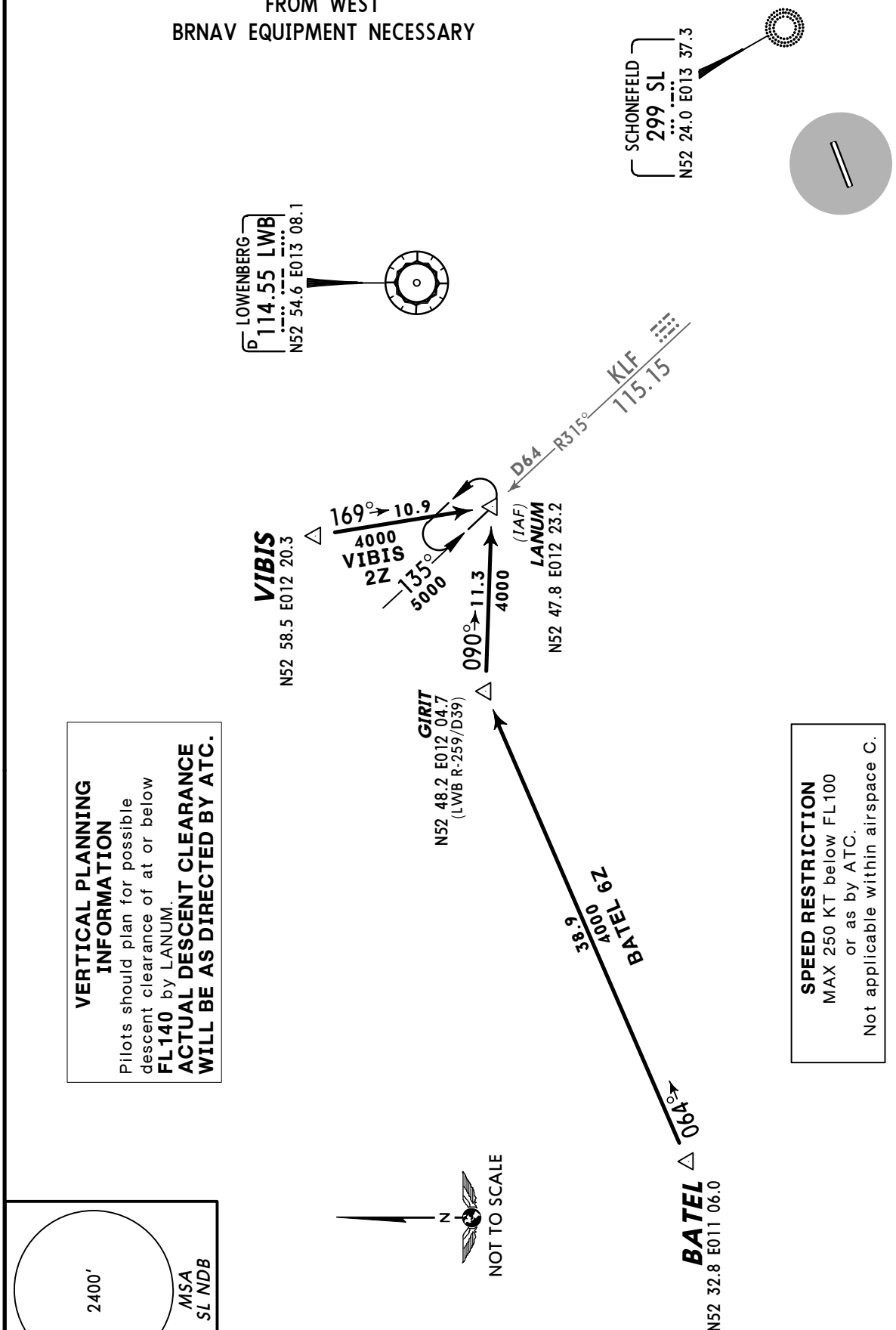
VERTICAL PLANNING INFORMATION
Pilots should plan for possible descent clearance as follows:
AKUDI 4V, MILGU 3V:
at or below **FL120** by ATGUP.
NUKRO 3V:
at or below **FL140** by NUKRO,
at or below **FL70** by FWE.
RUDAK 5V:
at or below **FL100** by KLF.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

CHANGES: RWY designation.

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D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
124.95	157′	Trans level: By ATC Trans alt: 5000′

BATEL SIX ZULU (BATEL 6Z) *[BATE6Z]*
VIBIS TWO ZULU (VIBIS 2Z) *[VIBI2Z]*
RWY 07 ARRIVALS
FROM WEST
BRNAV EQUIPMENT NECESSARY



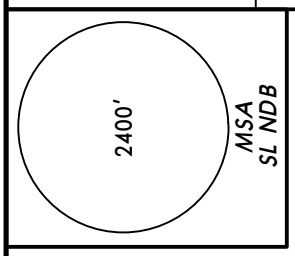
VERTICAL PLANNING INFORMATION
Pilots should plan for possible descent clearance of at or below **FL140** by LANUM.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

CHANGES: RWY designation.

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D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
124.95	157′	Trans level: By ATC Trans alt: 5000′



BATEL SIX VICTOR (BATEL 6V) *[BATE6V]*
VIBIS THREE VICTOR (VIBIS 3V) *[VIBI3V]*
RWY 25 ARRIVALS
FROM WEST
BRNAV EQUIPMENT NECESSARY

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

VERTICAL PLANNING INFORMATION
Pilots should plan for possible descent clearance as follows:
BATEL 6V: at or below **FL100** by NASAT & TERDA.
VIBIS 3V: at or below **FL100** by TERDA.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

HOLDING OVER TERDA
RENKI N52 54.9 E013 57.7
161° 4000 D25 R341° FWE
TERDA

D25 341°
TERDA (IAF) N52 48.5 E013 55.7
123° 12.5 4000
PINUV N52 55.7 E013 38.7
D19 085°
21.9 4000
FURSTENWALDE D 113.3 FWE N52 24.7 E014 07.8
D38 R307°
NASAT N52 48.2 E013 19.6
127° 4000
SCHONEFELD 299 SL N52 24.0 E013 37.3
LOWENBERG D 114.55 LWB N52 54.6 E013 08.1
29.6 4000
PODUS N52 57.6 E012 49.8
091° 17.9 4000 VIBIS 3V
VIBIS N52 58.5 E012 20.3
45.4 4000
D39 259°
087°
GIRIT N52 48.2 E012 04.7
064° 38.9 4000 BATEL 6V
BATEL N52 32.8 E011 06.0

N
NOT TO SCALE

CHANGES: RWY designation.

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D-ATIS	Apt Elev	
124.95	157′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

2400′
MSA
SL NDB

KLF Ø7
LANUM Ø7 [LANØ7]
RWY 07
RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC

135° 5000 095° 26.7 4000 LANUM Ø7

IBAMA
N52 44.1
E013 06.9

(IAF)
LANUM
N52 47.8 E012 23.2
At or below FL140

R315°

157°

20.5

N
NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NAKIP
N52 25.0
E013 18.8
220 KT

SCHONEFELD
299 SL
N52 24.0 E013 37.3

(FAF)
PIKOV
N52 18.9 E013 15.7
At or above 3000′

246°

DB531 N52 23.5 E013 12.8
DB532 N52 22.0 E013 06.7
DB533 N52 20.6 E013 00.6
DB534 N52 19.1 E012 54.5
DB535 N52 17.6 E012 48.5
DB536 N52 16.1 E012 42.4
DB552 N52 17.4 E013 09.7
DB553 N52 15.9 E013 03.6
DB554 N52 14.5 E012 57.6
DB555 N52 13.0 E012 51.5
DB556 N52 11.5 E012 45.5
DB590 N52 19.9 E013 20.0
DB541 N52 14.2 E013 18.7
DB542 N52 12.7 E013 12.7
DB543 N52 11.3 E013 06.6
DB544 N52 09.8 E013 00.6
DB545 N52 08.3 E012 54.5
DB546 N52 06.9 E012 48.5

By ATC 2.8

156° 5

066°

336°

DODAT
N52 15.7
E013 24.8
220 KT

15.6 4000 KLF Ø7 337°

(IAF)
KLASDORF
D 115.15 KLF
N52 01.2 E013 33.8
At or below FL90

201° 4000 021°

TRANSITION	ROUTING
KLF Ø7	KLF **(FL90-)** - DODAT (K220) - DB546 - DB556 - PIKOV **(3000′+).**
LANUM Ø7	LANUM **(FL140-)** - IBAMA - NAKIP (K220) - DB536 - DB556 - PIKOV **(3000′+).**

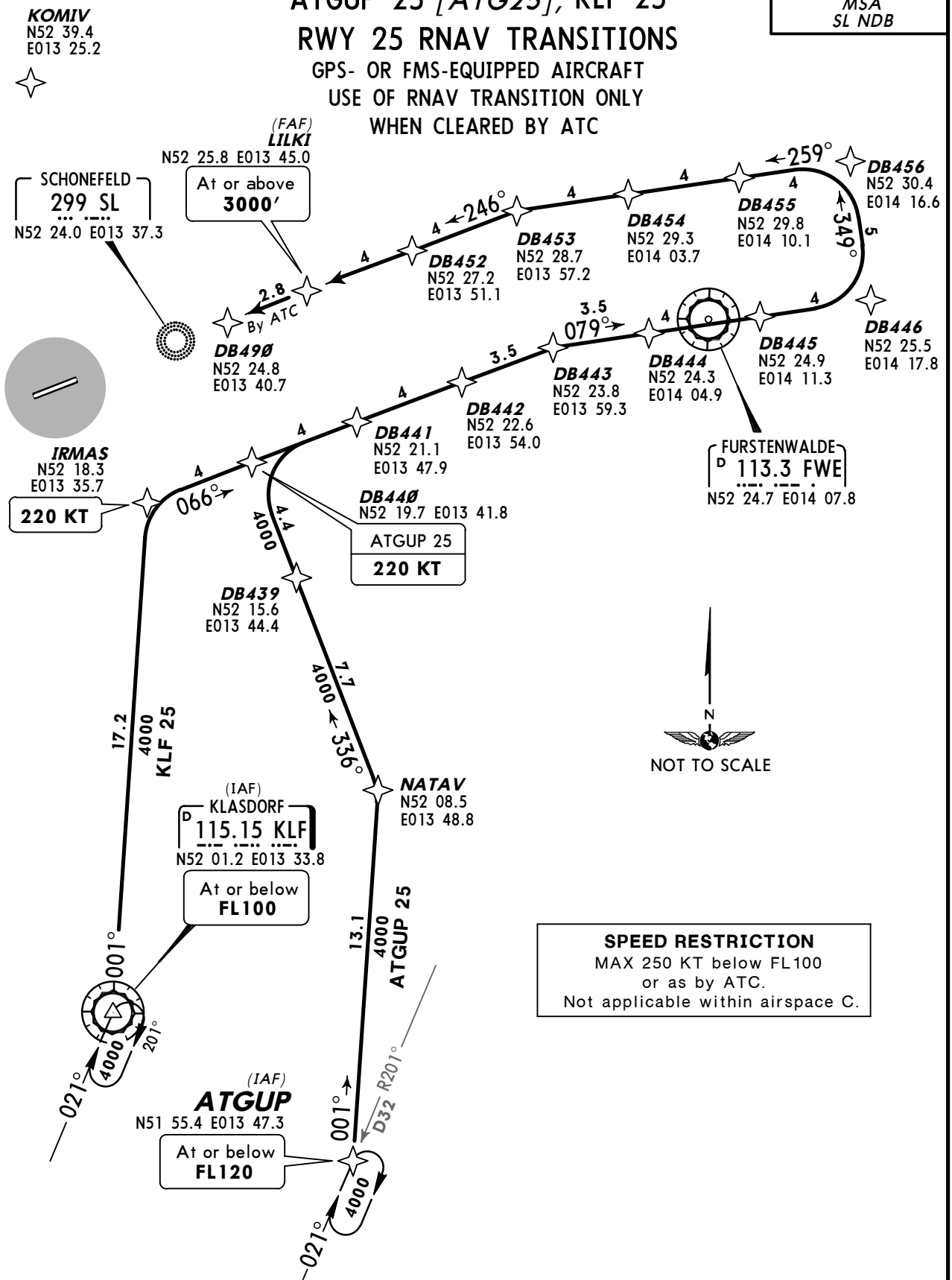
CHANGES: INS coordinates DB590.

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D-ATIS	Apt Elev	
124.95	157′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

2400′
MSA
SL NDB

ATGUP 25 *[ATG25]*, KLF 25
RWY 25 RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC



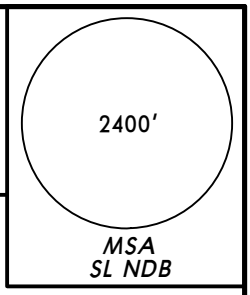
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

TRANSITION	ROUTING
ATGUP 25	ATGUP **(FL120-) -** NATAV - DB440 (K220) - DB443 - DB446 - DB456 - DB453 - LILKI **(3000′+).**
KLF 25	KLF **(FL100-) -** IRMAS (K220) - DB443 - DB446 - DB456 - DB453 - LILKI **(3000′+).**

CHANGES: INS coordinates DB490; holding at ATGUP.

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D-ATIS	Apt Elev	
124.95	157′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

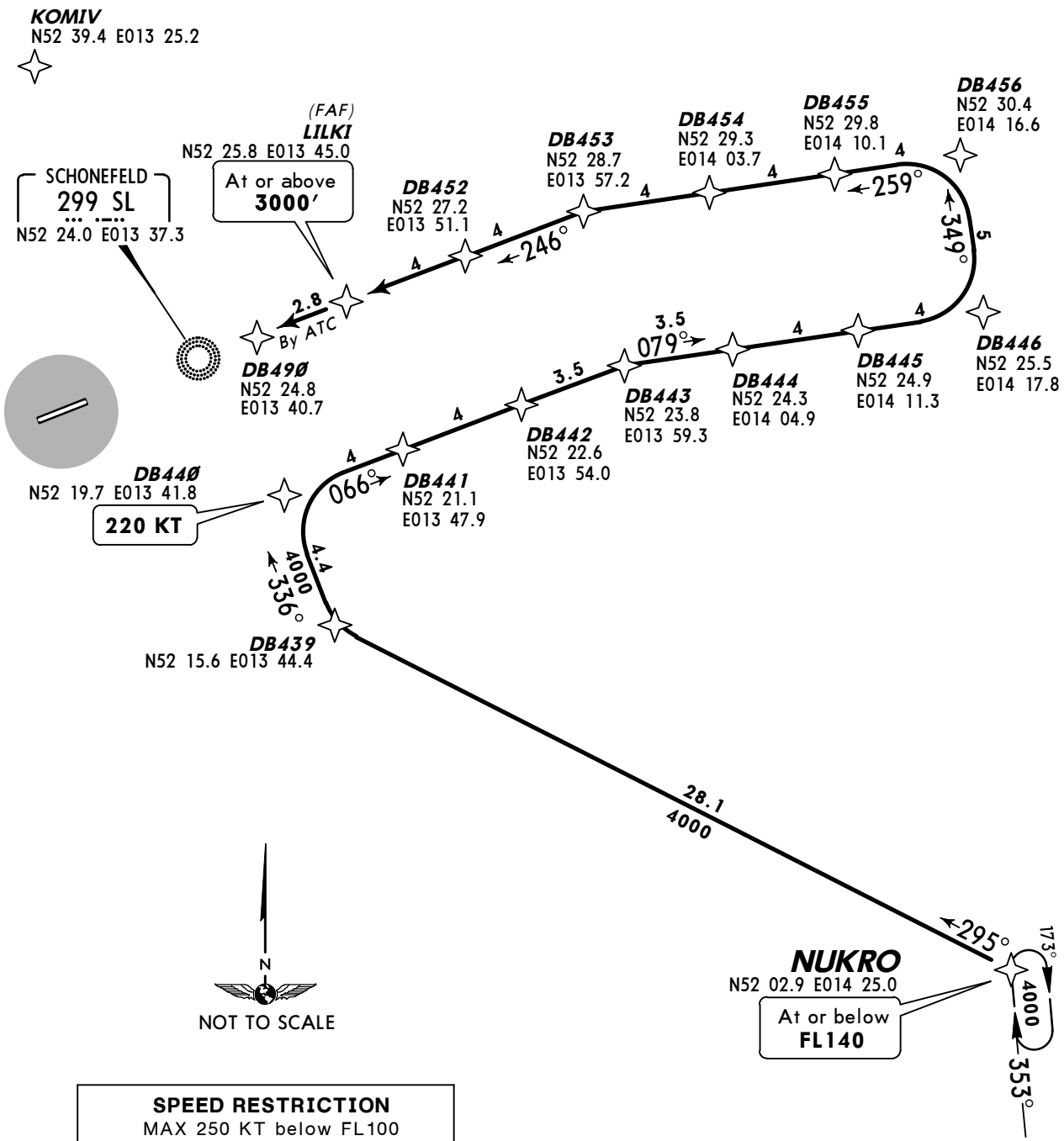


NUKRO 25 *[NUK25]*

RWY 25 RNAV TRANSITION

GPS- OR FMS-EQUIPPED AIRCRAFT

USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

ROUTING

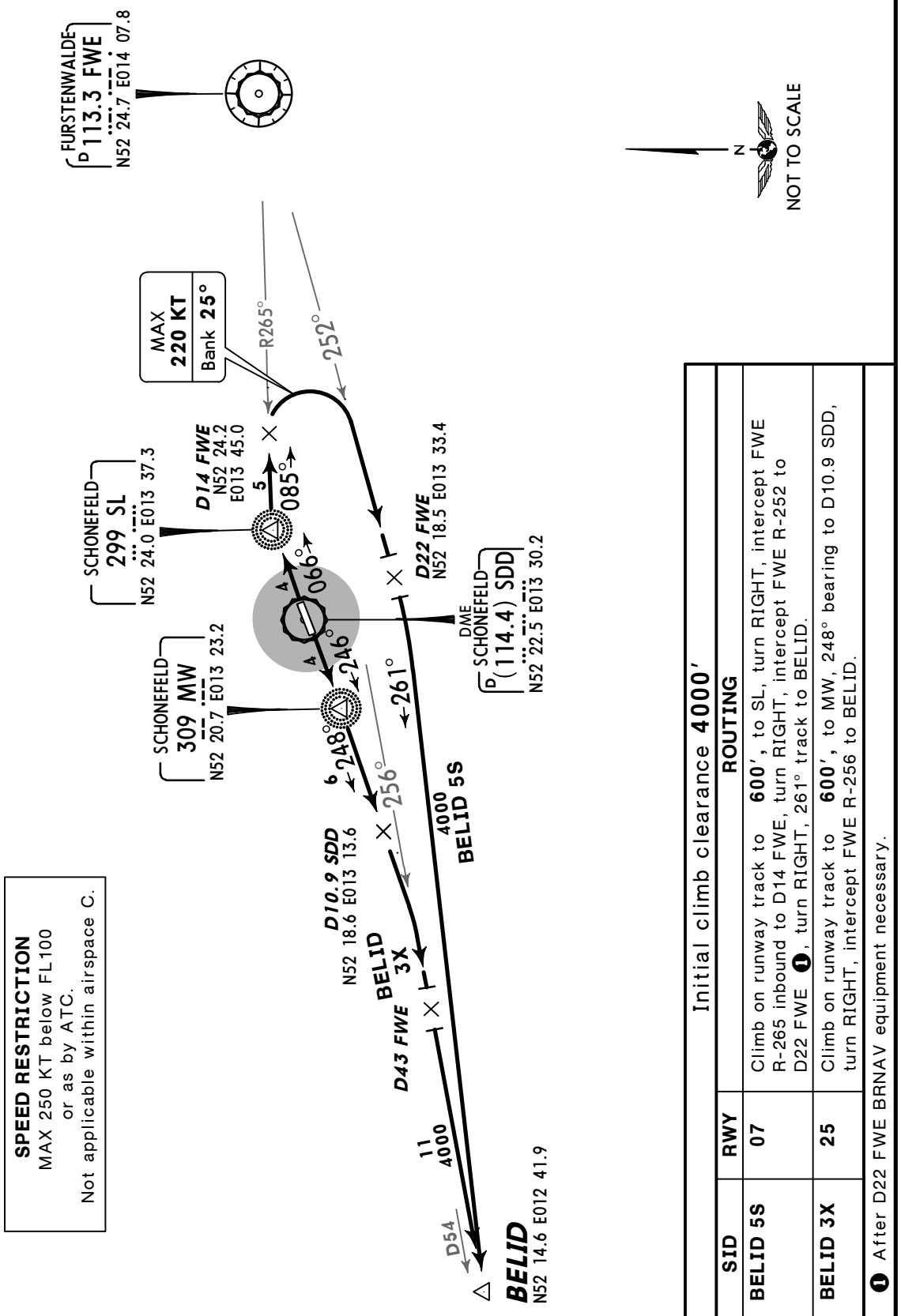
NUKRO **(FL140-) -** DB439 - DB440 (K220) - DB443 - DB446 - DB456 - DB453 - LILKI **(3000′+).**

CHANGES: INS coordinates DB490.

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BREMEN Radar	*Apt Elev*	
120.62	157′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 20-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

BELID FIVE SIERRA (BELID 5S)
BELID THREE X-RAY (BELID 3X)
RWYS 07, 25 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	RWY	ROUTING
BELID 5S	**07**	Climb on runway track to **600′**, to SL, turn RIGHT, intercept FWE R-265 inbound to D14 FWE, turn RIGHT, intercept FWE R-252 to D22 FWE ❶, turn RIGHT, 261° track to BELID.
BELID 3X	**25**	Climb on runway track to **600′**, to MW, 248° bearing to D10.9 SDD, turn RIGHT, intercept FWE R-256 to BELID.

❶ After D22 FWE BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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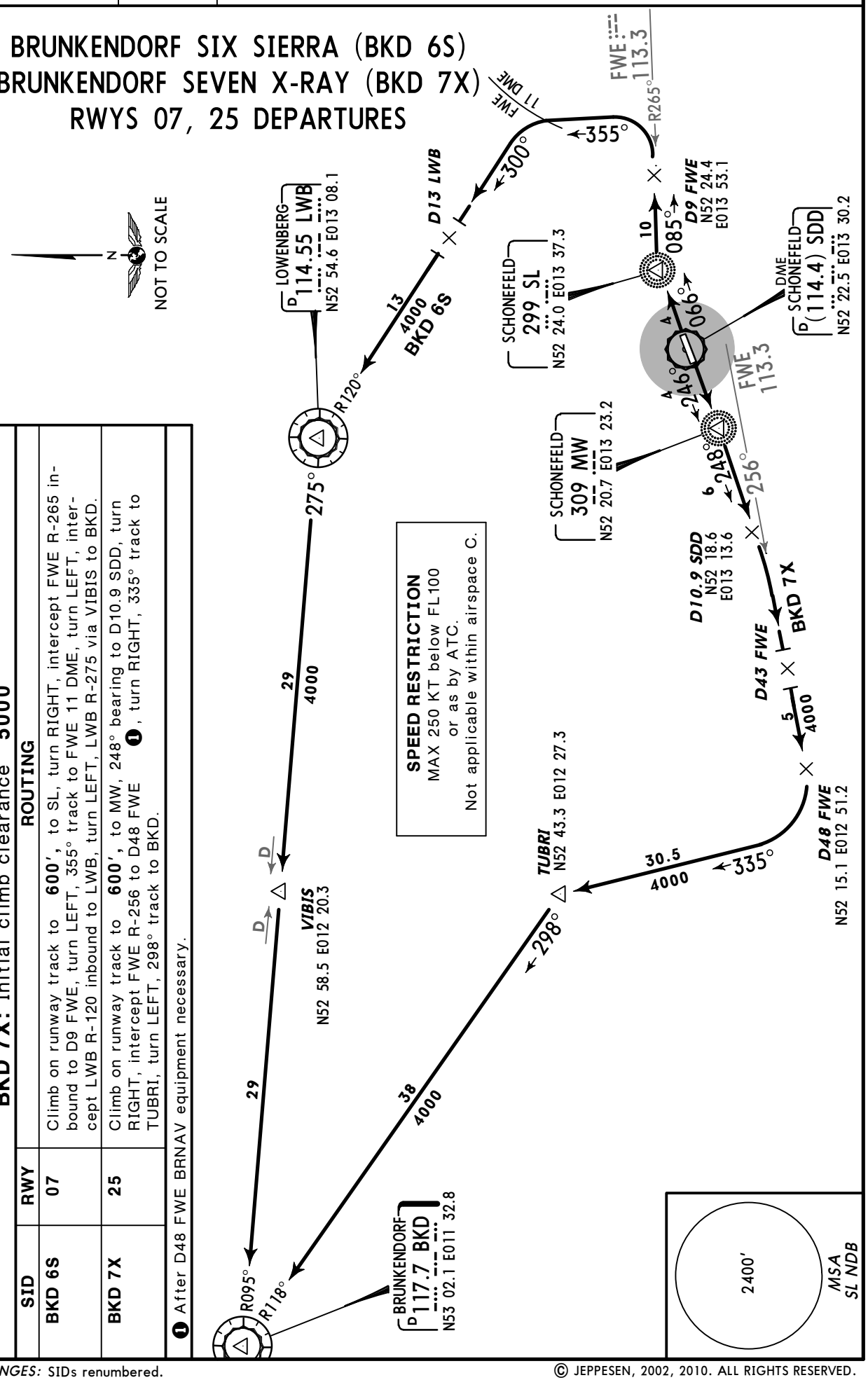
BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
120.62	157′	1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 20-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

BRUNKENDORF SIX SIERRA (BKD 6S)
BRUNKENDORF SEVEN X-RAY (BKD 7X)
RWYS 07, 25 DEPARTURES

BKD 6S: Initial climb clearance **4000′**
BKD 7X: Initial climb clearance **5000′**

SID	RWY	ROUTING
BKD 6S	07	Climb on runway track to **600′**, to SL, turn RIGHT, intercept FWE R-265 inbound to D9 FWE, turn LEFT, 355° track to FWE 11 DME, turn LEFT, intercept LWB R-120 inbound to LWB, turn LEFT, LWB R-275 via VIBIS to BKD.
BKD 7X	25	Climb on runway track to **600′**, to MW, 248° bearing to D10.9 SDD, turn RIGHT, intercept FWE R-256 to D48 FWE ❶, turn RIGHT, 335° track to TUBRI, turn LEFT, 298° track to BKD.

❶ After D48 FWE BRNAV equipment necessary.



CHANGES: SIDs renumbered.

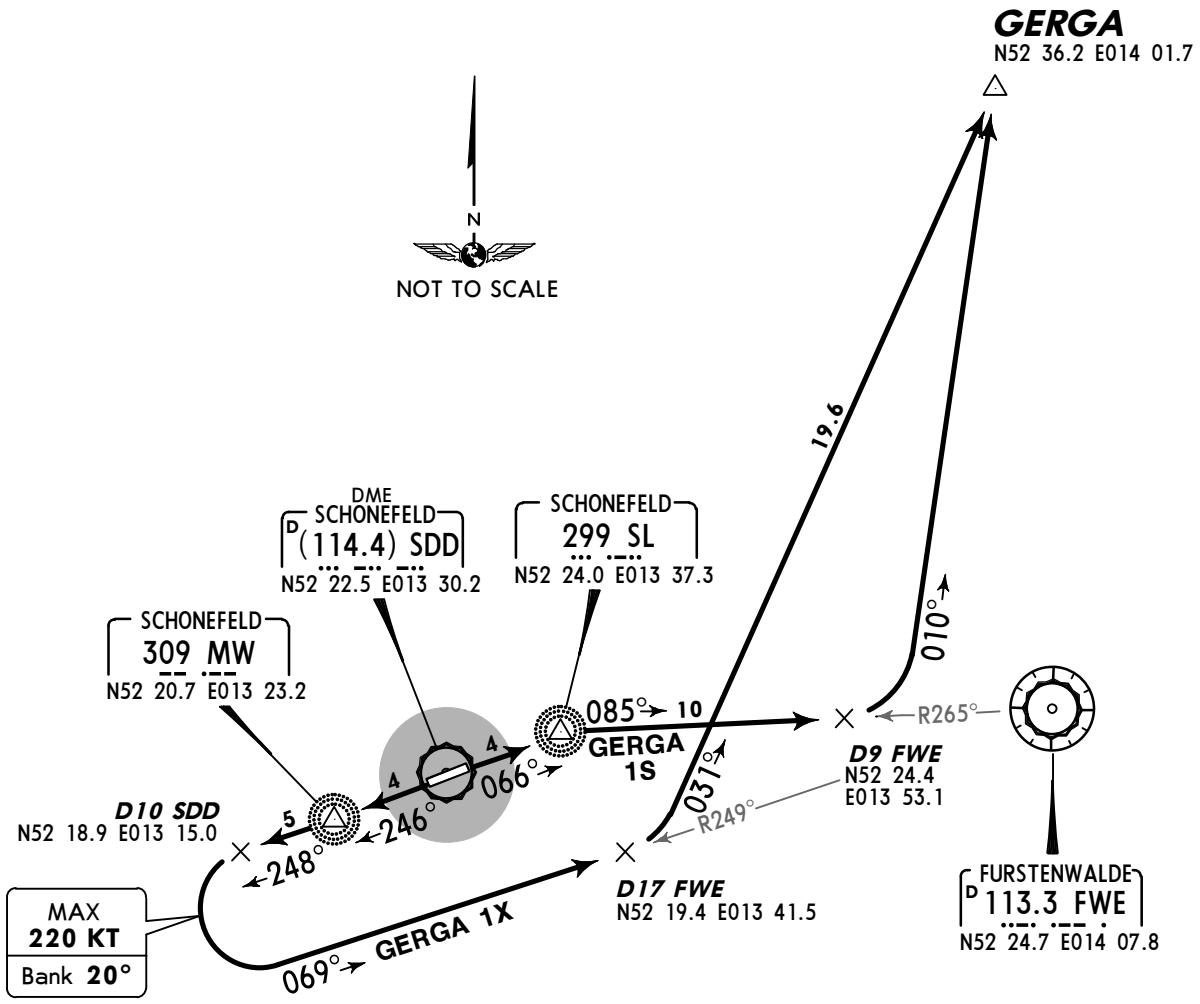
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BREMEN Radar 120.62	*Apt Elev* 157′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also minimum noise routings (refer to 20-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

2400′
MSA
SL NDB

GERGA ONE SIERRA (GERGA 1S)
GERGA ONE X-RAY (GERGA 1X)
RWYS 07, 25 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

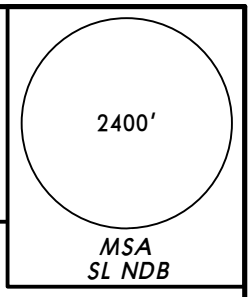
SID	RWY	ROUTING
GERGA 1S	**07**	Climb on runway track to **600′**, to SL, turn RIGHT, intercept FWE R-265 inbound to D9 FWE ❶, turn LEFT, 010° track to GERGA.
GERGA 1X	**25**	Climb on runway track to **600′**, to MW, 248° bearing to D10 SDD, turn LEFT, intercept FWE R-249 inbound to D17 FWE ❷, turn LEFT, 031° track to GERGA.

BRNAV equipment necessary after: ❶ D9 FWE/ ❷ D17 FWE.

CHANGES: GERGA SIDs established; KLF SIDs transferred.

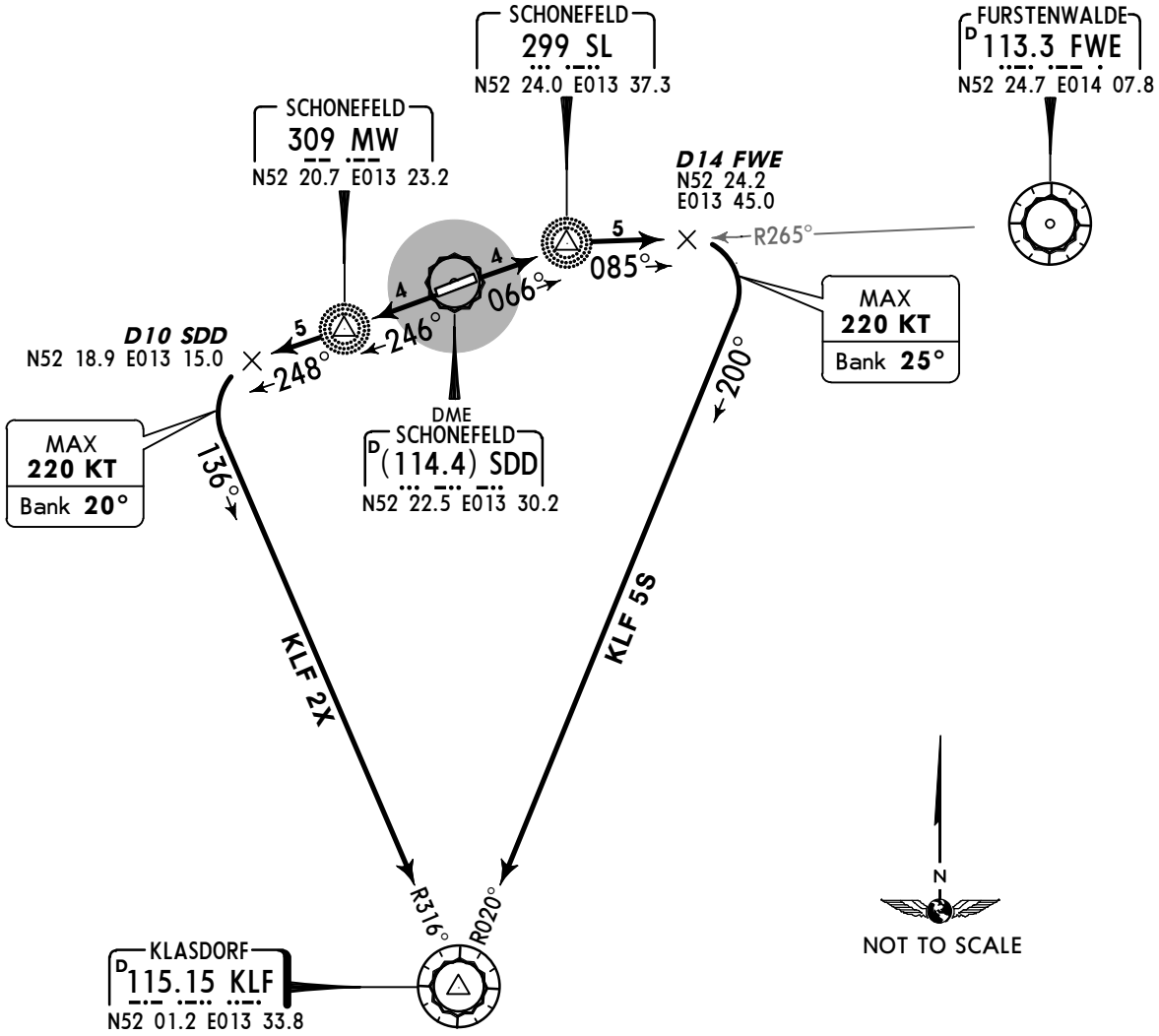
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BREMEN Radar 120.62	*Apt Elev* 157′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also minimum noise routings (refer to 20-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.



KLASDORF FIVE SIERRA (KLF 5S)
KLASDORF TWO X-RAY (KLF 2X)
RWYS 07, 25 DEPARTURES
ONLY FOR DESTINATION EDDB OR EDDT

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



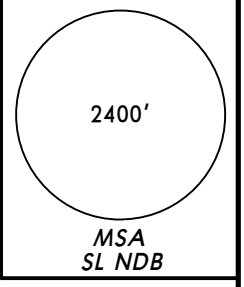
Initial climb clearance **4000′**

SID	RWY	ROUTING
KLF 5S	**07**	Climb on runway track to **600′**, to SL, turn RIGHT, intercept FWE R-265 inbound to D14 FWE, turn RIGHT, intercept KLF R-020 inbound to KLF.
KLF 2X	**25**	Climb on runway track to **600′**, to MW, 248° bearing to D10 SDD, turn LEFT, intercept KLF R-316 inbound to KLF.

CHANGES: KLF SIDs renumbered & transferred; RAKIT SIDs withdrawn.

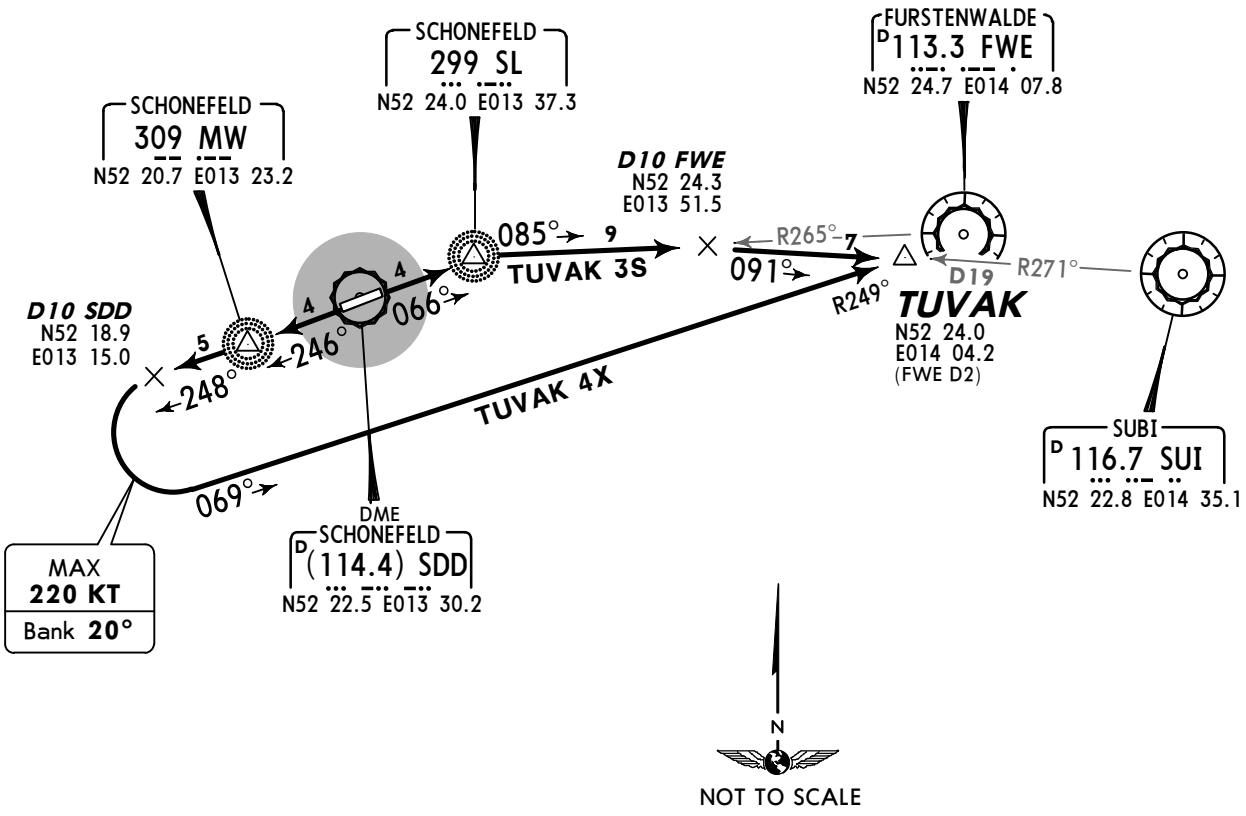
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BREMEN Radar 120.62	*Apt Elev* 157′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also minimum noise routings (refer to 20-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.



TUVAK THREE SIERRA (TUVAK 3S)
TUVAK FOUR X-RAY (TUVAK 4X)
RWYS 07, 25 DEPARTURES
NO ACCESS TO AIRWAY UL 980

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

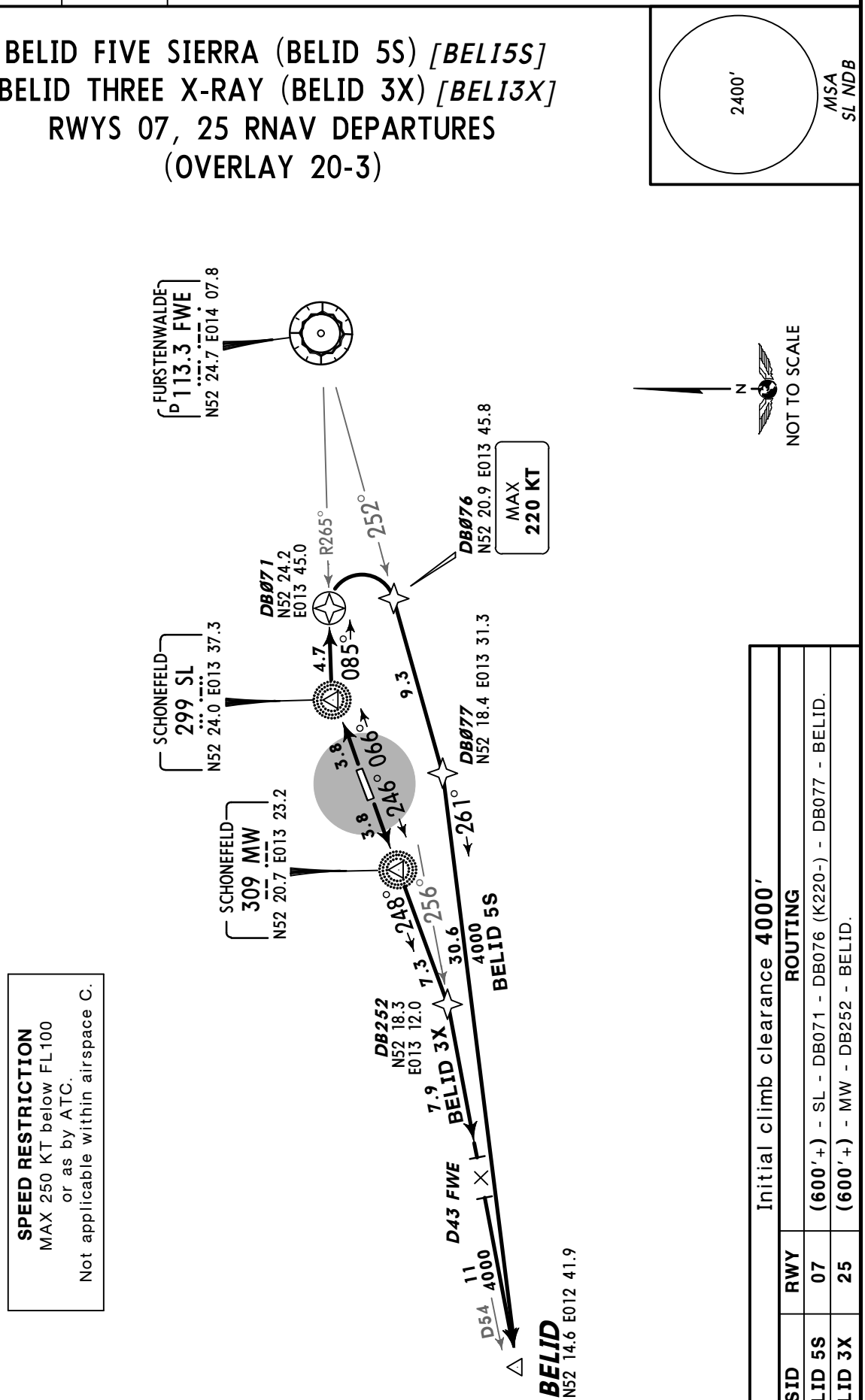
SID	RWY	ROUTING
TUVAK 3S	**07**	Climb on runway track to **600′**, to SL, turn RIGHT, intercept FWE R-265 inbound to D10 FWE, turn RIGHT, intercept SUI R-271 inbound to TUVAK.
TUVAK 4X	**25**	Climb on runway track to **600′**, to MW, 248° bearing to D10 SDD, turn LEFT, intercept FWE R-249 inbound to TUVAK.

CHANGES: SIDs renumbered.

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BREMEN Radar	*Apt Elev*	
120.62	157′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 20-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

BELID FIVE SIERRA (BELID 5S) *[BELI5S]*
BELID THREE X-RAY (BELID 3X) *[BELI3X]*
RWYS 07, 25 RNAV DEPARTURES
(OVERLAY 20-3)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	RWY	ROUTING
BELID 5S	07	(600′+) - SL - DB071 - DB076 (K220-) - DB077 - BELID.
BELID 3X	25	(600′+) - MW - DB252 - BELID.

CHANGES: RNAV SIDs renumbered & revised.

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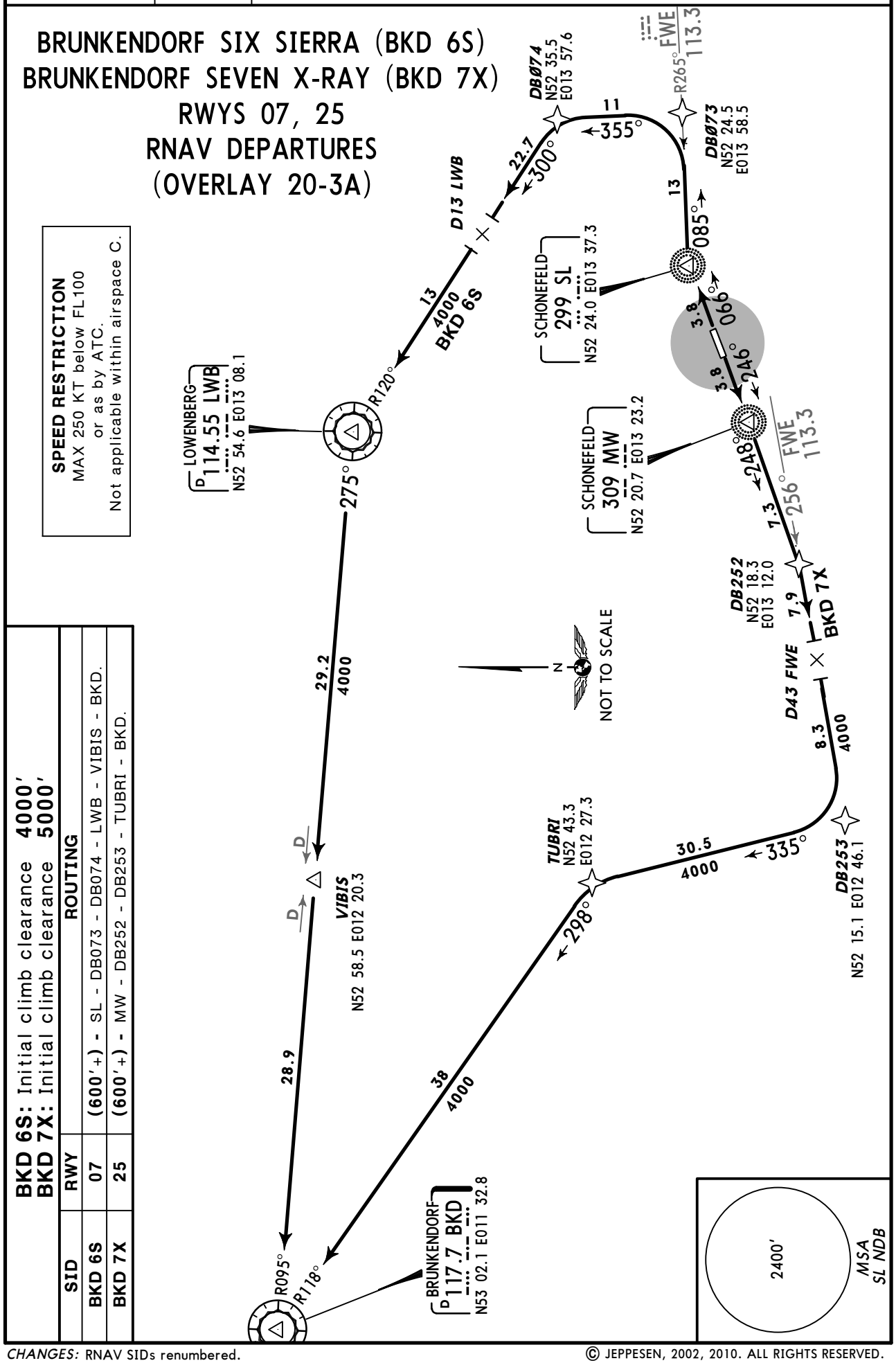
BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 20-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.
120.62	157′	

BRUNKENDORF SIX SIERRA (BKD 6S)
BRUNKENDORF SEVEN X-RAY (BKD 7X)
RWYS 07, 25
RNAV DEPARTURES
(OVERLAY 20-3A)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

BKD 6S: Initial climb clearance **4000′**
BKD 7X: Initial climb clearance **5000′**

SID	RWY	ROUTING
BKD 6S	07	(600′+) - SL - DB073 - DB074 - LWB - VIBIS - BKD.
BKD 7X	25	(600′+) - MW - DB252 - DB253 - TUBRI - BKD.



CHANGES: RNAV SIDs renumbered.

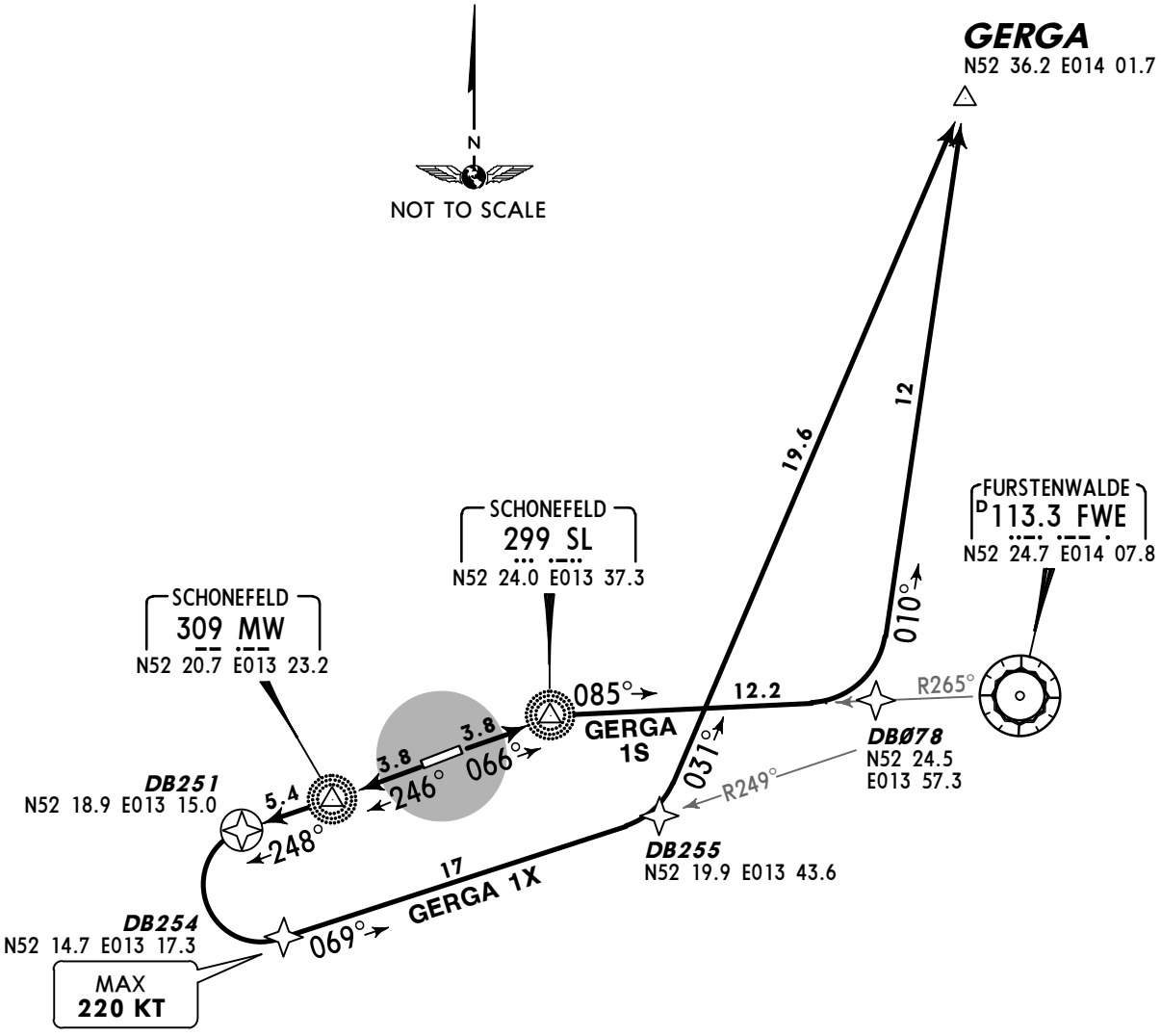
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BREMEN Radar 120.62	*Apt Elev* 157′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also minimum noise routings (refer to 20-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

2400′
MSA
SL NDB

GERGA ONE SIERRA (GERGA 1S) *[GERG1S]*
GERGA ONE X-RAY (GERGA 1X) *[GERG1X]*
RWYS 07, 25 RNAV DEPARTURES
(OVERLAY 20-3B)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

SID	RWY	ROUTING
GERGA 1S	**07**	**(600′+)** - SL - DB078 - GERGA.
GERGA 1X	**25**	**(600′+)** - MW - DB251 - DB254 (K220-) - DB255 - GERGA.

CHANGES: GERGA RNAV SIDs established; KLF RNAV SIDs transferred.

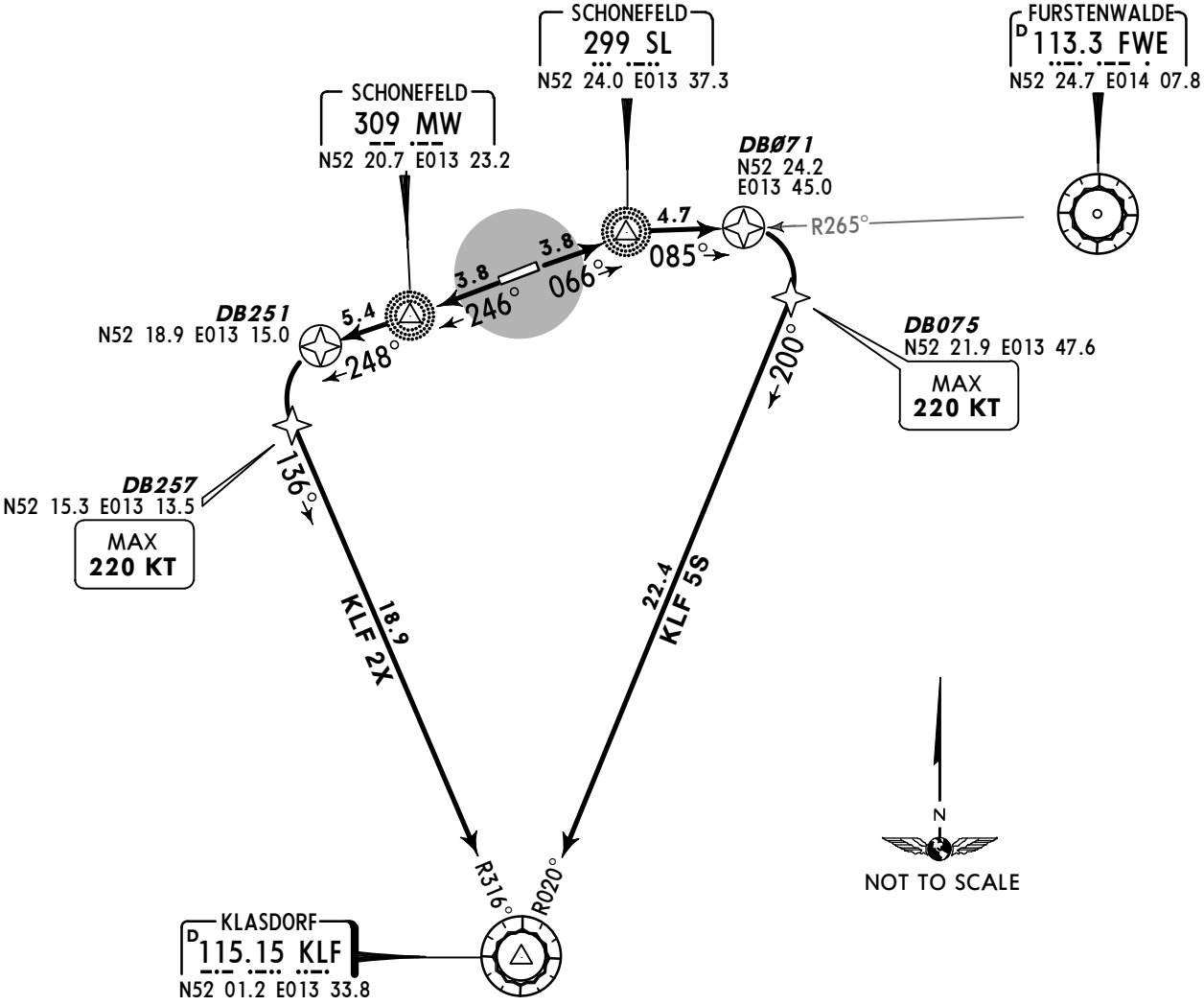
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BREMEN Radar 120.62	*Apt Elev* 157′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also minimum noise routings (refer to 20-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

2400′
MSA
SL NDB

KLASDORF FIVE SIERRA (KLF 5S)
KLASDORF TWO X-RAY (KLF 2X)
RWYS 07, 25 RNAV DEPARTURES
(OVERLAY 20-3C)

ONLY FOR DESTINATION EDDB OR EDDT



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	RWY	ROUTING
KLF 5S	**07**	**(600′+) -** SL - DB071 - DB075 (K220-) - KLF.
KLF 2X	**25**	**(600′+) -** MW - DB251 - DB257 (K220-) - KLF.

CHANGES: KLF RNAV SIDs renumb & transferred; RAKIT RNAV SIDs withdrawn.

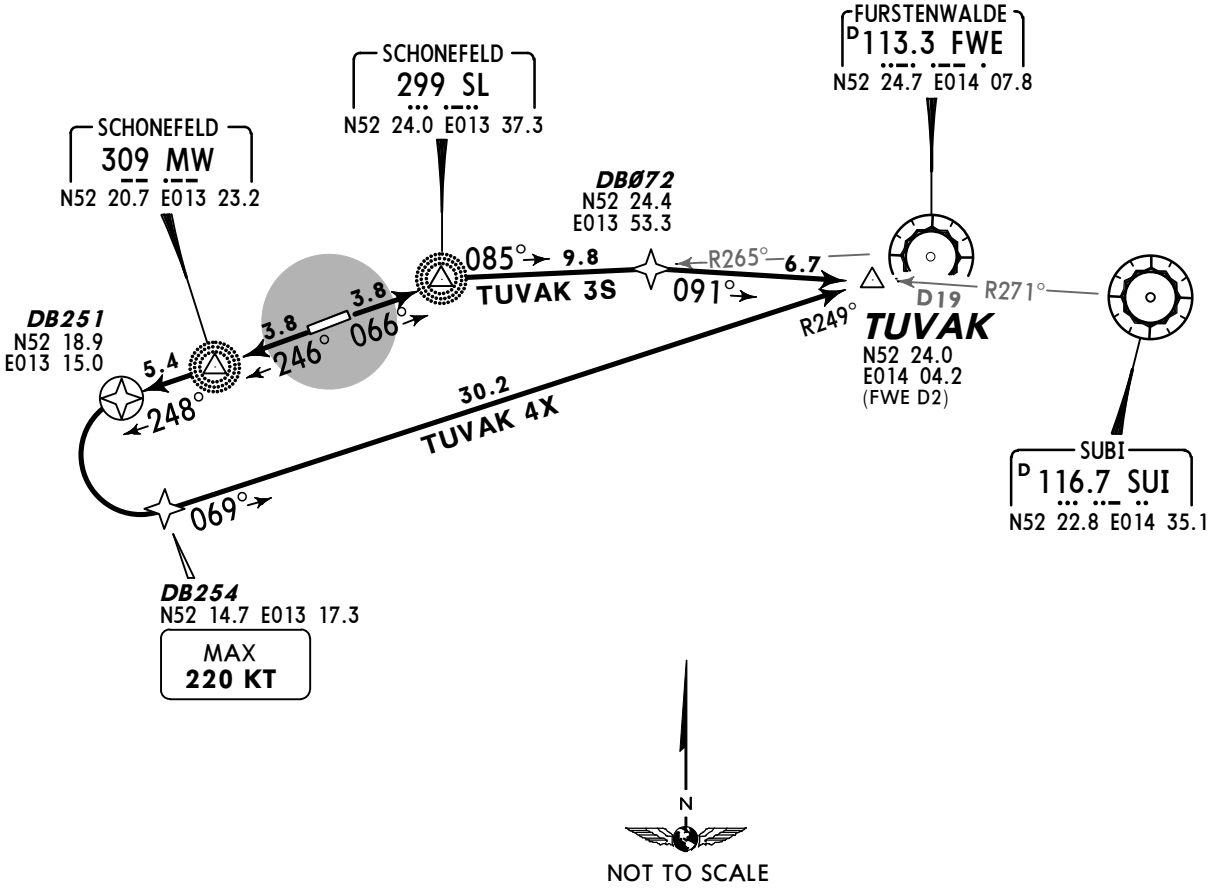
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BREMEN Radar 120.62	*Apt Elev* 157′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also minimum noise routings (refer to 20-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

2400′
MSA
SL NDB

TUVAK THREE SIERRA (TUVAK 3S) *[TUVA3S]*
TUVAK FOUR X-RAY (TUVAK 4X) *[TUVA4X]*
RWYS 07, 25 RNAV DEPARTURES
(OVERLAY 20-3D)
NO ACCESS TO AIRWAY UL 980

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

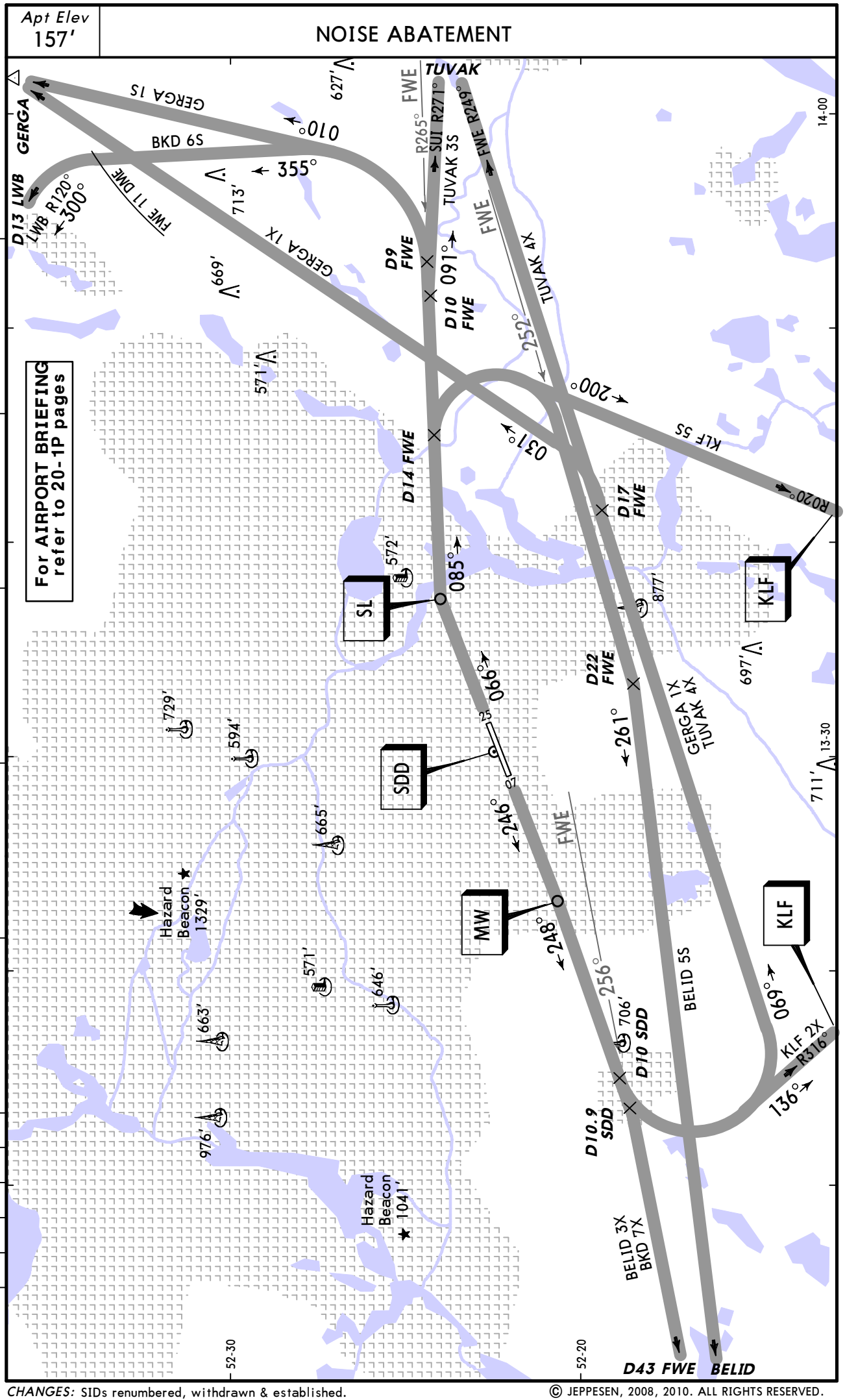
SID	RWY	ROUTING
TUVAK 3S	**07**	**(600′+)** - SL - DB072 - TUVAK.
TUVAK 4X	**25**	**(600′+)** - MW - DB251 - DB254 (K220-) - TUVAK.

CHANGES: RNAV SIDs renumbered.

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Apt Elev
157'

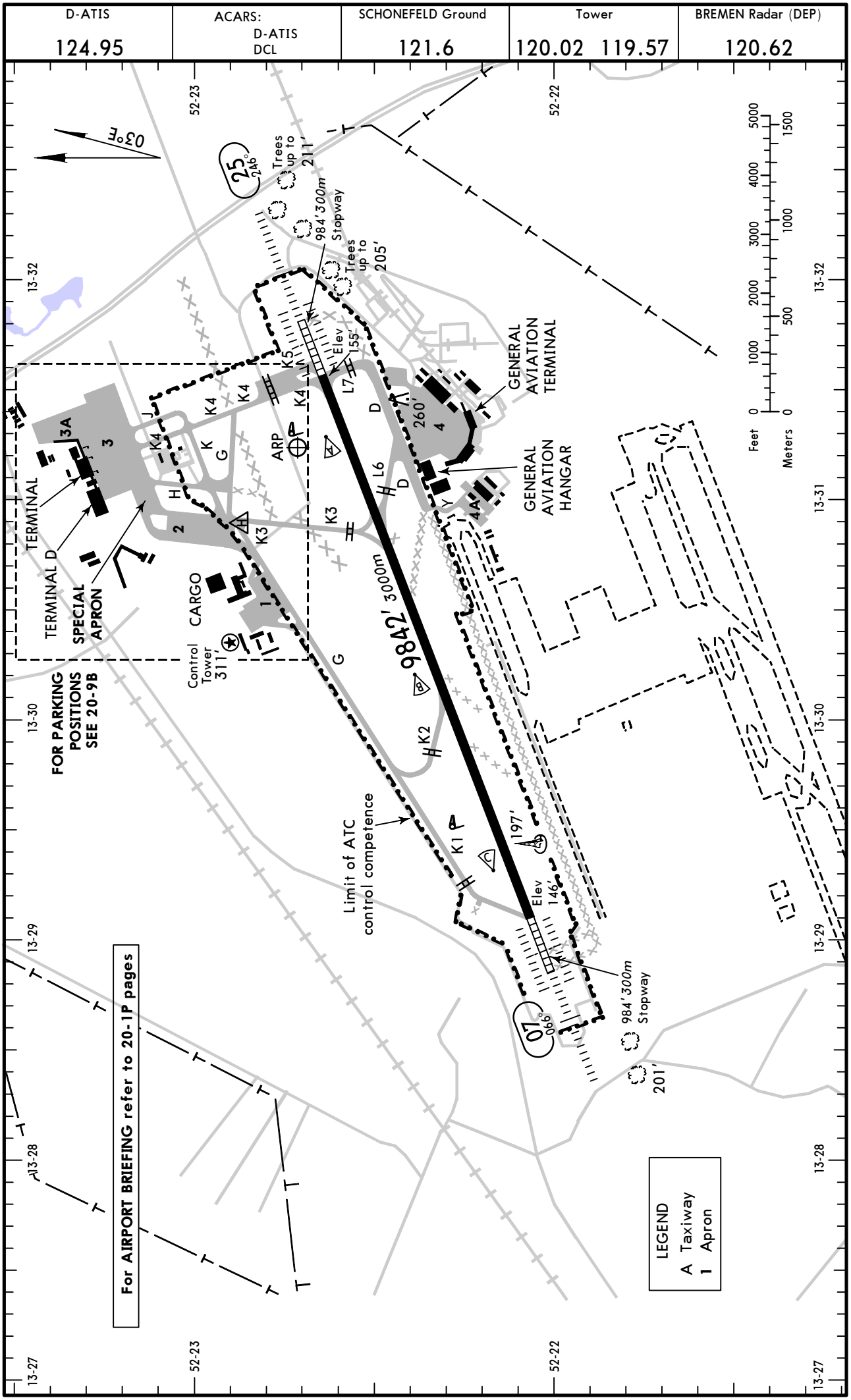
NOISE ABATEMENT



CHANGES: SIDs renumbered, withdrawn & established.

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D-ATIS	ACARS: D-ATIS DCL	SCHONEFELD Ground	Tower	BREMEN Radar (DEP)
124.95		121.6	120.02 119.57	120.62



CHANGES: Twy designation.

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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND Threshold	LANDING BEYOND Glide Slope	TAKE-OFF	WIDTH
07 25	HIRL CL *(15m)*HIALS SFL TDZ PAPI-L(3.0°) RVR		8870′ *2704m* 8748′ *2666m*	❶	148′ *45m*

❶ TAKE-OFF RUN AVAILABLE

RWY 07:
From rwy head 9842′ (3000m)
twy K2 int 6070′ (1850m)
twy L6 int 2920′ (890m)
twy K3 int 2690′ (820m)

RWY 25:
From rwy head 9842′ (3000m)
twy L6 int 7267′ (2215m)
twy K3 int 6726′ (2050m)
twy K2 int 4347′ (1325m)

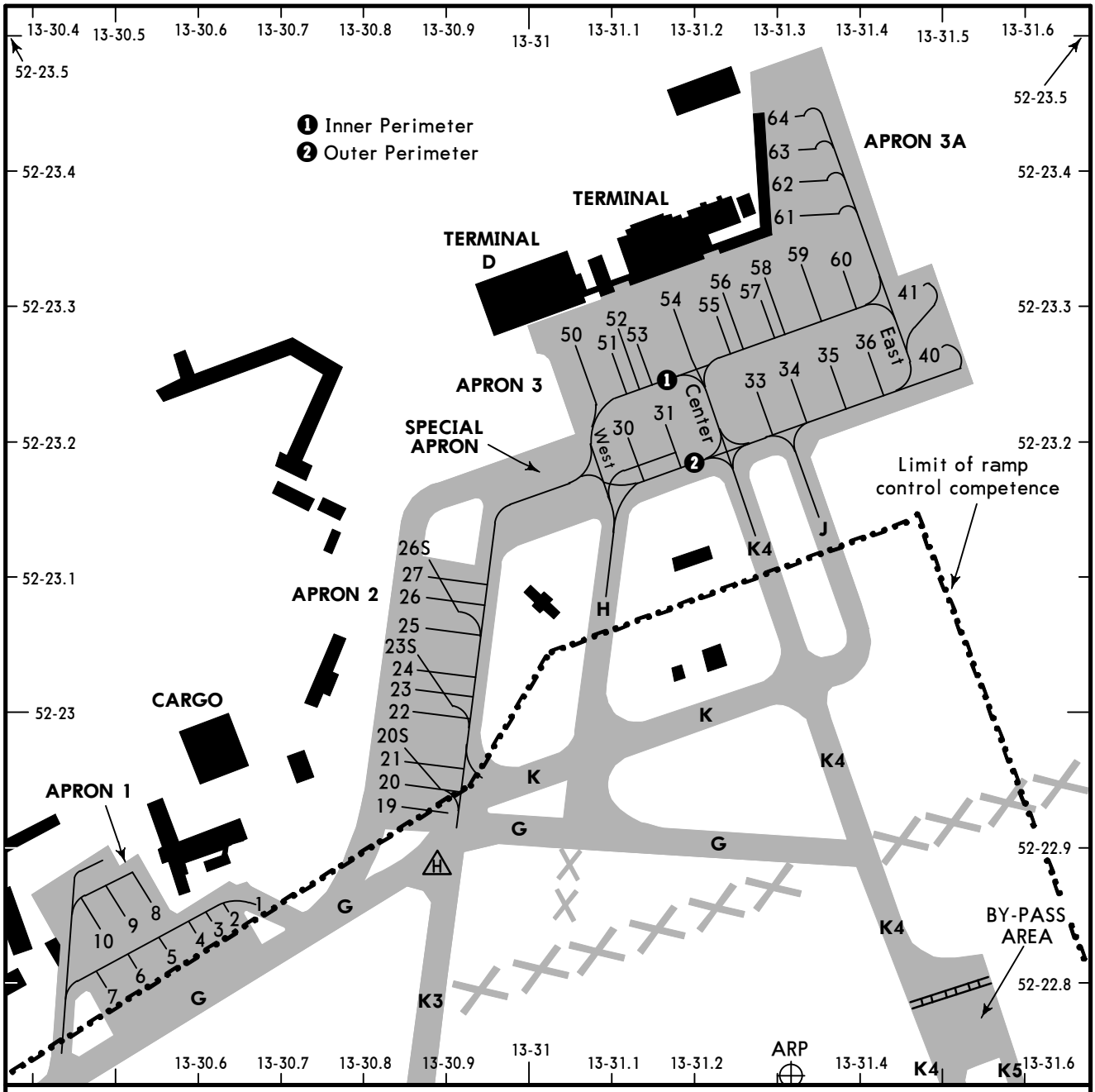
Standard TAKE-OFF **1**

	Approved Operators HIRL, CL & mult. RVR req	LVP must be in force RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: None.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1	N52 22.8 E013 30.7	36	N52 23.3 E013 31.4
2 thru 5	N52 22.8 E013 30.6	40, 41	N52 23.3 E013 31.5
6 thru 10	N52 22.8 E013 30.5	50	N52 23.3 E013 31.0
19, 20	N52 22.9 E013 30.8	51 thru 53	N52 23.3 E013 31.1
20S thru 24	N52 23.0 E013 30.8	54 thru 56	N52 23.3 E013 31.2
25	N52 23.1 E013 30.8	57 thru 59	N52 23.3 E013 31.3
26, 26S, 27	N52 23.1 E013 30.9	60	N52 23.3 E013 31.4
30	N52 23.2 E013 31.1	61	N52 23.3 E013 31.3
31	N52 23.2 E013 31.2	62 thru 64	N52 23.4 E013 31.3
33 thru 35	N52 23.2 E013 31.3		

CHANGES: Twy designations.

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BERLIN, GERMANY

SCHONEFELD

STRAIGHT-IN RWY		A	B	C	D
07	CAT 3B ILS	**R125m**	**R125m**	**R125m**	**R125m**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**246′**(100′)	**246′**(100′)	**246′**(100′)	**246′**(100′)
		RA105′R300m	**RA105′R300m**	**RA105′R300m**	**RA105′R300m**
	ILS	**346′**(200′)	**346′**(200′)	**346′**(200′)	**346′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**530′**(384′)	**530′**(384′)	**530′**(384′)	**530′**(384′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**490′**(344′)	**490′**(344′)	**490′**(344′)	**490′**(344′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**630′**(484′)	**630′**(484′)	**630′**(484′)	**630′**(484′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**680′**(534′)	**680′**(534′)	**680′**(534′)	**680′**(534′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**680′**(534′)	**680′**(534′)	**680′**(534′)	**680′**(534′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
25	CAT 3B ILS	**R125m**	**R125m**	**R125m**	**R125m**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**255′**(100′)	**255′**(100′)	**255′**(100′)	**255′**(100′)
		RA101′R300m	**RA101′R300m**	**RA101′R300m**	**RA101′R300m**
	ILS	**355′**(200′)	**355′**(200′)	**355′**(200′)	**355′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**540′**(385′)	**540′**(385′)	**540′**(385′)	**540′**(385′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**680′**(525′)	**680′**(525′)	**680′**(525′)	**680′**(525′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV)	**680′**(525′)	**680′**(525′)	**680′**(525′)	**680′**(525′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**730′**(575′)	**730′**(575′)	**730′**(575′)	**730′**(575′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**730′**(575′)	**730′**(575′)	**730′**(575′)	**730′**(575′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

CHANGES: Minimums.

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BERLIN, GERMANY
SCHONEFELD

TAKE-OFF RWY 07, 25

All Rwys

LVP must be in Force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

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EDDB/SXF
SCHONEFELD

JEPPESEN
30 SEP 11 (21-1)

BERLIN, GERMANY
ILS or LOC Rwy 07

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	SCHONEFELD Tower	Ground
124.95	119.62	126.42	136.1	120.02 119.57	121.6

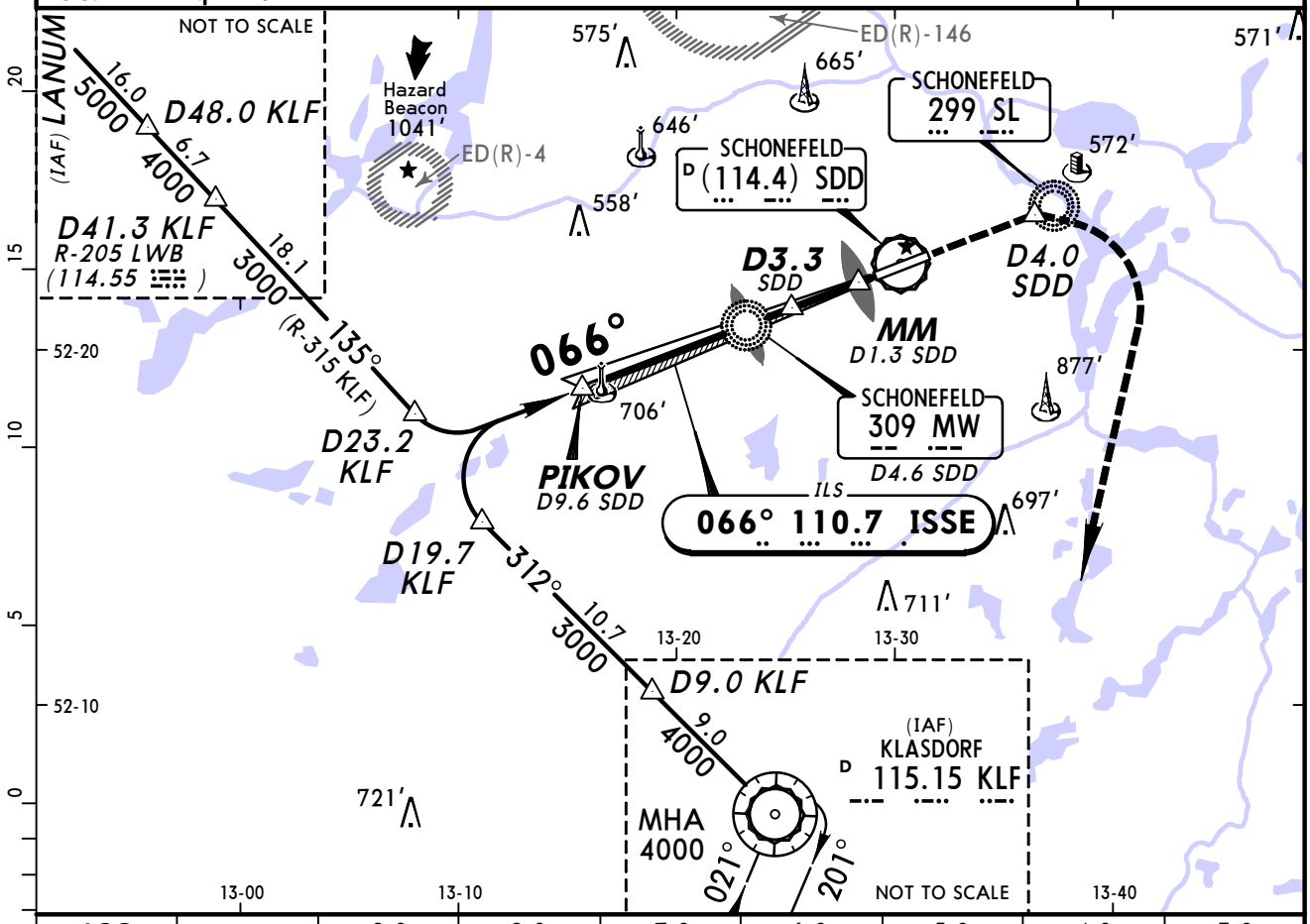
BRIEFING STRIP ™

LOC ISSE	Final Apch Crs	GS LOM	ILS DA(H)	Apt Elev / RWY
110.7	066°	1410′ (1264′)	346′ (200′)	Apt Elev 157′ / RWY 146′

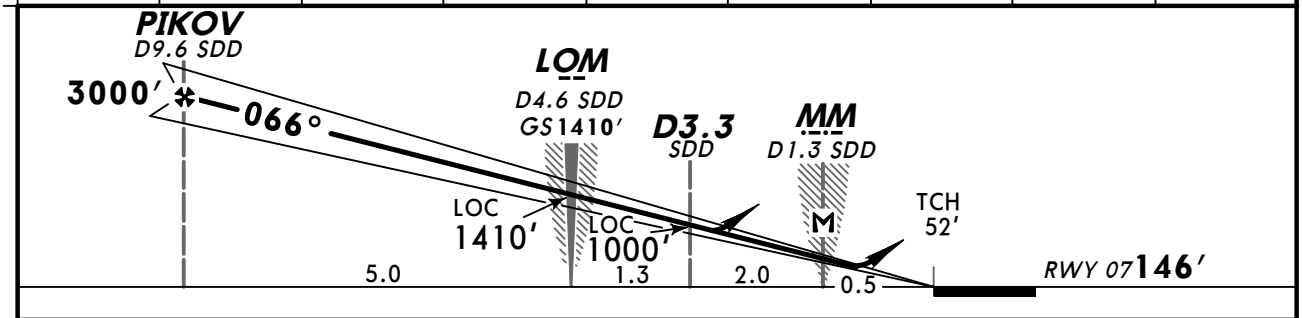
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 East of SDD DME turn RIGHT to KLF VOR and continue climb to 4000′.

Alt Set: hPa (IN on req) | Rwy Elev: 5 hPa | Trans level: By ATC | Trans alt: 5000′
LOC: **DME required.**

2400′
MSA
SL Lctr



LOC (GS out)	SDD DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	2810′	2490′	2170′	1860′	1540′	1220′	900′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.3 SDD						

HIALS-II
PAPI
3000′ MAX

Standard STRAIGHT-IN LANDING RWY **07**

	ILS DA(H) 346′ (200′)			LOC (GS out) DA(H) 530′ (384′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1100m	RVR 1500m
B					
C					RVR 1800m
D					

PANS OPS 4

CHANGES: SDF added. Minimums.

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SCHONEFELD

JEPPESEN
30 SEP 11 (21-1A)

BERLIN, GERMANY
CAT II/III ILS Rwy 07

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	SCHONEFELD Tower	Ground
124.95	119.62	126.42	136.1	120.02 119.57	121.6

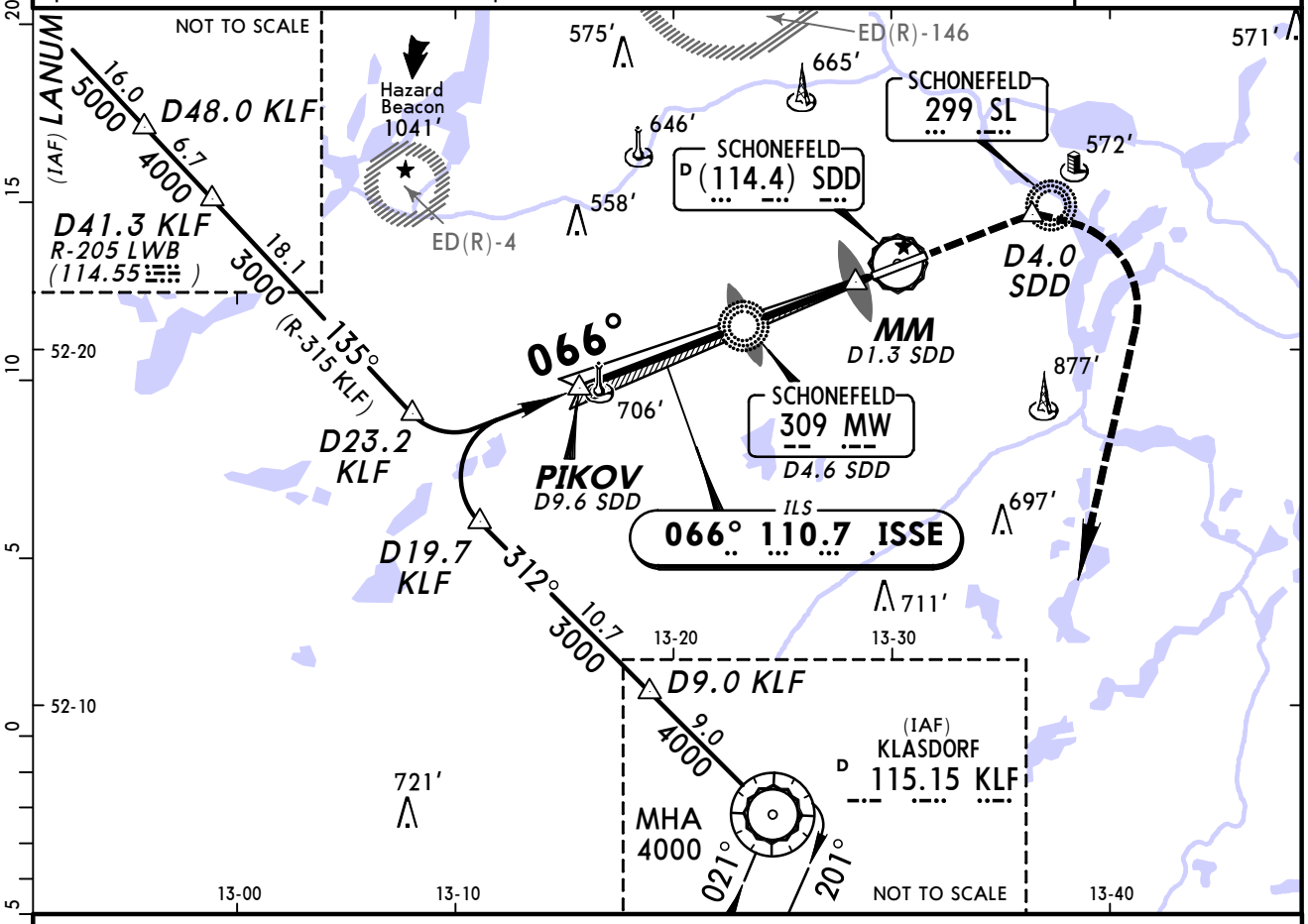
LOC	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev / RWY
ISSE 110.7	066°	LOM 1410′ (1264′)	Refer to Minimums	Apt Elev 157′ RWY 146′

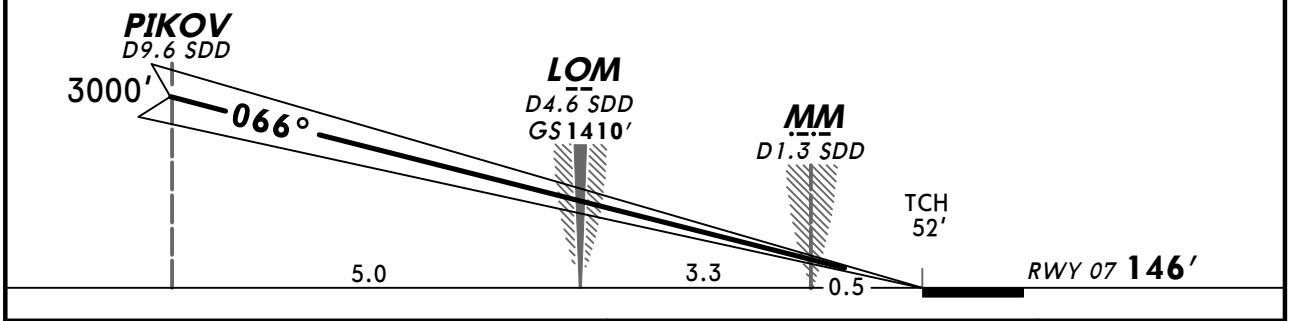
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 East of SDD DME turn RIGHT to KLF VOR and continue climb to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification required.

2400′
MSA
SL Lctr

BRIEFING STRIP™





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

HIALS-II
PAPI
3000′ MAX

Standard STRAIGHT-IN LANDING RWY **07**

CAT III ILS	CAT II ILS
DH 50′	ABCD RA 105′ DA(H) 246′ (100′)
RVR 200m	RVR 300m [1]

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

PANS OPS 4

CHANGES: Minimums.

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SCHONEFELD

JEPPESEN
30 SEP 11 (21-2)

BERLIN, GERMANY
ILS or LOC Rwy 25

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	SCHONEFELD Tower	Ground
124.95	119.62	126.42	136.1	120.02 119.57	121.6

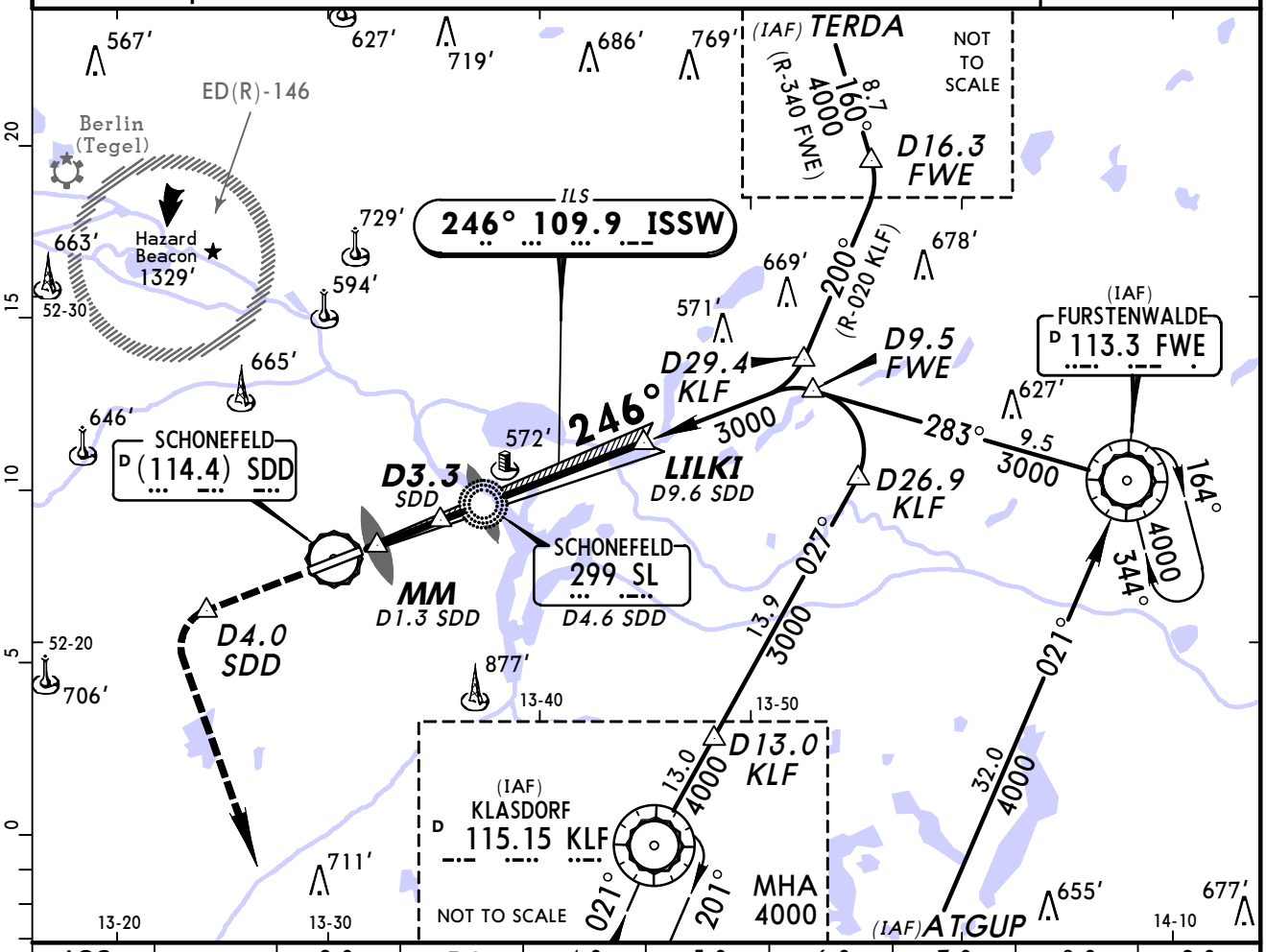
BRIEFING STRIP

LOC	Final	GS	ILS	Apt Elev 157′
ISSW	Apch Crs	LOM	DA(H)	RWY 155′
109.9	246°	1420′ (1265′)	355′ (200′)	

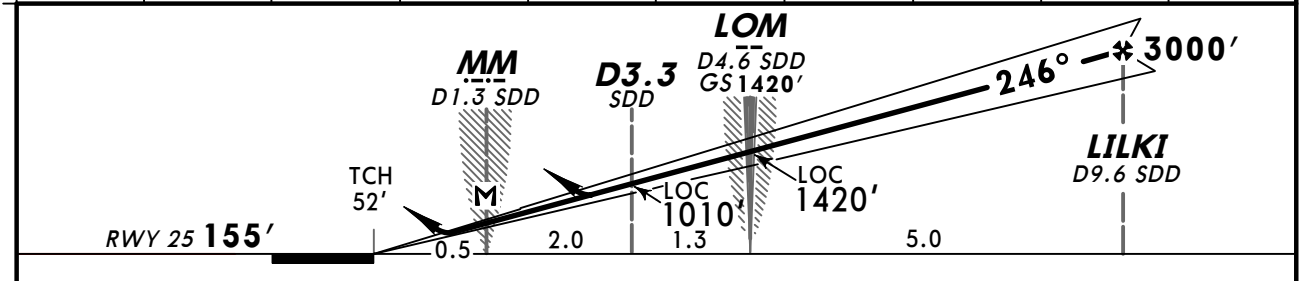
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 West of SDD DME turn LEFT to KLF VOR and continue climb to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′
LOC: **DME required.**

2400′
MSA SL Lctr



LOC (GS out)	SDD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	590′	910′	1230′	1550′	1860′	2180′	2500′	2820′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.3 SDD						

HIALS-II
PAPI
3000′ MAX

Standard STRAIGHT-IN LANDING RWY 25

	ILS DA(H) 355′ (200′)			LOC (GS out) DA(H) 540′ (385′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1100m	RVR 1500m
B					
C					RVR 1800m
D					

PANS OPS 4

CHANGES: SDF added. Minimums.

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EDDB/SXF
SCHONEFELD

JEPPESEN
30 SEP 11 (21-2A)

BERLIN, GERMANY
CAT II/III ILS Rwy 25

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	SCHONEFELD Tower	Ground
124.95	119.62	126.42	136.1	120.02 119.57	121.6

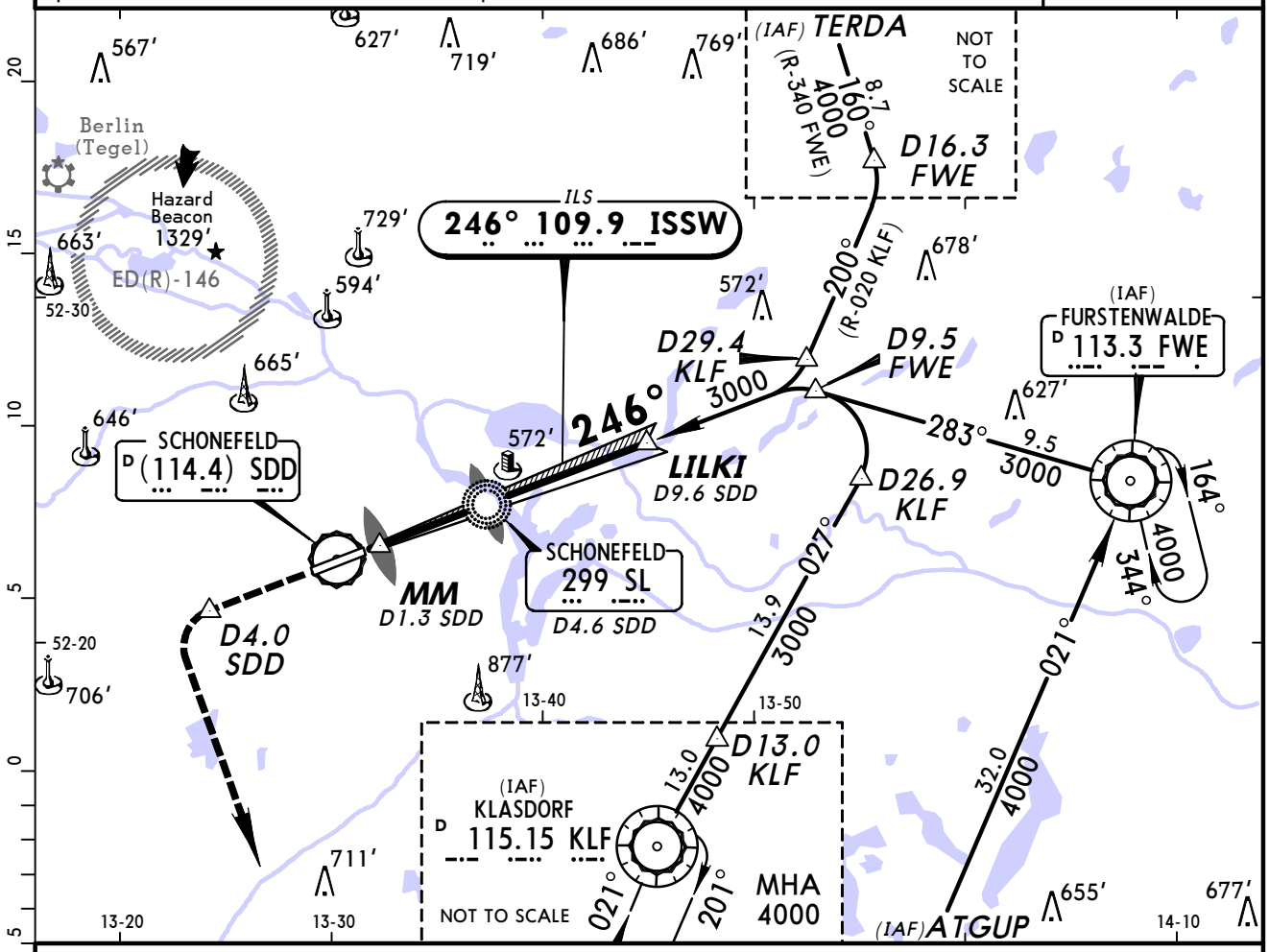
LOC	Final	GS	CAT II & IIIA ILS	Apt Elev 157′
ISSW	Apch Crs	LOM	Refer to Minimums	RWY 155′
109.9	246°	1420′ (1265′)		

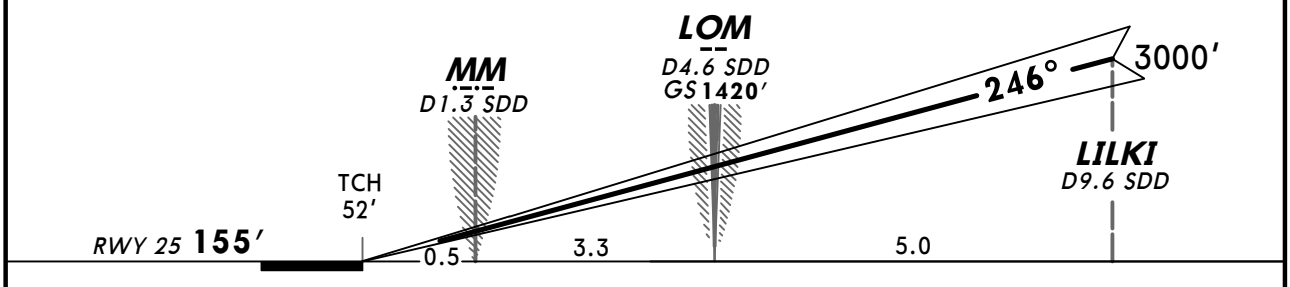
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 West of SDD DME turn LEFT to KLF VOR and continue climb to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification required.

2400′
MSA SL Lctr

BRIEFING STRIP™





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

HIALS-II
PAPI
3000′ MAX

Standard STRAIGHT-IN LANDING RWY 25

CAT III ILS	CAT II ILS
DH 50′	ABCD RA 101′ DA(H) 255′ (100′)
RVR 200m	RVR 300m [1]

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

PANS OPS 4

CHANGES: Minimums.

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SCHONEFELD

JEPPESEN
30 SEP 11 (22-1)

BERLIN, GERMANY
RNAV (GPS) Rwy 07

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	SCHONEFELD Tower	Ground
124.95	119.62	126.42	136.1	120.02 119.57	121.6

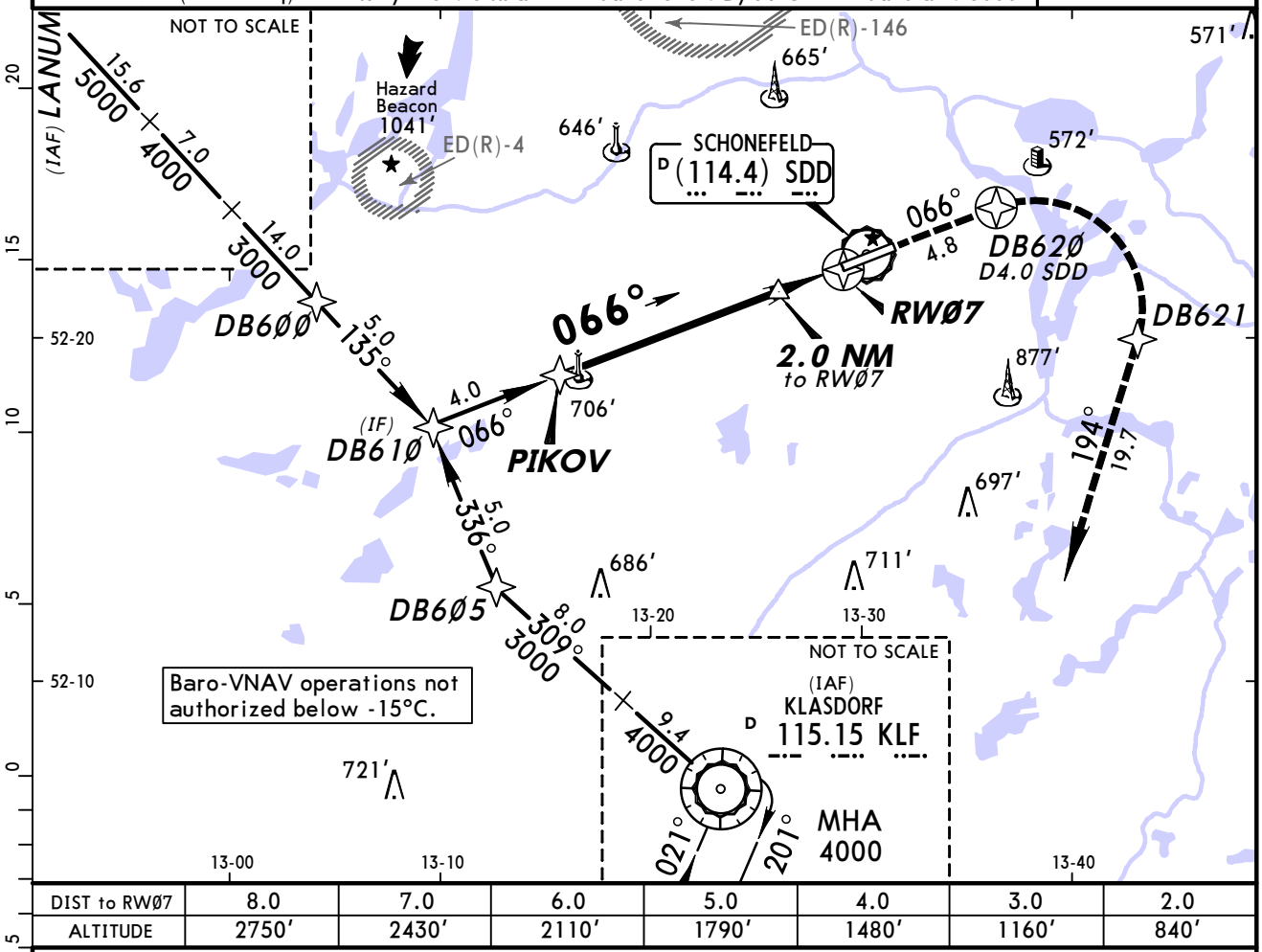
BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt PIKOV	LNAV/VNAV DA(H)	Apt Elev / RWY
	066°	3000′ (2854′)	490′ (344′)	Apt Elev 157′ / RWY 146′

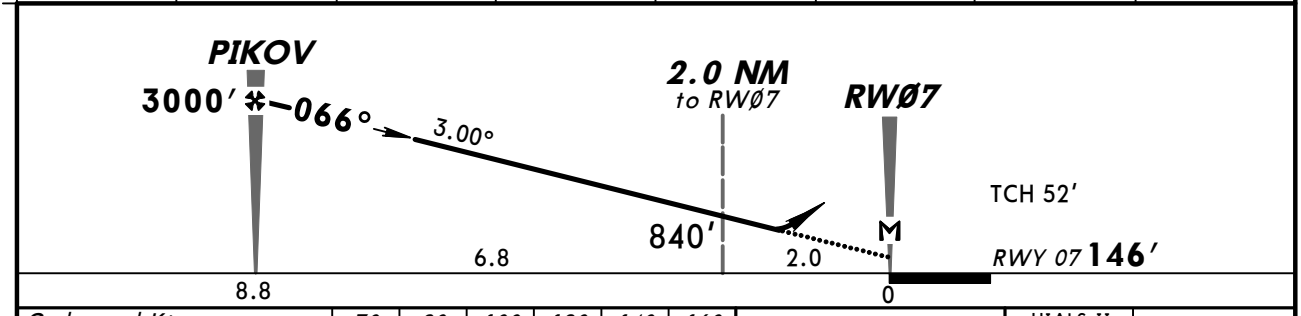
MISSED APCH RNAV: Climb on track 066° to DB62Ø (MAX 3000′), then turn RIGHT via DB621 on track 194° to KLF VOR climbing to 4000′.
NON RNAV: Climb on rwy track to MAX 3000′. At D4.0 East of SDD DME turn RIGHT to KLF VOR and continue climb to 4000′.

2400′
MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 5 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RWØ7	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2750′	2430′	2110′	1790′	1480′	1160′	840′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ7							

HIALS-II
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **07**

	LNAV/VNAV DA(H) 490′ (344′)		LNAV DA(H) 630′ (484′)	
		ALS out		ALS out
A	RVR 900m	RVR 1500m	RVR 1500m	RVR 1500m
B				
C		RVR 1600m		CMV 2300m
D				

PANS OPS 4

CHANGES: Minimums.

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SCHONEFELD

JEPPESEN
30 SEP 11 (22-2)

BERLIN, GERMANY
RNAV (GPS) Rwy 25

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	SCHONEFELD Tower		Ground
124.95	119.62	126.42	136.1	120.02	119.57	121.6

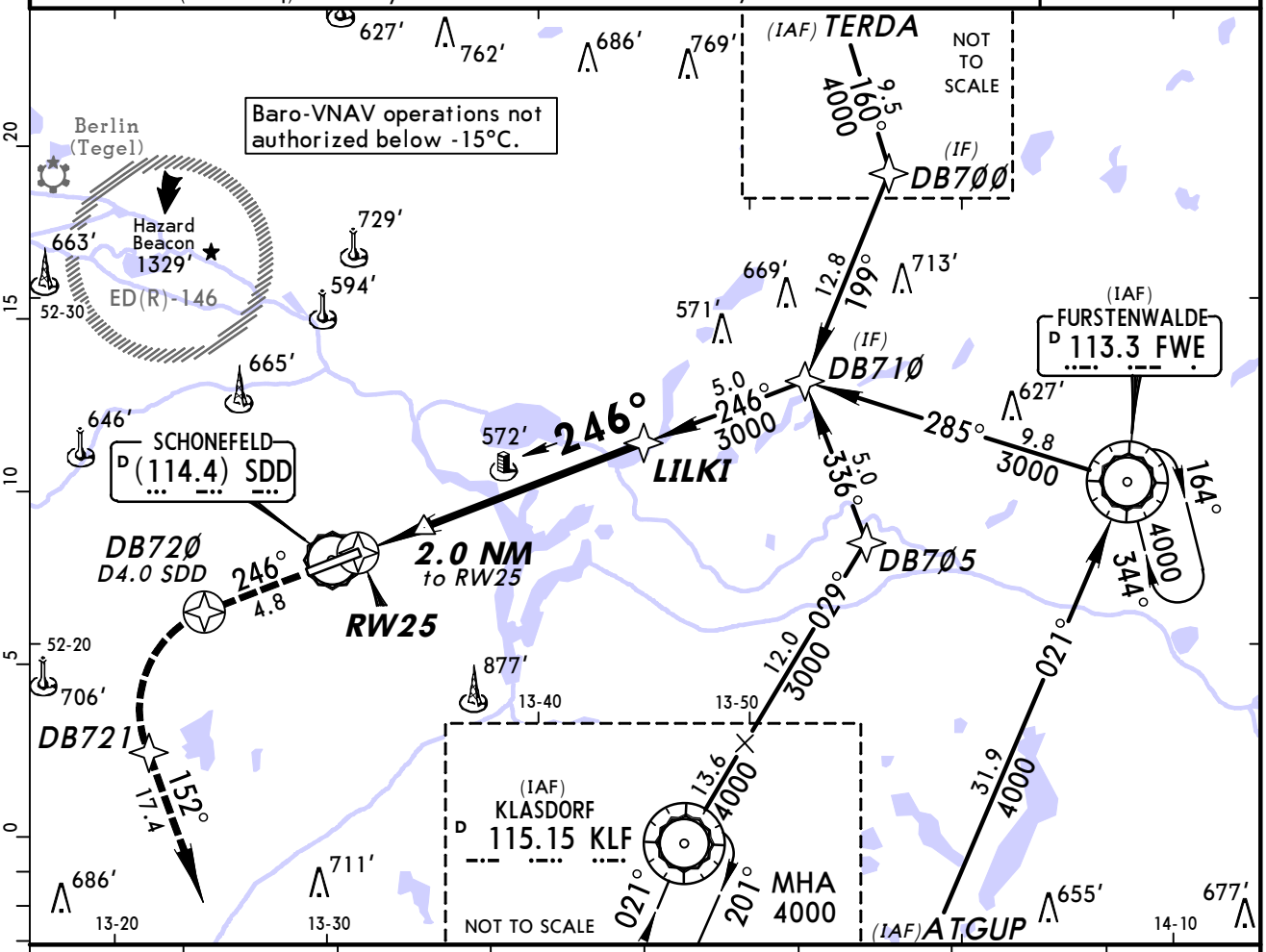
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt LILKI	LNAV/VNAV DA(H)	Apt Elev / RWY
	246°	3000′ (2845′)	680′ (525′)	Apt Elev 157′ RWY 155′

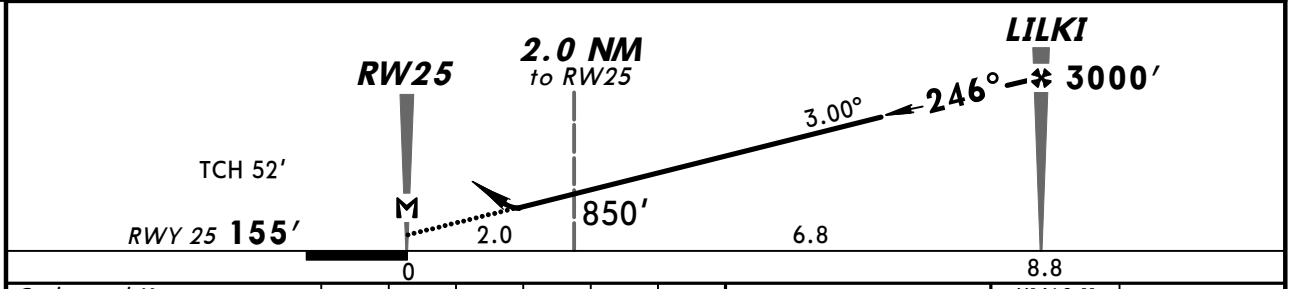
MISSED APCH RNAV: Climb on track 246° to DB72Ø (MAX 3000′), then turn LEFT via DB721 on track 152° to KLF VOR climbing to 4000′.
NON RNAV: Climb on rwy track to MAX 3000′. At D4.0 West of SDD DME turn LEFT to KLF VOR and continue climb to 4000′.

Alt Set: hPa (IN on req) | Rwy Elev: 6 hPa | Trans level: By ATC | Trans alt: 5000′

2400′
MSA ARP



DIST to RW25	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	850′	1170′	1490′	1800′	2120′	2440′	2760′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW25							

HIALS-II
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **25**

	LNAV/VNAV DA(H) 680′ (525′)		LNAV DA(H) 680′ (525′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1700m	CMV 2400m	RVR 1700m	CMV 2400m
D				

PANS OPS 4

CHANGES: Minimums.

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SCHONEFELD

JEPPESEN
30 SEP 11 (26-1)

BERLIN, GERMANY
NDB Rwy 07

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	SCHONEFELD Tower	Ground
124.95	119.62	126.42	136.1	120.02	121.6

BRIEFING STRIP™

Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
MW 309	066°	PIKOV 3000′ (2854′)	680′ (534′)	Apt Elev 157′ / RWY 146′

MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 East of SDD DME turn RIGHT to KLF VOR and continue climb to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2400′
MSA SL Lctr

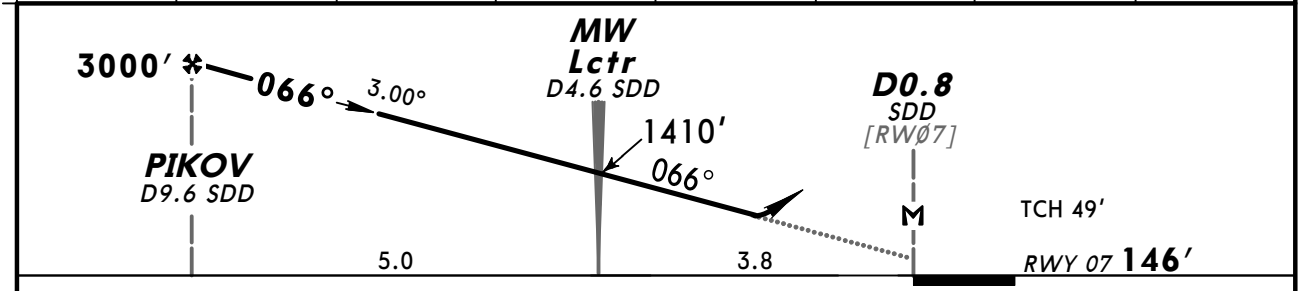
NOT TO SCALE

LANUM (IAF)
16.0 5000 D48.0 KLF
6.7 4000
D41.3 KLF
R-205 LWB
(114.44)
18.1 3000
135° (R-315 KLF)
D23.2 KLF
D19.7 KLF
312° 10.7 3000
D9.0 KLF
9.0 4000

Hazard Beacon 1041′
ED(R)-4
ED(R)-146
571′
665′
646′
SCHONEFELD 299 SL
572′
SCHONEFELD (114.4) SDD
D4.0 SDD
066°
D0.8 SDD [RWØ7]
877′
706′
PIKOV D9.6 SDD
SCHONEFELD 309 MW
D4.6 SDD
697′
686′
711′
721′
(IAF) KLASDORF 115.15 KLF
MHA 4000
021°
201°

52-20
52-10
13-00
13-10
13-20
13-30
13-40
NOT TO SCALE

SDD DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2810′	2490′	2170′	1860′	1540′	1220′	900′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.8 SDD							

HIALS-II
PAPI
3000′ MAX

Standard

STRAIGHT-IN LANDING RWY **07**

DA(H) **680′** (534′)

	ALS out
A B	RVR 1500m
C D	RVR 1700m / CMV 2400m

PANS OPS 4

CHANGES: Minimums.

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JEPPESEN
30 SEP 11 (26-2)

BERLIN, GERMANY
NDB Rwy 25

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	SCHONEFELD Tower		Ground
124.95	119.62	126.42	136.1	120.02	119.57	121.6

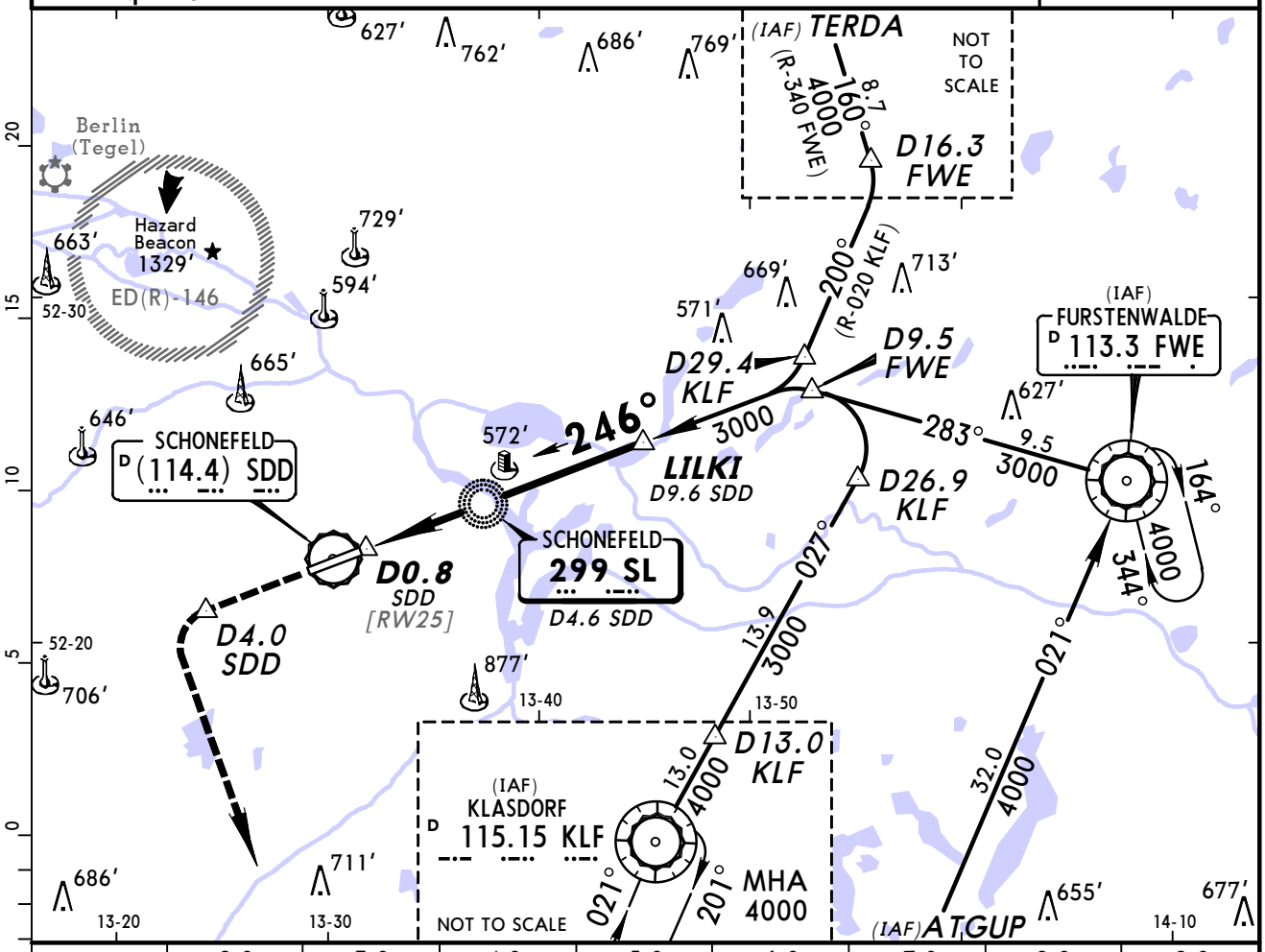
BRIEFING STRIP™

Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
SL 299	246°	LILKI 3000′ (2845′)	730′ (575′)	Apt Elev 157′ RWY 155′

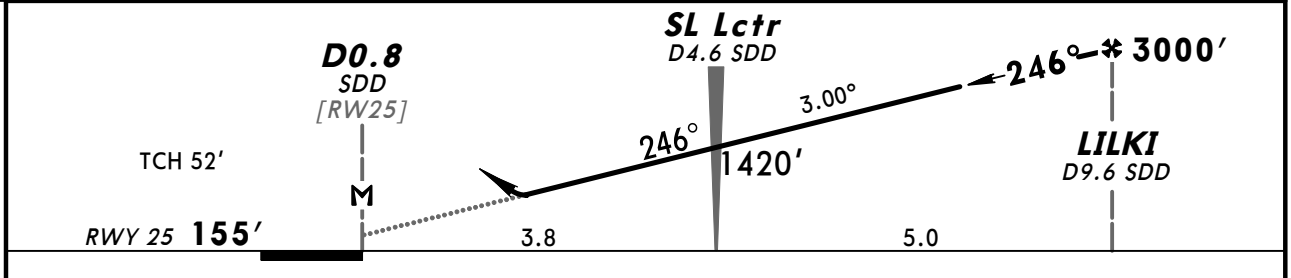
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 West of SDD DME turn LEFT to KLF VOR and continue climb to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2400′
MSA SL Lctr



SDD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	590′	910′	1230′	1550′	1860′	2180′	2500′	2820′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.8 SDD							

HIALS-II
PAPI
3000′ MAX

Standard STRAIGHT-IN LANDING RWY **25**

DA(H) **730′** (575′)

ALS out

PANS OPS 4

A, B	RVR 1500m	
C, D	RVR 1900m	CMV 2400m

CHANGES: Minimums.

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EDDB/SXF
SCHONEFELD

JEPPESEN
30 SEP 11 (28-1)

BERLIN, GERMANY
SRE Rwy 07, 25

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	SCHONEFELD Tower	Ground
124.95	119.62	126.42	136.1	120.02 119.57	121.6

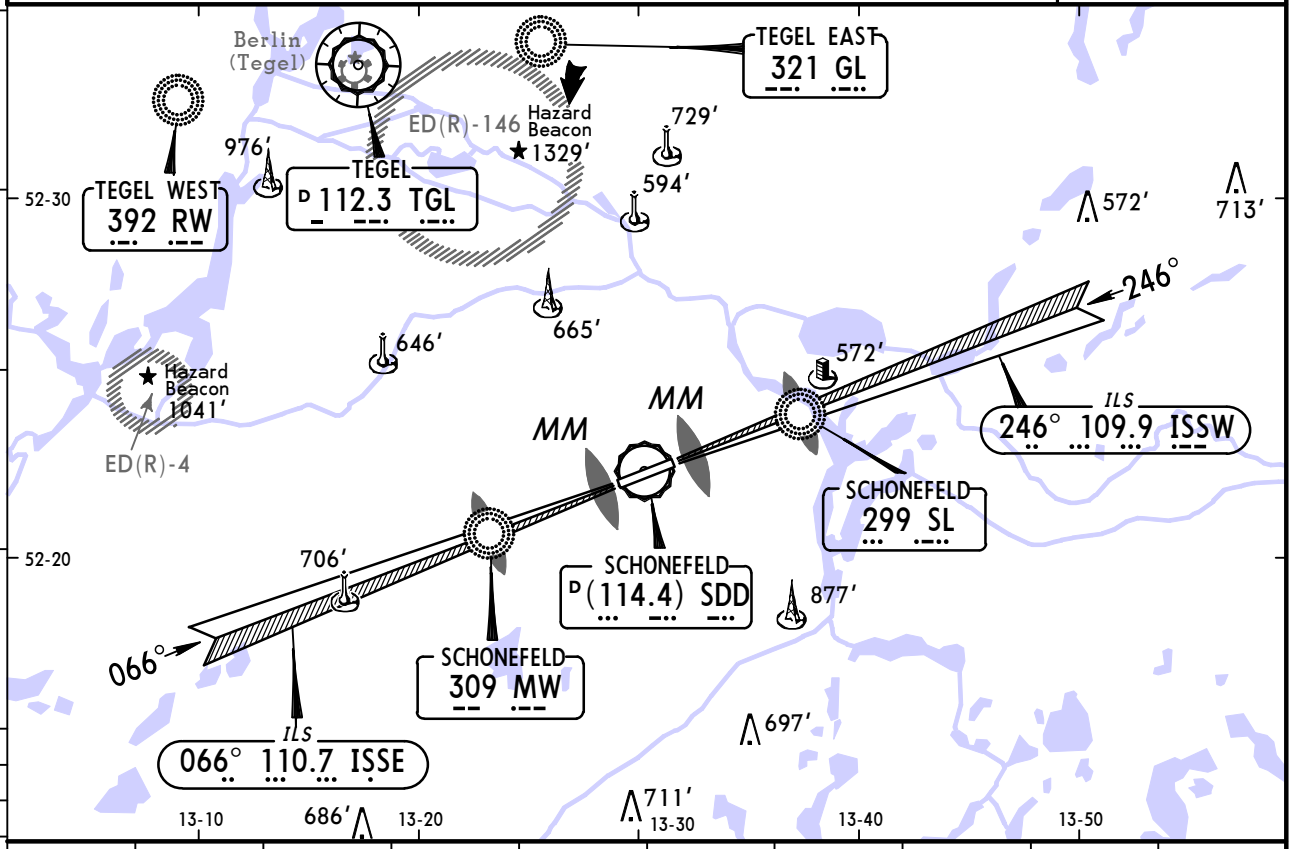
RADAR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / RWY 07 / RWY 25
	By ATC	See table below	Refer to Minimums	157′ / 146′ / 155′

MISSED APCH: Climb STRAIGHT AHEAD to 4000′.

2400′

MSA SL Lctr

Alt Set: hPa (IN on req) Apt Elev: 6 hPa Trans level: By ATC Trans alt: 5000′



		10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
RWY 07	RADAR FIX								
	ALTITUDE	3200′	2900′	2600′	2300′	2000′	1700′	1400′	1100′
RWY 25	RADAR FIX	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	3300′	3000′	2700′	2400′	2100′	1800′	1500′	1200′

Minimum Alt/NM	10.0 FAF	4.0
SRE 07	**3200′**	**1200′**
SRE 25	**3300′**	**1200′**

Gnd speed-Kts		*70*	*90*	*100*	*120*	*140*	*160*
Descent Angle	2.81°	348	447	497	596	696	795
MAP at THR							

Lighting-Refer to Airport Chart

4000′

Standard STRAIGHT-IN LANDING

	SRE 07 MDA(H) 680′ (534′)		SRE 25 MDA(H) 730′ (575′)	
		ALS out		ALS out
A B	RVR *1900m*	CMV *2600m*	CMV *2100m*	CMV *2800m*
C D	CMV *2100m*	CMV *2800m*	CMV *2300m*	CMV *3000m*

PANS OPS 4

CHANGES: Minimums.

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General Information

Location: Dresden Deu
IATA Code: DRS
Lat/Long: N51° 08.1' E013° 46.1'
Elevation: 754 ft

Airport Use: Public
Magnetic Variation: 3.0°E

Fuel Types: 100 Octane (LL), Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0555 Z
Sunset: 1641 Z,

Runway Information

Runway: 04
Length x Width: 9350 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 754 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 22
Length x Width: 9350 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 700 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 984 ft

Communication Information

ATIS 118.875
Dresden Tower 122.925
Dresden Tower 119.7
Dresden Tower 24.192
Dresden Ground Control 121.975
Dresden Apron Ramp/Taxi Control 121.75
Munich Radar Approach Control 125.625
Munich Radar Approach Control 26.492 Military

1. GENERAL

1.1. ATIS

* D-ATIS 118.87

1.2. NOISE ABATEMENT PROCEDURES

For additional depiction refer to 10-4.

1.2.1. NIGHT FLYING RESTRICTIONS

From 2200-0600LT, flight operations at Dresden APT will be restricted to prevent noise disturbance at night. Take-offs and landings between 2200-0600LT are only permitted as follows:
Take-offs and landings of air carriers in commercial airline traffic and non-scheduled air transport (with the exception of air taxis) from 2200-2330LT and from 0530-0600LT.
Delayed landings and take-offs from 2330-0000LT if the planned arrival or departure time at/from Dresden APT is before 2330LT and the arrival or departure takes place before 0000LT; premature landings from 0500-0530LT if the planned time of arrival is after 0530LT.
Flights by air carriers, whose ACFT are mainly maintained at Dresden APT and who conduct commercial airline traffic and non-scheduled air transport at Dresden APT for the purpose of service/repairs as well as ferry flights/relocation flights by these air carriers from 2200-2330LT and from 0530-0600LT.

Exceptions:
Above stated restrictions regarding operating times do not apply to:
- Flights on missions of aid in cases of emergency and catastrophe.
- Flights which are absolutely necessary for medical supplies and to fulfill humanitarian assignments.
- Landings for meteorological, technical and other safety reasons.
- Calibration flights by Deutsche Flugsicherung GmbH (DFS) or on their behalf.
- A maximum of 24 take-offs or landings per calendar year in the course of production of the ACFT industry located at Dresden APT.

1.2.2. REVERSE THRUST

Reverse thrust, other than idle thrust, shall only be used to an extent necessary for safety reasons.

1.2.3. RUN-UP TESTS

Engine test-runs require permission from the APT operator. He establishes location, time-span and sequence of engine test-runs. Engine test-runs are not generally permitted Sun & Hol H24, weekdays 2000-0600LT. Exceptional permission may be granted by the airport operator in justified cases. Consent for an engine test-run by the Aviation Supervision Office does not include the necessary ATC clearance for taxiing. Applications shall be directed to
Flughafen Dresden GmbH,
Verkehrszentrale
Fax: 0351 881 3225
"DRESDEN Apron" 121.75.

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1. GENERAL

1.3. LOW VISIBILITY PROCEDURES

1.3.1. ACFT GUIDANCE WHEN REACHING OR FLYING BELOW RWY VISUAL RANGE (RVR) OF 1000M AND/OR REACHING A CEILING OF 300 FT (ALL WEATHER OPERATIONS)

In All-Weather Operations under CAT II/III conditions and/or LVTO, taxiing traffic on TWYs B, C, D and Apron 5 is not permitted. Taxiing across the stop bars/barrage bars after they have turned red is strictly prohibited. No clearances of any kind cover permission for taxiing across an operating, red stop bar.

1.3.1.1. ARRIVING ACFT

After landing on RWY 22, ACFT shall vacate the RWY via the colour-coded TWY centerline (yellow/green) on TWY A. ACFT are requested to report clearing the colour-coded centerline lights (yellow/green) to Tower. Within the area competency to ramp control, a Follow-me car will hold at intersections leading to the parking positions on TWY H, and direct ACFT to the assigned parking position.

1.3.1.2. DEPARTING ACFT

The direct taxiing of ACFT from Aprons 1 and 2 to TWY H is generally possible. In case direct taxiing to TWY H is not possible, ACFT will be guided to the junction of TWY H by a Follow-me car. Taxi movements for conducting take-offs in low visibility (LVTO) are permitted for RWYs 04 and 22 which are authorized for them in accordance with the requirements pursuant to the "Guidelines for All-Weather Operations" in the currently valid version.

1.4. TAXI PROCEDURES

1.4.1. GENERAL

TWY H MAX wingspan less than 213'/65m.
TWYs B and D MAX wingspan less than 171'/52m.
TWYs C, M-Blue and M-Orange MAX wingspan less than 118'/36m.
TWY N MAX wingspan 113 '/34.5m.
TWYs K and O MAX wingspan less than 72 '/24m.

1.4.2. TAXIING ON THE APRON

- Pilots may request a Follow-me car from Apron Control for guidance.
- On the apron, ACFT may only taxi on or along the yellow, blue (M blue) and orange (M orange) taxiing guide lines. No deviations or shortcuts are allowed. In exceptional cases taxiing off the guide lines is permitted on special instructions by Apron Control, only.
- On the apron, ACFT are permitted to taxi only at the indispensible minimum engine speed.

1.4.3. TAXING ACROSS THE APRON

ACFT taxiing across the apron shall establish radio contact with DRESDEN Apron, at the latest when reaching the boundary of responsibility of Apron Control, and taxi as instructed by Apron Control to the change-over point of the ATC unit. At the change-over point the pilot will be instructed to establish radio contact with Tower.

1.5. PARKING INFORMATION

Stands 51 thru 54 for helicopters only.

Visual Docking Guidance System available for stands 7 thru 10 and 30 thru 38.

1.6. OTHER INFORMATION

CAUTION: Birds.
Ultralight ACFT activity.

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2. ARRIVAL

2.1. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within Airspace C.

2.2. NOISE ABATEMENT PROCEDURES

Visual approaches with CAT C & D ACFT and a span of equal to or greater than 24m shall be restricted to a final approach distance of at least 5 NM and not less than 2400' MSL at the start of the approach. The descent rate of 5.2%/3° shall be strictly observed and checked with the PAPI indication.

2.3. CAT II/III OPERATIONS

RWY 22 is approved for CAT II/III operations, special aircrew and ACFT certification required.

2.4. TAXI PROCEDURES

2.4.1. TAXIING OF ACFT ON THE APRON

ACFT may leave "nose-in-positions" only with "push-out-facility"; there are exceptions in individual cases. Reverse thrust shall not be used. ACFT operators shall make appropriate arrangements.

2.4.2. ACFT GUIDANCE ON THE APRON

- Arriving ACFT shall establish radio contact with "DRESDEN Apron", when reaching the boundary of responsibility as depicted on APT charts at the latest, and shall taxi as instructed by Apron Control to the position assigned.
- If the crew realizes when taxiing into a nose-in position equipped with visual docking guidance system that the latter is switched off or out of order, it shall stop the ACFT immediately. Malfunctioning shall be reported to Apron Control via radio. Taxiing will be continued according to instructions by Apron Control.
- On parking positions without a visual docking guidance system, ACFT are guided by a marshaller.

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3. DEPARTURE

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

3.1.1. ACFT GUIDANCE ON TH APRONS

- START-UP PROCEDURE:
  Clearance for starting up engines shall be requested on the frequency "DRESDEN Ground".
- PUSH-BACK PROCEDURE:
  To obtain push-back instructions from a nose-in position, pilots are advised to request push-back permission on the respective frequency of "DRESDEN Apron". In order to avoid delays in taxiing, pilots are instructed to start the engines during push-back. After completion of the push-back, "ready to taxi" shall be reported on the frequency of "DRESDEN Apron".
- TAXI-OUT PROCEDURE:
  To obtain instructions for taxiing from a taxi-out position, pilots are instructed to request taxi clearance on the respective frequency of "DRESDEN Apron".
  When taxiing from a position, pilots are instructed to request taxi clearance on the frequency of "DRESDEN Apron". On initial radio contact with "DRESDEN Apron", pilots shall report position and "ready to taxi" and/or the RWY in use assigned by the aerodrome control tower.
- Permission for push-back or taxiing from a position may only be requested if the pilot can perform the manouevre immediately.

3.2. SPEED RESTRICTIONS

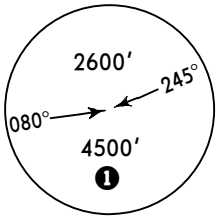
MAX 250 KT below FL100 or as by ATC.
Not applicable within Airspace C.

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*ATIS	Apt Elev	
118.87	755′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′

OSKAN THREE ALFA (OSKAN 3A) *[OSKA3A]* ❷
RWY 22 ARRIVAL

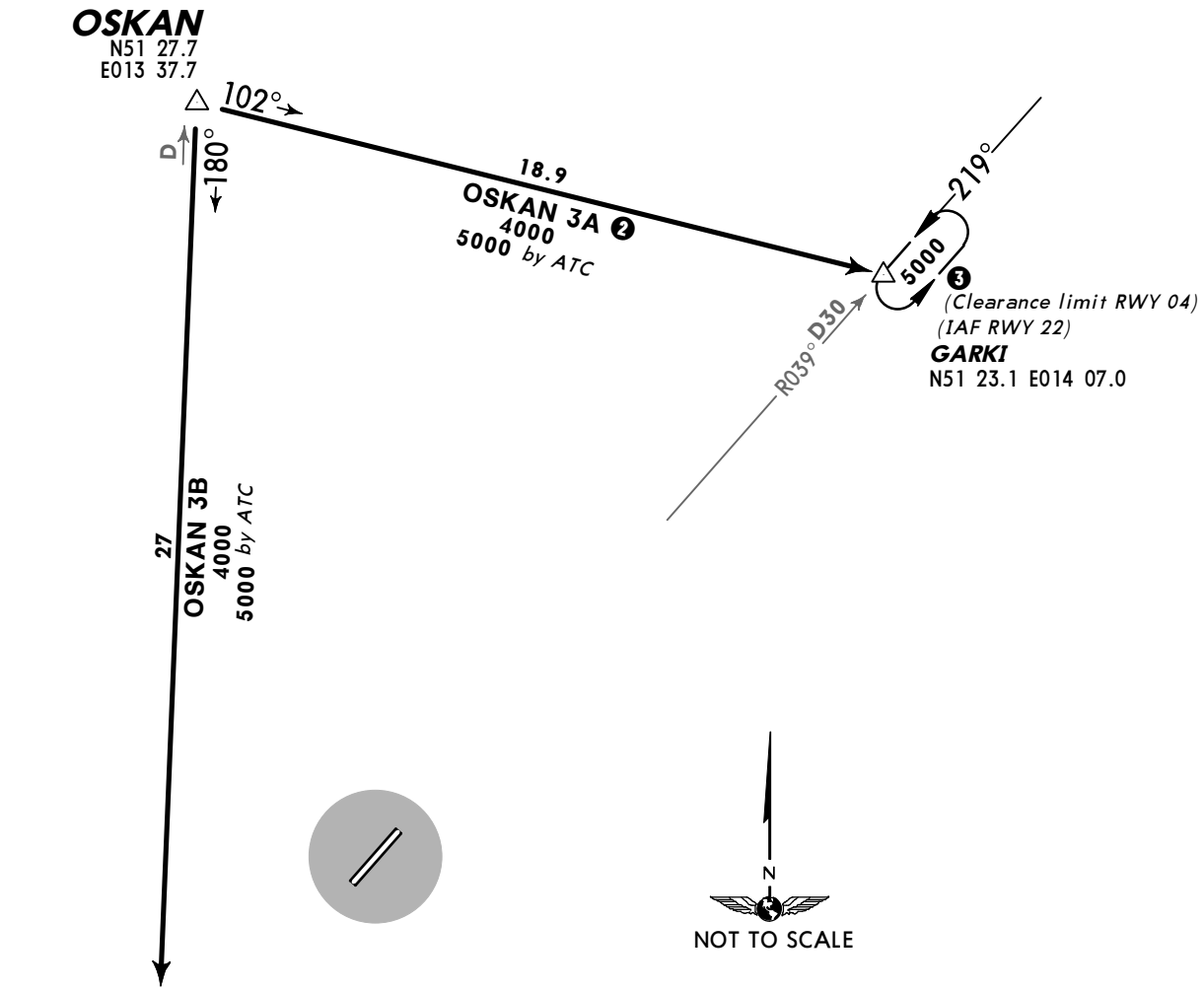
OSKAN THREE BRAVO (OSKAN 3B) *[OSKA3B]*
RWY 04 ARRIVAL



MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

❷ BRNAV equipment necessary.
❸ Expect radar vectoring to final.

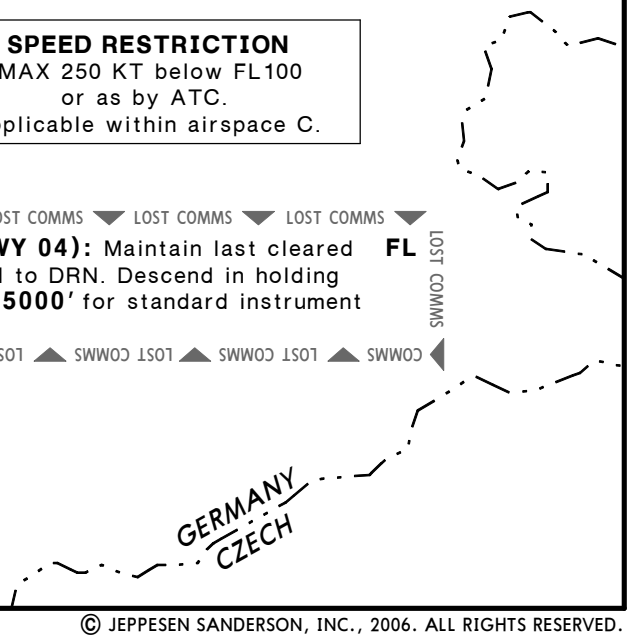


SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

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

GARKI (RWY 04): Maintain last cleared **FL** and proceed to DRN. Descend in holding pattern to **5000′** for standard instrument approach.

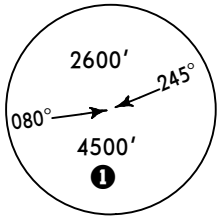
LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲



CHANGES: OSKAN STARs renumb & revised; HDO STARs withdrawn.

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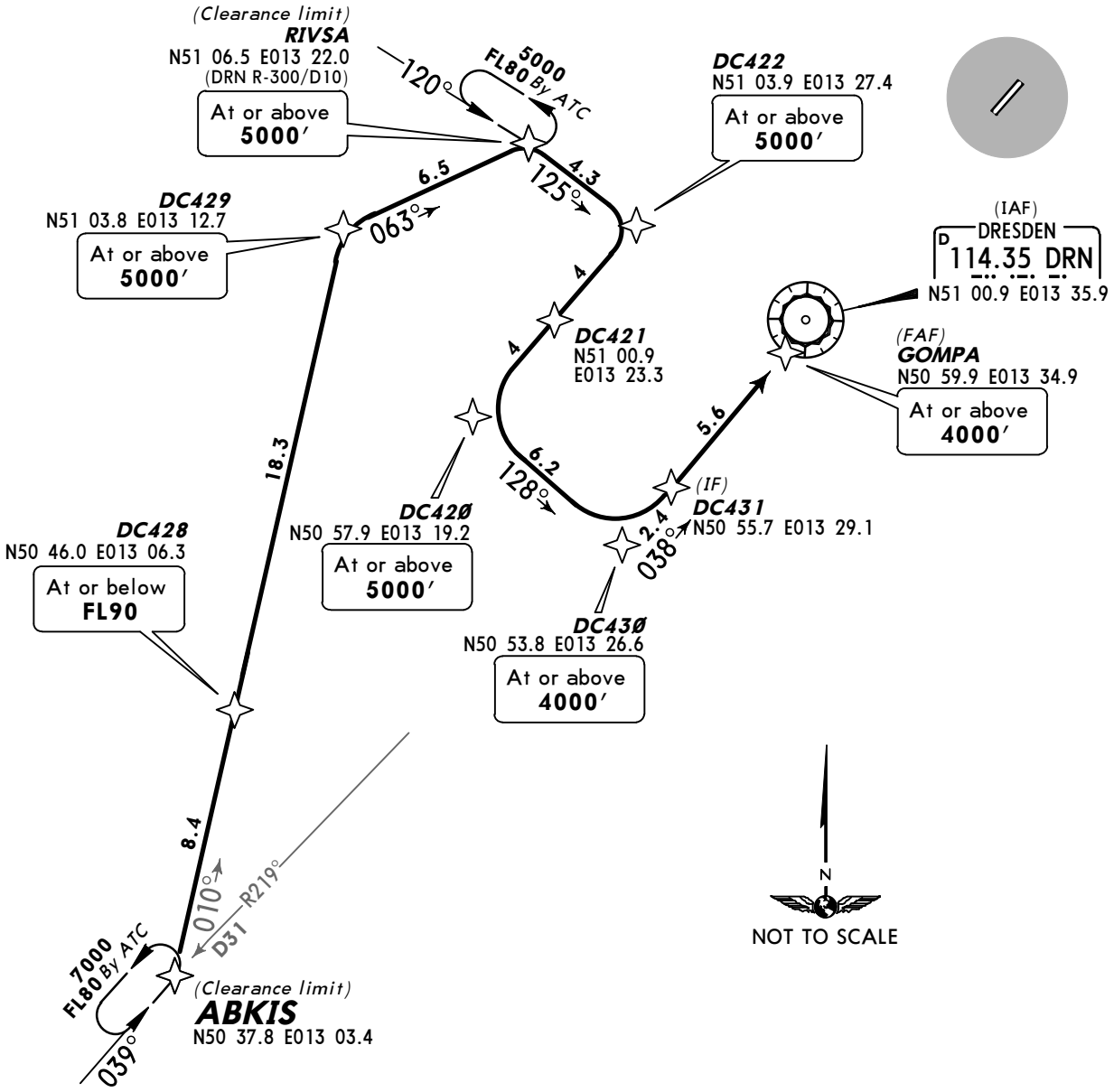
*D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Altitude assignements will be issued by ATC.
118.87	754′	



MSA
DRN VOR
applicable over
German territory only

1 3100′ within 10 NM

ABKIS Ø4 *[ABKØ4]*
RWY 04 RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC FROM SOUTHWEST



GPS/FMS CLEARANCE PHRASEOLOGY

1. "Cleared xxx Transition":
Permission to fly the lateral GPS/FMS-route, including assigned speeds. Altitudes will be assigned separately.

2. "Cleared xxx Transition and Profile":
Permission to fly the GPS/FMS-route, including assigned speeds and altitudes.

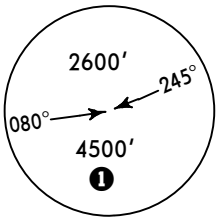
3. "Cleared direct waypoint xxx" and/or "Cleared via waypoints xxx, ... and zzz":
Permission to fly from the present position direct to one and/or a combination of waypoints, including the continuation of the flight on the lateral part of a GPS/FMS route adjoining the last waypoint, including assigned speeds. Altitudes will be assigned separately.

ROUTING

ABKIS - DC428 **(FL90-)** - DC429 **(5000′+)** - RIVSA **(5000′+)** - DC422 **(5000′+)** - DC420 **(5000′+)** - DC430 **(4000′+)** - GOMPA **(4000′+)**.

CHANGES: RNAV transitions revised & transferred.

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MSA
DRN VOR
applicable over
German territory only

1 3100′ within 10 NM

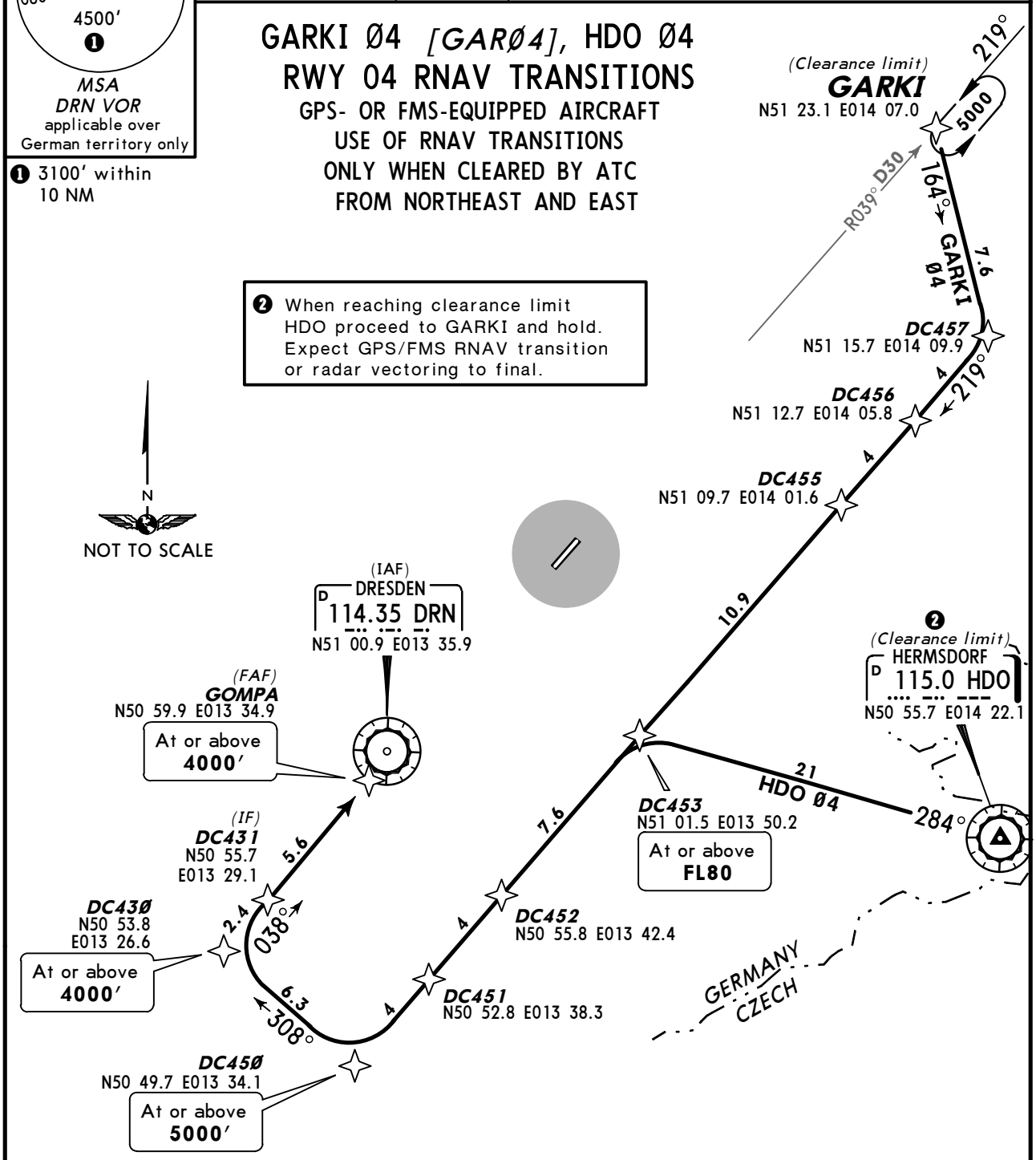
*D-ATIS	Apt Elev
118.87	754′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. On downwind expect vectors to final.
2. Altitude assignements will be issued by ATC.

GARKI Ø4 *[GARØ4]*, HDO Ø4 RWY 04 RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS
ONLY WHEN CLEARED BY ATC
FROM NORTHEAST AND EAST

2 When reaching clearance limit HDO proceed to GARKI and hold. Expect GPS/FMS RNAV transition or radar vectoring to final.



GPS/FMS CLEARANCE PHRASEOLOGY

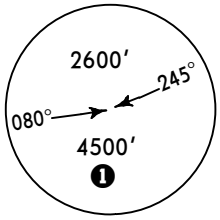
1. **"Cleared xxx Transition":**
   Permission to fly the lateral GPS/FMS-route, including assigned speeds. Altitudes will be assigned separately.
2. **"Cleared xxx Transition and Profile":**
   Permission to fly the GPS/FMS-route, including assigned speeds and altitudes.
3. **"Cleared direct waypoint xxx" and/or "Cleared via waypoints xxx, ... and zzz":**
   Permission to fly from the present position direct to one and/or a combination of waypoints, including the continuation of the flight on the lateral part of a GPS/FMS route adjoining the last waypoint, including assigned speeds. Altitudes will be assigned separately.

TRANSITION	ROUTING
GARKI Ø4	GARKI - DC457 - DC453 **(FL80+) -** DC450 **(5000′+) -** DC430 **(4000′+) -** GOMPA **(4000′+).**
HDO Ø4	HDO - DC453 **(FL80+) -** DC450 **(5000′+) -** DC430 **(4000′+) -** GOMPA **(4000′+).**

CHANGES: RNAV transitions revised & transferred.

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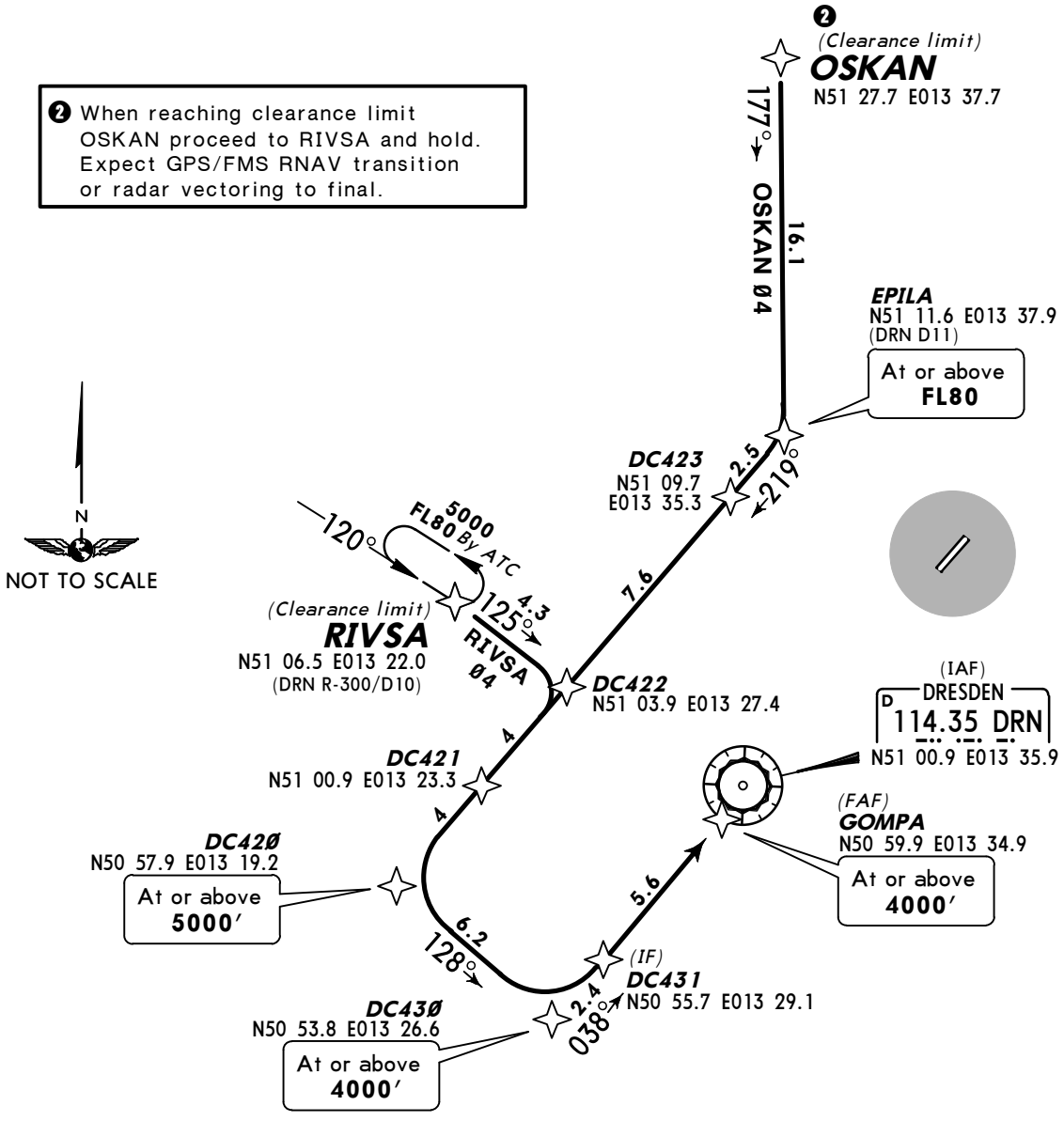
*D-ATIS	*Apt Elev*	
118.87	754′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Altitude assignements will be issued by ATC.



MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

OSKAN Ø4 *[OSKØ4]*, RIVSA Ø4 *[RIVØ4]*
RWY 04 RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC FROM WEST AND NORTHWEST



GPS/FMS CLEARANCE PHRASEOLOGY

1. "Cleared xxx Transition":
Permission to fly the lateral GPS/FMS-route, including assigned speeds. Altitudes will be assigned separately.

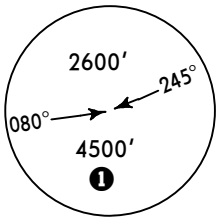
2. "Cleared xxx Transition and Profile":
Permission to fly the GPS/FMS-route, including assigned speeds and altitudes.

3. "Cleared direct waypoint xxx" and/or "Cleared via waypoints xxx, ... and zzz":
Permission to fly from the present position direct to one and/or a combination of waypoints, including the continuation of the flight on the lateral part of a GPS/FMS route adjoining the last waypoint, including assigned speeds. Altitudes will be assigned separately.

TRANSITION	ROUTING
OSKAN Ø4	OSKAN - EPILA **(FL80+)** - DC420 **(5000′+)** - DC430 **(4000′+)** - GOMPA **(4000′+).**
RIVSA Ø4	RIVSA - DC422 - DC420 **(5000′+)** - DC430 **(4000′+)** - GOMPA **(4000′+).**

CHANGES: RNAV transitions transferred & revised.

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MSA
DRN VOR
applicable over
German territory only

1 3100′ within 10 NM

*D-ATIS	Apt Elev
118.87	754′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. On downwind expect vectors to final.
2. Altitude assignements will be issued by ATC.

ABKIS 22 *[ABK22]*
RWY 22
RNAV TRANSITION

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC
FROM SOUTHWEST

DC437
N51 19.9 E014 02.5
At or above **4000′**

DC436
N51 16.9 E013 58.3
At or above **3000′**

(FAF)
OKILO
N51 13.9 E013 54.1
At or above **3000′**

DC457
N51 15.7
E014 09.9

DC456
N51 12.7
E014 05.8

DC455
N51 09.7
E014 01.6

DC454
N51 03.4 E013 52.9
At or above **FL80**

(IAF)
D DRESDEN
114.35 DRN
N51 00.9 E013 35.9

4 219° 6.3 309° 4 4 4 8.4 18.1 039°

D31 219° 22.9

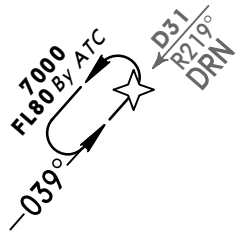
DC450
N50 49.7 E013 34.1

056°

(Clearance limit)
ABKIS
N50 37.8 E013 03.4

GERMANY
CZECH

HOLDING OVER ABKIS



N
NOT TO SCALE

GPS/FMS CLEARANCE PHRASEOLOGY

1. **"Cleared xxx Transition":**
   Permission to fly the lateral GPS/FMS-route, including assigned speeds. Altitudes will be assigned separately.
2. **"Cleared xxx Transition and Profile":**
   Permission to fly the GPS/FMS-route, including assigned speeds and altitudes.
3. **"Cleared direct waypoint xxx" and/or "Cleared via waypoints xxx, ... and zzz":**
   Permission to fly from the present position direct to one and/or a combination of waypoints, including the continuation of the flight on the lateral part of a GPS/FMS route adjoining the last waypoint, including assigned speeds. Altitudes will be assigned separately.

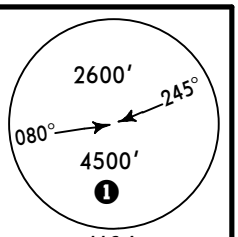
ROUTING

ABKIS - DC450 - DC454 **(FL80+) -** DC457 - DC437 **(4000′+) -** DC436 **(3000′+) -** OKILO **(3000′+).**

CHANGES: RNAV transitions transferred & revised.

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*D-ATIS	Apt Elev	
118.87	754′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Altitude assignements will be issued by ATC.

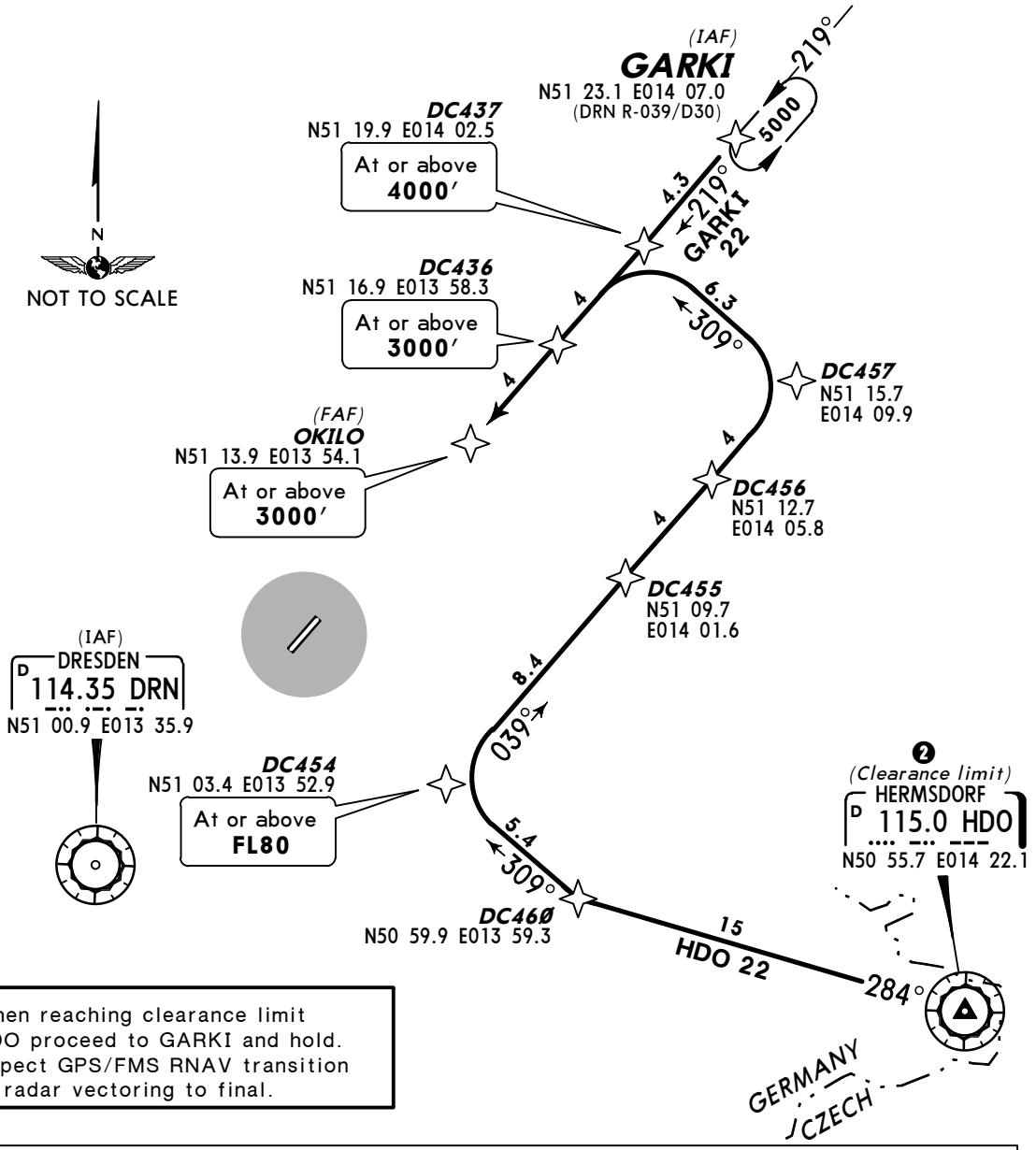


MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

GARKI 22 *[GAR22]*, HDO 22
RWY 22 RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC
FROM NORTHEAST AND EAST



❷ When reaching clearance limit HDO proceed to GARKI and hold. Expect GPS/FMS RNAV transition or radar vectoring to final.

GPS/FMS CLEARANCE PHRASEOLOGY

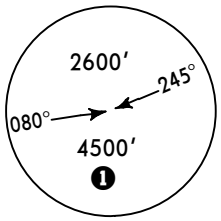
1. **"Cleared xxx Transition":**
   Permission to fly the lateral GPS/FMS-route, including assigned speeds. Altitudes will be assigned separately.
2. **"Cleared xxx Transition and Profile":**
   Permission to fly the GPS/FMS-route, including assigned speeds and altitudes.
3. **"Cleared direct waypoint xxx" and/or "Cleared via waypoints xxx, ... and zzz":**
   Permission to fly from the present position direct to one and/or a combination of waypoints, including the continuation of the flight on the lateral part of a GPS/FMS route adjoining the last waypoint, including assigned speeds. Altitudes will be assigned separately.

TRANSITION	ROUTING
GARKI 22	GARKI - DC437 **(4000′+)** - DC436 **(3000′+)** - OKILO **(3000′+).**
HDO 22	HDO - DC460 - DC454 **(FL80+)** - DC457 - DC437 **(4000′+)** - DC436 **(3000′+)** - OKILO **(3000′+).**

CHANGES: Reissue due to misprint.

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*ATIS	Apt Elev	
118.87	754′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Altitude assignements will be issued by ATC.

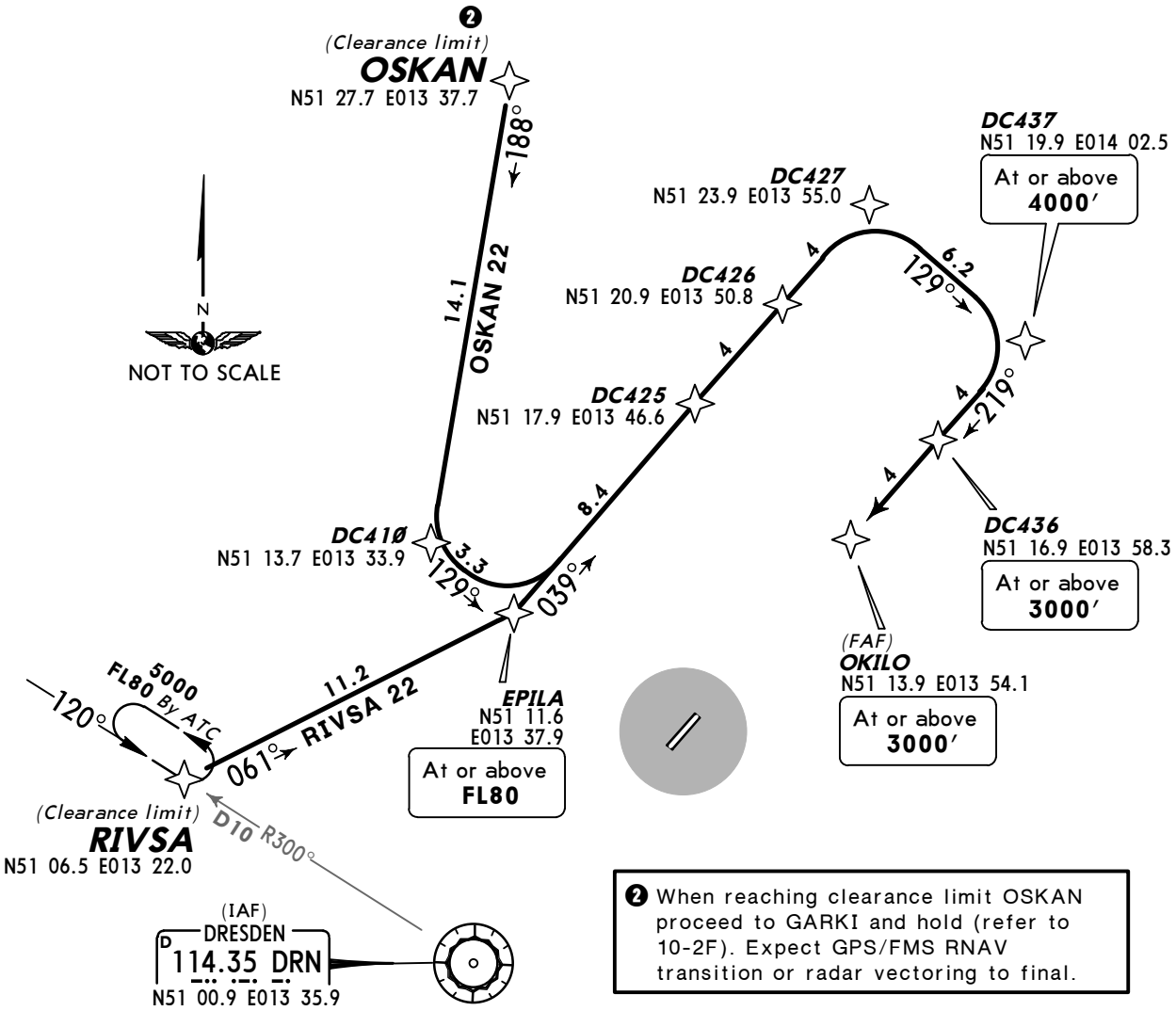


MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

OSKAN 22 *[OSK22]*
RIVSA 22 *[RIV22]*
RWY 22 RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC FROM WEST AND NORTHWEST



❷ When reaching clearance limit OSKAN proceed to GARKI and hold (refer to 10-2F). Expect GPS/FMS RNAV transition or radar vectoring to final.

GPS/FMS CLEARANCE PHRASEOLOGY

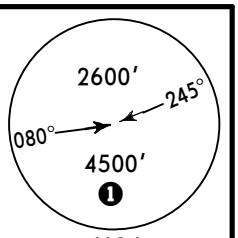
1. **"Cleared xxx Transition":**
   Permission to fly the lateral GPS/FMS-route, including assigned speeds. Altitudes will be assigned separately.
2. **"Cleared xxx Transition and Profile":**
   Permission to fly the GPS/FMS-route, including assigned speeds and altitudes.
3. **"Cleared direct waypoint xxx" and/or "Cleared via waypoints xxx, ... and zzz":**
   Permission to fly from the present position direct to one and/or a combination of waypoints, including the continuation of the flight on the lateral part of a GPS/FMS route adjoining the last waypoint, including assigned speeds. Altitudes will be assigned separately.

TRANSITION	ROUTING
OSKAN 22	OSKAN - DC410 - EPILA **(FL80+) -** DC427 - DC437 **(4000′+) -** DC436 **(3000′+) -** OKILO **(3000′+).**
RIVSA 22	RIVSA - EPILA **(FL80+) -** DC427 - DC437 **(4000′+) -** DC436 **(3000′+) -** OKILO **(3000′+).**

CHANGES: Reissue due to misprint.

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MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.

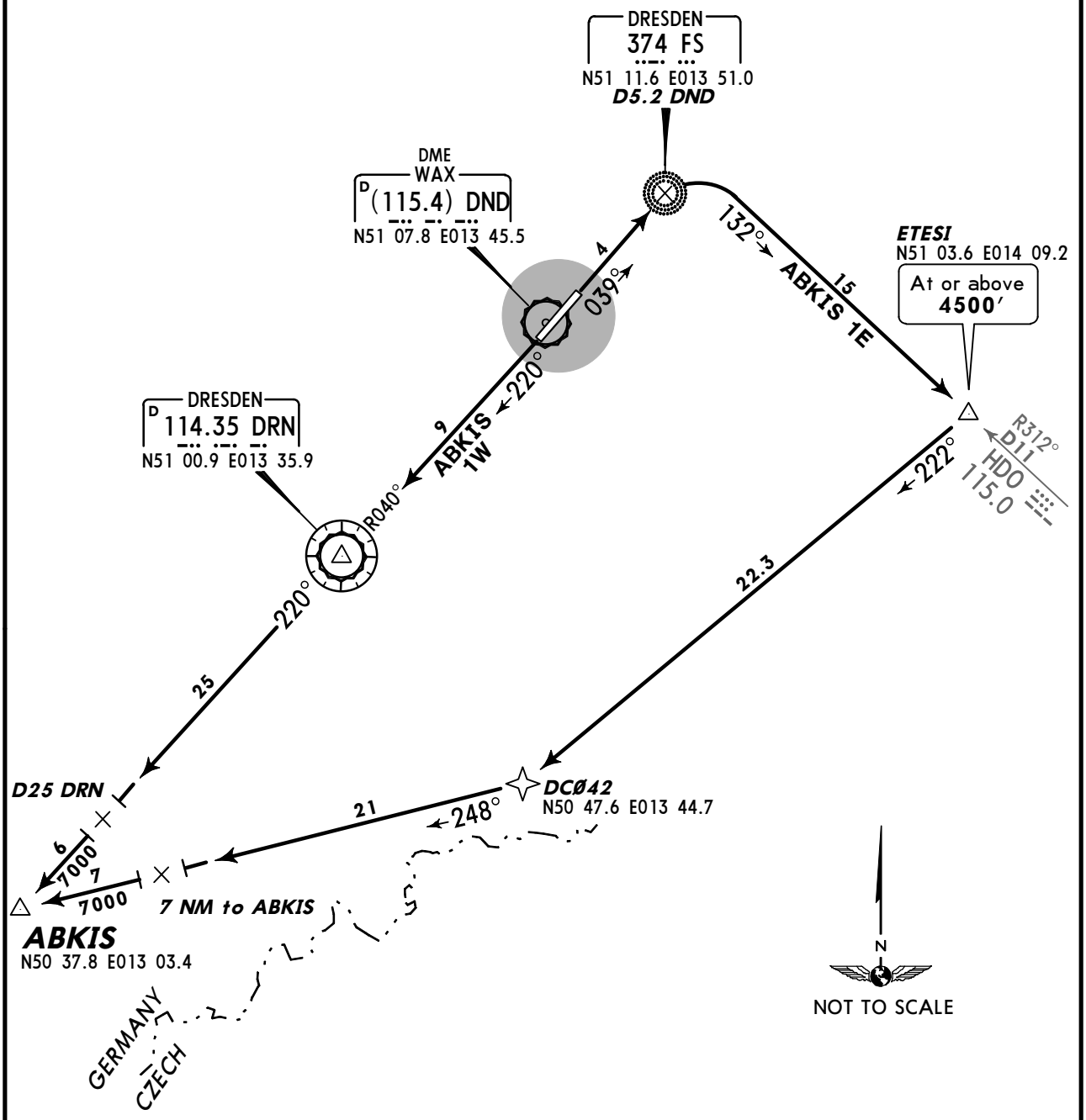


MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

ABKIS ONE ECHO (ABKIS 1E)
ABKIS ONE WHISKEY (ABKIS 1W)
RWYS 04, 22 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

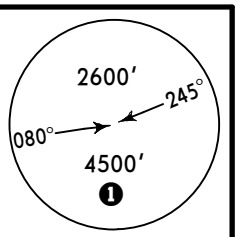
SID	RWY	ROUTING
ABKIS 1E	**04**	To FS (D5.2 DND), turn RIGHT, intercept HDO R-312 inbound to ETESI ❷, turn RIGHT, 222° track to DC042, turn RIGHT, 248° track to ABKIS.
ABKIS 1W	**22**	Intercept DRN R-040 inbound to DRN, DRN R-220 to ABKIS.

❷ After ETESI BRNAV equipment necessary.

CHANGES: ABKIS SIDs estbld; BEBEX & DEKOV SIDs transferred.

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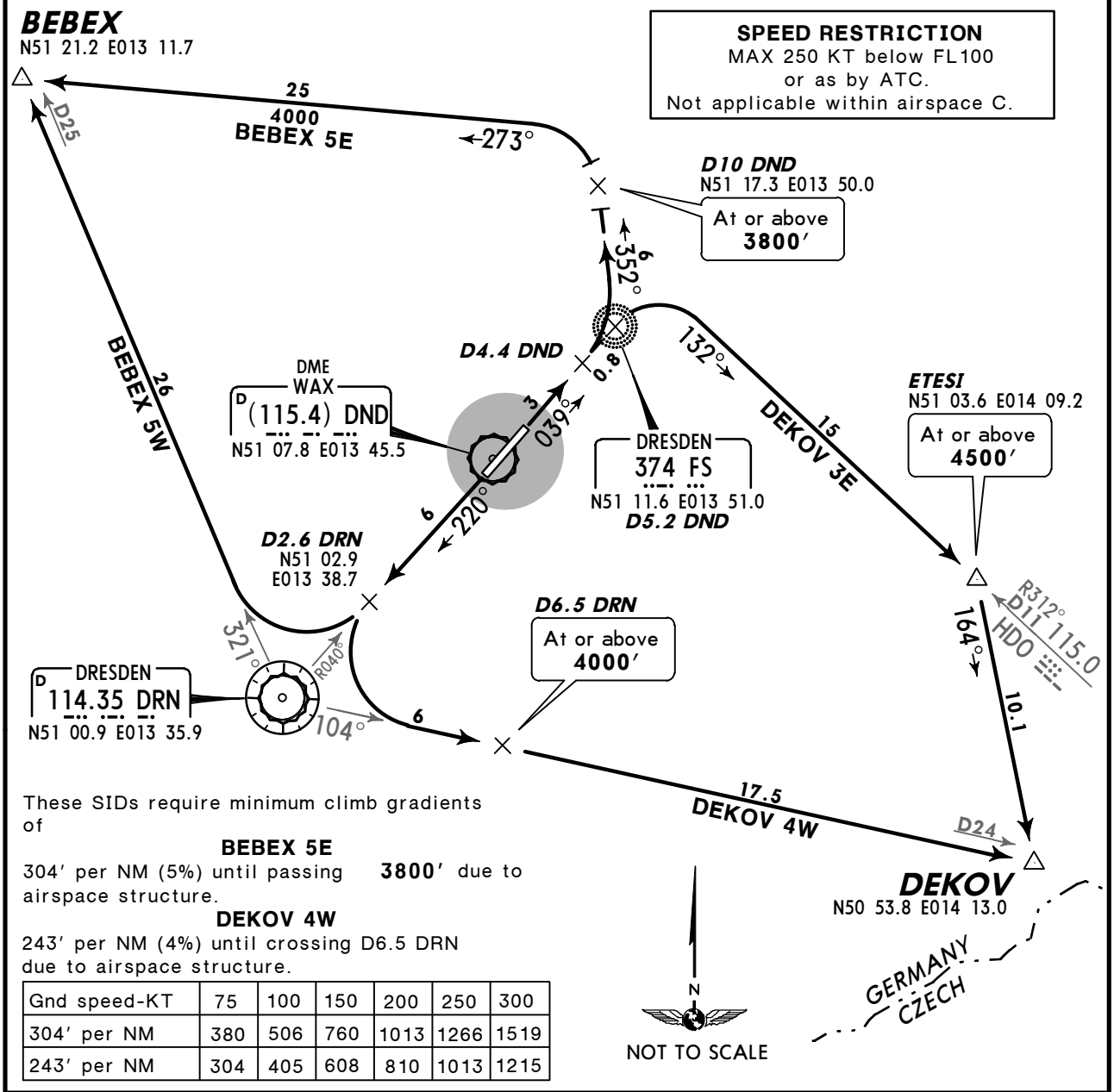
MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.



MSA
DRN VOR
applicable over German territory only

❶ 3100′ within 10 NM

BEBEX FIVE ECHO (BEBEX 5E)
BEBEX FIVE WHISKEY (BEBEX 5W)
DEKOV THREE ECHO (DEKOV 3E)
DEKOV FOUR WHISKEY (DEKOV 4W)
RWYS 04, 22 DEPARTURES



These SIDs require minimum climb gradients of

BEBEX 5E

304′ per NM (5%) until passing **3800′** due to airspace structure.

DEKOV 4W

243′ per NM (4%) until crossing D6.5 DRN due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215

Initial climb clearance **5000′**

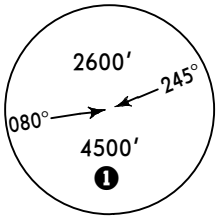
SID	RWY	ROUTING
BEBEX 5E ❷	**04**	On 039° bearing towards FS, at D4.4 DND turn LEFT, intercept 352° bearing from FS to D10 DND ❸, turn LEFT, 273° track to BEBEX.
BEBEX 5W	**22**	Intercept DRN R-040 inbound to D2.6 DRN, turn RIGHT, intercept DRN R-321 to BEBEX.
DEKOV 3E ❷	**04**	To FS (D5.2 DND), turn RIGHT, intercept HDO R-312 inbound to ETESI ❹, turn RIGHT, 164° track to DEKOV.
DEKOV 4W	**22**	Intercept DRN R-040 inbound to D2.6 DRN, turn LEFT, intercept DRN R-104 to DEKOV.

❷ If unable to comply request alternate route by ATC.
After D10 DND ❸ /ETESI ❹ BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised; chart reindexed.

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MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.



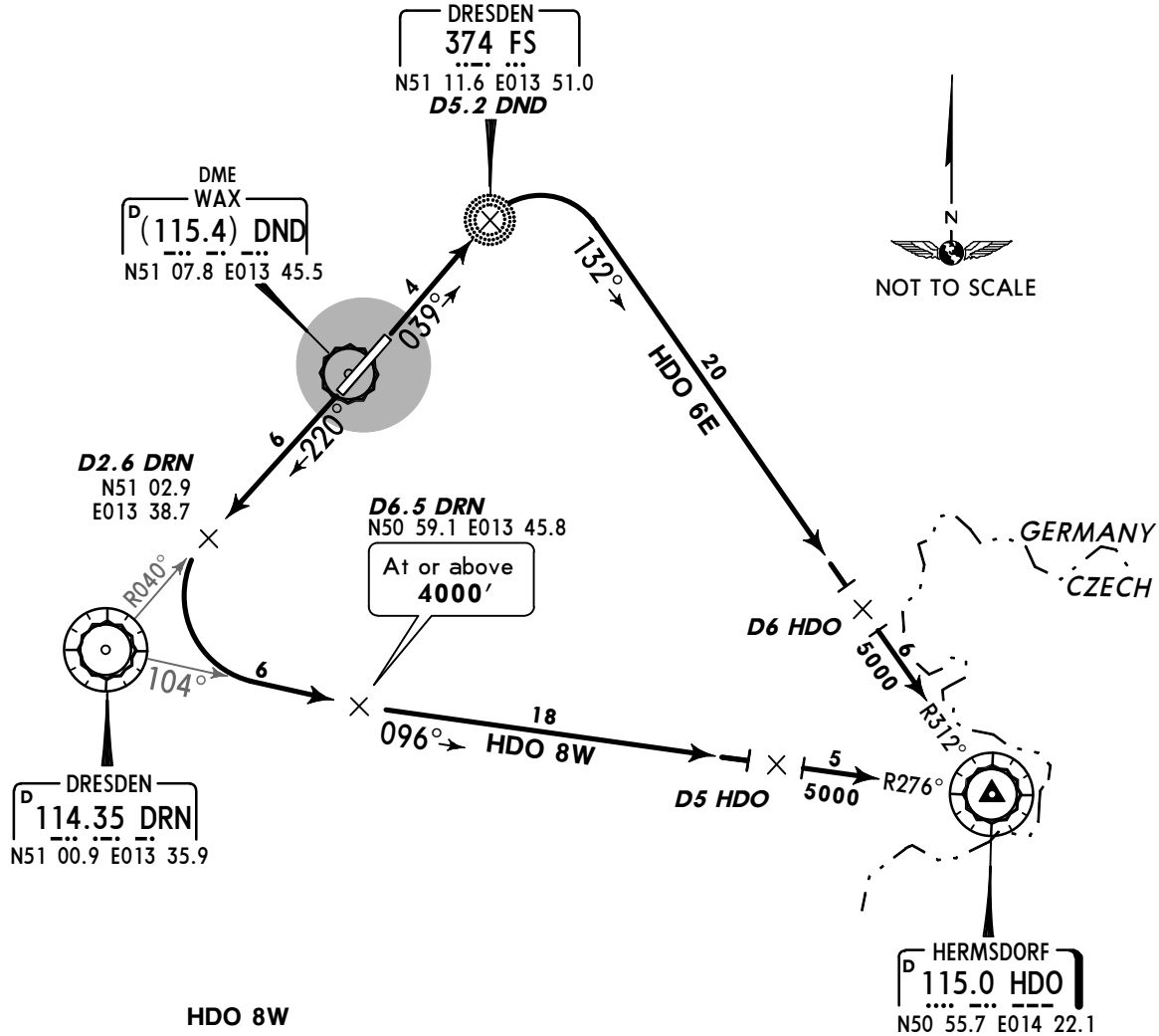
MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

HERMSDORF SIX ECHO (HDO 6E)
HERMSDORF EIGHT WHISKEY (HDO 8W)
RWYS 04, 22 DEPARTURES

ONLY FOR TRAFFIC PLANNED TO CONTINUE
VIA AIRWAYS (U)P 96 - OKX

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



HDO 8W
This SID requires a minimum climb gradient of
243′ per NM (4%) until crossing D6.5 DRN
due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
243′ per NM	304	405	608	810	1013	1215

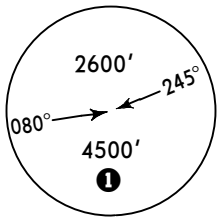
Initial climb clearance **5000′**

SID	RWY	ROUTING
HDO 6E	**04**	To FS (D5.2 DND), turn RIGHT, intercept HDO R-312 inbound to HDO.
HDO 8W	**22**	Intercept DRN R-040 inbound to D2.6 DRN, turn LEFT, intercept DRN R-104 to D6.5 DRN, turn LEFT, intercept HDO R-276 inbound to HDO.

CHANGES: SIDs renumbered, revised & transferred.

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MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.

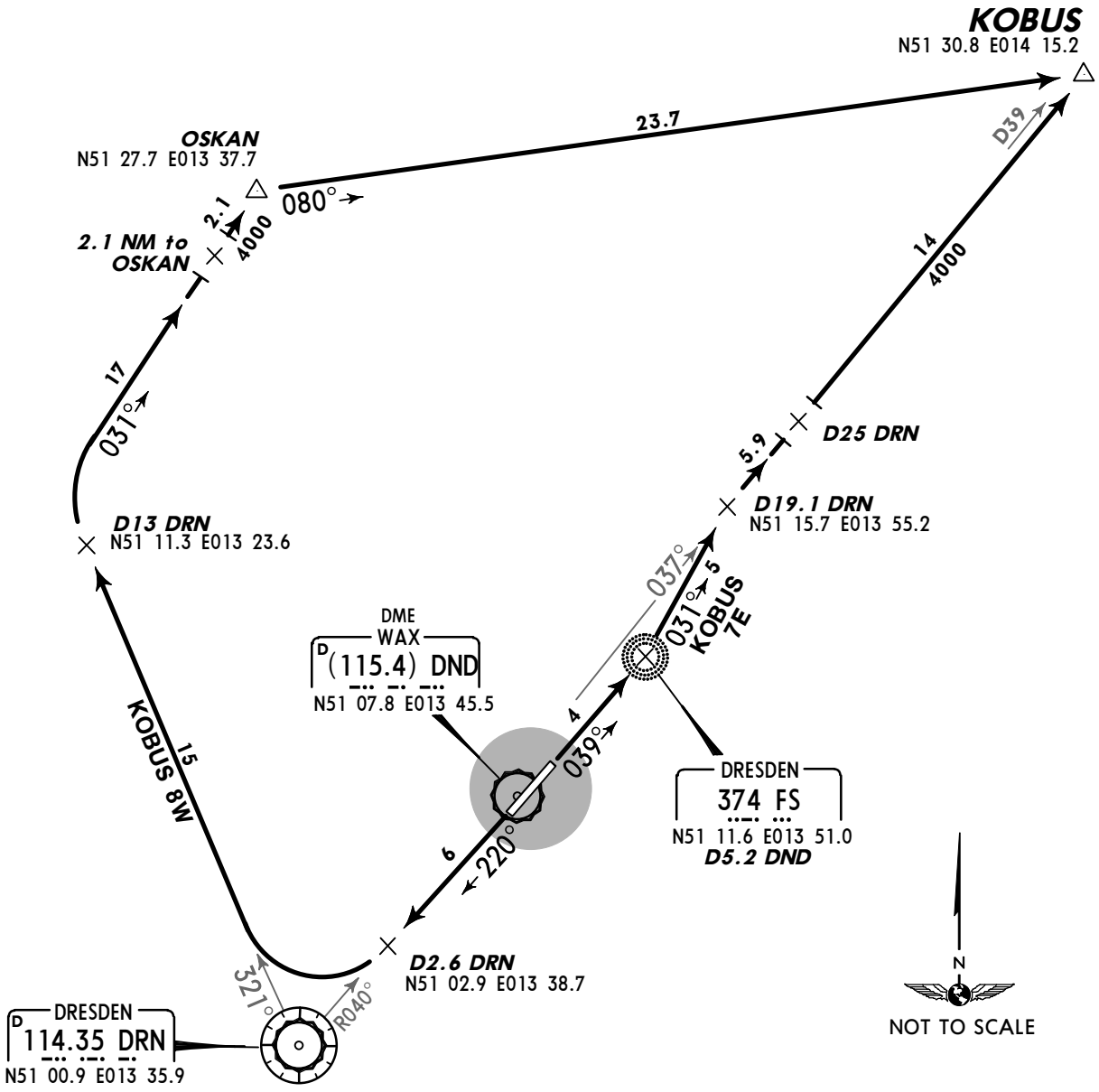


MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

KOBUS SEVEN ECHO (KOBUS 7E)
KOBUS EIGHT WHISKEY (KOBUS 8W)
RWYS 04, 22 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

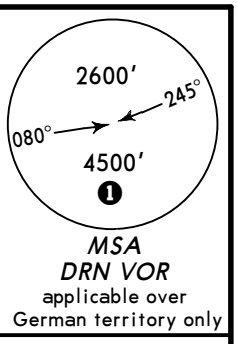
SID	RWY	ROUTING
KOBUS 7E	**04**	To FS (D5.2 DND), turn LEFT, 031° bearing to D19.1 DRN, turn RIGHT, intercept DRN R-037 to KOBUS.
KOBUS 8W ❷	**22**	Intercept DRN R-040 inbound to D2.6 DRN, turn RIGHT, intercept DRN R-321 to D13 DRN ❸, turn RIGHT, 031° track to OSKAN, turn RIGHT, 080° track to KOBUS.

❷ If unable to comply request alternate route by ATC.
❸ After D13 DRN BRNAV equipment necessary.

CHANGES: SIDs renumbered, revised & transferred.

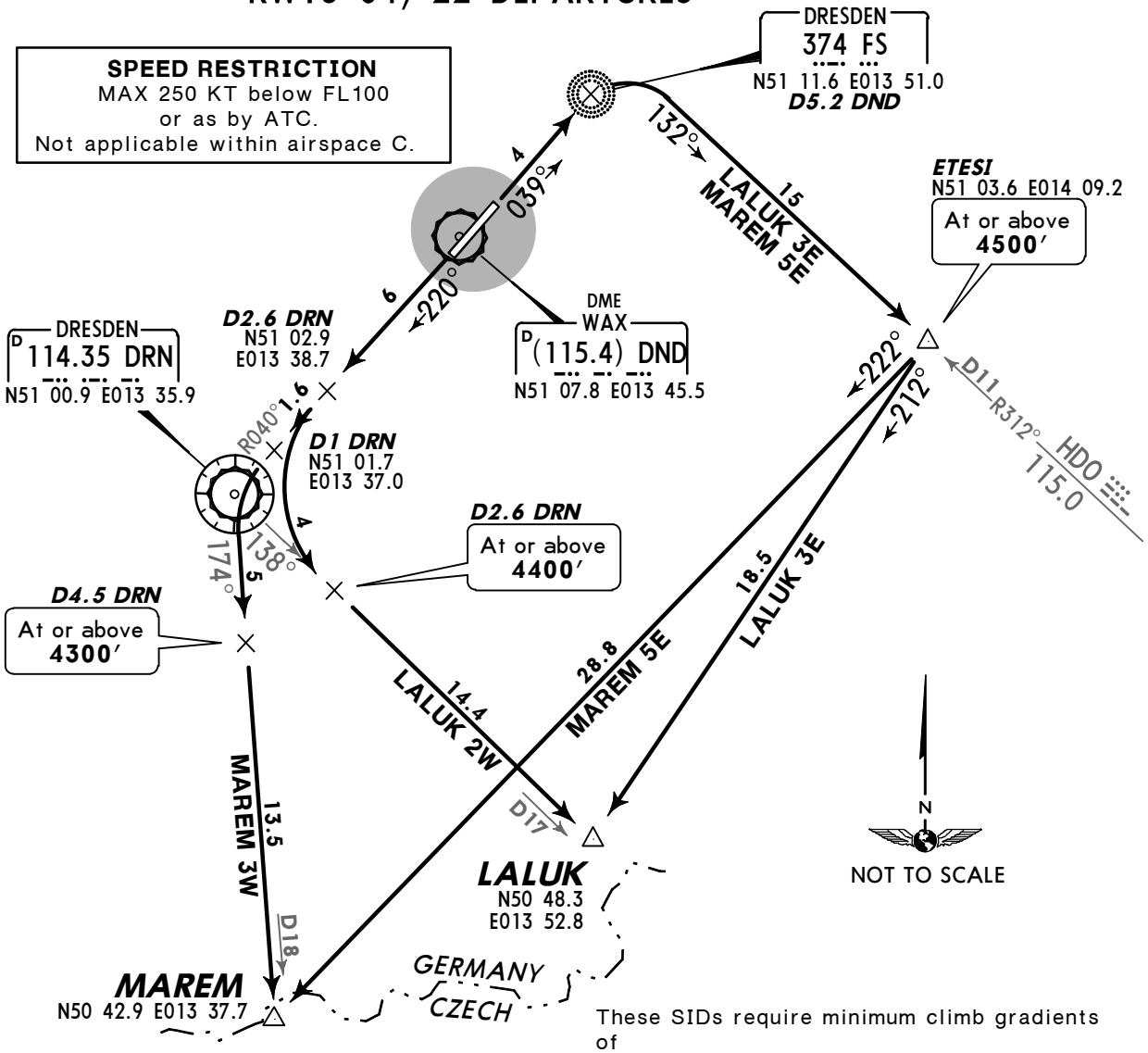
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MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.



❶ 3100′ within 10 NM

LALUK THREE ECHO (LALUK 3E)
LALUK TWO WHISKEY (LALUK 2W)
MAREM FIVE ECHO (MAREM 5E)
MAREM THREE WHISKEY (MAREM 3W)
RWYS 04, 22 DEPARTURES



Gnd speed-KT	75	100	150	200	250	300
352′ per NM	441	587	881	1175	1468	1762
273′ per NM	342	456	684	911	1139	1367

These SIDs require minimum climb gradients of

LALUK 2W

352′ per NM (5.8%) until crossing D2.6 DRN due to airspace structure.

MAREM 3W

273′ per NM (4.5%) until crossing D4.5 DRN due to airspace structure.

Initial climb clearance **5000′**

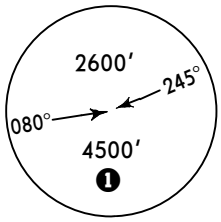
SID	RWY	ROUTING
LALUK 3E ❷	**04**	To FS (D5.2 DND), turn RIGHT, intercept HDO R-312 inbound to ETESI ❸, turn RIGHT, 212° track to LALUK.
LALUK 2W	**22**	Intercept DRN R-040 inbound to D2.6 DRN, turn LEFT, intercept DRN R-138 to LALUK.
MAREM 5E ❷	**04**	To FS (D5.2 DND), turn RIGHT, intercept HDO R-312 inbound to ETESI ❸, turn RIGHT, 222° track to MAREM.
MAREM 3W	**22**	Intercept DRN R-040 inbound to D1 DRN, turn LEFT, intercept DRN R-174 to MAREM.

❷ If unable to comply request alternate route by ATC.
❸ After ETESI BRNAV equipment necessary.

CHANGES: SIDs & RNAV SIDs renumbered, revised & transferred.

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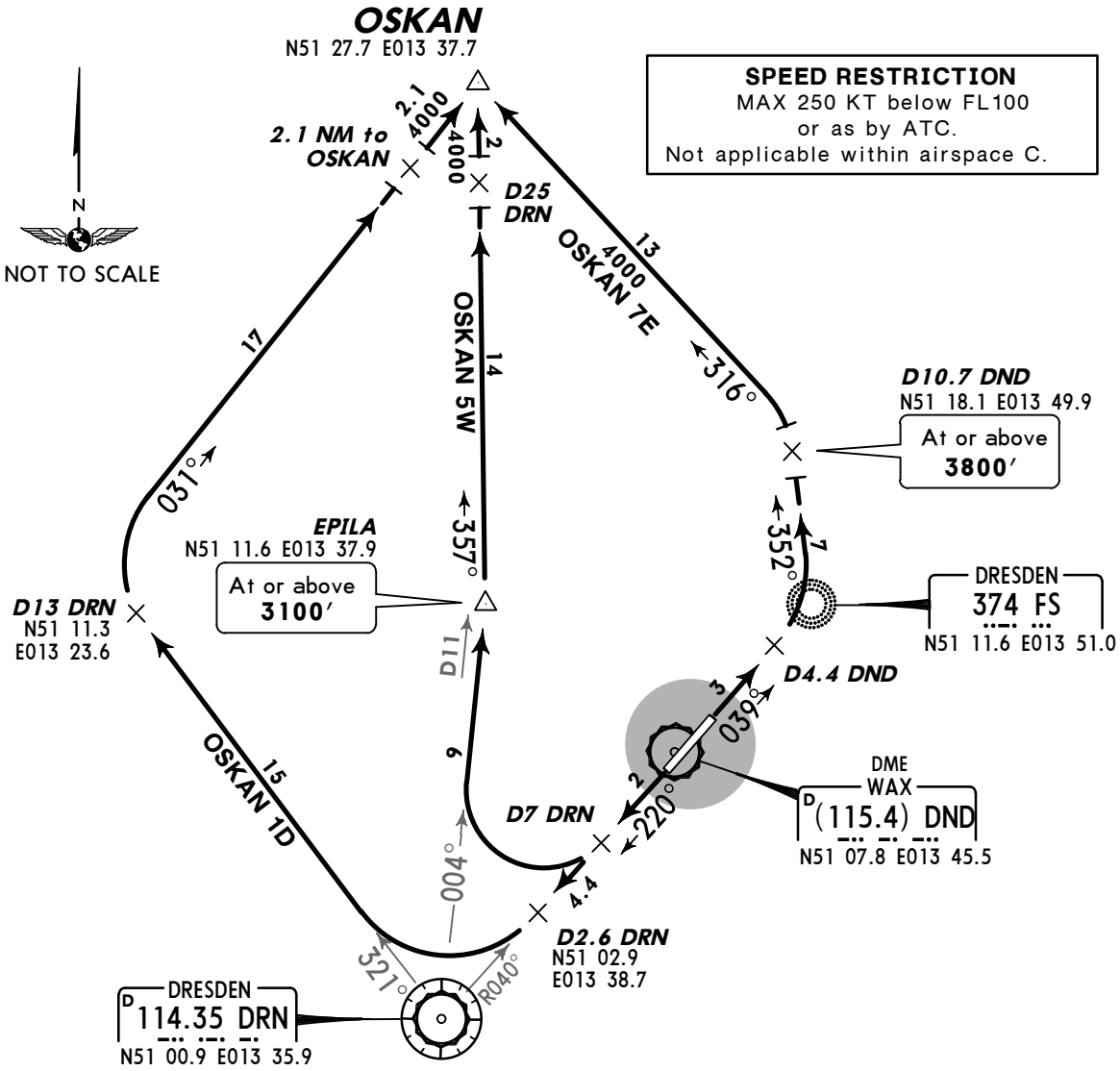
MUNICH Radar (APP)	Apt Elev	Trans level: By ATC Trans alt: 5000′
125.62	754′	**1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.



MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

OSKAN ONE DELTA (OSKAN 1D)
OSKAN SEVEN ECHO (OSKAN 7E)
OSKAN FIVE WHISKEY (OSKAN 5W)
RWYS 22, 04 DEPARTURES



OSKAN 7E

This SID requires a minimum climb gradient of
304′ per NM (5%) until passing **3800′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519

Initial climb clearance **5000′**

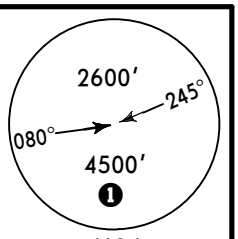
SID	RWY	ROUTING
OSKAN 1D ❷	**22**	Intercept DRN R-040 inbound to D2.6 DRN, turn RIGHT, intercept DRN R-321 to D13 DRN ❹, turn RIGHT, 031° track to OSKAN.
OSKAN 7E ❷	**04**	On 039° bearing towards FS to D4.4 DND, turn LEFT, intercept 352° bearing from FS to D10.7 DND ❺, turn LEFT, 316° track to OSKAN.
OSKAN 5W ❸	**22**	Intercept DRN R-040 inbound to D7 DRN, turn RIGHT, intercept DRN R-004 to EPILA, turn LEFT, 357° track to OSKAN.

❷ If unable to comply request alternate route by ATC.
❸ Not to be filed in flight plan. Advised by ATC only.
After D13 DRN ❹ /D10.7 DND ❺ BRNAV equipment necessary.

CHANGES: SIDs & RNAV SIDs renumbered, revised & transferred.

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MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.

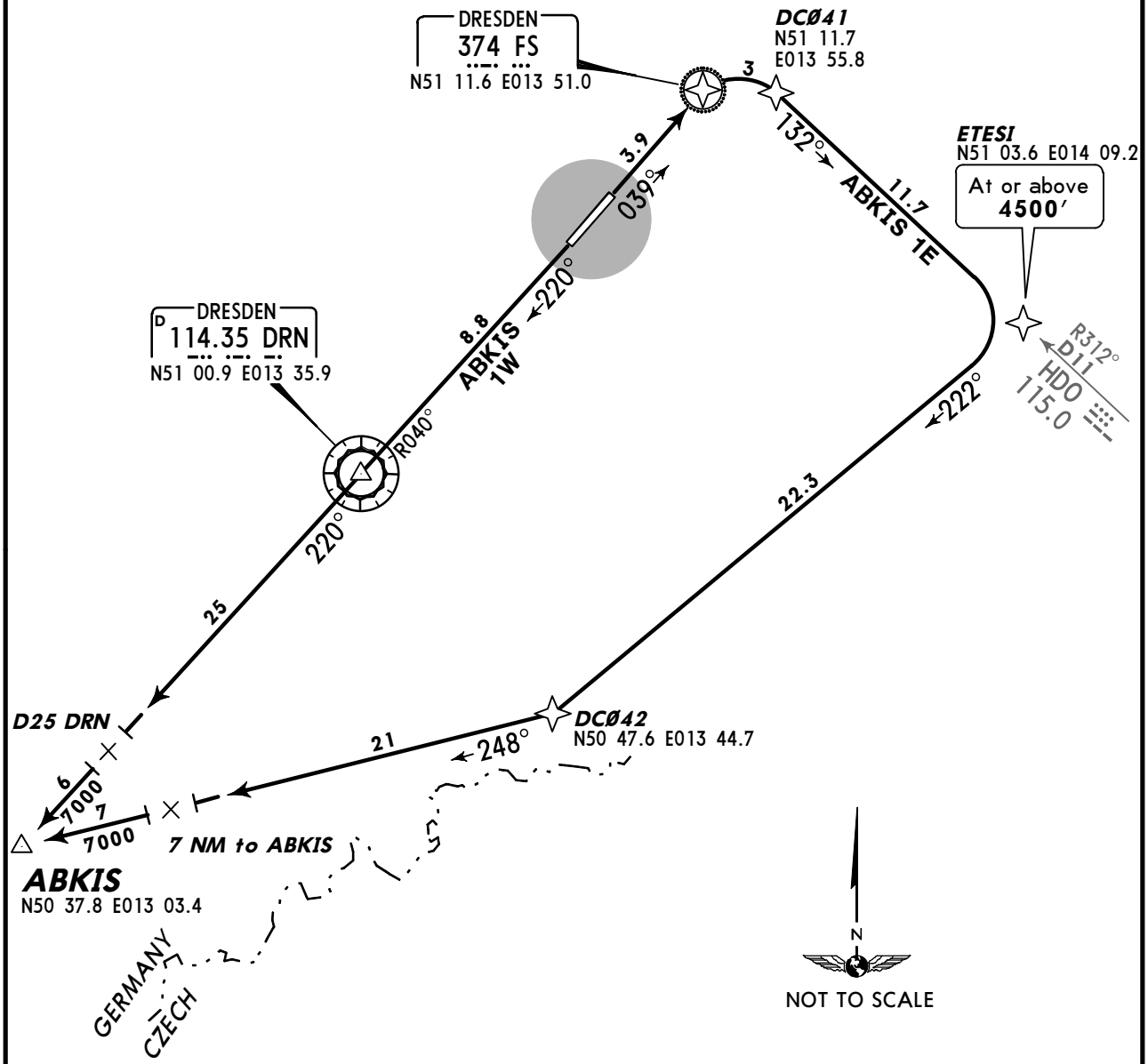


MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

ABKIS ONE ECHO (ABKIS 1E) *[ABKI1E]*
ABKIS ONE WHISKEY (ABKIS 1W) *[ABKI1W]*
RWYS 04, 22 RNAV DEPARTURES
(OVERLAY 10-3)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



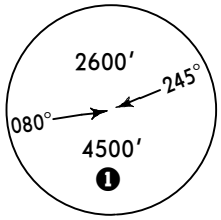
Initial climb clearance **5000′**

SID	RWY	ROUTING
ABKIS 1E	**04**	**(1200′+)** - FS - DC041 - ETESI **(4500′+)** - DC042 - ABKIS.
ABKIS 1W	**22**	**(1200′+)** - DRN - ABKIS.

CHANGES: ABKIS SIDs estbld; KOBUS & LALUK SIDs transferred.

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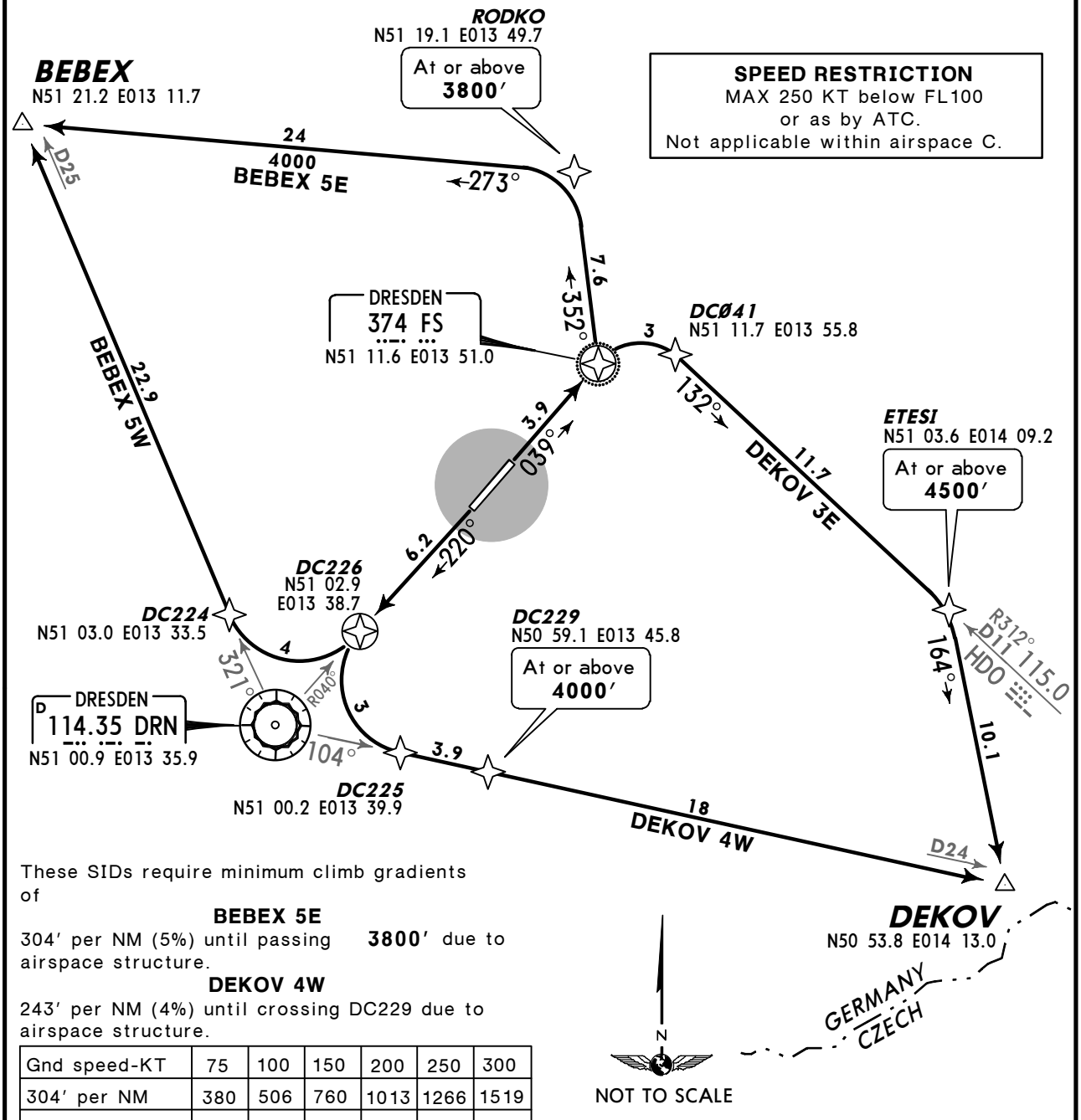
MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.



MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

BEBEX FIVE ECHO (BEBEX 5E) *[BEBE5E]*
BEBEX FIVE WHISKEY (BEBEX 5W) *[BEBE5W]*
DEKOV THREE ECHO (DEKOV 3E) *[DEKO3E]*
DEKOV FOUR WHISKEY (DEKOV 4W) *[DEKO4W]*
RWYS 04, 22 RNAV DEPARTURES
(OVERLAY 10-3A)



These SIDs require minimum climb gradients of

BEBEX 5E

304′ per NM (5%) until passing **3800′** due to airspace structure.

DEKOV 4W

243′ per NM (4%) until crossing DC229 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215

Initial climb clearance **5000′**

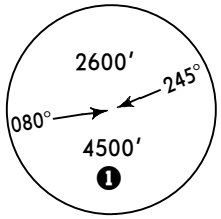
SID	RWY	ROUTING
BEBEX 5E ❷	**04**	**(1200′+)** - FS - RODKO **(3800′+)** - BEBEX.
BEBEX 5W	**22**	**(1200′+)** - DC226 - DC224 - BEBEX.
DEKOV 3E ❷	**04**	**(1200′+)** - FS - DC041 - ETESI **(4500′+)** - DEKOV.
DEKOV 4W	**22**	**(1200′+)** - DC226 - DC225 - DC229 **(4000′+)** - DEKOV.

❷ If unable to comply request alternate route by ATC.

CHANGES: RNAV SIDs renumbered & revised; chart reindexed.

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MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.



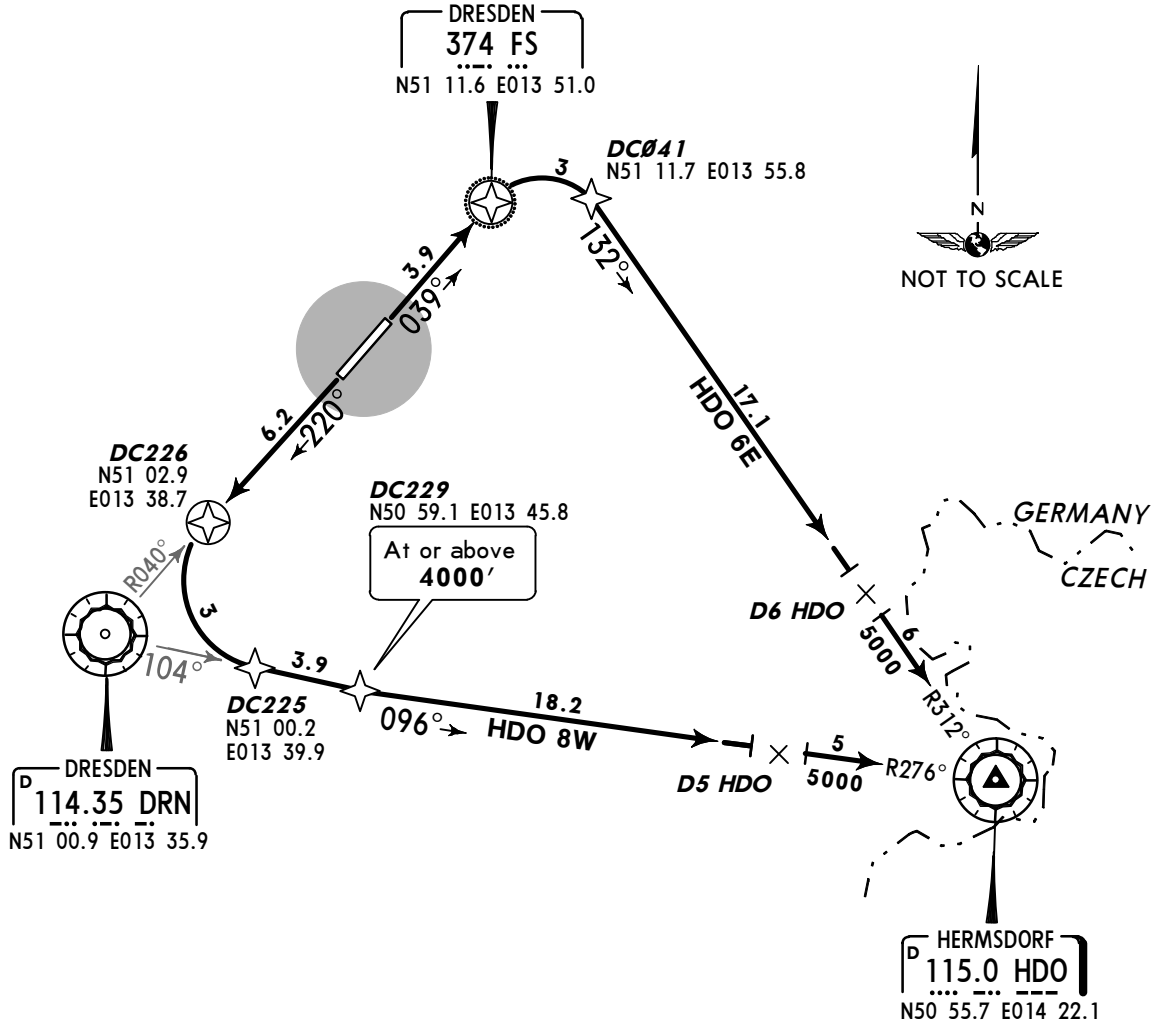
MSA
DRN VOR
applicable over
German territory only

1 3100′ within 10 NM

HERMSDORF SIX ECHO (HDO 6E)
HERMSDORF EIGHT WHISKEY (HDO 8W)
RWYS 04, 22 RNAV DEPARTURES
(OVERLAY 10-3B)

ONLY FOR TRAFFIC PLANNED TO CONTINUE VIA AIRWAYS (U)P 96 - OKX

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



HDO 8W

This SID requires a minimum climb gradient of
243′ per NM (4%) until crossing DC229 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
243′ per NM	304	405	608	810	1013	1215

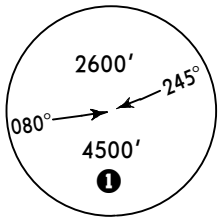
Initial climb clearance **5000′**

SID	RWY	ROUTING
HDO 6E	**04**	**(1200′+)** - FS - DC041 - HDO.
HDO 8W	**22**	**(1200′+)** - DC226 - DC225 - DC229 **(4000′+)** - HDO.

CHANGES: SIDs & RNAV SIDs renumbered, revised & transferred.

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MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.

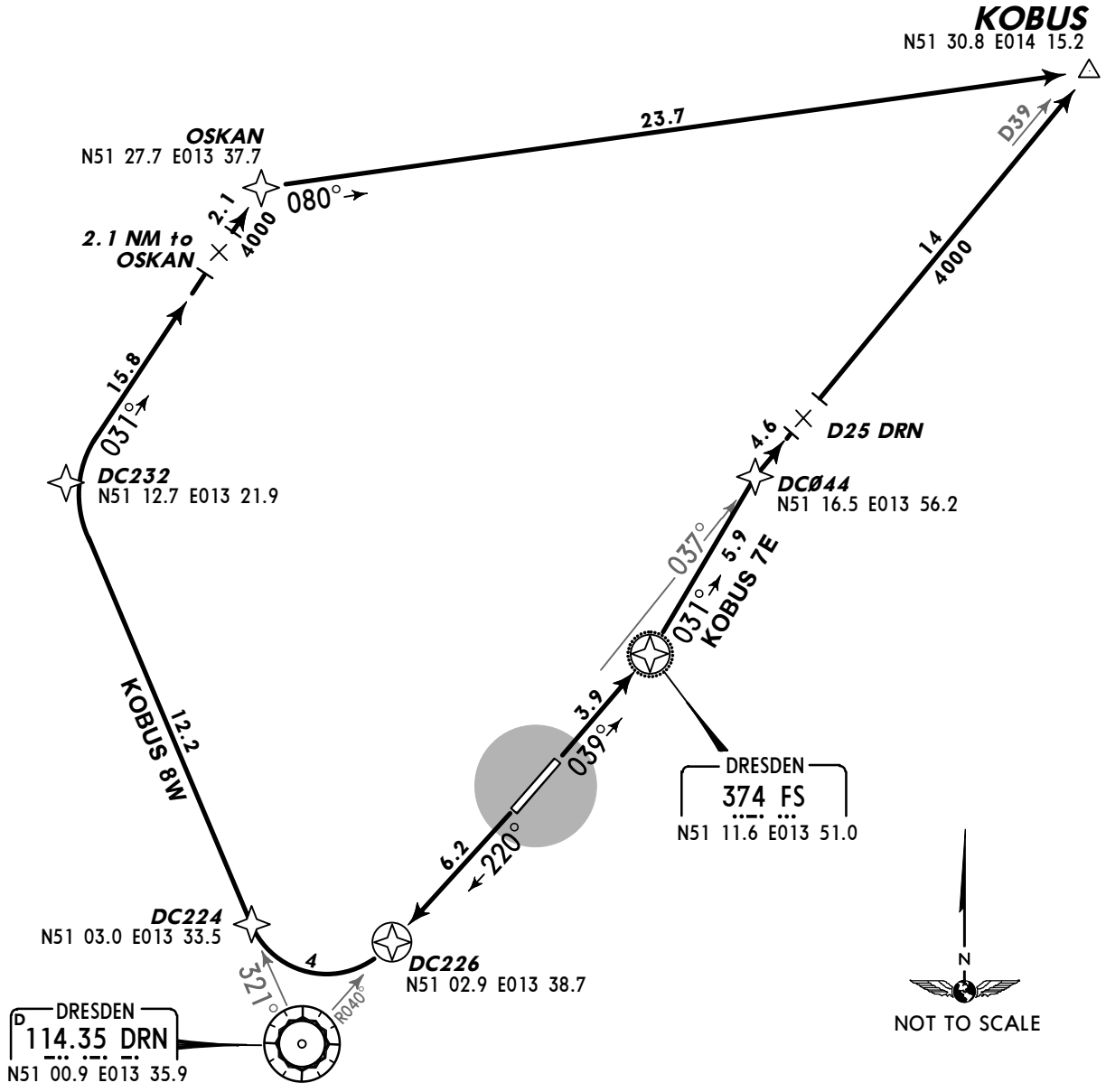


MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

KOBUS SEVEN ECHO (KOBUS 7E) *[KOBU7E]*
KOBUS EIGHT WHISKEY (KOBUS 8W) *[KOBU8W]*
RWYS 04, 22 RNAV DEPARTURES
(OVERLAY 10-3C)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

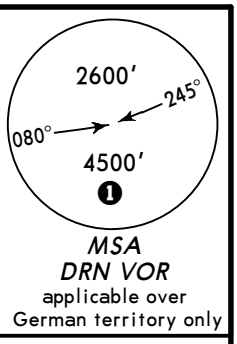
SID	RWY	ROUTING
KOBUS 7E	**04**	**(1200′+)** - FS - DC044 - KOBUS.
KOBUS 8W ❷	**22**	**(1200′+)** - DC226 - DC224 - DC232 - OSKAN - KOBUS.

❷ If unable to comply request alternate route by ATC.

CHANGES: SIDs & RNAV SIDs renumbered, revised & transferred.

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MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.

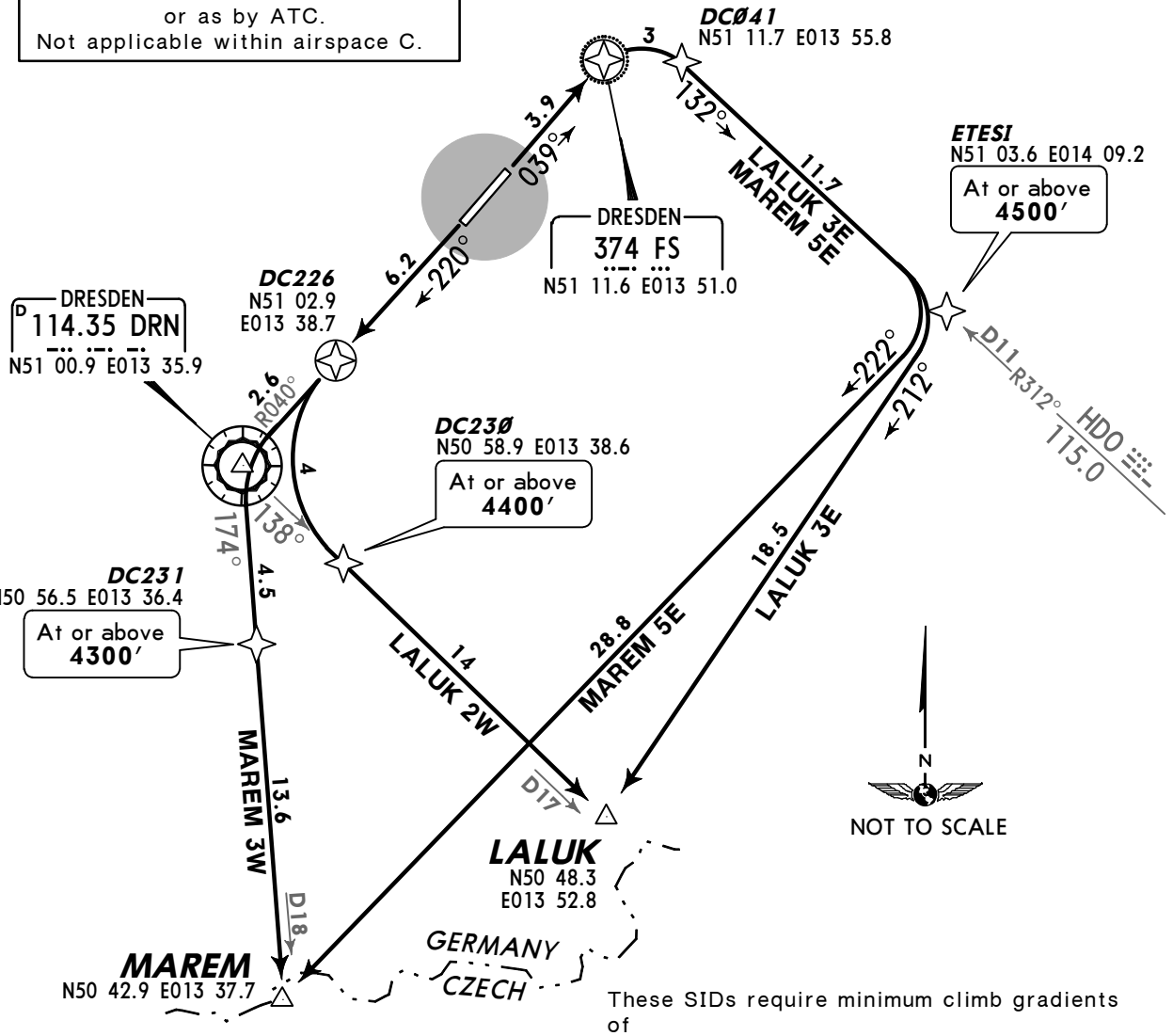


LALUK THREE ECHO (LALUK 3E) *[LALU3E]*
LALUK TWO WHISKEY (LALUK 2W) *[LALU2W]*
MAREM FIVE ECHO (MAREM 5E) *[MARE5E]*
MAREM THREE WHISKEY (MAREM 3W) *[MARE3W]*

1 3100′ within 10 NM

RWYS 04, 22 RNAV DEPARTURES
(OVERLAY 10-3D)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Gnd speed-KT	75	100	150	200	250	300
352′ per NM	441	587	881	1175	1468	1762
273′ per NM	342	456	684	911	1139	1367

These SIDs require minimum climb gradients of

LALUK 2W
352′ per NM (5.8%) until crossing DC230 due to airspace structure.

MAREM 3W
273′ per NM (4.5%) until crossing DC231 due to airspace structure.

Initial climb clearance **5000′**

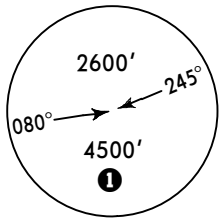
SID	RWY	ROUTING
LALUK 3E 2	**04**	**(1200′+)**- FS - DC041 - ETESI **(4500′+)**- LALUK.
LALUK 2W	**22**	**(1200′+)**- DC226 - DC230 **(4400′+)** - LALUK.
MAREM 5E 2	**04**	**(1200′+)**- FS - DC041 - ETESI **(4500′+)**- MAREM.
MAREM 3W	**22**	**(1200′+)**- DRN - DC231 **(4300′+)** - MAREM.

2 If unable to comply request alternate route by ATC.

CHANGES: SIDs & RNAV SIDs renumbered, revised & transferred.

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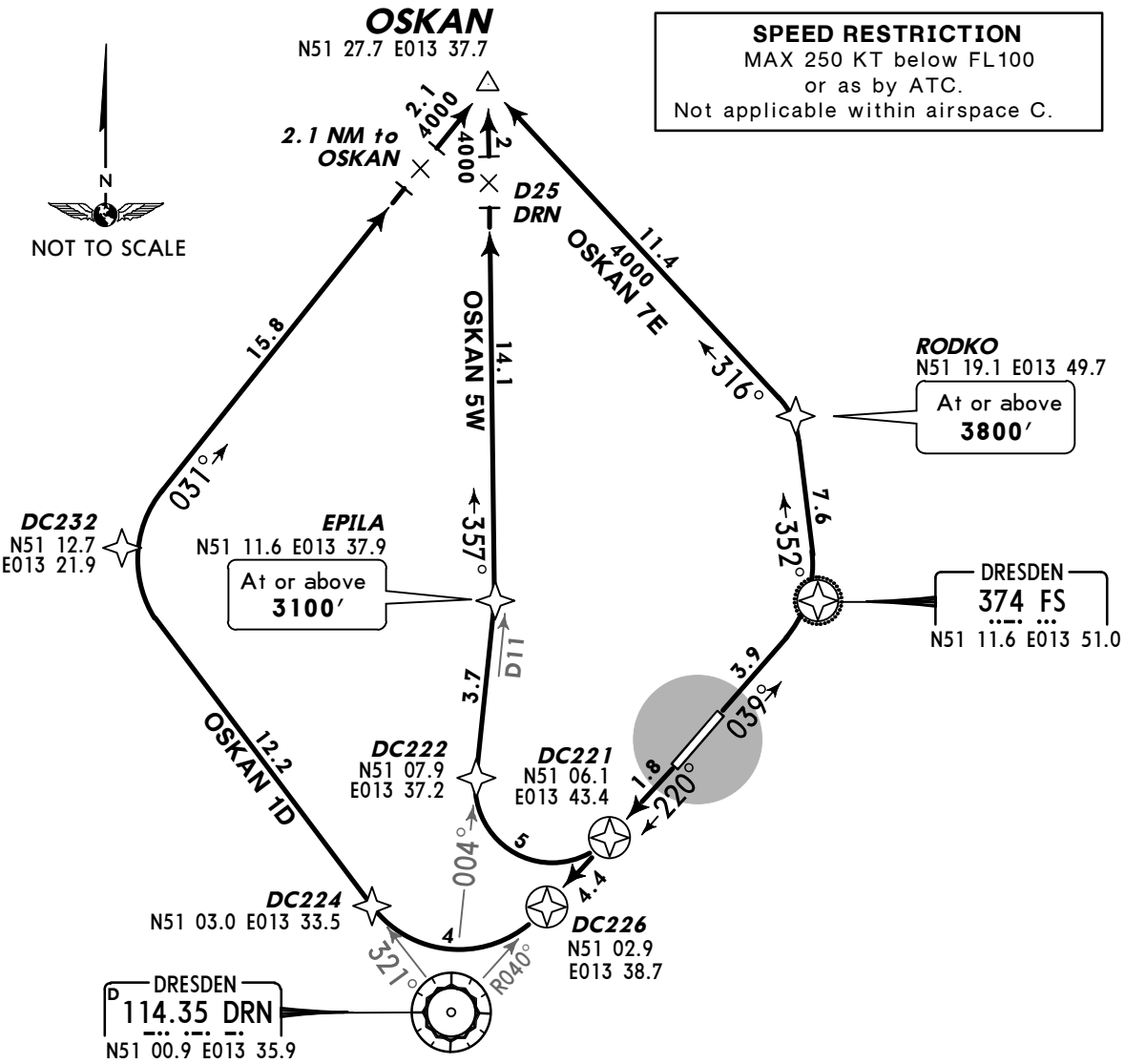
MUNICH Radar (APP) 125.62	*Apt Elev* 754′	Trans level: By ATC Trans alt: 5000′ **1.** Immediately after take-off contact MUNICH Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWY 04: EXPECT close-in obstacles.



MSA
DRN VOR
applicable over
German territory only

❶ 3100′ within 10 NM

OSKAN ONE DELTA (OSKAN 1D) *[OSKA1D]*
OSKAN SEVEN ECHO (OSKAN 7E) *[OSKA7E]*
OSKAN FIVE WHISKEY (OSKAN 5W) *[OSKA5W]*
RWYS 22, 04 RNAV DEPARTURES
(OVERLAY 10-3E)



OSKAN 7E

This SID requires a minimum climb gradient of
304′ per NM (5%) until passing **3800′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519

Initial climb clearance **5000′**

SID	RWY	ROUTING
OSKAN 1D ❷	**22**	**(1200′+)** - DC226 - DC224 - DC232 - OSKAN.
OSKAN 7E ❷	**04**	**(1200′+)** - FS - RODKO **(3800′+)** - OSKAN.
OSKAN 5W ❸	**22**	**(1200′+)** - DC221 - DC222 - EPILA **(3100′+)** - OSKAN.

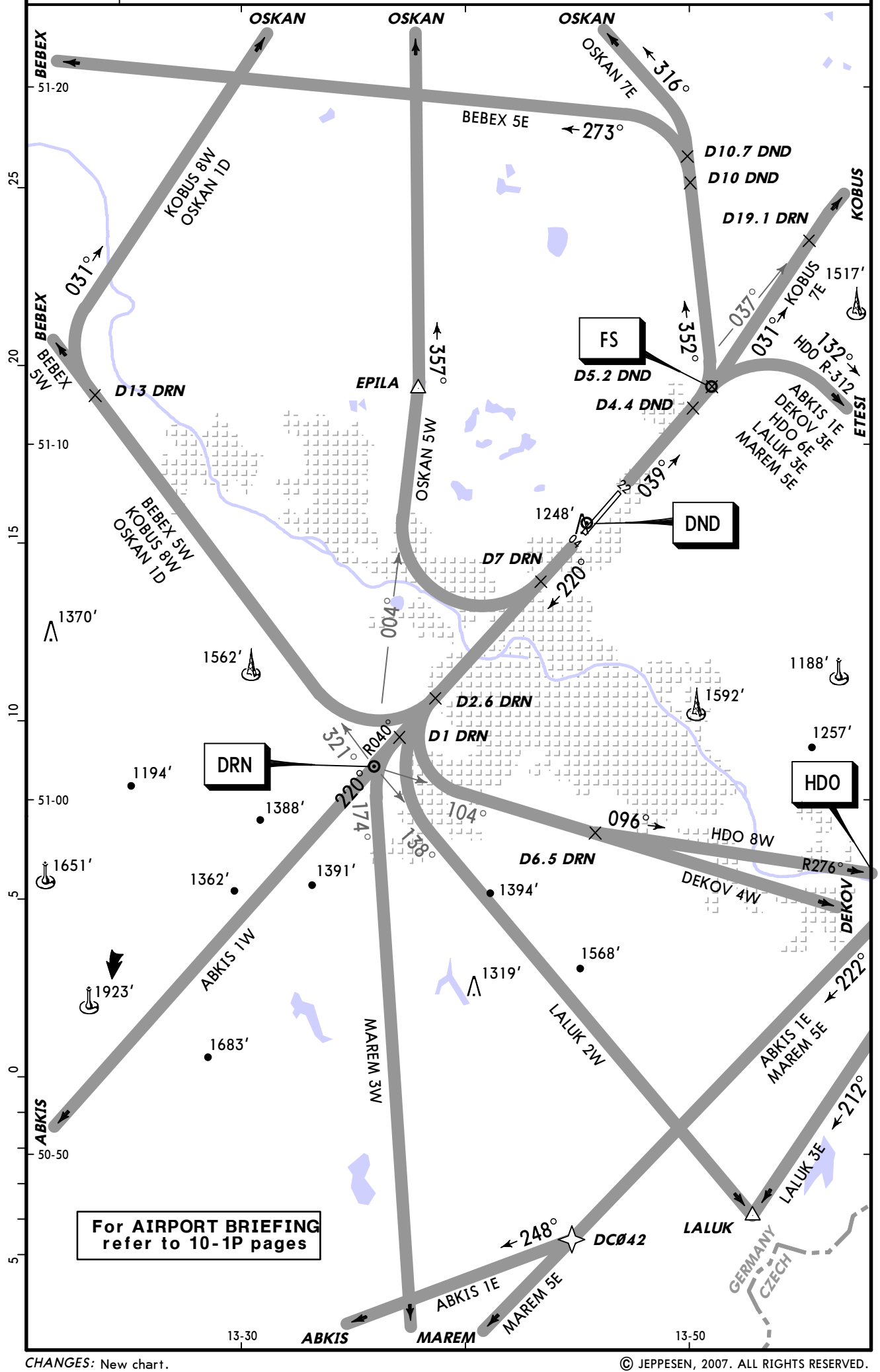
❷ If unable to comply request alternate route by ATC.
❸ Not to be filed in flight plan. Advised by ATC only.

CHANGES: SIDs & RNAV SIDs renumbered, revised & transferred.

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Apt Elev 754'

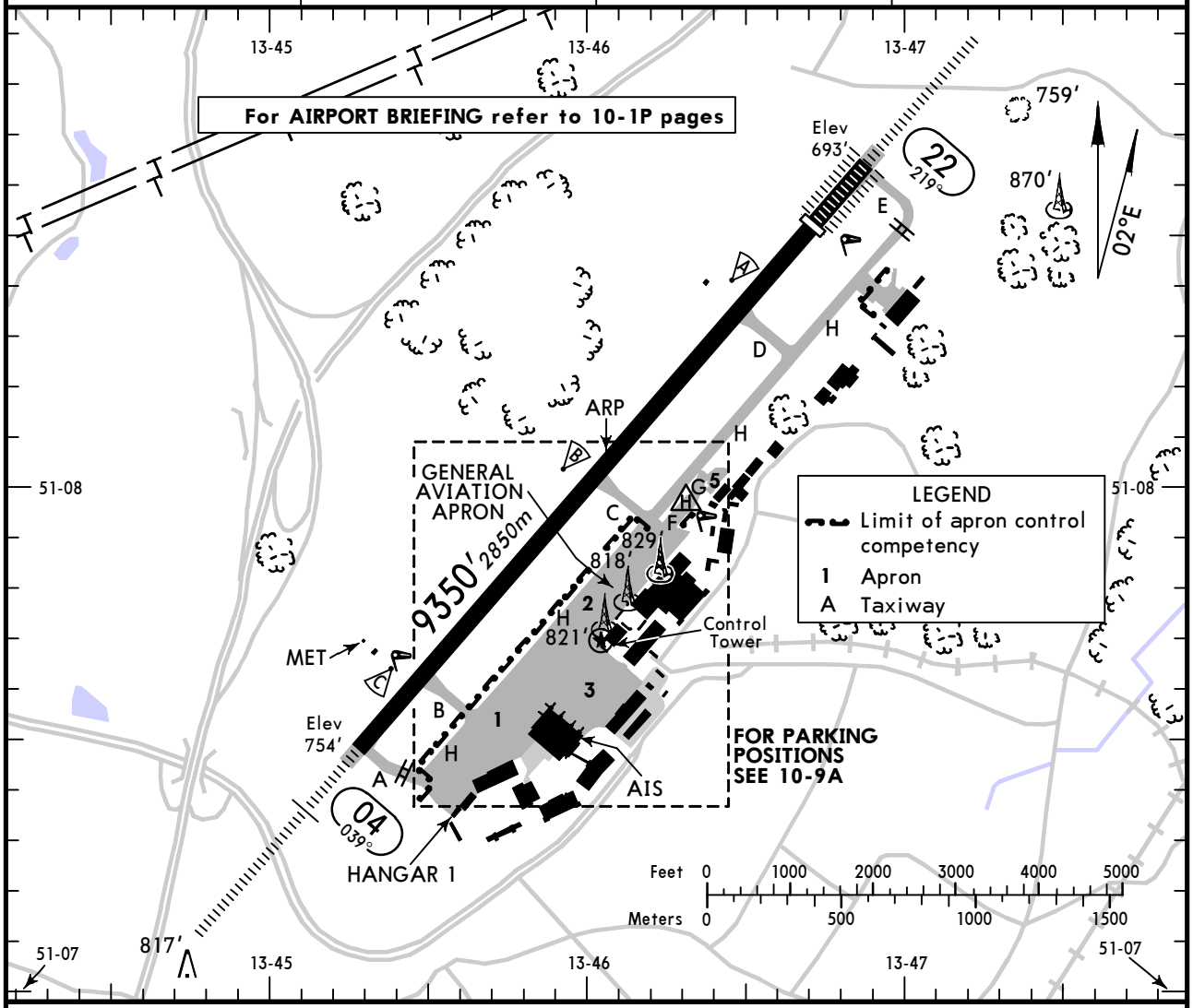
NOISE ABATEMENT



CHANGES: New chart.

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*D-ATIS	DRESDEN Ground	Apron	Tower
118.87	121.97	121.75	122.92



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
04	HIRL CL ❶ ALSF-I PAPI-L(3.0°) RVR	9350′ *2850m*	8317′ *2535m*	❷	197′ *60m*
22	HIRL CL ❶ ALSF-II TDZ REIL PAPI-L(3.0°) RVR	8366′ *2550m*	7455′ *2272m*		

❶ spacing 15m.

❷ TAKE-OFF RUN AVAILABLE

RWY 04:
From rwy head 9350′ (2850m)
twy B int 8202′ (2500m)
twy C int 4987′ (1520m)

RWY 22:
From rwy head 9350′ (2850m)
twy D int 7087′ (2160m)
twy C int 4462′ (1360m)

Standard

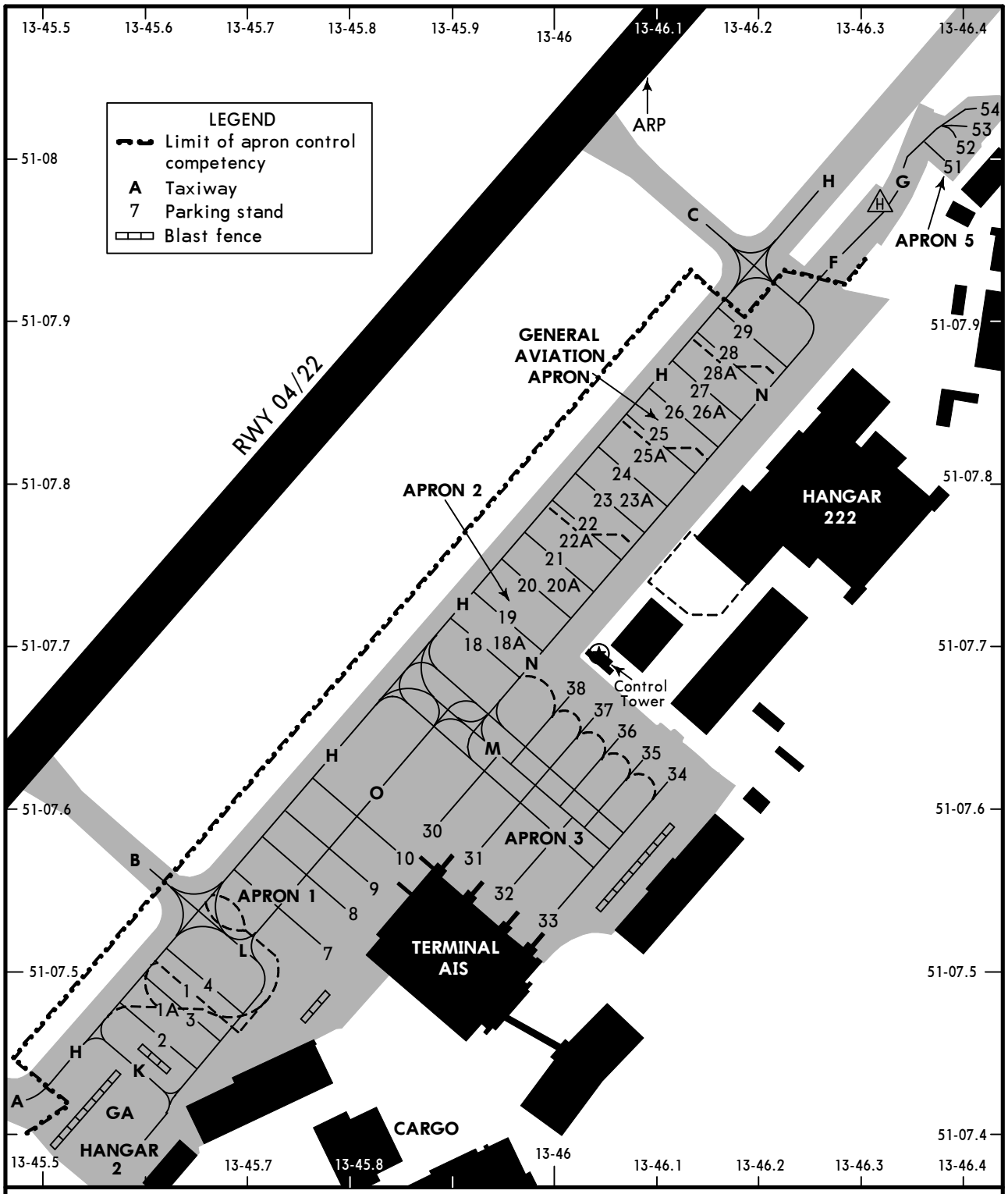
TAKE-OFF 1

	LVP must be in Force: Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved HUD required below 150m.

CHANGES: MET. Apron.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1 thru 4	N51 07.3 E013 45.4	27 thru 29	N51 07.9 E013 46.2
7, 8	N51 07.5 E013 45.8	30, 31	N51 07.6 E013 45.9
9	N51 07.6 E013 45.8	32, 33	N51 07.5 E013 46.0
10	N51 07.6 E013 45.9	34, 35	N51 07.6 E013 46.1
18, 18A	N51 07.7 E013 45.9	36	N51 07.7 E013 46.1
19 thru 20A	N51 07.7 E013 46.0	37, 38	N51 07.7 E013 46.0
21, 22, 22A	N51 07.8 E013 46.0	51 thru 54	N51 08.0 E013 46.4
23	N51 07.8 E013 46.1		
23A	N51 07.8 E013 46.0		
24 thru 26A	N51 07.8 E013 46.1		

CHANGES: Twys. Stands. Coordinates.

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DRESDEN, GERMANY

DRESDEN

STRAIGHT-IN RWY		A	B	C	D
04	ILS	**954**′(200′)	**954**′(200′)	**954**′(200′)	**954**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1200**′(446′)	**1200**′(446′)	**1200**′(446′)	**1200**′(446′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**1050**′(296′)	**1080**′(326′)	**1080**′(326′)	**1080**′(326′)
		R800m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**1120**′(366′)	**1120**′(366′)	**1120**′(366′)	**1120**′(366′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	VOR	**1200**′(446′)	**1200**′(446′)	**1200**′(446′)	**1200**′(446′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
22	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**800**′(100′)	**800**′(100′)	**800**′(100′)	**800**′(100′)
		RA107′R300m	**RA107′R300m**	**RA107′R300m**	**RA107′R300m**
	ILS	**900**′(200′)	**900**′(200′)	**900**′(200′)	**900**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1230**′(530′)	**1230**′(530′)	**1230**′(530′)	**1230**′(530′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**1170**′(470′)	**1170**′(470′)	**1170**′(470′)	**1170**′(470′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV)	**1160**′(460′)	**1160**′(460′)	**1160**′(460′)	**1160**′(460′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR	**1280**′(580′)	**1280**′(580′)	**1280**′(580′)	**1280**′(580′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

CIRCLE-TO-LAND	100 KT	135 KT	180 KT	205 KT
	1230′(476′)❶	**1260**′(506′)❶	**1460**′(706′)	**1460**′(706′)
	V1500m	V1600m	V2400m	V3600m

❶ After VOR rwy 22: 1280′(526′).

TAKE-OFF RWY 04, 22

	Approved Operators	LVP must be in Force				
	HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: New page.

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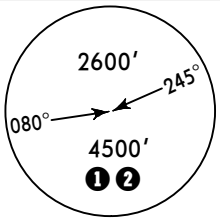
BRIEFING STRIP™

*D-ATIS	MUNCHEN Radar (APP)	DRESDEN Tower	Ground
118.87	125.62	122.92	121.97

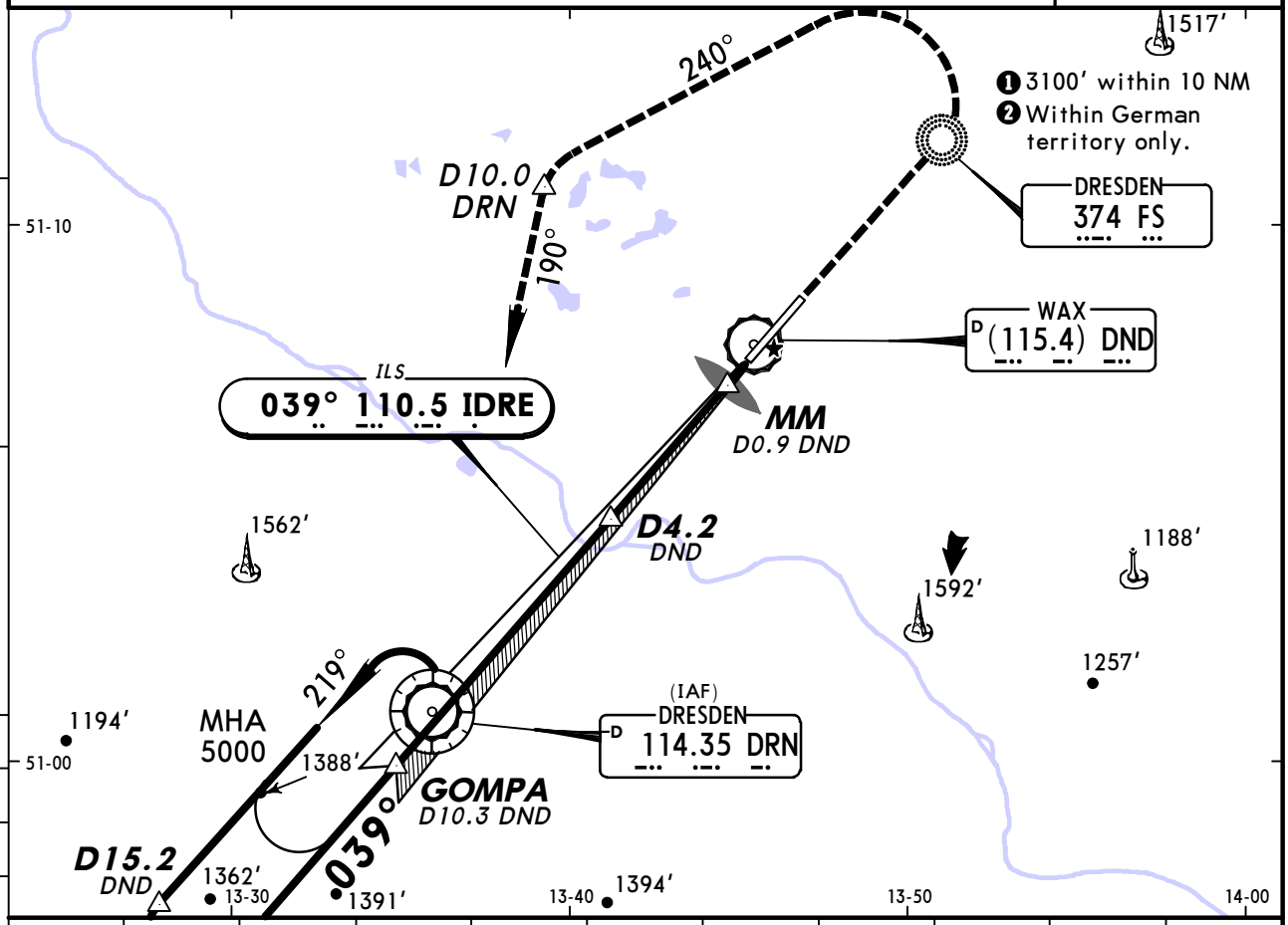
LOC	Final Apch Crs	GS	ILS	Apt Elev 754′
IDRE		D4.2 DND	DA(H)	RWY 754′
110.5	039°	2050′ (1296′)	954′ (200′)	

MISSED APCH: Climb STRAIGHT AHEAD to NDB or 2500′, whichever is later, then turn LEFT onto 240° to intercept R-010 inbound to VOR, climbing to 5000′. Cross D10.0 DRN at 4000′or above.

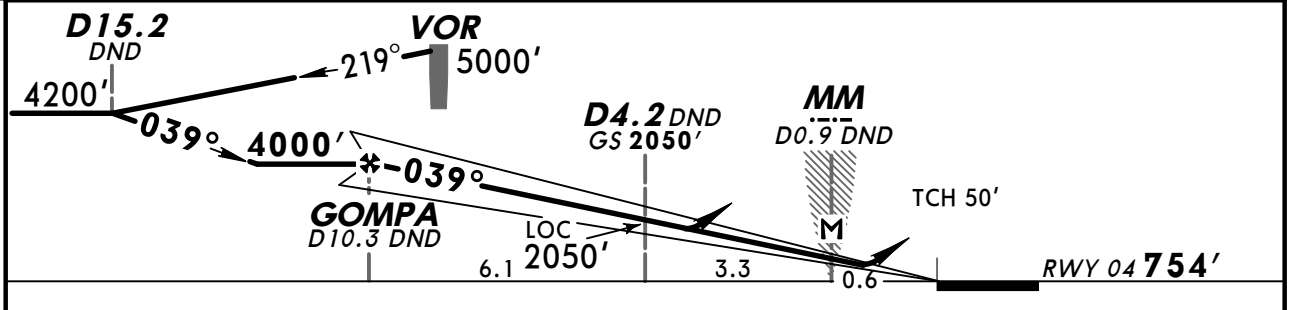
Alt Set: hPa (IN on req) Rwy Elev: 27 hPa Trans level: By ATC Trans alt: 5000′
DME REQUIRED.



MSA
DRN VOR



LOC (GS out)	DND DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3900′	3580′	3260′	2950′	2620′	2310′	1990′	1670′	1350′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D0.9 DND						

ALSF-I
PAPI

FS 374 whichever is later 2500′

Standard STRAIGHT-IN LANDING RWY **04**

	ILS DA(H) 954′ (200′)			LOC (GS out) DA(H) 1200′ (446′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	1230′ (476′)	1500m
135	1260′ (506′)	1600m
180	1460′ (706′)	2400m
205	1460′ (706′)	3600m

PANS OPS 4

CHANGES: Minimums.

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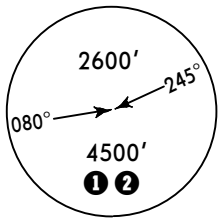
BRIEFING STRIP™

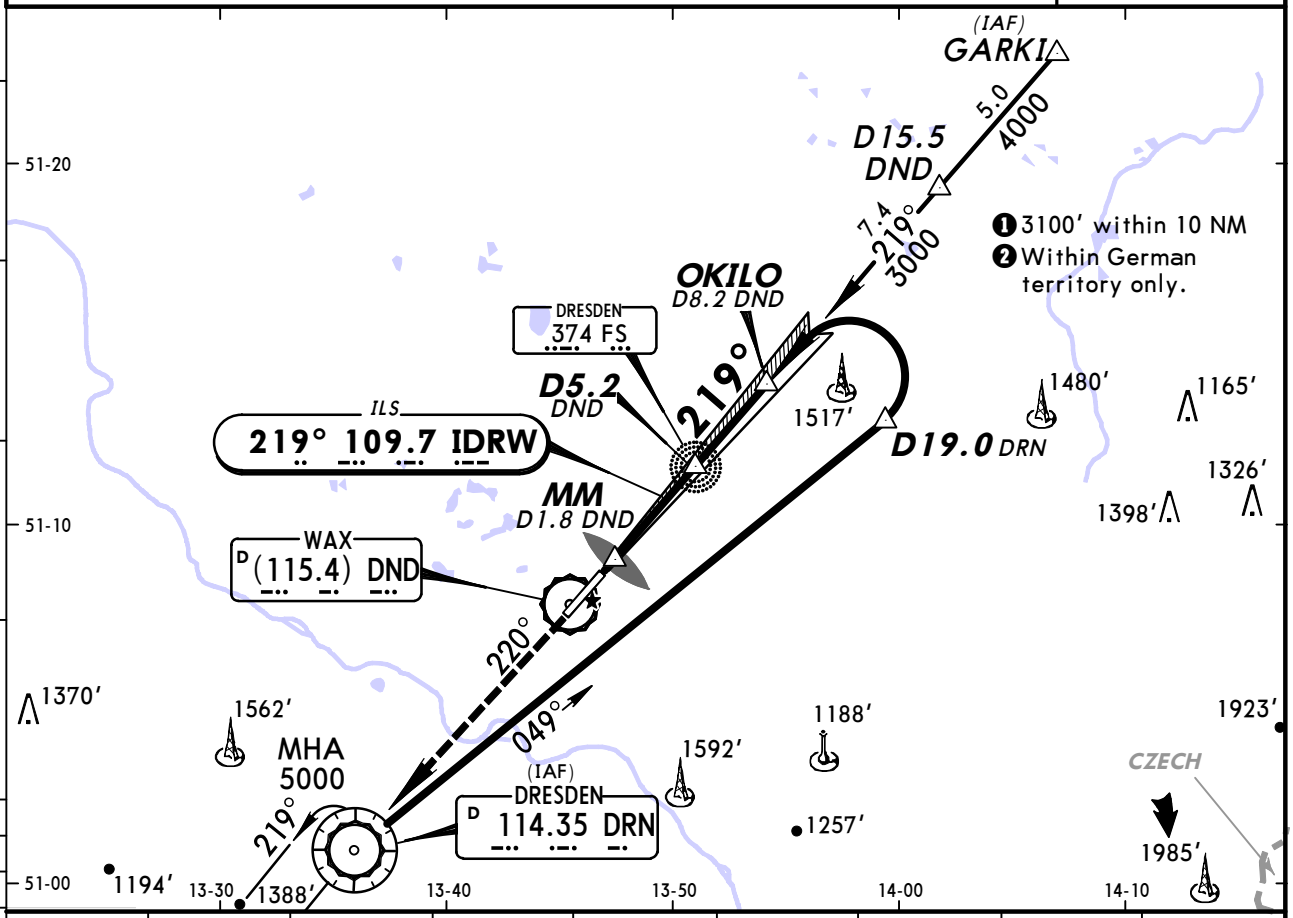
*D-ATIS	MUNCHEN Radar (APP)	DRESDEN Tower	Ground
118.87	125.62	122.92	121.97

LOC IDRW	Final Apch Crs	GS D5.2 DND	ILS DA(H)	Apt Elev / RWY
109.7	219°	2060′ (1360′)	900′ (200′)	754′ / 700′

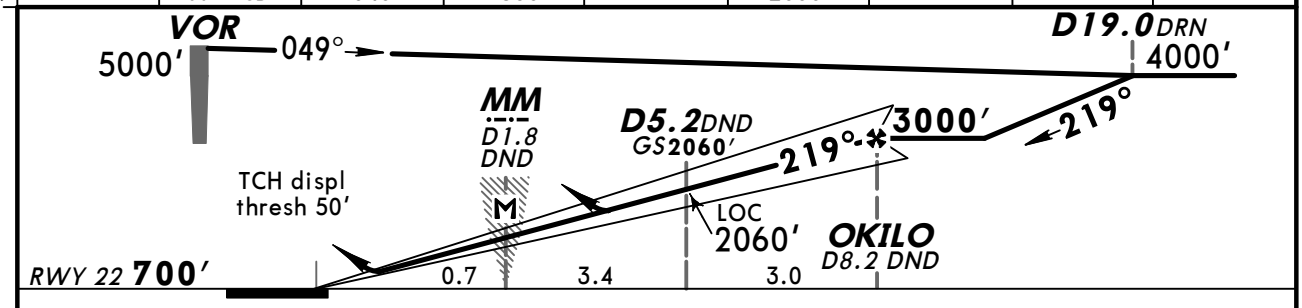
MISSED APCH: Climb on R-040 inbound to VOR to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 25 hPa Trans level: By ATC Trans alt: 5000′
DME REQUIRED.





LOC (GS out)	DND DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0
	ALTITUDE	1040′	1360′	1680′	2000′	2320′	2630′	2950′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.8 DND						

ALSF-II
REIL
PAPI

5000′ DRN 114.35 on R-040

Standard STRAIGHT-IN LANDING RWY 22

	ILS DA(H) 900′ (200′)			LOC (GS out) DA(H) 1230′ (530′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m	
B					
C				RVR 1700m	CMV 2400m
D					

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	1230′ (476′) 1	1500m
135	1260′ (506′) 1	1600m
180	1460′ (706′)	2400m
205	1460′ (706′)	3600m

1 After LOC (GS out): MDA(H) 1290′ (536′).

PANS OPS 4

CHANGES: Minimums.

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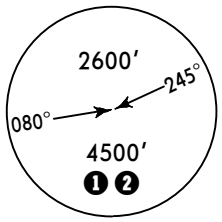
*D-ATIS	MUNCHEN Radar (APP)	DRESDEN Tower	Ground
118.87	125.62	122.92	121.97

BRIEFING STRIP™

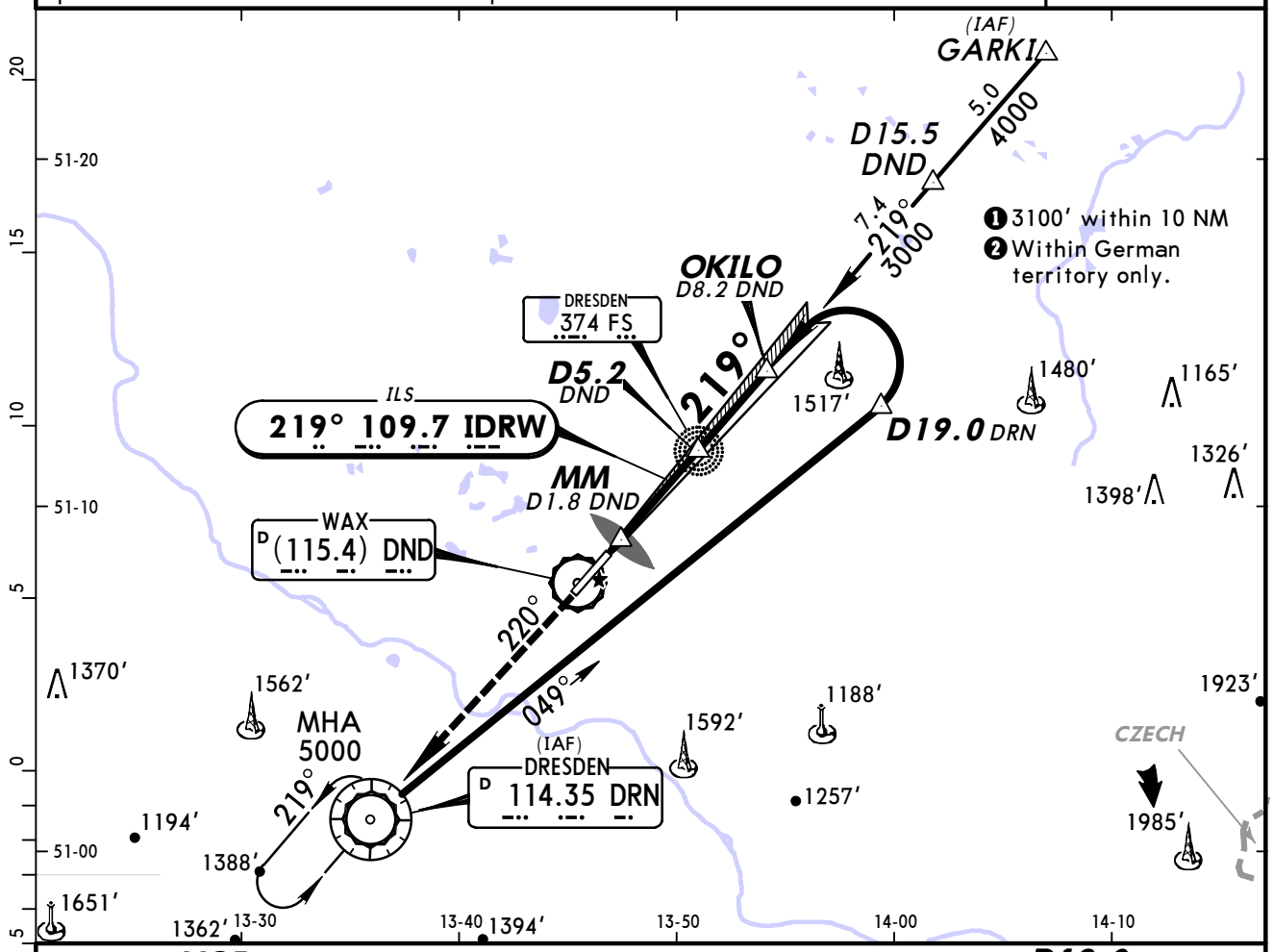
LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev 754′
IDRW		D5.2 DND	RA 107′ DA(H)	RWY 700′
109.7	219°	2060′ (1360′)	800′ (100′)	

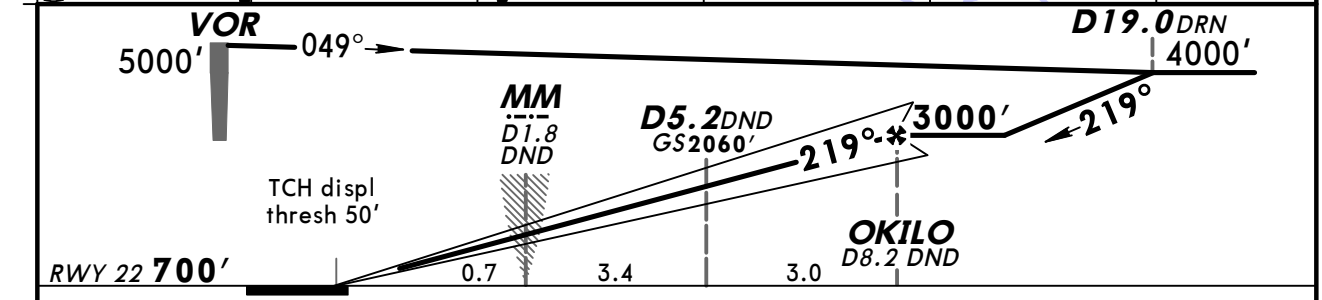
MISSED APCH: Climb on R-040 inbound to VOR to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 25 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certifcation Required.



MSA DRN VOR





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

ALSF-II
REIL
PAPI

5000′ DRN 114.35 on R-040

PANS OPS 4

Standard

STRAIGHT-IN LANDING RWY **22**
CAT II ILS

ABCD
RA 107′
DA(H) **800′** (100′)

RVR 300m ❶

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

CHANGES: Minimums.

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BRIEFING STRIP™

*D-ATIS	MUNCHEN Radar (APP)	DRESDEN Tower	Ground
118.87	125.62	122.92	121.97

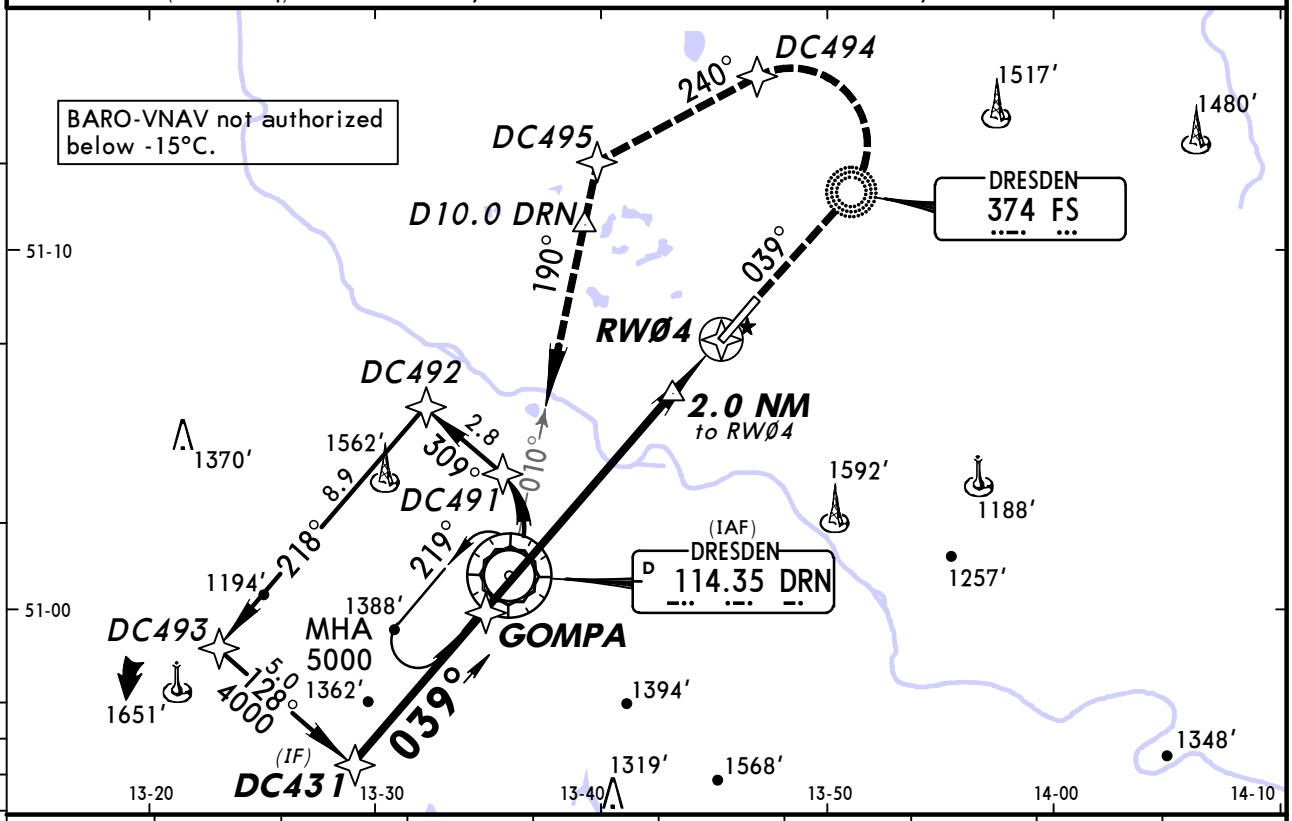
RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	039°	GOMPA 4000′ (3246′)	Refer to Minimums	754′ / 754′

MISSED APCH: RNAV: Climb on 039° to NDB or 2500′, whichever is later, then turn LEFT via DC494 to DC495 to intercept R-010 inbound to VOR, climbing to 5000′. Cross D10.0 DRN at 4000′or above.

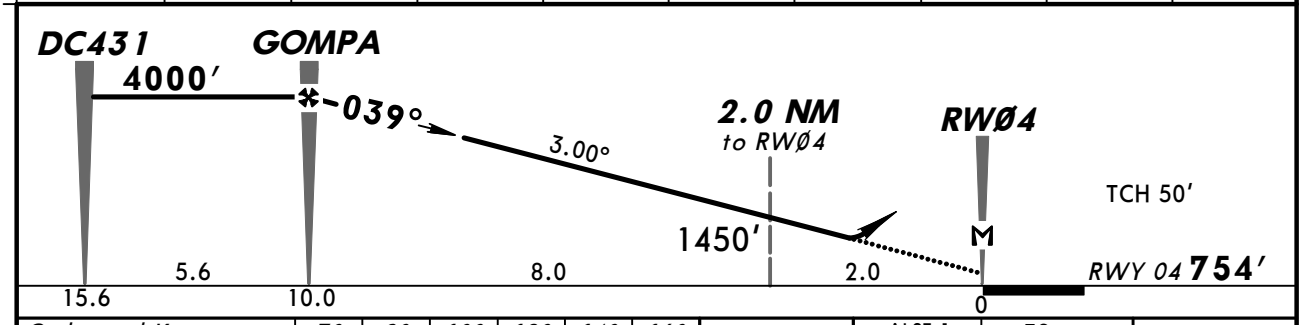
NON-RNAV: Climb STRAIGHT AHEAD to NDB or 2500′, whichever is later, then turn LEFT onto 240° to intercept R-010 inbound to VOR, climbing to 5000′. Cross D10.0 DRN at 4000′or above.

4500′
MSA ARP

Alt Set: hPa (IN on req)	Rwy Elev: 27 hPa	Trans level: By ATC	Trans alt: 5000′



DIST to RWØ4	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	4000′	3670′	3360′	3040′	2720′	2400′	2080′	1760′	1450′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ4							

ALSF-I
PAPI

FS 374 whichever is later 2500′

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 04

	LNAV/VNAV DA(H) A: 1050′ (296′) BCD: 1080′ (326′)		LNAV DA(H) 1120′ (366′)	
		ALS out		ALS out
A	RVR 750m [1]	RVR 1400m	RVR 1000m	RVR 1500m
B	RVR 800m	RVR 1500m		
C				RVR 1700m
D				

[1] With TDZ, CL and HUD: RVR 650m

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	1230′ (476′)	1500m
135	1260′ (506′)	1600m
180	1460′ (706′)	2400m
205	1460′ (706′)	3600m

CHANGES: Minimums.

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BRIEFING STRIP™

*D-ATIS	MUNCHEN Radar (APP)	DRESDEN Tower	Ground
118.87	125.62	122.92	121.97

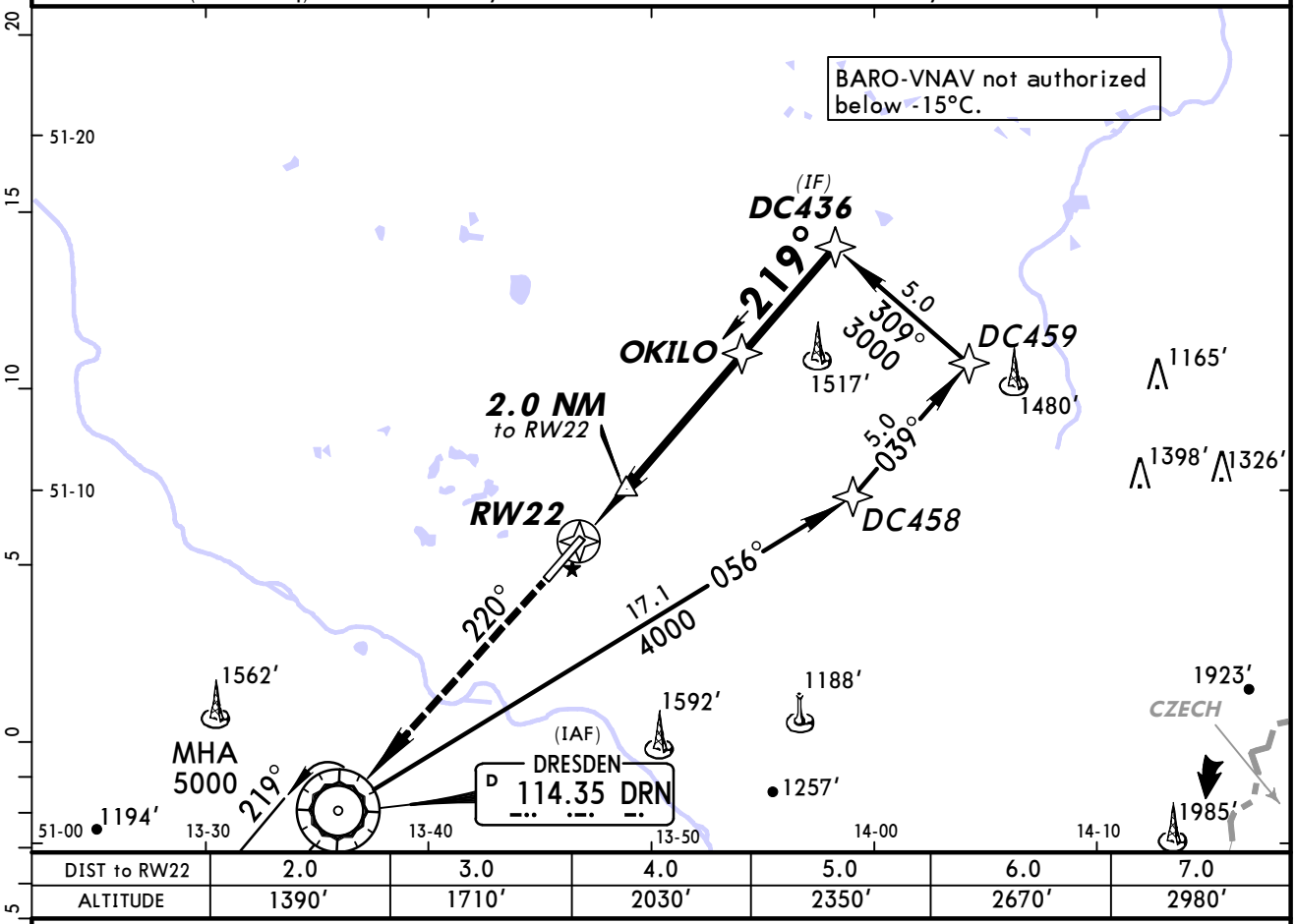
RNAV	Final Apch Crs	Minimum Alt	LNAV DA(H)	Apt Elev / RWY
	219°	OKILO 3000′ (2300′)	1160′ (460′)	Apt Elev 754′ / RWY 700′

MISSED APCH: RNAV: Climb on 220° to VOR to 5000′.

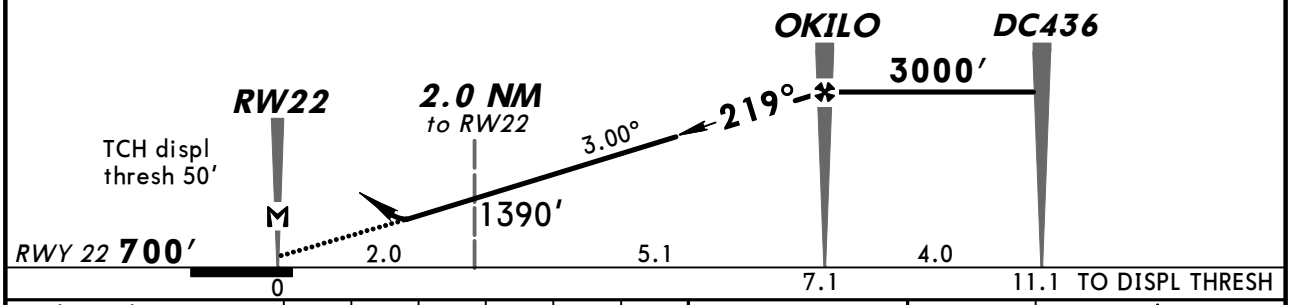
NON-RNAV: Climb on R-040 inbound to VOR to 5000′.

4500′
MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 25 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RW22	2.0	3.0	4.0	5.0	6.0	7.0
ALTITUDE	1390′	1710′	2030′	2350′	2670′	2980′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW22							

ALSF-II
REIL
PAPI

5000′ on DRN 114.35 R-040

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **22**

	LNAV/VNAV DA(H) 1170′ (470′)		LNAV DA(H) 1160′ (460′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1400m	RVR 1500m
B				
C	RVR 1500m	CMV 2200m		CMV 2100m
D				

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	1230′ (476′)	1500m
135	1260′ (506′)	1600m
180	1460′ (706′)	2400m
205	1460′ (706′)	3600m

CHANGES: Minimums.

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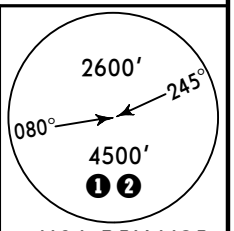
*D-ATIS	MUNCHEN Radar (APP)	DRESDEN Tower	Ground
118.87	125.62	122.92	121.97

BRIEFING STRIP™

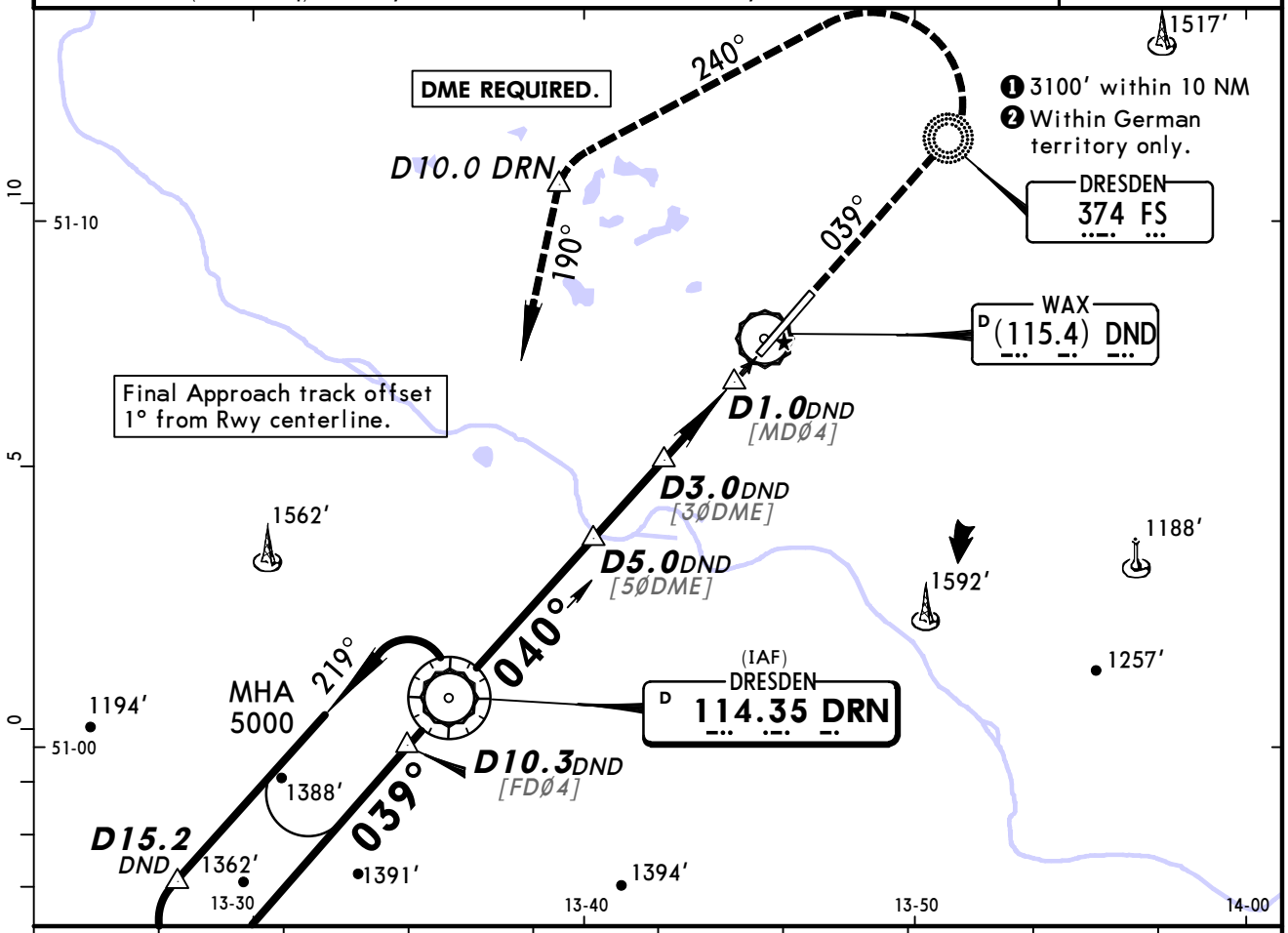
VOR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
DRN 114.35	040°	D10.3 DND 4000′ (3246′)	1200′ (446′)	Apt Elev 754′ RWY 754′

MISSED APCH: Climb on 039° to NDB or 2500′, whichever is later, then turn LEFT onto 240° to intercept R-010 inbound to VOR, climbing to 5000′. Cross D10.0 DRN at 4000′or above.

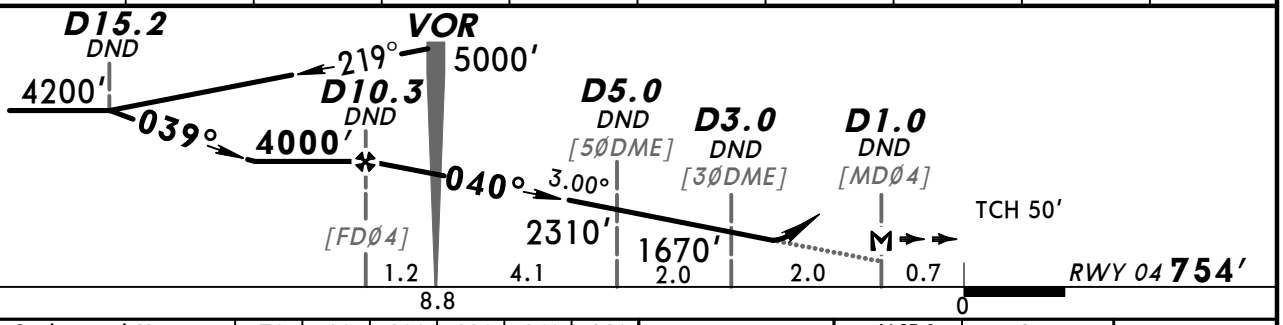
Alt Set: hPa (IN on req) Rwy Elev: 27 hPa Trans level: By ATC Trans alt: 5000′



MSA DRN VOR



DND DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3900′	3580′	3260′	2940′	2620′	2310′	1990′	1670′	1350′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.0 DND						

ALSF-I
PAPI

FS 374 whichever is later 2500′

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **04**

DA(H) **1200′** (446′)

	ALS out	ALS inop
A	RVR 1400m	RVR 1500m
B		
C		CMV 2100m
D		

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	1230′ (476′)	1500m
135	1260′ (506′)	1600m
180	1460′ (706′)	2400m
205	1460′ (706′)	3600m

CHANGES: Minimums.

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DRESDEN, GERMANY
VOR Rwy 22

*D-ATIS	MUNCHEN Radar (APP)	DRESDEN Tower	Ground
118.87	125.62	122.92	121.97

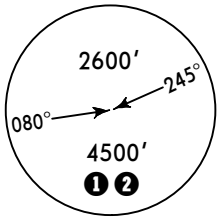
BRIEFING STRIP™

VOR DRN	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
114.35	220°	D8.2 DND 3000′ (2300′)	1280′ (580′)	Apt Elev 754′ RWY 700′

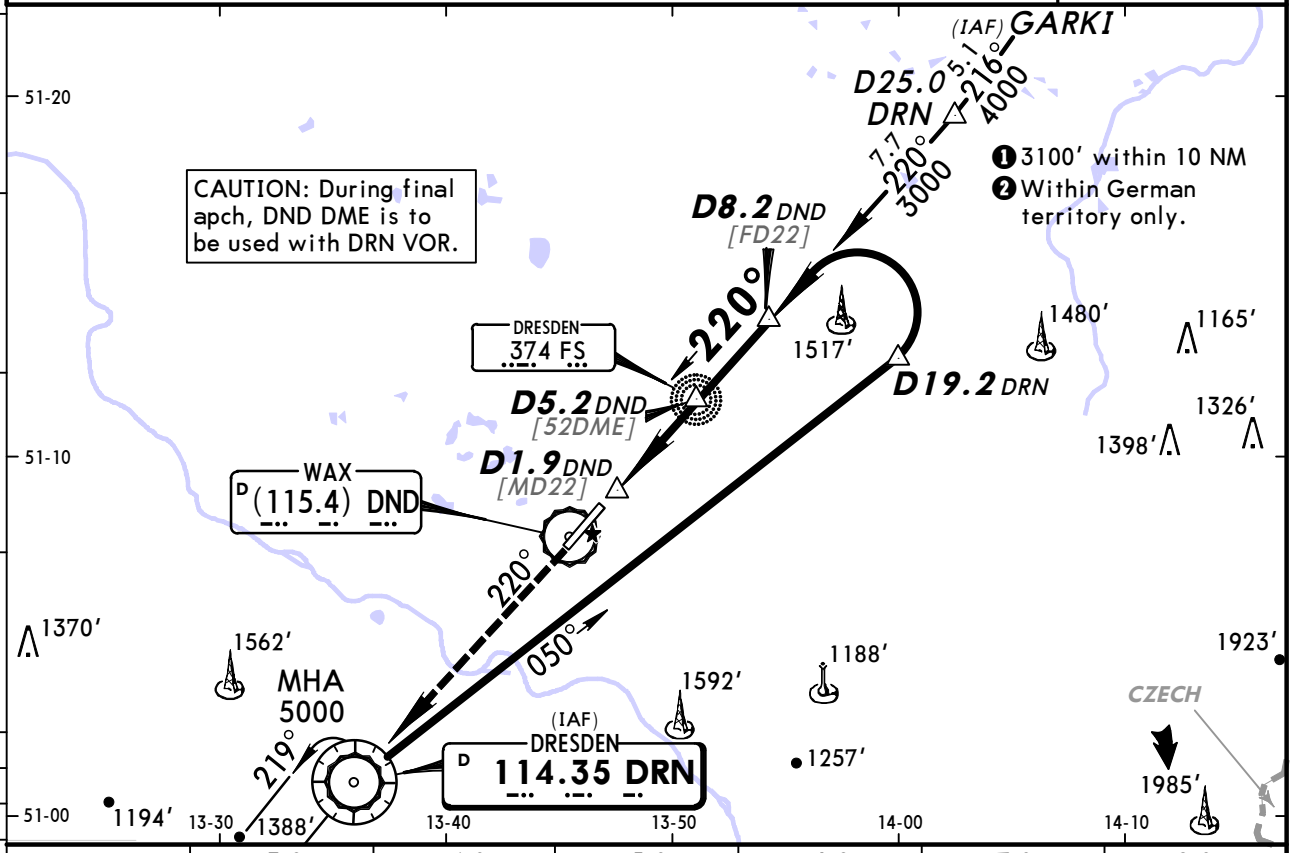
MISSED APCH: Climb on R-040 inbound to VOR to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 25 hPa Trans level: By ATC Trans alt: 5000′

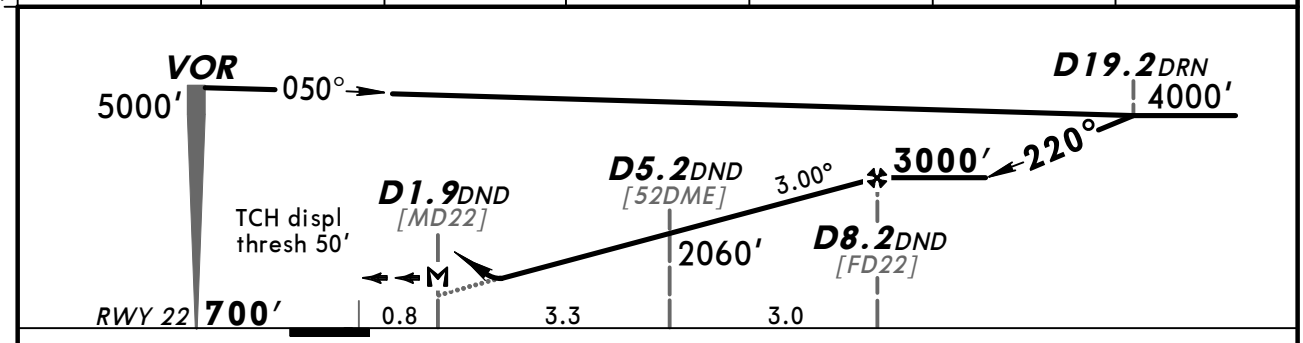
1. **DND DME REQUIRED.** 2. Final approach track offset 1° from Rwy centerline.



MSA
DRN VOR



DND DME	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1360′	1680′	2000′	2320′	2630′	2950′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.9 DND						

ALSF-II
REIL
PAPI

5000′ DRN 114.35 on R-040

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 22

DA(H) 1280′ (580′)

ALS out

	RVR	CMV
A	1500m	
B	1500m	
C	1900m	2400m
D	1900m	2400m

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	1340′ (586′)	1500m
135	1340′ (586′)	1600m
180	1460′ (706′)	2400m
205	1460′ (706′)	3600m

CHANGES: Minimums.

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JEPPESEN
JeppView for Windows

General Information

Location: Erfurt-Weimar Deu
IATA Code: ERF
Lat/Long: N50° 58.8' E010° 57.5'
Elevation: 1036 ft

Airport Use: Public
Magnetic Variation: 2.2°E

Fuel Types: 100 Octane (LL), Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0606 Z
Sunset: 1652 Z,

Runway Information

Runway: 10
Length x Width: 8530 ft x 164 ft
Surface Type: asphalt
TDZ-Elev: 1025 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 28
Length x Width: 8530 ft x 164 ft
Surface Type: asphalt
TDZ-Elev: 1016 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 689 ft

Communication Information

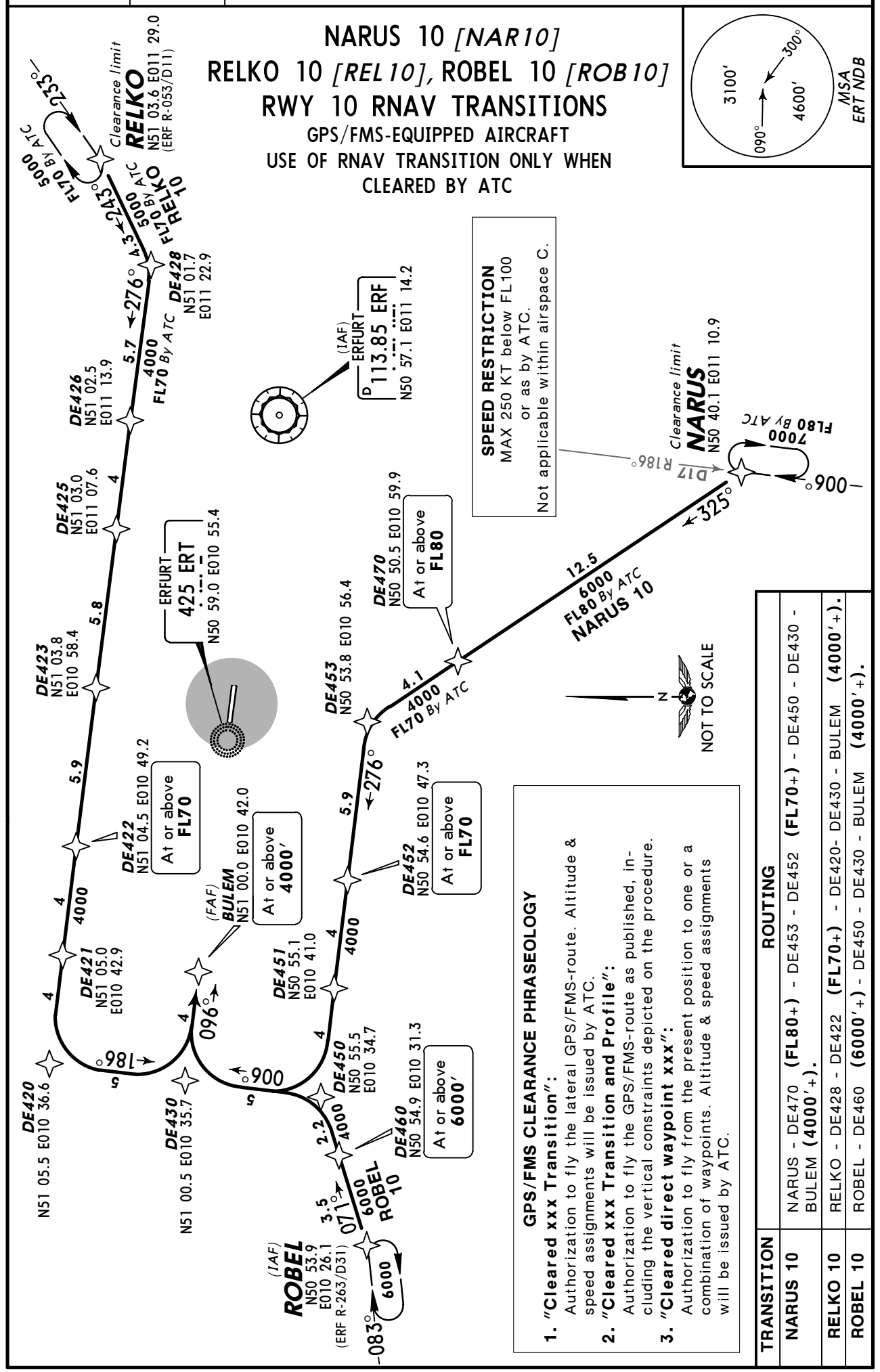
ATIS 133.45
Erfurt Tower 121.15
Erfurt Tower 24.442
Erfurt Ground Control 121.75
Erfurt Ground Control 119.7
Apron Ramp/Taxi Control 121.9
Munich Radar Approach Control 126.175
Munich Radar Approach Control 38.677 Military

*ATIS	Apt Elev
133.45	1036′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect vectors to final.
2. Altitude assignments will be issued by ATC.

NARUS 10 *[NAR10]*
RELKO 10 *[REL10]*, ROBEL 10 *[ROB10]*
RWY 10 RNAV TRANSITIONS

GPS/FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



GPS/FMS CLEARANCE PHRASEOLOGY

1. **"Cleared xxx Transition":**
   Authorization to fly the lateral GPS/FMS-route. Altitude & speed assignments will be issued by ATC.
2. **"Cleared xxx Transition and Profile":**
   Authorization to fly the GPS/FMS-route as published, including the vertical constraints depicted on the procedure.
3. **"Cleared direct waypoint xxx":**
   Authorization to fly from the present position to one or a combination of waypoints. Altitude & speed assignments will be issued by ATC.

TRANSITION	ROUTING
NARUS 10	NARUS - DE470 **(FL80+)** - DE453 - DE452 **(FL70+)** - DE450 - DE430 - BULEM **(4000′+).**
RELKO 10	RELKO - DE428 - DE422 **(FL70+)** - DE420- DE430 - BULEM **(4000′+).**
ROBEL 10	ROBEL - DE460 **(6000′+)** - DE450 - DE430 - BULEM **(4000′+).**

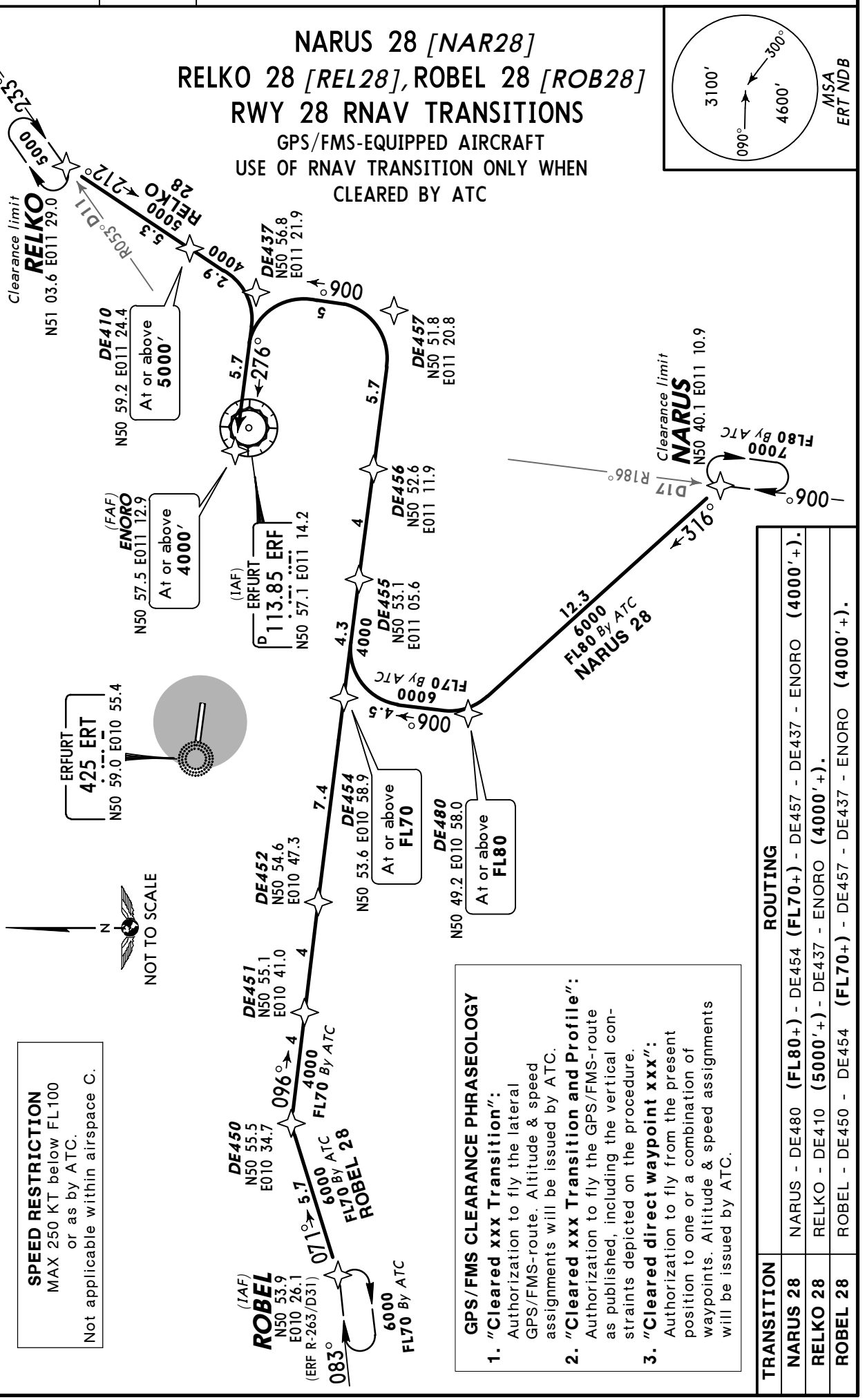
CHANGES: Crossing at DE452 estbld; MEAs; coords; tracks; distances.

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*ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
133.45	1036′	**1.** On downwind expect vectors to final. **2.** Altitude assignments will be issued by ATC.

NARUS 28 *[NAR28]*
RELKO 28 *[REL28]*, ROBEL 28 *[ROB28]*
RWY 28 RNAV TRANSITIONS

GPS/FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

GPS/FMS CLEARANCE PHRASEOLOGY

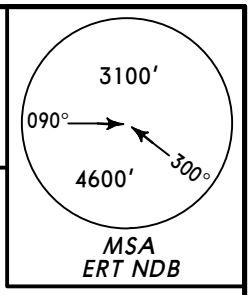
1. **"Cleared xxx Transition":** Authorization to fly the lateral GPS/FMS-route. Altitude & speed assignments will be issued by ATC.
2. **"Cleared xxx Transition and Profile":** Authorization to fly the GPS/FMS-route as published, including the vertical constraints depicted on the procedure.
3. **"Cleared direct waypoint xxx":** Authorization to fly from the present position to one or a combination of waypoints. Altitude & speed assignments will be issued by ATC.

TRANSITION	ROUTING
NARUS 28	NARUS - DE480 **(FL80+)** - DE454 **(FL70+)** - DE457 - DE437 - ENORO **(4000′+).**
RELKO 28	RELKO - DE410 **(5000′+)** - DE437 - ENORO **(4000′+).**
ROBEL 28	ROBEL - DE450 - DE454 **(FL70+)** - DE457 - DE437 - ENORO **(4000′+).**

CHANGES: Coordinates; track; distances.

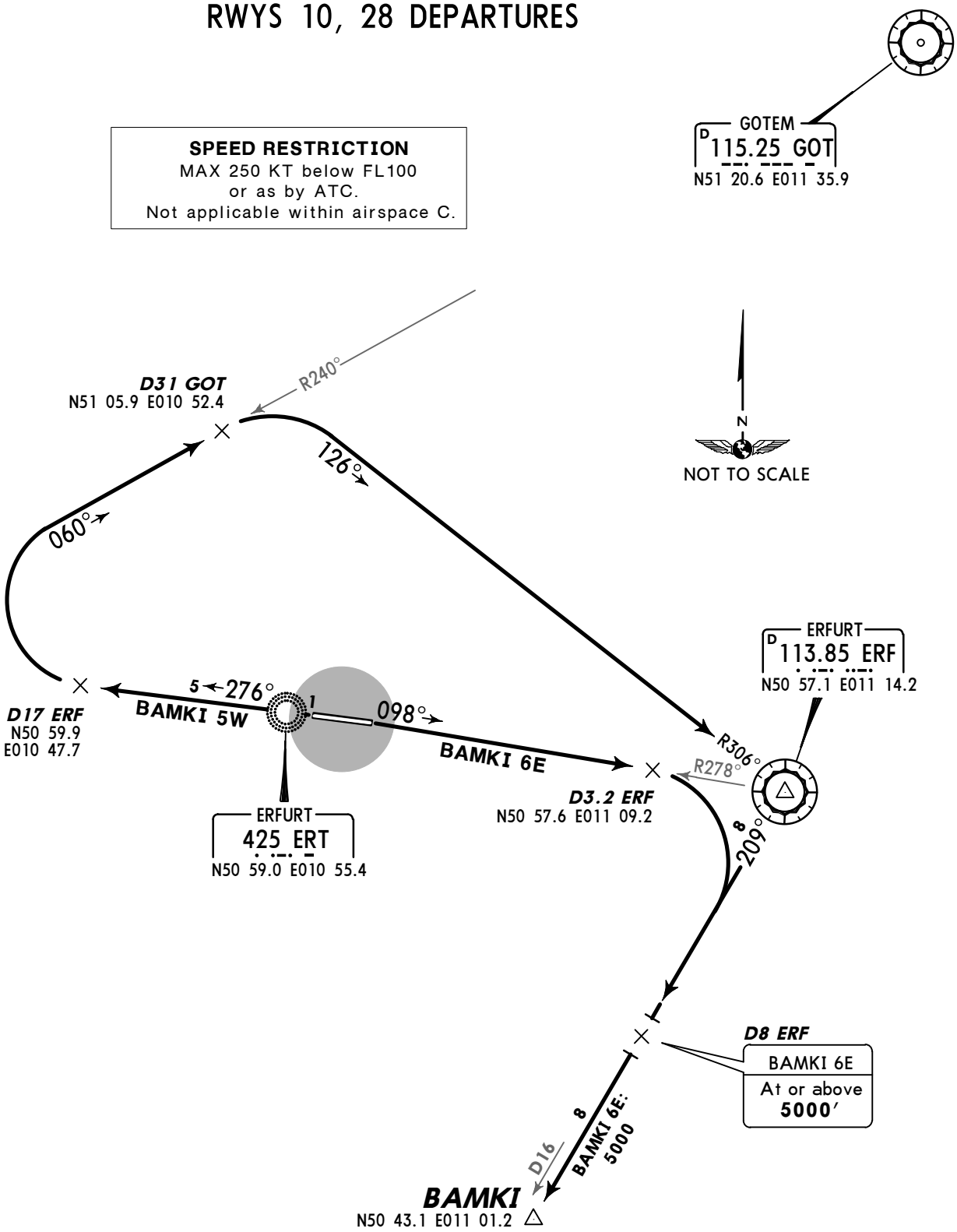
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MUNICH Radar 126.17	*Apt Elev* 1036′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



BAMKI SIX ECHO (BAMKI 6E)
BAMKI FIVE WHISKEY (BAMKI 5W)
RWYS 10, 28 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

SID	RWY	ROUTING
BAMKI 6E	**10**	Intercept ERF R-278 inbound to D3.2 ERF, turn RIGHT, intercept ERF R-209 to BAMKI.
BAMKI 5W	**28**	On runway track via ERT to D17 ERF, turn RIGHT, intercept GOT R-240 inbound to D31 GOT, turn RIGHT, intercept ERF R-306 inbound to ERF, ERF R-209 to BAMKI.

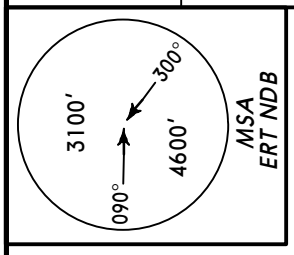
CHANGES: None.

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MUNICH Radar	Apt Elev
126.17	1036′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

ERSIL FIVE ECHO (ERSIL 5E)
ERSIL THREE NOVEMBER (ERSIL 3N)
ERSIL THREE WHISKEY (ERSIL 3W)
RWYS 10, 28 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

NOT TO SCALE

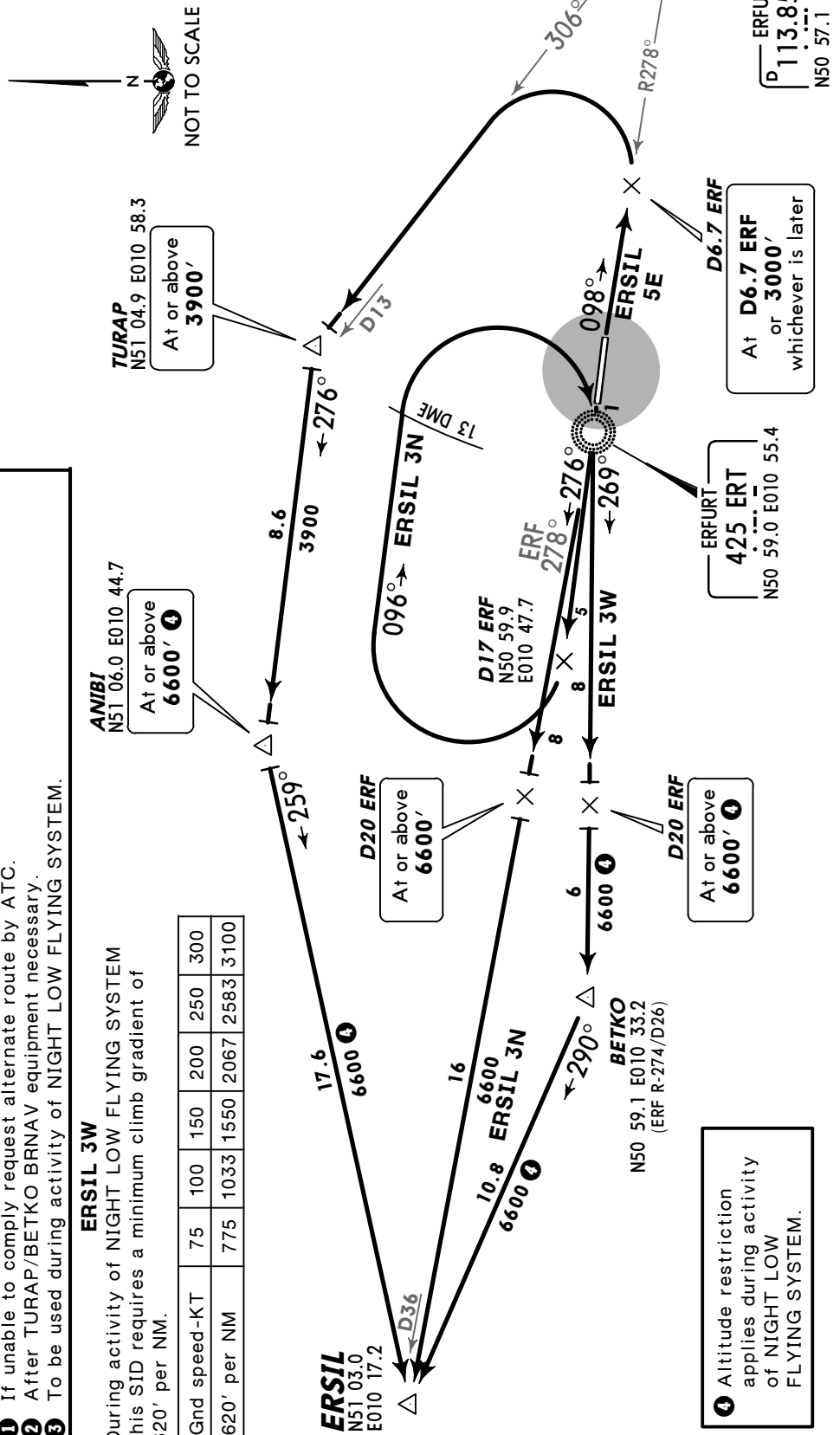
Initial climb clearance **5000′**

SID	RWY	ROUTING
ERSIL 5E ❶	**10**	Climb on ERF R-278 inbound to D6.7 ERF or **3000′**, whichever is later, turn LEFT, intercept ERF R-306 to TURAP ❷, turn LEFT, 276° track to ANIBI, turn LEFT, 259° track to ERSIL.
ERSIL 3N ❸	**28**	On runway track via ERT to D17 ERF, turn RIGHT, 096° track to ERF 13 DME, turn RIGHT to ERT, intercept ERF R-278 to ERSIL.
ERSIL 3W ❶		To ERT, turn LEFT, 269° bearing to BETKO ❷, turn RIGHT, 290° track to ERSIL.

❶ If unable to comply request alternate route by ATC.
❷ After TURAP/BETKO BRNAV equipment necessary.
❸ To be used during activity of NIGHT LOW FLYING SYSTEM.

ERSIL 3W
During activity of NIGHT LOW FLYING SYSTEM this SID requires a minimum climb gradient of 620′ per NM.

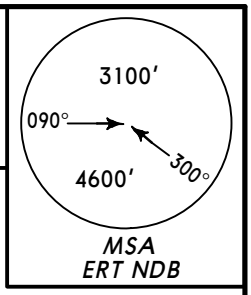
Gnd speed-KT	75	100	150	200	250	300
620′ per NM	775	1033	1550	2067	2583	3100



CHANGES: SID ERSIL 4E renumbered 5E.

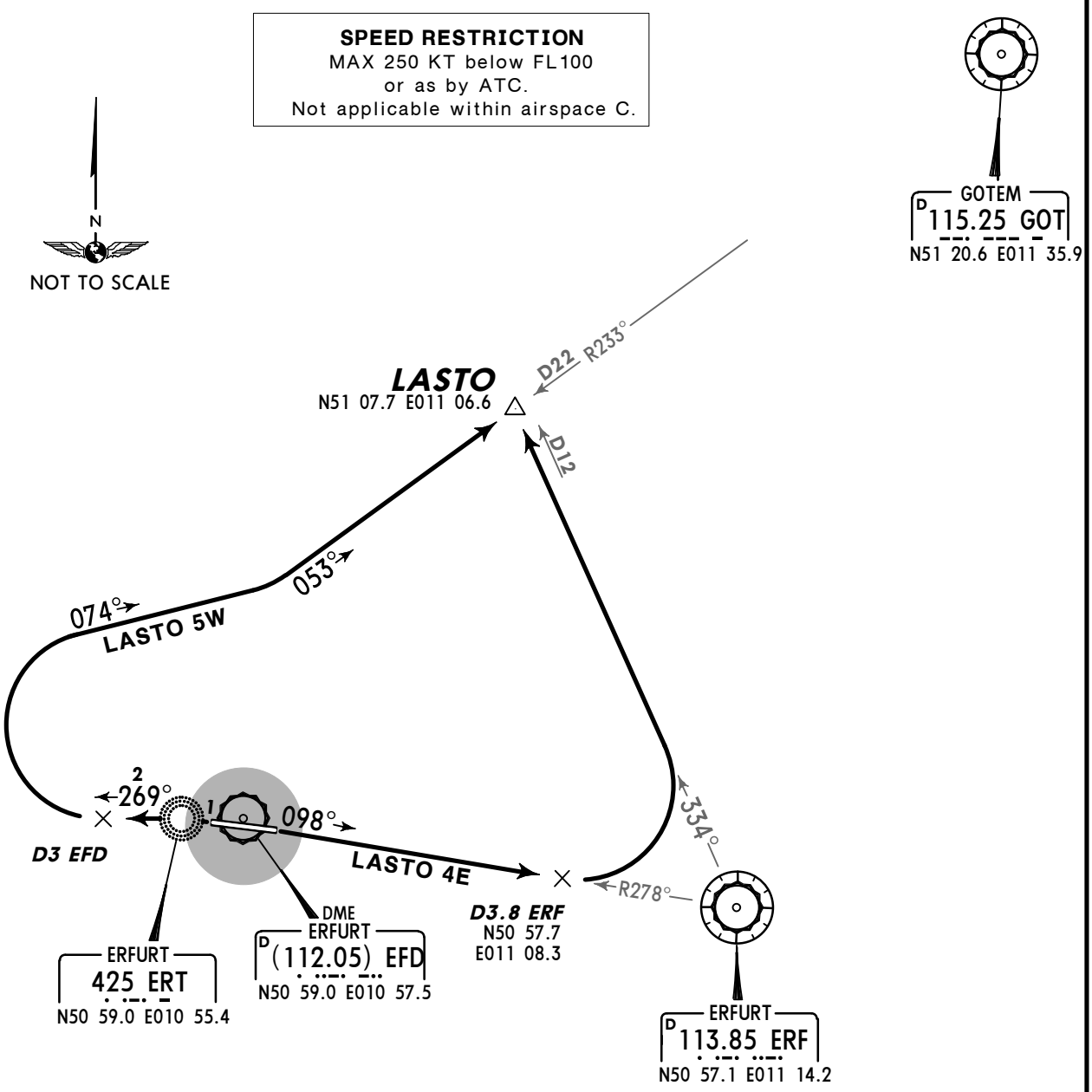
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MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
126.17	1036′	



LASTO FOUR ECHO (LASTO 4E)
LASTO FIVE WHISKEY (LASTO 5W)
RWYS 10, 28 DEPARTURES
NO ACCESS TO AIRWAYS (U)M 852

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

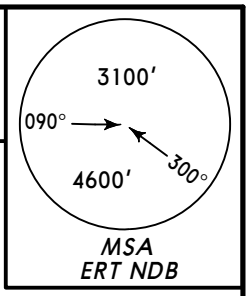
SID	RWY	ROUTING
LASTO 4E	**10**	Intercept ERF R-278 inbound to D3.8 ERF, turn LEFT, intercept ERF R-334 to LASTO.
LASTO 5W	**28**	To ERT, turn LEFT, 269° bearing to D3 EFD, turn RIGHT, 074° track, intercept GOT R-233 inbound to LASTO.

CHANGES: None.

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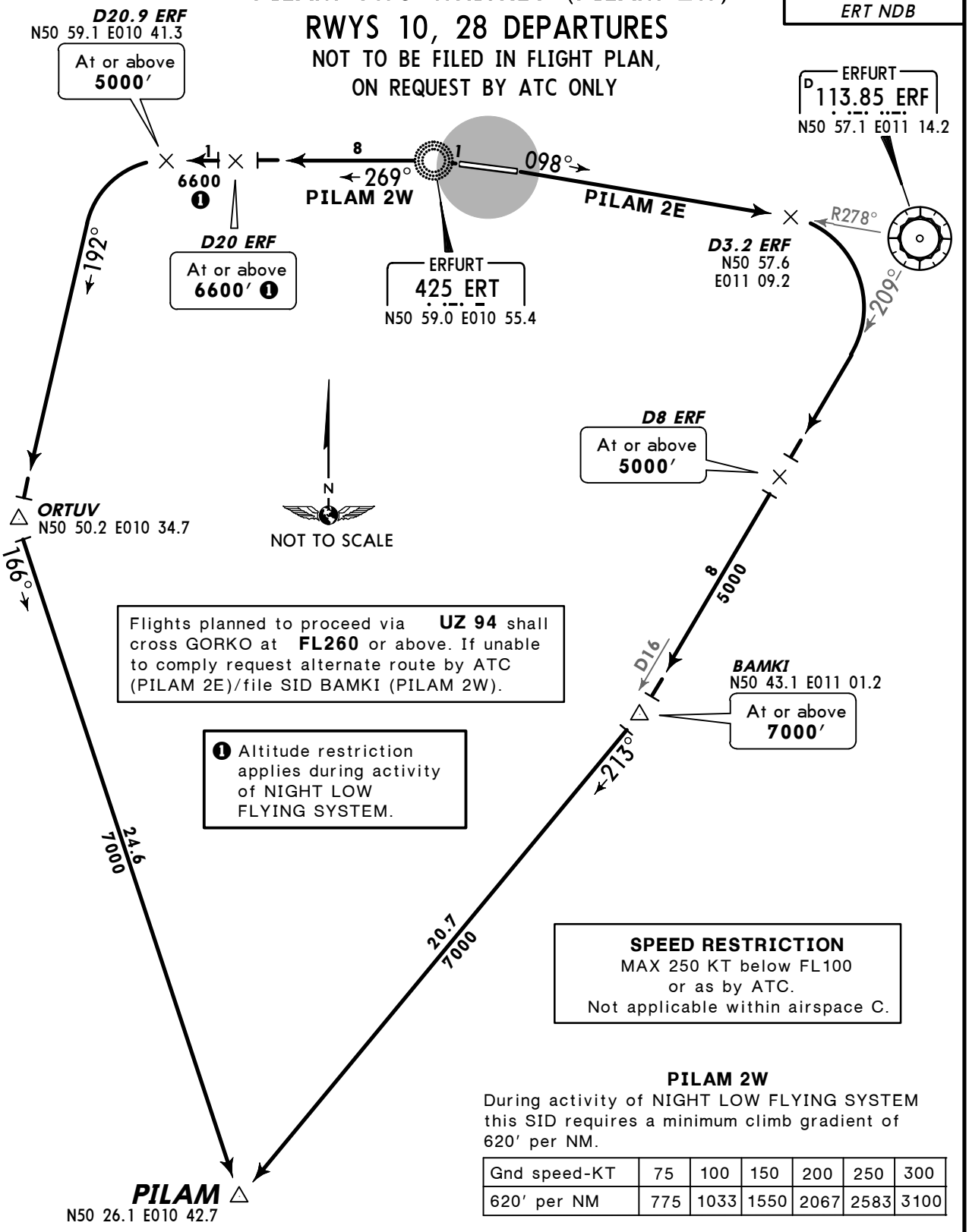
MUNICH Radar	Apt Elev
126.17	1036′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



PILAM TWO ECHO (PILAM 2E)
PILAM TWO WHISKEY (PILAM 2W)
RWYS 10, 28 DEPARTURES

NOT TO BE FILED IN FLIGHT PLAN,
ON REQUEST BY ATC ONLY



Flights planned to proceed via **UZ 94** shall cross GORKO at **FL260** or above. If unable to comply request alternate route by ATC (PILAM 2E)/file SID BAMKI (PILAM 2W).

❶ Altitude restriction applies during activity of NIGHT LOW FLYING SYSTEM.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

PILAM 2W
During activity of NIGHT LOW FLYING SYSTEM this SID requires a minimum climb gradient of 620′ per NM.

Gnd speed-KT	75	100	150	200	250	300
620′ per NM	775	1033	1550	2067	2583	3100

Initial climb clearance **5000′**

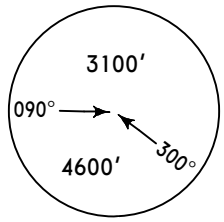
SID	RWY	ROUTING
PILAM 2E	**10**	Intercept ERF R-278 inbound to D3.2 ERF, turn RIGHT, intercept ERF R-209 to BAMKI ❷, turn RIGHT, 213° track to PILAM.
PILAM 2W	**28**	To ERT, turn LEFT, 269° bearing to D20.9 ERF ❸, turn LEFT, 192° track to ORTUV, turn LEFT, 166° track to PILAM.

BRNAV equipment necessary after: ❷ BAMKI/ ❸ D20.9 ERF.

CHANGES: SIDs availability.

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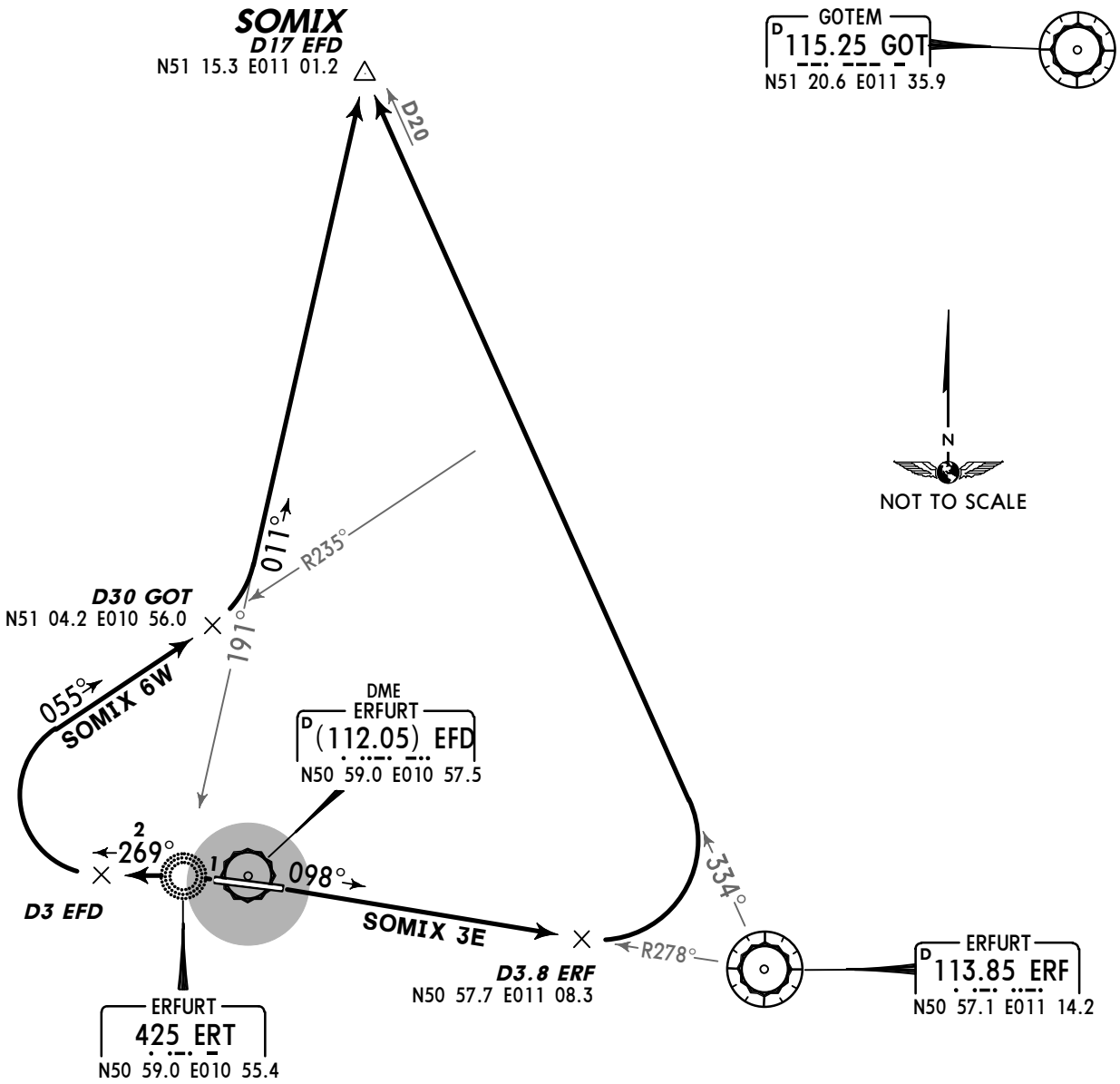
MUNICH Radar	Apt Elev	Trans level: By ATC Trans alt: 5000′
126.17	1036′	1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



MSA
ERT NDB

SOMIX THREE ECHO (SOMIX 3E)
SOMIX SIX WHISKEY (SOMIX 6W)
RWYS 10, 28 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



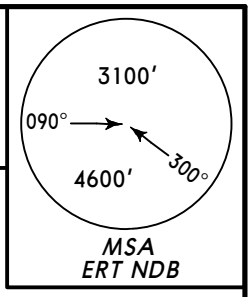
Initial climb clearance **5000′**

SID	RWY	ROUTING
SOMIX 3E	**10**	Intercept ERF R-278 inbound to D3.8 ERF, turn LEFT, intercept ERF R-334 to SOMIX.
SOMIX 6W	**28**	To ERT, turn LEFT, 269° bearing to D3 EFD, turn RIGHT, intercept GOT R-235 inbound to D30 GOT, turn LEFT, intercept 011° bearing from ERT to SOMIX.

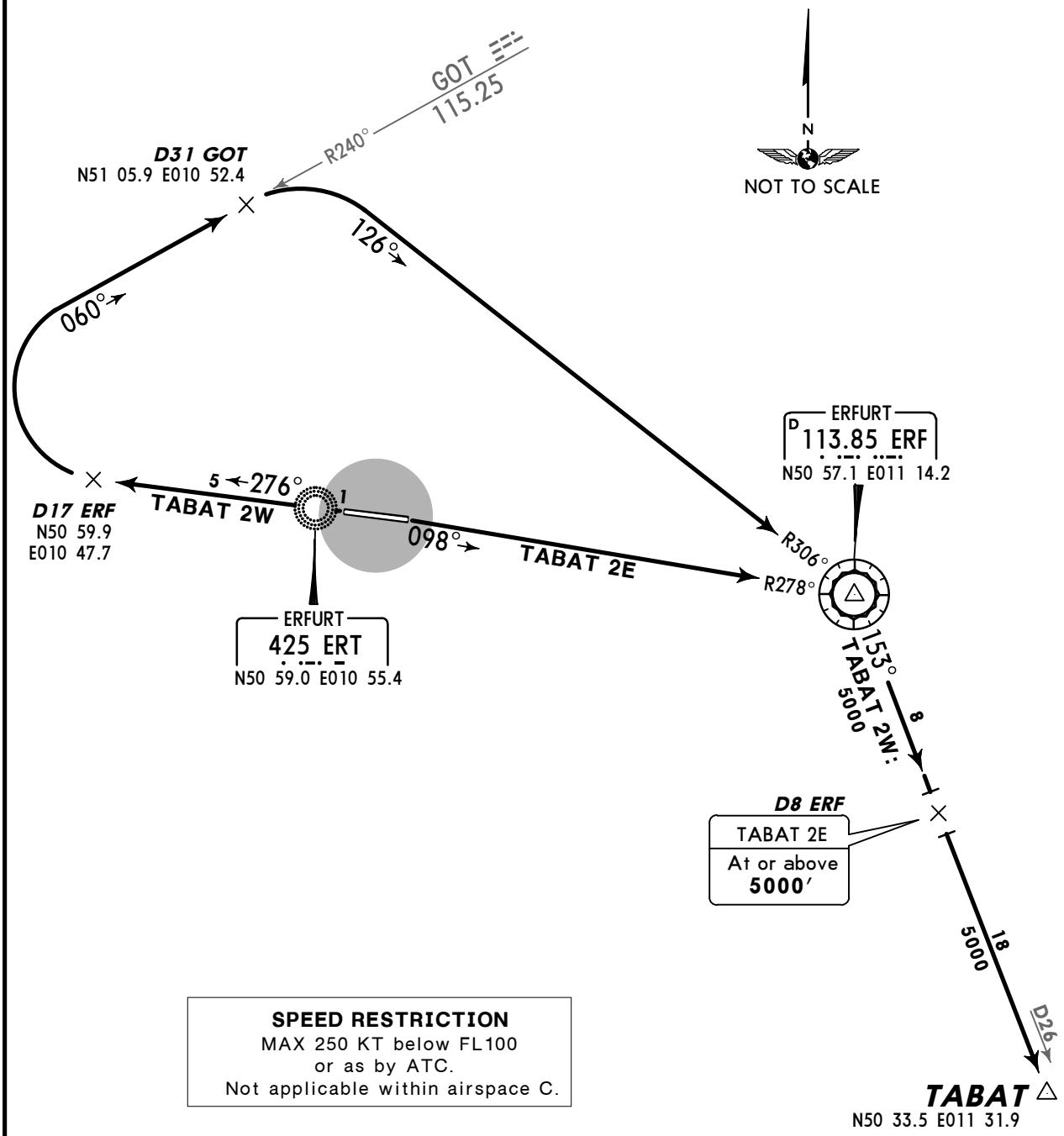
CHANGES: SID SOMIX 5W renumbered 6W.

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MUNICH Radar 126.17	*Apt Elev* 1036′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



TABAT TWO ECHO (TABAT 2E)
TABAT TWO WHISKEY (TABAT 2W)
RWYS 10, 28 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

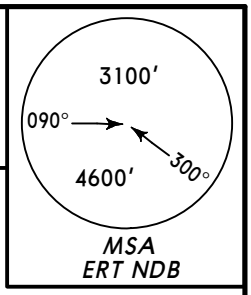
Initial climb clearance **5000′**

SID	RWY	ROUTING
TABAT 2E	**10**	Intercept ERF R-278 inbound to ERF, turn RIGHT, ERF R-153 to TABAT.
TABAT 2W	**28**	On runway track via ERT to D17 ERF, turn RIGHT, intercept GOT R-240 inbound to D31 GOT, turn RIGHT, intercept ERF R-306 inbound to ERF, ERF R-153 to TABAT.

CHANGES: None.

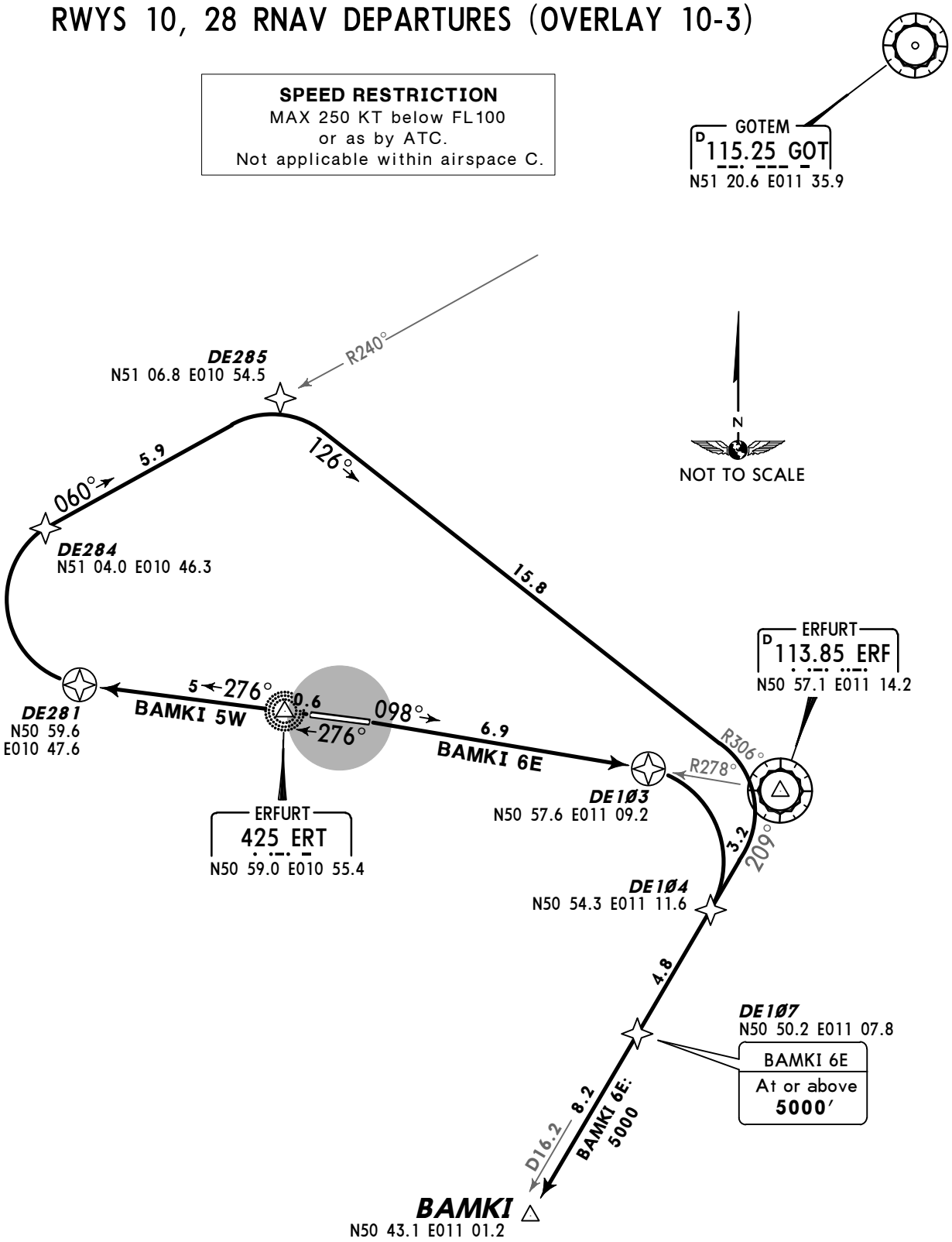
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MUNICH Radar 126.17	*Apt Elev* 1036′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



BAMKI SIX ECHO (BAMKI 6E) *[BAMK6E]*
BAMKI FIVE WHISKEY (BAMKI 5W) *[BAMK5W]*
RWYS 10, 28 RNAV DEPARTURES (OVERLAY 10-3)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

SID	RWY	ROUTING
BAMKI 6E	**10**	**(1500′+) -** DE103 - DE104 - DE107 **(5000′+) -** BAMKI.
BAMKI 5W	**28**	**(1500′+) -** ERT - DE281 - DE284 - DE285 - ERF - BAMKI.

CHANGES: None.

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MUNICH Radar	Apt Elev	
126.17	1036′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

ERSIL FIVE ECHO (ERSIL 5E) *[ERSI5E]*
ERSIL THREE NOVEMBER (ERSIL 3N) *[ERSI3N]*
ERSIL THREE WHISKEY (ERSIL 3W) *[ERSI3W]*
RWYS 10, 28
RNAV DEPARTURES (OVERLAY 10-3A)

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

❸ Altitude restriction applies during activity of NIGHT LOW FLYING SYSTEM.

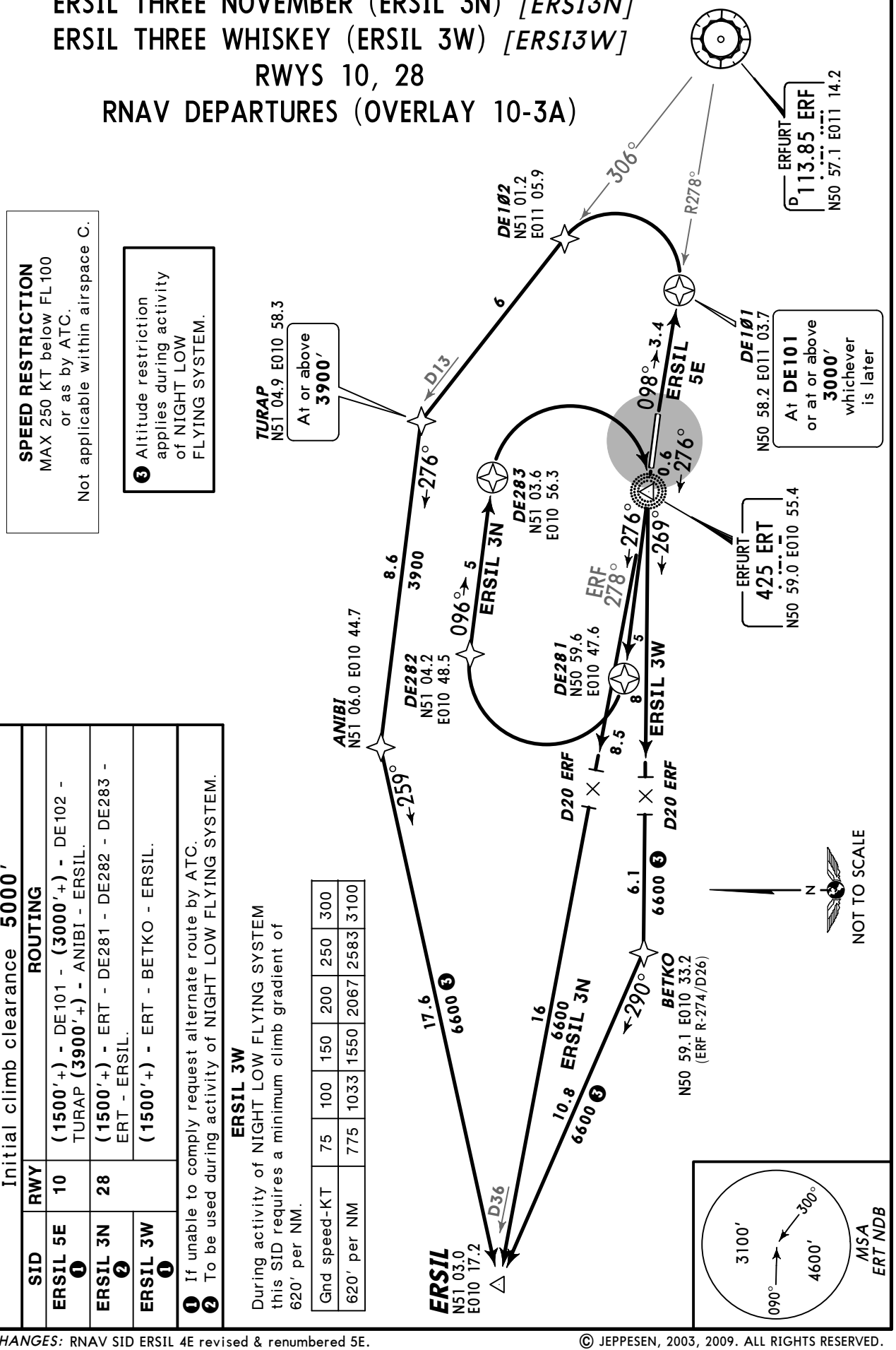
SID	RWY	ROUTING
ERSIL 5E ❶	10	(1500′+) - DE101 - (3000′+) - DE102 - TURAP (3900′+) - ANIBI - ERSIL.
ERSIL 3N ❷	28	(1500′+) - ERT - DE281 - DE282 - DE283 - ERT - ERSIL.
ERSIL 3W ❶		(1500′+) - ERT - BETKO - ERSIL.

Initial climb clearance **5000′**

❶ If unable to comply request alternate route by ATC.
❷ To be used during activity of NIGHT LOW FLYING SYSTEM.

ERSIL 3W
During activity of NIGHT LOW FLYING SYSTEM this SID requires a minimum climb gradient of 620′ per NM.

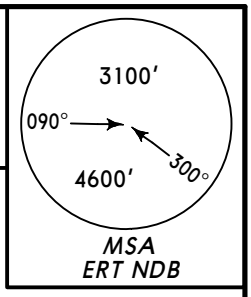
Gnd speed-KT	75	100	150	200	250	300
620′ per NM	775	1033	1550	2067	2583	3100



CHANGES: RNAV SID ERSIL 4E revised & renumbered 5E.

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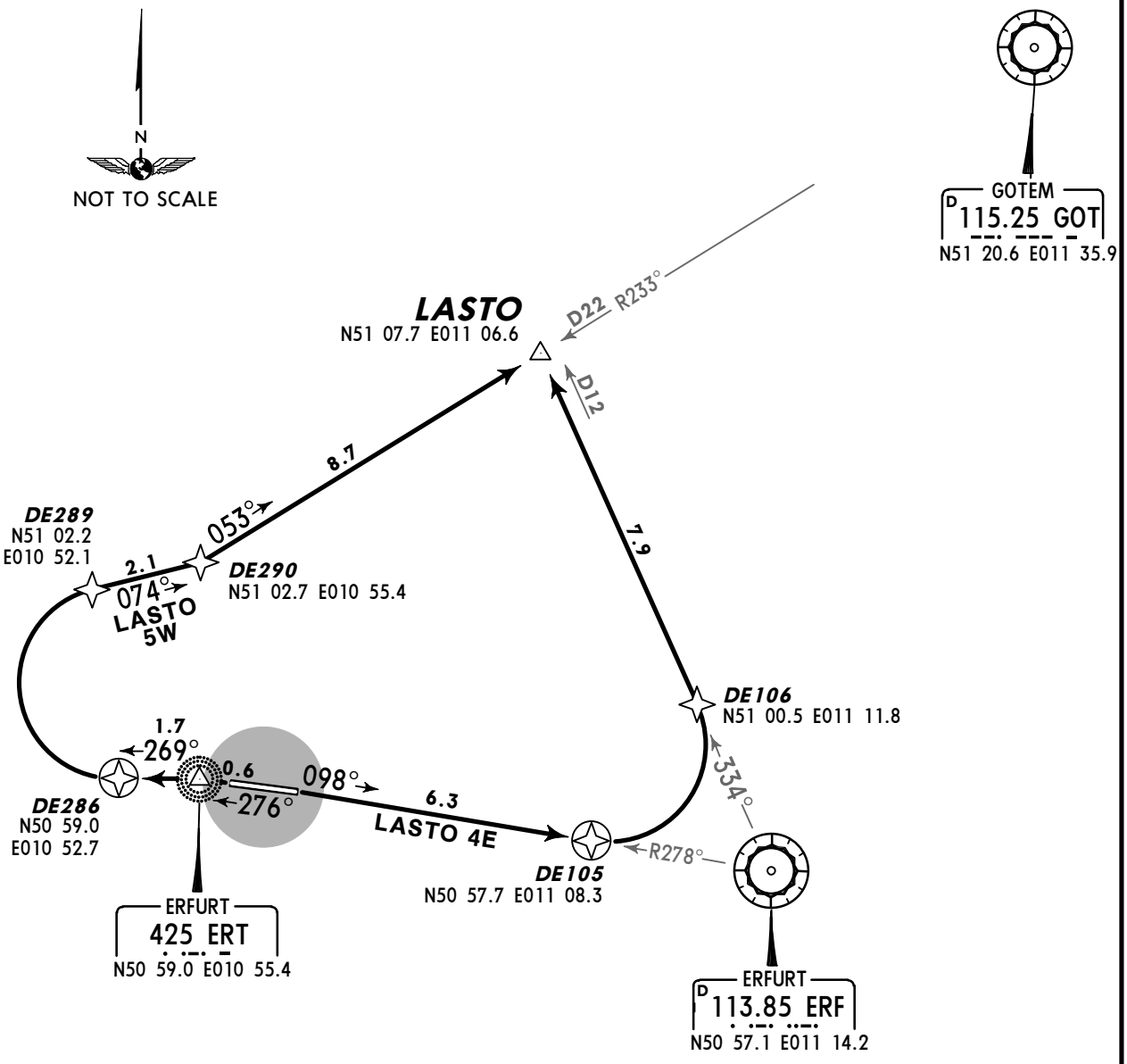
MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
126.17	1036′	



LASTO FOUR ECHO (LASTO 4E) *[LAST4E]*
LASTO FIVE WHISKEY (LASTO 5W) *[LAST5W]*
RWYS 10, 28 RNAV DEPARTURES (OVERLAY 10-3B)

NO ACCESS TO AIRWAYS (U)M 852

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

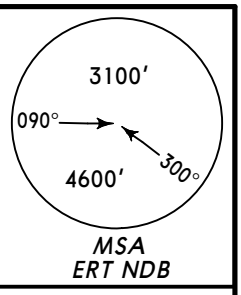
SID	RWY	ROUTING
LASTO 4E	**10**	**(1500′+) -** DE105 - DE106 - LASTO.
LASTO 5W	**28**	**(1500′+) -** ERT - DE286 - DE289 - DE290 - LASTO.

CHANGES: None.

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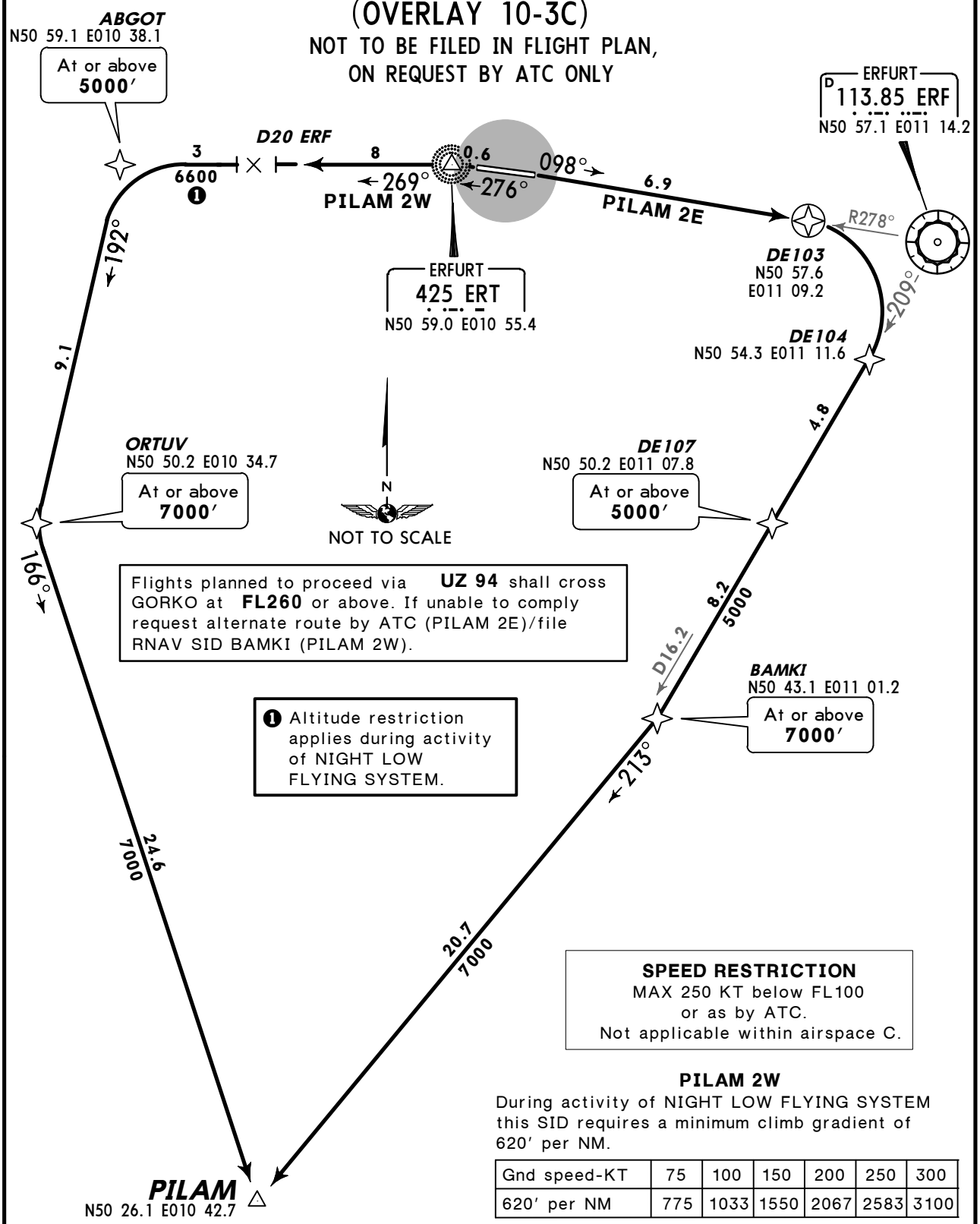
MUNICH Radar	Apt Elev
126.17	1036′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



PILAM TWO ECHO (PILAM 2E) *[PILA2E]*
PILAM TWO WHISKEY (PILAM 2W) *[PILA2W]*
RWYS 10, 28 RNAV DEPARTURES
(OVERLAY 10-3C)

NOT TO BE FILED IN FLIGHT PLAN, ON REQUEST BY ATC ONLY



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

PILAM 2W
During activity of NIGHT LOW FLYING SYSTEM this SID requires a minimum climb gradient of 620′ per NM.

Gnd speed-KT	75	100	150	200	250	300
620′ per NM	775	1033	1550	2067	2583	3100

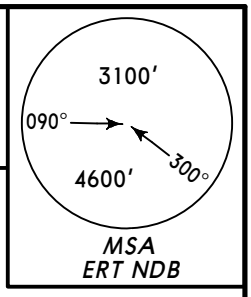
Initial climb clearance **5000′**

SID	RWY	ROUTING
PILAM 2E	**10**	**(1500′+) -** DE103 - DE104 - DE107 **(5000′+) -** BAMKI **(7000′+) -** PILAM.
PILAM 2W	**28**	**(1500′+) -** ERT - ABGOT **(5000′+) -** ORTUV **(7000′+) -** PILAM.

CHANGES: RNAV SIDs availability.

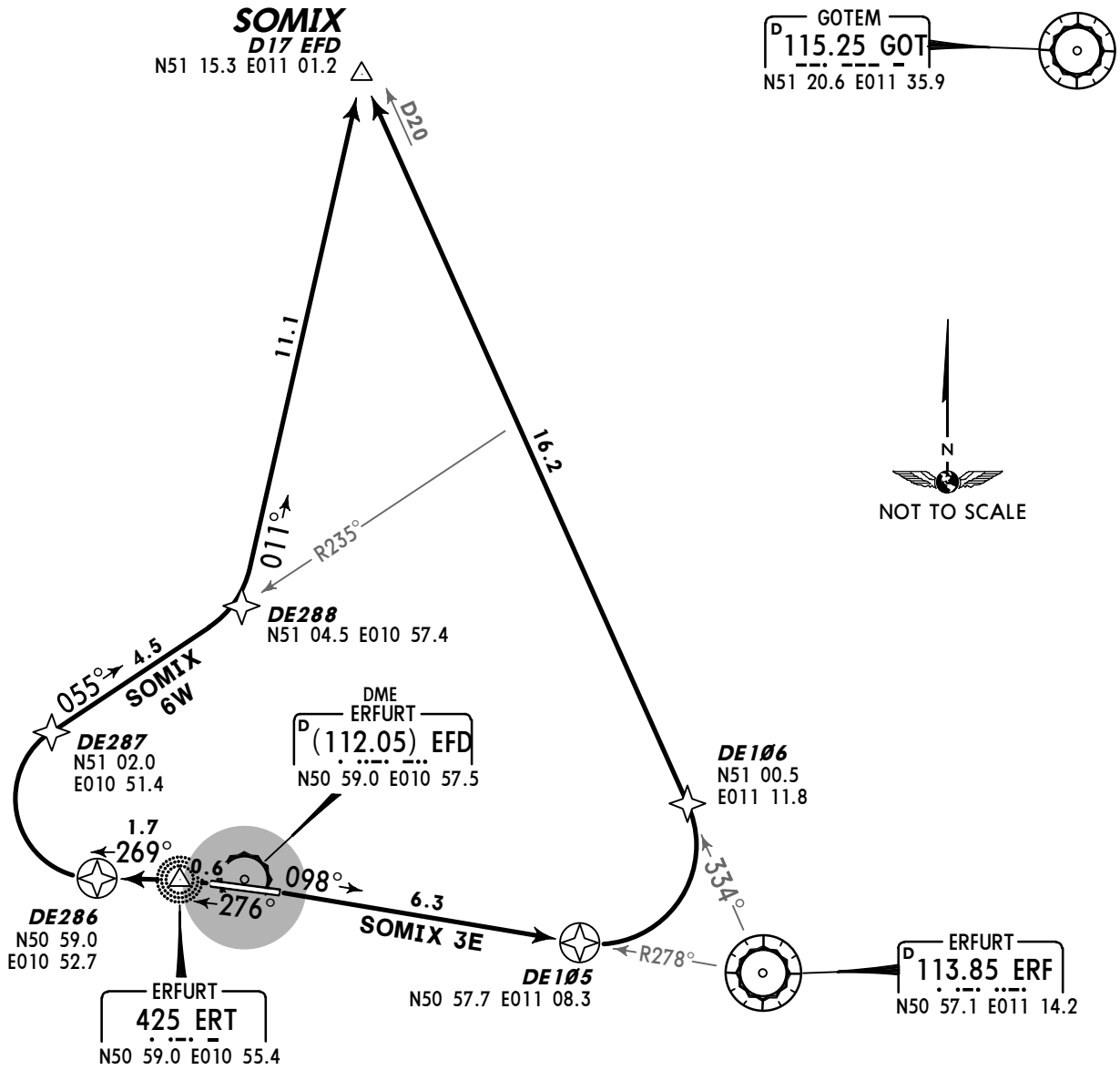
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MUNICH Radar 126.17	*Apt Elev* 1036′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



SOMIX THREE ECHO (SOMIX 3E) *[SOMI3E]*
SOMIX SIX WHISKEY (SOMIX 6W) *[SOMI6W]*
RWYS 10, 28 RNAV DEPARTURES (OVERLAY 10-3D)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



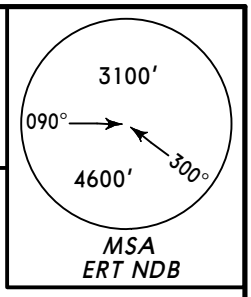
Initial climb clearance **5000′**

SID	RWY	ROUTING
SOMIX 3E	**10**	**(1500′+) -** DE105 - DE106 - SOMIX.
SOMIX 6W	**28**	**(1500′+) -** ERT - DE286 - DE287 - DE288 - SOMIX.

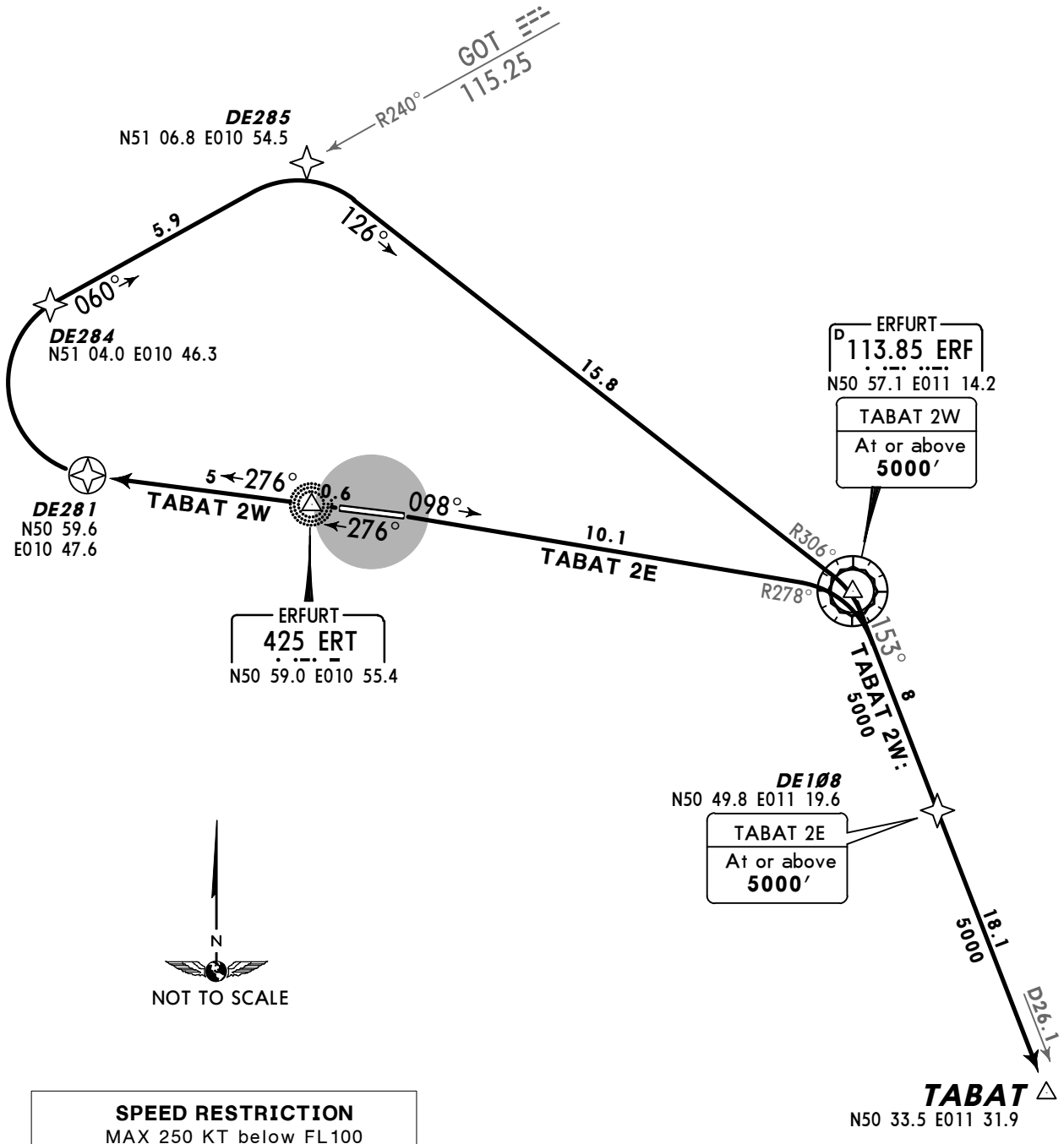
CHANGES: RNAV SID SOMIX 5W renumbered 6W.

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MUNICH Radar 126.17	*Apt Elev* 1036′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



TABAT TWO ECHO (TABAT 2E) *[TABA2E]*
TABAT TWO WHISKEY (TABAT 2W) *[TABA2W]*
RWYS 10, 28 RNAV DEPARTURES (OVERLAY 10-3E)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
TABAT 2E	**10**	**(1500′+) -** ERF - DE108 **(5000′+) -** TABAT.
TABAT 2W	**28**	**(1500′+) -** ERT - DE281 - DE284 - DE285 - ERF **(5000′+) -** TABAT.

CHANGES: None.

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NOISE ABATEMENT

SUMMER	**: LT minus 2 HOURS**	**= UTC (Z)**
WINTER	**: LT minus 1 HOUR**	**= UTC (Z)**

GENERAL

Aircraft with a wingspan of 52 m or more and aircraft with a distance of the outer wheels of the undercarriage of 14 m and more (aircraft Categories E and F) as well as jet aircraft not fulfilling the noise protection requirements according to ICAO Annex 16, Chapter 3, may only take-off and land with permission from the 'Thueringer Ministerium fuer Bau, Landesentwicklung und Verkehr'.

Thueringer Ministerium fuer
Bau, Landesentwicklung und Verkehr
Werner-Seelenbinder-Str.8
99096 Erfurt
Telefon: 0361/379 10 00
Telefax: 0361/379 14 99

NIGHT FLYING RESTRICTIONS

1. Between 2200-0600LT RWY 28 shall only be used for take-offs and RWY 10 only for landings, unless use of these take-off and landing directions is impossible for meteorological or flight safety reasons.
   This ruling applies in general for a tailwind component of up to 5KT.
   Aircraft with a MTOW of more than 150.000 kg are not permitted to take-off from RWY 10 between 2200-0600LT.
2. **Propeller-driven aircraft with a MTOW up to 2000 kg and powered gliders**
   Between 2200-0600LT (workdays) or 2000-0800LT (Sundays and holidays) take-off or landing are permitted only if they fall below the noise limit in accordance with ICAO Annex 16, Chapter 6 or 10 by at least 8 dB (A).
3. **Propeller-driven aircraft with a MTOW of more than 2000 kg**
   Between 2200-0600LT (workdays) or 2000-0800LT (Sundays and holidays) take-off or landing are permitted only if they fall below the noise limit of 80 dB (A) in accordance with ICAO Annex 16, Chapter 6 by at least 4 dB(A) or are to be classified as being particularly low in noise according to other terms of admission.
4. **Jet aircraft**
   Between 2200-0600LT take-off or landing are permitted if they do not exceed the noise limits in accordance with ICAO Annex 16, Volume I, Chapter 3 and are included in the Attachment below (10-4A).
5. **Jet aircraft with a MTOW of more than 150.000 kg**
   Between 2300-0600LT take-offs are generally not permitted.

EXCEPTIONS

Delayed scheduled aircraft in scheduled air services, cargo or all-inclusive air traffic whose scheduled arrival or take-off at Erfurt is before 2200LT, are excluded from the regulations described in paragraph No. 1, 3 & 4.
Landings of other delayed scheduled aircraft are excluded from night-flying restrictions until 2300LT.
Between 2300-0600LT delayed scheduled jet aircraft with a MTOW of more than 150.000 kg are permitted to take-off on RWY 28 only if they are included in the Attachment below (10-4A).

cont'd

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NOISE ABATEMENT

NIGHT FLYING RESTRICTIONS (cont'd)

ATTACHMENT

All aircraft up to MTOW of 25.000 kg not exceeding the noise values found in ICAO Annex 16, Volume I, Chapter 3, as well as the following airplane types:

A300, A310,A319,A320, A321, A330, A340
BAe 146/AVRO RJ-series
B727-100 re-engined with 3 Tay-power units,
B737-300/400/500/600/700/800, B747-400, B757, B767, B777
FOKKER 70/100, Gulfstream IV, MD DC8-70series, MD11, MD90
Limited to landings: MD DC10-30, MD80 all versions
Limited to take-offs: Lockhead L1011, MD DC 10

REVERSE THRUST

Reverse thrust other than idle thrust shall only be used as far as necessary for safety reason.

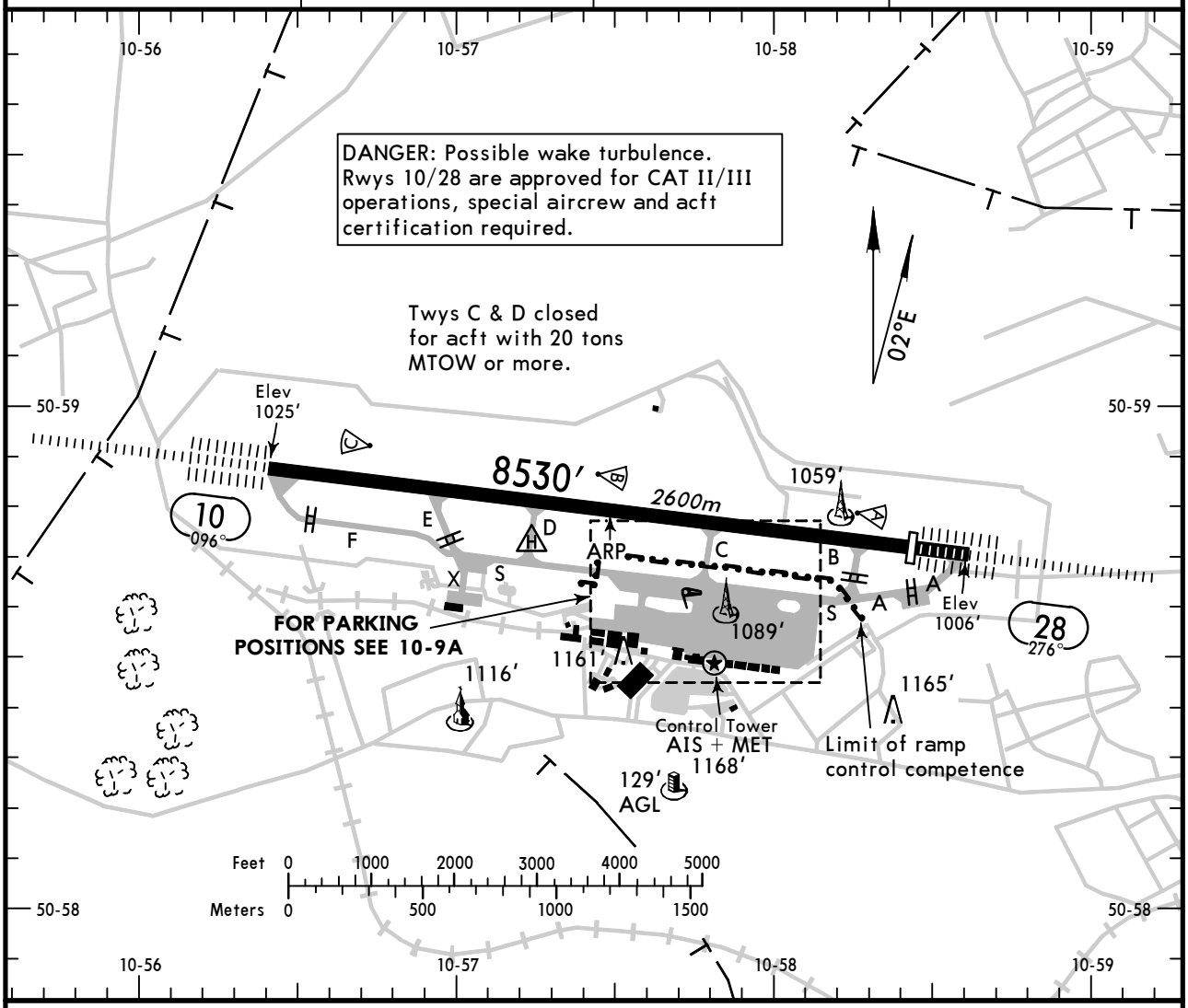
RUN-UP TESTS

Engine test runs are not permitted between 2200-0600LT.
Between 0600-2200LT engine test runs require permission from the 'Luftaufsicht' who will determine the position. The number of engine test runs shall be reduced to a minimum.

Flughafen Erfurt GmbH
Luftaufsicht
Binderslebener Landstr. 100
99092 Erfurt
Telefon: 0361/656 22 50
Telefax: 0361/656 22 89

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*D-ATIS	ERFURT Apron	Ground	Tower
133.45	121.9	121.75	121.15



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
10 ❶ 28	HIRL CL *(15m)* ALSF-II REIL TDZ PAPI-L (3.0°) RVR		7647′ *2331m*	❷	164′ *50m*
		7841′ *2390m*	6976′ *2126m*		

❶ Antiskid layer.

❷ TAKE-OFF RUN AVAILABLE
RWY 10: From rwy head 8530′ (2600m) twy E int 6562′ (2000m)
RWY 28: From rwy head 8530′ (2600m) twy B int 7218′ (2200m)

Standard TAKE-OFF ❶

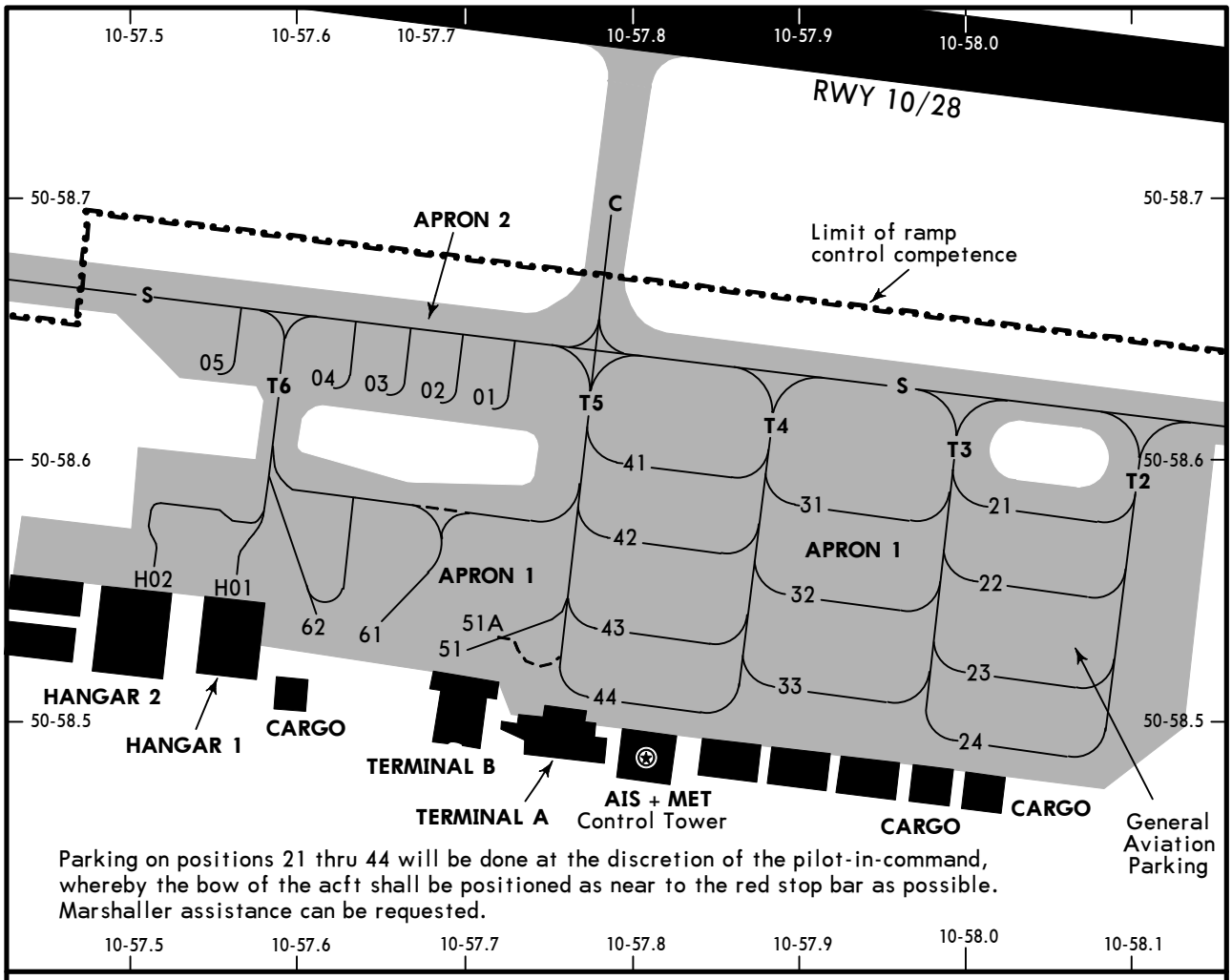
	LVP must be in Force					
	❷ Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

❶ Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

❷ RWY 28: With approved guidance system: ABCD 75m.

CHANGES: None.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
01, 02	N50 58.6 E010 57.7	61	N50 58.5 E010 57.6
03, 04	N50 58.6 E010 57.6	62, H01	N50 58.6 E010 57.6
05	N50 58.6 E010 57.5	H02	N50 58.6 E010.57.5
21, 22	N50 58.6 E010 58.0		
23, 24	N50 58.5 E010 58.0		
31, 32	N50 58.6 E010 57.9		
33	N50 58.5 E010 57.9		
41 thru 43	N50 58.6 E010 57.8		
44	N50 58.5 E010 57.8		
51, 51A	N50 58.6 E010 57.7		

CAT II/III OPERATIONS

As soon as notice of CAT II/III all-weather operations has been given, all acft are permitted to taxi on taxiways with switched on centerline lighting only, or in accordance with separate instructions by ATC.

Landing acft shall leave the rwy via twy E. At the request of the pilot-in-command, guidance by a "Follow me" car will be provided.

Stop bars have been installed at the CAT II/III holding positions which may not be taxied over when they are switched on. No kind of clearence whatever, includes permission to cross a stop bar which is switched on.

CHANGES: Stands.

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ERFURT, GERMANY

ERFURT

STRAIGHT-IN RWY		A	B	C	D
10	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	NOT AUTH
	CAT 2 ILS	**1125′**(100′)	**1125′**(100′)	**1125′**(100′)	**1138′**(113′)
		RA102′ R300m	**RA102′ R300m**	**RA102′ R300m**	**RA156′ R300m**
	ILS	**1225′**(200′)	**1225′**(200′)	**1225′**(200′)	**1225′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1410′**(385′)	**1410′**(385′)	**1410′**(385′)	**1410′**(385′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**1450′**(425′)	**1450′**(425′)	**1450′**(425′)	**1450′**(425′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**1490′**(465′)	**1490′**(465′)	**1490′**(465′)	**1490′**(465′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**1600′**(575′)	**1600′**(575′)	**1600′**(575′)	**1600′**(575′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
28	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**1116′**(100′)	**1116′**(100′)	**1116′**(100′)	**1118′**(102′)
		RA114′ R300m	**RA114′ R300m**	**RA114′ R300m**	**RA116′ R300m**
	ILS	**1216′**(200′)	**1216′**(200′)	**1216′**(200′)	**1216′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1370′**(354′)	**1370′**(354′)	**1370′**(354′)	**1370′**(354′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**1300′**(284′)	**1310′**(294′)	**1330′**(314′)	**1340′**(324′)
		R800m	**R800m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**1420′**(404′)	**1420′**(404′)	**1420′**(404′)	**1420′**(404′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	VOR	**1420′**(404′)	**1420′**(404′)	**1420′**(404′)	**1420′**(404′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m

CIRCLE-TO-LAND ❶	100 KT	135 KT	180 KT	205 KT
	1600′(564′)	**1660′**(624′)	**1760′**(724′)	**1760′**(724′)
	V1500m	V1600m	V2400m	V3600m

❶ Not authorized South of airport.

CHANGES: RNAV.

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TAKE-OFF RWY 10, 28

All Rwys

LVP must be in Force

	[1] Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

[1] Rwy 28: With approved guidance system: ABCD 75m.

CHANGES: None.

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BRIEFING STRIP™

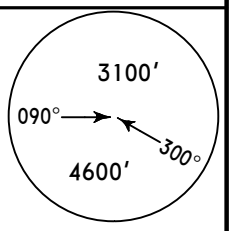
*D-ATIS	MUNICH Radar (APP)	ERFURT Tower	Ground
133.45	126.17	121.15	121.75

LOC IERE	Final Apch Crs	GS	ILS	Apt Elev 1036′
108.3	096°	D4.5 EFD 2290′ (1265′)	DA(H) 1225′ (200′)	RWY 1025′

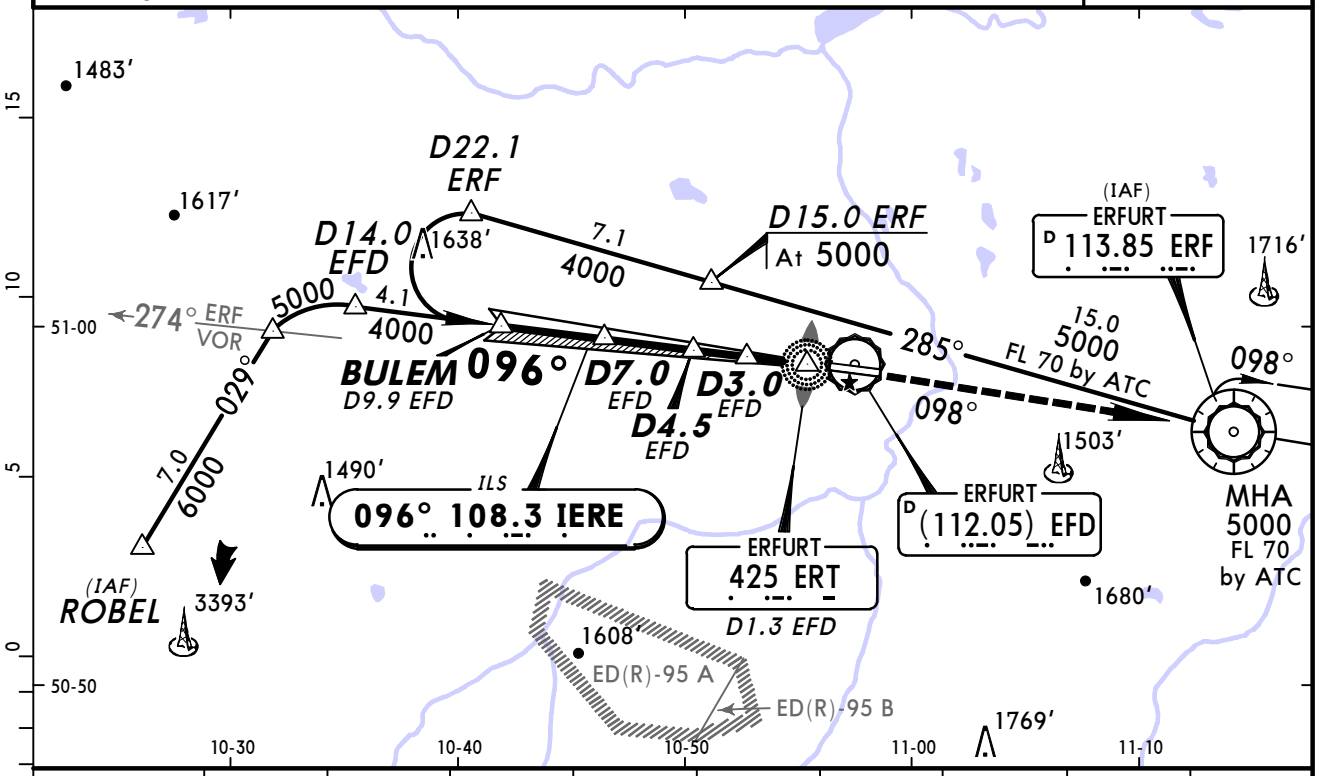
MISSED APCH: Climb on R-278 inbound to VOR to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 37 hPa Trans level: By ATC Trans alt: 5000′

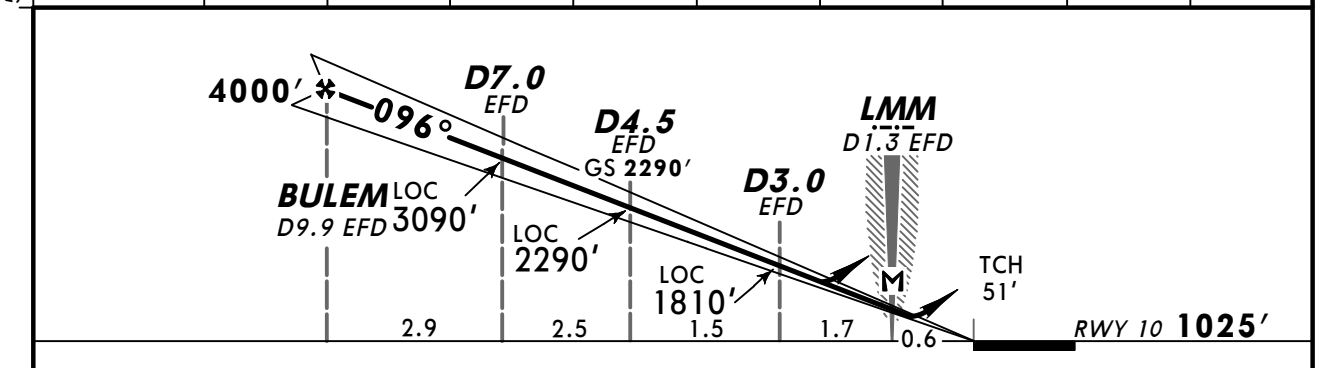
DME REQUIRED.



MSA
ERT NDB



LOC (GS out)	EFD DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3720′	3410′	3090′	2770′	2450′	2130′	1810′	1490′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at LMM/D1.3 EFD						

ALSF-II
REIL
PAPI

5000′ on ERF 113.85 R-278

Standard STRAIGHT-IN LANDING RWY 10

CIRCLE-TO-LAND

Not authorized
South of airport

	ILS DA(H) 1225′ (200′)			LOC (GS out) DA(H) 1410′ (385′)		Max Kts	MDA(H)	VIS
	FULL	Limited	ALS out		ALS out			
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1100m	RVR 1500m	100	1600′ (564′)	1500m
B						135	1660′ (624′)	1600m
C					RVR 1800m	180	1760′ (724′)	2400m
D						205	1760′ (724′)	3600m

PANS OPS 4

CHANGES: OM removed.

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EDDE/ERF
ERFURT

JEPPESEN
10 SEP 10
Eff 23 Sep
11-1A

ERFURT, GERMANY
CAT II ILS Rwy 10

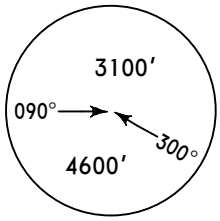
BRIEFING STRIP™

*D-ATIS	MUNICH Radar (APP)	ERFURT Tower	Ground
133.45	126.17	121.15	121.75

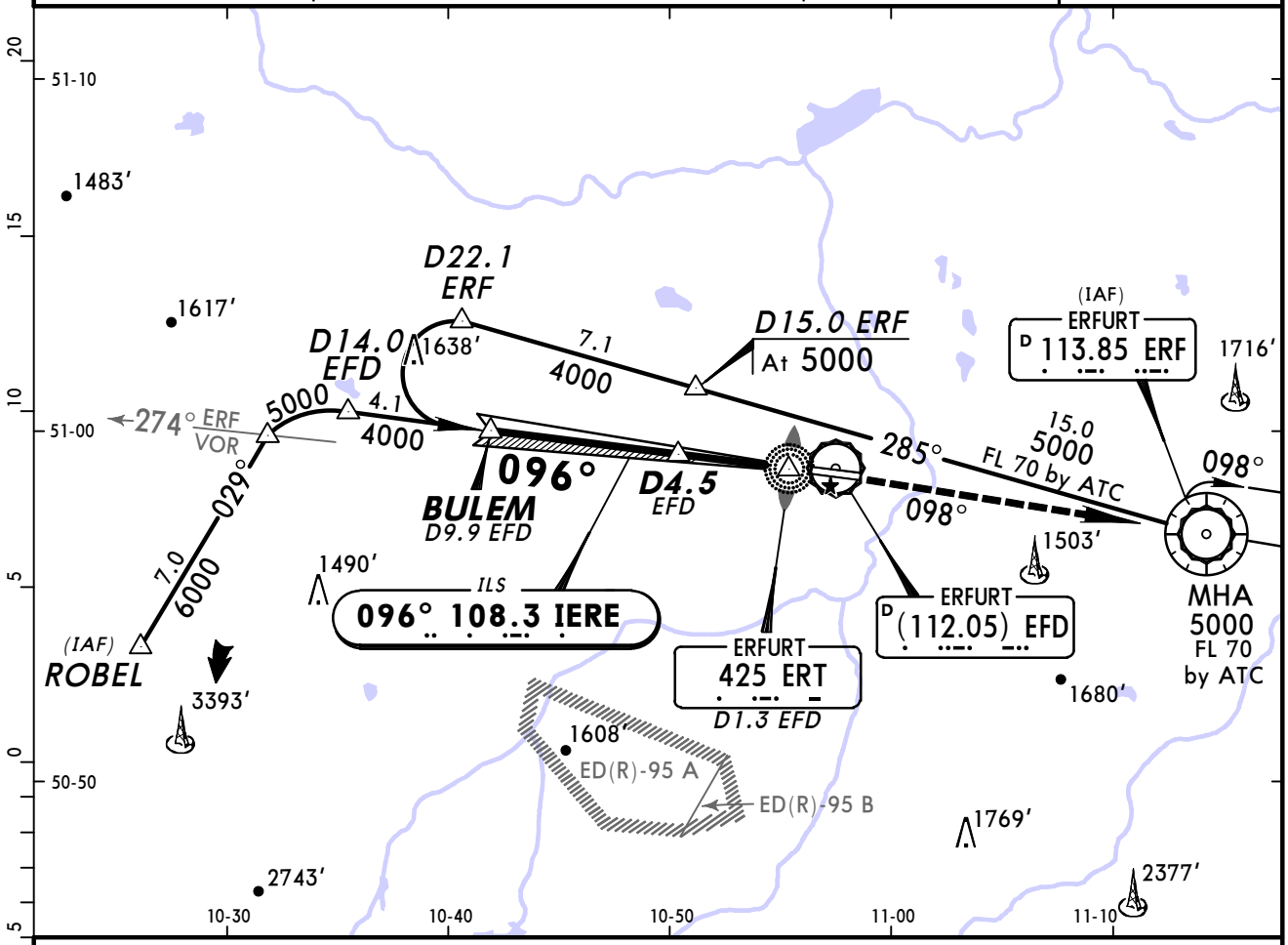
LOC	Final Apch Crs	GS	CAT II ILS RA/DA(H)	Apt Elev / RWY
IERE 108.3	096°	D4.5 EFD 2290′ (1265′)	Refer to Minimums	Apt Elev 1036′ RWY 1025′

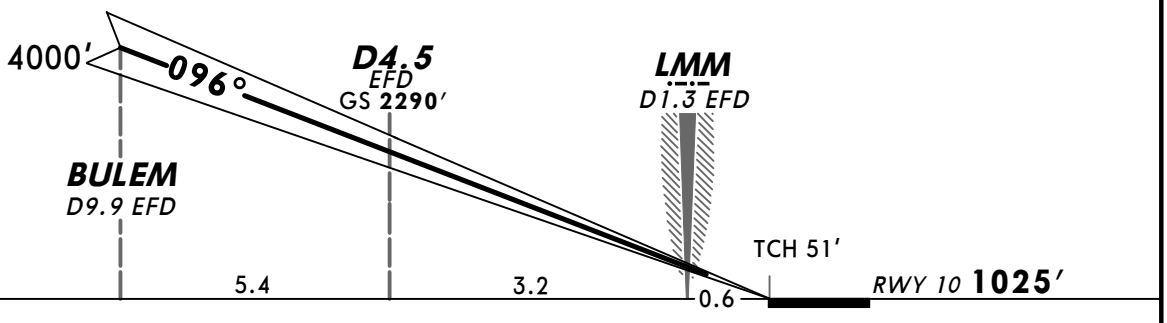
MISSED APCH: Climb on R-278 inbound to VOR to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 37 hPa Trans level: By ATC Trans alt: 5000′
1. DME REQUIRED. 2. Special Aircrew & Aircraft Certification Required.



MSA ERT NDB





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

5000′ on ERF 113.85 R-278

Standard

STRAIGHT-IN LANDING RWY **10**
CAT II ILS

ABC	D
RA 102′	**RA 156′**
DA(H) **1125′** (100′)	DA(H) **1138′** (113′)

RVR 300m 1

PANS OPS 4

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

CHANGES: OM removed.

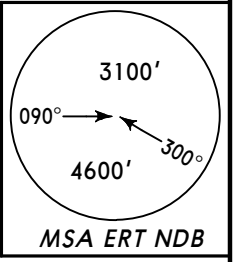
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BRIEFING STRIP™

*D-ATIS	MUNICH Radar (APP)	ERFURT Tower	Ground
133.45	126.17	121.15	121.75

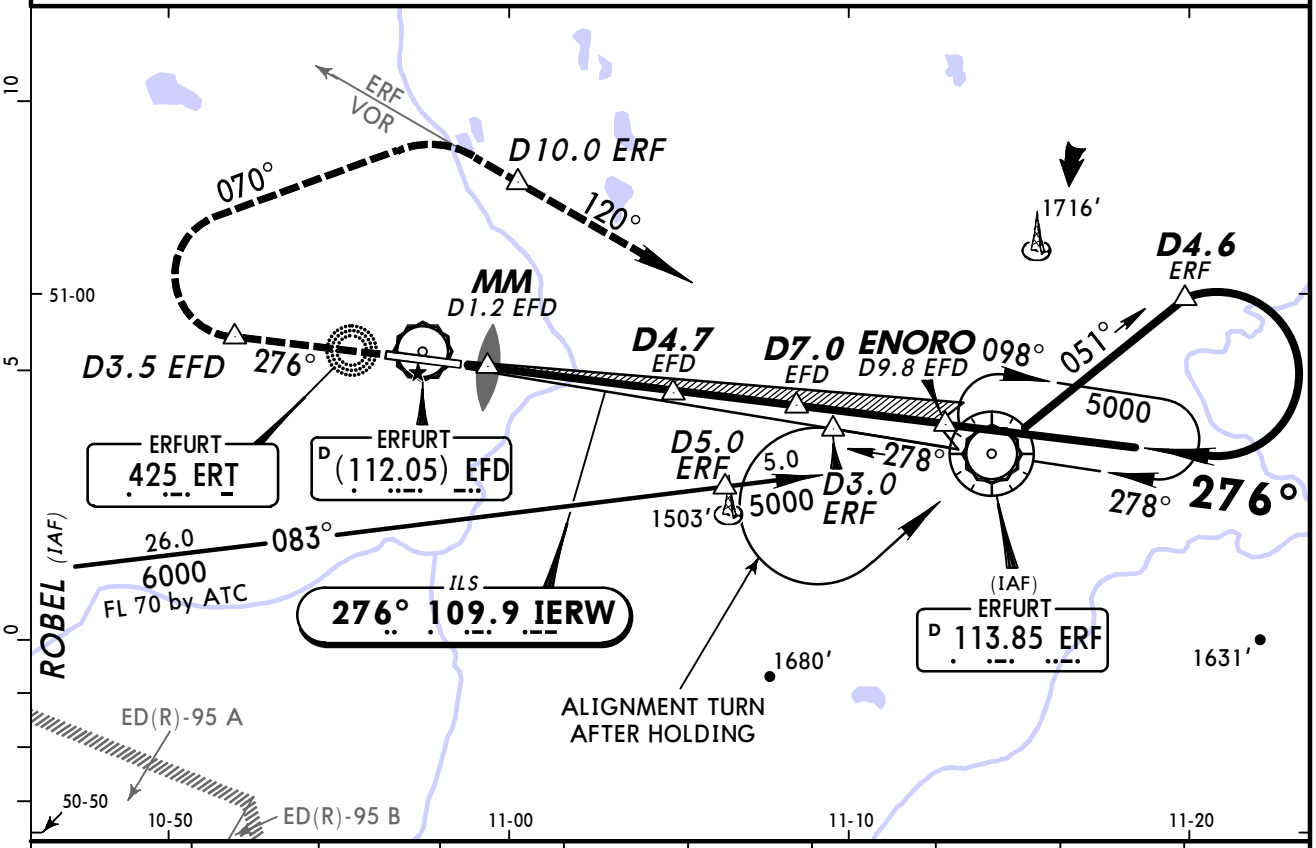
LOC	Final Apch Crs	GS	ILS	Apt Elev 1036′
IERW		D4.7 EFD	DA(H)	RWY 1016′
109.9	276°	2370′ (1354′)	1216′ (200′)	

MISSED APCH: Climb on 276° to D3.5 EFD or 2500′, whichever is later, then turn RIGHT onto 070° to intercept R-300 inbound. Cross D10.0 ERF at 4000′ or above, then climb to VOR to 5000′.

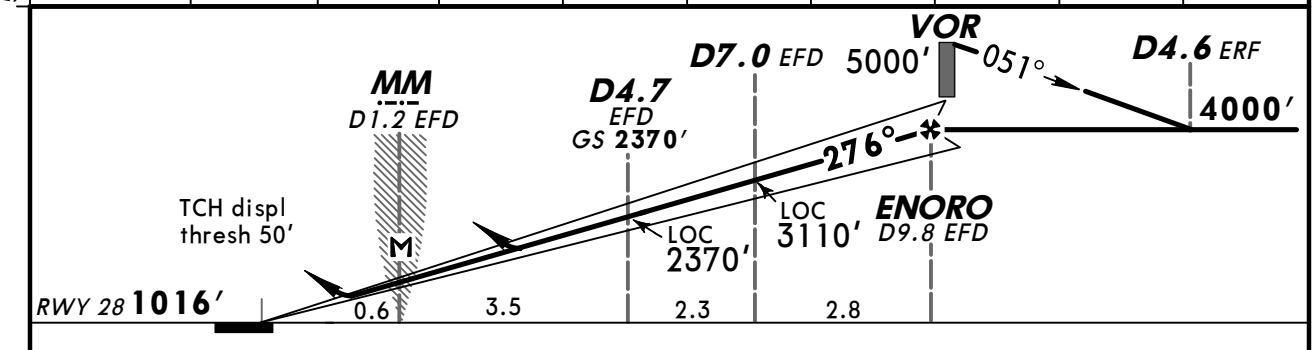


Alt Set: hPa (IN on req) Rwy Elev: 37 hPa Trans level: By ATC Trans alt: 5000′

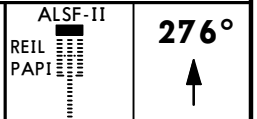
1. **DME REQUIRED.** 2. Glide slope restricted to 6° and 10 NM South of centerline.



LOC (GS out)	EFD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	1520′	1840′	2150′	2470′	2790′	3110′	3430′	3750′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.2 EFD						



PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **28**

	ILS DA(H) 1216′ (200′)			LOC (GS out) DA(H) 1370′ (354′)		CIRCLE-TO-LAND Not authorized South of airport		
	FULL	Limited	ALS out		ALS out	Max Kts	MDA(H)	VIS
A	RVR 550m	RVR 750m	RVR 1200m	RVR 900m	RVR 1500m	100	1600′ (564′)	1500m
B						135	1660′ (624′)	1600m
C					RVR 1600m	180	1760′ (724′)	2400m
D						205	1760′ (724′)	3600m

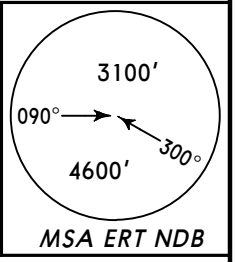
CHANGES: OM removed.

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BRIEFING STRIP™

*D-ATIS	MUNICH Radar (APP)	ERFURT Tower	Ground
133.45	126.17	121.15	121.75

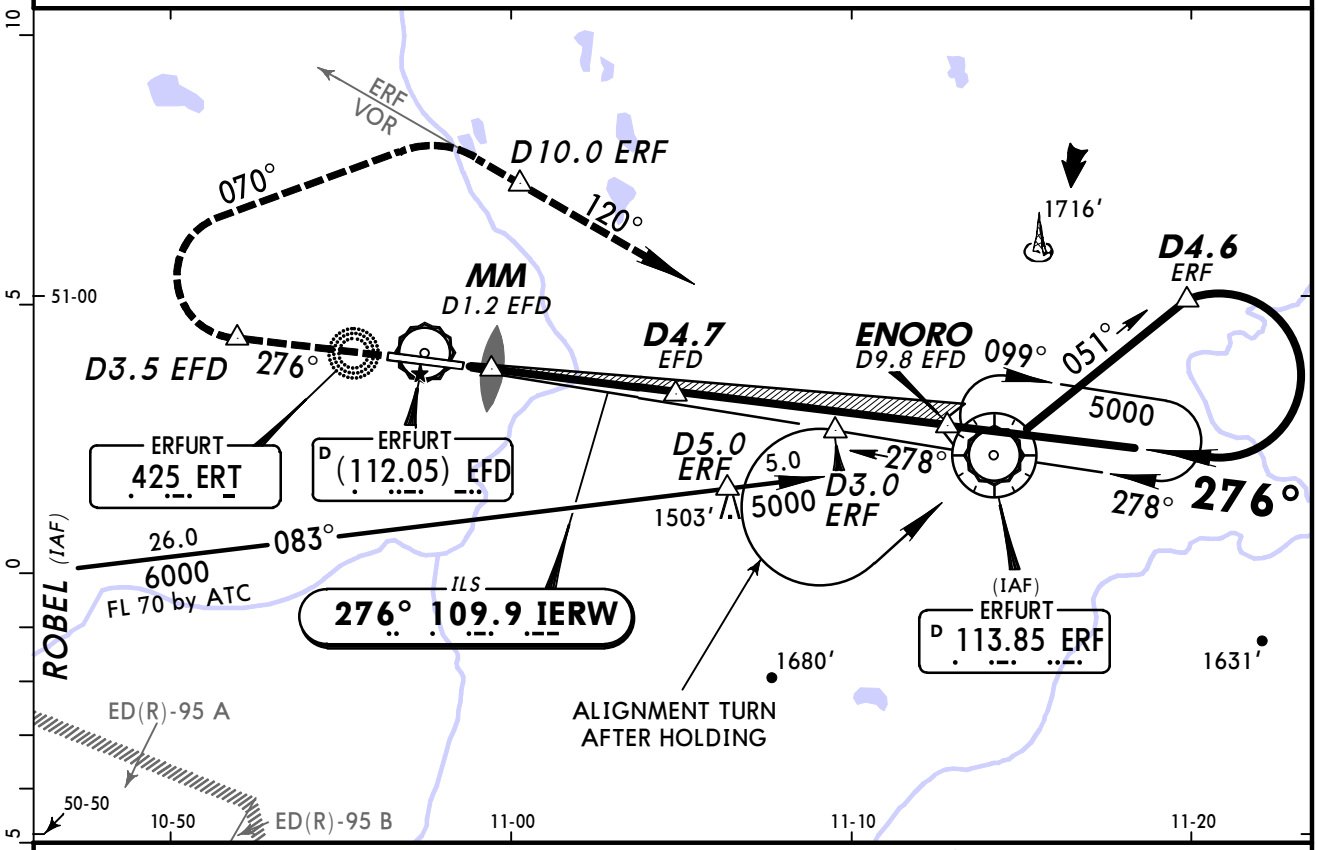
LOC	Final Apch Crs	GS	CAT II ILS RA/DA(H)	Apt Elev / RWY
IERW **109.9**	**276°**	**D4.7 EFD** **2370′** (1354′)	Refer to Minimums	Apt Elev 1036′ RWY **1016′**

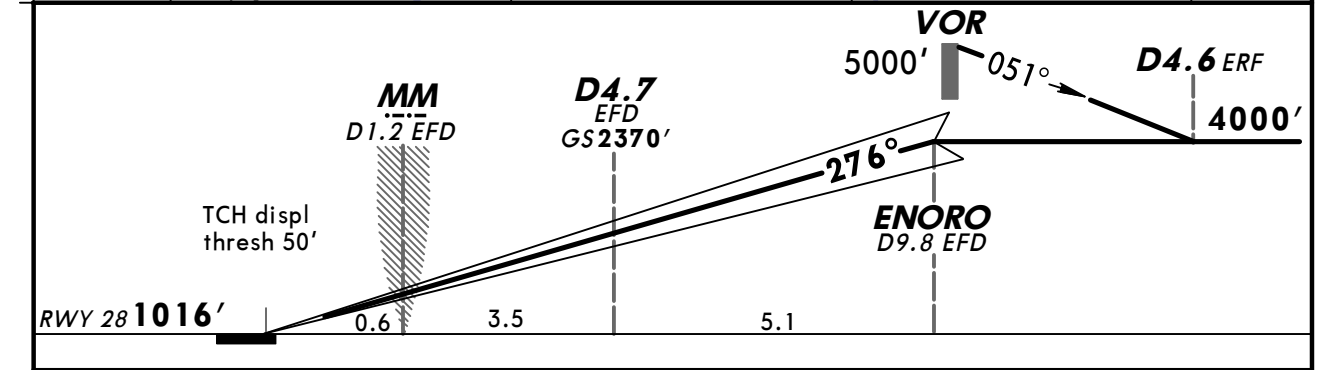


MISSED APCH: Climb on 276° to D3.5 EFD or 2500′, whichever is later, then turn RIGHT onto 070° to intercept R-300 inbound. Cross D10.0 ERF at 4000′ or above, then climb to VOR to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 37 hPa Trans level: By ATC Trans alt: 5000′

1. **DME REQUIRED.** 2. Special Aircrew & Acft Certification Required.
3. Glide slope restricted to 6° and 10 NM South of centerline.





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

276°

Standard

STRAIGHT-IN LANDING RWY **28**
CAT II ILS

ABC	D
RA 114′	**RA 116′**
DA(H) **1116′** (100′)	DA(H) **1118′** (102′)

RVR 300m 1

PANS OPS 4

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

CHANGES: OM removed.

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BRIEFING STRIP™

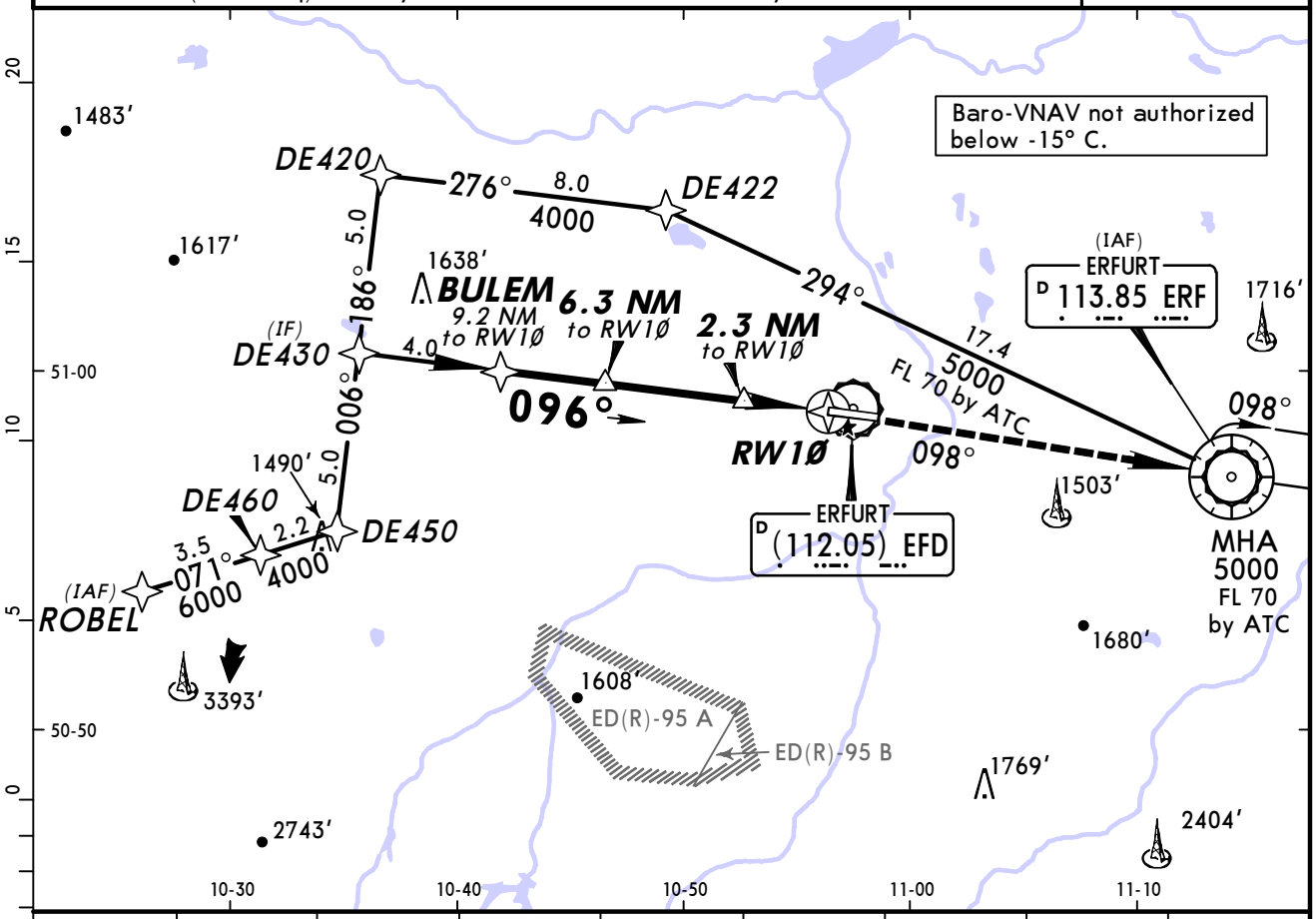
*D-ATIS	MUNICH Radar (APP)	ERFURT Tower	Ground
133.45	126.17	121.15	121.75

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 1036′
	096°	BULEM 4000′ (2975′)	1450′ (425′)	RWY10 1025′

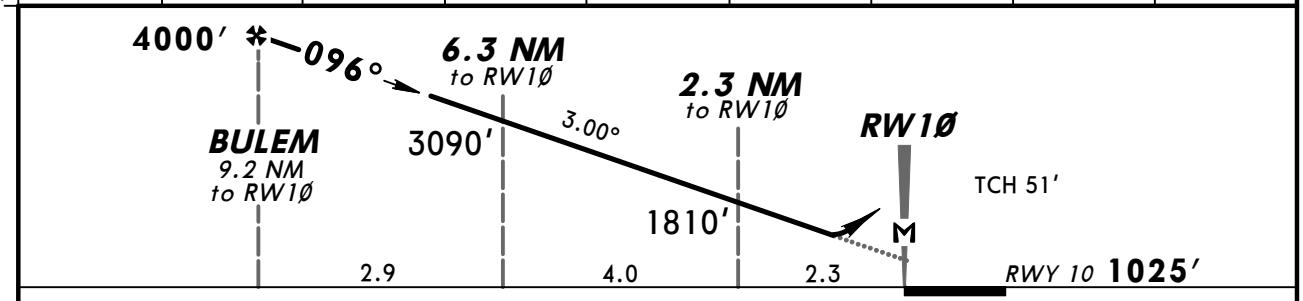
MISSED APCH: RNAV: Climb on 098° to VOR to 5000′.
NON-RNAV: Climb on R-278 to VOR to 5000′.

Alt Set: hPa (IN on req) | Rwy Elev: 37 hPa | Trans level: By ATC | Trans alt: 5000′

4600′
MSA ARP



NM to RW10	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3950′	3630′	3310′	2990′	2670′	2350′	2040′	1720′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW10							

ALSF-II
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **10**

	LNAV/VNAV DA(H) 1450′ (425′)		LNAV DA(H) 1490′ (465′)	
		ALS out		ALS out
A	RVR 1300m	RVR 1500m	RVR 1500m	
B				
C		RVR 2000m	RVR 1500m	CMV 2200m
D				

CIRCLE-TO-LAND
Not authorized
South of airport

Max Kts	MDA(H)	VIS
100	1600′ (564′)	1500m
135	1660′ (624′)	1600m
180	1760′ (724′)	2400m
205	1760′ (724′)	3600m

PANS OPS 4

CHANGES: Minimums.

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BRIEFING STRIP™

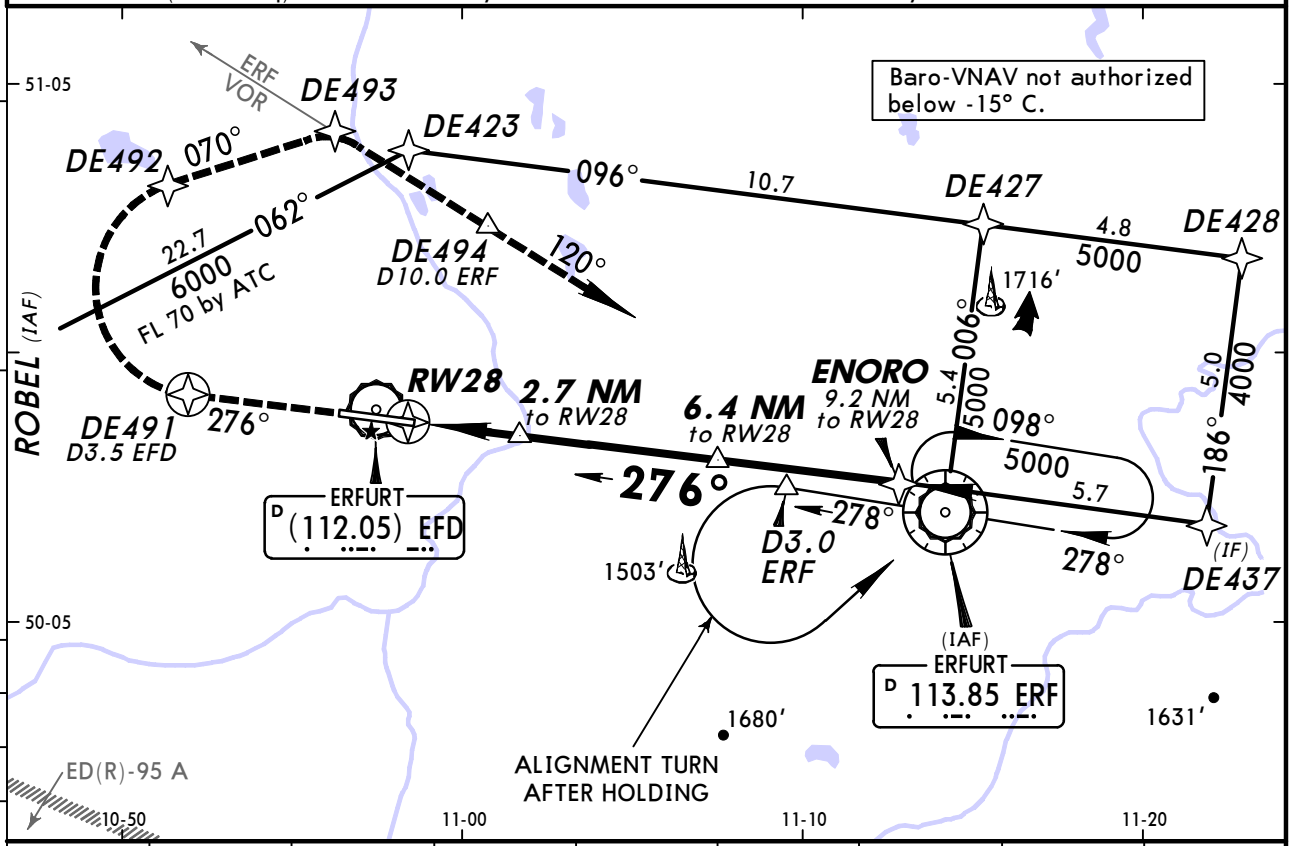
*D-ATIS	MUNICH Radar (APP)	ERFURT Tower	Ground
133.45	126.17	121.15	121.75

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 1036′
	276°	ENORO 4000′ (2984′)	Refer to Minimums	RWY 1016′

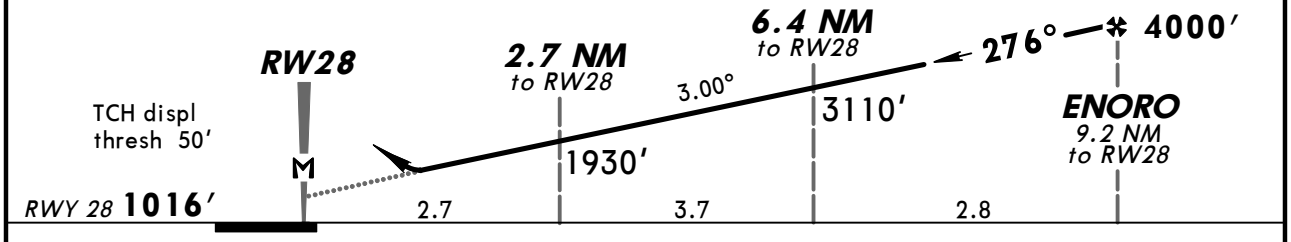
MISSED APCH: RNAV: Climb on 276° to DE491 or 2500′, whichever is later, then turn RIGHT via DE492 onto 070° to DE493. Turn RIGHT onto 120° to VOR. Cross DE494 at 4000′ or above, then climb to 5000′.
NON-RNAV: Climb on 276° to D3.5 EFD or 2500′, whichever is later, then turn RIGHT onto 070° to intercept R-300 inbound. Cross D10.0 ERF at 4000′ or above, then climb to VOR to 5000′.

4600′
MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 37 hPa | Trans level: By ATC | Trans alt: 5000′



NM to RW28	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	1710′	2030′	2340′	2660′	2980′	3300′	3620′	3940′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW28							

ALSF-II
REIL
PAPI
276°

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **28**

	LNAV/VNAV DA(H)		LNAV DA(H)	
	A: 1300′ (284′) C: 1330′ (314′)		1420′ (404′)	
	B: 1310′ (294′) D: 1340′ (324′)			
	ALS out		ALS out	
A	RVR 750m [1]	RVR 1400m	RVR 1200m	RVR 1500m
B				
C				RVR 1900m
D	RVR 800m	RVR 1500m		

CIRCLE-TO-LAND
Not authorized
South of airport

Max Kts	MDA(H)	VIS
100	1600′ (564′)	1500m
135	1660′ (624′)	1600m
180	1760′ (724′)	2400m
205	1760′ (724′)	3600m

[1] With TDZ, CL and HUD: CAT A, B: 650m, CAT C: 700m.

CHANGES: Minimums.

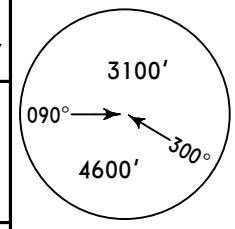
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*D-ATIS	MUNICH Radar (APP)	ERFURT Tower	Ground
133.45	126.17	121.15	121.75

VOR ERF	Final Apch Crs	Minimum Alt VOR	DA(H)	Apt Elev 1036′
113.85	278°	4000′ (2984′)	1420′ (404′)	RWY 1016′

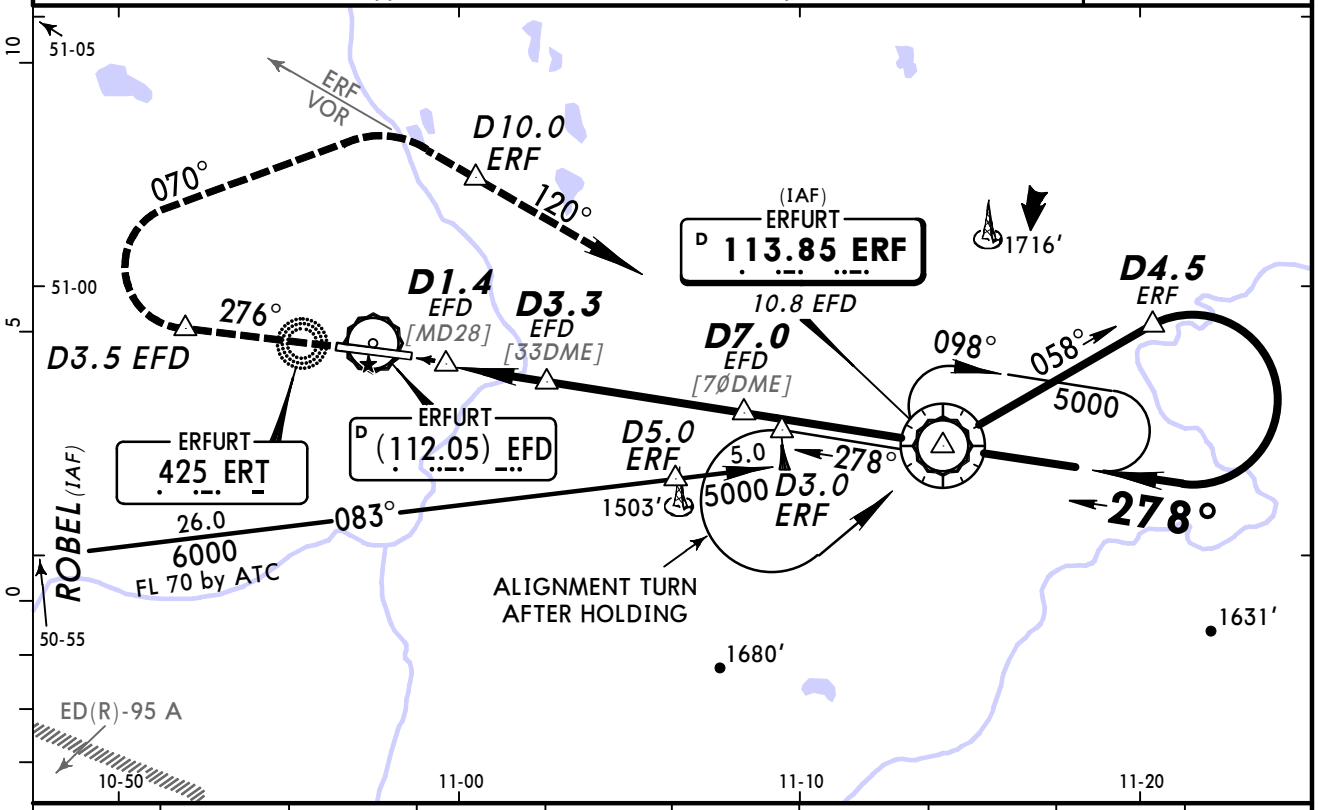
MISSED APCH: Climb on 276° to D3.5 EFD or 2500′, whichever is later, then turn RIGHT onto 070° to intercept R-300 inbound. Cross D10.0 ERF at 4000′ or above, then climb to VOR to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 37 hPa Trans level: By ATC Trans alt: 5000′
1. **DME REQUIRED.** 2. Final approach track offset 2° from runway centerline.

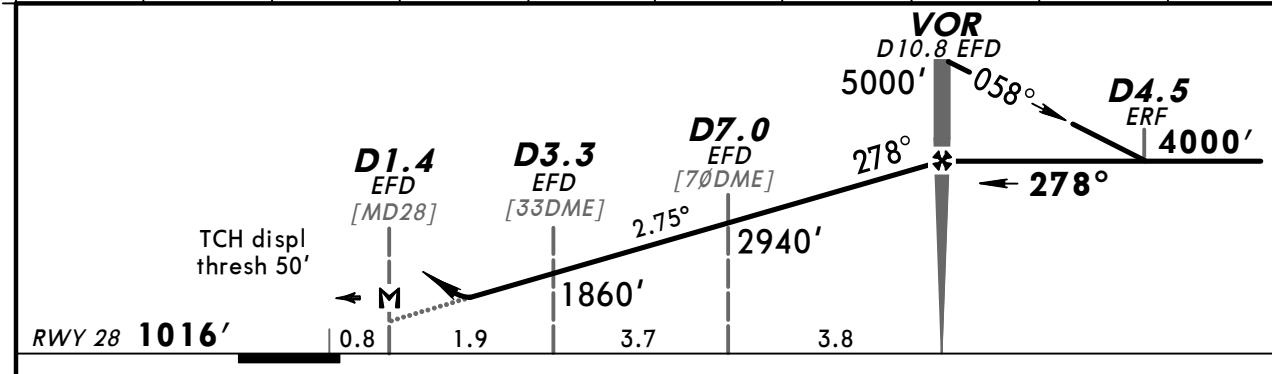


MSA ERT NDB

BRIEFING STRIP ™



EFD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	1480′	1770′	2060′	2350′	2650′	2940′	3230′	3520′	3810′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	2.75°	340	438	486	584	681	778
MAP at D1.4 EFD							

ALSF-II
REIL
PAPI

276°

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **28**

DA(H) **1420′** (404′)

	ALS out	ALS inop
A	RVR 1200m	RVR 1500m
B		
C		RVR 1900m
D		

CIRCLE-TO-LAND
Not authorized
South of airport

Max Kts	MDA(H)	VIS
100	1600′ (564′)	1500m
135	1660′ (624′)	1600m
180	1760′ (724′)	2400m
205	1760′ (724′)	3600m

CHANGES: Minimums.

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BRIEFING STRIP ™

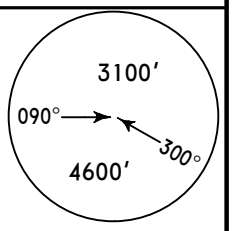
*D-ATIS	MUNICH Radar (APP)	ERFURT Tower	Ground
133.45	126.17	121.15	121.75

NDB ERT	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 1036′
425	096°	BULEM 4000′ (2975′)	1600′ (575′)	RWY 1025′

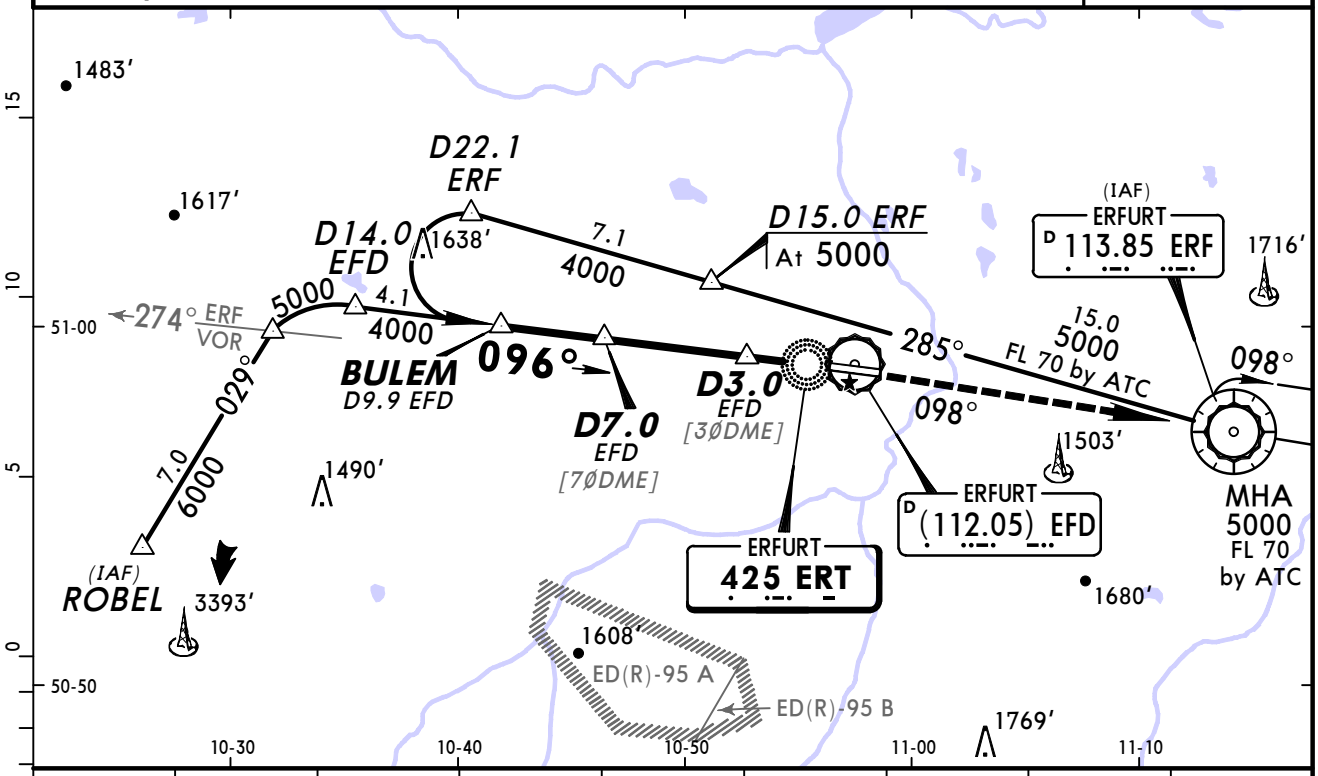
MISSED APCH: Climb on R-278 inbound to VOR to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 37 hPa Trans level: By ATC Trans alt: 5000′

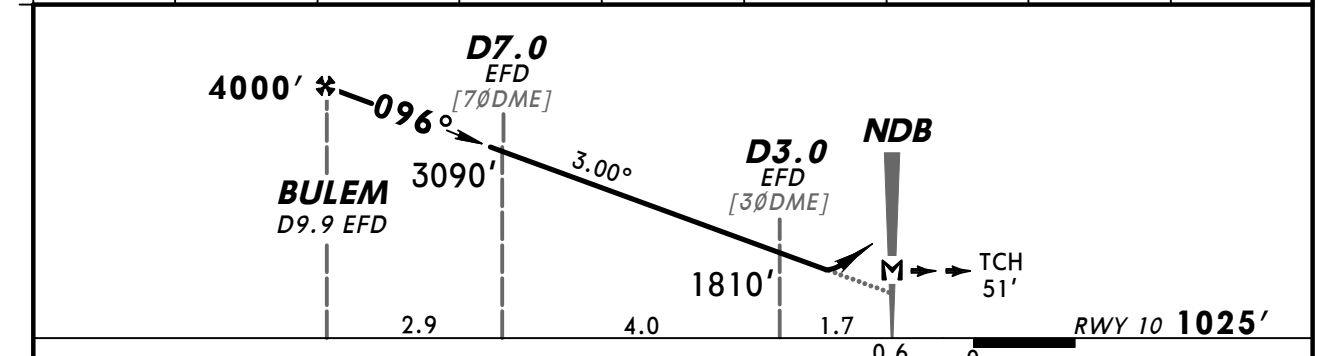
DME REQUIRED.



MSA
ERT NDB



EFD DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3720′	3410′	3090′	2770′	2450′	2130′	1810′	1490′



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

ALSF-II
REIL
PAPI

5000′ on ERF 113.85 R-278

Standard STRAIGHT-IN LANDING RWY **10**

DA(H) **1600′** (575′)

ALS out

A	RVR 1500m	
B		
C	RVR 1900m	CMV 2400m
D		

CIRCLE-TO-LAND

Not authorized
South of airport

Max Kts	MDA(H)	VIS
100	1620′ (584′)	1500m
135	1660′ (624′)	1600m
180	1760′ (724′)	2400m
205	1760′ (724′)	3600m

PANS OPS 4

CHANGES: New chart.

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General Information

Location: Frankfurt/Main Deu
IATA Code: FRA
Lat/Long: N50° 02.0' E008° 34.2'
Elevation: 364 ft

Airport Use: Public
Magnetic Variation: 1.5°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0614 Z
Sunset: 1703 Z,

Runway Information

Runway: 07C
Length x Width: 13123 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 329 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 07L
Length x Width: 9186 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 305 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 07R
Length x Width: 13123 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 328 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 18
Length x Width: 13123 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 326 ft
Lighting: Edge, Centerline

Runway: 25C
Length x Width: 13123 ft x 197 ft

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Surface Type: asphalt
TDZ-Elev: 364 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 25L
Length x Width: 13123 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 362 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 25R
Length x Width: 9186 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 353 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Communication Information

ATIS 118.725 Departure Service
ATIS 118.025 Arrival Service
Frankfurt Ground Tower 121.8
Frankfurt Delivery Tower 121.9
Frankfurt Tower 136.5
Frankfurt Tower 127.325 At or below 4000 ft
Frankfurt Tower 124.85 At or below 4000 ft
Frankfurt Tower 119.9 At or below 4000 ft
Frankfurt Tower 118.775
Frankfurt Tower 37.835 At or below 4000 ft Military
Frankfurt De-Icing Centre Ramp/Taxi Control 135.225
Frankfurt Apron Ramp/Taxi Control 121.95
Frankfurt Apron Ramp/Taxi Control 121.85
Frankfurt Apron Ramp/Taxi Control 121.75
Frankfurt Apron Ramp/Taxi Control 121.65
Frankfurt Apron Ramp/Taxi Control 121.55
Langen Radar Approach Control 136.125
Langen Radar Approach Control 126.55 Departure Service
Langen Radar Approach Control 125.35
Langen Radar Approach Control 120.8
Langen Radar Approach Control 120.15
Langen Radar Approach Control 119.025 Arrival Service
Langen Radar Approach Control 37.285 Military
Langen Radar Approach Control 27.78 Military
Frankfurt Director Approach Control 127.275 At or below 15000 ft Out to 40 mi.
Frankfurt Director Approach Control 37.545 At or below 10000 ft Military
Frankfurt Arrival Approach Control 118.5

1. GENERAL

1.1. ATIS

*D-ATIS Arrival 118.02
*D-ATIS Departure 118.72

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. RUNWAY USAGE

1.2.1.1. ARRIVALS

RWYs 25C/L will preferably be assigned to landing ACFT, provided the tailwind component does not exceed 5 KT. The landing direction will be changed, however, even if the tailwind component is less than 5 KT when braking action on the RWYs is impaired by ice, snow, slush, etc.

1.2.1.2. DEPARTURES

In case of landing direction 07:
RWY 07C will preferably be assigned to departures into northern and eastern directions.

In case of landing direction 25:
RWY 25C will preferably be assigned to departures into northern directions.

In case of landing direction 07 or 25:
RWY 18 will generally be assigned to departures into south-eastern, southern and western directions, provided the tailwind component does not exceed 15 KT.
If the tailwind component for RWY 18 is more than 10 KT this will be announced by ATIS. Pilots-in-command who cannot accept the higher tailwind component are requested to advise ATC at the same time as the request for the start-up clearance.
Exceptions are possible if the traffic situation permits or for reasons of traffic safety.

1.2.2. NIGHT FLYING RESTRICTIONS AND OPERATIONAL RESTRICTIONS OUTSIDE NIGHTTIME HOURS FOR CIVIL AVIATION

a) Landing RWY northwest (07L/25R) may only be used by airplanes up to and including code letter E in compliance with ICAO categorization. Airplanes with code letter F in compliance with categorization according to ICAO Attachment 14, jet airplanes, which cannot be classified into the airplane groups up to and including S 6.3 in compliance with the instructions for calculating noise protection zones as well as airplanes of the type MD11 may not use landing RWY northwest (07L/25R). Take-offs of ACFT are not permitted from landing RWY northwest (07L/25R).

b) ACFT without a noise certificate in accordance with ICAO Annex 16 are not permitted to take-off from or land on the whole runway system of Frankfurt/Main APT during the entire hours of operation of Frankfurt/Main APT.

c) ACFT that merely meet the noise certification values in accordance with ICAO Annex 16, Volume I, Part II, Chapter 2 are not permitted to take-off from or land on the whole RWY system of Frankfurt/Main APT during the entire hours of operation of Frankfurt/Main APT unless - documented by a certificate according to Article 11c, paragraph 7 of the German Aviation Regulation (LuftVO) - the Federal Aviation Office (LBA) has granted an exemption for the ACFT concerned according to Article 11 c, paragraphs 4 - 6 of the LuftVO or a Member State of the European Union has granted an exemption in accordance with Article 11c, paragraph 8 of the LuftVO.

d) The following operational provisions apply to ACFT that are marginally compliant with ICAO Annex 16, Volume 1, Part II, Chapter 3 within the meaning of Article 48a no. 4 of the Regulation on the Certification and Licensing in Aviation (LuftVZO):

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1. GENERAL

Take-offs and landings are not permitted on all days of the week between 2000-0800LT, unless an exemption in accordance with Article 48 f, paragraph 1 of the LuftVZO or an individual exemption in accordance with paragraph 2 of the regulation has been granted.
From the beginning of the winter 2011/2012 scheduling period, take-offs and landings are not permitted between Friday, 2000LT and Monday, 0800LT, unless they have been granted an exemption in accordance with Article 48 f, paragraph 1 of the LuftVZO or an individual exemption in accordance with paragraph 2 of the regulation.
ACFT arriving late or early whose landing is planned by the APT coordinator for a slot outside the operational restrictions up to 2000LT or from 0800LT may land until 2200LT and from 0600LT, provided that the late or early arrival was not envisaged as such in the flight plan (Article 25 LuftVO).

e) Following the opening of the landing RWY northwest, from the first day of the new scheduling period, which - because of the added capacity of the landing RWY northwest - provides an increase in the coordinated hourly runway capacity, take-offs and landings are not permitted on the whole RWY system of Frankfurt/Main APT between 2200-0600LT on all days of the week, unless otherwise provided.
Between 2200-2300LT as well as between 0500-0600LT, only such ACFT are permitted to take off and land that - have a noise certificate or a noise certification value in accordance with ICAO Annex 16, Volume I, Part II, Chapter 4 and whose take-off or landing has been coordinated by the APT coordinator of the Federal Republic of Germany at least one day in advance.
From the beginning of the winter timetable (30 OCT 2011), scheduled flights are not permitted between 2300-0500LT.

The following regulations apply to ACFT arriving late or early:
- ACFT that are not only marginally compliant with ICAO Annex 16, Volume I, Part III, Chapter 3 within the meaning of Article 48 a of the LuftVZO, and ACFT fulfilling the provisions of ICAO Annex 16, Volume 1, Part II, Chapter 4 and whose landing is planned by the APT coordinator for a slot up to 2200LT or from 0600LT, are permitted to land until 2400LT and/or from 0500LT without being counted against the quota as well as the maximum limit, provided that the late or early arrival was not envisaged as such in the flight plan (Article 25 of the LuftVO).
- ACFT fulfilling the provisions of ICAO Annex 16, Volume I, Part II, Chapter 4 and whose landing is planned by the APT coordinator for a slot between 2200-2300LT and between 0500-0600LT under the conditions set out, are permitted to land until 2400LT without being counted against the maximum limit provided that the late arrival was not envisaged as such in the flight plan (Article 25 of the LuftVO).
Early arrivals before 0500LT are not permitted.
ACFT are not permitted to use the landing RWY northwest between 2300-0500LT.
At Frankfurt/Main APT, take-offs and landings of ACFT conducting flight checks of radio, radar or APT facilities are permitted between 2200-0600LT only if the ACFT meet the provisions of ICAO Annex 16, Volume I, Part II, Chapter 4 and if it is absolutely necessary to conduct these checks during this period of time.
Propeller ACFT with a maximum take-off mass of less than 9,000 kg may take-off and land between 2200-0600LT only under the restrictions outlined in sections above; instead of the mentioned noise certification values they must at least fulfil the higher sound-proofing requirements defined in Article 4 of the Airfield Noise Abatement Ordinance (LandeplatzLaermschutzV) of 5 January 1999 (Federal Law Gazette I, page 35; German-language publication Nfl I 134/99).

f) Delayed take-offs to be conducted in a period of restricted operations by an ACFT subject to the restrictions require individual permission by the local aviation supervision office. Permission may only be granted if the delay is due to reasons beyond the control of the air carrier concerned. Delayed take-offs are not permitted between 2400-0500LT unless they meet the approval requirements above.

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1. GENERAL

EXCEPTIONS

Excluded from the restrictions mentioned above are:

- Landings of ACFT approaching Frankfurt Main APT as an alternate aerodrome for meteorological, technical or other safety reasons as well as take-offs and landings of ACFT rendering medical assistance or on missions in disasters, as well as evacuation flights;
- Flights conducted particularly in the public interest.

Apart from this, the approving authority may grant exemptions from the operational restrictions only upon application in cases of particular hardship. It is not a case of particular hardship if the operational restriction makes the air carrier's ACFT turn-around planning more difficult or requires arrangements for passenger transfer or accommodation. Processing of applications is subject to charges.

As a rule, the application shall be submitted in writing to:

Hessisches Ministerium fuer Wirtschaft, Verkehr
und Landesentwicklung
- Referat V4 -
Kaiser-Friedrich-Ring 75
65185 Wiesbaden/Germany
Fax: 0611/815-2223

In urgent cases, the application shall be submitted in writing or verbally to:

Oertliche Luftaufsichtsstelle/local Aviation Supervision Office
Verkehrsflughafen Frankfurt/Main
Gebaeude (building) 514
60547 Frankfurt am Main/Germany
Tel.: 069/690-71717
Fax: 069/690-66150

The application shall contain:

- Name and address of ACFT operating agency and ACFT operator,
- aerodrome of departure or destination,
- radio call sign of the ACFT,
- type, year of construction, and noise certificate according to Article 11c of the LuftVO,
- confirmation that the ACFT will be flown by a pilot who is familiar with the noise abatement procedures at Frankfurt/Main APT,
- time of departure or landing for which the exemption is requested,
- number of passengers,
- weight of cargo in tonnes.

The reasons for the application shall be specified; the applicant shall state, in particular, where the hardship lies.
Take-off or landing clearances granted by ATC as well as other clearances do not automatically include the necessary exemption by the approval authority. ATC will not grant exemptions via radiotelephony.

The pilot-in-command (PIC) shall report the landing of an ACFT outside the times permitted, which has not previously been approved, and justify it in writing to the local aviation supervision office after landing (Declaration of PIC).

1.2.3. REVERSE THRUST

Reverse thrust must not be used on the entire RWY system of Frankfurt Main APT - except for safety reasons in unavoidable cases. This does not apply to idle reverse thrust.

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1. GENERAL

1.2.4. RUN-UP TESTS

Engine run-ups with thrust settings above an idle power setting may only be conducted at the following positions:
- on the apron of hangar 5 and in the run-up enclosure in the time between 0600-2200LT,
- in the time between 2200-0600LT, engine run-ups with the thrust setting on part-load on the apron of hangar 5, whereby on the position hangar 5 west the maximum power setting may only be taken to part-load low (up to 50% N1), as well as in the run-up enclosure; engine run-ups with the thrust setting on full-load may only be conducted in the run-up enclosure.

Engine run-ups shall be conducted in such a way that their duration of exposure on the next built-up area shall not, on average, result in a continuous sound level higher than 57 dB(A) during the day and 50 dB(A) during the night.

Engine run-ups in the time between 2200-0600LT with a thrust setting above an idle power setting shall be notified to the local aviation supervision office.

Engine test runs and run-ups as well as extensive maintenance work on ACFT at the positions are not permitted. Apron control may grant exceptions in justified cases.

1.3. LOW VISIBILITY PROCEDURES

1.3.1. CAT III OPERATIONS

1.3.1.1. GENERAL

RWYs 07R/25L & 07C/25C will be announced via ATIS. Taxiing for all ACFT is restricted to TWYs with operating centerline lights. The TWY centerline lights within the ILS sensitive area from RWY 07C/25C towards TWY L and from RWY 07R/25L towards TWY M are colorcoded (yellow/green). Landing ACFT are requested to report RWY vacated at the end of the colorcoded TWY centerline lights to indicate that the ACFT has vacated the ILS sensitive area.
In order to facilitate ground movement several clearance bars and stop bars are installed.

1.3.1.2. CLEARANCE BARS

Clearance bars are operated together with the centerline lighting and consist of three unidirectional surface lights showing YELLOW in the direction of approach to the intersection, arranged at 90° to the TWY centerline and partly displaced laterally to centerline.

If the traffic situation requires, ACFT may be instructed to hold at a specific clearance bar. If no such instruction is given, ACFT may taxi across the clearance bar without a specific clearance.

1.3.1.3. STOP BARS

Stop bars are operated independently of the centerline lighting and consist of unidirectional surface lights showing red in the direction of approach to a taxi-holding position/an intersection, spaced at intervals of 10 '/3m across the overall width of a TWY at 90° to the TWY centerline.
Taxiing across an operating stop bar is strictly prohibited.

1.4. SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM

1.4.1. OPERATION OF SSR-MODE S TRANSPONDERS

1.4.1.1. GENERAL

An Advanced Surface Movement Guidance and Control System, using Mode-S multilateration, is in operation.

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1. GENERAL

1.4.1.2. OPERATION OF MODE S TRANSPONDERS WHEN ACFT IS ON GROUND

ACFT operators shall ensure that Mode S transponders are able to operate when ACFT is on the ground.
Pilots shall:
Select AUTO mode and assigned Mode A code. If AUTO mode is not available, select ON (e.g. XPDR) and assigned Mode A code (e.g. Mode A code = 1000 using callsign in flight).
- From request for push-back or taxi, whichever is earlier;
- After landing, continuously until ACFT is fully parked on stand;
- When fully parked on stand, select STBY.

Whenever ACFT is capable of reporting ACFT ident (i.e. callsign used in flight), ACFT ident shall also be entered from request for push-back or taxi, whichever is earlier (through FMS or transponder control panel). Aircrew must use ICAO defined format for entry of ACFT ident (e.g. DLH5MC, AFR6380, SAS589, BAW68PG).

To ensure that performance of systems based on SSR frequencies (including airborne TCAS units and SSR radars) is not compromised, TCAS shall not be activated before approaching holding point. After landing, it shall be deselected after vacating RWY.
ACFT taxiing without flight plan shall select STBY.

1.5. TAXI PROCEDURES

1.5.1. GENERAL

ACFT are permitted to taxi on the manoeuvring area between RWY 07C/25C and TWYL only with the minimum engine revolutions absolutely required.

Turns from TWY M17 to M15 & conversely not authorized.

TWY N7 MAX wingspan 113 '/34.5m.
TWYs N blue and N orange MAX wingspan 118 '/36m.
TWYs N SOUTH and S20 MAX wingspan 171 '/52m.

1.5.2. TAXIING ON APRON

Wing-tip clearance for B747-400 on ACFT stand taxilanes to objects is MIM 25'/ 7.5m, to parallel height-limited service roads is MIM 16'/5m.

Wing-tip clearance for A380 on ACFT stand taxilanes to objects is MIM 25'/7.5m, to parallel height-limited service roads is MIM 8'/2.5m.
ACFT type A380-800 will be towed with reduced obstacle clearance of 5m on TWY N11.

Heavy ACFT taxiing on apron shall apply minimum thrust only. When taxiing into parking stands, ACFT shall not stop in turns. I f an ACFT comes to a stop, notify Apron Control prior to increasing engine power.
Push-backs to TWY N have to be executed facing West.

In the General Aviation Area the wing-tip clearance is MIM 15'/4.5m.
Adhere strictly to the yellow, blue and orange taxi guidance lines.

1.6. PARKING INFORMATION

On stands A11 thru A42, B20 thru B48, C4 thru C16, D1 thru D8A, E2 thru E9A, F211 thru F238,G2 thru G16, S501 thru S705, V92 thru V130 and V266 thru V323 push-back required.

1.7. OTHER INFORMATION

Glider areas in vicinity of APT.
CAUTION: In cases of strong winds, wind shears and increased turbulence can be expected on RWY 18.

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2. ARRIVAL

2.1. NOISE ABATEMENT PROCEDURES

Between 2300-0500LT all inbound ACFT should expect clearances whereby final will be reached not closer to the APT than:
- approximately 18 NM (RWYs 25C/L) and
- approximately 19 NM (RWYS 07C/R) from THR.

These "final-interception points" correspond to the GPS/FMS waypoints DF622 (RWYs 25C/L) and DF652 (RWYs 07C/R). The fly-by function of these waypoints is not affected.

Pilots should subsequently expect a clearance for an ILS approach with GP interception at 5000'.

In addition pilots should expect a clearance to descend below FL70 only 6 NM prior to reaching the above mentioned points. Pilots should adjust their speed accordingly (approximately 200-220 KT when leaving FL70) and are urgently requested to perform their descent from FL70 a s a continuous descent whenever possible.

In the event of technical failure of the ILS equipment, i.e. the need to fly non-precision approaches, descent clearances to 4000' will be issued.

Requests for non-precision approaches for training purposes will be denied.

The above procedures will not be applied to:
- flights with STS/HOSP
- flights in adverse weather conditions and
- flights in emergency situations.

Between 2300-0500LT approaching aircraft shall wait for clearances with the information that the final approach tracks can only be reached at a distance of 5.0 NM (RWY 25C/25L) and 5.1 NM (RWY 07C/07R) in front of the THR.
These "final approach points" correspond to the GPS/FMS waypoints RATRU (25C), TITUT (25L) as well as TIXAK (07C) and BOGVO (07R).

In addition, pilots should be prepared not to expect a descent clearance below FL 70 until 6 NM prior to reaching KUGUV and/or ORVIV (25C/25L) and 6 NM prior to reaching ULNOK and/or IBLUS (07C/07R). Pilots shall adjust their speed accordingly (approx. 200 - 220 kt when leaving FL 70) and are urgently requested to conduct the descent from FL 70 as continuous descent, whenever possible.

These procedures may not be applied to:
- flights with STS/HOSP
- flights in meteorological conditions such as CB, TS
- flights in emergencies.

In the case that R-NAV (GPS) approach procedures cannot be applied due to the absence of RNAV (GPS) equipment, pilots will be issued with a clearance for an ILS approach (in compliance with the night approach procedure above).

In the case of the ILS not being available, i.e. for clearances for non-precision approaches, approach control will issue descent clearances after 4000'.

2.2. CAT II/III OPERATIONS

RWYs 07L, 07C, 07R, 25L, 25C and 25R approved for CAT II/III operations, special aircrew and ACFT certification required.

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2. ARRIVAL

2.3. RWY OPERATIONS

2.3.1. HIGH INTENSITY RWY OPERATIONS

2.3.1.1. APPROACH

Approaching ACFT for which a parking position is designated on the Southern airport area shall advise LANGEN Radar on **120.8, 125.35.**
These ACFT and propeller-driven ACFT which park in the Eastern part of the Northern apron will preferably be assigned to RWY 07R/25L.

When changing frequency from LANGEN Radar to FRANKFURT Director initial contact shall be restricted to

FRANKFURT DIRECTOR & CALLSIGN
in order to avoid frequency congestion.
When being transferred to FRANKFURT Tower initial contact shall consist of

FRANKFURT TOWER, CALLSIGN & RWY.

2.3.1.2. LANDINGS

Pilots are reminded that by leaving the RWY quickly, ATC will be able to guide ACFT on final using minimum radar separation.

In order to reduce RWY occupancy times, pilots shall apply the following procedures:
The RWYs shall, as a rule, be left via the existing high-speed turn-offs.
When RWY conditions permit, pilots should prepare their landings in order to leave the RWYs via the high-speed turn-offs listed below:

RWY	ACFT	Turn off intersections	Dist from THR ft (m)
07C	heavy	L9	8202' (2500m)
	medium / light	L11	5906' (1800m)
07R	heavy	M13	7054' (2150m)
	medium / light	M15	5577' (1700m)
25L	heavy	M21 (except A380)	7546' (2300m)
	medium (JET)	M17	6070' (1850m)
	medium (PROP) / light	M11	3609' (1100m)
25C	heavy	L13	6890' (2100m)
	medium (JET)	L10	6070' (1850m)
	medium (PROP) / light	L8	3773' (1150m)

Name the expected high-speed turn-off during the approach briefing to ensure a minimum RWY occupancy time.
The possibility of FRANKFURT Tower applying re duced RWY separation remains unaffected and shall continue to be observed.

The frequency change after landing from FRANKFURT Tower to FRANKFURT Apron shall only be carried out on request.
If the pilot-in-command does not receive further taxi clearance, he should stop in front of TWY L.

2.4. TAXI PROCEDURES

To maintain smooth taxiing traffic, ACFT having landed on RWY 07R/25L will be guided, if possible, to defined change-over points, depending on the assigned parking position, to cross RWY 07C/25C.

This procedure will be withdrawn during adverse weather conditions, at the latest when CAT III operation is in force.

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3. DEPARTURE

3.1. DE-ICING

3.1.1. GENERAL

De-icing notification shall be directed to FRANKFURT De-icing **135.22** or via phone 069/690-73891.
ACFT shall be ready at the estimated de-icing time. If this is impossible, the APT De-icing Center (ADC) shall be informed and the new "ready for de-icing time" be transmitted to the ADC.
CAUTION: If the ACFT is not ready at the estimated de-icing time (i.e. doors not closed) the de-icing vehicles will be directed to the next ACFT waiting and subject flight will have to wait until other vehicles become available for disposition.

3.1.2. ACFT STANDS

The de-icing/anti-icing of ACFT at the respective ACFT stands will take place with engines switched off, passenger bridges cast off, and the ACFT clear of handling equipment.

3.1.3. REMOTE DE-ICING PADS (DPs)

The remote de-icing pads are located West of the head of RWY 18 and fall within the responsibility of FRANKFURT Tower. When carrying out de-icing procedure, responsibility will temporarily be transferred to FRANKFURT Apron.

De-icing on DP1 MAX wingspan less than 213'/65m. De-icing on DP2 East and DP2 West MAX wingspan up to 118'/36m, DP2 Center MAX wingspan up to 262'/80m. Pilot stop ACFT when left Pilot position is abeam yellow stop line markings/lights left of centerline.

ACFT which were de-iced on DP1 will be guided to TWY W1 by Apron Control before handed over to ATC.
After de-icing on DP2 intersection take-off out of TWY W3 from RWY 18 required.

On the remote de-icing pads, only jet ACFT with running engines and APU switched off will be de-iced.
Propeller ACFT will not be de-iced for safety reasons.

Underwing de-icing, de-icing of undercarriage or with hot air, the control of the central engines (e.g. DC10), as well as special examinations of individual ACFT parts (e.g. hands on checks) cannot be carried out on the remote de-icing pads.

Taxiing manoeuvres may only be carried out at the indispensable minimum engine speed. ACFT will be positioned on de-icing pad by an eyeline to the LEFT of the respective centerline, which enables the pilot to visualize the exact holding position. This eyeline is made up to 5 yellow surface lights which shine on one side. If centerline lighting or eyeline is out of operation, ACFT will be guided by a marshaller.

During the de-icing proceedings, the pilot-in-command shall ensure continuous listening watch on the respective frequency of FRANKFURT Apron. After de-icing proceedings have been concluded, the pilot-in-command shall report to FRANKFURT Apron that he is ready to taxi.

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3. DEPARTURE

3.2. START-UP & TAXI PROCEDURES

3.2.1. AIRPORT COLLABORATIVE DECISION MAKING

3.2.1.1. START-UP AND PUSH-BACK

Start-up approvals and push-back clearances are issued taking into account the TOBT and TSAT only. The sequence of the start-up request is no longer a factor. The following rules apply:

- The ACFT has to be ready for start-up and/or remote de-icing at TOBT.
- The pilot shall request start-up approval and en-route clearance within the time period of TSAT +/- 5 minutes (not DCL).
- The push-back/taxi clearance has to be requested no later than five minutes after the start-up approval has been issued.

In the case of delays, Clearance Delivery has to be informed accordingly.
Otherwise the TOBT will be deleted and has to be re-entered.

3.2.1.2. REMOTE HOLDING

In case an ACFT cannot leave its parking position due to a late TSAT and the parking position is required for an incoming flight, the remote holding procedure can be applied.
When the ACFT is ready to taxi, the pilot will request start-up/pushback for remote holding from apron control.
Note: This request does not refer to start-up approval or en-route clearance. These shall be obtained from the tower after reaching the remote position.

3.2.1.3. DATALINK CLEARANCE - DCL

For data link departure clearances (DCL), the published procedures and time parameters will remain valid. The TSAT is transmitted via CLD (departure clearance uplink message - issue of the start-up approval and en-route clearance by Clearance Delivery) (″start-up approved at TSAT -hh:mm-″). The push-back/taxi clearance shall be requested at TSAT +/- 5 minutes.

3.2.1.4. TERMS AND DEFINITIONS

TOBT (Target off-block time): The time that an ACFT operator or ground handler estimates that an ACFT will be ready, all doors closed, boarding bridge removed, push-back vehicle available and ready to start-up/ push-back immediately upon reception of clearance from the Tower.
TSAT (Target start-up approval time): Target time for start-up approval according to the A-CDM procedure taking into account TOBT, CTOT and/or the traffic situation.

3.2.1.5. CONTACT

Detailed information on Airport CDM can be found at:
www.cdm.frankfurt-airport.com

3.2.2. GENERAL

Departures from the Southern APT area shall state their position when request start-up clearance.
ACFT parking on stand B10 have to contact FRANKFURT Apron, prior actual engine start-up.

3.2.3. FROM 0600 - 2200LT

All ACFT up to A321 parked at positions East of TWY N3 and planned for departure from RWY 18 have to expect to taxi via TWYs S East, R East, R and S. Departure will take place basically from position S. Pilots unable to comply with these conditions shall advise Frankfurt Apron upon initial contact.

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3. DEPARTURE

3.3. NOISE ABATEMENT

For additional depiction refer to 10-4.

3.3.1. DEPARTURE DESIGNATION

RWYs 07C/R:

a) Between 0700-2200LT:

- SIDs with designator **ECHO** may be used by all **MEDIUM** and **LIGHT** ACFT able to comply with the climb restrictions;
- SIDs with designator **DELTA** shall be used by all **HEAVY** and **SUPER** ACFT and by all ACFT unable to comply with the climb restrictions in SIDs with designator **ECHO**.

b) Between 2200-0700LT ALL ACFT shall use SIDs with designator **DELTA**.

c) NON RNAV (enroute only) equipped ACFT shall use SIDs with designator **CHARLIE**.

RWYs 25L/C:

a) Between 0700-2200LT:

- aa)ACFT via **BIBTI**, **MARUN**, **TOBAK** shall use SIDs with designators:
- **MIKE & KILO** (KILO by ATC only) for **MEDIUM** and **LIGHT** ACFT **able to comply** with the climb restrictions;
- **JULIETT** for **HEAVY** and **SUPER** ACFT **able to comply** with the climb restrictions;
- **FOXTROT** (by ATC only) for **MEDIUM** and **LIGHT** ACFT **able to comply** with the climb restrictions;
- **GOLF** for all ACFT **unable to comply** with climb restrictions.
- ab)Traffic to all other directions shall use SIDs with designators:
- **FOXTROT** for all **MEDIUM** and **LIGHT** ACFT;
- **GOLF** for all **HEAVY** and **SUPER** ACFT.

b) Between 2200-0700LT:

- All 3- and 4-engined jet ACFT, except Avroliner, BAe 146, FA50 and FA90 via BIBTI, MARUN, SOBRA and TOBAK, shall use SIDs with designator **NOVEMBER**;
- Single- and twin-engined ACFT shall use SIDs according to paragraphs a) & c) respectively.

c) SIDs with designator **PAPA** may be used by single and twin-engined propeller-driven ACFT and DASH 7 only.

d) NON RNAV (enroute only) equipped ACFT shall use SIDs with designator **QUEBEC**.

RWY 18:

NON RNAV (enroute only) equipped ACFT shall use SIDs with designator **CHARLIE** and **QUEBEC** respectively.

3.3.2. TRIAL OPERATIONS TO IMPLEMENT THE FIRST PACKAGE OF MEASURES FOR NOISE ABATEMENT

3.3.2.1. Vertical Optimisation of Departure Procedures

In order to achieve greater height on the first miles after take-off (thrust for the climb, not for acceleration purposes) and improved lateral precision, a speed restriction of 220 KT will be introduced - in addition to the speed restrictions already existing on some SIDs - for departures on the
"D" SIDs: BIBTI, MARUN, OSBIT, SULUS and TOBAK
"S" SIDs: BIBTI, MARUN, SOBRA and TOBAK.

3.3.2.2. Dedicated Runway Operations (DROps)

In order to create noise pauses, utilisation of the RWYs for departures during the night times 2300-0500LT will generally be arranged on the odd calendar days as follows (the date for the commencement of the "DROps night" is significant for the respective night period):

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3. DEPARTURE

3.3.2.2.1. DROps RWY in use 25

All take-offs will be cleared via RWYs 25L/C. No utilization of RWY 18.
Allocation of SIDs in compliance with published SIDs.

3.3.2.2.2. DROps RWY in use 07

All take-offs will be handled via RWY 18, thus avoiding the utilization of the RWYs 07C/R for take-offs. SIDs with designation "S", "L", "U" and "R" (new) will be allocated. SIDs with designation "R" will be allocated by the aerodrome control tower exclusively, when using the DROps procedures and landing direction 07 for departures in a northern direction.
Aircraft unable to adhere to the altitude restriction "Cross FFM R-201 2500'+" on the "R" SID, will only be granted start-up approval and en-route clearance after coordination has taken place with the approach control facility.

3.3.2.2.3. Special Features

If meteorological conditions and/or other operational conditions (on the part of the airport and/or the pilot-in-command) do not allow utilization of RWY 18 and/or 25, the appropriate RWY will be allocated after coordination has taken place with the approach control facility. This applies also to ambulance flights and/or flights with corresponding priority treatment. On the even week days, the procedures so far employed and published apply.

3.4. RWY OPERATIONS

3.4.1. HIGH INTENSITY RWY OPERATIONS

Cockpit checks should be completed prior to line-up and any checks requiring completion on the RWY should be kept to a minimum.
ACFT ready for departure should be in a position to taxi directly from hold upon receiving take-off clearance from Tower.
When using landing direction 07, the pilot shall advise Tower on initial contact of the earliest possible take-off intersection.

3.5. OTHER INFORMATION

3.5.1. GENERAL

When glider areas in vicinity of APT activated, expect higher crossing altitude by ATC for SIDs which require higher climb gradient than standard.

Winds between 200° and 160° in a clockwise direction and speeds of 15 KT and more shall be expected on RWY 18. Gusts and strong windshifts up to tail wind components may occur.

3.5.2. DATALINK DEPARTURE CLEARANCE (DCL)

DFS (Deutsche Flugsicherung GmbH) is offering start-up and enroute clearances using Datalink. The procedures have been described in an AIC.
Deviations from this, in special situations (e.g. snow), enroute clearance may be transmitted via Datalink in advance after receiving a RCD, while at the appropriate time, start-up approval will be granted on the frequency specified in the CLD.
Pilots shall maintain listening watch on this frequency and shall refrain from making enquiries about the start-up approval.

The following time parameters apply:

t_i 15 min prior to EOBT for unregulated flights.
25 min prior to CTOT for ATFM regulated flights.

t_t 6 min prior to EOBT for unregulated flights.
16 min prior to CTOT for ATFM regulated flights.

t_1 5 min

The start-up clearance shall not be requested before it has been ascertained that ACFT engines can be started within 5 min after clearance has been issued.

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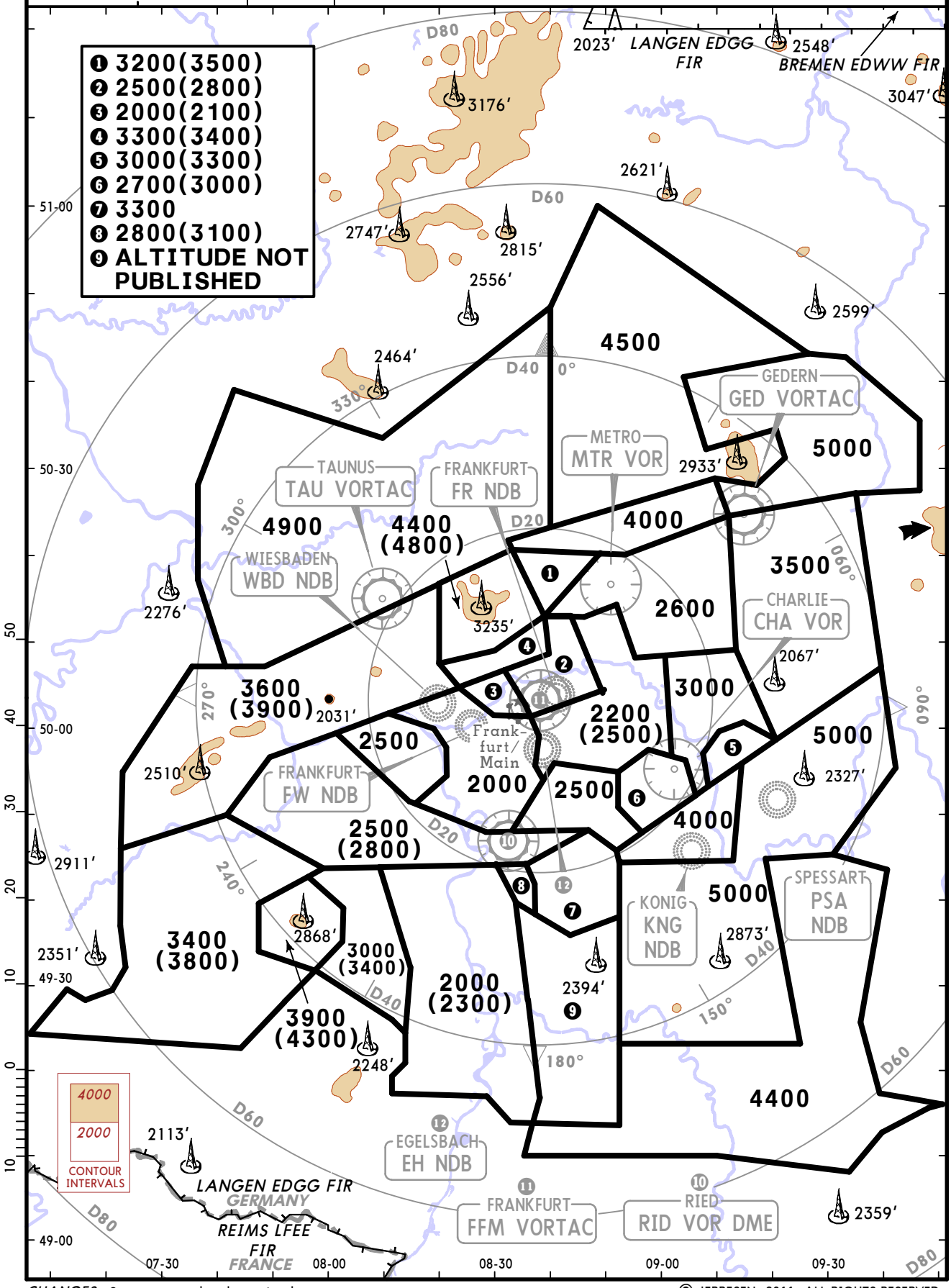
LANGEN Radar (APP)

ARRIVAL	DEPARTURE
*119.02	*120.15
North	136.12
120.8	*126.55
South	
*125.35	

Apt Elev 364′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000′ above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500′). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only.
Altitudes in brackets apply for the period from AIRAC date in November until AIRAC date in March in order to meet required obstacle clearance at cold temperatures.

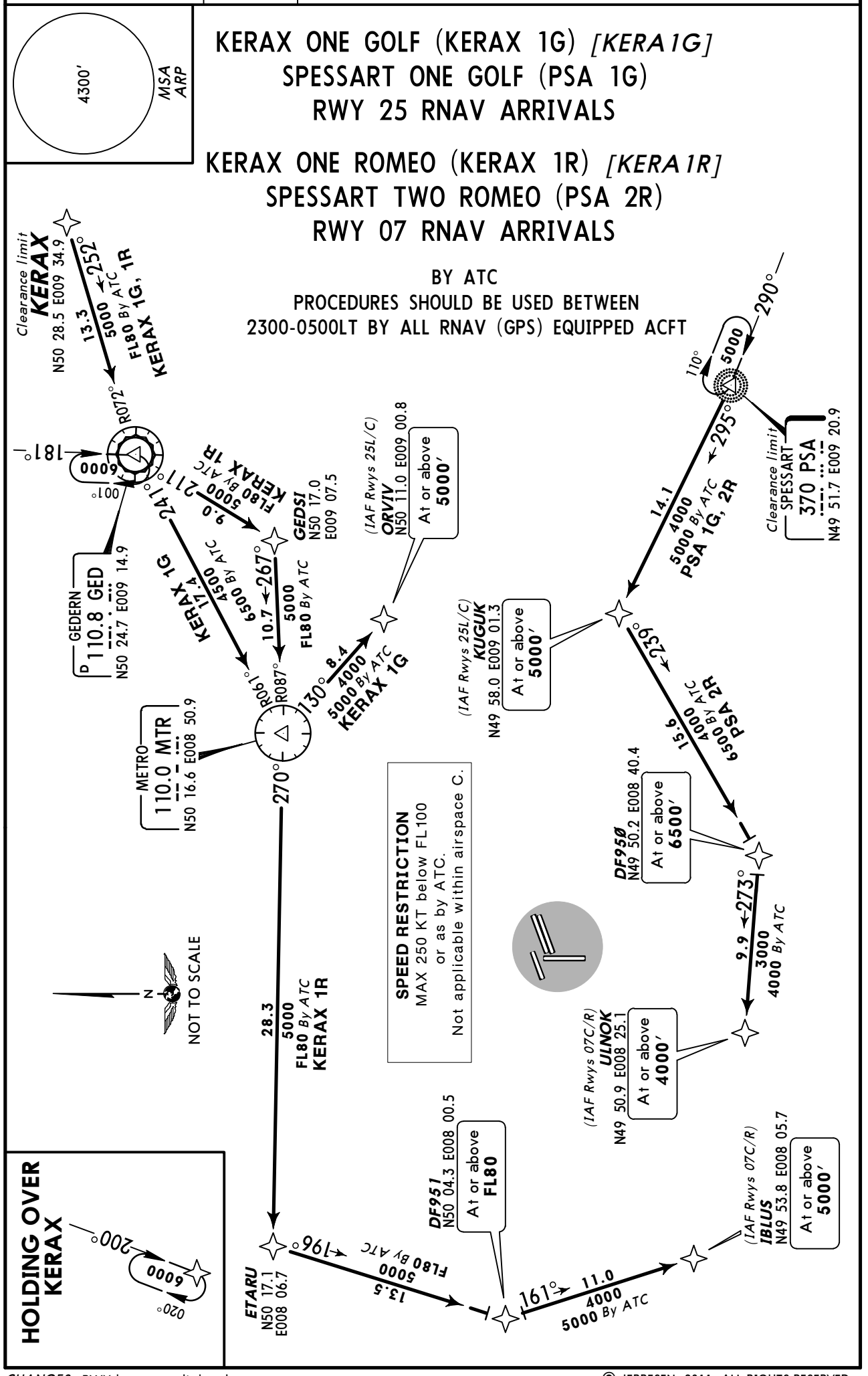
❶ 3200(3500)
❷ 2500(2800)
❸ 2000(2100)
❹ 3300(3400)
❺ 3000(3300)
❻ 2700(3000)
❼ 3300
❽ 2800(3100)
❾ ALTITUDE NOT PUBLISHED



CHANGES: Sectors completely revised.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
118.02	364′	Trans level: By ATC Trans alt: 5000′



CHANGES: RWY layout; radial update.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
118.02	364′	Trans level: By ATC Trans alt: 5000′

ROLIS ONE GOLF (ROLIS 1G) *[ROLI1G]*
UNOKO ONE GOLF (UNOKO 1G) *[UNOK1G]*
RWY 25 RNAV ARRIVALS

ROLIS ONE ROMEO (ROLIS 1R) *[ROLI1R]*
UNOKO ONE ROMEO (UNOKO 1R) *[UNOK1R]*
RWY 07 RNAV ARRIVALS

BY ATC
PROCEDURES SHOULD BE USED
BETWEEN 2300-0500LT BY ALL
RNAV (GPS) EQUIPPED ACFT

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

MSA
ARP
4300′

ORVIV
N50 11.0 E009 00.8
(IAF Rwys 25L/C)
At or above 5000′

IBLUS
N49 53.8 E008 05.7
(IAF Rwys 07C/R)
At or above 5000′

METRO
110.0 MTR
N50 16.6 E008 50.9

FRANKFURT
114.2 FFM
N50 03.2 E008 38.2

ETARU
N50 17.1 E008 06.7

DF951
N50 04.3 E008 00.5
At or above FL80

ROKIM
N50 00.1
E008 03.1

RAMOB
N50 06.7 E007 41.0

REDLI
N50 01.2 E007 48.0

MANUV
N50 17.7 E007 27.5

IBVIL
N50 26.1 E007 22.2

Clearance limit
ROLIS
N50 26.1 E007 49.5

Clearance limit
UNOKO
N50 27.3
E007 13.6

130° 8.4 4000 5000 By ATC
R210°
15.7
6500 4000 By ATC
ROLIS 1G
UNOKO 1G
030°
R303°
R260°
24.6 5000 FL80 By ATC
123°
22.9 4000 FL80 By ATC
080°
11.0 4000 5000 By ATC
14.2 5000 FL110 By ATC ROLIS 1G
23.0 5000 FL80 By ATC ROLIS 1R
340° 128° 161° 160° FL110
UNOKO 1G 15.6 5000 FL80 By ATC
13.6 4000 5000 By ATC
122°
113° 7.1 139° 5000 FL80 By ATC UNOKO 1R
140° 14.1 5000 FL110 By ATC
156° 9.0 5000 FL110 By ATC
5.6 101° 5000 FL110 By ATC UNOKO 1G, 1R
089° FL110 269°

N
NOT TO SCALE

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
118.02	364′	Trans level: By ATC Trans alt: 5000′

4300′ 180° 125° 3200′ 3500′ 335°
MSA
FFM VOR

NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

KERAX ONE BRAVO (KERAX 1B) *[KERA 1B]* ❶
KERAX ONE LIMA (KERAX 1L) *[KERA 1L]* ❷
SPESSART ONE BRAVO (PSA 1B)❶
SPESSART ONE LIMA (PSA 1L)❷
RWYS 25L/C/R ARRIVALS

KERAX ONE HOTEL (KERAX 1H) *[KERA 1H]* ❶
KERAX ONE MIKE (KERAX 1M) *[KERA 1M]* ❸
SPESSART ONE HOTEL (PSA 1H)❶
SPESSART ONE MIKE (PSA 1M)❸
RWYS 07L/C/R ARRIVALS

❺ Clearance limit
KERAX
N50 28.5 E009 34.9

GEDERN
D (H) 110.8 GED
N50 24.7 E009 14.9

FRANKFURT
D (H) 114.2 FFM
N50 03.2 E008 38.2

METRO
(H) 110.0 MTR
N50 16.6 E008 50.9

TAUNUS
D (L) 116.7 TAU
N50 15.0 E008 09.8

❻ Clearance limit
SPESSART
370 PSA
N49 51.7 E009 20.9

CHARLIE
(H) 115.5 CHA
N49 55.3 E009 02.4

RIED
D 112.2 RID
N49 46.9 E008 32.5

(IAF Rwys 07L/C/R) ❹
(IAF Rwys 25L/C/R) ❹

❶ Only for aircraft type A380, B747, DC-10, L-1011, MD11, AN124, AN225, C5, E3A & KC35.
❷ Not to be used by aircraft type A380, B747, DC-10, L-1011, MD11, AN124, AN225, C5, E3A & KC35. Those aircraft have to file KERAX 1B/PSA 1B instead.
❸ Not to be used by aircraft type A380, B747, DC-10, L-1011, MD11, AN124, AN225, C5, E3A & KC35. Those aircraft have to file KERAX 1H/PSA 1H instead.
❹ BRNAV and NON-RNAV equipped aircraft EXPECT RADAR vectors to final approach.
❺ GPS/FMS equipped aircraft EXPECT KERAX 07N (10-2D)/KERAX 07S (10-2E)/KERAX 25N (10-2F)/ KERAX 25S (10-2G) Transition.
❻ GPS/FMS equipped aircraft EXPECT PSA 07S (10-2E)/ PSA 25N (10-2F)/PSA25S (10-2G) Transition.

❼ **KERAX 1B, PSA 1B, 1L:**
4000
FL80 *By ATC*
KERAX 1H, PSA 1H, 1M:
5000
FL80 *By ATC*

CHANGES: None.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
118.02	364′	Trans level: By ATC Trans alt: 5000′

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

4300′ 180° 125° 3200′ 3500′ 335°
MSA
FFM VOR

N
NOT TO SCALE

ROLIS ONE BRAVO
(ROLIS 1B) *[ROLI1B]* ❶
ROLIS ONE LIMA
(ROLIS 1L) *[ROLI1L]* ❷
UNOKO ONE BRAVO
(UNOKO 1B) *[UNOK1B]* ❶
UNOKO ONE LIMA
(UNOKO 1L) *[UNOK1L]* ❷
RWYS 25L/C/R ARRIVALS

ROLIS ONE HOTEL
(ROLIS 1H) *[ROLI1H]* ❶
ROLIS ONE MIKE
(ROLIS 1M) *[ROLI1M]* ❸
UNOKO ONE HOTEL
(UNOKO 1H) *[UNOK1H]* ❶
UNOKO ONE MIKE
(UNOKO 1M) *[UNOK1M]* ❸
RWYS 07L/C/R ARRIVALS

❾ ROLIS 1L:
5000
FL80 *By ATC*
ROLIS 1M:
5000
FL100 *By ATC*

❻ *Clearance limit*
UNOKO
N50 27.3
E007 13.6

089° FL110 101° 5.6 ❽ 5000 FL110 *By ATC* UNOKO 1B, 1H, 1L, 1M 269°

IBVIL
N50 26.1 E007 22.2

156° 9.0 5000 FL110 *By ATC*

MANUV
N50 17.7 E007 27.5

140° ❽ 14.1 5000 FL110 *By ATC*

❺ *Clearance limit*
ROLIS
N50 26.1 E007 49.5

160° FL110 340° 125° 140° 129° 13.1 5000 FL120 *By ATC* ROLIS 1B ROLIS 1L, 1M 17 ROLIS 1H

OSPUL
N50 15.8 E008 02.2

MHA 5000 227° 047° R309°

❹ (IAF Rwys 07L/C/R)
TAUNUS
D (L) 116.7 TAU
N50 15.0 E008 09.8

❹ (IAF Rwys 25L/C/R)
METRO
(H) 110.0 MTR
N50 16.6 E008 50.9

061° 241° MHA 4000 5000 *By ATC* R240° R210°

144° R224° 121° 38.8 5000 FL120 *By ATC*

20 5000 FL80 *By ATC* UNOKO 1M

22 5000 FL80 *By ATC* ROLIS 1L

35 5000 FL80 *By ATC* UNOKO 1L

16 4000 FL80 *By ATC* ROLIS 1L

064° 094° 113°

37 5000 FL80 *By ATC* UNOKO 1H

15.6 5000 FL110 *By ATC* UNOKO 1B, 1L ❽

❼ **RAMOB**
N50 06.7 E007 41.0

R305° R301° 030° R274°

FRANKFURT
D (H) 114.2 FFM
N50 03.2 E008 38.2

191°

060° 095°

ROKIM
N50 00.1 E008 03.1

35 5000 FL80 *By ATC*

39 4000 FL80 *By ATC* UNOKO 1B

17 4000 FL80 *By ATC* ROLIS 1H UNOKO 1H

R275° R245° 105° MHA 4000 5000 *By ATC* 285°

❹ (IAF Rwys 25L/C/R)
CHARLIE
(H) 115.5 CHA
N49 55.3 E009 02.4

R324° R011° 065°

21 4000 FL80 *By ATC* ROLIS 1B

❹ (IAF Rwys 07L/C/R)
RIED
D 112.2 RID
N49 46.9 E008 32.5

HOLDING OVER RID
066° 246° MHA 4000 5000 *By ATC*

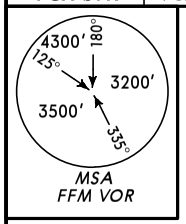
❶ Only for aircraft type A380, B747, DC-10, L-1011, MD11, AN124, AN225, C5, E3A & KC35.
❷ Not to be used by aircraft type A380, B747, DC-10, L-1011, MD11, AN124, AN225, C5, E3A & KC35. Those aircraft have to file ROLIS 1B/UNOKO 1B instead.
❸ Not to be used by aircraft type A380, B747, DC-10, L-1011, MD11, AN124, AN225, C5, E3A & KC35. Those aircraft have to file ROLIS 1H/UNOKO 1H instead.
❹ BRNAV and NON-RNAV equipped aircraft EXPECT RADAR vectors to final approach.
❺ GPS/FMS equipped aircraft EXPECT ROLIS 07N (10-2H)/ ROLIS 07S (10-2J)/ROLIS 25N (10-2K)/ROLIS 25S (10-2L) Transition.
❻ GPS/FMS equipped aircraft EXPECT UNOKO 07N (10-2H)/UNOKO 07S (10-2J)/UNOKO 25N (10-2K)/ UNOKO 25S (10-2L) Transition.
❼ Immediate transition at RAMOB possible when approaching via airway Z-111.
❽ BRNAV equipment necessary.

CHANGES: STAR UNOKO 1H MEA revised.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
118.02	364′	On downwind transition EXPECT vectors to final.

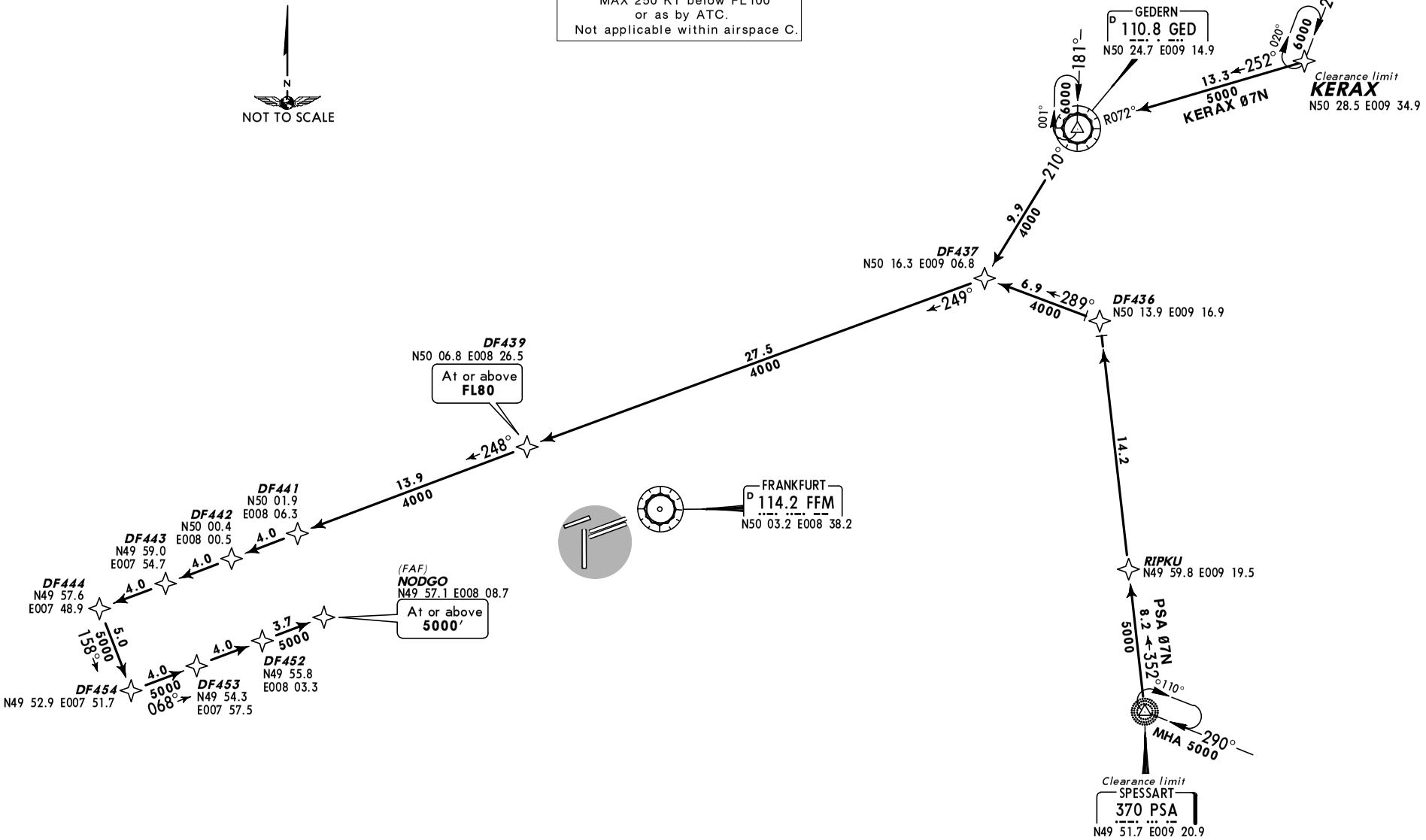
TRANSITION	ROUTING
KERAX Ø7N	KERAX - GED - DF437 - DF439 (FL80+) - DF444 - DF454 - NODGO (5000′+).
PSA Ø7N	PSA - DF436 - DF437 - DF439 (FL80+) - DF444 - DF454 - NODGO (5000′+).



KERAX Ø7N *[KERØ7N]*
PSA Ø7N
RWYS 07L RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

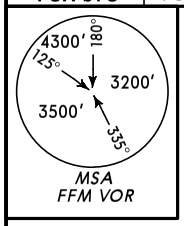


CHANGES: RWY layout; transitions revised & transferred.

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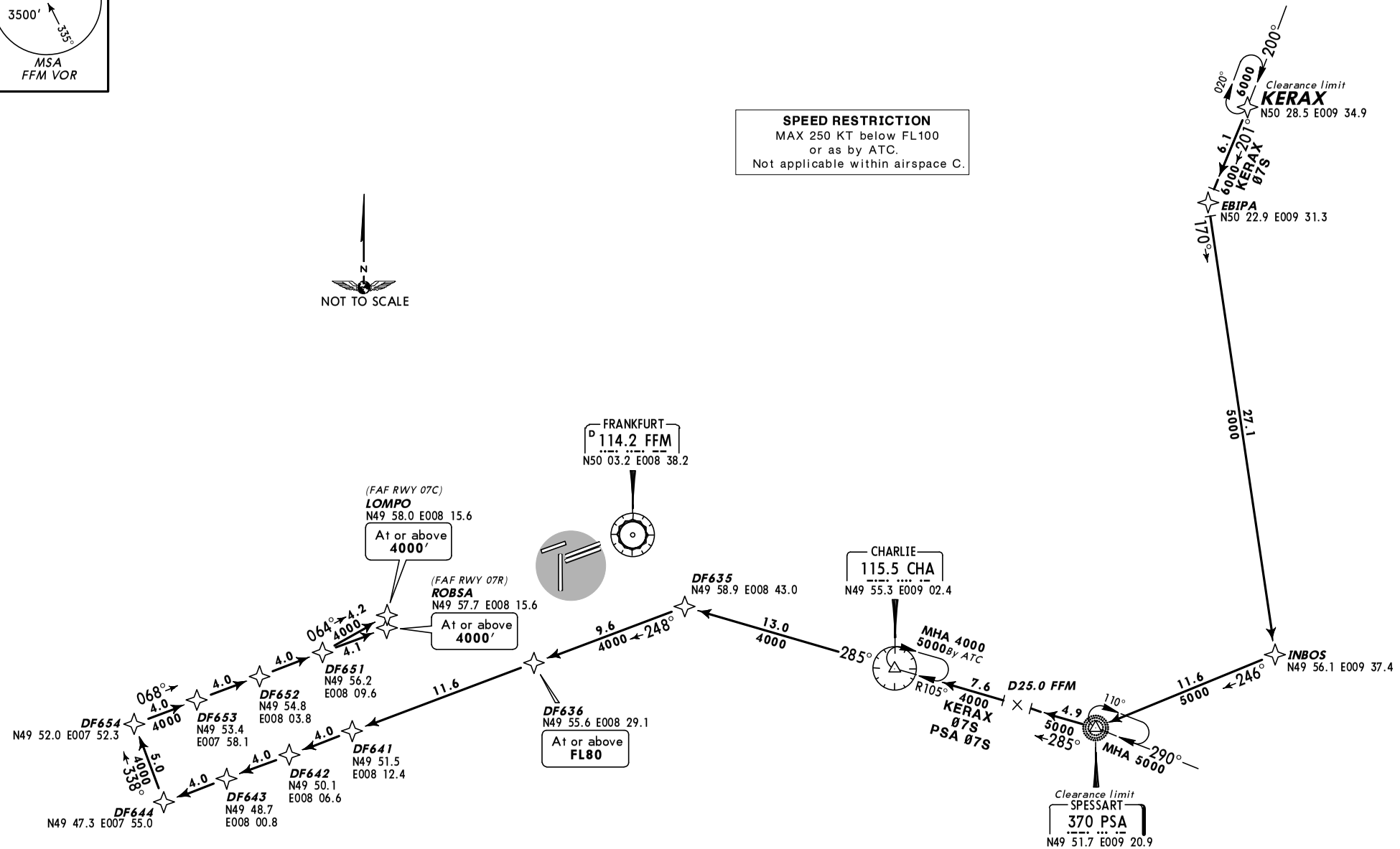
*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

TRANSITION	ROUTING
KERAX Ø7S	KERAX - EBIPA - INBOS - PSA - DF635 - DF636 (FL80+) - DF644 - DF654 - ROBSA (4000′+).
PSA Ø7S	PSA - DF635 - DF636 (FL80+) - DF644 - DF654 - ROBSA (4000′+).



KERAX Ø7S *[KERØ7S]*
PSA Ø7S
RWYS 07C/R RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

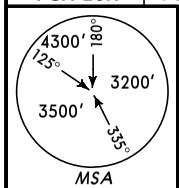


CHANGES: RWY layout; transitions revised & transferred.

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*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

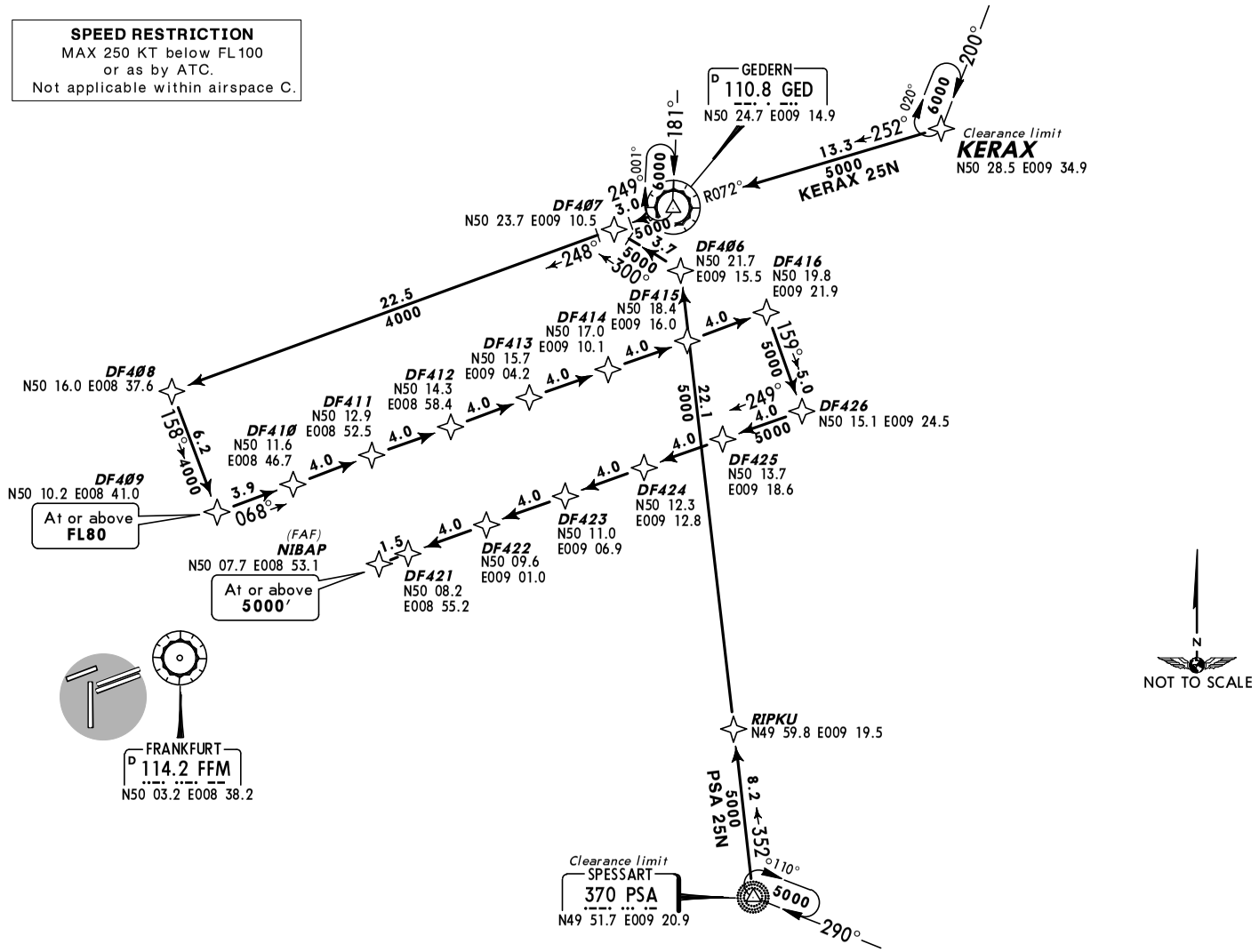
TRANSITION	ROUTING
KERAX 25N	KERAX - GED - DF407 - DF408 - DF409 (FL80+) - DF416 - DF426 - NIBAP (5000′+).
PSA 25N	PSA - DF406 - DF407 - DF408 - DF409 (FL80+) - DF416 - DF426 - NIBAP (5000′+).



MSA
FFM VOR

KERAX 25N *[KER25N]*
PSA 25N
RWYS 25R RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

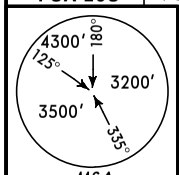


CHANGES: RWY layout; transitions revised & transferred.

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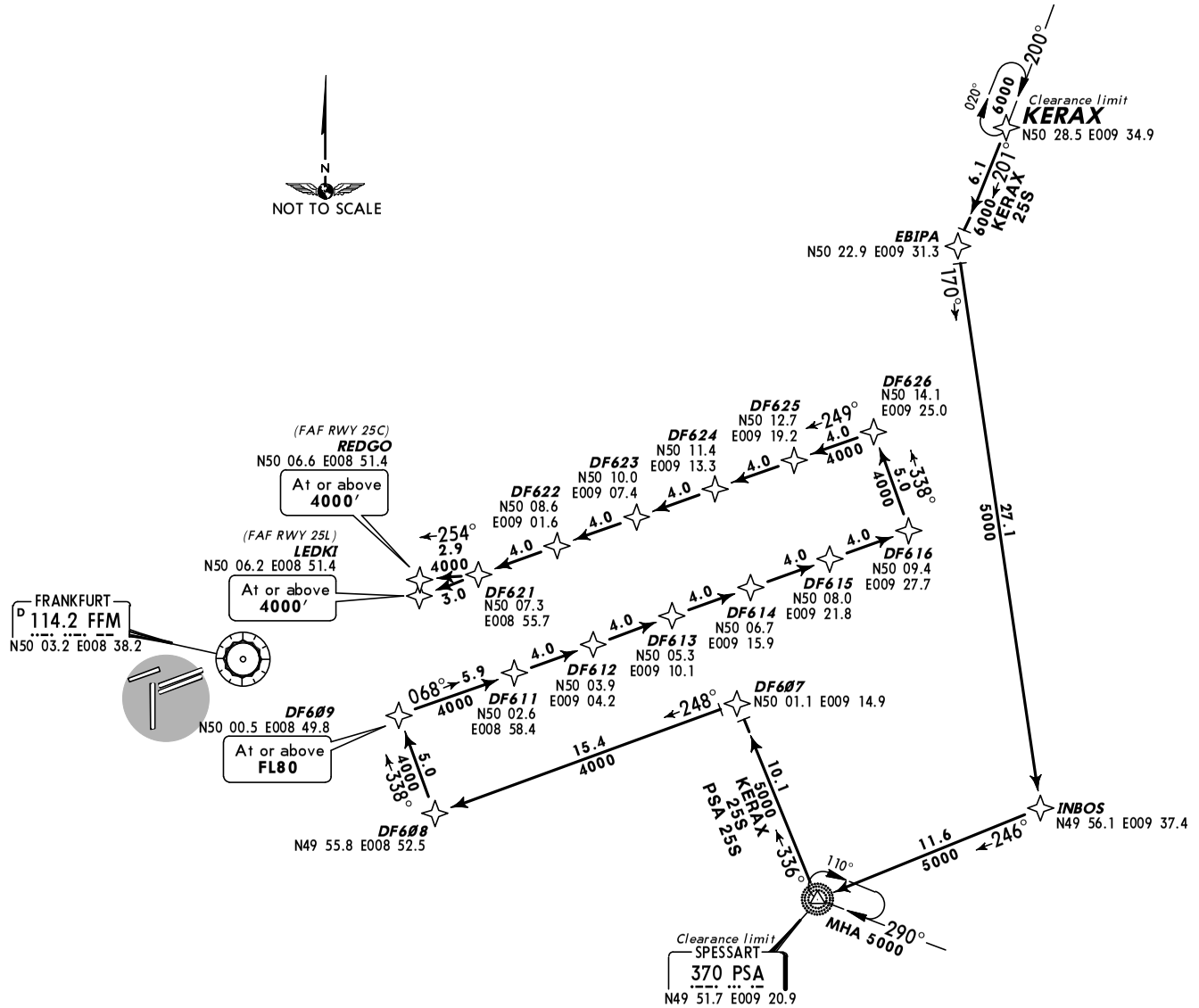
*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

TRANSITION	ROUTING
KERAX 25S	KERAX - EBIPA - INBOS - PSA - DF607 - DF608 - DF609 (FL80+) - DF616 - DF626 - LEDKI (4000′+).
PSA 25S	PSA - DF607 - DF608 - DF609 (FL80+) - DF616 - DF626 - LEDKI (4000′+).



KERAX 25S *[KER25S]*
PSA 25S
RWYS 25L/C RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

CHANGES: RWY layout; transitions revised & transferred.

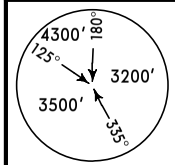
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*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

TRANSITION	ROUTING
ROLIS Ø7N	ROLIS - ETARU - DF432 - DF439 (FL80+) - DF444 - DF454 - NODGO (5000′+).
UNOKO Ø7N	UNOKO - IBVIL - MANUV - RAMOB (FL110) - DF431 - DF432 - DF439 (FL80+) - DF444 - DF454 - NODGO (5000′+).

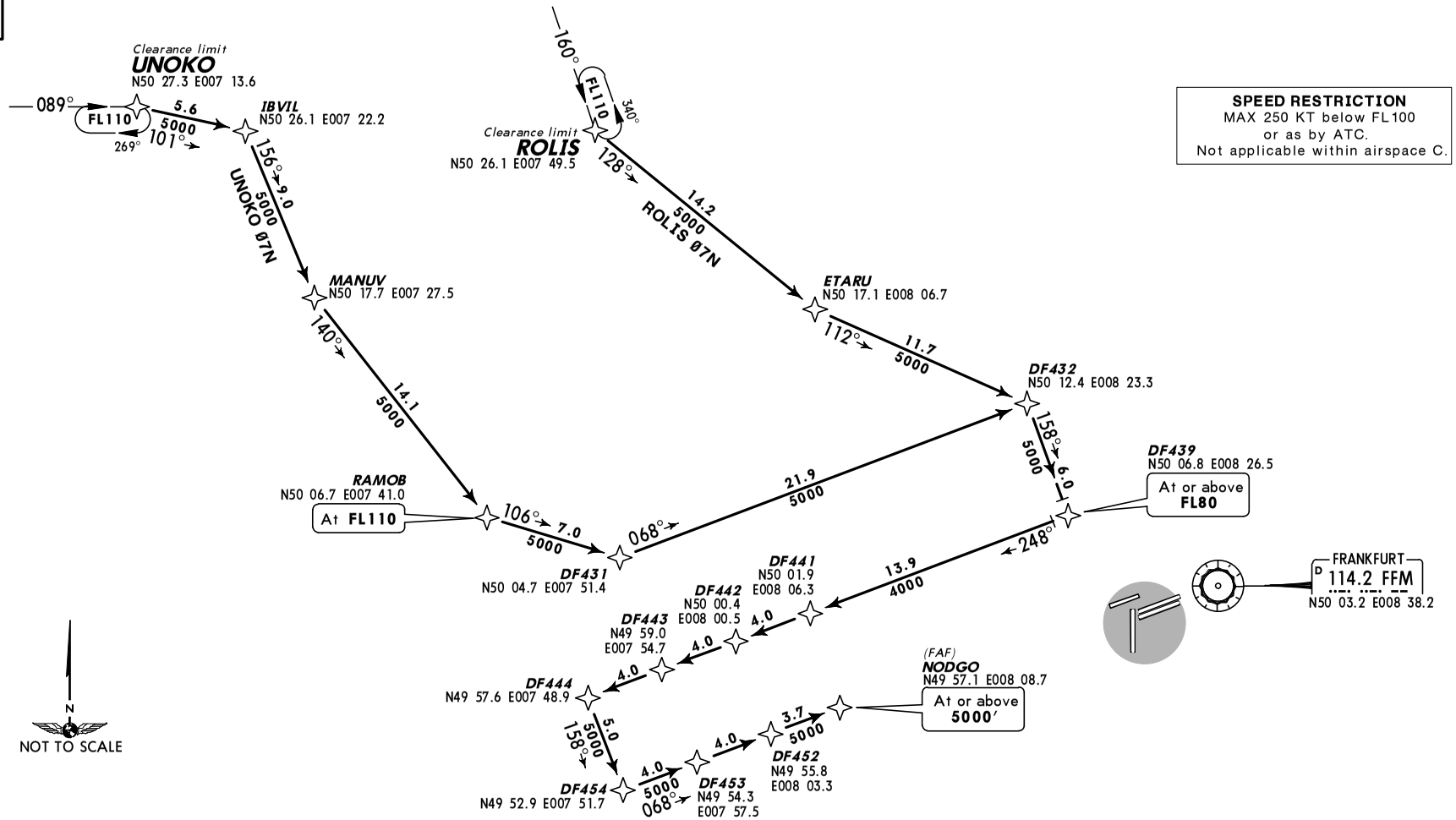
ROLIS Ø7N *[ROLØ7N]*
UNOKO Ø7N *[UNOØ7N]*
RWYS 07L RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC



MSA
FFM VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



CHANGES: New chart (RWY layout; transitions revised & transferred).

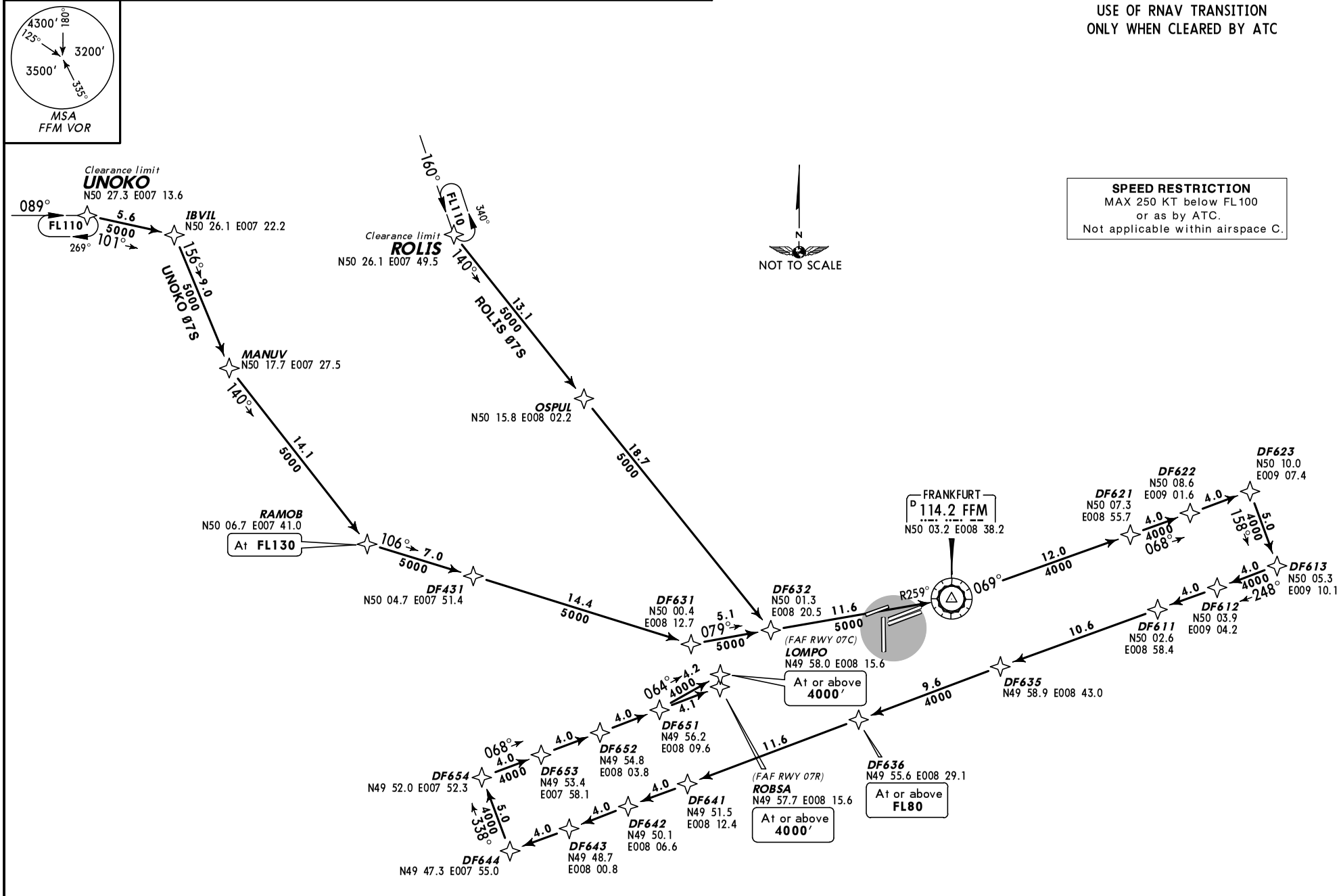
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*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

TRANSITION	ROUTING
ROLIS Ø7S	ROLIS - DF632 - FFM - DF623 - DF613 - DF636 (FL80+) - DF644 - DF654 - ROBSA (4000′+).
UNOKO Ø7S	UNOKO - IBVIL - MANUV - RAMOB (FL130) - DF631 - FFM - DF623 - DF613 - DF636 (FL80+) - DF644 - DF654 - ROBSA (4000′+).

ROLIS Ø7S *[ROLØ7S]*
UNOKO Ø7S *[UNOØ7S]*
RWYS 07C/R RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC



CHANGES: New chart (RWY layout; transitions revised & transferred).

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*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

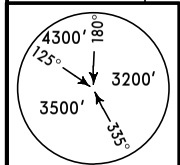
TRANSITION	ROUTING
ROLIS 25N	ROLIS - ETARU - DF403 - DF409 (FL80+) - DF416 - DF426 - NIBAP (5000′+).
UNOKO 25N	UNOKO - IBVIL - MANUV - RAMOB (FL110) - DF401 - DF409 (FL80+) - DF416 - DF426 - NIBAP (5000′+).

HOLDING OVER UNOKO

089° FL110 269°

ROLIS 25N *[ROL25N]*
UNOKO 25N *[UNO25N]*
RWYS 25R RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC



MSA
FFM VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

N
NOT TO SCALE

Clearance limit
UNOKO
N50 27.3 E007 13.6

IBVIL
N50 26.1
E007 22.2

5.6
5000
101°
156°
UNOKO 25N
9.0

MANUV
N50 17.7 E007 27.5

140°
14.1
5000

RAMOB
N50 06.7 E007 41.0
At **FL110**

123°
12.5
5000

DF401
N49 59.6 E007 57.0

068°
17.6
5000

Clearance limit
ROLIS
N50 26.1 E007 49.5

160°
FL110
340°
128°
14.2
5000
ROLIS 25N

ETARU
N50 17.1 E008 06.7

137°
15.2
5000

DF403
N50 05.8 E008 22.5

12.7
4000

DF409
N50 10.2 E008 41.0
At or above **FL80**

3.9

DF410
N50 11.6
E008 46.7

4.0

DF411
N50 12.9
E008 52.5

4.0

DF412
N50 14.3
E008 58.4

4.0

DF413
N50 15.7
E009 04.2

4.0

DF414
N50 17.0
E009 10.1

4.0

DF415
N50 18.4
E009 16.0

4.0

DF416
N50 19.8
E009 21.9

159°
5000
5.0

249°
4.0
5000

DF426
N50 15.1
E009 24.5

4.0

DF425
N50 13.7
E009 18.6

4.0

DF424
N50 12.3
E009 12.8

4.0

DF423
N50 11.0
E009 06.9

4.0

DF422
N50 09.6
E009 01.0

4.0

DF421
N50 08.2
E008 55.2

1.5

(FAF)
NIBAP
N50 07.7 E008 53.1
At or above **5000′**

FRANKFURT
P 114.2 FFM
N50 03.2 E008 38.2

CHANGES: New chart (RWY layout; transitions revised & transferred).

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
118.02	364′	On downwind transition EXPECT vectors to final.

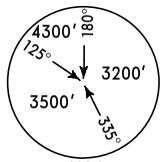
TRANSITION	ROUTING
ROLIS 25S	ROLIS - DF402 - DF601 - DF609 (FL80+) - DF616 - DF626 - LEDKI (4000′+).
UNOKO 25S	UNOKO - IBVIL - MANUV - RAMOB (FL130) - DF601 - DF609 (FL80+) - DF616 - DF626 - LEDKI (4000′+).

HOLDING OVER UNOKO

090° FL110 270°

ROLIS 25S *[ROL25S]*
UNOKO 25S *[UNO25S]*
RWYS 25L/C RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC



MSA
FFM VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

N
NOT TO SCALE

Clearance limit
UNOKO
N50 27.3 E007 13.6

5.6
5000
101°
IBVIL
N50 26.1
E007 22.2

156°
5000
UNOKO 25S
9.0

MANUV
N50 17.7 E007 27.5

140°
14.1
5000

RAMOB
N50 06.7 E007 41.0
At **FL130**

106°
34.6
5000

160°
FL110
340°

Clearance limit
ROLIS
N50 26.1 E007 49.5

140°
13.1
5000
ROLIS 25S

OSPUL
N50 15.8 E008 02.2

14.6
5000

DF402
N50 04.4 E008 16.3

126°
13.1
4000

FRANKFURT
114.2 FFM
N50 03.2 E008 38.2

DF601
N49 56.4 E008 32.3

068°
12.1
4000

DF609
N50 00.5 E008 49.8
At or above
FL80

5.9
4000

DF611
N50 02.6
E008 58.4

4.0
DF612
N50 03.9
E009 04.2

4.0
DF613
N50 05.3
E009 10.1

4.0
DF614
N50 06.7
E009 15.9

4.0
DF615
N50 08.0
E009 21.8

4.0
DF616
N50 09.4
E009 27.7

4.0
4000
338°
5.0
4000

DF626
N50 14.1
E009 25.0

4.0
4000
249°

DF625
N50 12.7
E009 19.2

4.0
DF624
N50 11.4
E009 13.3

4.0
DF623
N50 10.0
E009 07.4

4.0
DF622
N50 08.6
E009 01.6

4.0
254°
2.9
4000
3.0

DF621
N50 07.3
E008 55.7

(FAF RWY 25C)
REDGO
N50 06.6 E008 51.4
At or above
4000′

(FAF RWY 25L)
LEDKI
N50 06.2 E008 51.4
At or above
4000′

CHANGES: New chart (RWY layout; transitions revised & transferred).

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SID DESIGNATION	REFER TO CHART
ANEKI 9D, 2E	10-3B
ANEKI 8F, 8G, 6L	10-3C
BIBTI 4D, 3E	10-3D
BIBTI 3F, 3G	10-3E
BIBTI 1K, 1M	10-3E1
BIBTI 4N	10-3E2
BIBTI 2L, 3S	10-3E3
BIBTI 2R	10-3E4
BIBTI 2T	10-3E5
DINKELSBUHL 8D, 6E	10-3E6
DINKELSBUHL 5F, 6G	10-3E7
DINKELSBUHL 4L, 6S	10-3E8
KOENIG 6C	10-3F
MARUN 8D, 4E	10-3G
MARUN 3F, 4G, 3J	10-3G1
MARUN 1K, 1M	10-3G2
MARUN 5N	10-3G3
MARUN 2R	10-3G4
MARUN 3S	10-3G5
MARUN 2T	10-3G6
METRO 4C	10-3G7
NOMBO 8D, 7E	10-3G8
NOMBO 6F, 7G	10-3H
NOMBO 6L, 6S	10-3J
OSBIT 4D, 3E	10-3J1
RATIM 4D, 4E	10-3J2
RATIM 4F, 4G	10-3J3
RATIM 3S	10-3J4
RIED 6C, 3Q	10-3J5
ROTEN 5F, 4G	10-3J6
ROTEN 3L, 5S	10-3J7
SOBRA 4D	10-3J8
SOBRA 4E	10-3K
SOBRA 4F, 4G, 5N, 3P	10-3L
SOBRA 4L, 3S, 4U	10-3L1
SULUS 7D, 5E	10-3L2
SULUS 6F, 7G	10-3L3
SULUS 6L, 6S	10-3L4
TAUNUS 4Q	10-3L5
TOBAK 8D, 7E	10-3L6
TOBAK 4F, 5G, 4J	10-3L7
TOBAK 1K, 1M	10-3L8
TOBAK 7N	10-3M
TOBAK 2R	10-3N
TOBAK 5S	10-3N1
TOBAK 4T	10-3N2
ULKIG 5U	10-3N3

FOR RNAV SID DESIGNATION REFER TO PAGE 10-3A

CHANGES: SIDs renumbered & established.

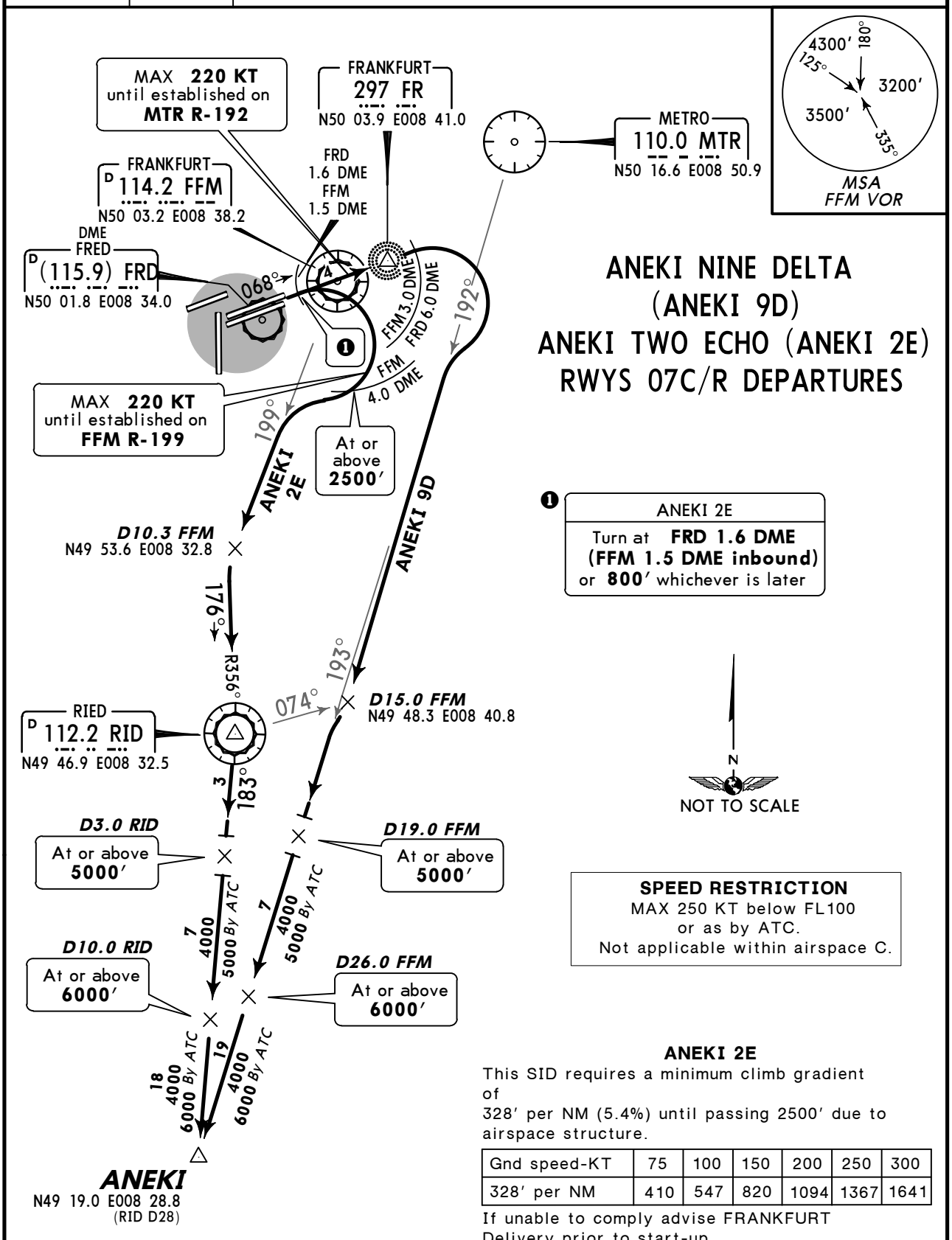
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RNAV SID DESIGNATION	REFER TO CHART
ANEKI 9D, 2E	10-3N4
ANEKI 8F, 8G, 6L	10-3N5
BIBTI 4D, 3E	10-3N6
BIBTI 3F, 3G	10-3N7
BIBTI 1K, 1M	10-3N8
BIBTI 4N	10-3P
BIBTI 2L, 3S	10-3Q
BIBTI 2R	10-3Q1
BIBTI 2T	10-3Q2
DINKELSBUHL 8D, 6E	10-3Q3
DINKELSBUHL 5F, 6G	10-3Q4
DINKELSBUHL 4L, 6S	10-3Q5
MARUN 8D, 4E	10-3Q6
MARUN 3F, 4G, 3J	10-3Q7
MARUN 1K, 1M	10-3Q8
MARUN 5N	10-3S
MARUN 2R	10-3T
MARUN 3S	10-3T1
MARUN 2T	10-3T2
NOMBO 8D, 7E	10-3T3
NOMBO 6F, 7G	10-3T4
NOMBO 6L, 6S	10-3T5
OSBIT 4D, 3E	10-3T6
RATIM 4D, 4E	10-3T7
RATIM 4F, 4G	10-3T8
RATIM 3S	10-3U
ROTEN 5F, 4G	10-3V
ROTEN 3L, 5S	10-3V1
SOBRA 4D	10-3V2
SOBRA 4E	10-3V3
SOBRA 4F, 4G, 5N, 3P	10-3V4
SOBRA 4L, 3S, 4U	10-3V5
SULUS 7D, 5E	10-3V6
SULUS 6F, 7G	10-3V7
SULUS 6L, 6S	10-3V8
TOBAK 8D, 7E	10-3W
TOBAK 4F, 5G, 4J	10-3X
TOBAK 1K, 1M	10-3X1
TOBAK 7N	10-3X2
TOBAK 2R	10-3X3
TOBAK 5S	10-3X4
TOBAK 4T	10-3X5
ULKIG 5U	10-3X6

CHANGES: RNAV SIDs renumbered & established.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



ANEKI 2E

This SID requires a minimum climb gradient of
328′ per NM (5.4%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
328′ per NM	410	547	820	1094	1367	1641

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

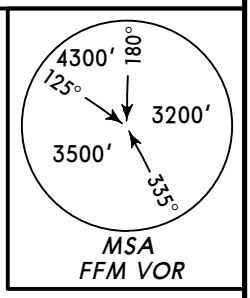
SID	ROUTING
ANEKI 9D	Climb on runway track to 800′, via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, intercept MTR R-192 to D15.0 FFM/RID R-074, turn RIGHT, intercept MTR R-193 to ANEKI.
ANEKI 2E	Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or 800′, whichever is later, turn RIGHT, intercept FFM R-199, at D10.3 FFM turn LEFT, intercept RID R-356 inbound to RID, turn RIGHT, RID R-183 to ANEKI.

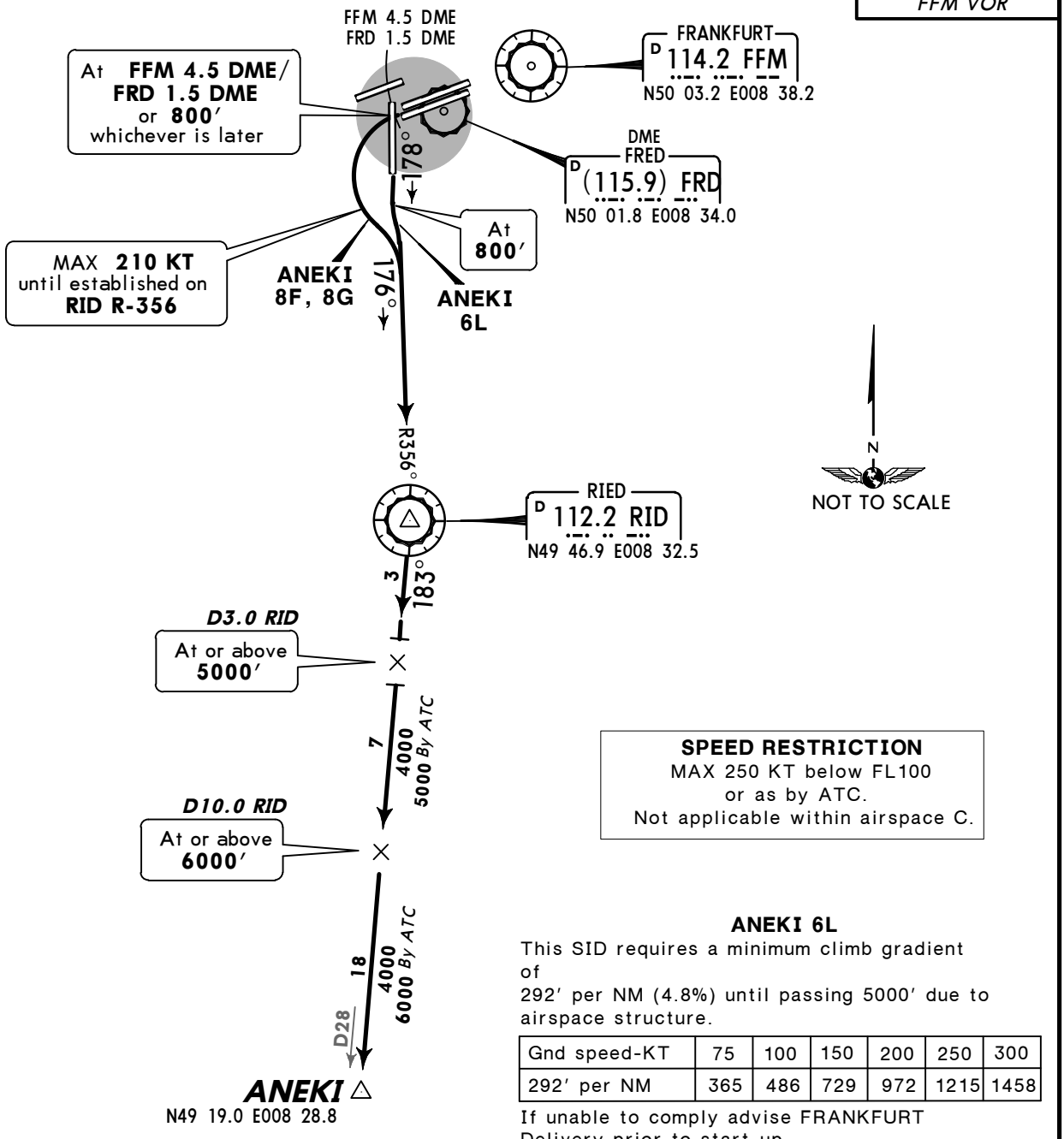
CHANGES: RWY layout.

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*LANGEN Radar 136.12	*Apt Elev* 364′	Trans level: By ATC Trans alt: 5000′ 1. RWYs 25L/C: Contact LANGEN Radar when advised by Tower. RWY 18: Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 18: EXPECT close-in obstacles. 4. RWY 18: Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

ANEKI EIGHT FOXTROT (ANEKI 8F)
ANEKI EIGHT GOLF (ANEKI 8G)
ANEKI SIX LIMA (ANEKI 6L)
RWYS 25L/C, 18 DEPARTURES





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

ANEKI 6L
This SID requires a minimum climb gradient of
292′ per NM (4.8%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
292′ per NM	365	486	729	972	1215	1458

If unable to comply advise FRANKFURT Delivery prior to start-up.

ANEKI 8F, 8G: Initial climb clearance **5000′**
ANEKI 6L: Initial climb clearance **4000′**

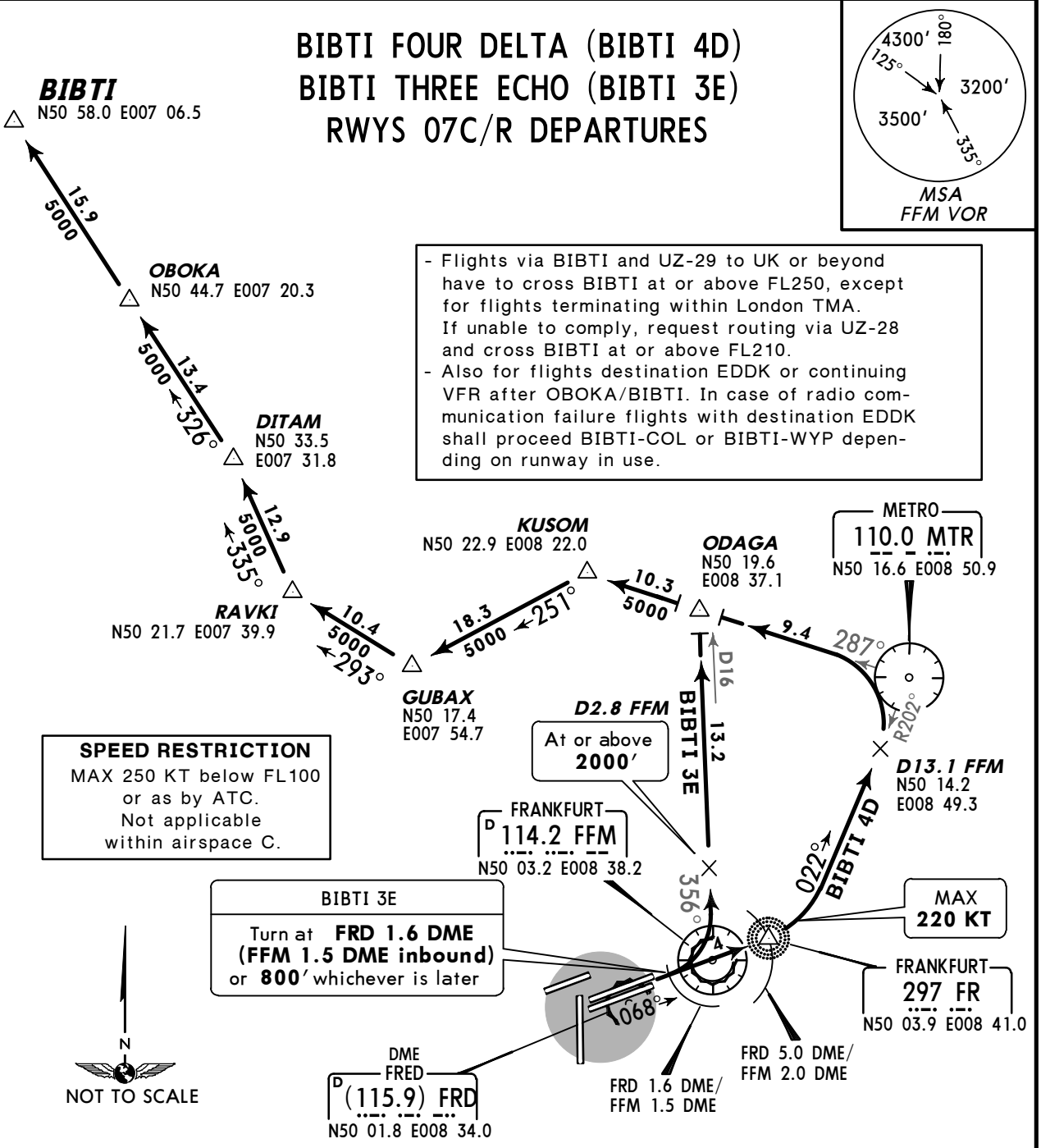
SID	RWY	ROUTING
ANEKI 8F, 8G	**25L/C**	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT, intercept RID R-356 inbound to RID, RID R-183 to ANEKI.
ANEKI 6L	**18**	Climb on runway track to 800′, intercept RID R-356 inbound to RID, turn RIGHT, RID R-183 to ANEKI.

CHANGES: RWY layout; RWYS 25L/C initial contact.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

BIBTI FOUR DELTA (BIBTI 4D)
BIBTI THREE ECHO (BIBTI 3E)
RWYS 07C/R DEPARTURES



BIBTI 3E
This SID requires a minimum climb gradient of
383′ per NM (6.3%) until passing 2000′.

Gnd speed-KT	75	100	150	200	250	300
383′ per NM	479	638	957	1276	1595	1914

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

SID	ROUTING
BIBTI 4D	Climb on runway track to 800′, to FR (FRD 5.0 DME/FFM 2.0 DME outbound), turn LEFT **immediately,** intercept MTR R-202 inbound to D13.1 FFM, turn LEFT, intercept MTR R-287 via ODAGA ❶ to KUSOM, turn LEFT, 251° track to GUBAX, turn RIGHT, 293° track to RAVKI, turn RIGHT, 335° track to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.
BIBTI 3E	Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or 800′, whichever is later, turn LEFT, intercept FFM R-356 to ODAGA ❶, turn LEFT, 287° track to KUSOM, turn LEFT, 251° track to GUBAX, turn RIGHT, 293° track to RAVKI, turn RIGHT, 335° track to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

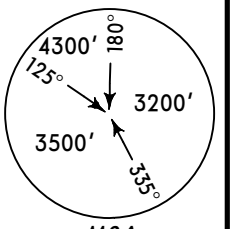
❶ After ODAGA BRNAV equipment necessary.

CHANGES: RWY layout.

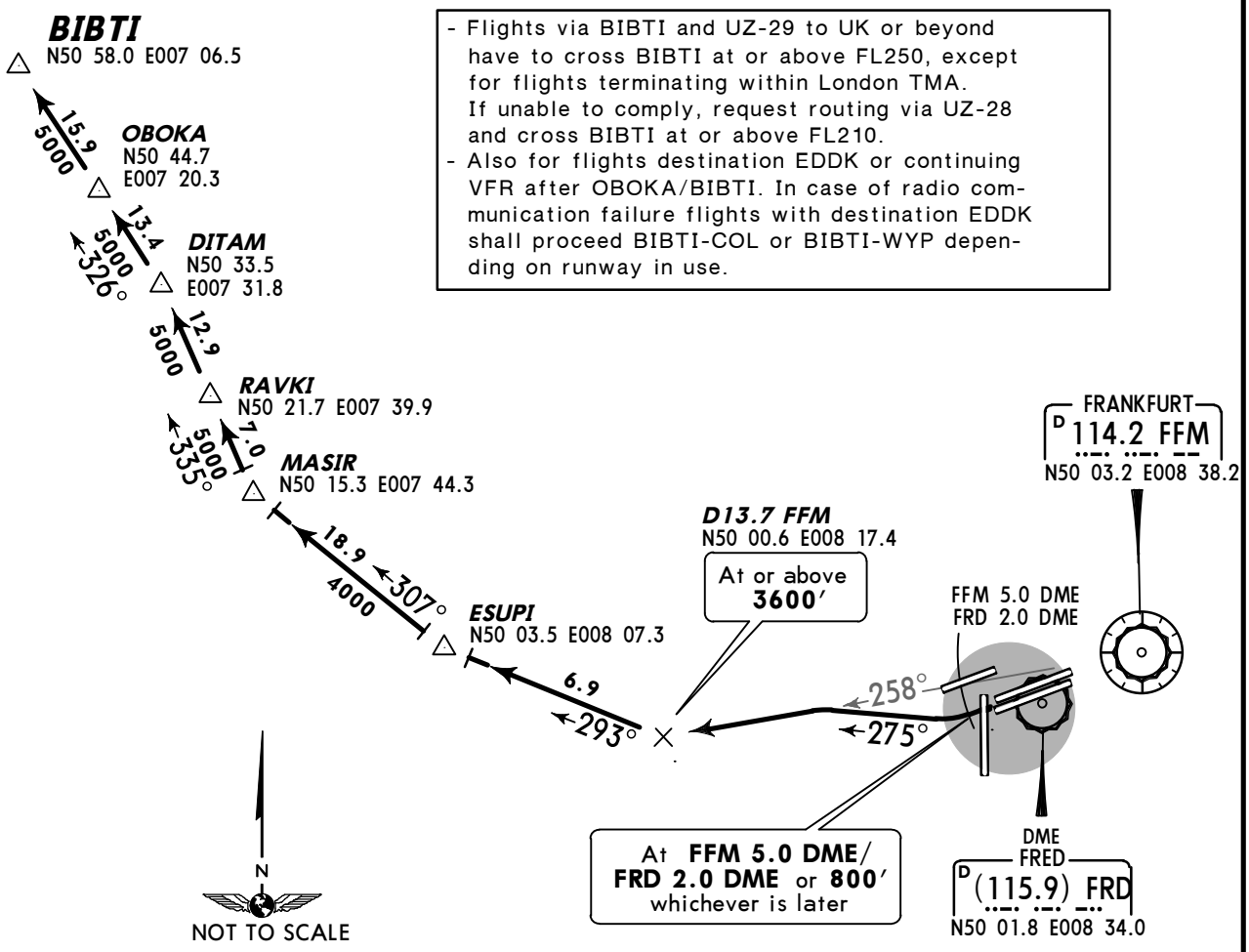
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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

BIBTI THREE FOXTROT (BIBTI 3F)
BIBTI THREE GOLF (BIBTI 3G)
RWYS 25L/C DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.

These SIDs require a minimum climb gradient of
352′ per NM (5.8%) until passing 3600′, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
352′ per NM	441	587	881	1175	1468	1762

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

ROUTING

Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800′, whichever is later, turn RIGHT, 275° track (RWY 25L: 278° track), intercept FFM R-258 to D13.7 FFM ❶, turn RIGHT, 293° track to ESUPI, turn RIGHT, 307° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

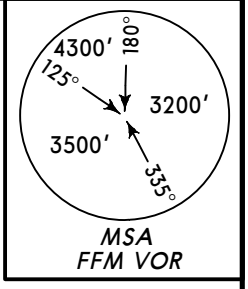
❶ After D13.7 FFM BRNAV equipment necessary.

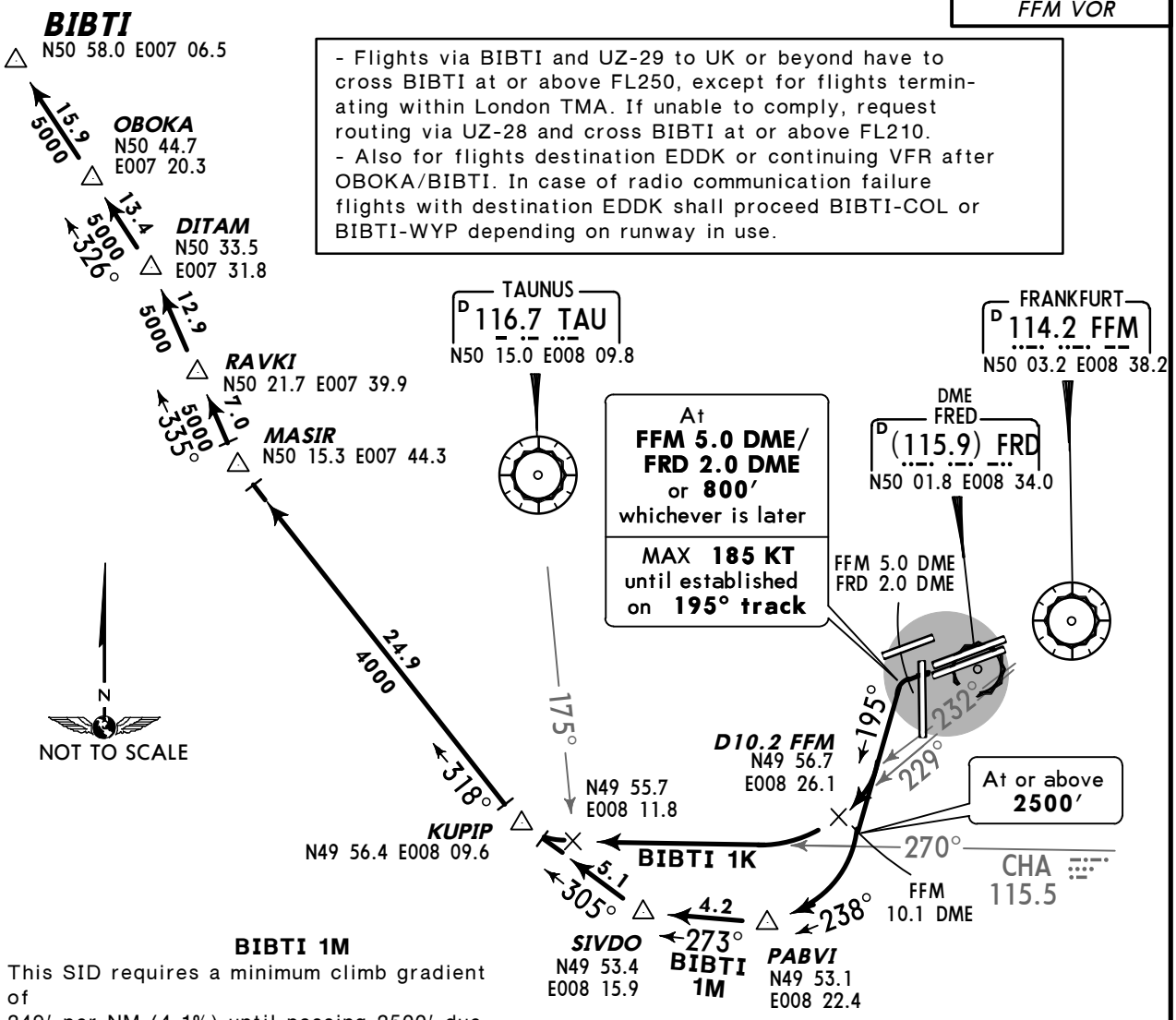
CHANGES: RWY layout; initial contact.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

BIBTI ONE KILO (BIBTI 1K)
NOT TO BE FILED IN FLIGHT PLAN
BIBTI ONE MIKE (BIBTI 1M)
RWYS 25L/C DEPARTURES
BY ATC





BIBTI 1M
This SID requires a minimum climb gradient of
249′ per NM (4.1%) until passing 2500′ due to airspace structure

Gnd speed-KT	75	100	150	200	250	300
249′ per NM	311	415	623	830	1038	1246

If unable to comply advise FRANKFURT Delivery prior to start-up.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	ROUTING
BIBTI 1K	Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800′, whichever is later, turn LEFT, 195° track, when passing FFM R-232 turn RIGHT, intercept FFM R-229 to D10.2 FFM, turn RIGHT, intercept CHA R-270, when passing TAU R-175 ❶, turn RIGHT, 318° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.
BIBTI 1M	Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800′, whichever is later, turn LEFT, 195° track to FFM 10.1 DME ❷, turn RIGHT, 238° track to PABVI, turn RIGHT, 273° track to SIVDO, turn RIGHT, 305° track to KUPIP, turn RIGHT, 318° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

BRNAV equipment necessary after ❶ TAU R-175/ ❷ FFM 10.1 DME.

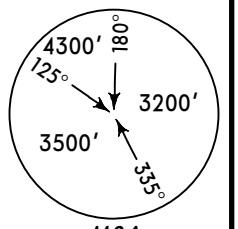
CHANGES: New chart (SIDs established).

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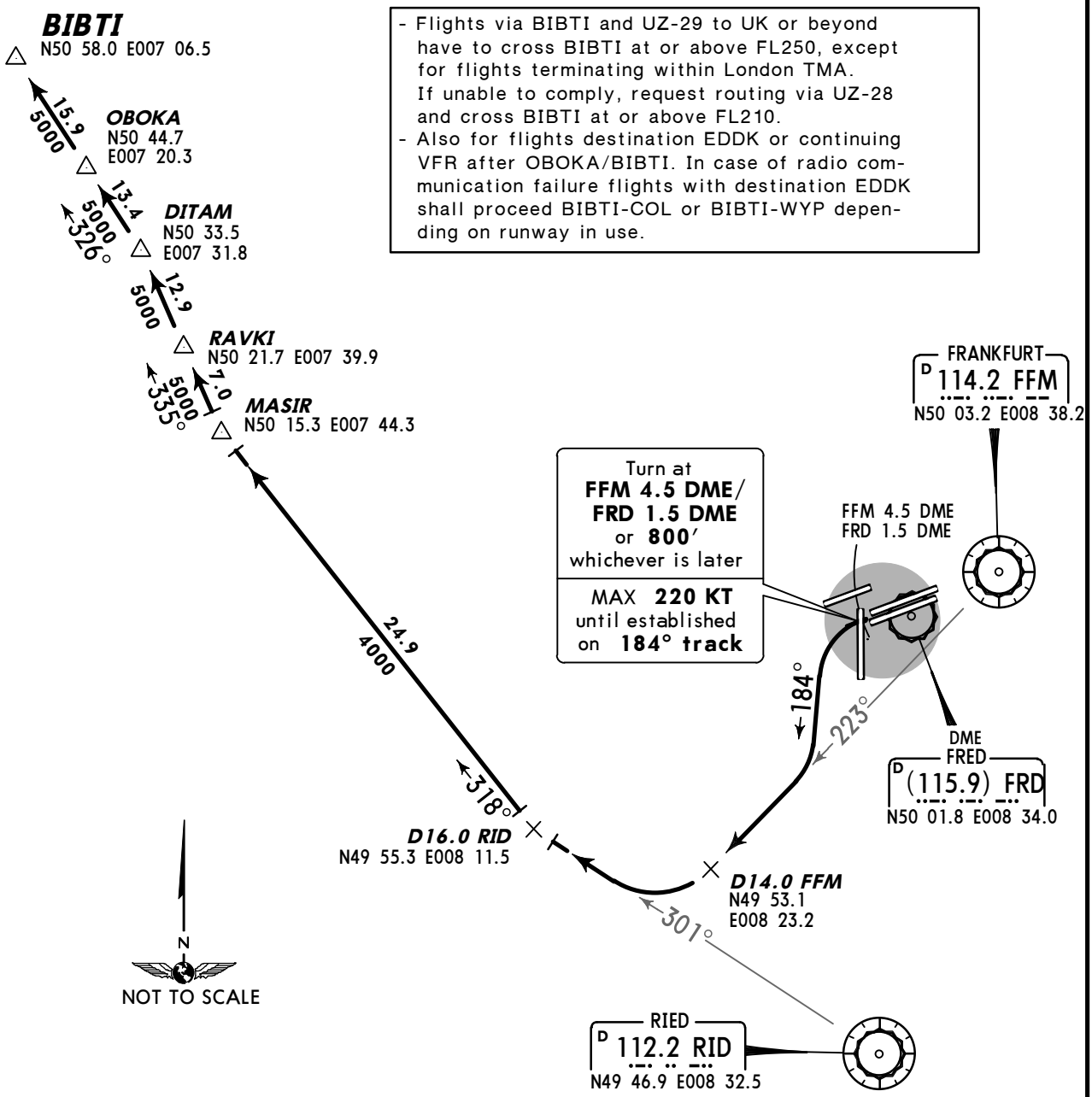
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

BIBTI FOUR NOVEMBER (BIBTI 4N)
RWYS 25L/C DEPARTURE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.



Initial climb clearance **5000′**

ROUTING

Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT, 184° track, intercept FFM R-223 to D14.0 FFM, turn RIGHT, intercept RID R-301 to D16.0 RID ❶, turn RIGHT, 318° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

❶ After D16.0 RID BRNAV equipment necessary.

CHANGES: New chart (RWY layout; SID renumbered; initial contact).

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

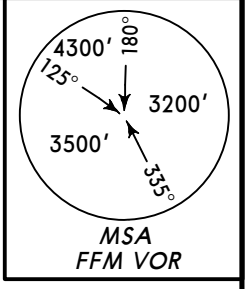
BIBTI TWO LIMA (BIBTI 2L)

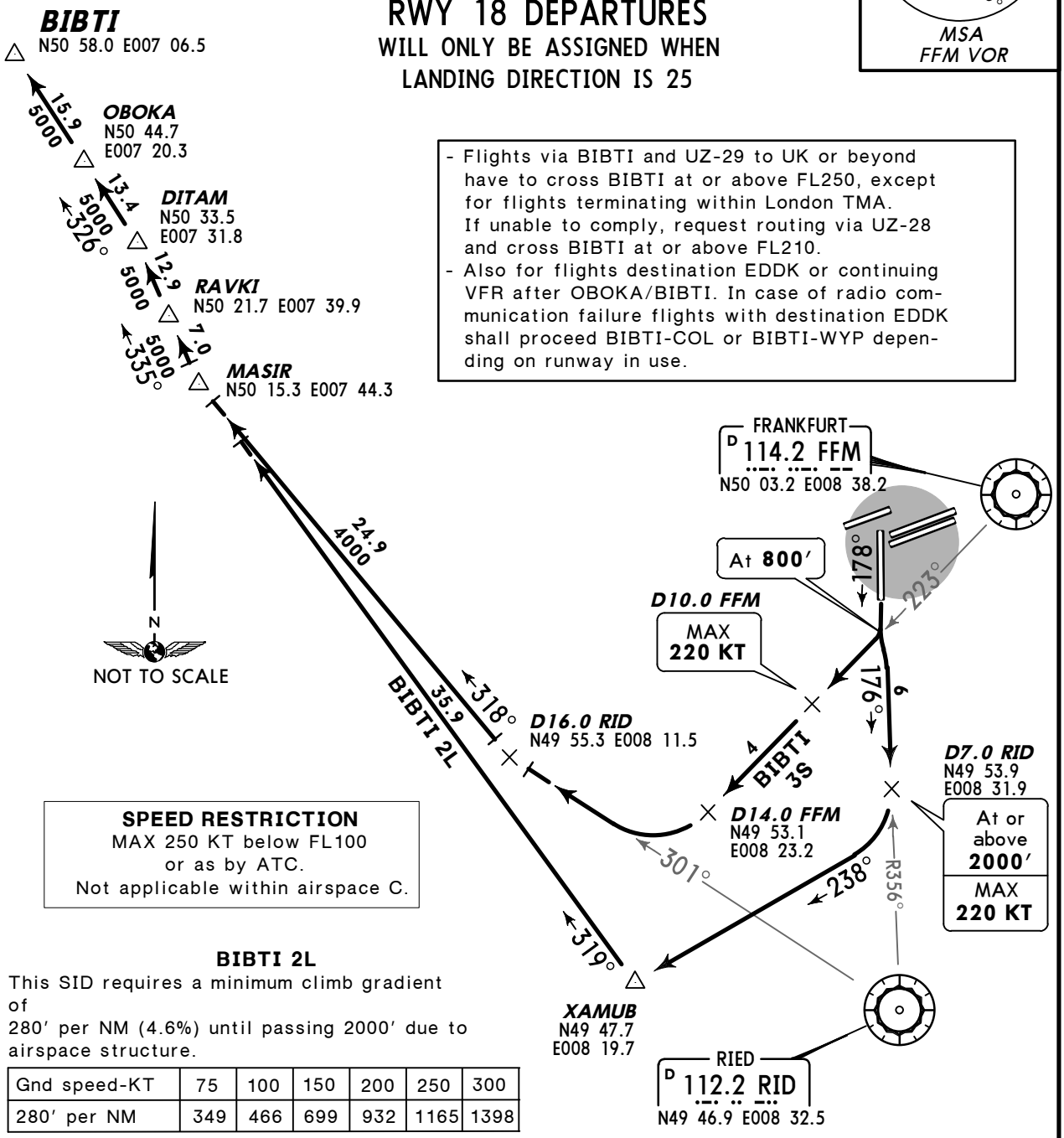
BIBTI THREE SIERRA (BIBTI 3S)

BY ATC

RWY 18 DEPARTURES

WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS 25





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

BIBTI 2L

This SID requires a minimum climb gradient of
280′ per NM (4.6%) until passing 2000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
280′ per NM	349	466	699	932	1165	1398

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

SID	ROUTING
BIBTI 2L	Climb on runway track to 800′, intercept RID R-356 inbound to D7.0 RID ❶, turn RIGHT, 238° track to XAMUB, turn RIGHT, 319° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.
BIBTI 3S	Climb on runway track to 800′, turn RIGHT, intercept FFM R-223 to D14.0 FFM, turn RIGHT, intercept RID R-301 to D16.0 RID ❷, turn RIGHT, 318° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

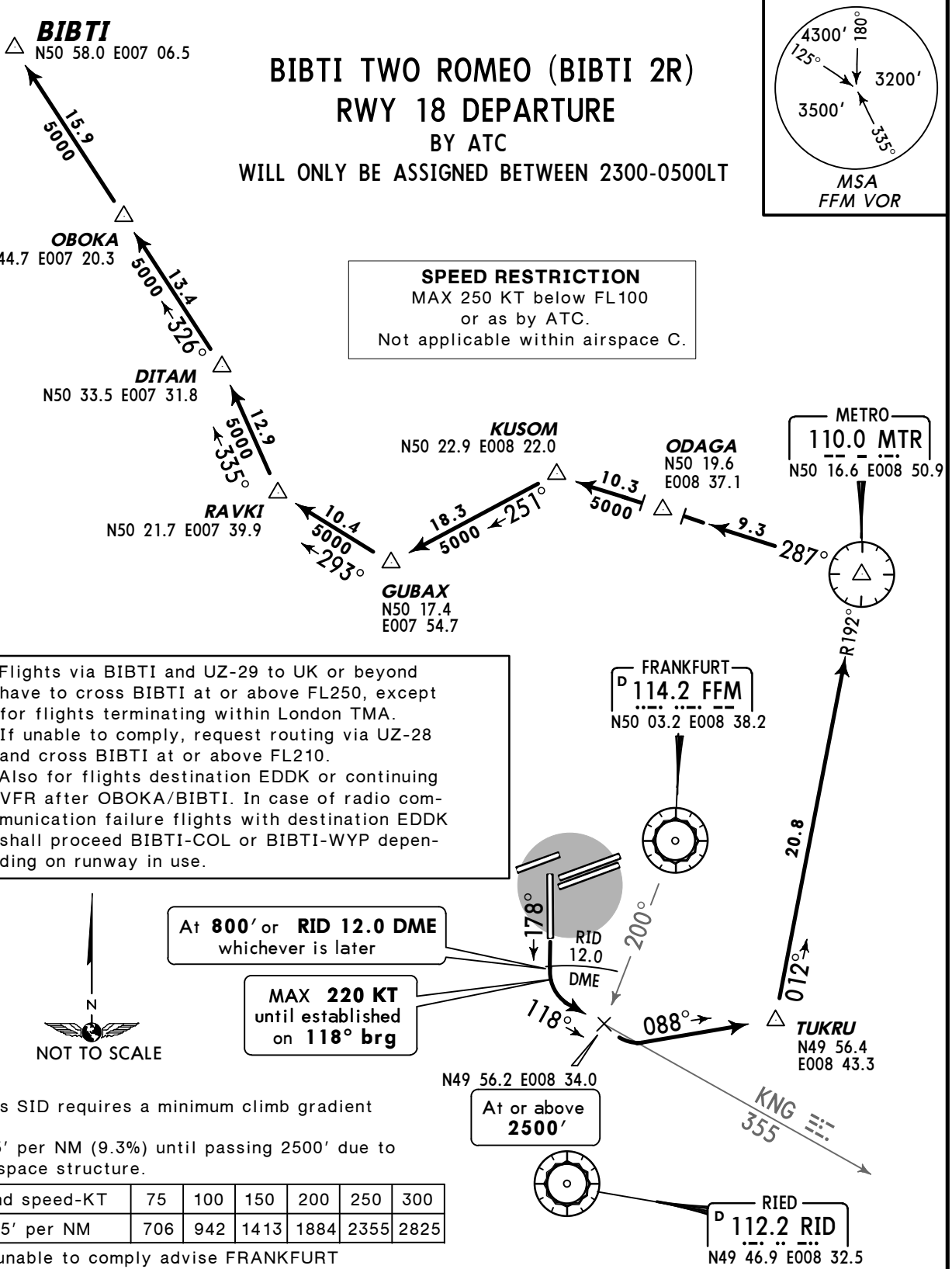
BRNAV equipment necessary after: ❶ D7.0 RID/ ❷ D16.0 RID.

CHANGES: New chart (RWY layout).

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

BIBTI TWO ROMEO (BIBTI 2R)
RWY 18 DEPARTURE
BY ATC
WILL ONLY BE ASSIGNED BETWEEN 2300-0500LT



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.

At **800′** or **RID 12.0 DME** whichever is later

MAX **220 KT** until established on **118° brg**

At or above **2500′**

This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′ or RID 12.0 DME, whichever is later, turn LEFT, intercept 118° bearing towards KNG, when passing FFM R-200 ❶ turn LEFT, 088° track to TUKRU, turn LEFT, intercept MTR R-192 inbound to MTR, turn LEFT, MTR R-287 via ODAGA to KUSOM, turn LEFT, 251° track to GUBAX, turn RIGHT, 293° track to RAVKI, turn RIGHT, 335° track to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

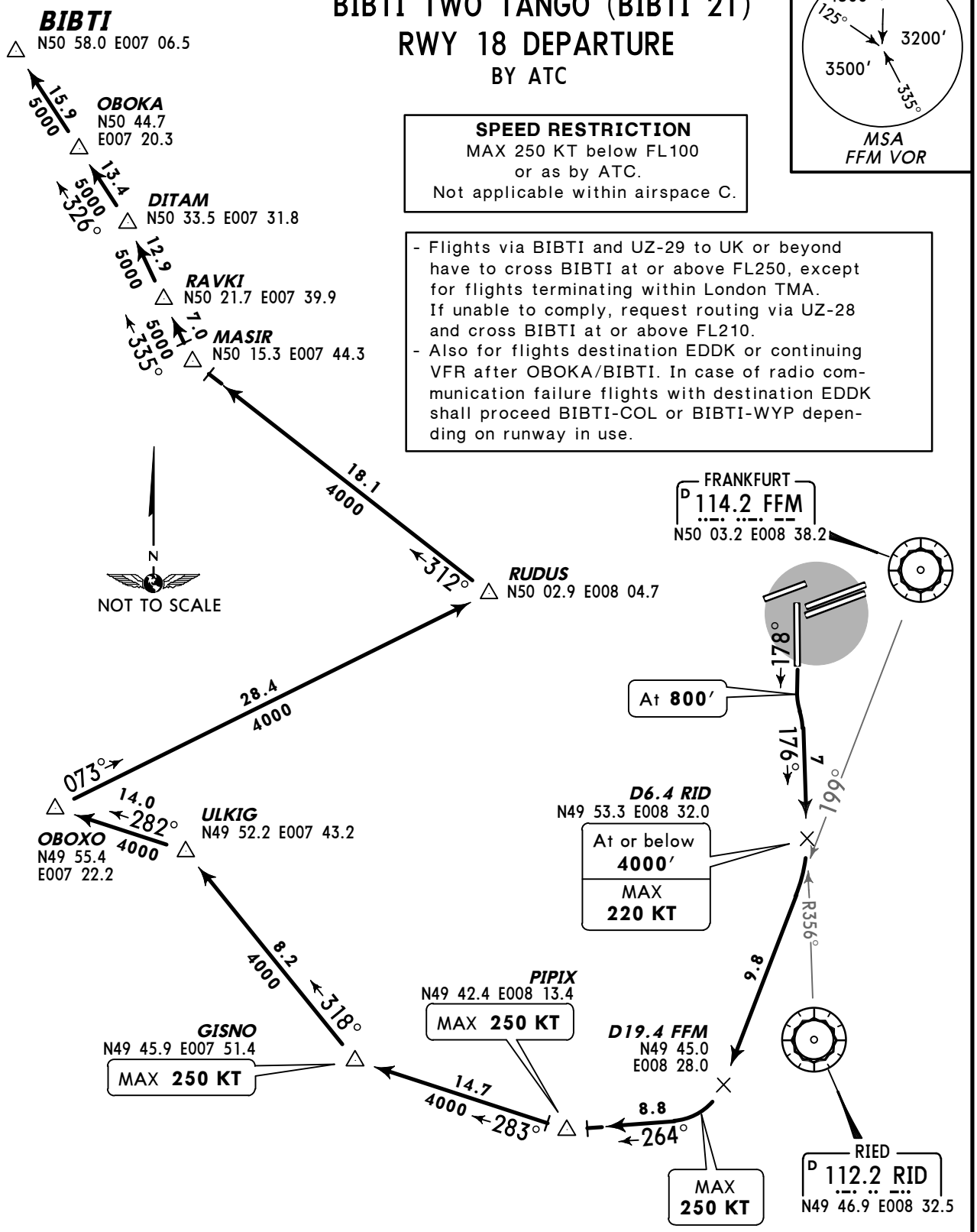
❶ After FFM R-200 BRNAV equipment necessary.

CHANGES: New chart (RWY layout).

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

BIBTI TWO TANGO (BIBTI 2T)
RWY 18 DEPARTURE
BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.

Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′, intercept RID R-356 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199 to D19.4 FFM ❶, turn RIGHT, 264° track to PIPIX, turn RIGHT, 283° track to GISNO, turn RIGHT, 318° track to ULKIG, turn LEFT, 282° track to OBOXO, turn RIGHT, 073° track to RUDUS, turn LEFT, 312° track to MASIR, turn RIGHT, 335° track via RAVKI to DITAM, turn LEFT, 326° track via OBOKA to BIBTI.

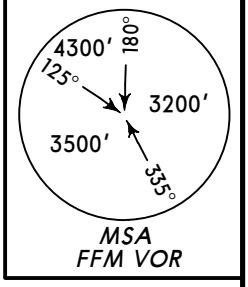
❶ After D19.4 FFM BRNAV equipment necessary.

CHANGES: New chart (RWY layout).

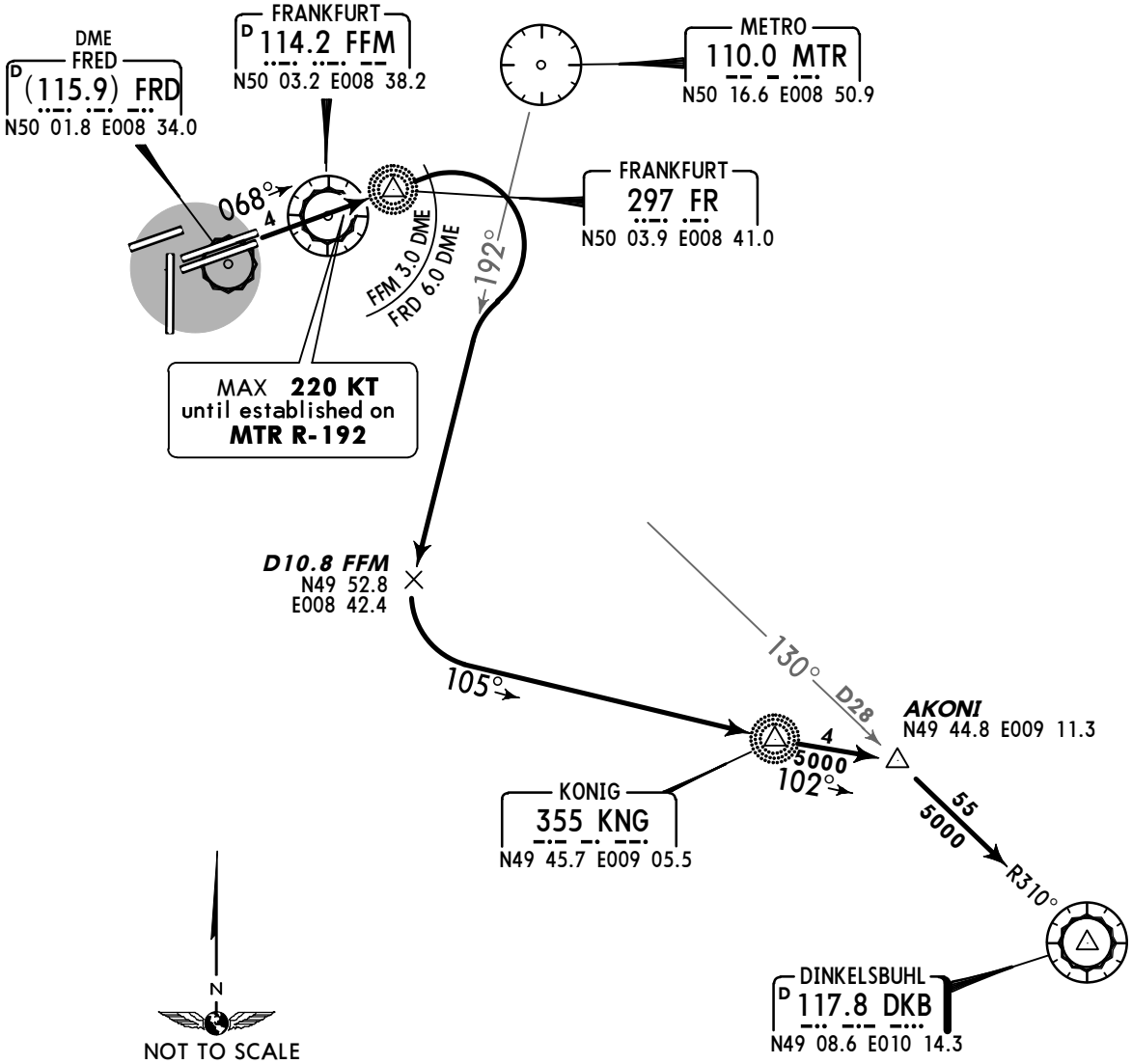
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

DINKELSBUHL EIGHT DELTA (DKB 8D)
DINKELSBUHL SIX ECHO (DKB 6E)
RWYS 07C/R DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

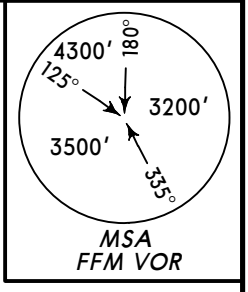
Climb on runway track to 800′, via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, intercept MTR R-192, at D10.8 FFM turn LEFT, intercept 105° bearing to KNG, turn LEFT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to DKB.

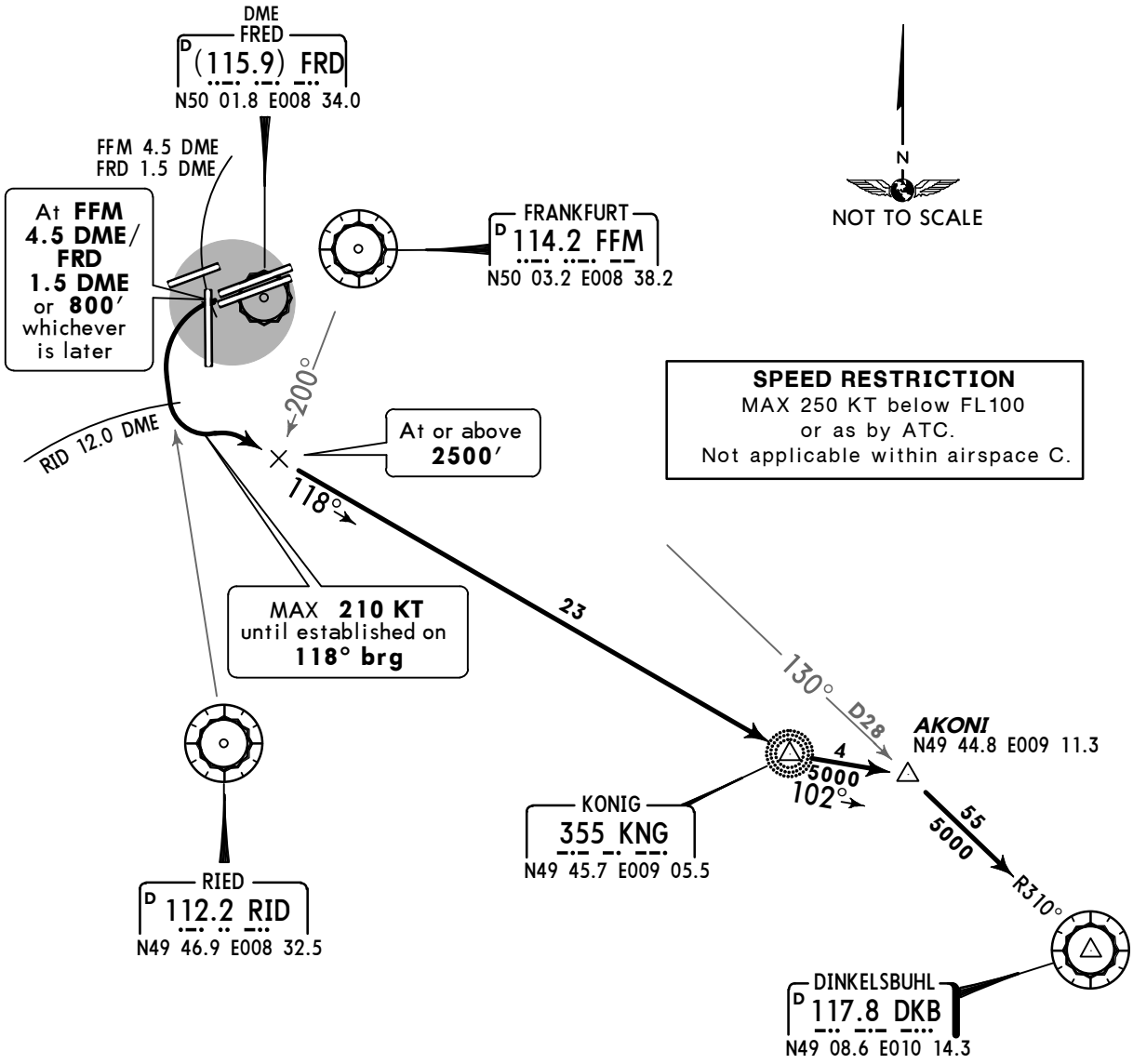
CHANGES: New chart (RWY layout).

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

DINKELSBUHL FIVE FOXTROT (DKB 5F)
DINKELSBUHL SIX GOLF (DKB 6G)
RWYS 25L/C DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR





These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

ROUTING

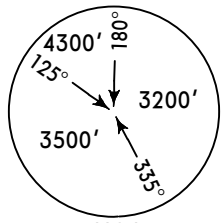
Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT towards RID, at RID 12.0 DME turn LEFT, intercept 118° bearing to KNG, turn LEFT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to DKB.

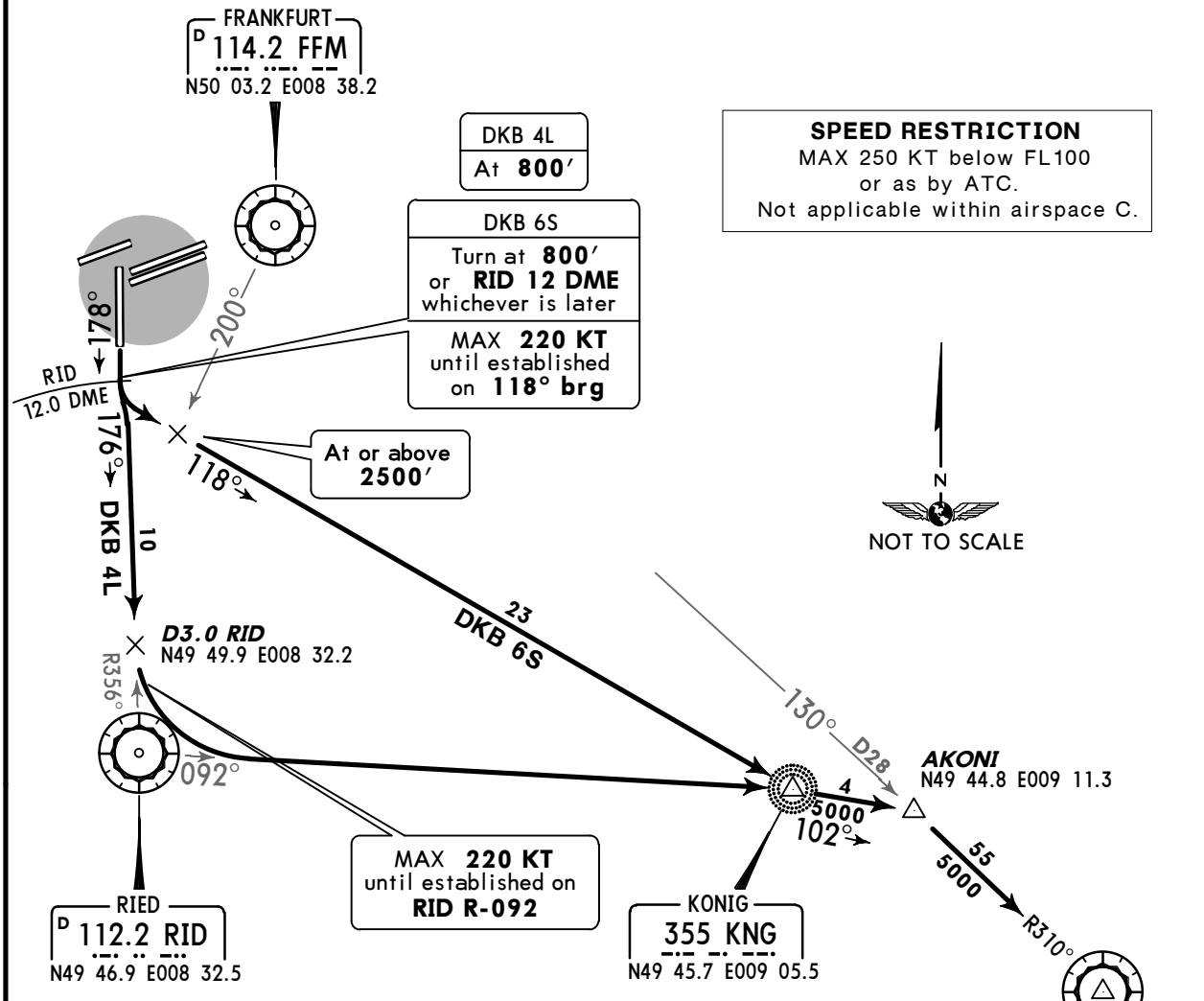
CHANGES: New chart (RWY layout; initial contact).

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

DINKELSBUHL FOUR LIMA (DKB 4L)
DINKELSBUHL SIX SIERRA (DKB 6S)
RWY 18 DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR





DKB 6S

This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing **2500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via DKB 4L.

Initial climb clearance **4000′**

SID	ROUTING
DKB 4L	Climb on runway track to 800′, intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to KNG, turn RIGHT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to DKB.
DKB 6S	Climb on runway track to 800′ or RID 12.0 DME, whichever is later, turn LEFT, intercept 118° bearing to KNG, turn LEFT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to DKB.

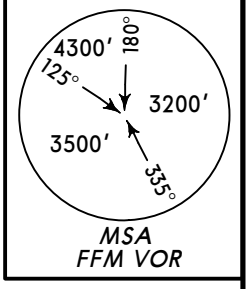
CHANGES: New chart (RWY layout).

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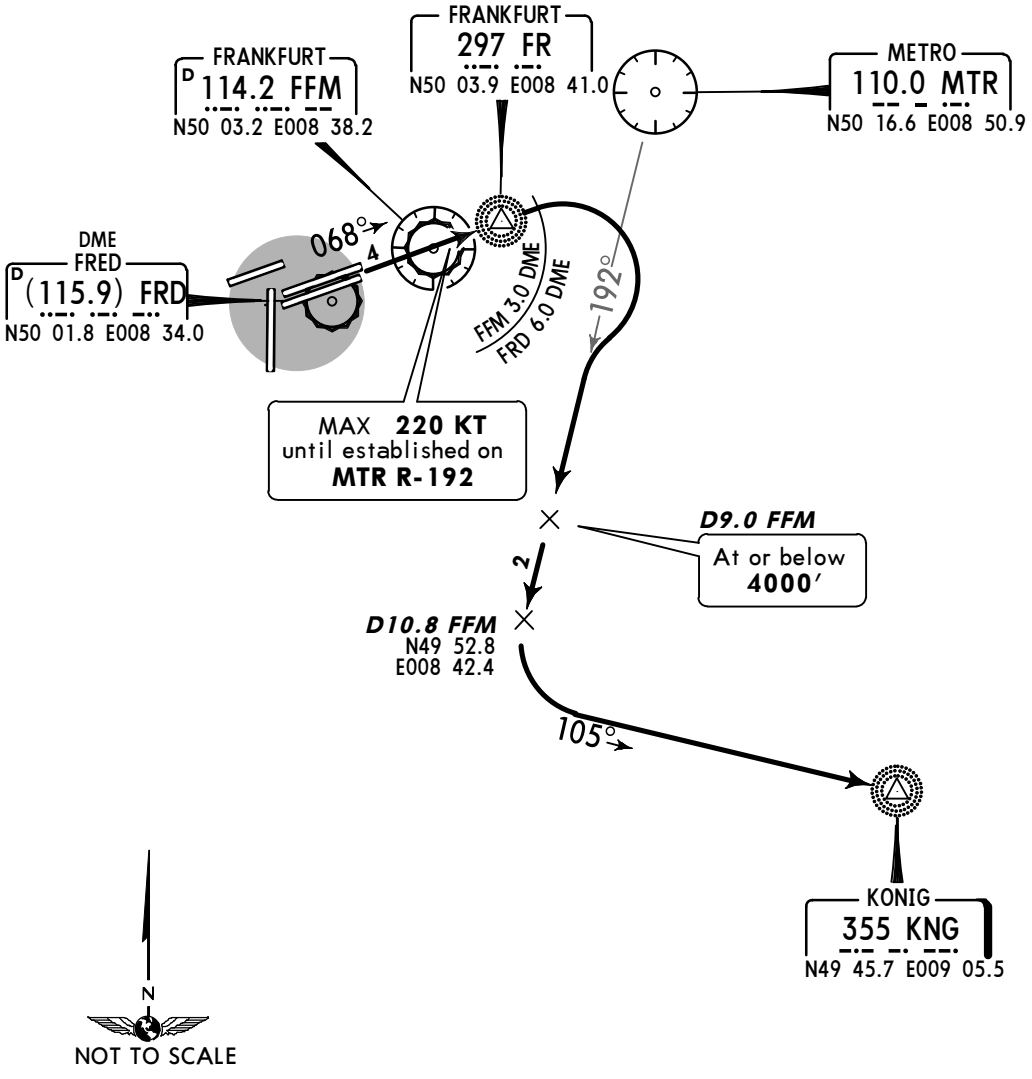
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

KOENIG SIX CHARLIE (KNG 6C)
RWYS 07C/R DEPARTURE

NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT ONLY
DELAY HAS TO BE EXPECTED
FURTHER ROUTING TO DESTINATION SHALL BE BASED ON VOR AND HAS TO BE COORDINATED WITH ATC PRIOR TO START-UP
NO RNAV OVERLAY EXISTING
MAX FL90
SPECIAL PERMISSION NEEDED PRIOR TO FLIGHT



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

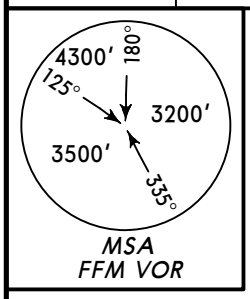
ROUTING

Climb on runway track to 800′, via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, intercept MTR R-192, at D10.8 FFM turn LEFT, intercept 105° bearing to KNG.

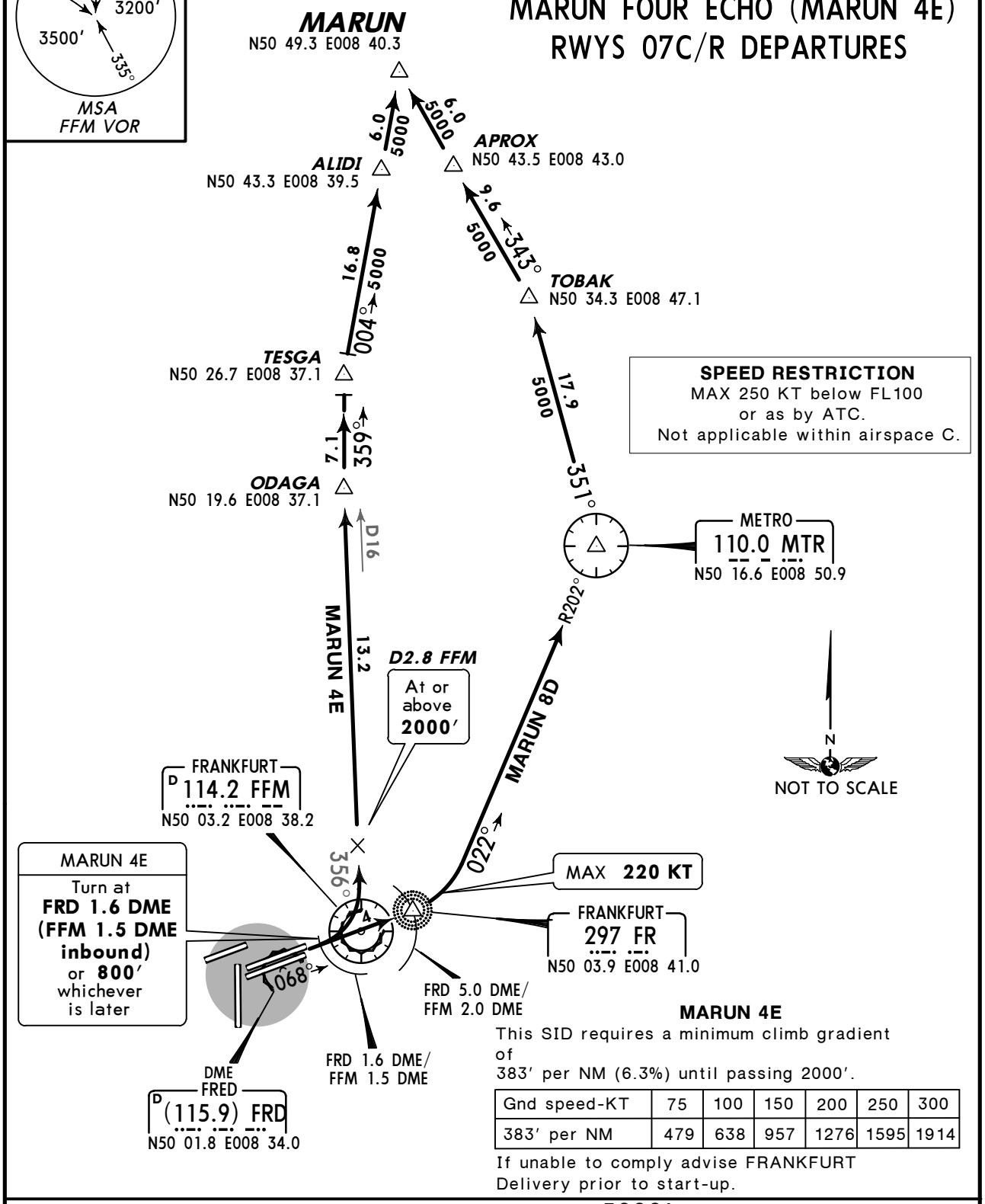
CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



MARUN EIGHT DELTA (MARUN 8D)
MARUN FOUR ECHO (MARUN 4E)
RWYS 07C/R DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

MARUN 4E

This SID requires a minimum climb gradient of
383′ per NM (6.3%) until passing 2000′.

Gnd speed-KT	75	100	150	200	250	300
383′ per NM	479	638	957	1276	1595	1914

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

SID	ROUTING
MARUN 8D	Climb on runway track to 800′, to FR (FRD 5.0 DME/FFM 2.0 DME outbound), turn LEFT **immediately,** intercept MTR R-202 inbound to MTR ❶, turn LEFT, MTR R-351 to TOBAK, turn LEFT, 343° track via APROX to MARUN.
MARUN 4E	Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or 800′, whichever is later, turn LEFT, intercept FFM R-356 to ODAGA ❷, turn RIGHT, 359° track to TESGA, turn RIGHT, 004° track via ALIDI to MARUN.

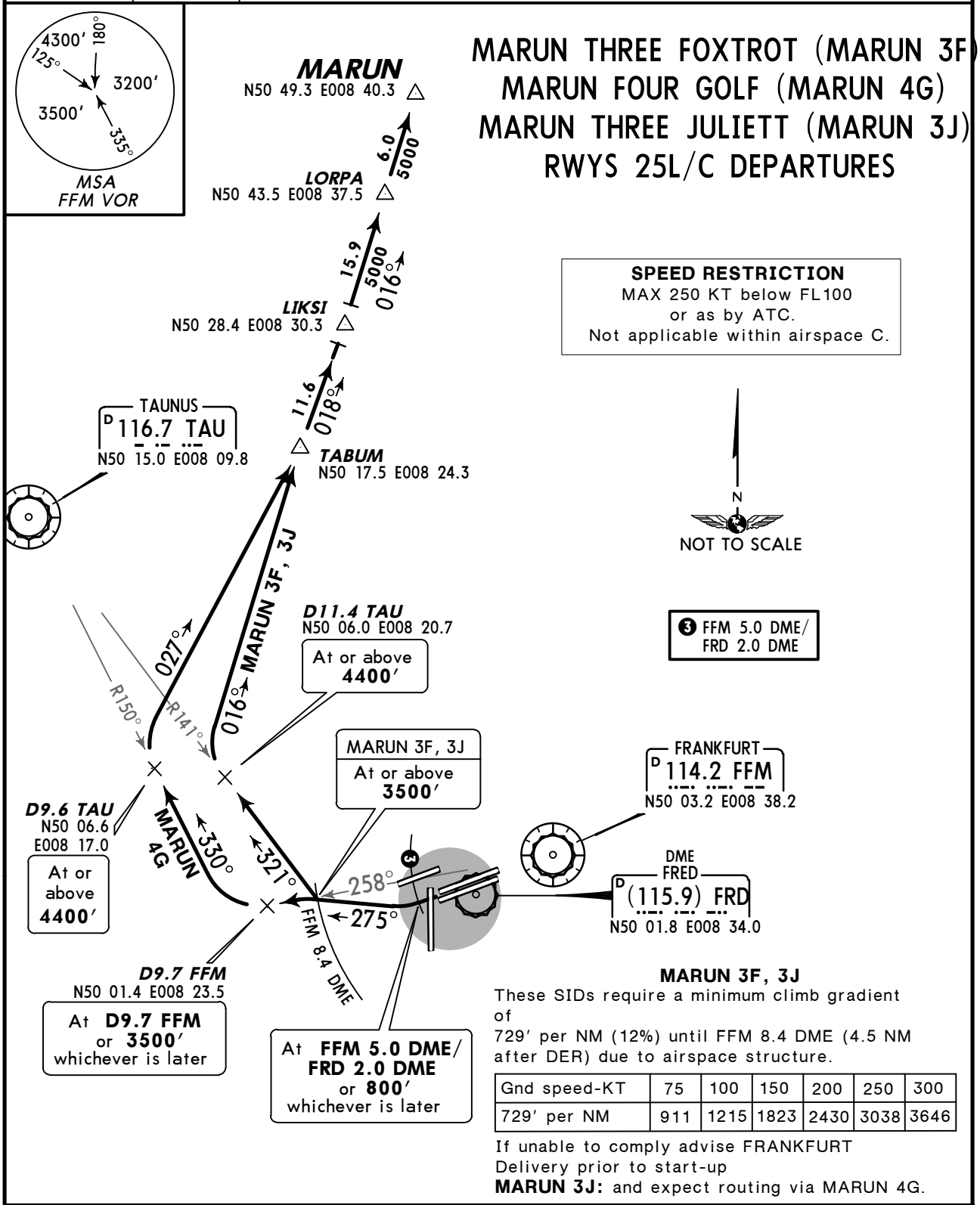
BRNAV equipment necessary after: ❶ MTR/ ❷ ODAGA.

CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

MARUN THREE FOXTROT (MARUN 3F)
MARUN FOUR GOLF (MARUN 4G)
MARUN THREE JULIETT (MARUN 3J)
RWYS 25L/C DEPARTURES



MARUN 3F, 3J

These SIDs require a minimum climb gradient of
729′ per NM (12%) until FFM 8.4 DME (4.5 NM after DER) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
729′ per NM	911	1215	1823	2430	3038	3646

If unable to comply advise FRANKFURT Delivery prior to start-up
MARUN 3J: and expect routing via MARUN 4G.

Initial climb clearance **5000′**

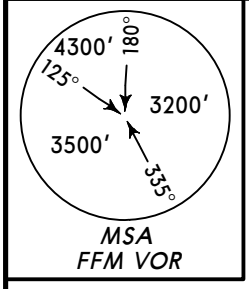
SID	ROUTING
MARUN 3F, 3J	Climb on runway track to FFM 5.0 DME or 800′, whichever is later, turn RIGHT, 275° track (RWY 25L: 278° track) to FFM 8.4 DME, turn RIGHT, intercept TAU R-141 inbound to D11.4 TAU ❶, turn RIGHT, 016° track to TABUM, turn RIGHT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.
MARUN 4G	Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800′, whichever is later, turn RIGHT, 275° track (RWY 25L: 278° track), intercept FFM R-258 to D9.7 FFM or 3500′, whichever is later, turn RIGHT, intercept TAU R-150 inbound to D9.6 TAU ❷, turn RIGHT, 027° track to TABUM, turn LEFT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.

BRNAV equipment necessary after: ❶ D11.4 TAU/ ❷ D9.6 TAU.

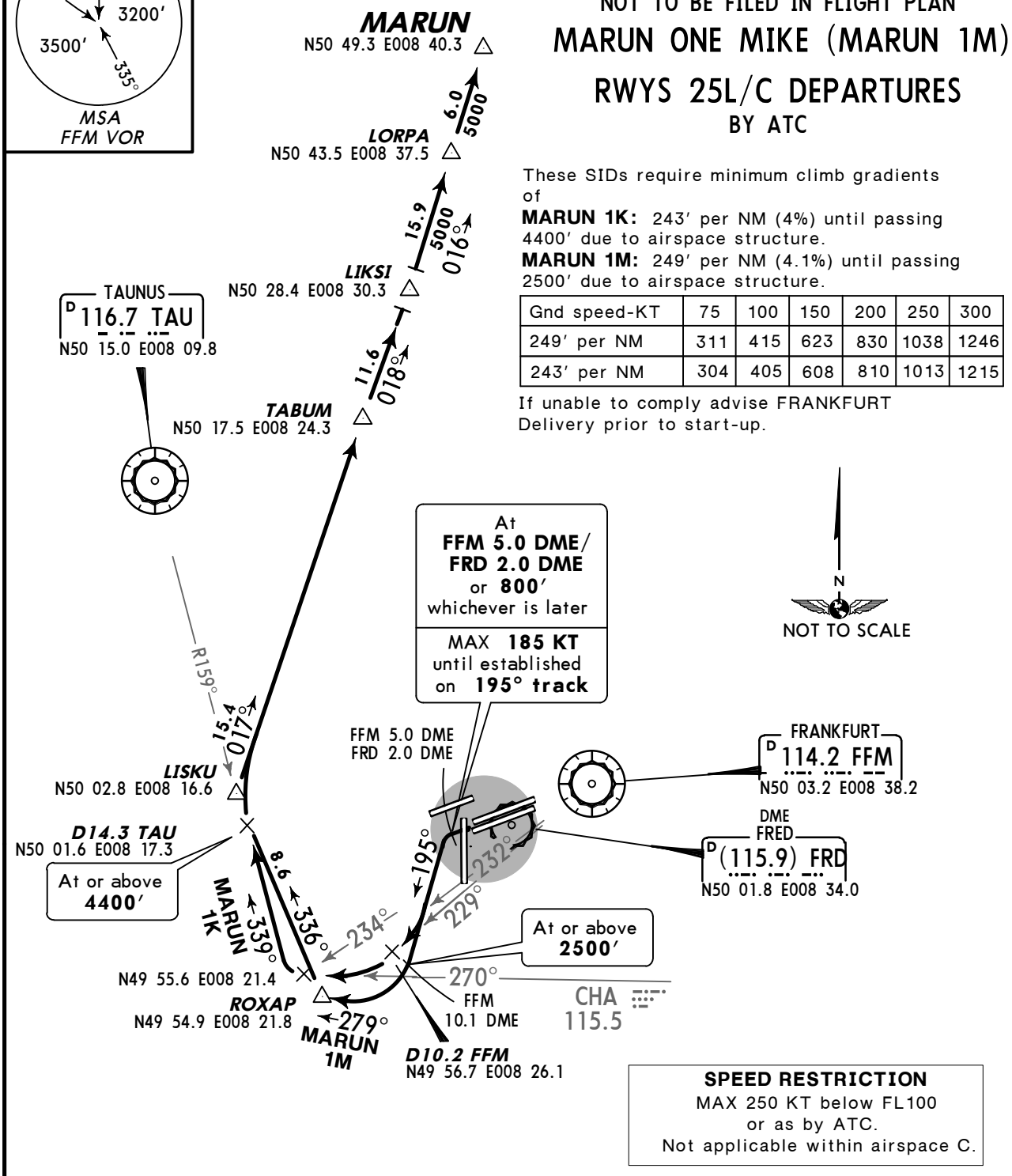
CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



MARUN ONE KILO (MARUN 1K)
NOT TO BE FILED IN FLIGHT PLAN
MARUN ONE MIKE (MARUN 1M)
RWYS 25L/C DEPARTURES
BY ATC



These SIDs require minimum climb gradients of **MARUN 1K:** 243′ per NM (4%) until passing 4400′ due to airspace structure. **MARUN 1M:** 249′ per NM (4.1%) until passing 2500′ due to airspace structure.						
Gnd speed-KT	75	100	150	200	250	300
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

If unable to comply advise FRANKFURT Delivery prior to start-up.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

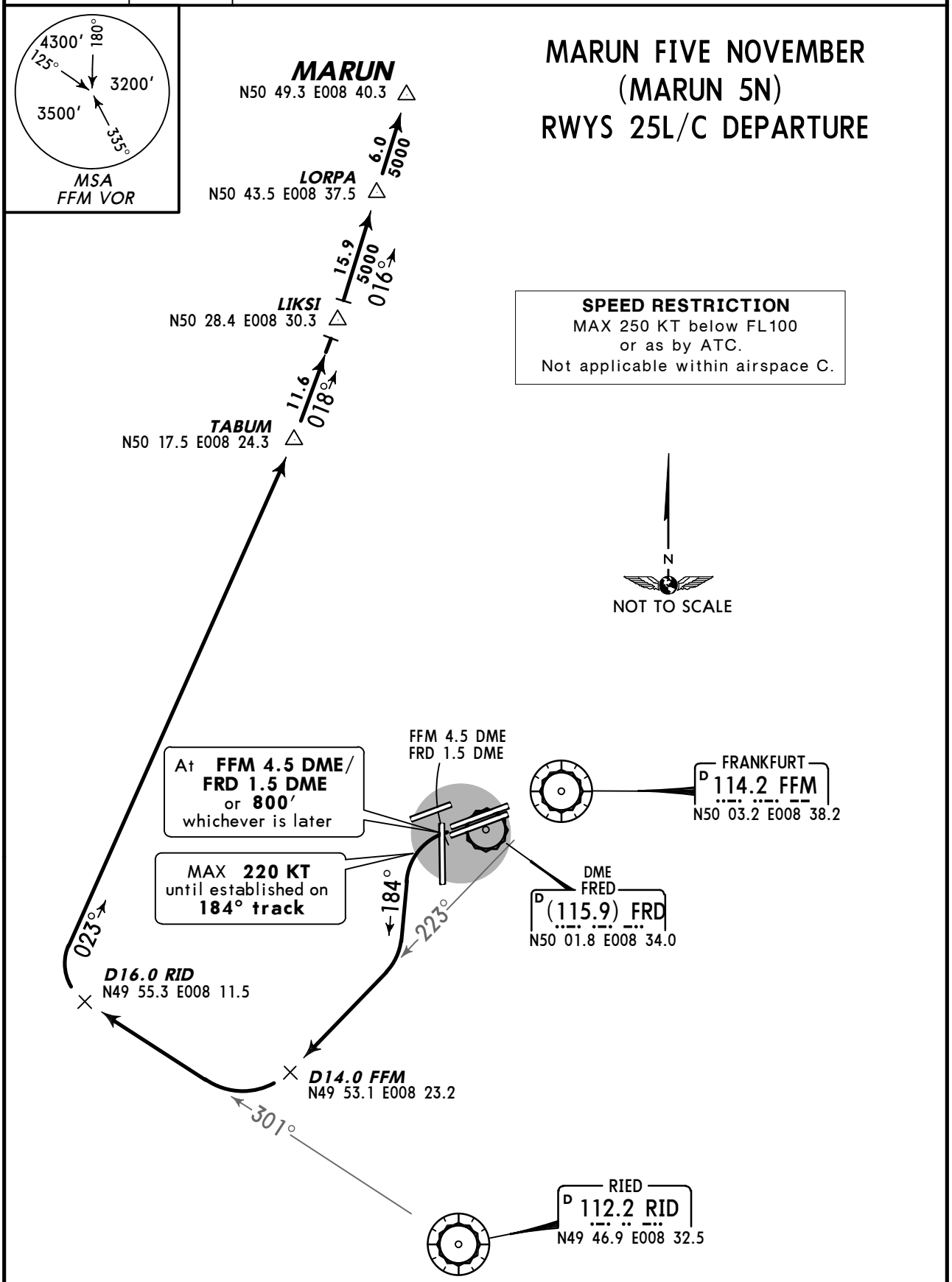
SID	ROUTING
MARUN 1K	Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800′, whichever is later, turn LEFT, 195° track, when passing FFM R-232 turn RIGHT, intercept FFM R-229 to D10.2 FFM, turn RIGHT, intercept CHA R-270, when passing FFM R-234 turn RIGHT, intercept TAU R-159 inbound to D14.3 TAU ❶, turn RIGHT, 017° track to TABUM, turn RIGHT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.
MARUN 1M	Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800′, whichever is later, turn LEFT, 195° track to FFM 10.1 DME ❷, turn RIGHT, 279° track to ROXAP, turn RIGHT, 336° track to LISKU, turn RIGHT, 017° track to TABUM, turn RIGHT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.

BRNAV equipment necessary after ❶ D14.3 TAU/ ❷ FFM 10.1 DME.

CHANGES: SIDs MARUN 1K & 1M established; SID BIBTI 2T transferred.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



Initial climb clearance **5000′**

ROUTING

Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT, 184° track, intercept FFM R-223 to D14.0 FFM, turn RIGHT, intercept RID R-301 to D16.0 RID ❶ turn RIGHT, 023° track to TABUM, turn LEFT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.

❶ After D16.0 RID BRNAV equipment necessary.

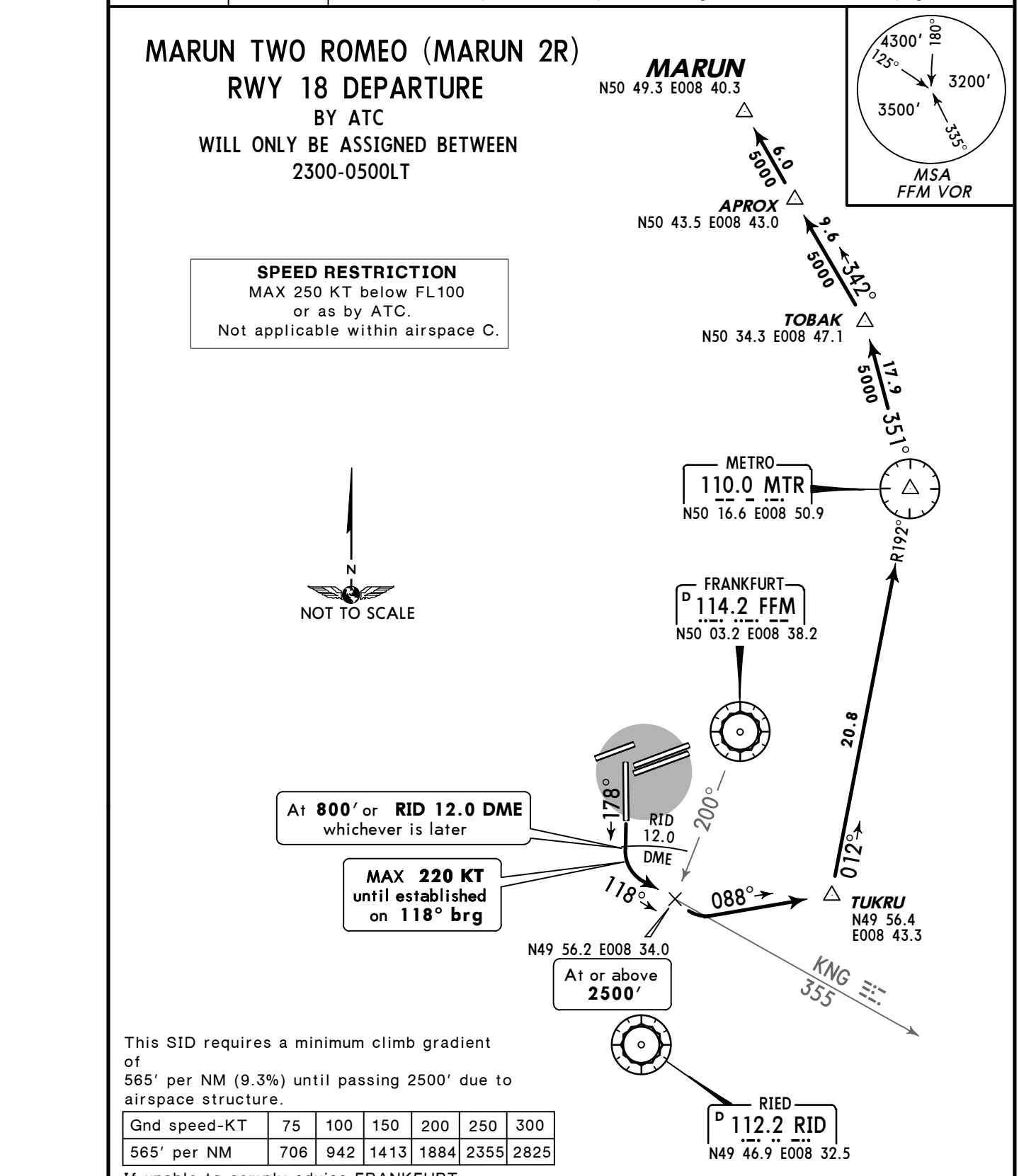
CHANGES: RWY layout; SID renumbered; initial contact; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

MARUN TWO ROMEO (MARUN 2R)
RWY 18 DEPARTURE
BY ATC
WILL ONLY BE ASSIGNED BETWEEN
2300-0500LT

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′ or RID 12.0 DME, whichever is later, turn LEFT, intercept 118° bearing towards KNG, when passing FFM R-200 ❶ turn LEFT, 088° track to TUKRU, turn LEFT, intercept MTR R-192 inbound to MTR, turn LEFT, MTR R-351 to TOBAK, turn LEFT, 342° track via APROX to MARUN.

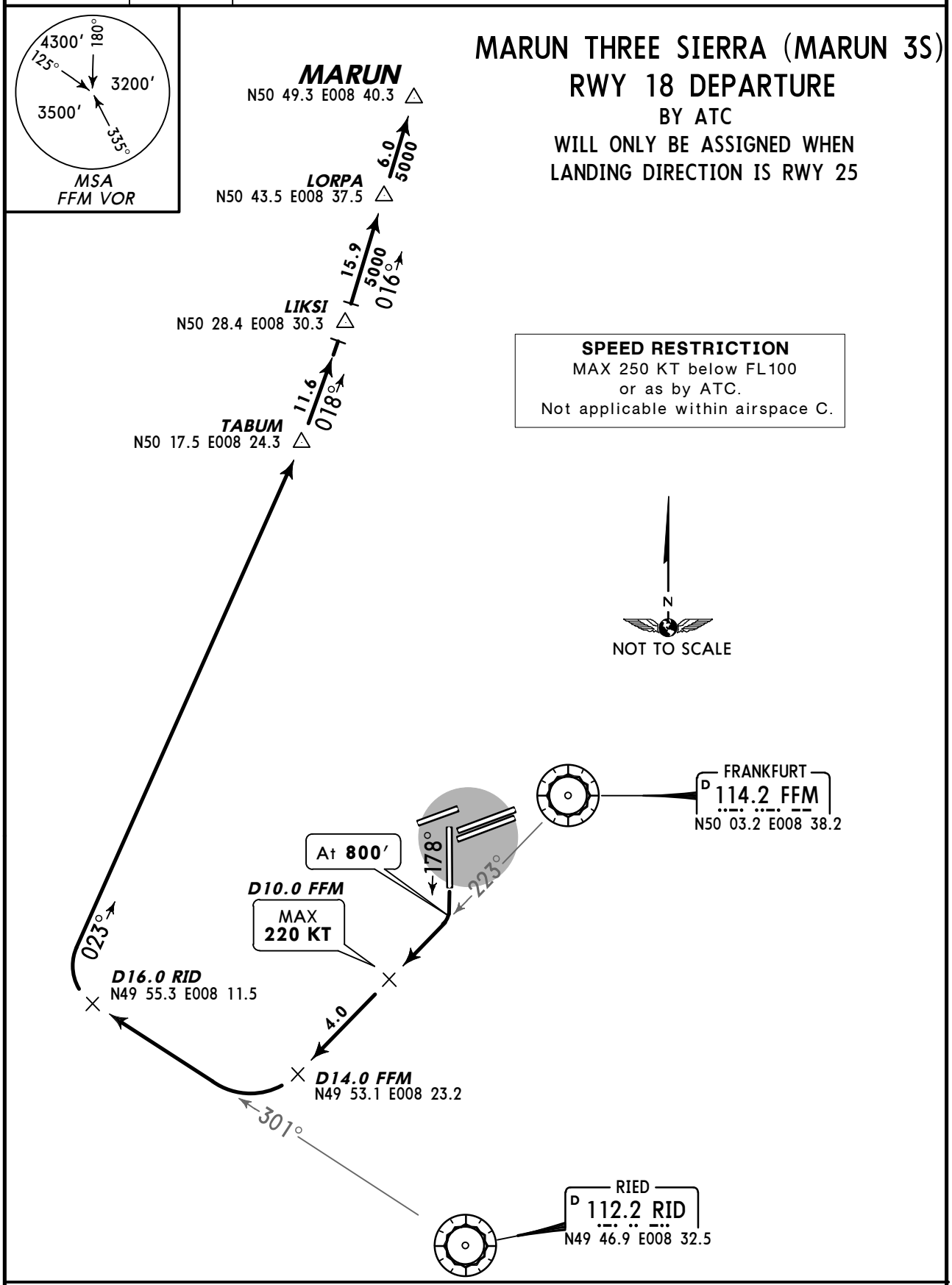
❶ After FFM R-200 BRNAV equipment necessary.

CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

MARUN THREE SIERRA (MARUN 3S)
RWY 18 DEPARTURE
BY ATC
WILL ONLY BE ASSIGNED WHEN
LANDING DIRECTION IS RWY 25



Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′, turn RIGHT, intercept FFM R-223 to D14.0 FFM, turn RIGHT, intercept RID R-301 to D16.0 RID ❶, turn RIGHT, 023° track to TABUM, turn LEFT, 018° track to LIKSI, turn LEFT, 016° track via LORPA to MARUN.

❶ After D16.0 RID BRNAV equipment necessary.

CHANGES: RWY layout; chart reindexed.

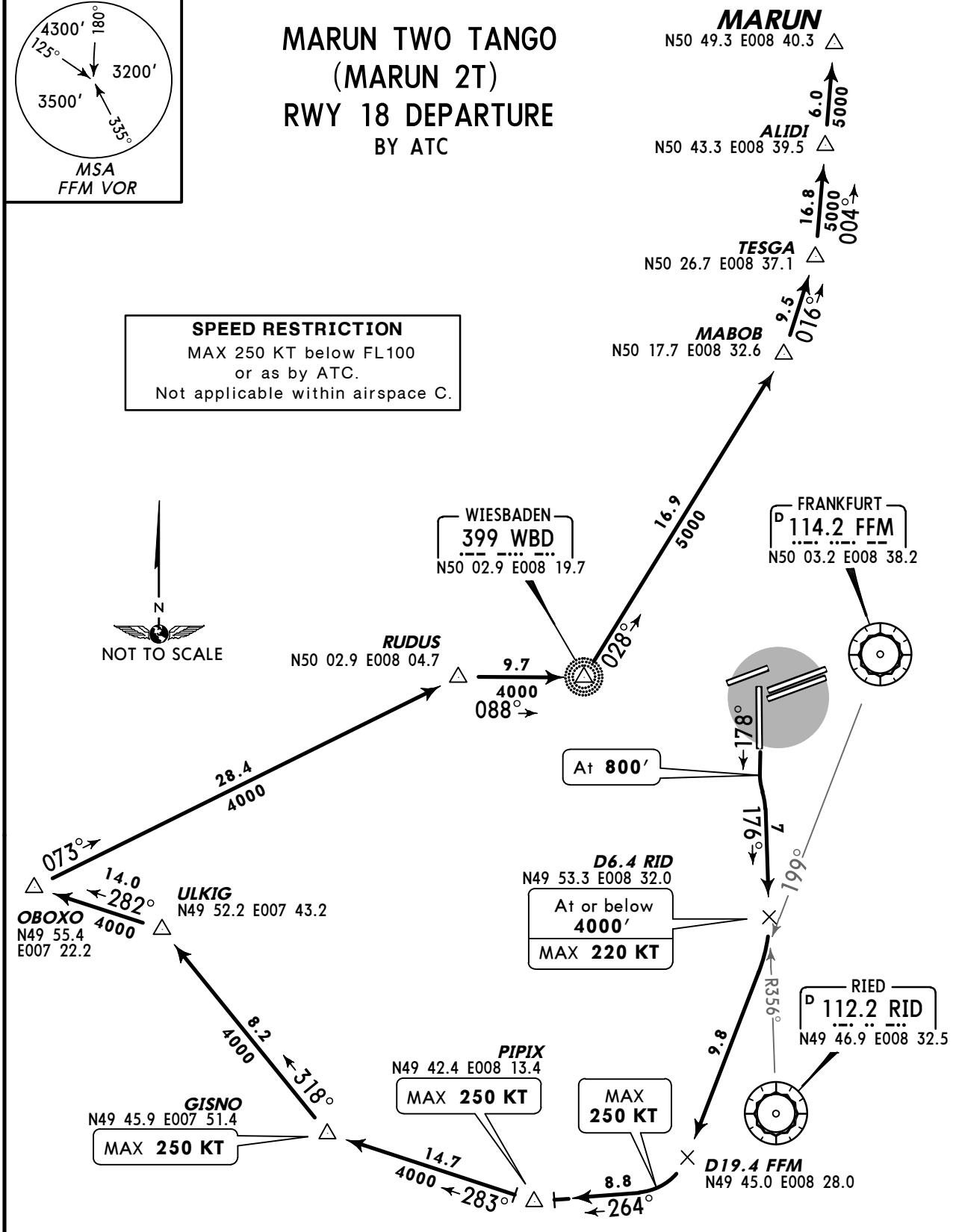
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

MARUN TWO TANGO (MARUN 2T) RWY 18 DEPARTURE

BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

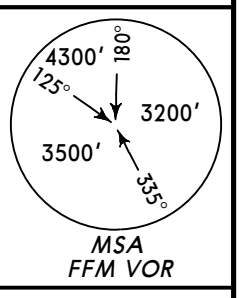
Climb on runway track to 800′, intercept RID R-356 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199 to D19.4 FFM ❶, turn RIGHT, 264° track to PIPIX, turn RIGHT, 283° track to GISNO, turn RIGHT, 318° track to ULKIG, turn LEFT, 282° track to OBOXO, turn RIGHT, 073° track to RUDUS, turn RIGHT, intercept 088° bearing to WBD, turn LEFT, 028° bearing to MABOB, turn LEFT, 016° track to TESGA, turn LEFT, 004° track via ALIDI to MARUN.

❶ After D19.4 FFM BRNAV equipment necessary.

CHANGES: RWY layout; chart reindexed.

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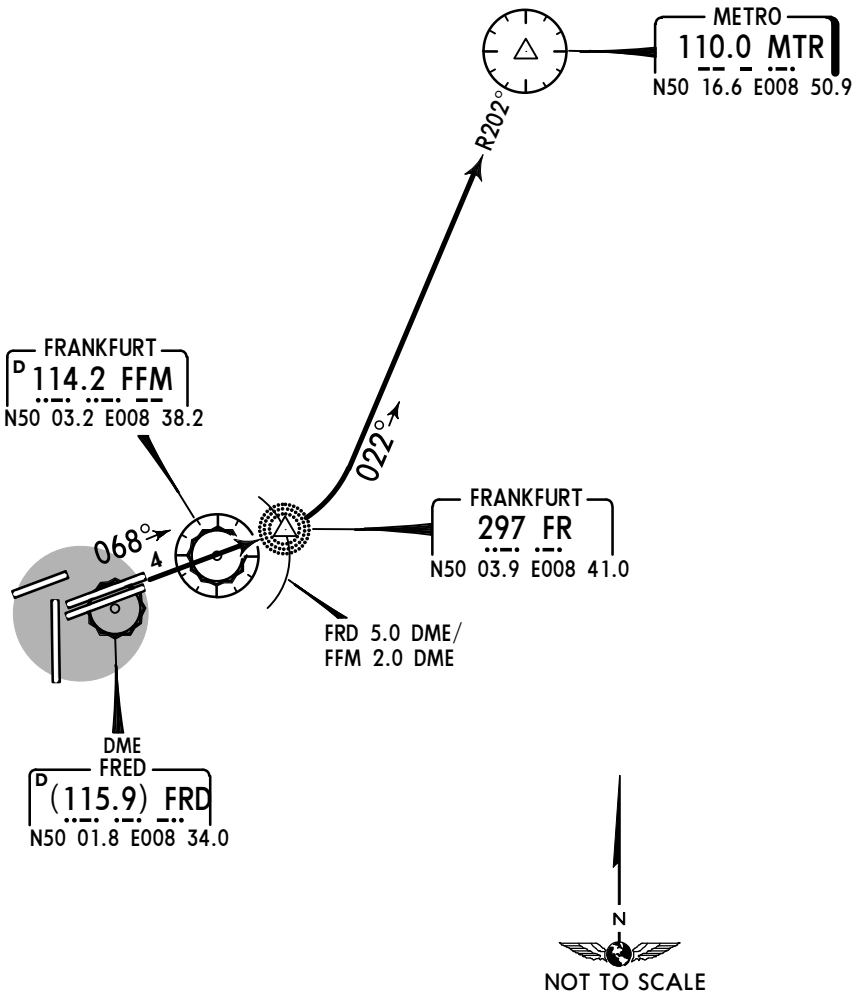
*LANGEN Radar 120.15	*Apt Elev* 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



METRO FOUR CHARLIE (MTR 4C)
RWYS 07C/R DEPARTURE

NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT ONLY
DELAY HAS TO BE EXPECTED
FURTHER ROUTING TO DESTINATION SHALL BE BASED ON VOR AND HAS TO BE COORDINATED WITH ATC PRIOR TO START-UP
NO RNAV OVERLAY EXISTING
MAX FL90
SPECIAL PERMISSION NEEDED PRIOR TO FLIGHT

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

ROUTING

Climb on runway track to 800′, to FR (FRD 5.0 DME/FFM 2.0 DME outbound), turn LEFT **immediately,** intercept MTR R-202 inbound to MTR.

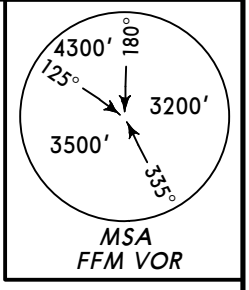
CHANGES: RWY layout; chart reindexed.

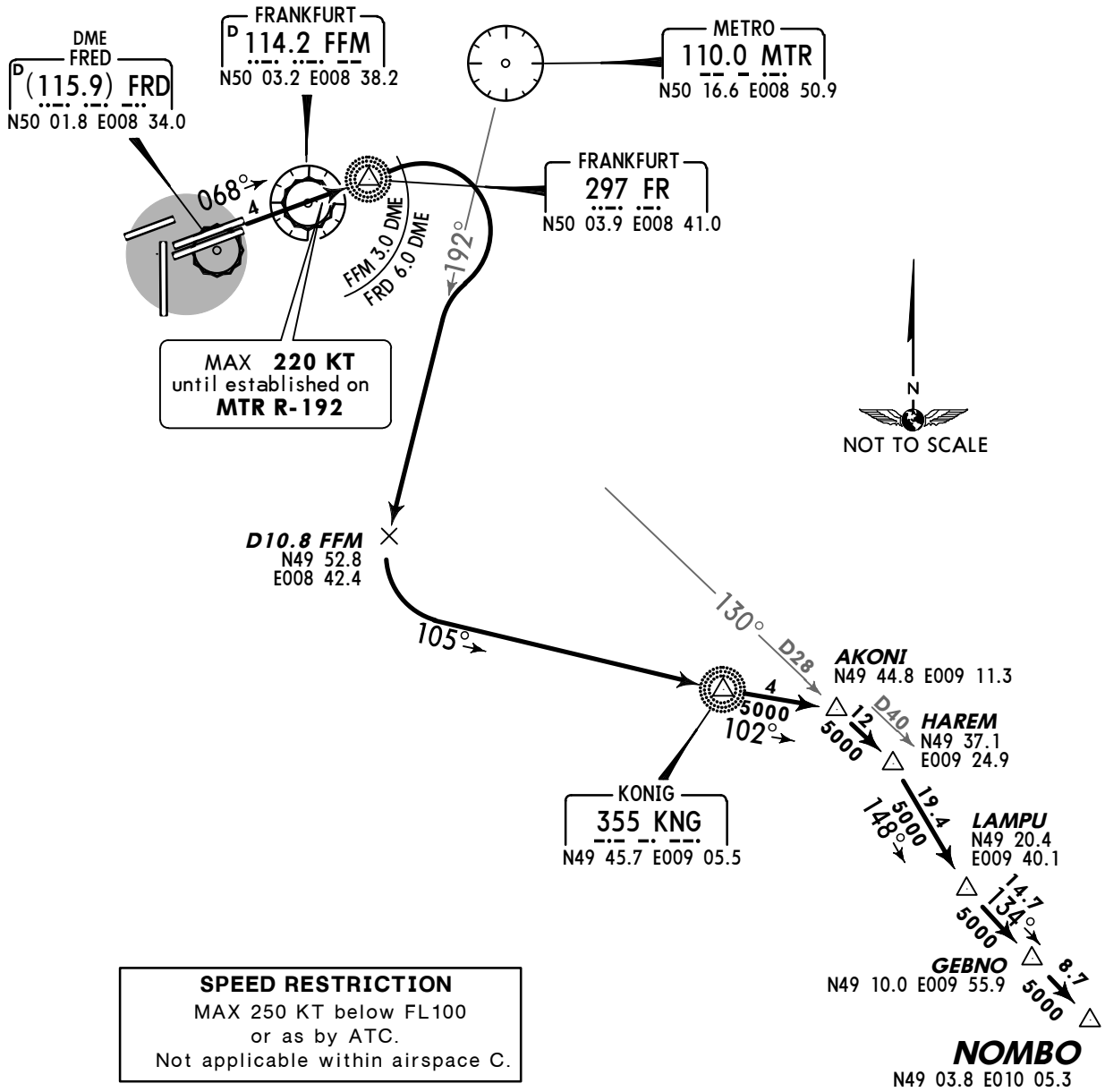
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

NOMBO EIGHT DELTA (NOMBO 8D)
NOMBO SEVEN ECHO (NOMBO 7E)
RWYS 07C/R DEPARTURES

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′, via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, intercept MTR R-192, at D10.8 FFM turn LEFT, intercept 105° bearing to KNG, turn LEFT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130 to HAREM ❶, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track via GEBNO to NOMBO.

❶ After HAREM BRNAV equipment necessary.

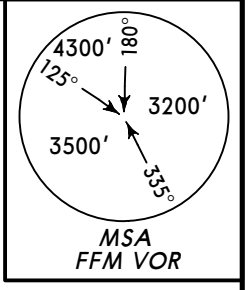
CHANGES: RWY layout; chart reindexed.

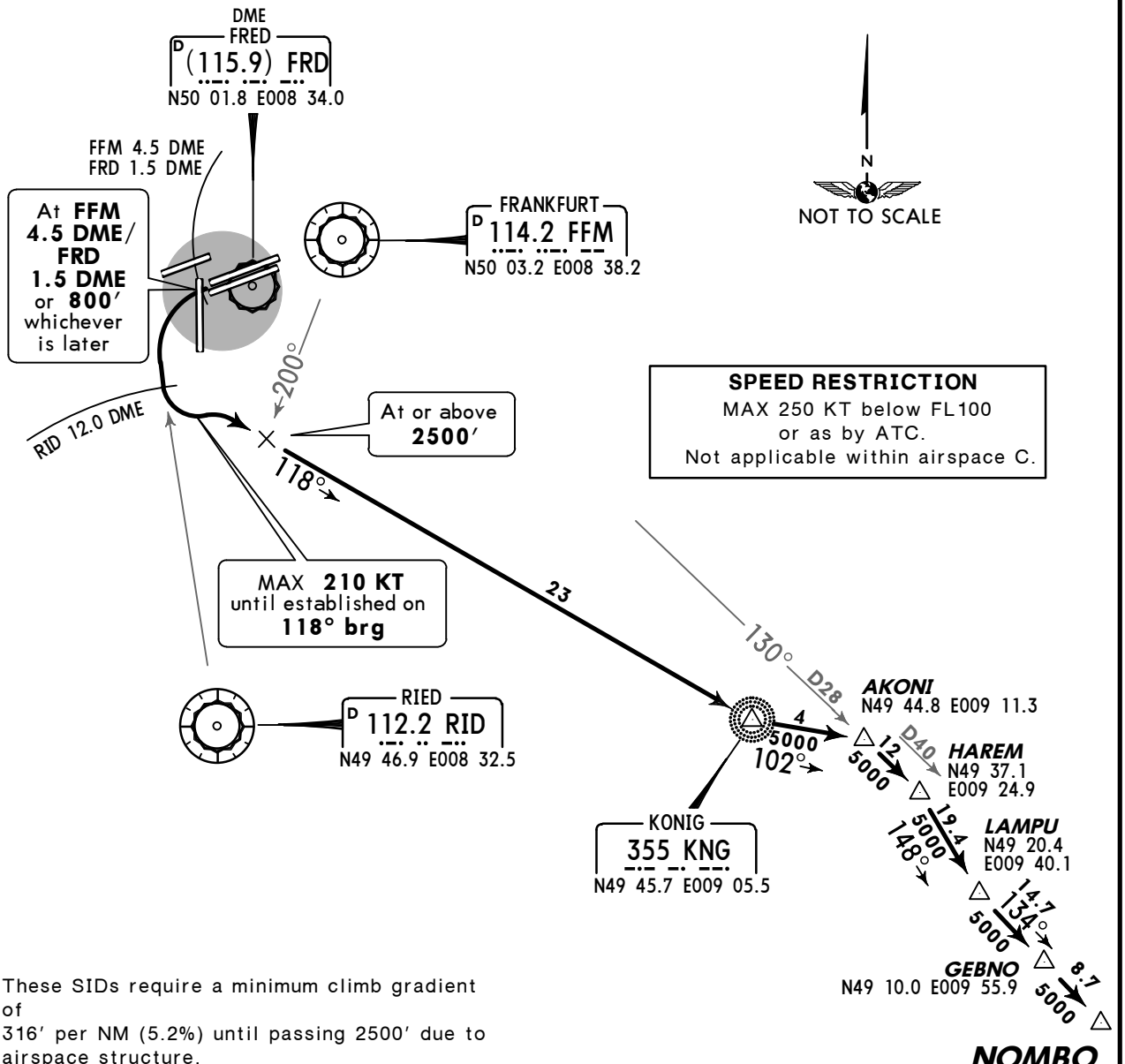
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*LANGEN Radar 136.12	*Apt Elev* 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

NOMBO SIX FOXTROT (NOMBO 6F)
NOMBO SEVEN GOLF (NOMBO 7G)
RWYS 25L/C DEPARTURES

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance 5000′

ROUTING

Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT towards RID, at RID 12.0 DME turn LEFT, intercept 118° bearing to KNG, turn LEFT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130 to HAREM ❶, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track via GEBNO to NOMBO.

❶ After HAREM BRNAV equipment necessary.

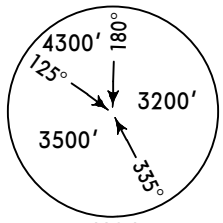
CHANGES: RWY layout; initial contact; chart reindexed.

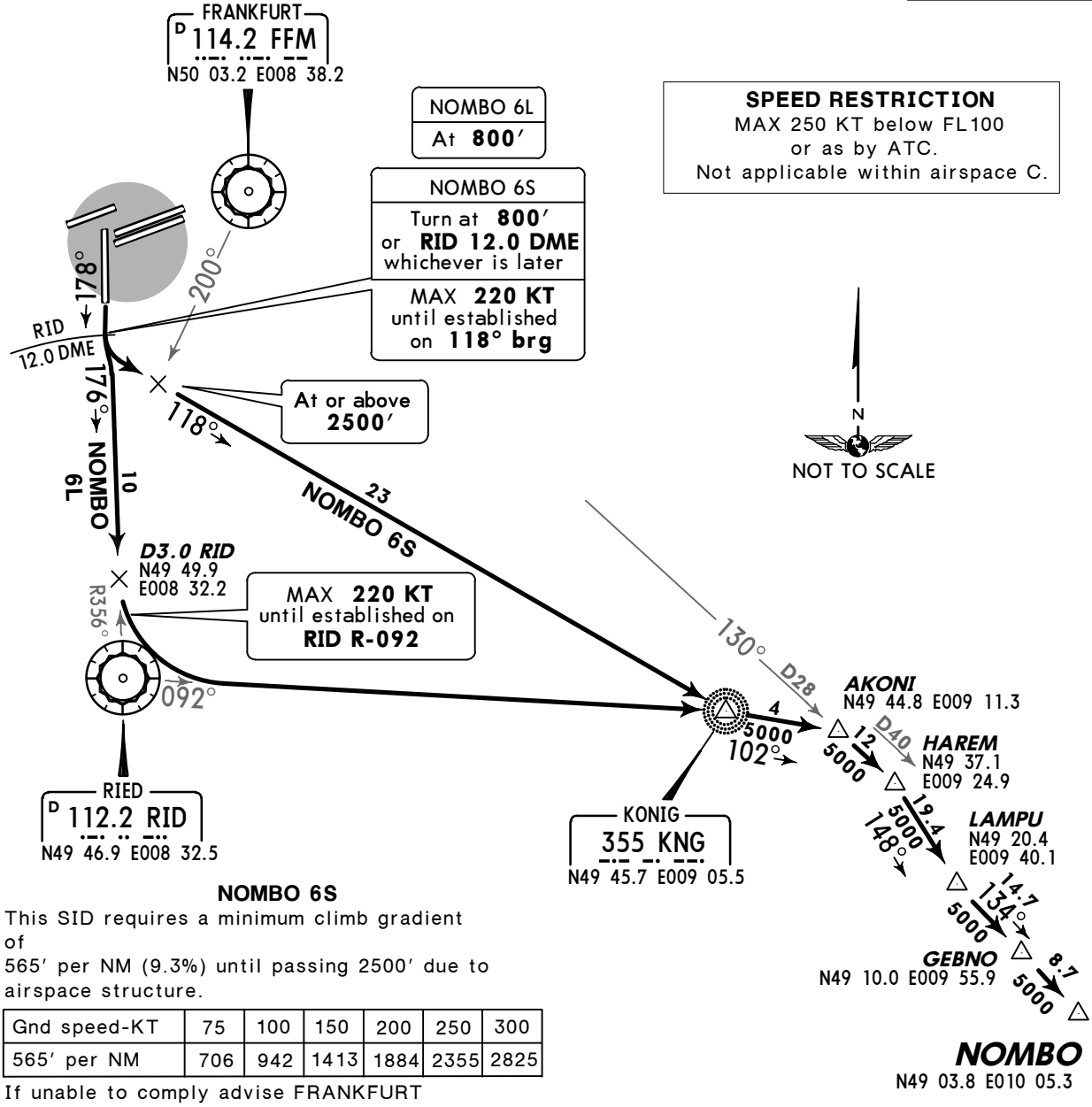
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

NOMBO SIX LIMA (NOMBO 6L)
NOMBO SIX SIERRA (NOMBO 6S)
RWY 18 DEPARTURES

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





NOMBO 6S

This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via NOMBO 6L.

Initial climb clearance **4000′**

SID	ROUTING
NOMBO 6L	Climb on runway track to 800′, intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to KNG, turn RIGHT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130 to HAREM ❶, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track via GEBNO to NOMBO.
NOMBO 6S	Climb on runway track to 800′, or RID 12.0 DME, whichever is later, turn LEFT, intercept 118° bearing to KNG, turn LEFT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130 to HAREM ❶, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° via GEBNO to NOMBO.

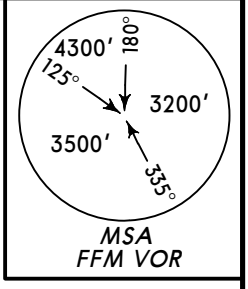
❶ After HAREM BRNAV equipment necessary.

CHANGES: RWY layout; chart reindexed.

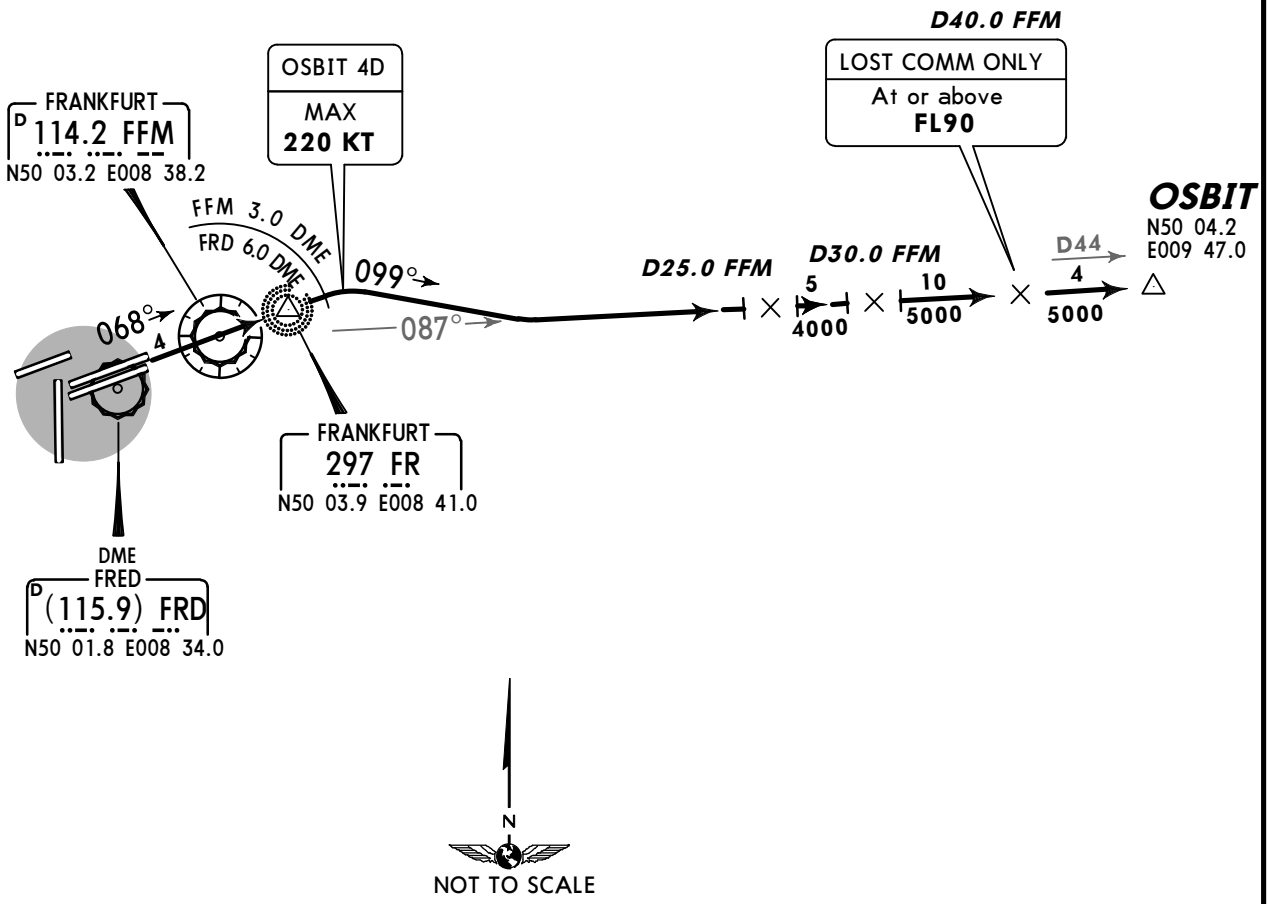
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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

OSBIT FOUR DELTA (OSBIT 4D)
OSBIT THREE ECHO (OSBIT 3E)
RWYS 07C/R DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′, via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, 099° track, turn LEFT, intercept FFM R-087 to OSBIT.

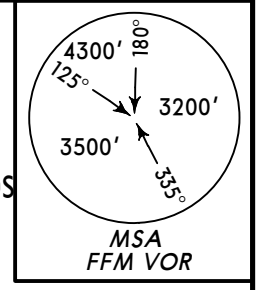
CHANGES: RWY layout; chart reindexed.

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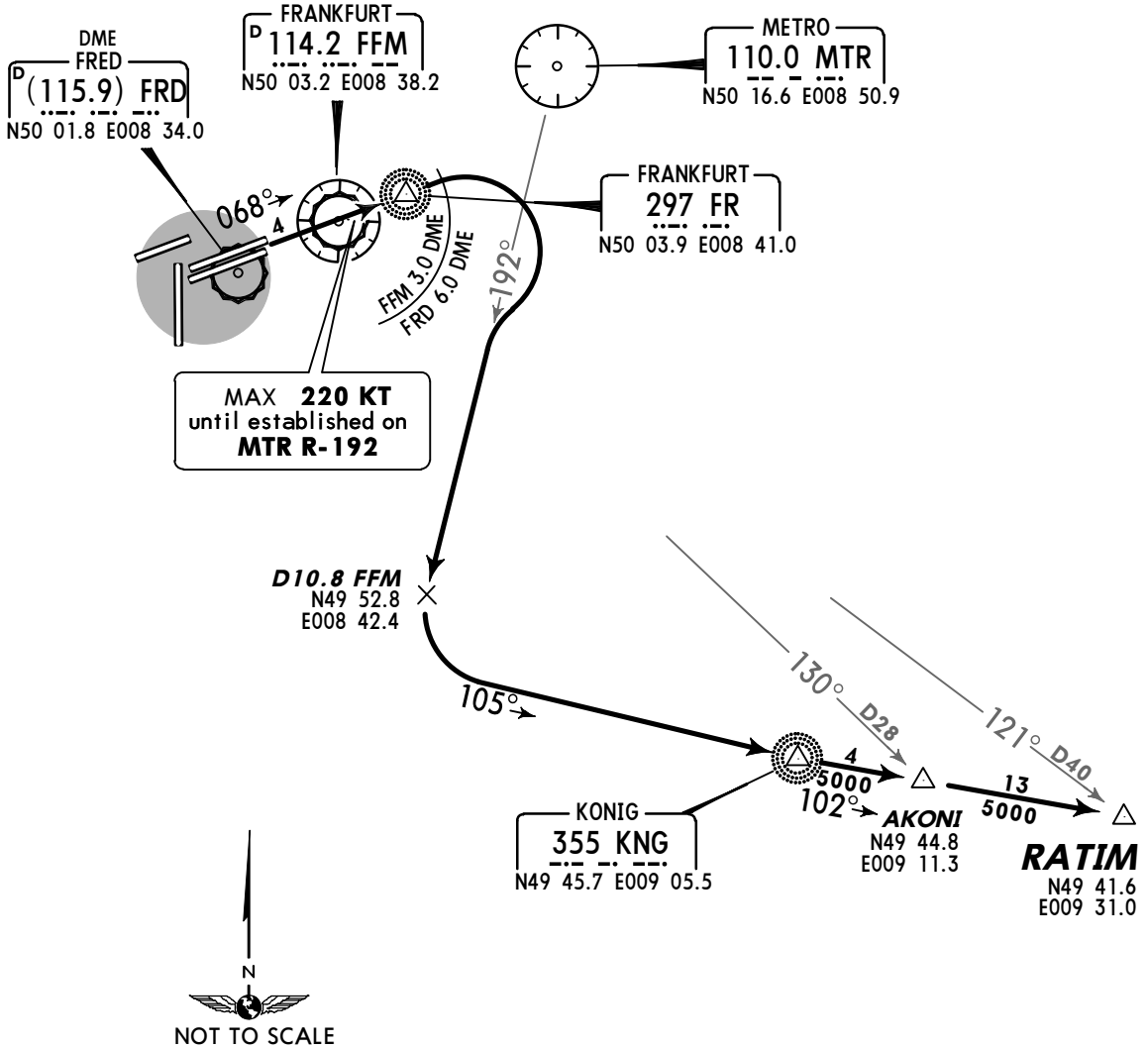
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

RATIM FOUR DELTA (RATIM 4D)
RATIM FOUR ECHO (RATIM 4E)
RWYS 07C/R DEPARTURES

ONLY PROP ACFT WITH MAX FL230 REQUESTED INSTEAD OF NOMBO SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′, via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, intercept MTR R-192, at D10.8 FFM turn LEFT, intercept 105° bearing to KNG, turn LEFT, 102° bearing via AKONI to RATIM.

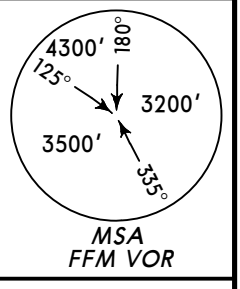
CHANGES: RWY layout; chart reindexed.

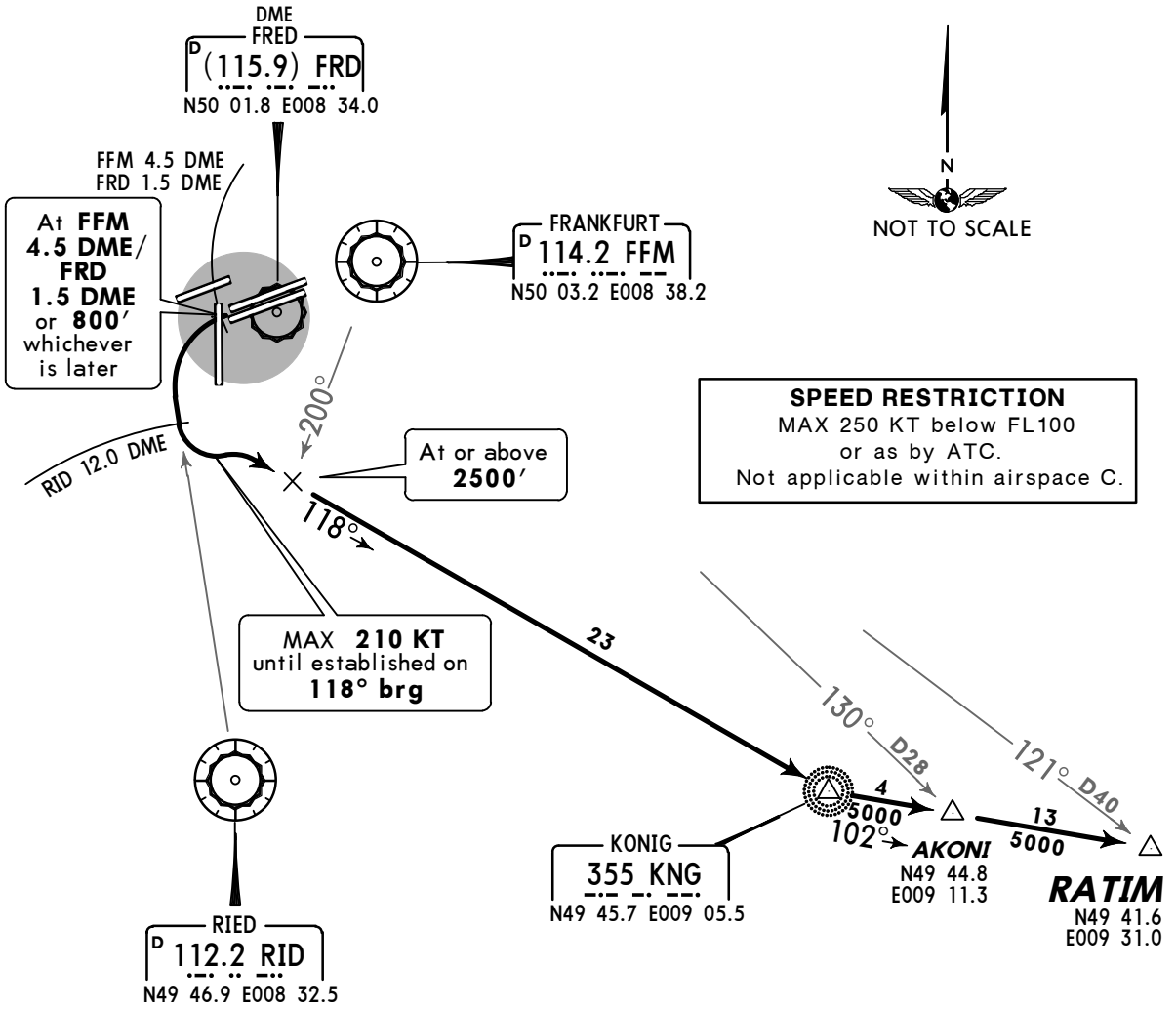
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

RATIM FOUR FOXTROT (RATIM 4F)
RATIM FOUR GOLF (RATIM 4G)
RWYS 25L/C DEPARTURES

ONLY PROP ACFT WITH MAX FL230 REQUESTED INSTEAD OF NOMBO SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

ROUTING

Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT towards RID, at RID 12.0 DME turn LEFT, intercept 118° bearing to KNG, turn LEFT, 102° bearing via AKONI to RATIM.

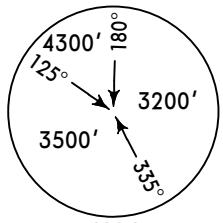
CHANGES: RWY layout; initial contact; chart reindexed.

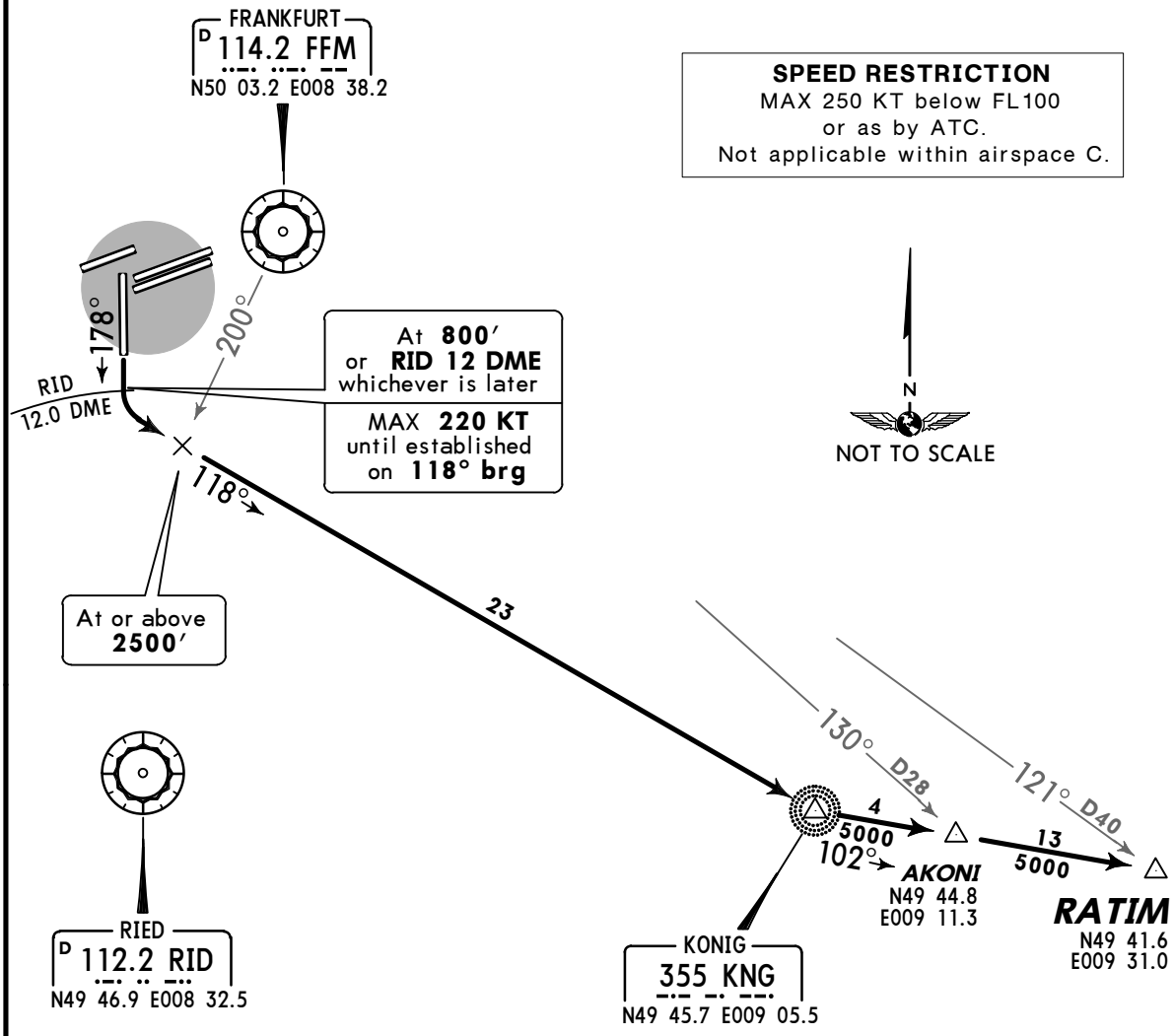
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

RATIM THREE SIERRA (RATIM 3S)
RWY 18 DEPARTURE

ONLY PROP ACFT WITH MAX FL230 REQUESTED INSTEAD OF NOMBO SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect alternate routing by ATC.

Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′ or RID 12.0 DME, whichever is later, turn LEFT, intercept 118° bearing to KNG, turn LEFT, 102° bearing via AKONI to RATIM.

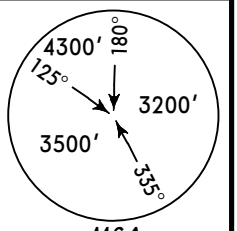
CHANGES: RWY layout; chart reindexed.

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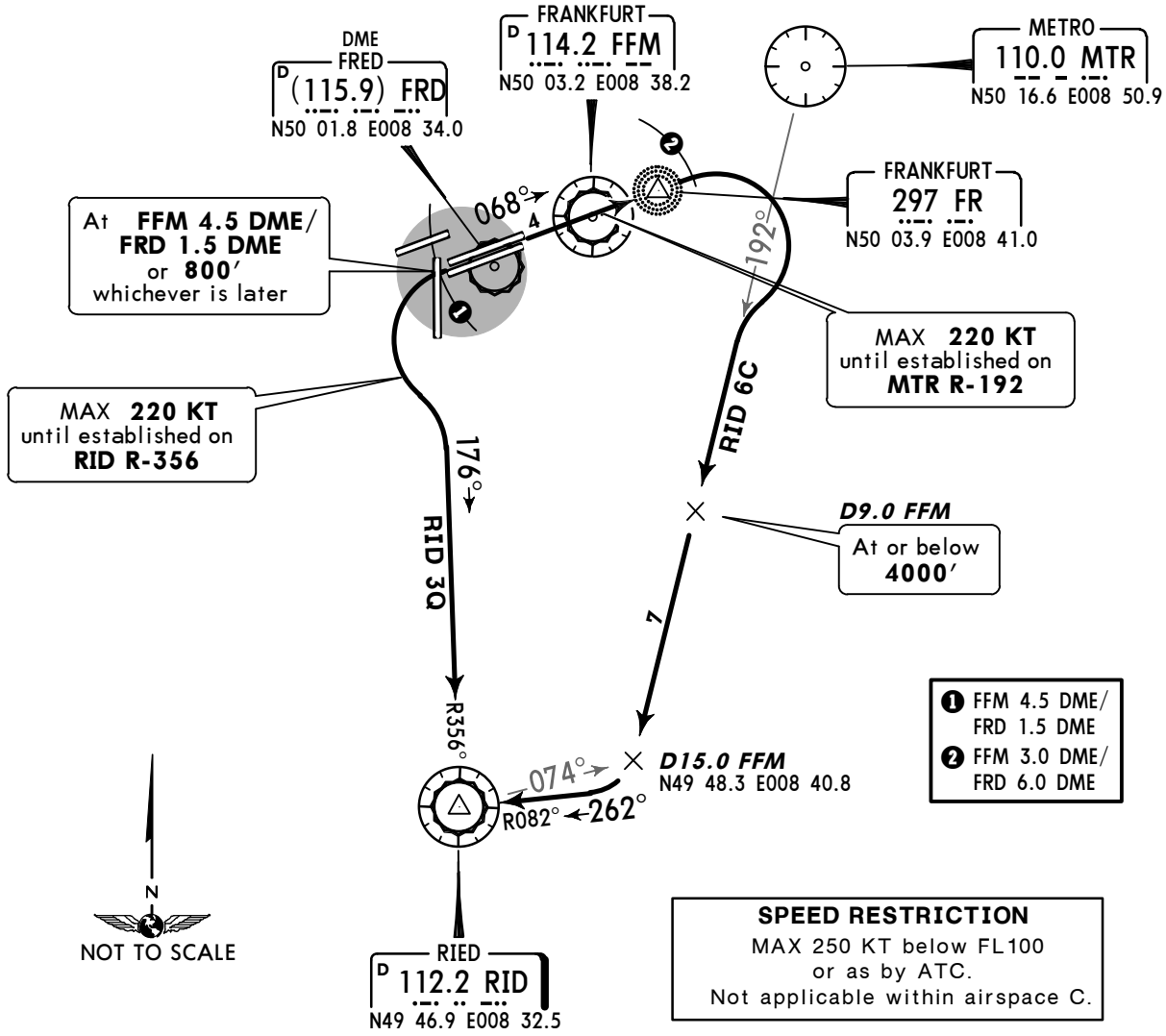
*LANGEN Radar 136.12	*Apt Elev* 364′	Trans level: By ATC Trans alt: 5000′ 1. RWY 07: Contact LANGEN Radar immediately after take-off. RWYs 25L/C: Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

RIED SIX CHARLIE (RID 6C)
RIED THREE QUEBEC (RID 3Q)
RWYS 07C/R, 25L/C DEPARTURES

NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT ONLY
DELAY HAS TO BE EXPECTED
FURTHER ROUTING TO DESTINATION SHALL BE BASED ON VOR AND HAS TO BE COORDINATED WITH ATC PRIOR TO START-UP
NO RNAV OVERLAY EXISTING
MAX FL90
SPECIAL PERMISSION NEEDED PRIOR TO FLIGHT



MSA
FFM VOR



RID 6C: Initial climb clearance **4000′**
RID 3Q: Initial climb clearance **5000′**

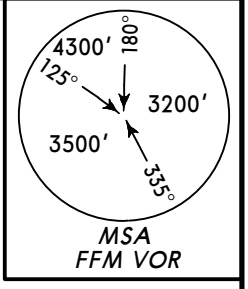
SID	RWY	ROUTING
RID 6C	**07C/R**	Climb on runway track to 800′, via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, intercept MTR R-192, at D15.0 FFM turn RIGHT, intercept RID R-082 inbound to RID.
RID 3Q	**25L/C**	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT, intercept RID R-356 inbound to RID.

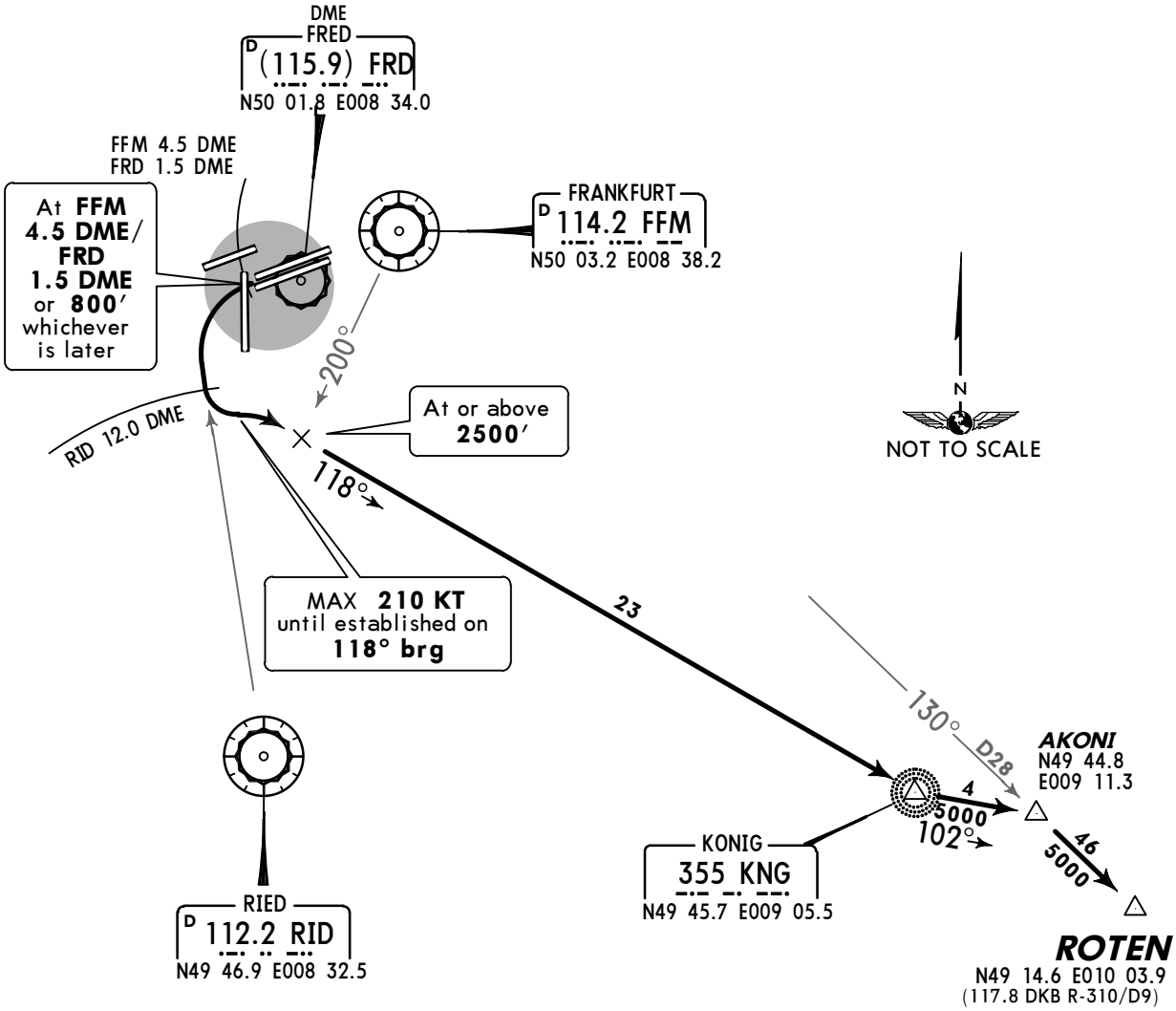
CHANGES: RWY layout; RWYS 25L/C initial contact; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

ROTEN FIVE FOXTROT (ROTEN 5F)
ROTEN FOUR GOLF (ROTEN 4G)
RWYS 25L/C DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA





These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

ROUTING

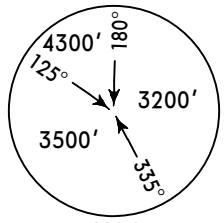
Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT towards RID, at RID 12.0 DME turn LEFT, intercept 118° bearing to KNG, turn LEFT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to ROTEN.

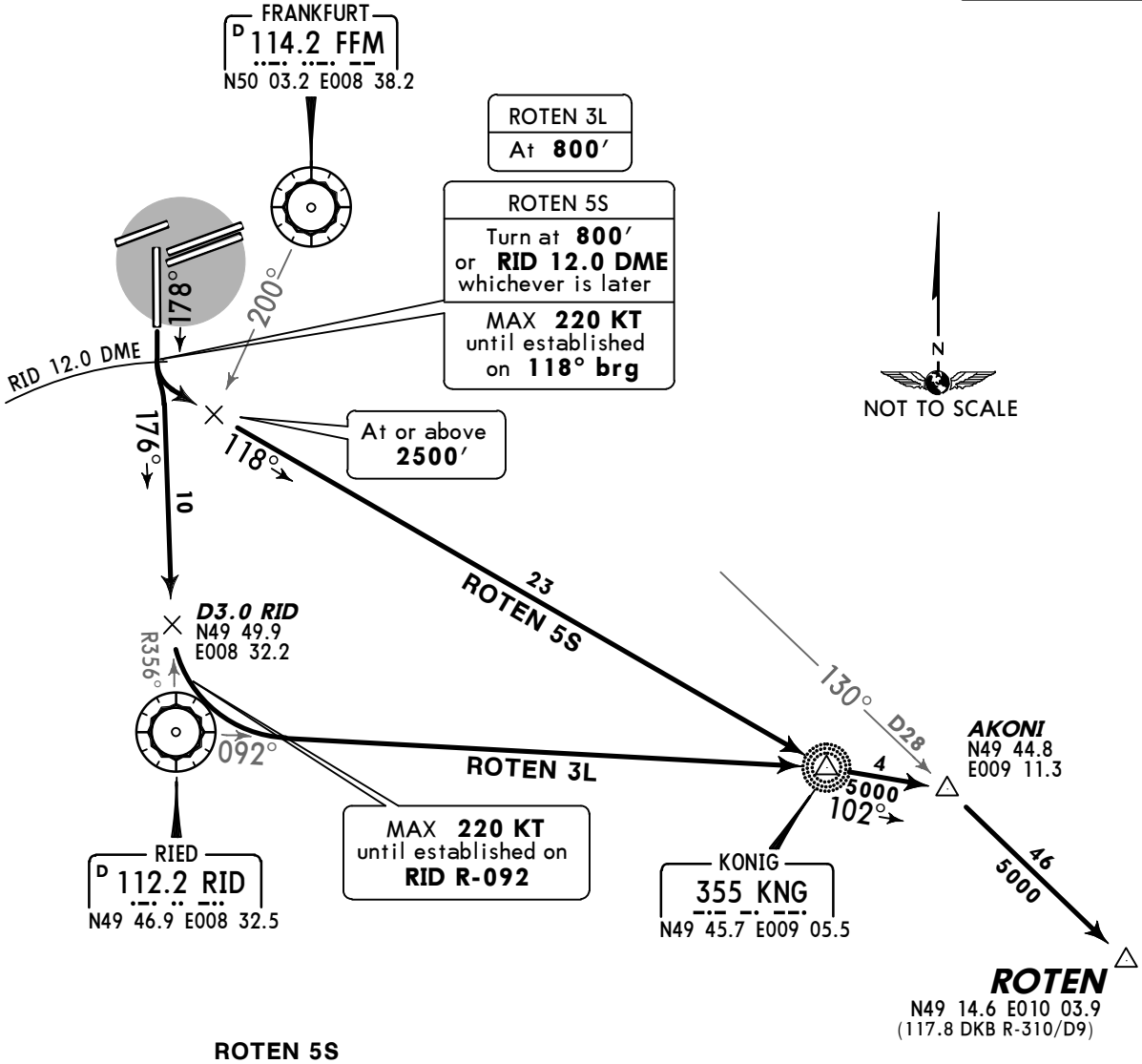
CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

ROTEN THREE LIMA (ROTEN 3L)
ROTEN FIVE SIERRA (ROTEN 5S)
RWY 18 DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA





ROTEN 5S

This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via ROTEN 3L.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	ROUTING
ROTEN 3L	Climb on runway track to 800′, intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to KNG, turn RIGHT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to ROTEN.
ROTEN 5S	Climb on runway track to 800′, or RID 12.0 DME, whichever is later, turn LEFT, intercept 118° bearing to KNG, turn LEFT, 102° bearing to AKONI, turn RIGHT, intercept FFM R-130/DKB R-310 inbound to ROTEN.

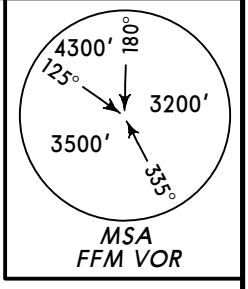
CHANGES: RWY layout; chart reindexed.

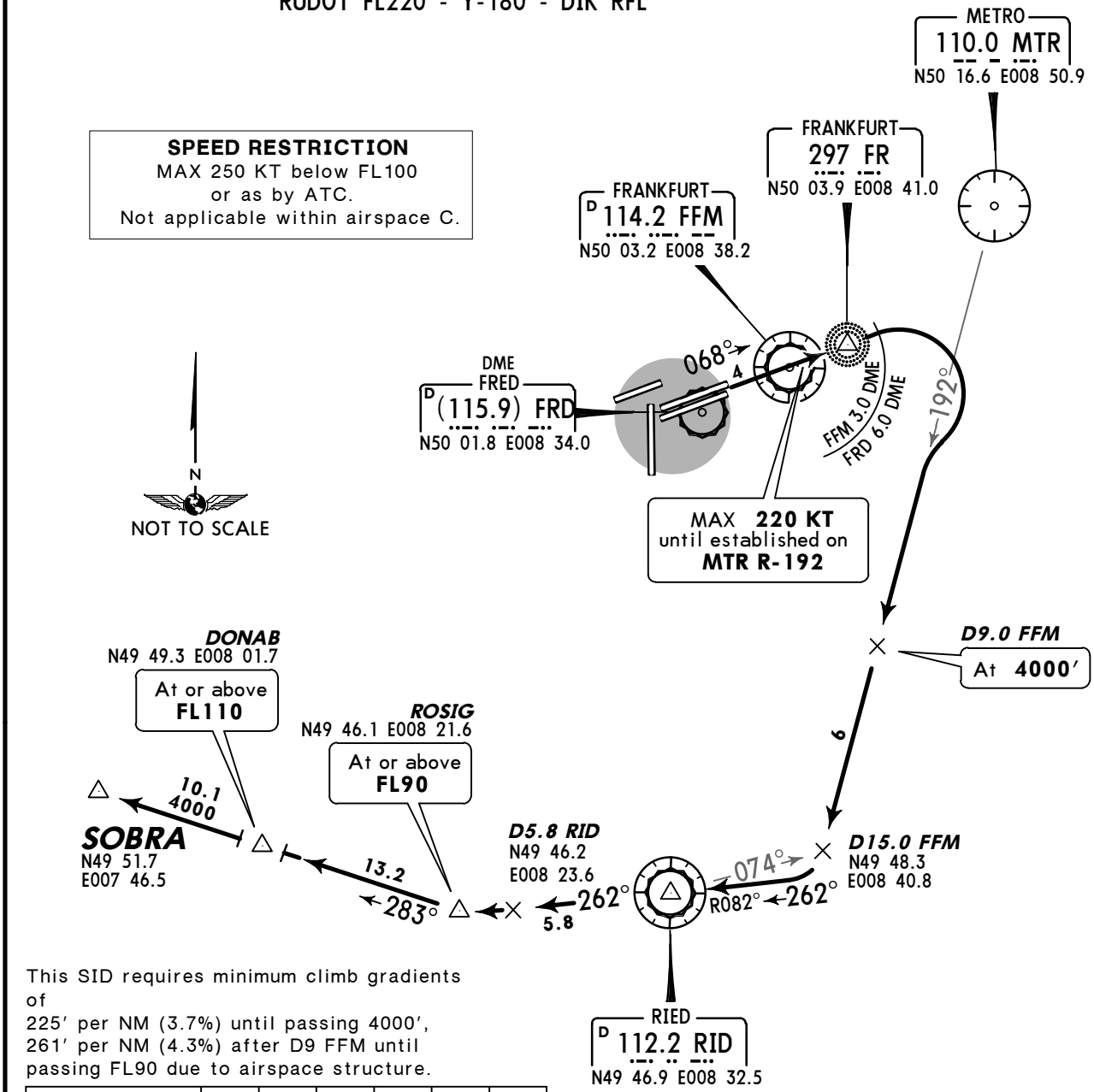
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SOBRA FOUR DELTA (SOBRA 4D)
RWYS 07C/R DEPARTURE

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y-180/Y-181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y-180 - DIK RFL





This SID requires minimum climb gradients of
225′ per NM (3.7%) until passing 4000′,
261′ per NM (4.3%) after D9 FFM until passing FL90 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
261′ per NM	327	435	653	871	1089	1306
225′ per NM	281	375	562	749	937	1124

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance 4000′

ROUTING

Climb on runway track to 800′, via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, intercept MTR R-192 to D15.0 FFM, turn RIGHT, intercept RID R-082 inbound to RID, RID R-262 to D5.8 RID ❶, turn RIGHT, 283° track via ROSIG and DONAB to SOBRA.

❶ After D5.8 RID BRNAV equipment necessary.

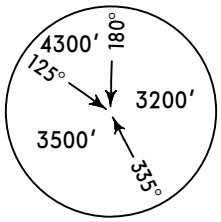
CHANGES: RWY layout; chart reindexed.

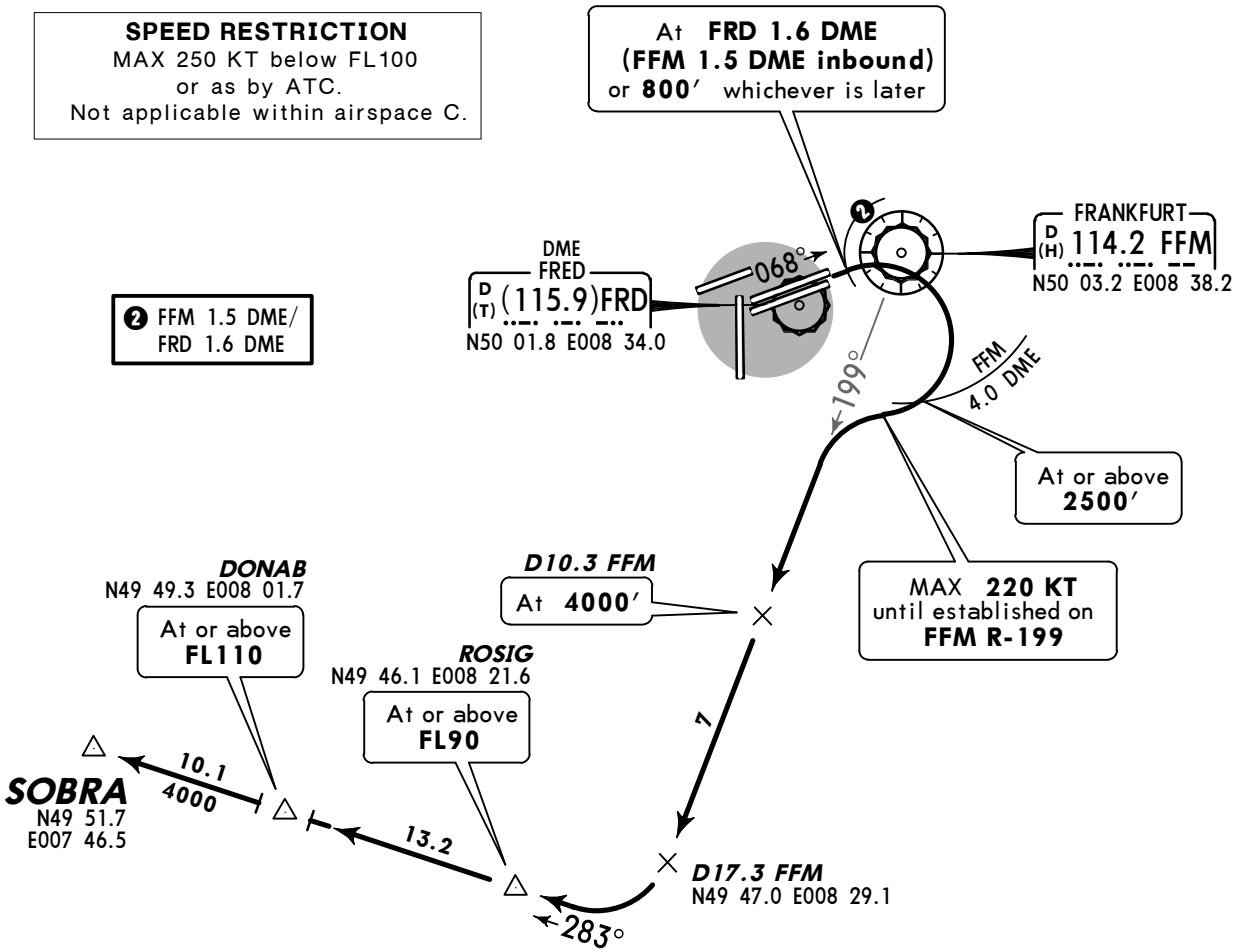
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*LANGEN Radar 136.12	*Apt Elev* 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SOBRA FOUR ECHO (SOBRA 4E)
RWYS 07C/R DEPARTURE

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y-180/Y-181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y-180 - DIK RFL

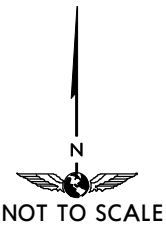




This SID requires minimum climb gradients of
383′ per NM (6.3%) until passing 2500′,
401′ per NM (6.6%) after D10.3 FFM until passing FL90 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
401′ per NM	501	668	1003	1337	1671	2005
383′ per NM	479	638	957	1276	1595	1914

If unable to comply advise FRANKFURT Delivery prior to start-up.



Initial climb clearance **4000′**

ROUTING

Climb on runway track to FRD 1.6 DME (FFM 1.5 DME inbound) or 800′, whichever is later, turn RIGHT, intercept FFM R-199, at D17.3 FFM ❶, turn RIGHT, 283° track via ROSIG and DONAB to SOBRA.

❶ After D17.3 FFM BRNAV equipment necessary.

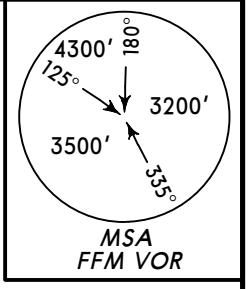
CHANGES: Initial contact.

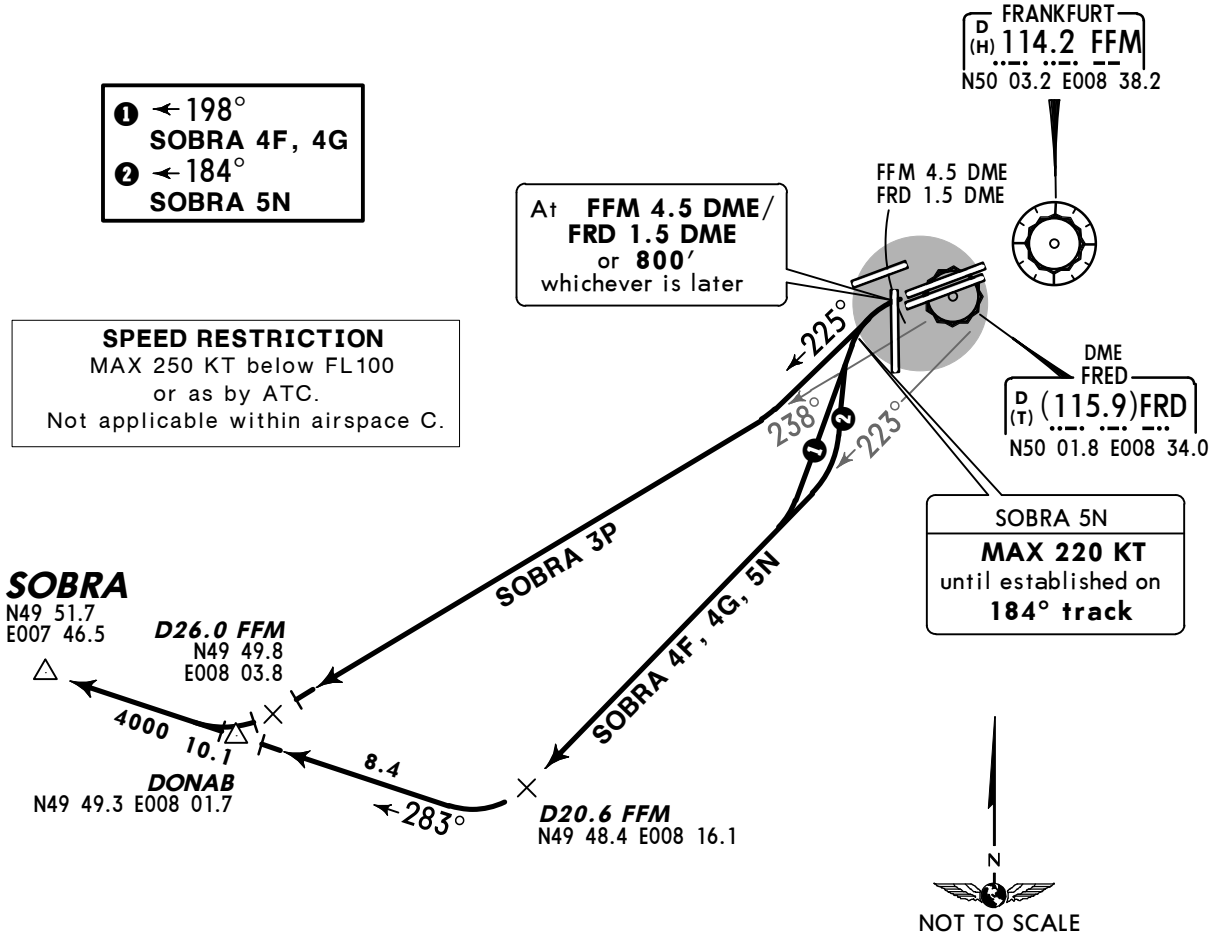
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*LANGEN Radar	*Apt Elev*	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SOBRA FOUR FOXTROT (SOBRA 4F)
SOBRA FOUR GOLF (SOBRA 4G)
SOBRA FIVE NOVEMBER (SOBRA 5N)
SOBRA THREE PAPA (SOBRA 3P)
RWYS 25L/C DEPARTURES

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y-180/Y-181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y-180 - DIK RFL





Initial climb clearance **5000′**

SID	ROUTING
SOBRA 4F, 4G	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT, 198° track, turn RIGHT, intercept FFM R-223, at D20.6 FFM ❸ turn RIGHT, 283° track via DONAB to SOBRA.
SOBRA 5N	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT, 184° track, intercept FFM R-223, at D20.6 FFM ❸ turn RIGHT, 283° track via DONAB to SOBRA.
SOBRA 3P	Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT, 225° track (RWY 25L: 228° track), intercept FFM R-238, at D26.0 FFM ❹ turn RIGHT, 283° track to SOBRA.

BRNAV equipment necessary after: ❸ D20.6 FFM/ ❹ D26.0 FFM.

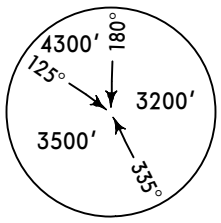
CHANGES: Communications.

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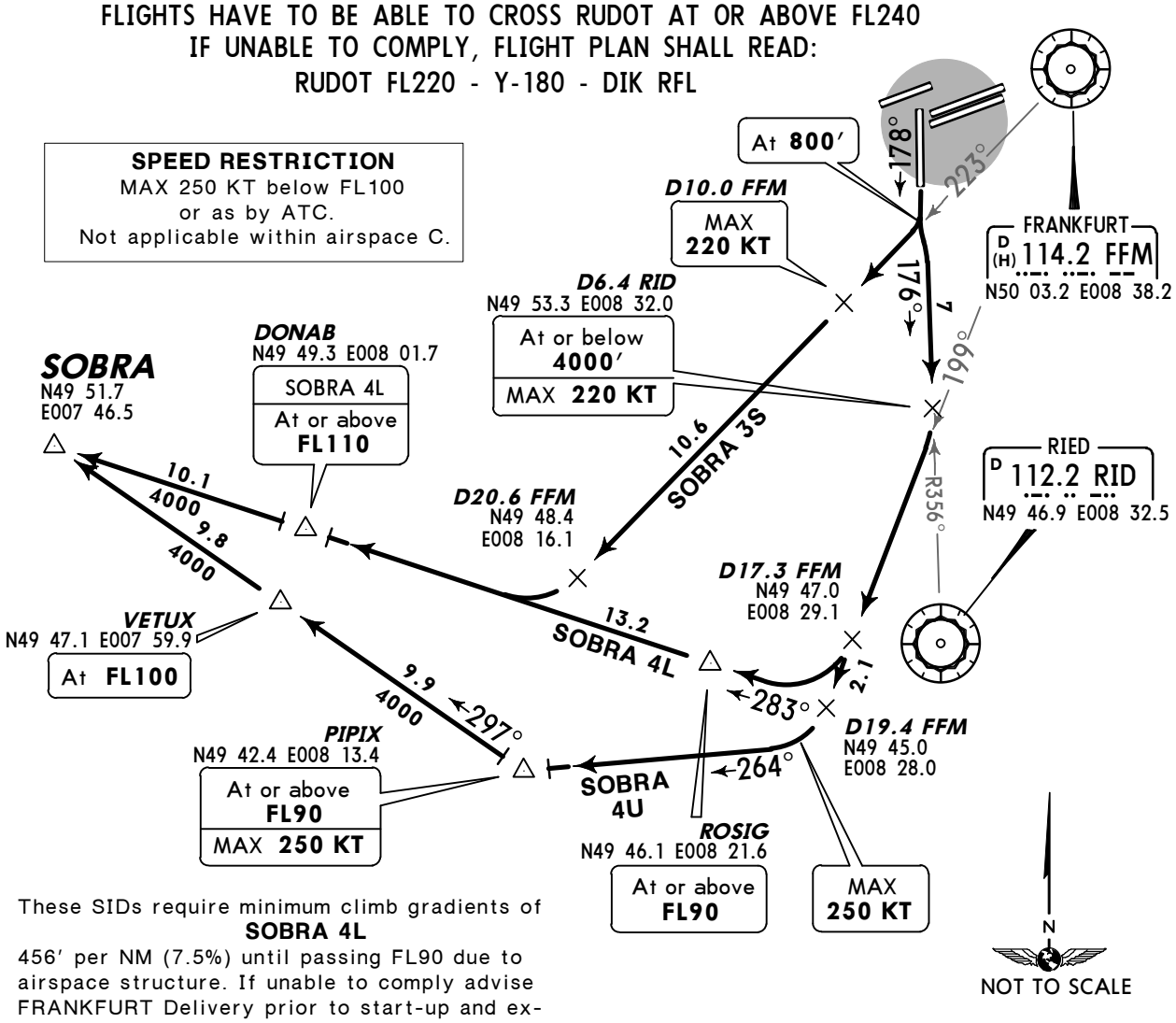
*LANGEN Radar SOBRA 4L, 4U 136.12 SOBRA 3S 120.15	*Apt Elev* 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

SOBRA FOUR LIMA (SOBRA 4L)
SOBRA THREE SIERRA (SOBRA 3S)
SOBRA FOUR UNIFORM (SOBRA 4U)
RWY 18 DEPARTURES

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y-180/Y-181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y-180 - DIK RFL



MSA
FFM VOR



These SIDs require minimum climb gradients of

SOBRA 4L

456′ per NM (7.5%) until passing FL90 due to airspace structure. If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via SOBRA 4U.

SOBRA 4U

328′ per NM (5.4%) until passing FL90 due to airspace structure. If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via ULKIG 5U.

Gnd speed-KT	75	100	150	200	250	300
456′ per NM	570	760	1139	1519	1899	2279
328′ per NM	410	547	820	1094	1367	1641

Initial climb clearance **4000′**

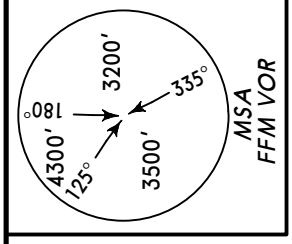
SID	ROUTING
SOBRA 4L Will be assigned when landing direction is 07	Climb on runway track to 800′, intercept RID R-356 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199, at D17.3 FFM ❶ turn RIGHT, 283° track via ROSIG and DONAB to SOBRA.
SOBRA 3S Only to be used when landing direction is 25	Climb on runway track to 800′, turn RIGHT, intercept FFM R-223, at D20.6 FFM ❷ turn RIGHT, 283° track via DONAB to SOBRA.
SOBRA 4U	Climb on runway track to 800′, intercept RID R-356 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199, at D19.4 FFM ❸ turn RIGHT, 264° track to PIPIX, turn RIGHT, 297° track via VETUX to SOBRA.

BRNAV equipment necessary after: ❶ D17.3 FFM/ ❷ D20.6 FFM/ ❸ D19.4 FFM.

CHANGES: Communications; initial contact.

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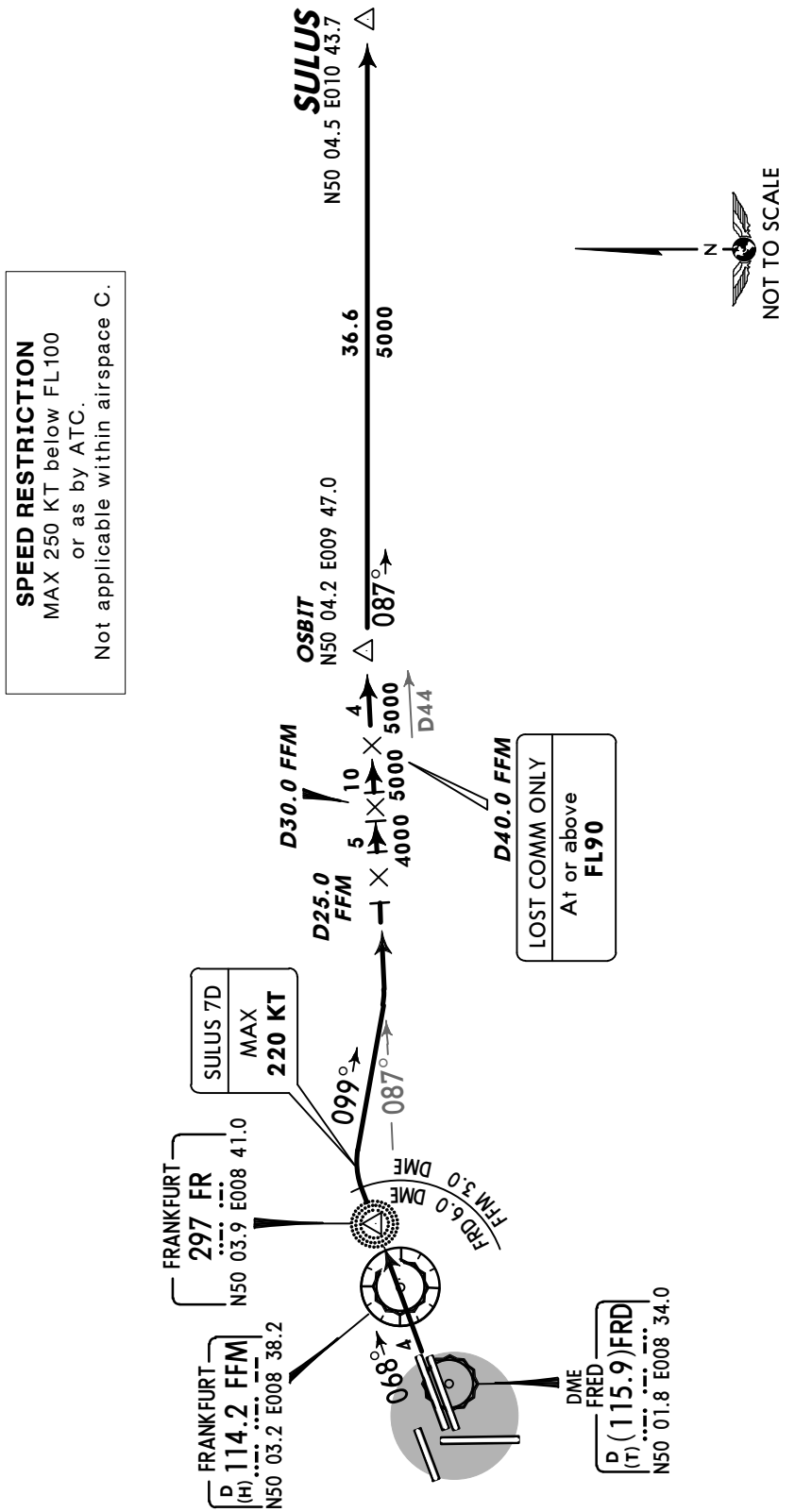
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



SULUS SEVEN DELTA (SULUS 7D)
SULUS FIVE ECHO (SULUS 5E)
RWYS 07C/R DEPARTURES

NOT FOR FLIGHTS DESTINATION EDDN

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance 4000′

ROUTING

Climb on runway track to 800′, via FR to FRD 6.0 DME (FFM 3.0 DME outbound), turn RIGHT, 099° track, turn LEFT, intercept FFM R-087 to OSBIT ❶, 087° track to SULUS.

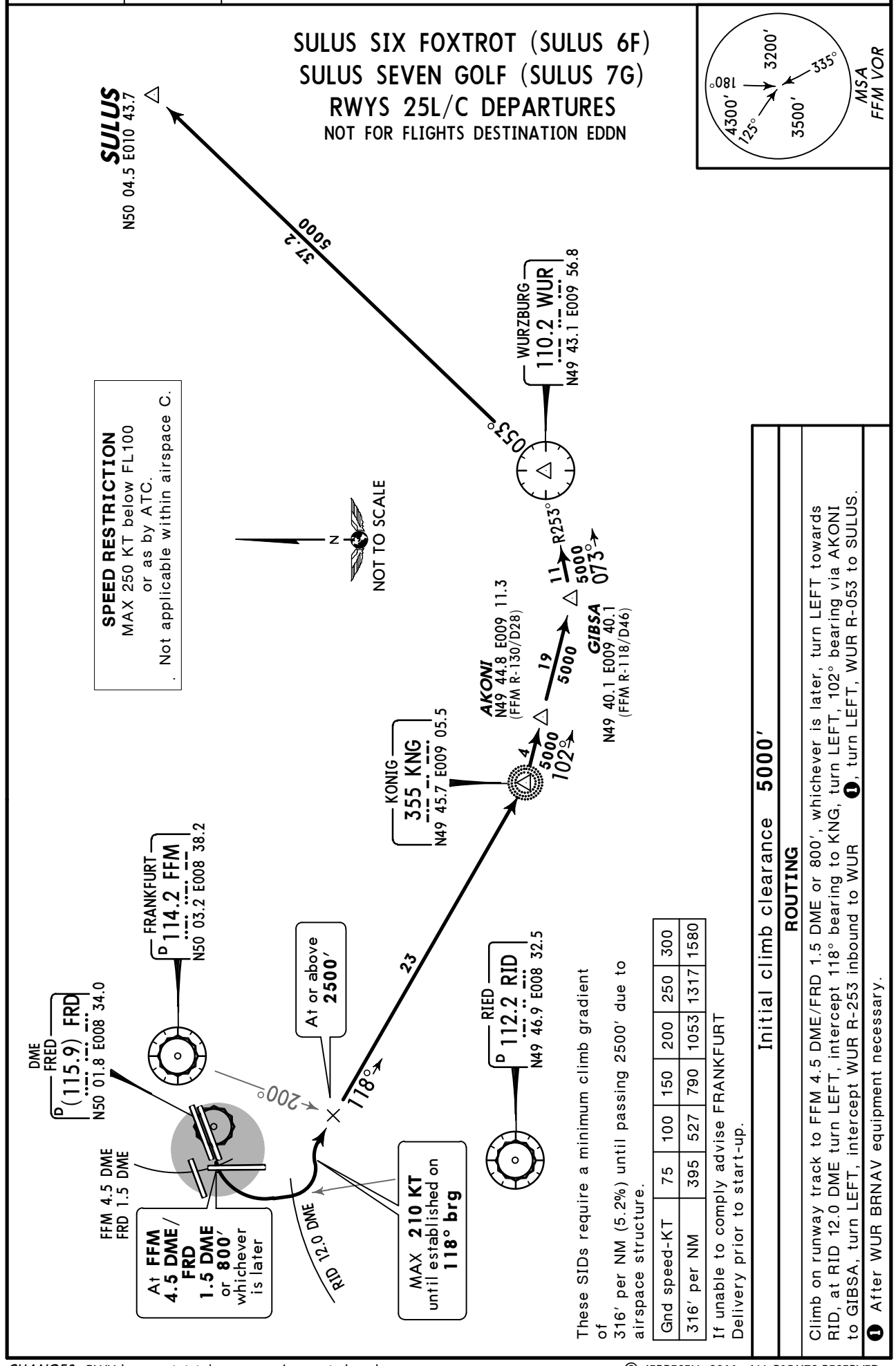
❶ After OSBIT BRNAV equipment necessary.

CHANGES: Initial contact.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SULUS SIX FOXTROT (SULUS 6F)
SULUS SEVEN GOLF (SULUS 7G)
RWYS 25L/C DEPARTURES
NOT FOR FLIGHTS DESTINATION EDDN



These SIDs require a minimum climb gradient of 316′ per NM (5.2%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance 5000′

ROUTING

Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT towards RID, at RID 12.0 DME turn LEFT, intercept 118° bearing to KNG, turn LEFT, 102° bearing via AKONI to GIBSA, turn LEFT, intercept WUR R-253 inbound to WUR ❶, turn LEFT, WUR R-053 to SULUS.

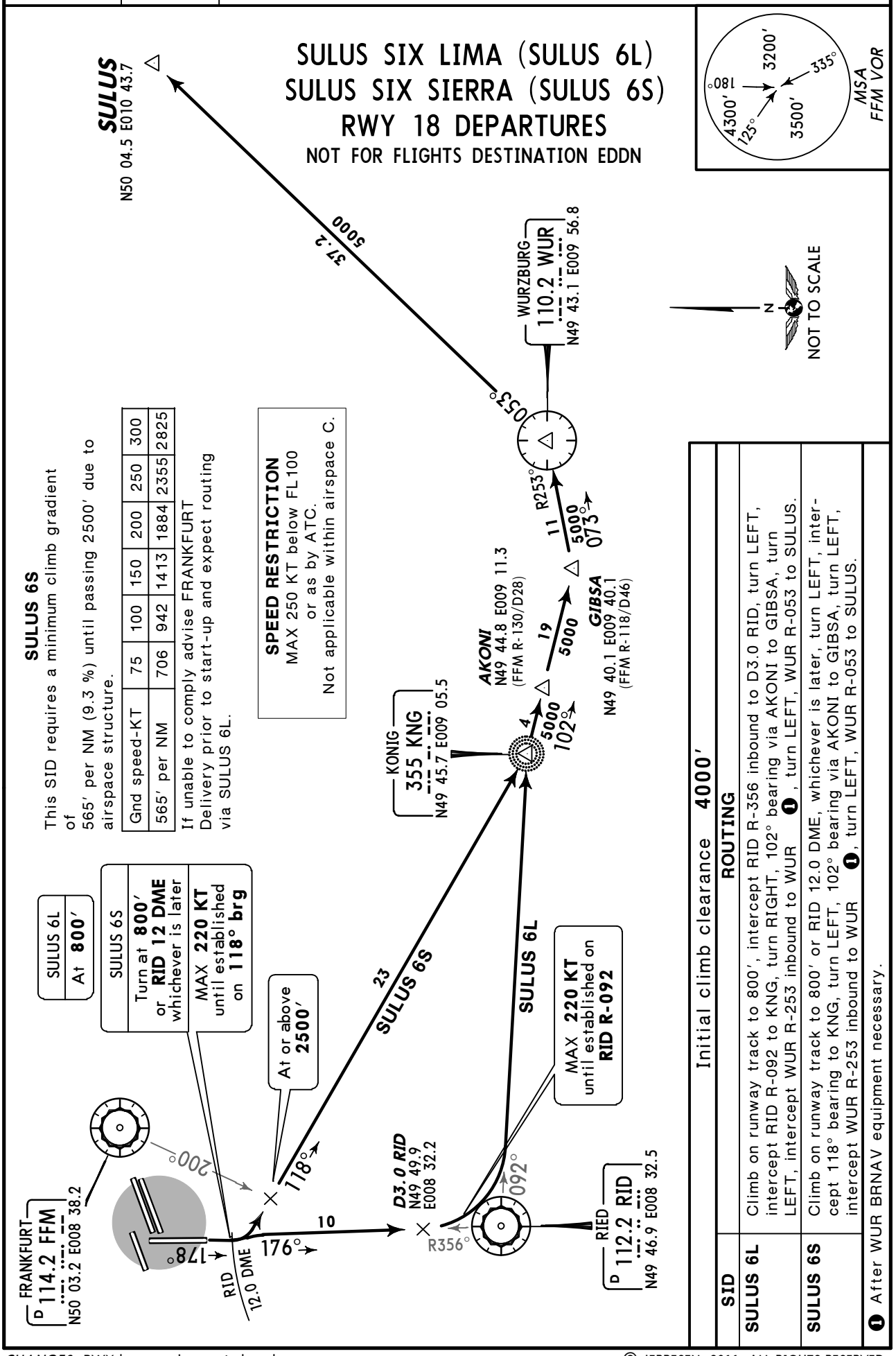
❶ After WUR BRNAV equipment necessary.

CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

SULUS SIX LIMA (SULUS 6L)
SULUS SIX SIERRA (SULUS 6S)
RWY 18 DEPARTURES
NOT FOR FLIGHTS DESTINATION EDDN



Initial climb clearance 4000′

SID	ROUTING
SULUS 6L	Climb on runway track to 800′, intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to KNG, turn RIGHT, 102° bearing via AKONI to GIBSA, turn LEFT, intercept WUR R-253 inbound to WUR ❶, turn LEFT, WUR R-053 to SULUS.
SULUS 6S	Climb on runway track to 800′ or RID 12.0 DME, whichever is later, turn LEFT, intercept 118° bearing to KNG, turn LEFT, 102° bearing via AKONI to GIBSA, turn LEFT, intercept WUR R-253 inbound to WUR ❶, turn LEFT, WUR R-053 to SULUS.

❶ After WUR BRNAV equipment necessary.

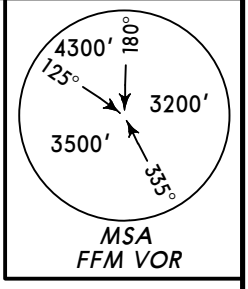
CHANGES: RWY layout; chart reindexed.

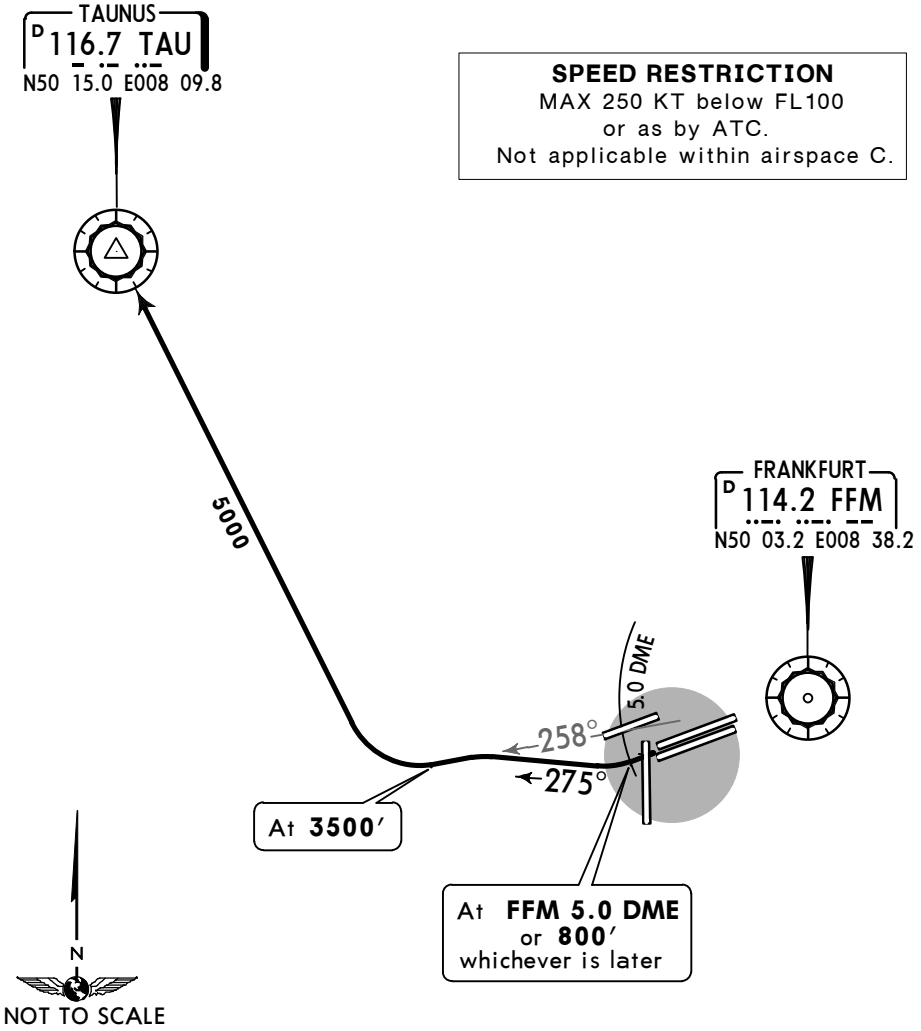
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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TAUNUS FOUR QUEBEC (TAU 4Q)
RWYS 25L/C DEPARTURE

NON RNAV (ENROUTE ONLY) EQUIPPED AIRCRAFT ONLY
DELAY HAS TO BE EXPECTED
FURTHER ROUTING TO DESTINATION SHALL BE BASED ON VOR AND HAS TO BE COORDINATED WITH ATC PRIOR TO START-UP
NO RNAV OVERLAY EXISTING
MAX FL90
SPECIAL PERMISSION NEEDED PRIOR TO FLIGHT





Initial climb clearance **5000′**

ROUTING

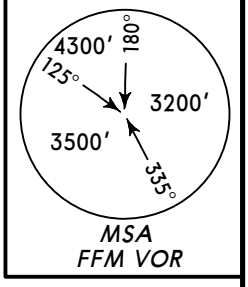
Climb on runway track to FFM 5.0 DME or 800′, whichever is later, turn RIGHT, 275° track (RWY 25L: 278° track), intercept FFM R-258, at 3500′ turn RIGHT to TAU, but not before reaching FFM R-258.

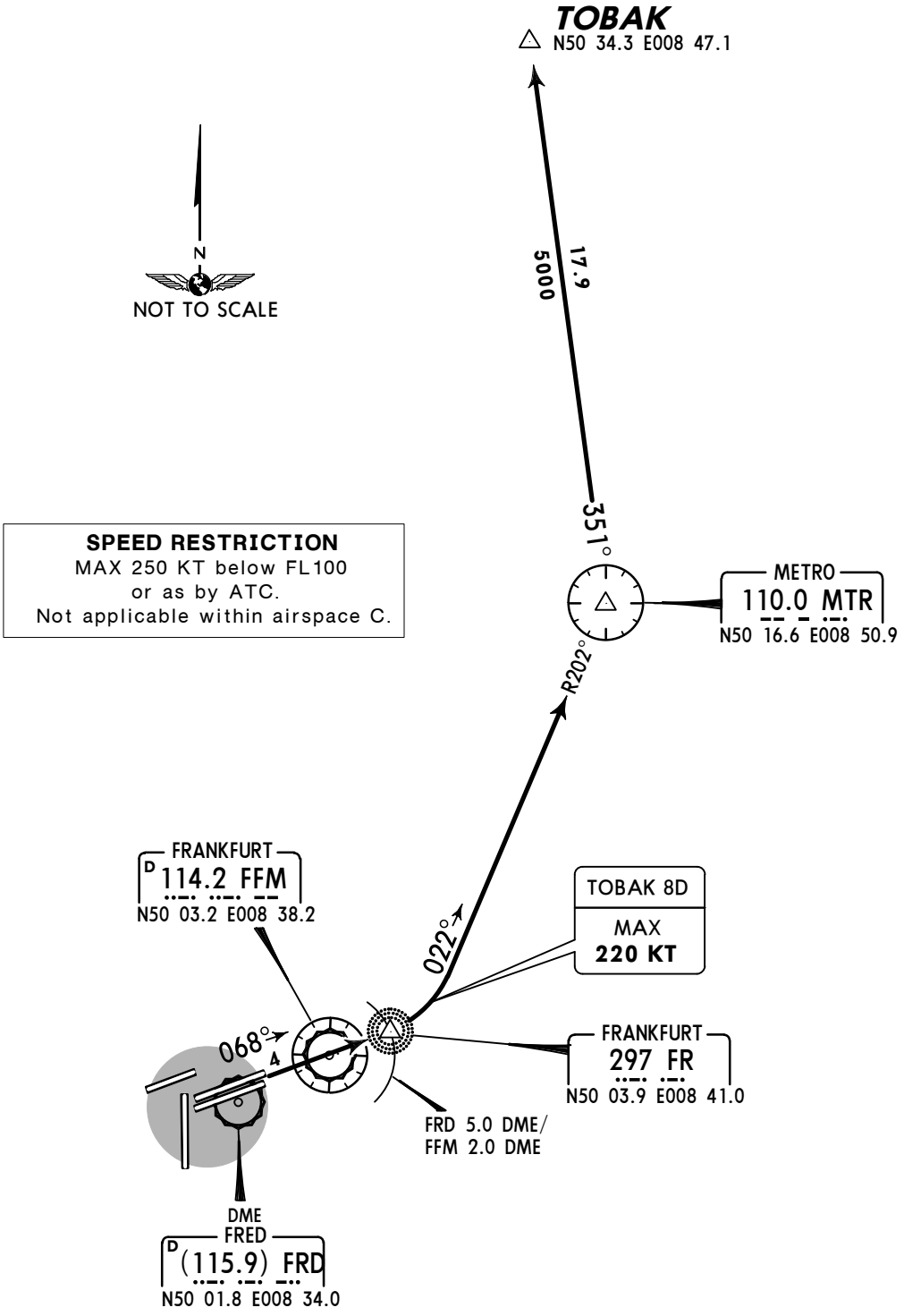
CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK EIGHT DELTA (TOBAK 8D)
TOBAK SEVEN ECHO (TOBAK 7E)
RWYS 07C/R DEPARTURES
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10





Initial climb clearance **5000′**

ROUTING

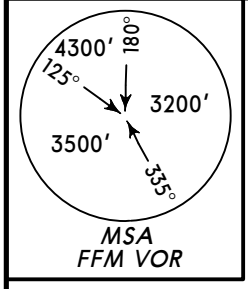
Climb on runway track to 800′, to FR (FRD 5.0 DME/FFM 2.0 DME outbound), turn LEFT **immediately,** intercept MTR R-202 inbound to MTR ❶, turn LEFT, MTR R-351 to TOBAK.

❶ After MTR BRNAV equipment necessary.

CHANGES: RWY layout; chart reindexed.

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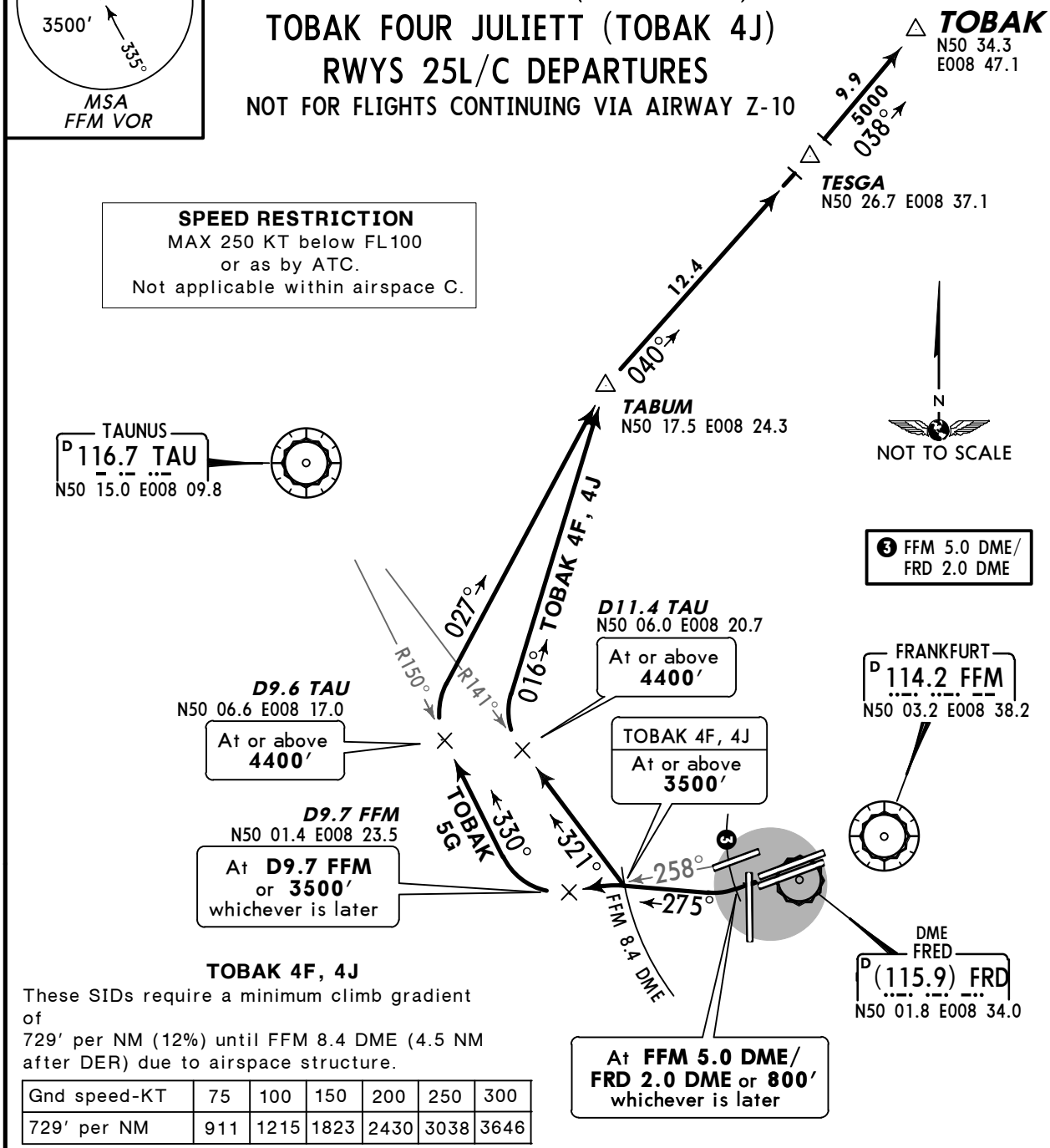
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



TOBAK FOUR FOXTROT (TOBAK 4F)
TOBAK FIVE GOLF (TOBAK 5G)
TOBAK FOUR JULIETT (TOBAK 4J)
RWYS 25L/C DEPARTURES

NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



TOBAK 4F, 4J

These SIDs require a minimum climb gradient of
729′ per NM (12%) until FFM 8.4 DME (4.5 NM after DER) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
729′ per NM	911	1215	1823	2430	3038	3646

If unable to comply advise FRANKFURT Delivery prior to start-up

TOBAK 4J: and expect routing via TOBAK 5G.

Initial climb clearance **5000′**

SID	ROUTING
TOBAK 4F, 4J	Climb on runway track to FFM 5.0 DME or 800′, whichever is later, turn RIGHT, 275° track (RWY 25L: 278° track) to FFM 8.4 DME, turn RIGHT, intercept TAU R-141 inbound to D11.4 TAU ❶, turn RIGHT, 016° track to TABUM, turn RIGHT, 040° track to TESGA, turn LEFT, 038° track to TOBAK.
TOBAK 5G	Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800′, whichever is later, turn RIGHT, 275° track (RWY 25L: 278° track), intercept FFM R-258 to D9.7 FFM or 3500′, whichever is later, turn RIGHT, intercept TAU R-150 inbound to D9.6 TAU ❷, turn RIGHT, 027° track to TABUM, 040° track to TESGA, turn LEFT, 038° track to TOBAK.

BRNAV equipment necessary after: ❶ D11.4 TAU/ ❷ D9.6 TAU.

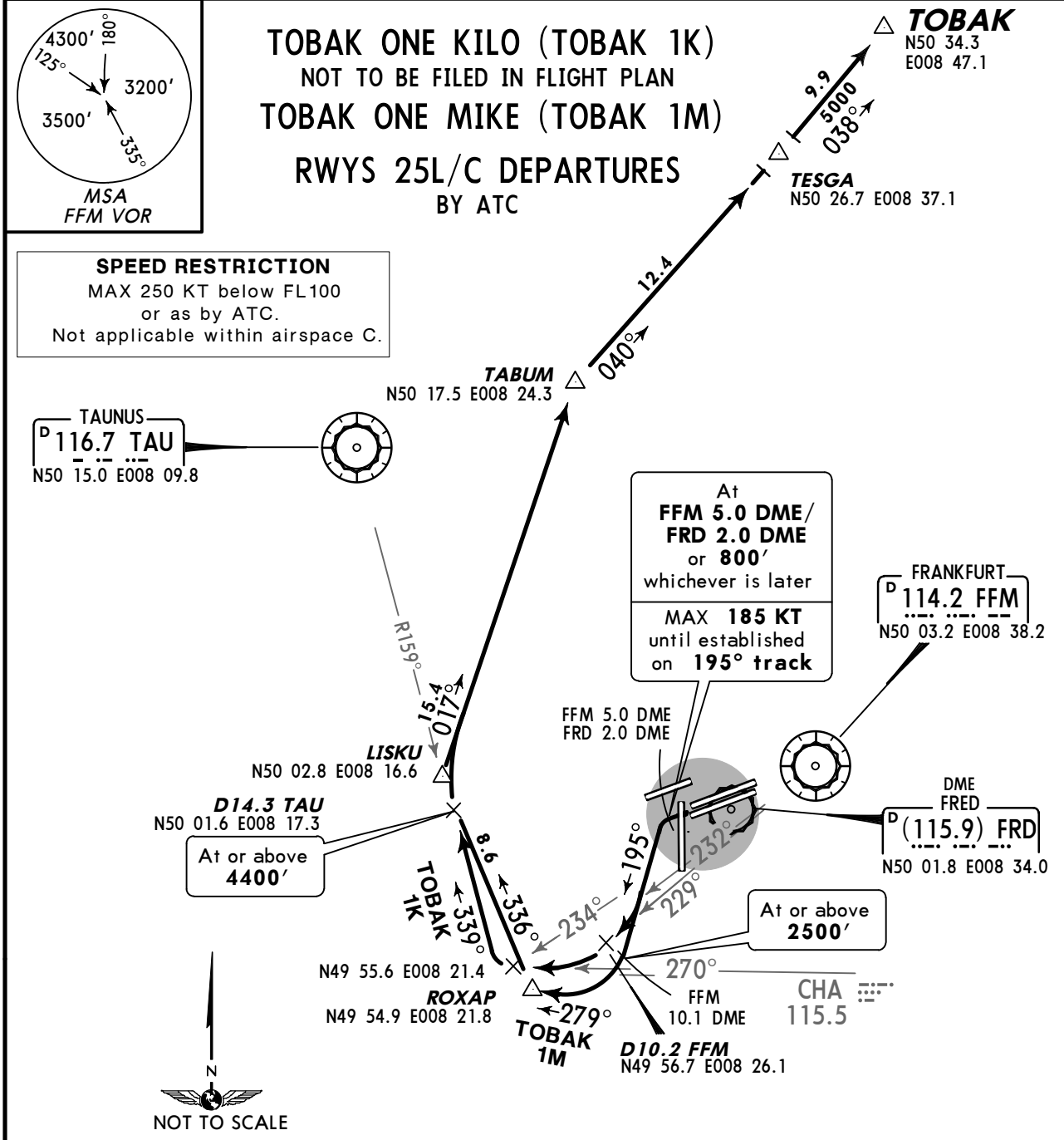
CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK ONE KILO (TOBAK 1K)
NOT TO BE FILED IN FLIGHT PLAN
TOBAK ONE MIKE (TOBAK 1M)
RWYS 25L/C DEPARTURES
BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of
TOBAK 1K: 243′ per NM (4%) until passing 4400′ due to airspace structure.
TOBAK 1M: 249′ per NM (4.1%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

SID	ROUTING
TOBAK 1K	Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800′, whichever is later, turn LEFT, 195° track, when passing FFM R-232 turn RIGHT, intercept FFM R-229 to D10.2 FFM, turn RIGHT, intercept CHA R-270, when passing FFM R-234 turn RIGHT, intercept TAU R-159 inbound to D14.3 TAU ❶, turn RIGHT, 017° track to TABUM, turn RIGHT, 040° track to TESGA, turn LEFT, 038° track to TOBAK.
TOBAK 1M	Climb on runway track to FFM 5.0 DME/FRD 2.0 DME or 800′, whichever is later, turn LEFT, 195° track to FFM 10.1 DME ❷, turn RIGHT, 279° track to ROXAP, turn RIGHT, 336° track to LISKU, turn RIGHT, 017° track to TABUM, turn RIGHT, 040° track to TESGA, turn LEFT, 038° track to TOBAK.

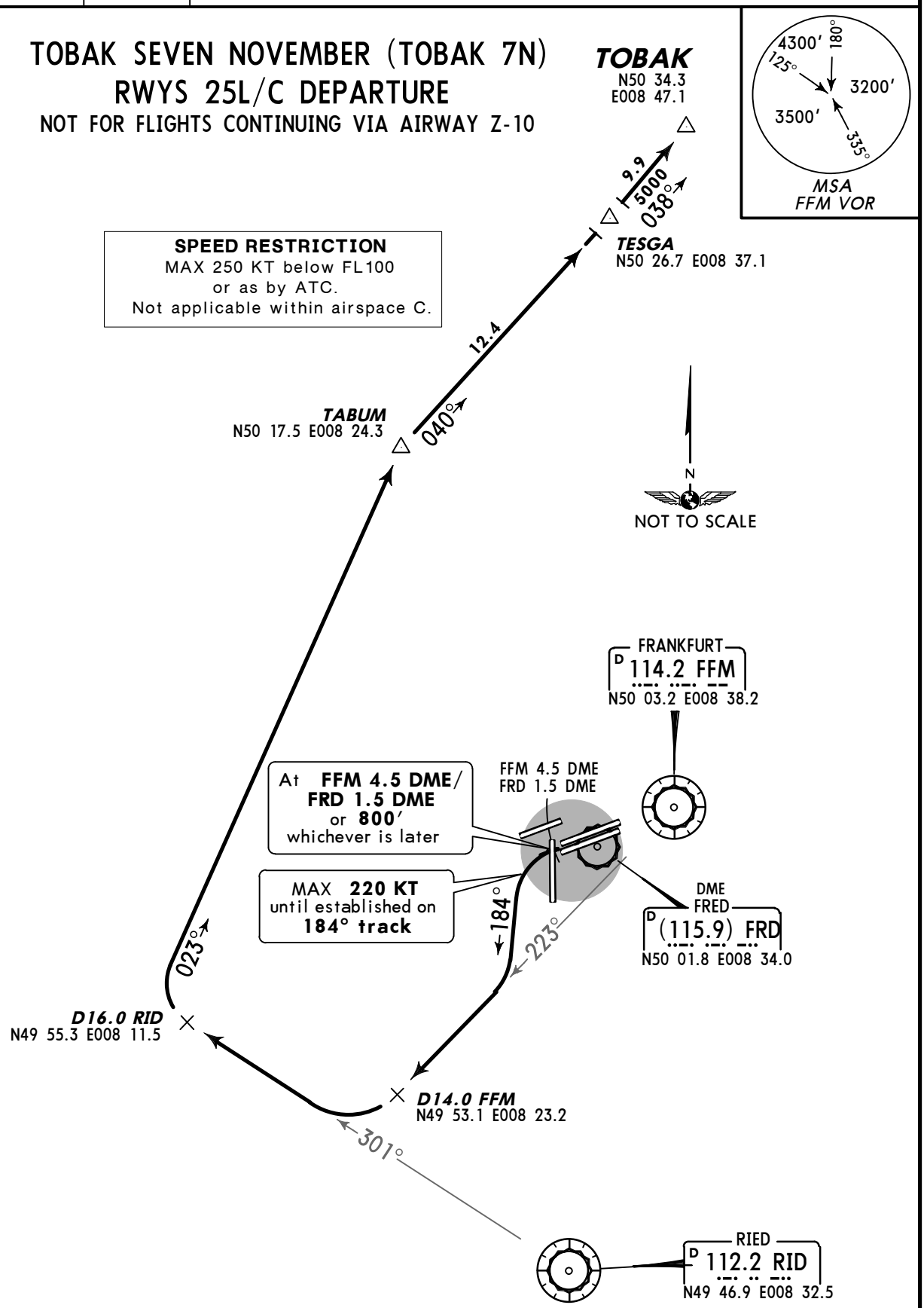
BRNAV equipment necessary after ❶ D14.3 TAU/ ❷ FFM 10.1 DME.

CHANGES: SIDs established; SIDs SULUS 7D & 5E transferred.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK SEVEN NOVEMBER (TOBAK 7N)
RWYS 25L/C DEPARTURE
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10



Initial climb clearance **5000′**

ROUTING

Climb on runway track to FFM 4.5 DME/FRD 1.5 DME or 800′, whichever is later, turn LEFT, 184° track, intercept FFM R-223 to D14.0 FFM, turn RIGHT, intercept RID R-301 to D16.0 RID ❶, turn RIGHT, 023° track to TABUM, turn RIGHT, 040° track to TESGA, turn LEFT, 038° track to TOBAK.

❶ After D16.0 RID BRNAV equipment necessary.

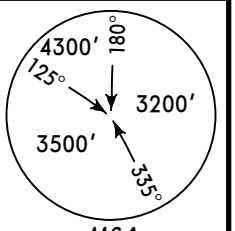
CHANGES: RWY layout; SID renumbered; initial contact; chart reindexed.

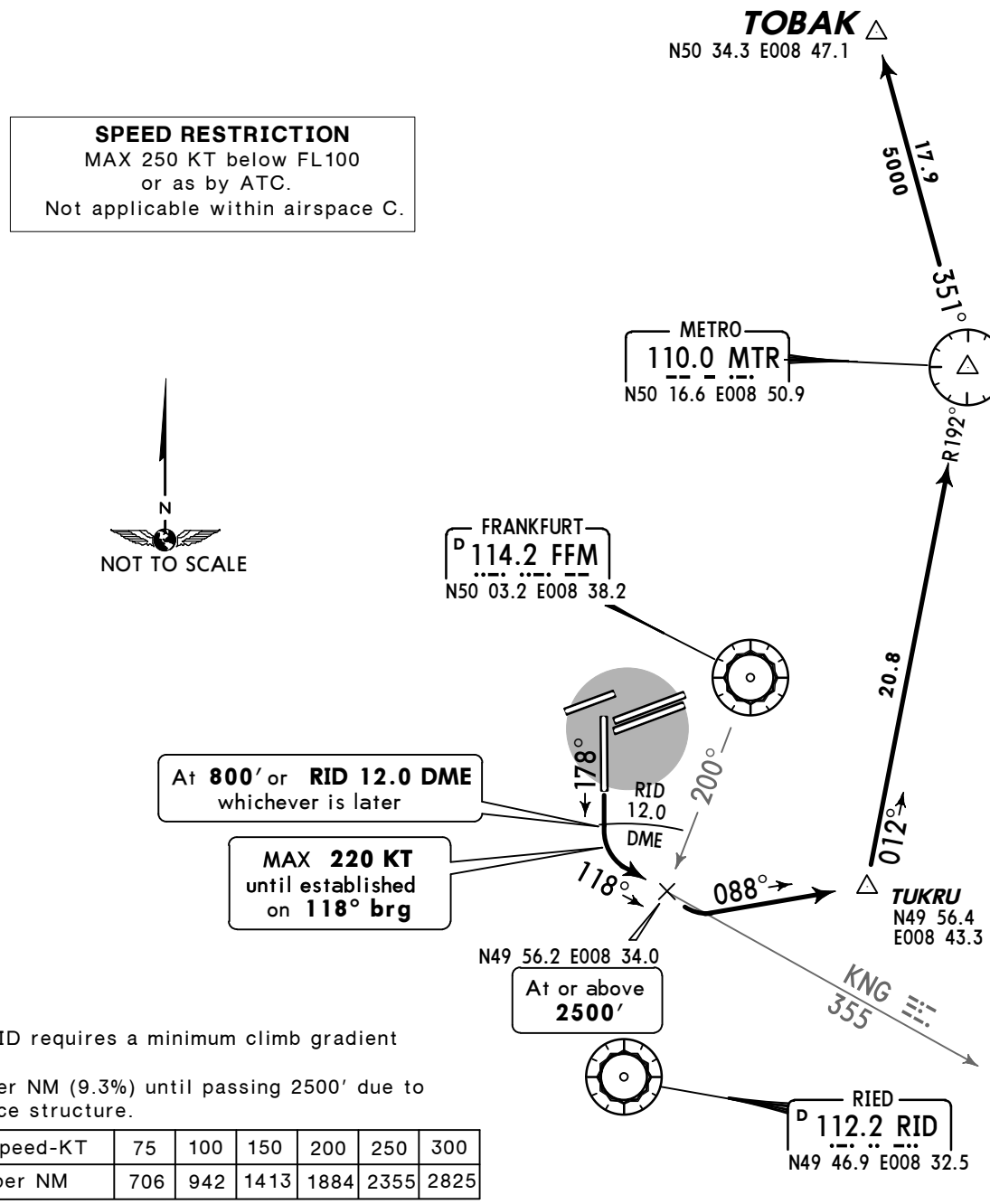
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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

TOBAK TWO ROMEO (TOBAK 2R)
RWY 18 DEPARTURE

BY ATC
WILL ONLY BE ASSIGNED BETWEEN 2300-0500LT
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10





This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′ or RID 12.0 DME, whichever is later, turn LEFT, intercept 118° bearing towards KNG, when passing FFM R-200 ❶ turn LEFT, 088° track to TUKRU, turn LEFT, intercept MTR R-192 inbound to MTR, turn LEFT, MTR R-351 to TOBAK.

❶ After FFM R-200 BRNAV equipment necessary.

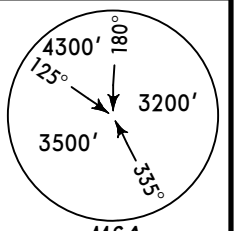
CHANGES: RWY layout; chart reindexed.

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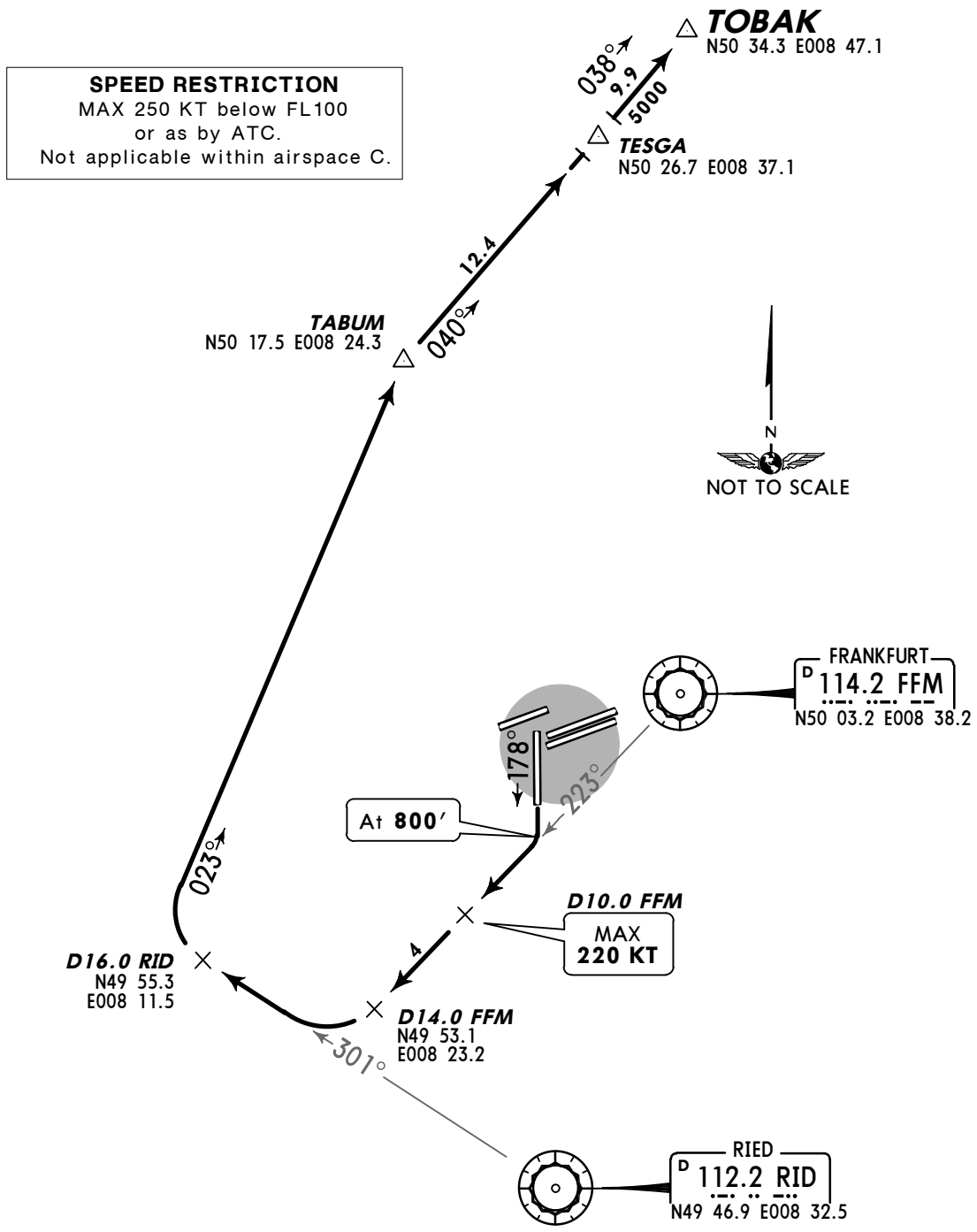
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

TOBAK FIVE SIERRA (TOBAK 5S)
RWY 18 DEPARTURE

BY ATC
WILL ONLY BE ASSIGNED
WHEN LANDING DIRECTION IS RWY 25
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′, turn RIGHT, intercept FFM R-223 to D14.0 FFM, turn RIGHT, intercept RID R-301 to D16.0 RID ❶, turn RIGHT, 023° track to TABUM, turn RIGHT, 040° track to TESGA, turn LEFT, 038° track to TOBAK.

❶ After D16.0 RID BRNAV equipment necessary.

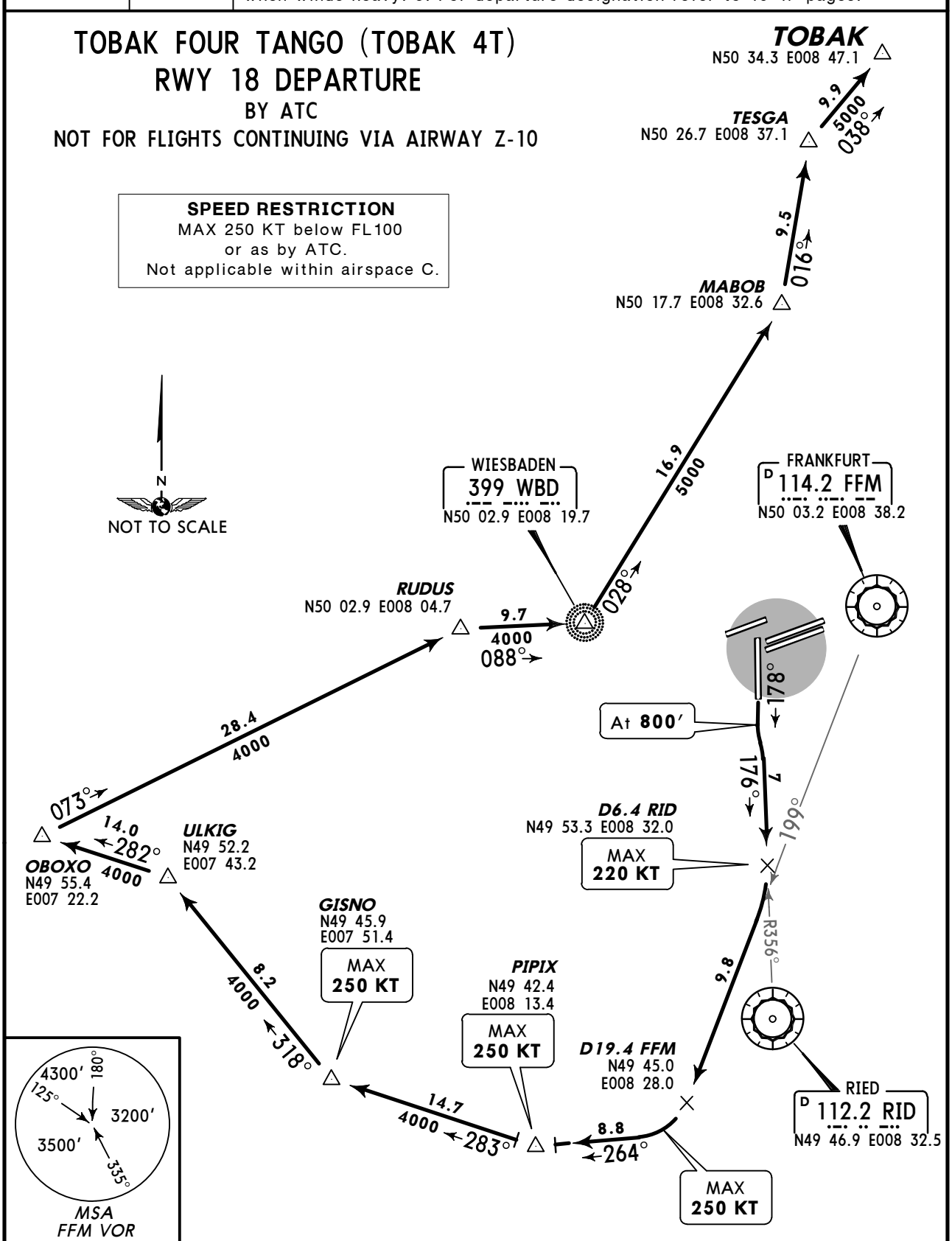
CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

TOBAK FOUR TANGO (TOBAK 4T)
RWY 18 DEPARTURE
BY ATC
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′, intercept RID R-356 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199 to D19.4 FFM ❶, turn RIGHT, 264° track to PIPIX, turn RIGHT, 283° track to GISNO, turn RIGHT, 318° track to ULKIG, turn LEFT, 282° track to OBOXO, turn RIGHT, 073° track to RUDUS, turn RIGHT, intercept 088° bearing to WBD, turn LEFT, 028° bearing to MABOB, turn LEFT, 016° track to TESGA, turn RIGHT, 038° track to TOBAK.

❶ After D19.4 FFM BRNAV equipment necessary.

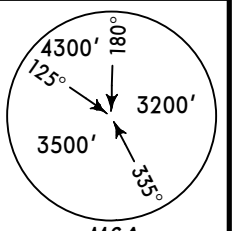
CHANGES: RWY layout; chart reindexed.

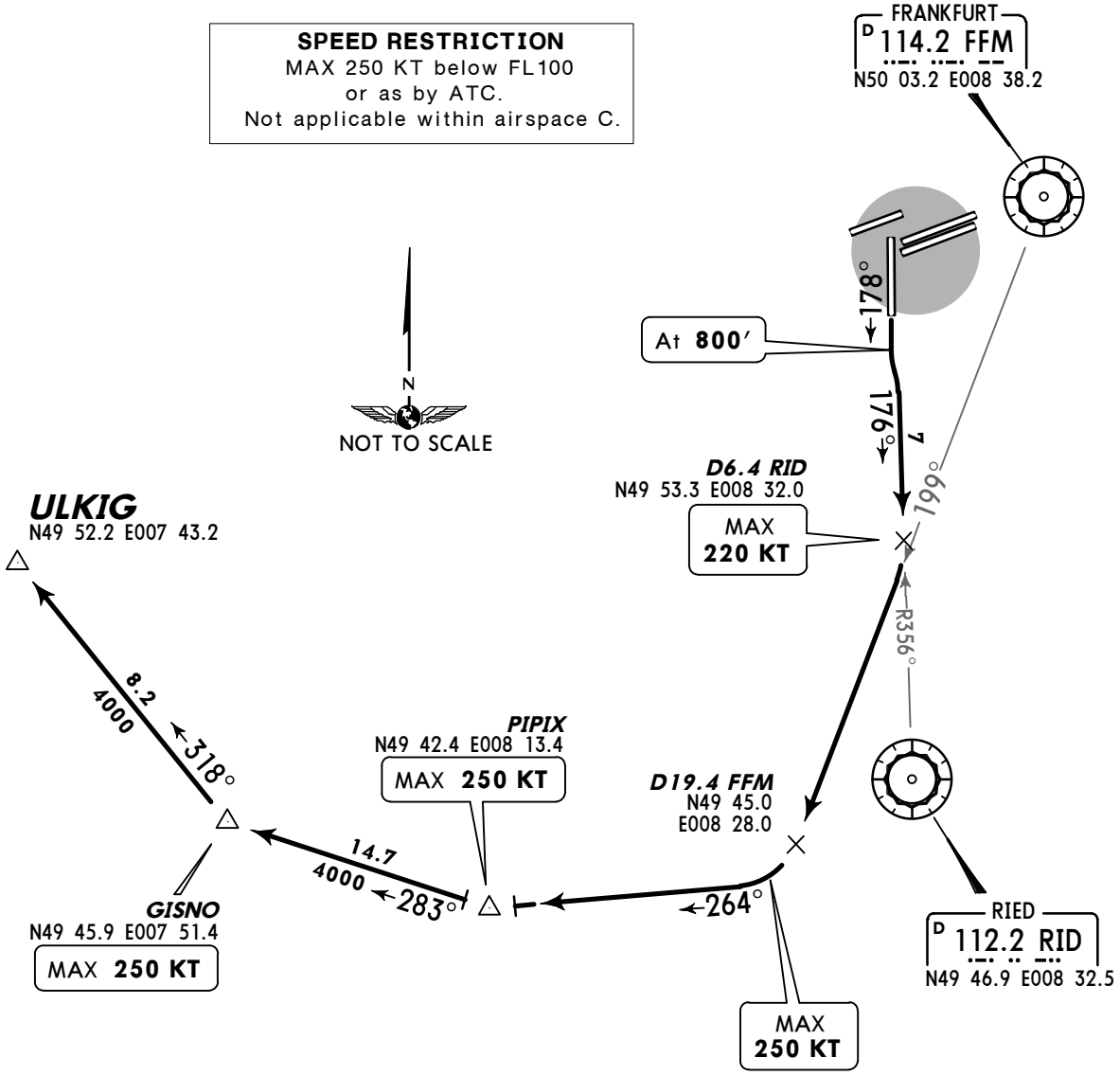
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*LANGEN Radar 136.12	*Apt Elev* 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

ULKIG FIVE UNIFORM (ULKIG 5U)
RWY 18 DEPARTURE

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y-180/Y-181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y-180 - DIK RFL





Initial climb clearance **4000′**

ROUTING

Climb on runway track to 800′, intercept RID R-356 inbound to D6.4 RID, turn RIGHT, intercept FFM R-199, at D19.4 FFM ❶ turn RIGHT, 264° track to PIPIX, turn RIGHT, 283° track to GISNO, turn RIGHT, 318° track to ULKIG.

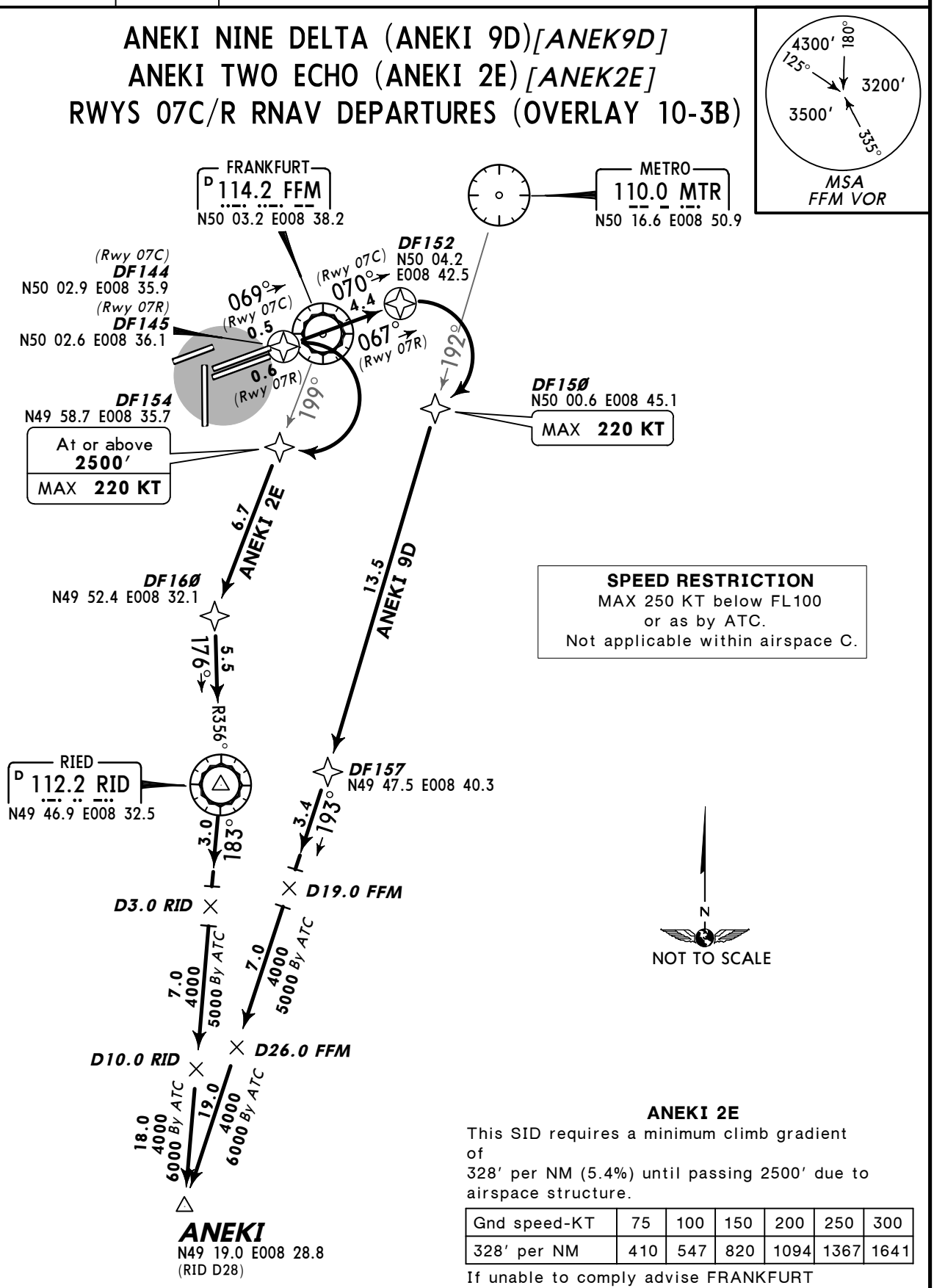
❶ After D19.4 FFM BRNAV equipment necessary.

CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

ANEKI NINE DELTA (ANEKI 9D)*[ANEK9D]*
ANEKI TWO ECHO (ANEKI 2E)*[ANEK2E]*
RWYS 07C/R RNAV DEPARTURES (OVERLAY 10-3B)



ANEKI 2E

This SID requires a minimum climb gradient of
328′ per NM (5.4%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
328′ per NM	410	547	820	1094	1367	1641

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

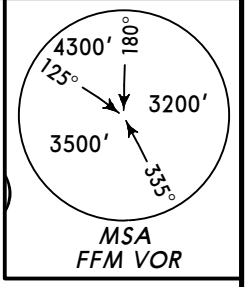
SID	ROUTING
ANEKI 9D	(800′+) - DF152 - DF150 (K220-) - DF157 - ANEKI.
ANEKI 2E	(800′+) - DF144 (07C)/DF145 (07R) - DF154 (2500′+; K220-) - DF160 - RID - ANEKI.

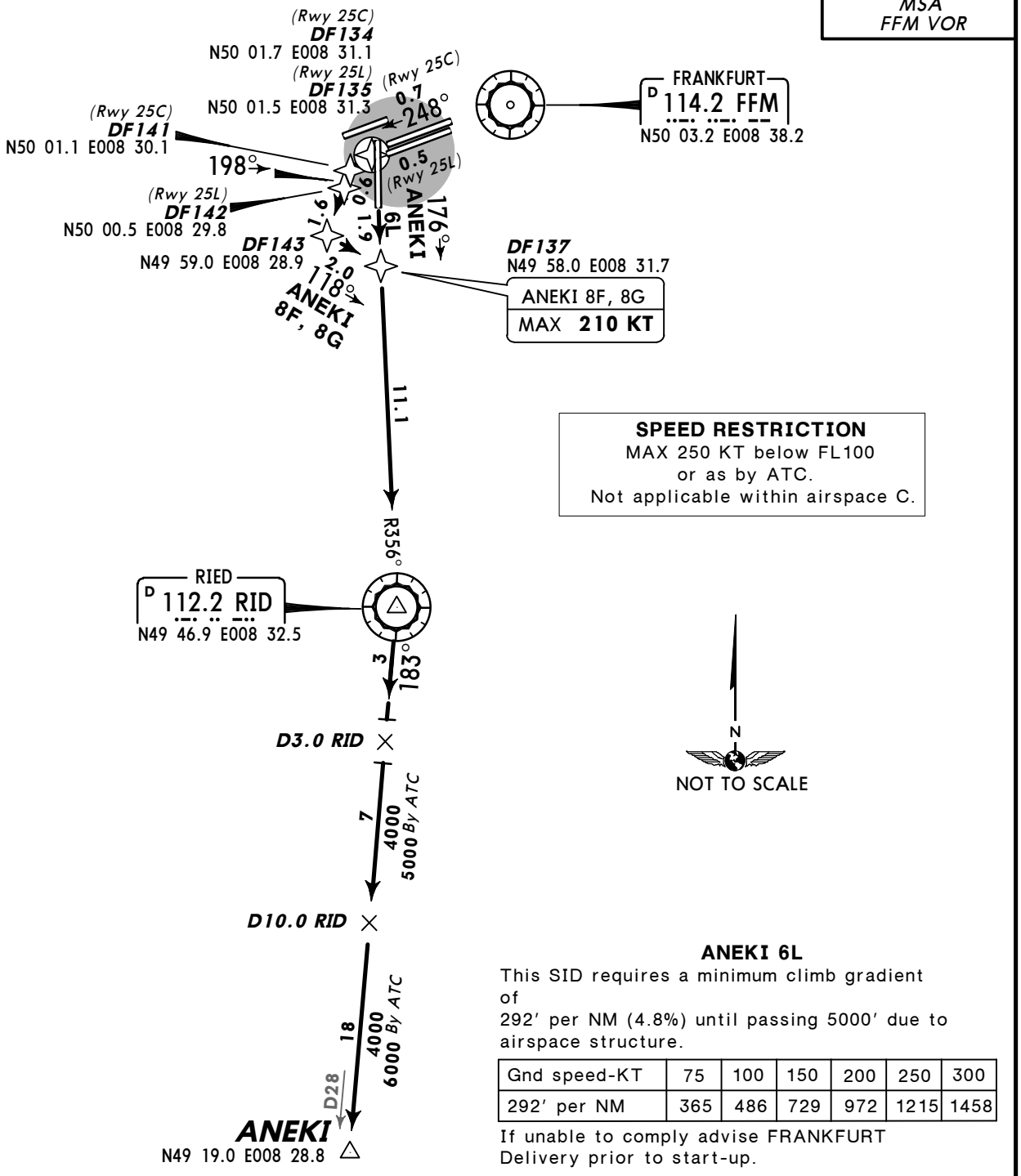
CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. RWYs 25L/C: Contact LANGEN Radar when advised by Tower. RWY 18: Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 18: EXPECT close-in obstacles. 4. RWY 18: Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

ANEKI EIGHT FOXTROT (ANEKI 8F) *[ANEK8F]*
ANEKI EIGHT GOLF (ANEKI 8G) *[ANEK8G]*
ANEKI SIX LIMA (ANEKI 6L) *[ANEK6L]*
RWYS 25L/C, 18 RNAV DEPARTURES (OVERLAY 10-3C)





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

ANEKI 6L
This SID requires a minimum climb gradient of
292′ per NM (4.8%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
292′ per NM	365	486	729	972	1215	1458

If unable to comply advise FRANKFURT Delivery prior to start-up.

ANEKI 8F, 8G: Initial climb clearance **5000′**
ANEKI 6L: Initial climb clearance **4000′**

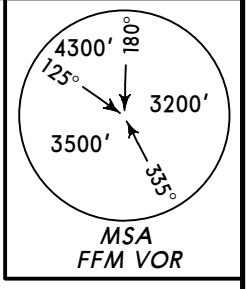
SID	RWY	ROUTING
ANEKI 8F, 8G	**25L/C**	(800′+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF143 - DF137 (K210-) - RID - ANEKI.
ANEKI 6L	**18**	(800′+) - RID - ANEKI.

CHANGES: RWY layout; chart reindexed.

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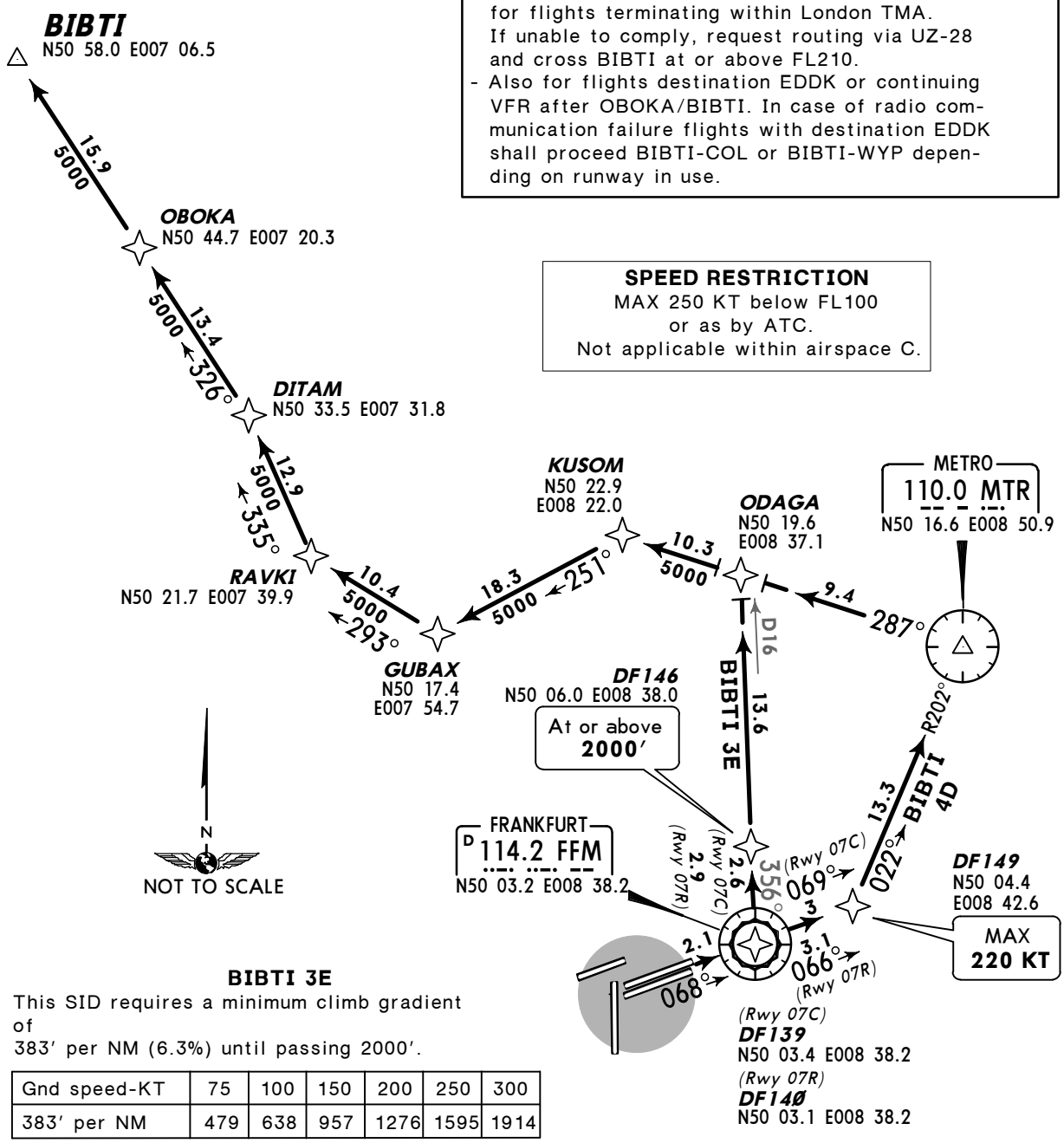
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

BIBTI FOUR DELTA (BIBTI 4D) *[BIBT4D]*
BIBTI THREE ECHO (BIBTI 3E)*[BIBT3E]*
RWYS 07C/R RNAV DEPARTURES (OVERLAY 10-3D)



- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



BIBTI 3E

This SID requires a minimum climb gradient of
383′ per NM (6.3%) until passing 2000′.

Gnd speed-KT	75	100	150	200	250	300
383′ per NM	479	638	957	1276	1595	1914

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

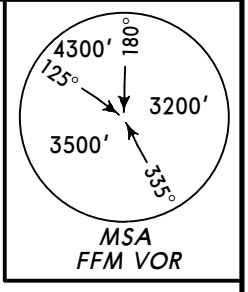
SID	ROUTING
BIBTI 4D	(800′+) - DF149 (K220-) - MTR - ODAGA - KUSOM - GUBAX - RAVKI - DITAM - OBOKA - BIBTI.
BIBTI 3E	(800′+) - DF139 (07C)/DF140 (07R) - DF146 (2000′+) - ODAGA - KUSOM - GUBAX - RAVKI - DITAM - OBOKA - BIBTI.

CHANGES: RWY layout; chart reindexed.

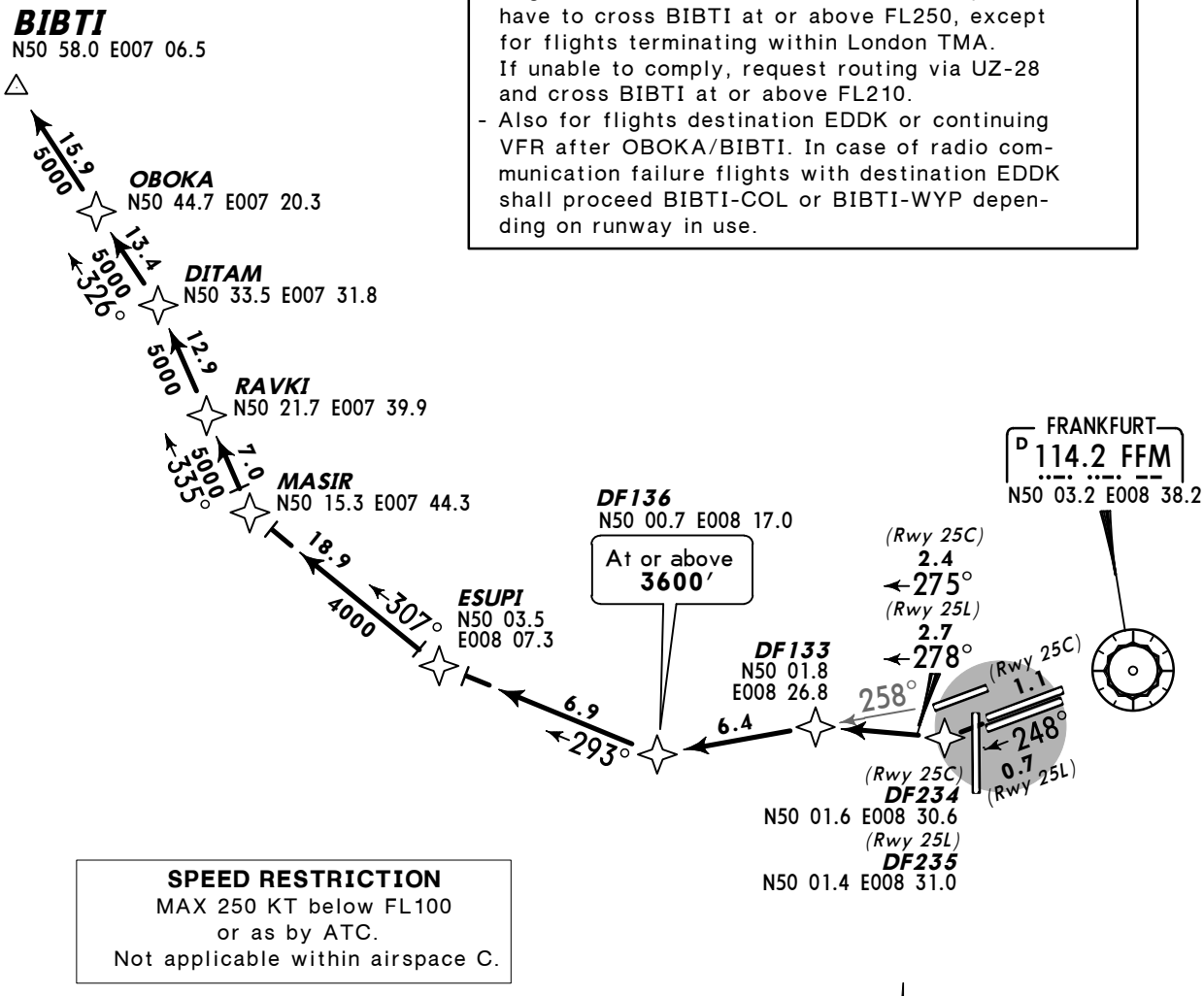
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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

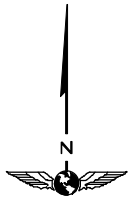
BIBTI THREE FOXTROT (BIBTI 3F)*[BIBT3F]*
BIBTI THREE GOLF (BIBTI 3G)*[BIBT3G]*
RWYS 25L/C RNAV DEPARTURES (OVERLAY 10-3E)



- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require a minimum climb gradient of
352′ per NM (5.8%) until passing 3600′, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
352′ per NM	441	587	881	1175	1468	1762

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

ROUTING

(800′+) - DF234 (25C)/DF235 (25L) - DF133 - DF136 (3600′+) - ESUPI - MASIR - RAVKI - DITAM - OBOKA - BIBTI.

CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

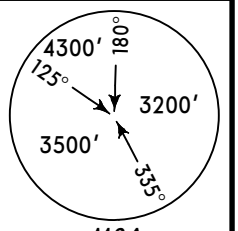
BIBTI ONE KILO (BIBTI 1K)*[BIBT1K]*

NOT TO BE FILED IN FLIGHT PLAN

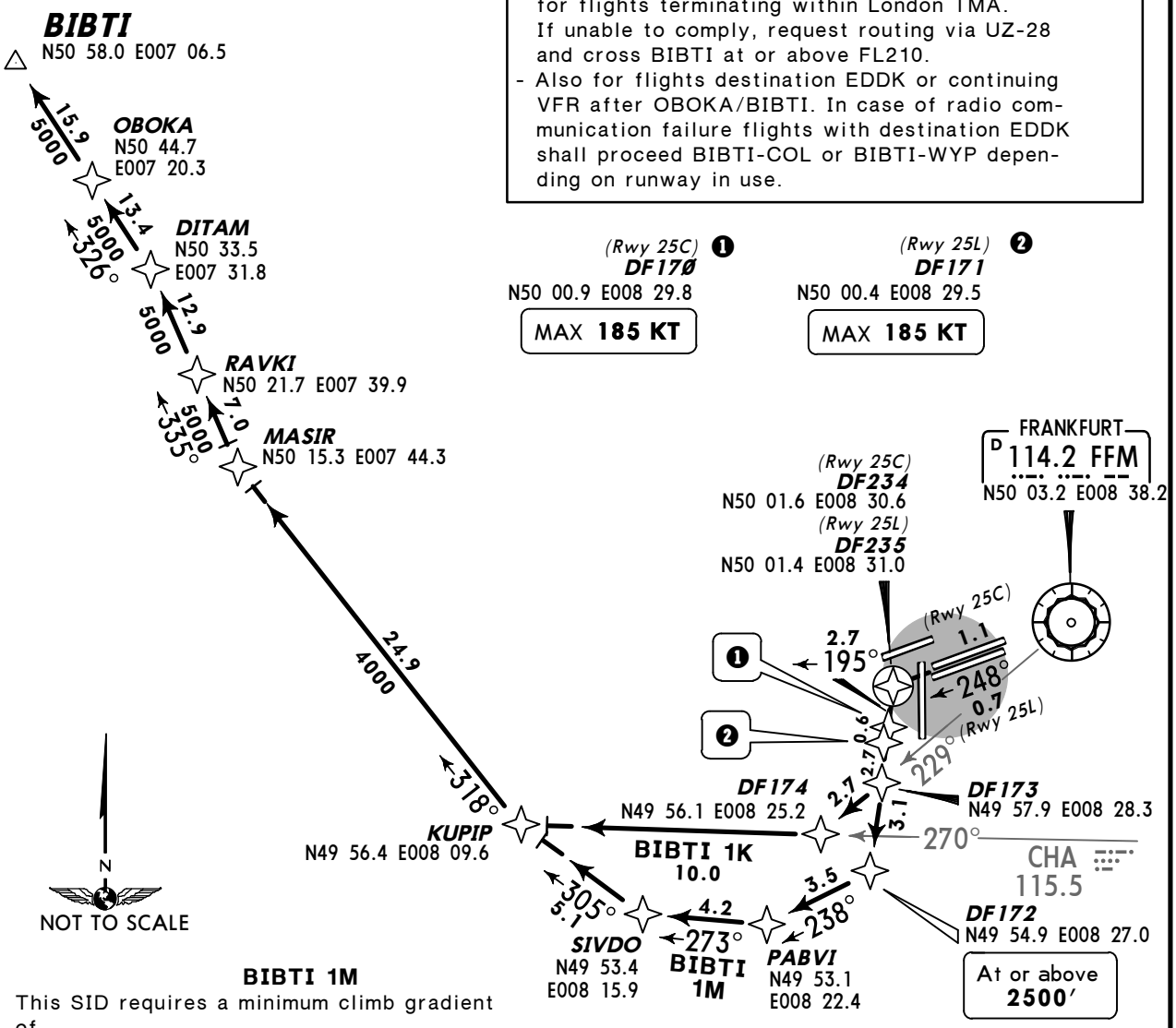
BIBTI ONE MIKE (BIBTI 1M)*[BIBT1M]*

RWYS 25L/C RNAV DEPARTURES (OVERLAY 10-3E1)

BY ATC



- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.



BIBTI 1M

This SID requires a minimum climb gradient of
249′ per NM (4.1%) until passing 2500′ due to airspace structure

Gnd speed-KT	75	100	150	200	250	300
249′ per NM	311	415	623	830	1038	1246

If unable to comply advise FRANKFURT Delivery prior to start-up.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

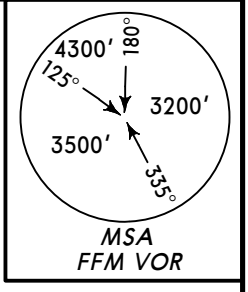
SID	ROUTING
BIBTI 1K	(800+) - DF234 (25C)/DF235 (25L) - DF170 (25C; K185-)/DF171 (25L; K185-) - DF173 - DF174 - KUPIP - MASIR - RAVKI - DITAM - OBOKA - BIBTI.
BIBTI 1M	(800+) - DF234 (25C)/DF235 (25L) - DF170 (25C; K185-)/DF171 (25L; K185-) - DF172 (2500′+) - PABVI - SIVDO - KUPIP - MASIR - RAVKI - DITAM - OBOKA - BIBTI.

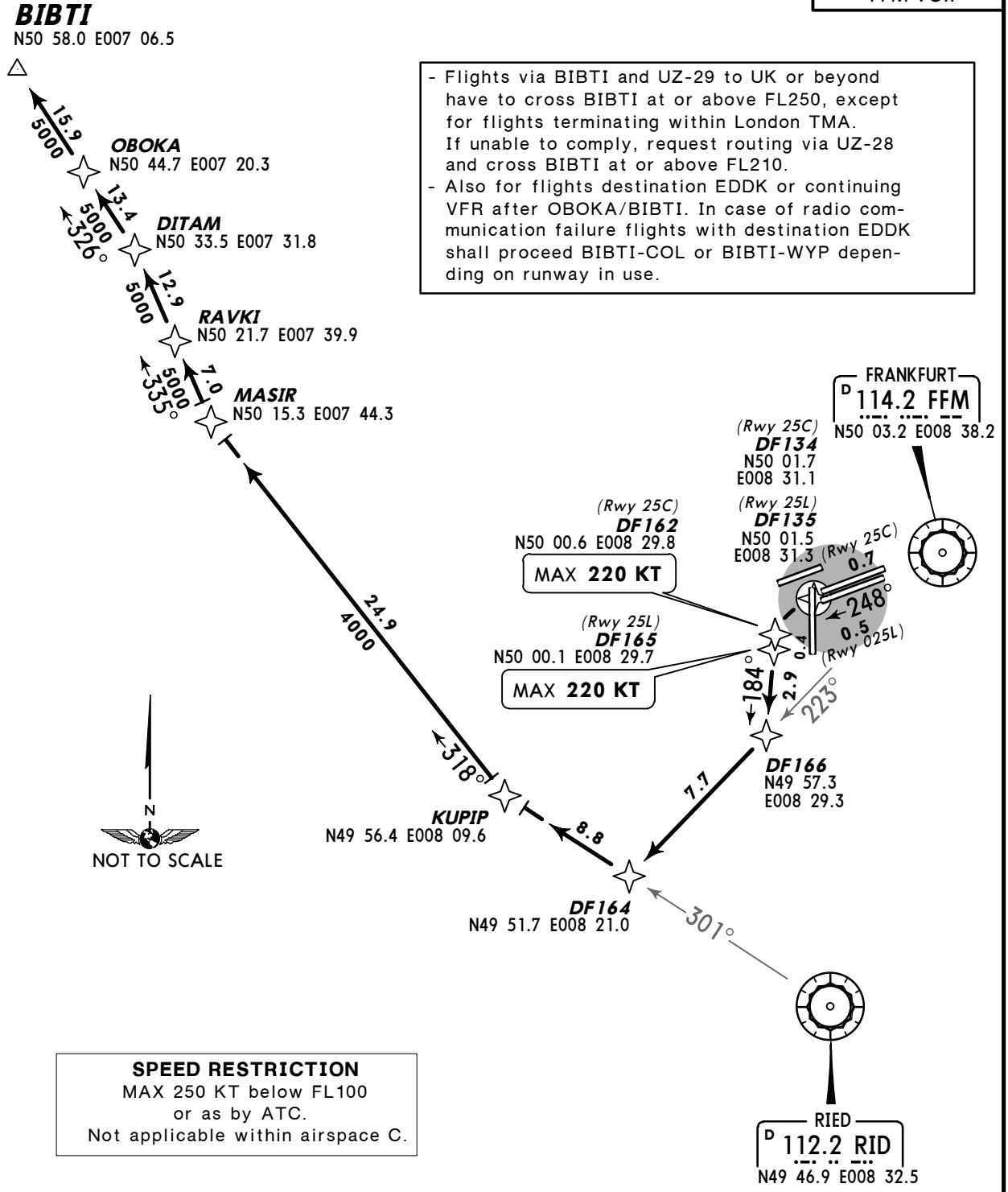
CHANGES: RNAV SIDs established; ULKIG SID transferred.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

BIBTI FOUR NOVEMBER (BIBTI 4N) *[BIBT4N]*
RWYS 25L/C RNAV DEPARTURE (OVERLAY 10-3E2)





- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

ROUTING

(800′+) - DF134 (25C)/DF135 (25L) - DF162 (25C; K220-)/DF165 (25L; K220-) - DF166 - DF164 - KUPIP - MASIR - RAVKI - DITAM - OBOKA - BIBTI.

CHANGES: RWY layout; RNAV SID renumb & revised; initial contact; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

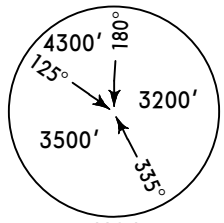
BIBTI TWO LIMA (BIBTI 2L)*[BIBT2L]*

BIBTI THREE SIERRA (BIBTI 3S)*[BIBT3S]*

BY ATC

RWY 18 RNAV DEPARTURES (OVERLAY 10-3E3)

WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS 25



- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

BIBTI
N50 58.0 E007 06.5

15.9 5000

OBOKA
N50 44.7
E007 20.3

13.4 5000 326°

DITAM
N50 33.5 E007 31.8

12.9 5000

RAVKI
N50 21.7 E007 39.9

7.0 5000 335°

MASIR
N50 15.3 E007 44.3

24.9 4000

35.9 318°

KUPIP
N49 56.4
E008 09.6

8.8

DF164
N49 51.7
E008 21.0

319°

XAMUB
N49 47.7
E008 19.7

DF156
N49 56.0 E008 27.5

MAX
220 KT

6.0 BIBTI 3S

3.8

DF197
N49 58.8
E008 31.6

179° 1.1

223°

BIBTI 2L 176° 7.5 from DER

DF160
N49 52.4
E008 32.1

At or above **2000′**

MAX **220 KT**

238° 9.4 301°

R356°

FRANKFURT
D 114.2 FFM
N50 03.2 E008 38.2

RIED
D 112.2 RID
N49 46.9 E008 32.5

N
NOT TO SCALE

BIBTI 2L

This SID requires a minimum climb gradient of
280′ per NM (4.6%) until passing 2000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
280′ per NM	349	466	699	932	1165	1398

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

SID	ROUTING
BIBTI 2L	(800′+) - DF160 (2000′+; K220-) - XAMUB - MASIR - RAVKI - DITAM - OBOKA - BIBTI.
BIBTI 3S	(800′+) - DF197 - DF156 (K220-) - DF164 - KUPIP - MASIR - RAVKI - DITAM - OBOKA - BIBTI.

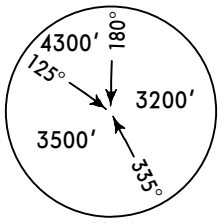
CHANGES: RWY layout; RNAV SID BIBTI 3S revised; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

BIBTI TWO ROMEO
(BIBTI 2R) *[BIBT2R]*
RWY 18 RNAV DEPARTURE
(OVERLAY 10-3E4)

BY ATC
WILL ONLY BE ASSIGNED BETWEEN 2300-0500LT



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

BIBTI
N50 58.0 E007 06.5

15.9
5000

OBOKA
N50 44.7 E007 20.3

13.4
5000
326°

DITAM
N50 33.5 E007 31.8

12.9
5000
335°

RAVKI
N50 21.7 E007 39.9

10.4
5000
293°

GUBAX
N50 17.4
E007 54.7

18.3
5000
251°

KUSOM
N50 22.9 E008 22.0

10.3
5000

ODAGA
N50 19.6
E008 37.1

9.3
287°

METRO
110.0 MTR
N50 16.6 E008 50.9

R192°

20.8

012°

FRANKFURT
D 114.2 FFM
N50 03.2 E008 38.2

- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.

178°
1.9

DF158
N49 58.0 E008 31.6
MAX **220 KT**

118°
2.1

1.3

4.6
088°

DF159
N49 57.0 E008 34.4
At or above
2500′

DF168
N49 56.3
E008 36.2

TUKRU
N49 56.4
E008 43.3

N
NOT TO SCALE

This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

ROUTING

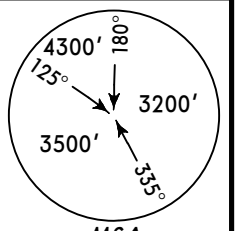
(800+) - DF158 (K220-) - DF159 (2500′+) - DF168 - TUKRU - MTR - ODAGA - KUSOM - GUBAX - RAVKI - DITAM - OBOKA - BIBTI.

CHANGES: RWY layout; chart reindexed.

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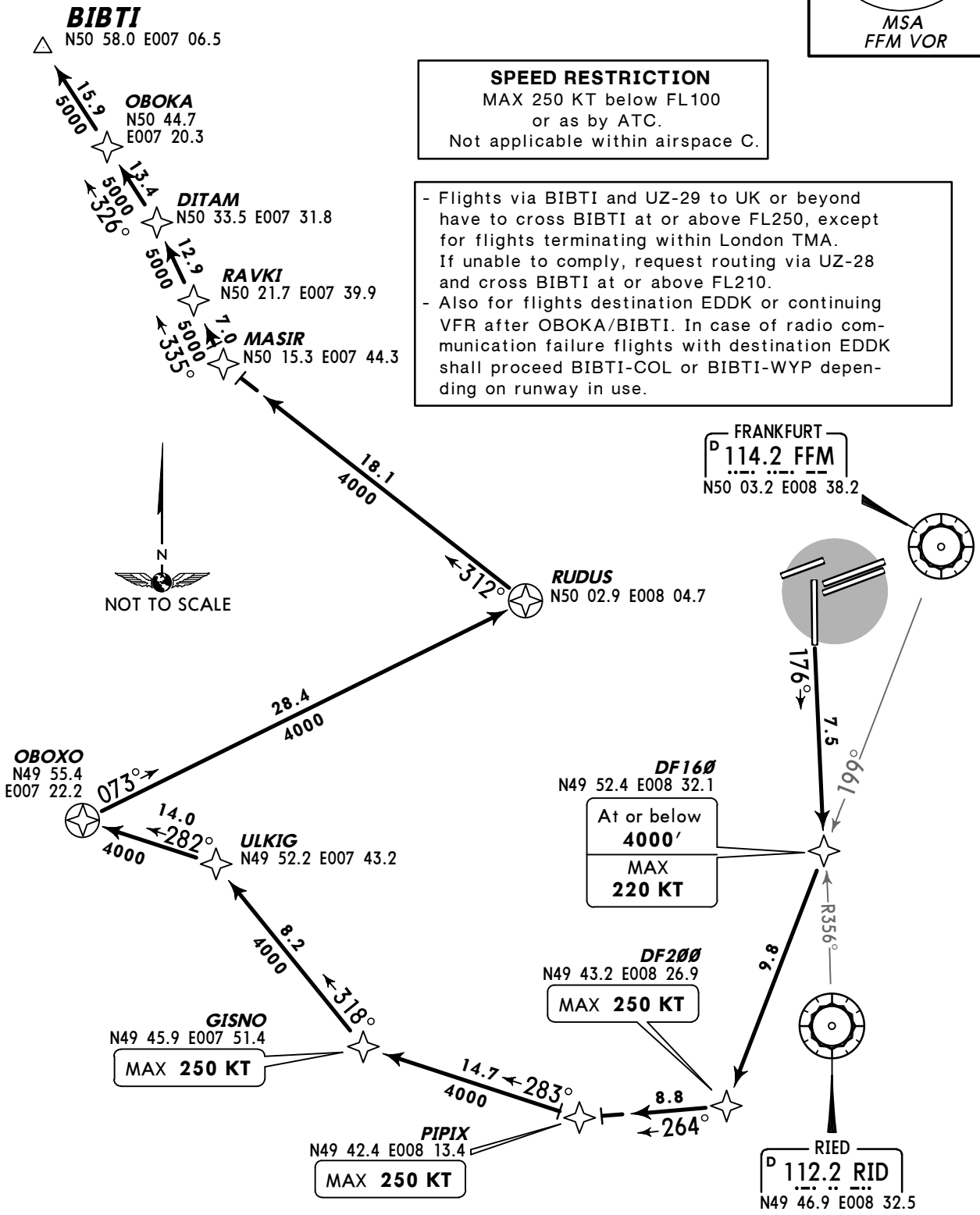
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

BIBTI TWO TANGO (BIBTI 2T) *[BIBT2T]*
RWY 18 RNAV DEPARTURE
(OVERLAY 10-3E5)
BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

- Flights via BIBTI and UZ-29 to UK or beyond have to cross BIBTI at or above FL250, except for flights terminating within London TMA. If unable to comply, request routing via UZ-28 and cross BIBTI at or above FL210.
- Also for flights destination EDDK or continuing VFR after OBOKA/BIBTI. In case of radio communication failure flights with destination EDDK shall proceed BIBTI-COL or BIBTI-WYP depending on runway in use.



Initial climb clearance **4000′**

ROUTING

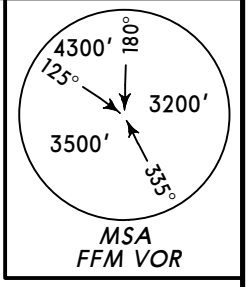
(800′+) - DF160 (4000′-; K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG - OBOXO - RUDUS - MASIR - RAVKI - DITAM - OBOKA - BIBTI.

CHANGES: RWY layout; chart reindexed.

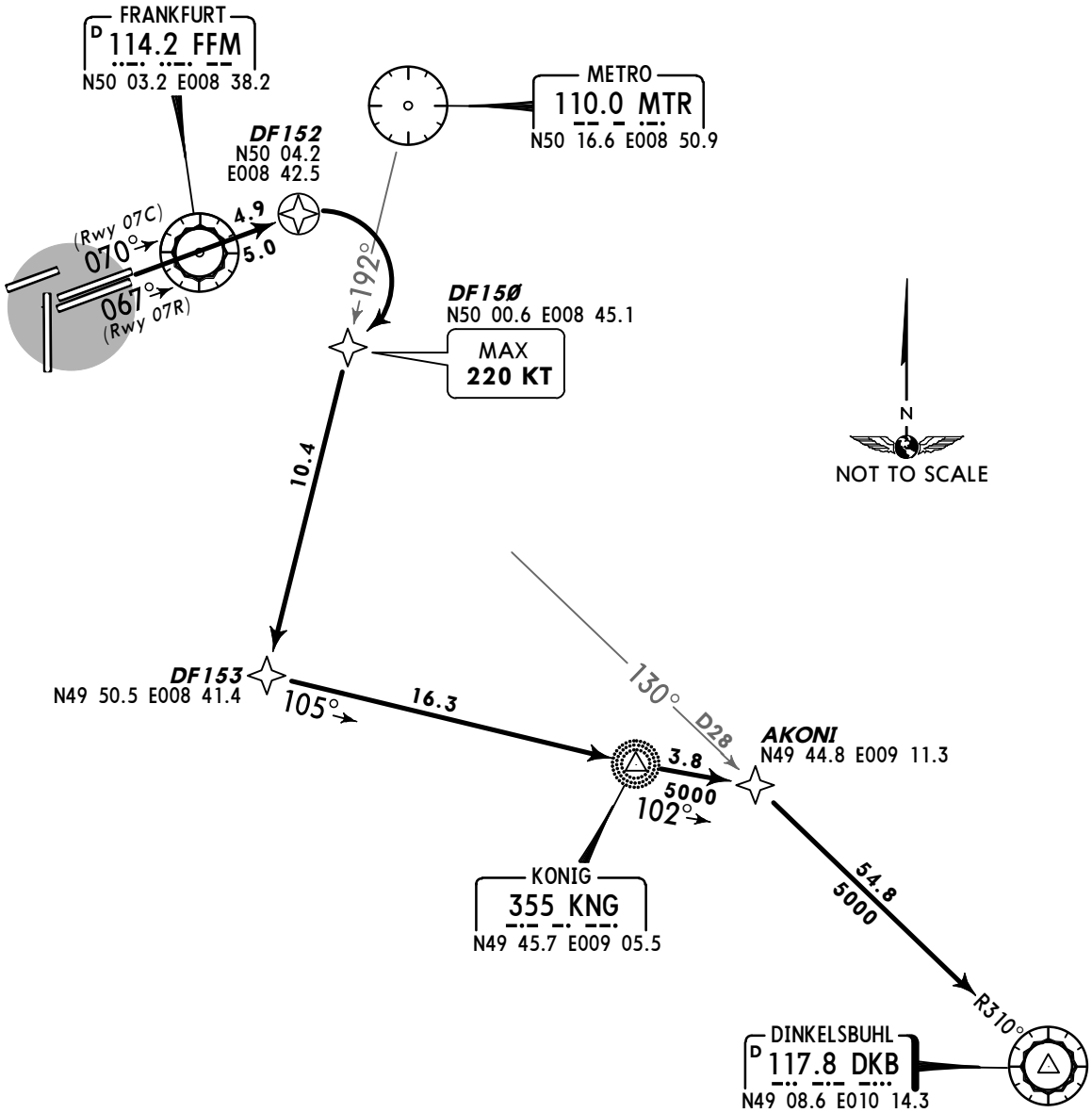
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

DINKELSBUHL EIGHT DELTA (DKB 8D)
DINKELSBUHL SIX ECHO (DKB 6E)
RWYS 07C/R RNAV DEPARTURES (OVERLAY 10-3E6)
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

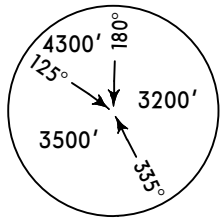
(800′+) - DF152 - DF150 (K220-) - DF153 - KNG - AKONI - DKB.

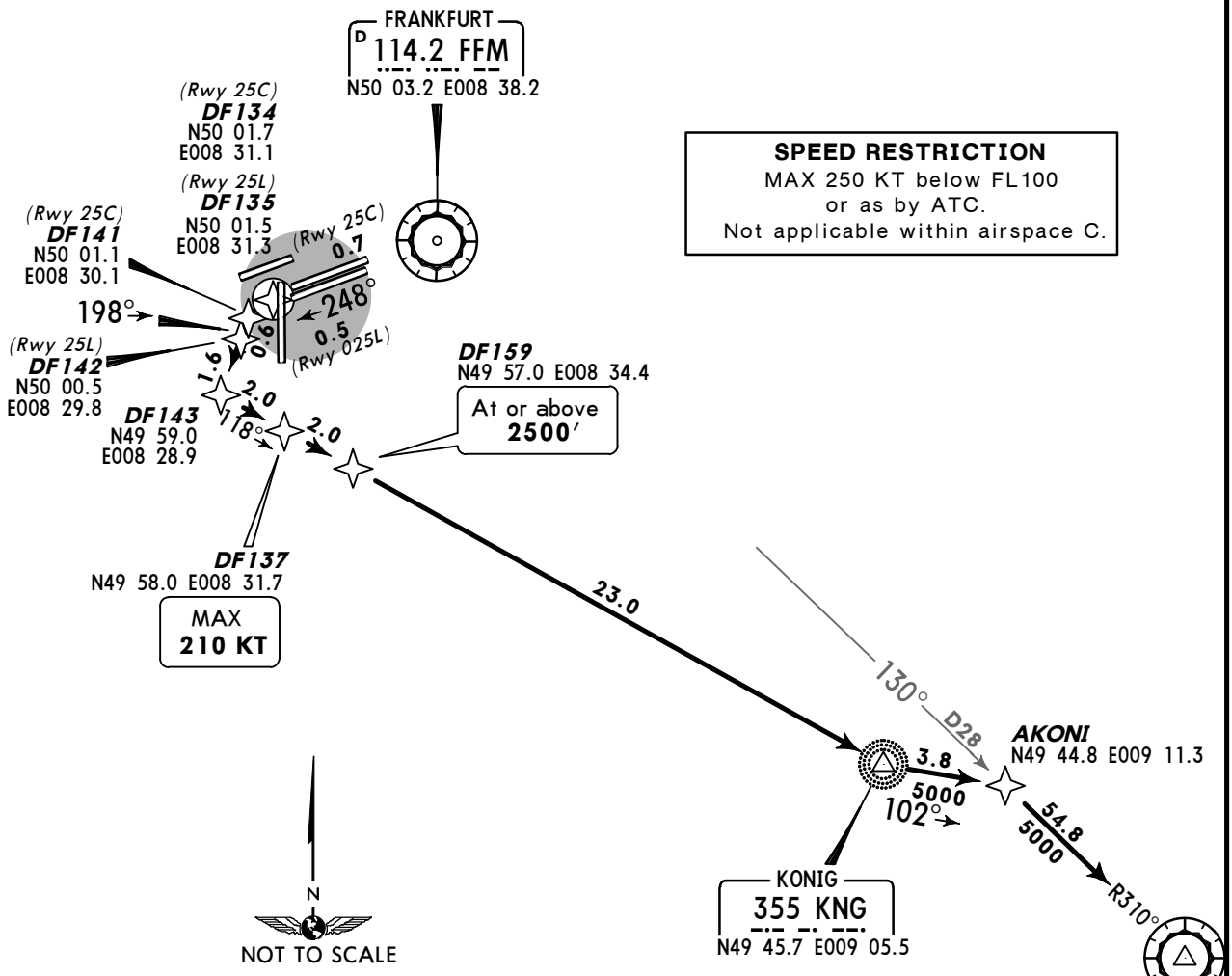
CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

DINKELSBUHL FIVE FOXTROT (DKB 5F)
DINKELSBUHL SIX GOLF (DKB 6G)
RWYS 25L/C RNAV DEPARTURES (OVERLAY 10-3E7)
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

ROUTING

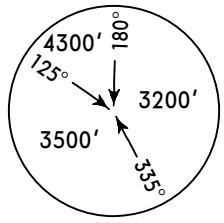
(800′+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 (2500′+) - KNG - AKONI - DKB.

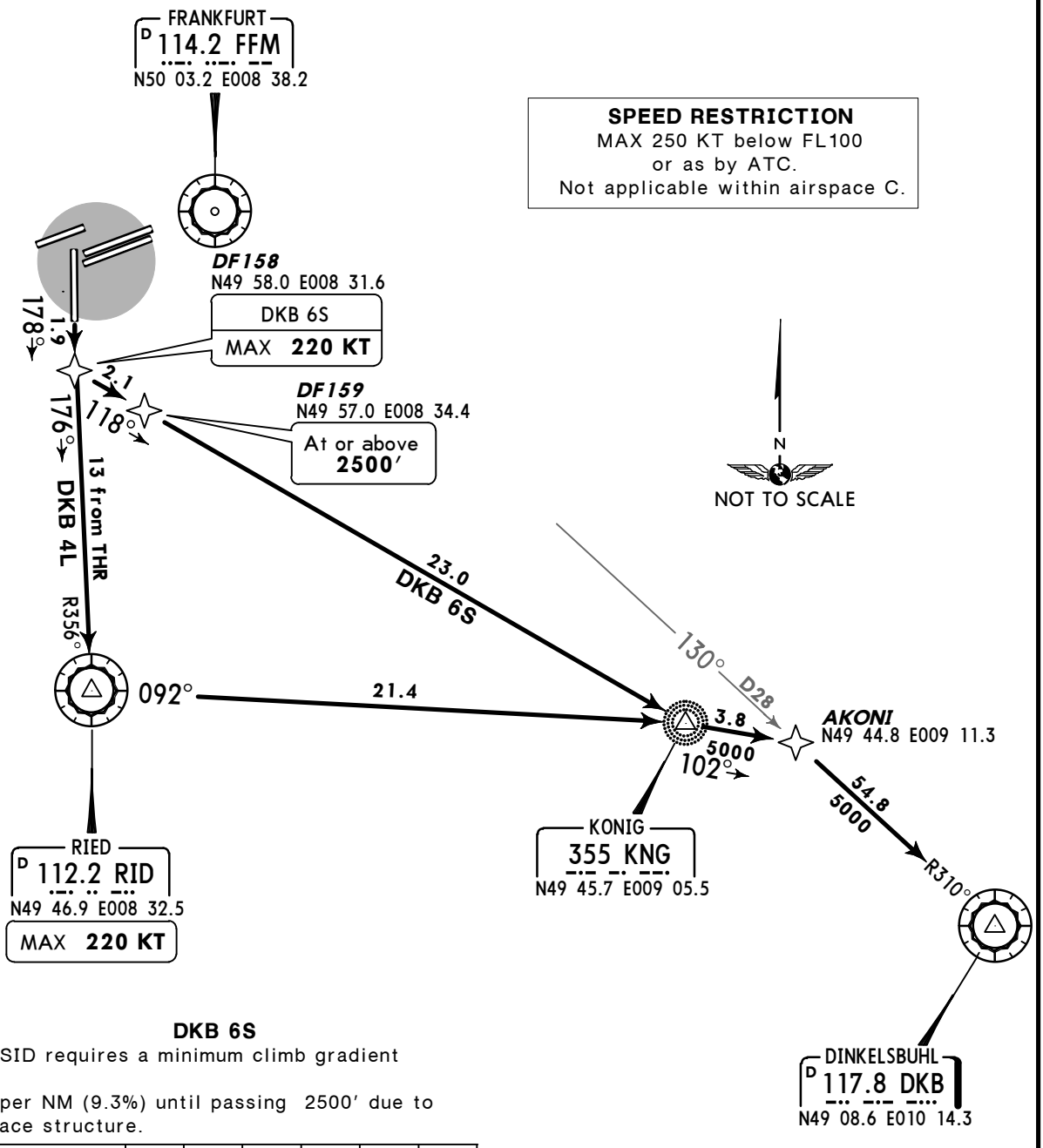
CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

DINKELSBUHL FOUR LIMA (DKB 4L)
DINKELSBUHL SIX SIERRA (DKB 6S)
RWY 18 RNAV DEPARTURES (OVERLAY 10-3E8)
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR





DKB 6S

This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via DKB 4L.

Initial climb clearance **4000′**

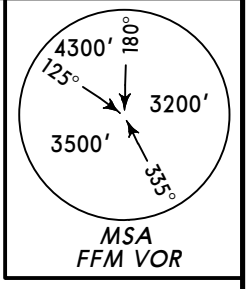
SID	ROUTING
DKB 4L	(800′+) - RID (K220-) - KNG - AKONI - DKB.
DKB 6S	(800′+) - DF158 (K220-) - DF159 (2500′+) - KNG - AKONI - DKB.

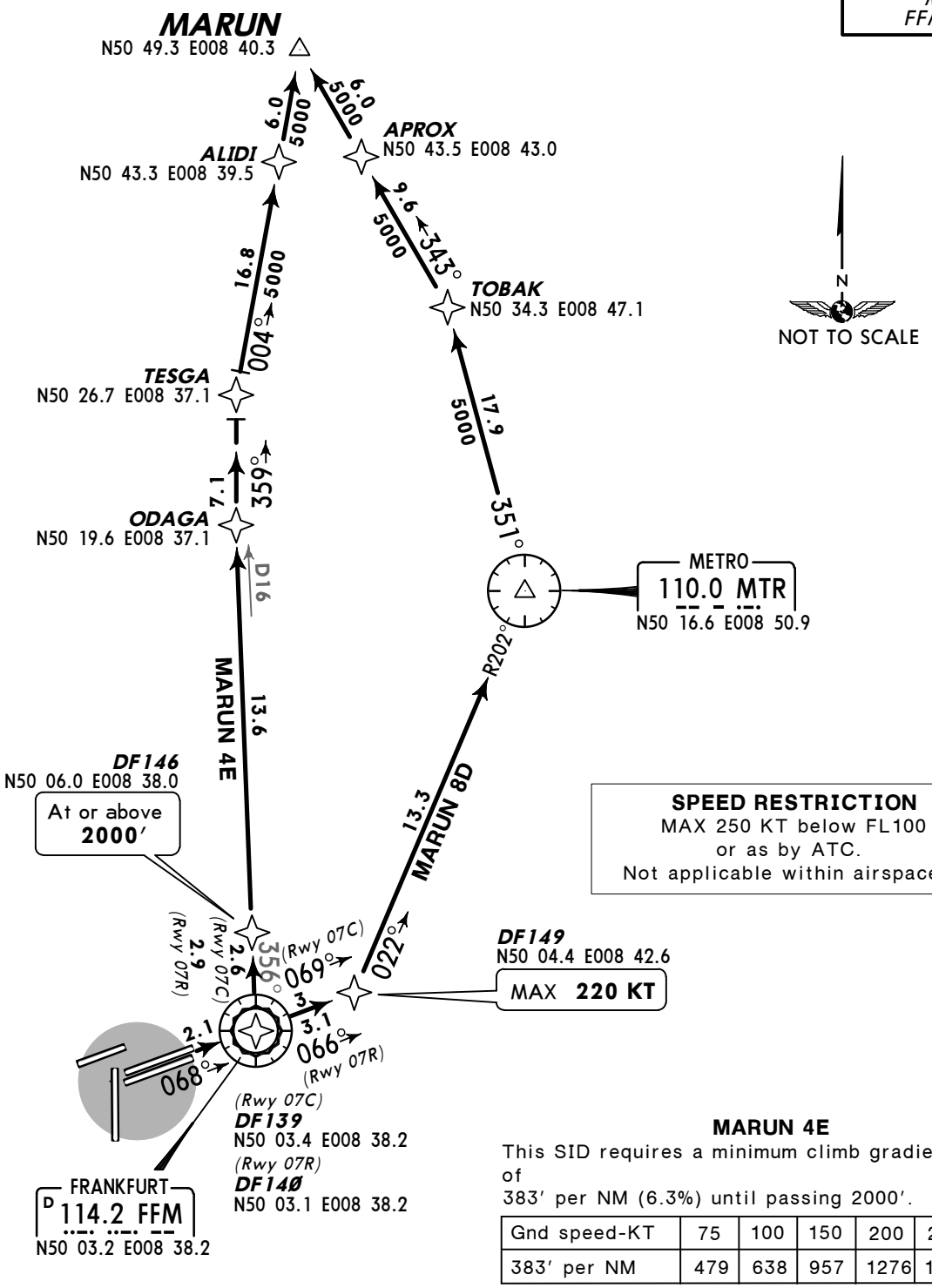
CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

MARUN EIGHT DELTA (MARUN 8D) *[MARU8D]*
MARUN FOUR ECHO (MARUN 4E) *[MARU4E]*
RWYS 07C/R RNAV DEPARTURES (OVERLAY 10-3G)





MARUN 4E

This SID requires a minimum climb gradient of
383′ per NM (6.3%) until passing 2000′.

Gnd speed-KT	75	100	150	200	250	300
383′ per NM	479	638	957	1276	1595	1914

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

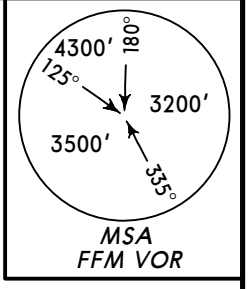
SID	ROUTING
MARUN 8D	(800′+) - DF149 (K220-) - MTR - TOBAK - APROX - MARUN.
MARUN 4E	(800′+) - DF139 (07C)/DF140 (07R) - DF146 (2000′+) - ODAGA - TESGA - ALIDI - MARUN.

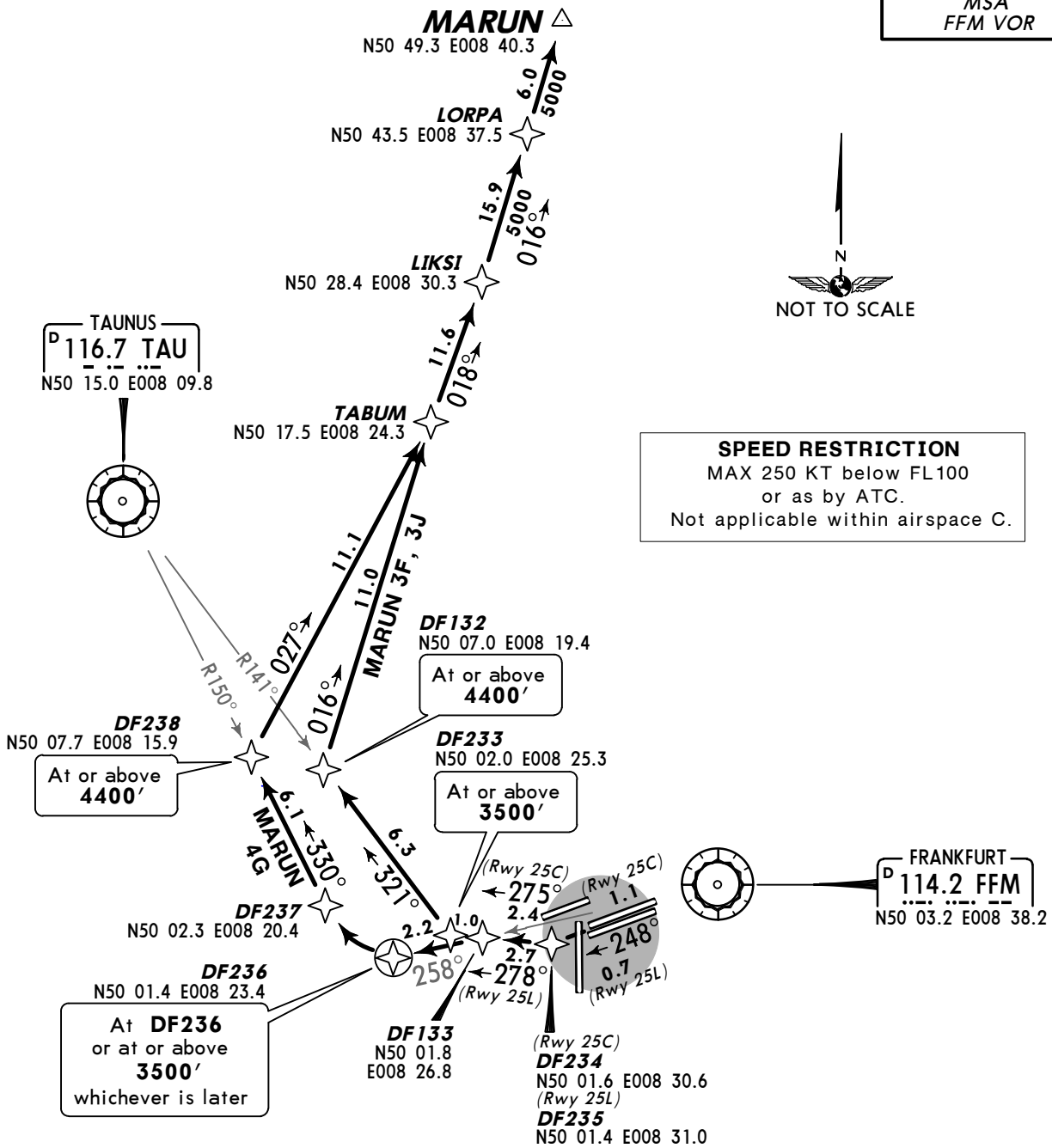
CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

MARUN THREE FOXTROT (MARUN 3F) *[MARU3F]*
MARUN FOUR GOLF (MARUN 4G) *[MARU4G]*
MARUN THREE JULIETT (MARUN 3J) *[MARU3J]*
RWYS 25L/C RNAV DEPARTURES (OVERLAY 10-3G1)





MARUN 3F, 3J
These SIDs require a minimum climb gradient of
729′ per NM (12%) until DF233 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
729′ per NM	911	1215	1823	2430	3038	3646

If unable to comply advise FRANKFURT Delivery prior to start-up.
MARUN 3J: and expect routing via MARUN 4G.

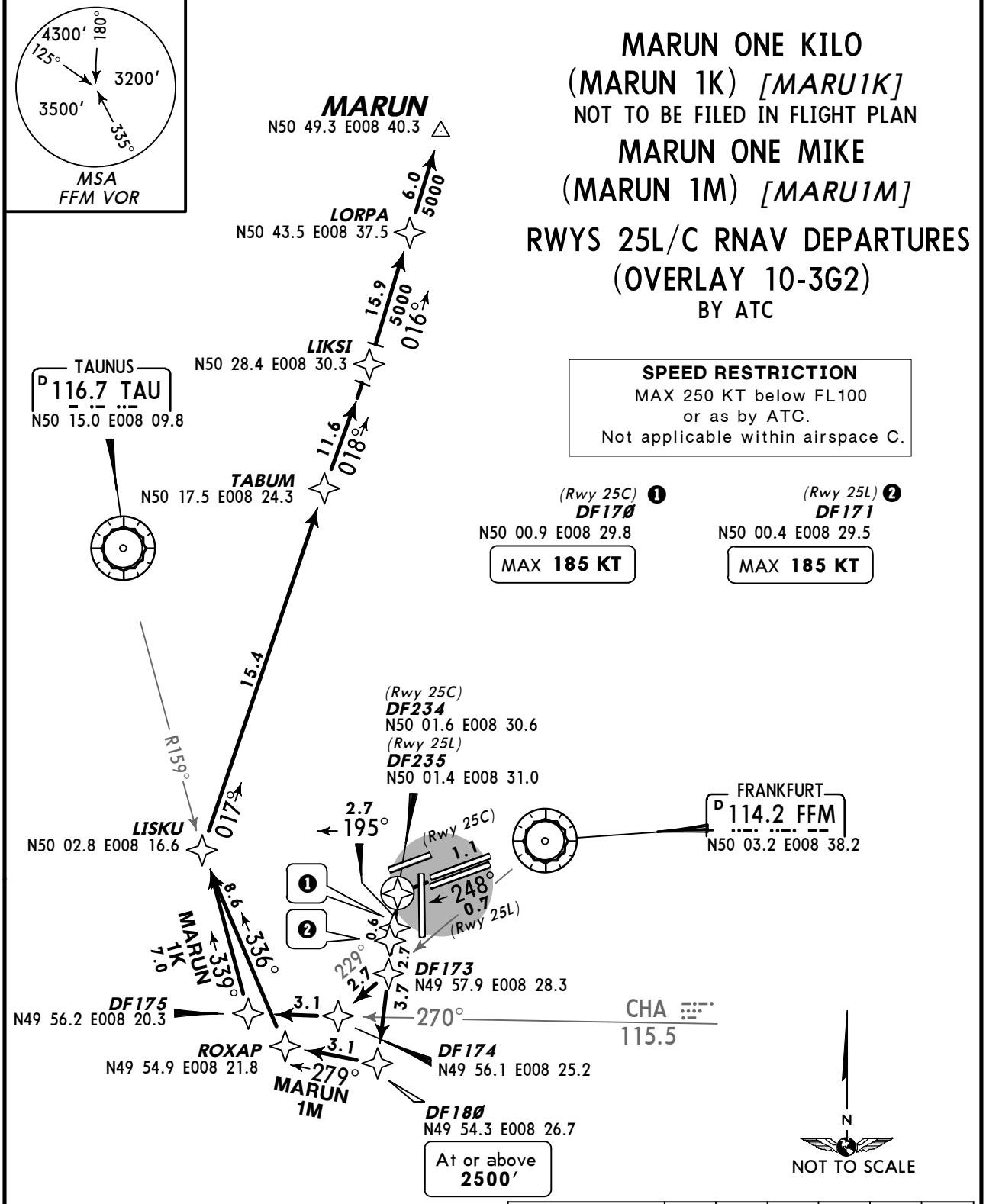
Initial climb clearance **5000′**

SID	ROUTING
MARUN 3F, 3J	(800′+) - DF234 (25C)/DF235 (25L) - DF233 (3500′+) - DF132 (4400′+) - TABUM - LIKSI - LORPA - MARUN.
MARUN 4G	(800′+) - DF234 (25C)/DF235 (25L) - DF133 - DF236 - (3500′+) - DF237 - DF238 (4400′+) - TABUM - LIKSI - LORPA - MARUN.

CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



These SIDs require minimum climb gradients of
MARUN 1K: 243′ per NM (4%) until passing 4400′ due to airspace structure.
MARUN 1M: 249′ per NM (4.1%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

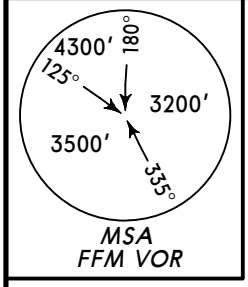
SID	ROUTING
MARUN 1K	(800+) - DF234 (25C)/DF235 (25L) - DF170 (25C; K185-)/DF171 (25L; K185-) - DF173 - DF174 - DF175 - LISKU - TABUM - LIKSI - LORPA - MARUN.
MARUN 1M	(800+) - DF234 (25C)/DF235 (25L) - DF170 (25C; K185-)/DF171 (25L; K185-) - DF180 (2500′+) - ROXAP - LISKU - TABUM - LIKSI - LORPA - MARUN.

CHANGES: RNAV SIDs established; RNAV SIDs DKB 5F & 6G transferred.

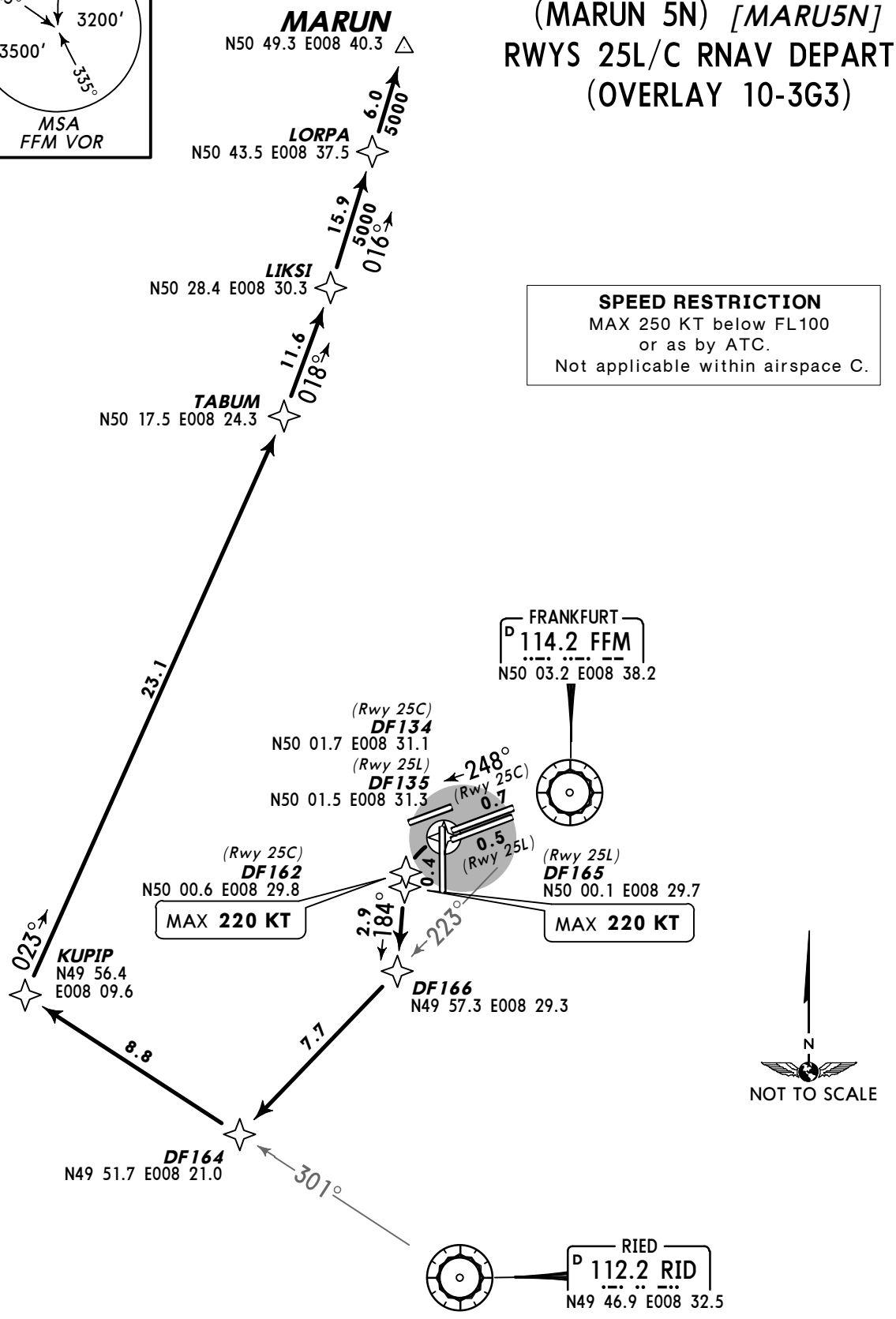
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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

MARUN FIVE NOVEMBER (MARUN 5N) *[MARU5N]* RWYS 25L/C RNAV DEPARTURE (OVERLAY 10-3G3)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

ROUTING

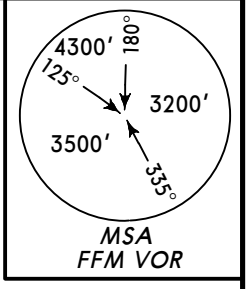
(800′+) - DF134 (25C)/DF135 (25L) - DF162 (25C; K220-)/DF165 (25L; K220-) - DF166 - DF164 - KUPIP - TABUM - LIKSI - LORPA - MARUN.

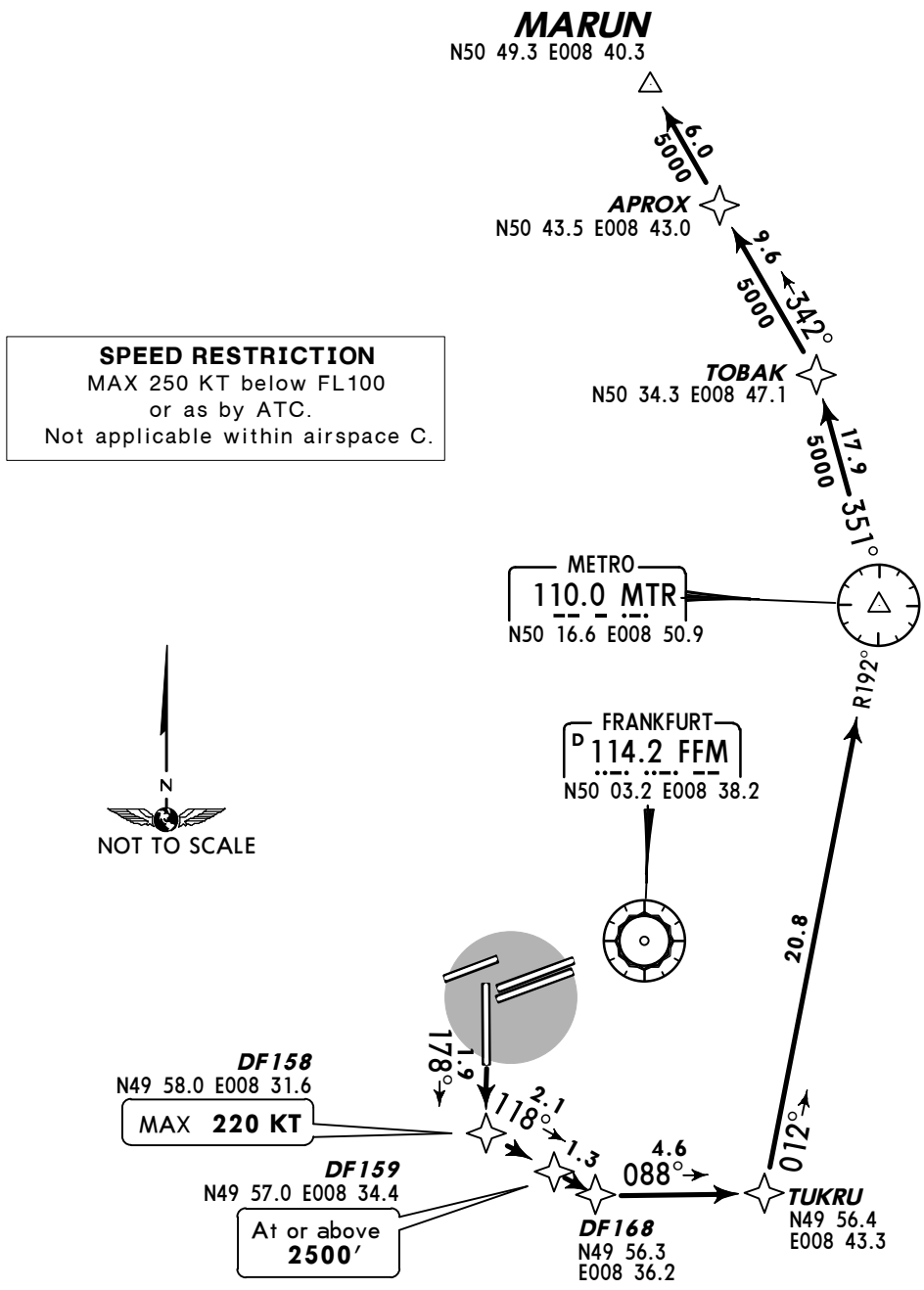
CHANGES: RWY layout; RNAV SID renumb & revised; initial contact; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

MARUN TWO ROMEO (MARUN 2R) *[MARU2R]*
RWY 18 RNAV DEPARTURE (OVERLAY 10-3G4)
BY ATC
WILL ONLY BE ASSIGNED BETWEEN 2300-0500LT





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

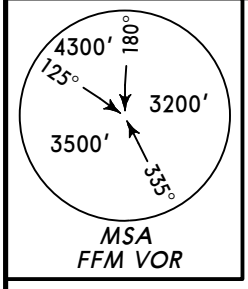
ROUTING

(800+) - DF158 (K220-) - DF159 (2500′+) - DF168 - TUKRU - MTR - TOBAK - APROX - MARUN.

CHANGES: RWY layout; chart reindexed.

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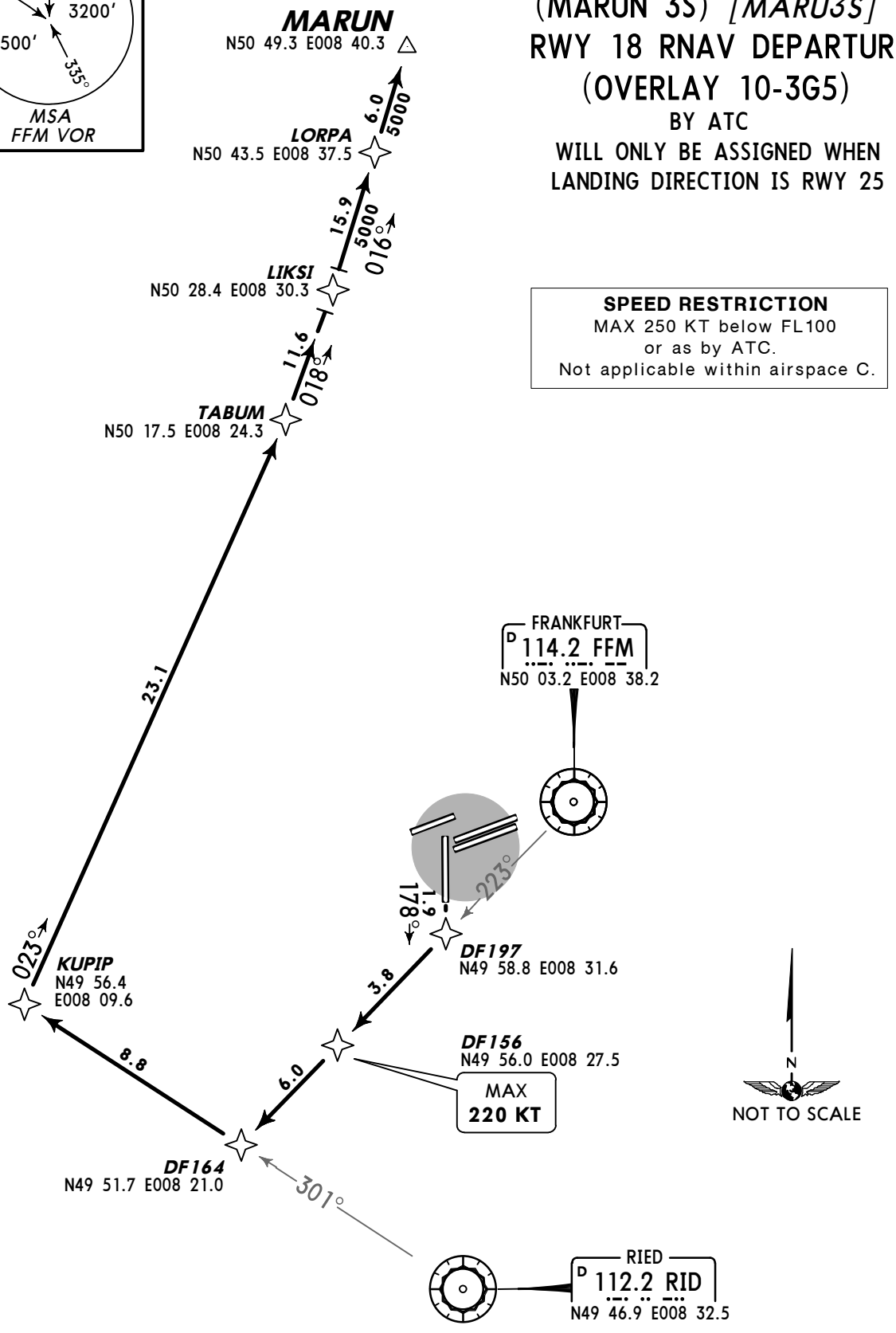
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.



MARUN THREE SIERRA (MARUN 3S) *[MARU3S]*
RWY 18 RNAV DEPARTURE (OVERLAY 10-3G5)

BY ATC
WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS RWY 25

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

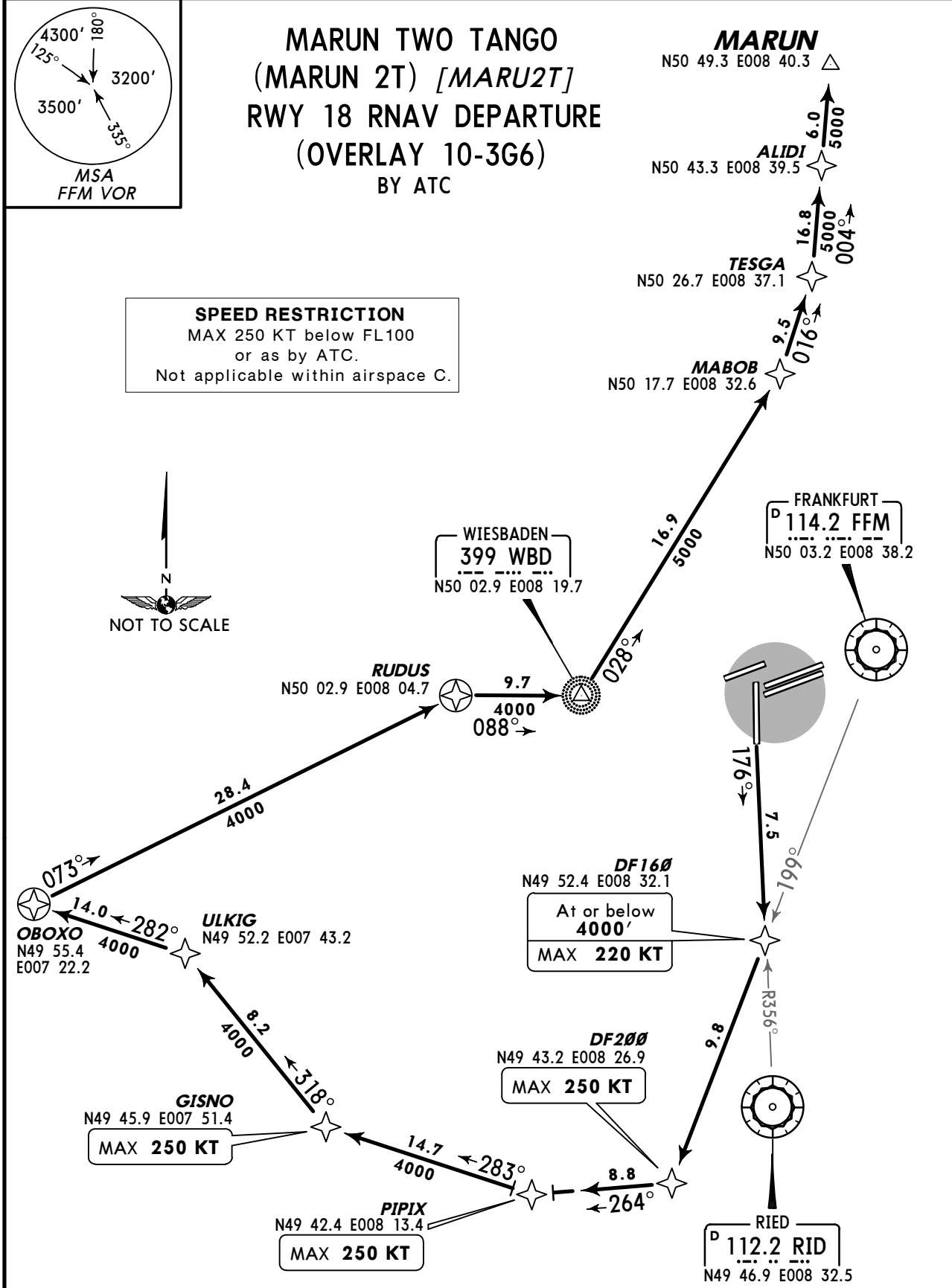
(800′+) - DF197 - DF156 (K220-) - DF164 - KUPIP - TABUM - LIKSI - LORPA - MARUN.

CHANGES: RWY layout; RNAV SID revised; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

MARUN TWO TANGO (MARUN 2T) [MARU2T]
RWY 18 RNAV DEPARTURE
(OVERLAY 10-3G6)
BY ATC



Initial climb clearance **4000′**

ROUTING

(800′+) - DF160 (4000′-; K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG - OBOXO - RUDUS - WBD - MABOB - TESGA - ALIDI - MARUN.

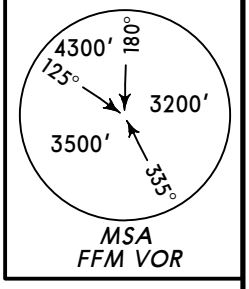
CHANGES: RWY layout; chart reindexed.

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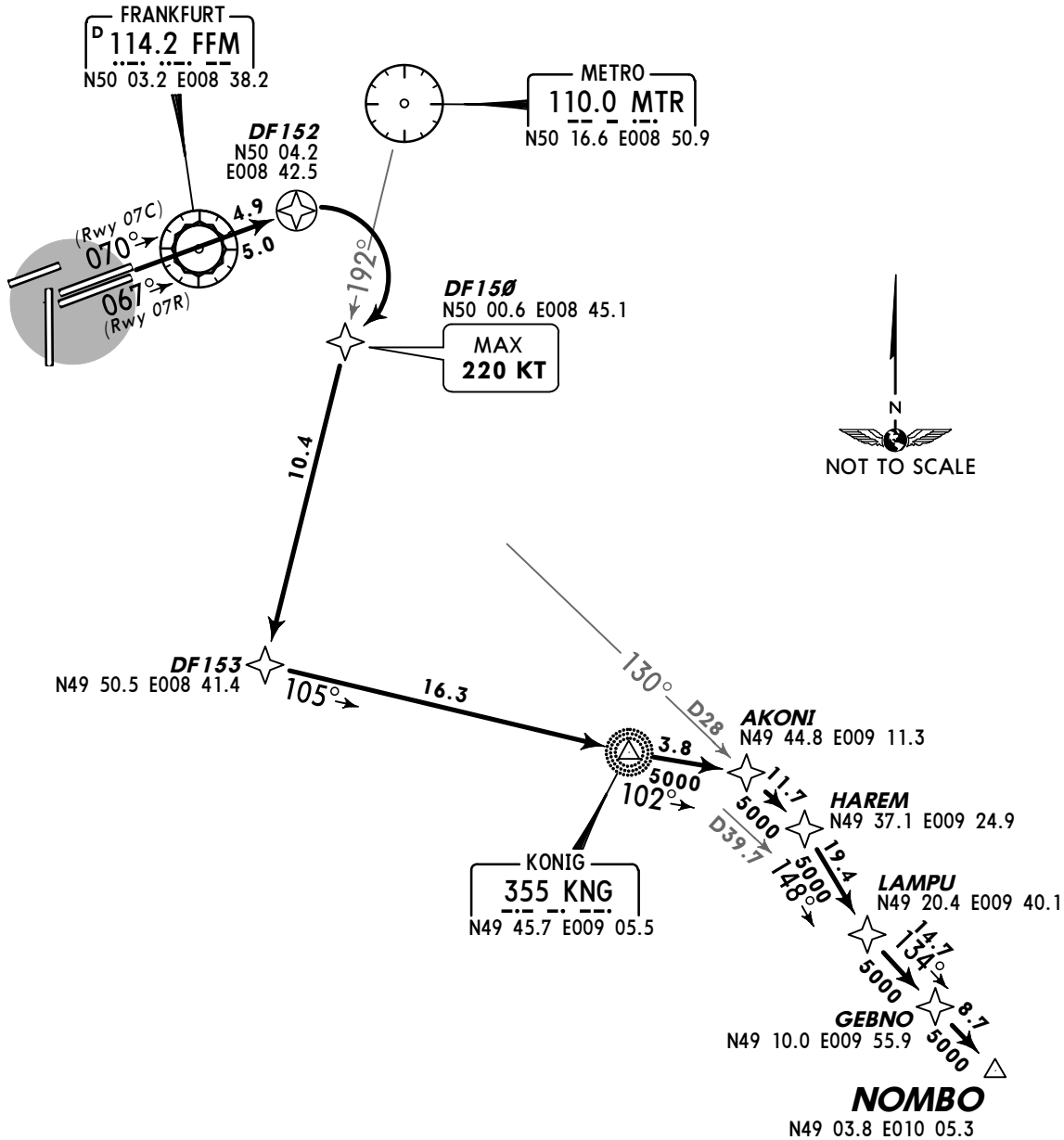
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

NOMBO EIGHT DELTA (NOMBO 8D) *[NOMB8D]*
NOMBO SEVEN ECHO (NOMBO 7E) *[NOMB7E]*
RWYS 07C/R RNAV DEPARTURES
(OVERLAY 10-3G8)

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

(800′+) - DF152 - DF150 (K220-) - DF153 - KNG - AKONI - HAREM - LAMPU - GEBNO - NOMBO.

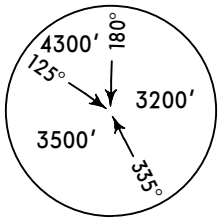
CHANGES: RWY layout; chart reindexed.

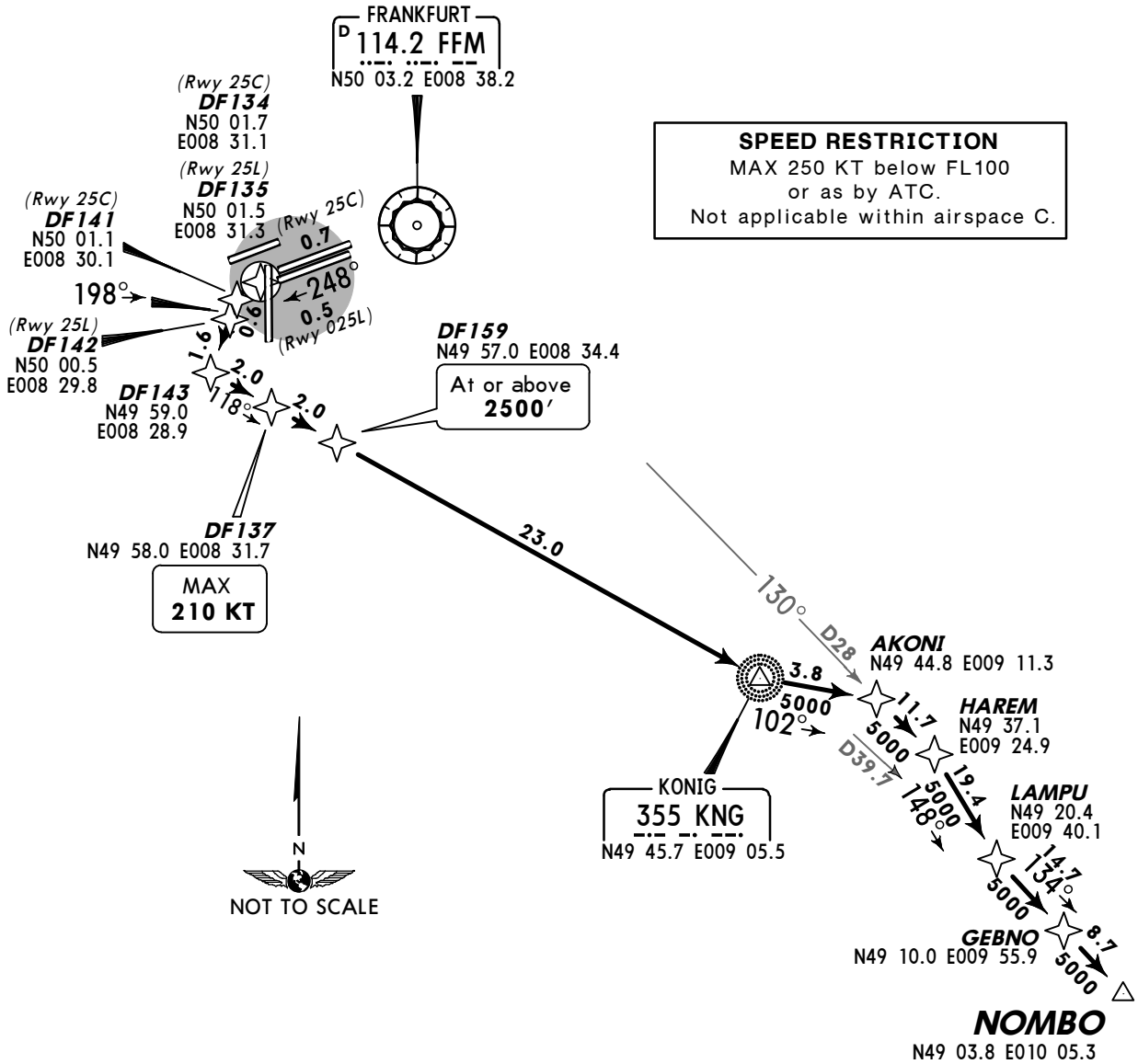
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

NOMBO SIX FOXTROT (NOMBO 6F) *[NOMB6F]*
NOMBO SEVEN GOLF (NOMBO 7G) *[NOMB7G]*
RWYS 25L/C RNAV DEPARTURES
(OVERLAY 10-3H)

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

ROUTING

(800′+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 (2500′+) - KNG - AKONI - HAREM - LAMPU - GEBNO - NOMBO.

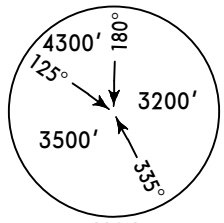
CHANGES: RWY layout; initial contact; chart reindexed.

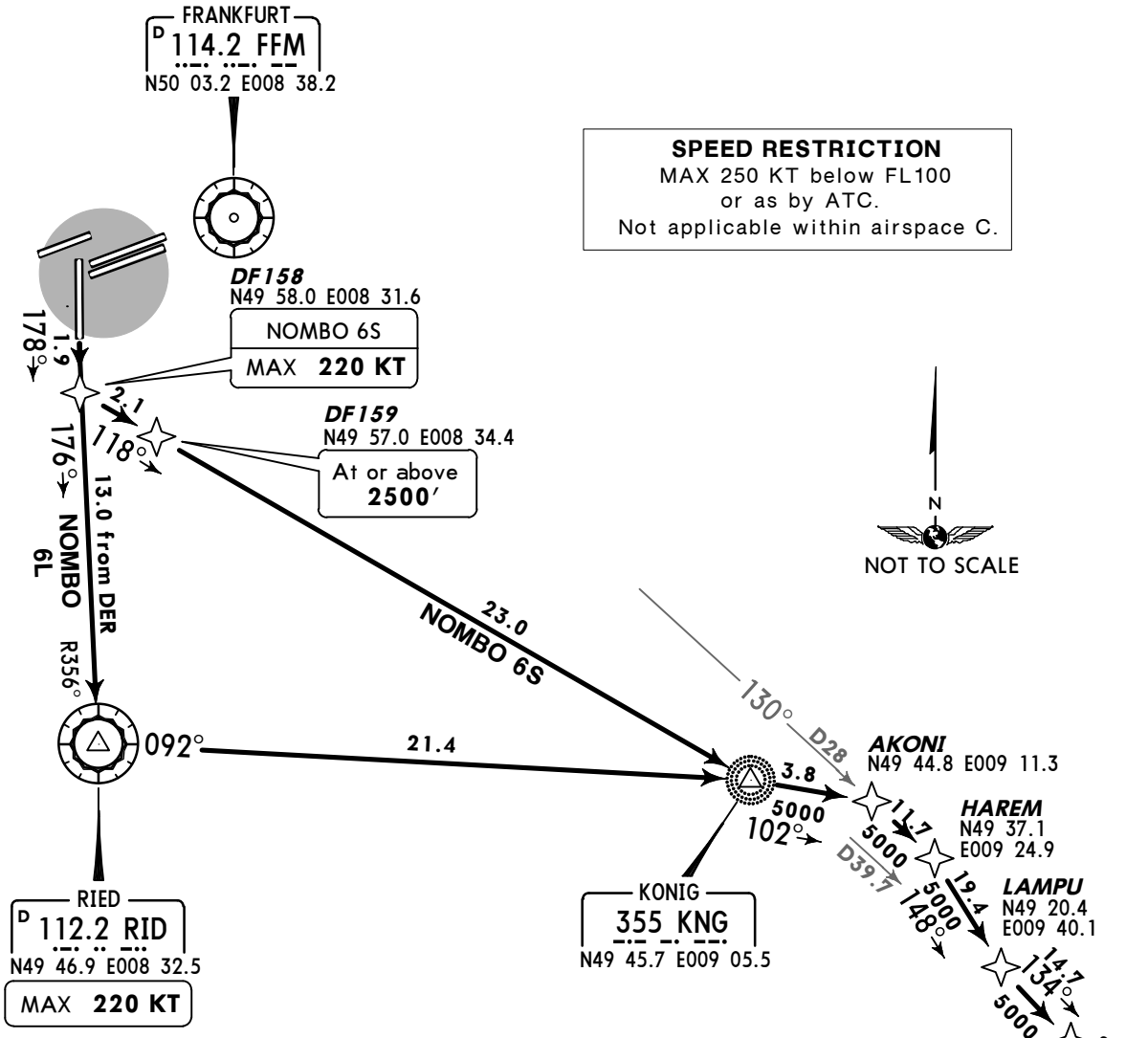
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

NOMBO SIX LIMA (NOMBO 6L) *[NOMB6L]*
NOMBO SIX SIERRA (NOMBO 6S) *[NOMB6S]*
RWY 18 RNAV DEPARTURES (OVERLAY 10-3J)

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





NOMBO 6S

This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via NOMBO 6L.

Initial climb clearance **4000′**

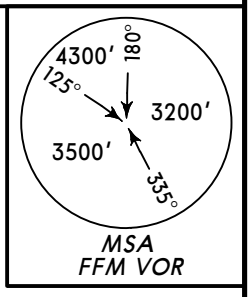
SID	ROUTING
NOMBO 6L	(800′+) - RID (K220-) - KNG - AKONI - HAREM - LAMPU - GEBNO - NOMBO.
NOMBO 6S	(800′+) - DF158 (K220-) - DF159 (2500′+) - KNG - AKONI - HAREM - LAMPU - GEBNO - NOMBO.

CHANGES: RWY layout; chart reindexed.

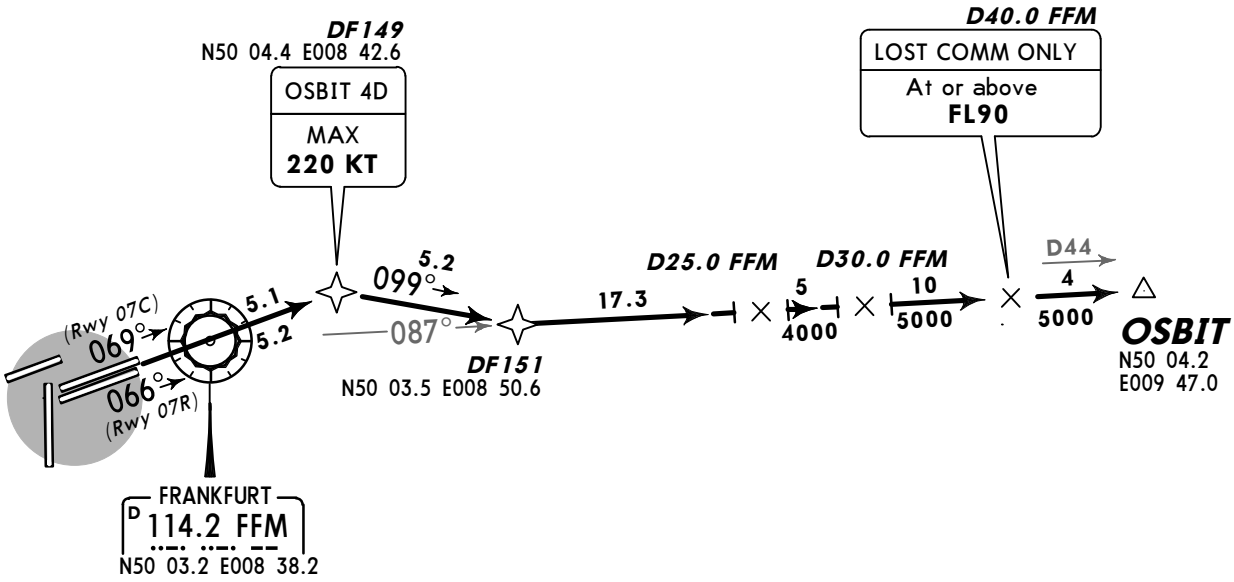
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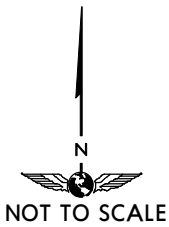
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

OSBIT FOUR DELTA (OSBIT 4D) *[OSBI4D]*
OSBIT THREE ECHO (OSBIT 3E) *[OSBI3E]*
RWYS 07C/R RNAV DEPARTURES (OVERLAY 10-3J1)
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





Initial climb clearance **4000′**

SID	ROUTING
OSBIT 4D	(800′+) - DF149 (K220-) - DF151 - OSBIT.
OSBIT 3E	(800′+) - DF149 - DF151 - OSBIT.

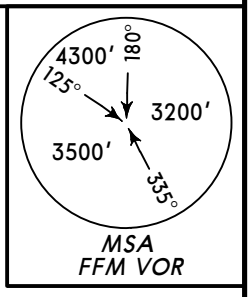
CHANGES: RWY layout; chart reindexed.

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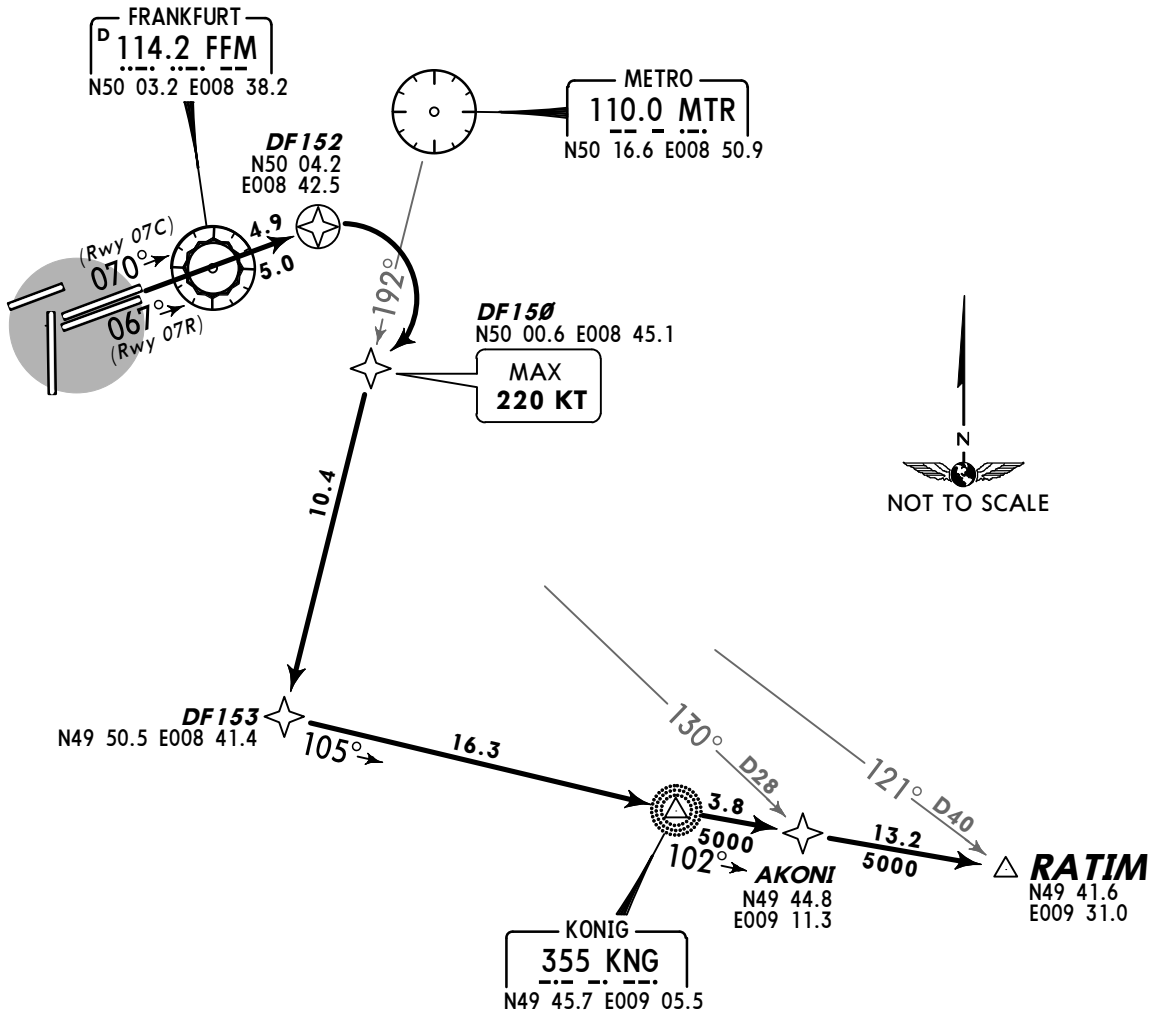
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

RATIM FOUR DELTA (RATIM 4D) *[RATI4D]*
RATIM FOUR ECHO (RATIM 4E) *[RATI4E]*
RWYS 07C/R RNAV DEPARTURES
(OVERLAY 10-3J2)

ONLY PROP ACFT WITH MAX FL230 REQUESTED
INSTEAD OF NOMBO RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

ROUTING

(800′+) - DF152 - DF150 (K220-) - DF153 - KNG - AKONI - RATIM.

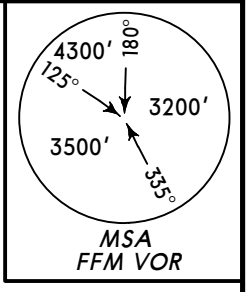
CHANGES: RWY layout; chart reindexed.

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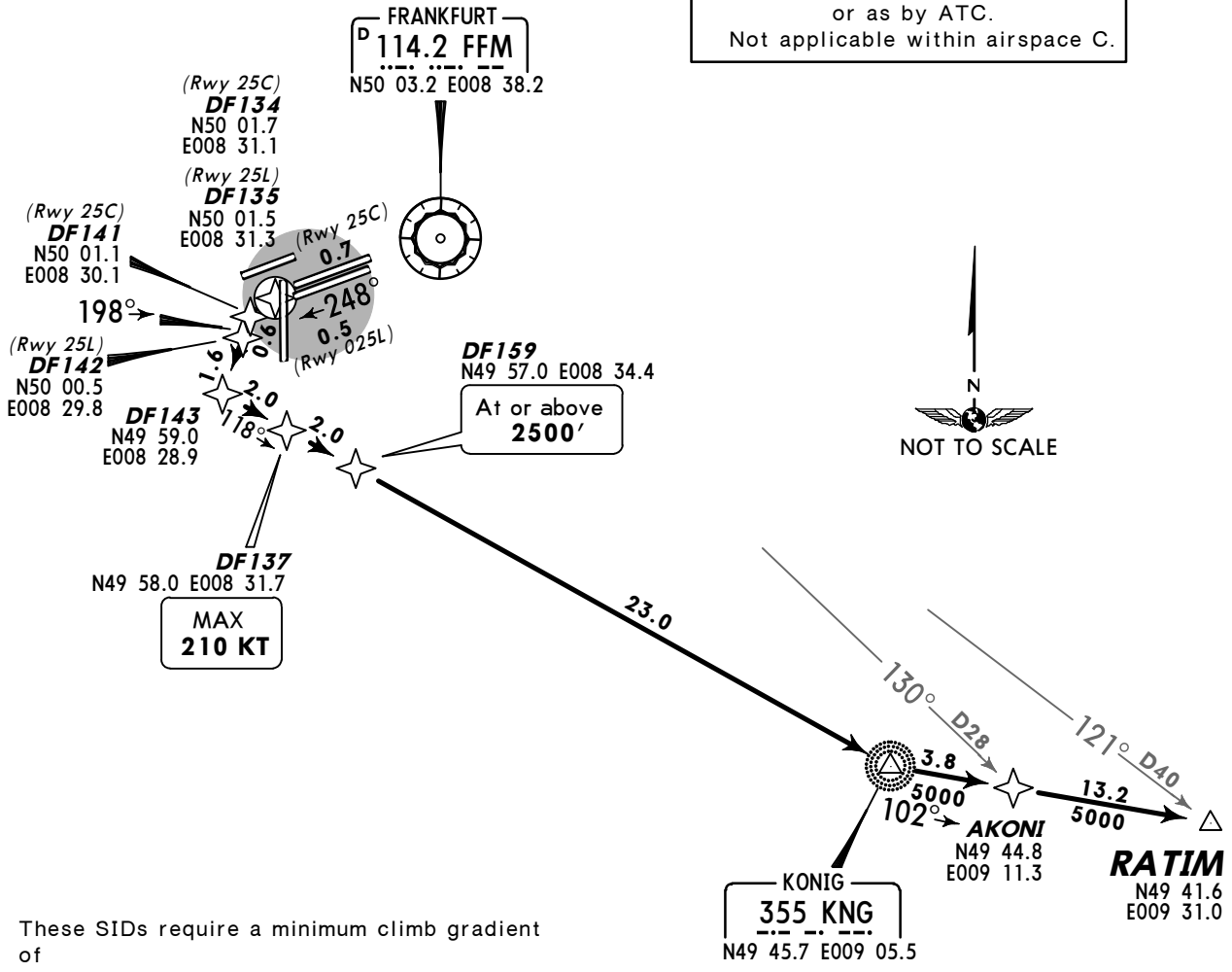
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

RATIM FOUR FOXTROT (RATIM 4F) *[RATI4F]*
RATIM FOUR GOLF (RATIM 4G) *[RATI4G]*
RWYS 25L/C RNAV DEPARTURES
(OVERLAY 10-3J3)

ONLY PROP ACFT WITH MAX FL230 REQUESTED
INSTEAD OF NOMBO RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require a minimum climb gradient of
316′ per NM (5.2%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

ROUTING

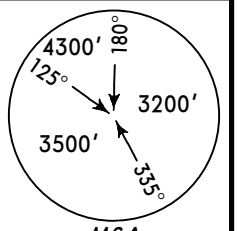
(800′+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 (2500′+) - KNG - AKONI - RATIM.

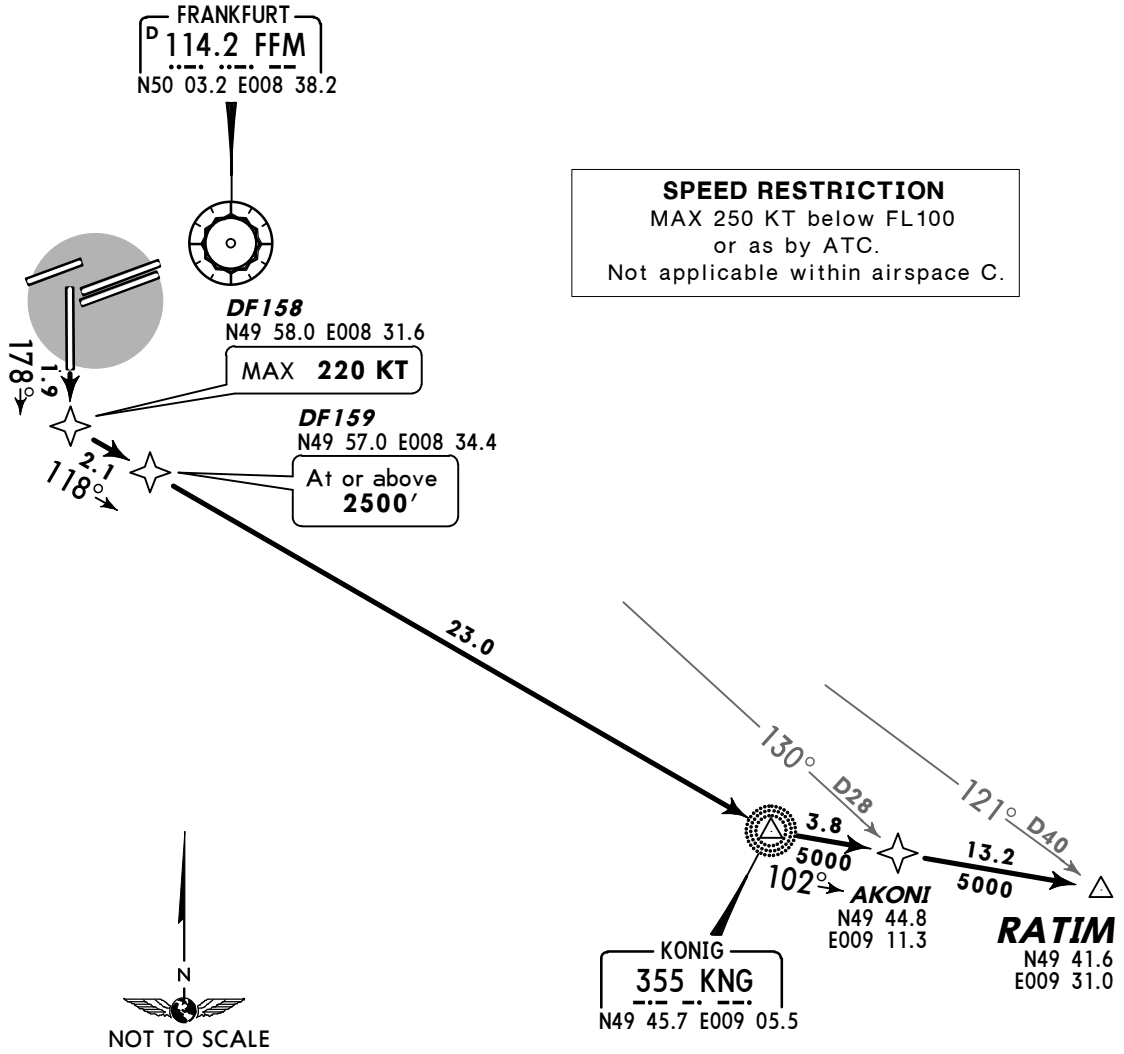
CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

RATIM THREE SIERRA (RATIM 3S) *[RATI3S]*
RWY 18 RNAV DEPARTURE (OVERLAY 10-3J4)
ONLY PROP ACFT WITH MAX FL230 REQUESTED
INSTEAD OF NOMBO RNAV SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR





This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up and expect alternate routing by ATC.

Initial climb clearance **4000′**

ROUTING

(800′+) - DF158 (K220-) - DF159 (2500′+) - KNG - AKONI - RATIM.

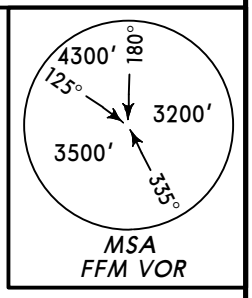
CHANGES: RWY layout; chart reindexed.

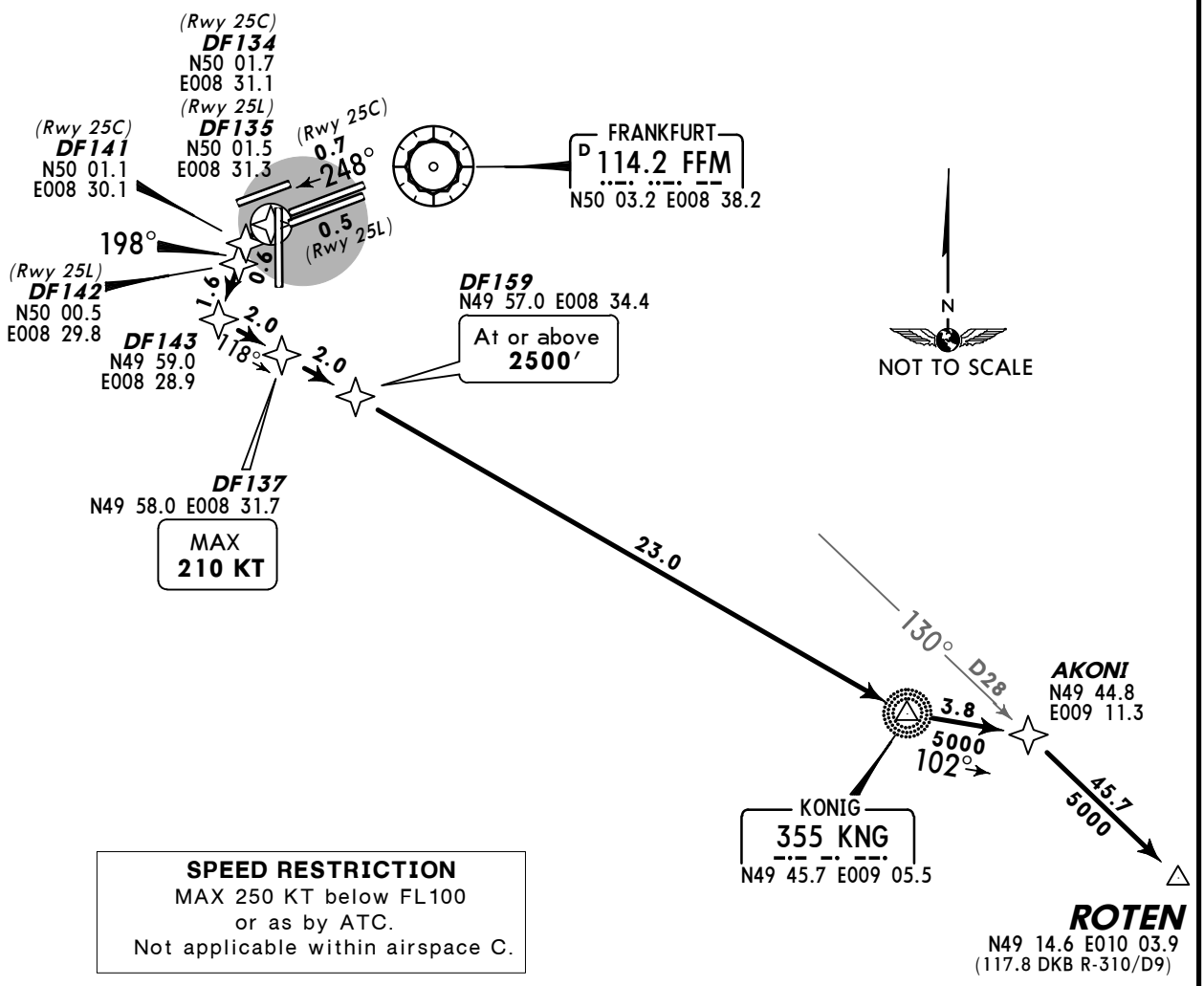
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

ROTEN FIVE FOXTROT (ROTEN 5F) *[ROTE5F]*
ROTEN FOUR GOLF (ROTEN 4G) *[ROTE4G]*
RWYS 25L/C RNAV DEPARTURES
(OVERLAY 10-3J6)

ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of
316′ per NM (5.2%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

ROUTING

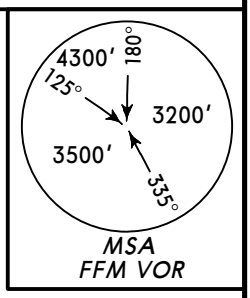
(800′+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 (2500′+) - KNG - AKONI - ROTEN.

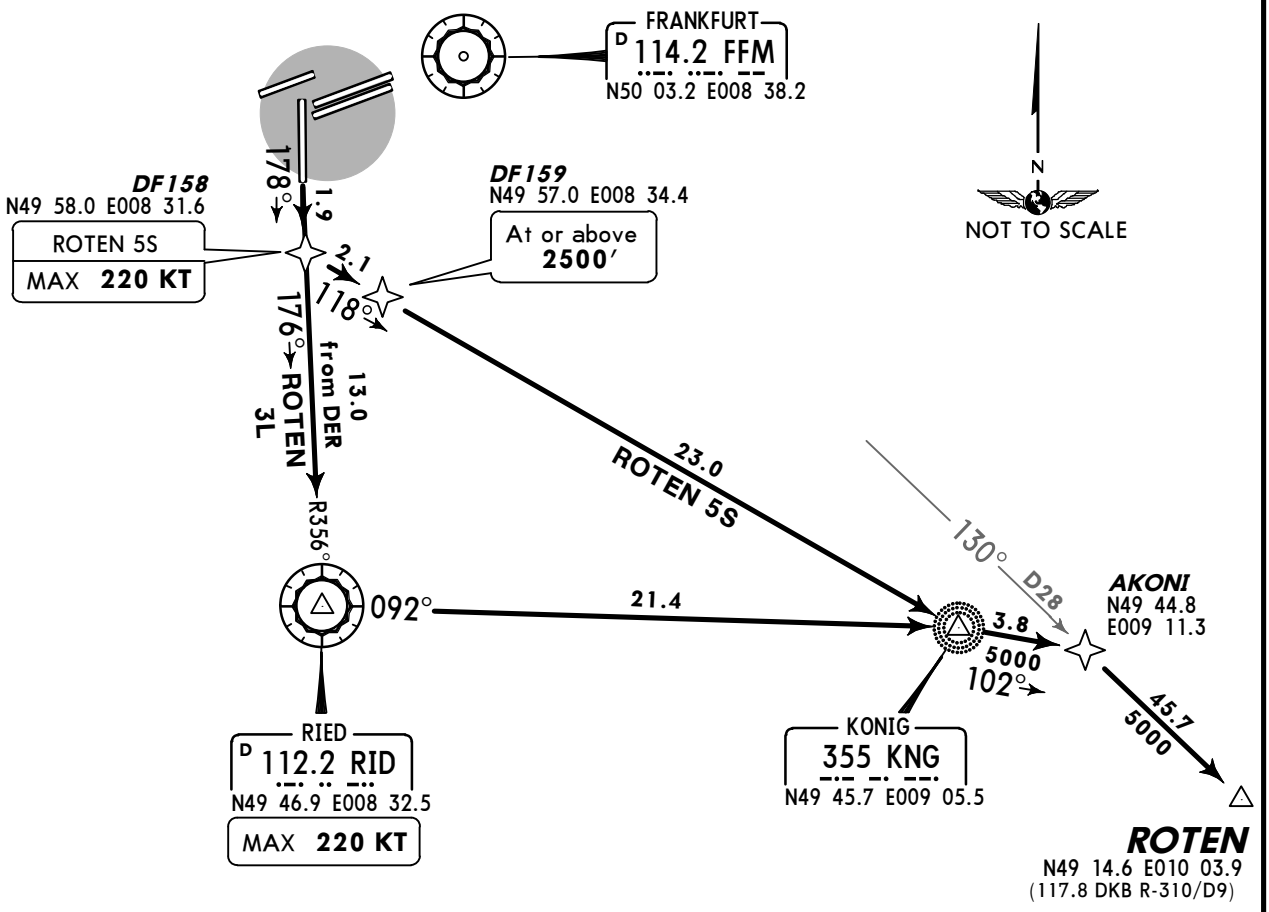
CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

ROTEN THREE LIMA (ROTEN 3L) *[ROTE3L]*
ROTEN FIVE SIERRA (ROTEN 5S) *[ROTE5S]*
RWY 18 RNAV DEPARTURES
(OVERLAY 10-3J7)
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA





ROTEN 5S

This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery and expect routing via ROTEN 3L.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	ROUTING
ROTEN 3L	(800′+) - RID (K220-) - KNG - AKONI - ROTEN.
ROTEN 5S	(800′+) - DF158 (K220-) - DF159 (2500′+) - KNG - AKONI - ROTEN.

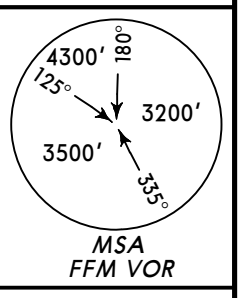
CHANGES: RWY layout; chart reindexed.

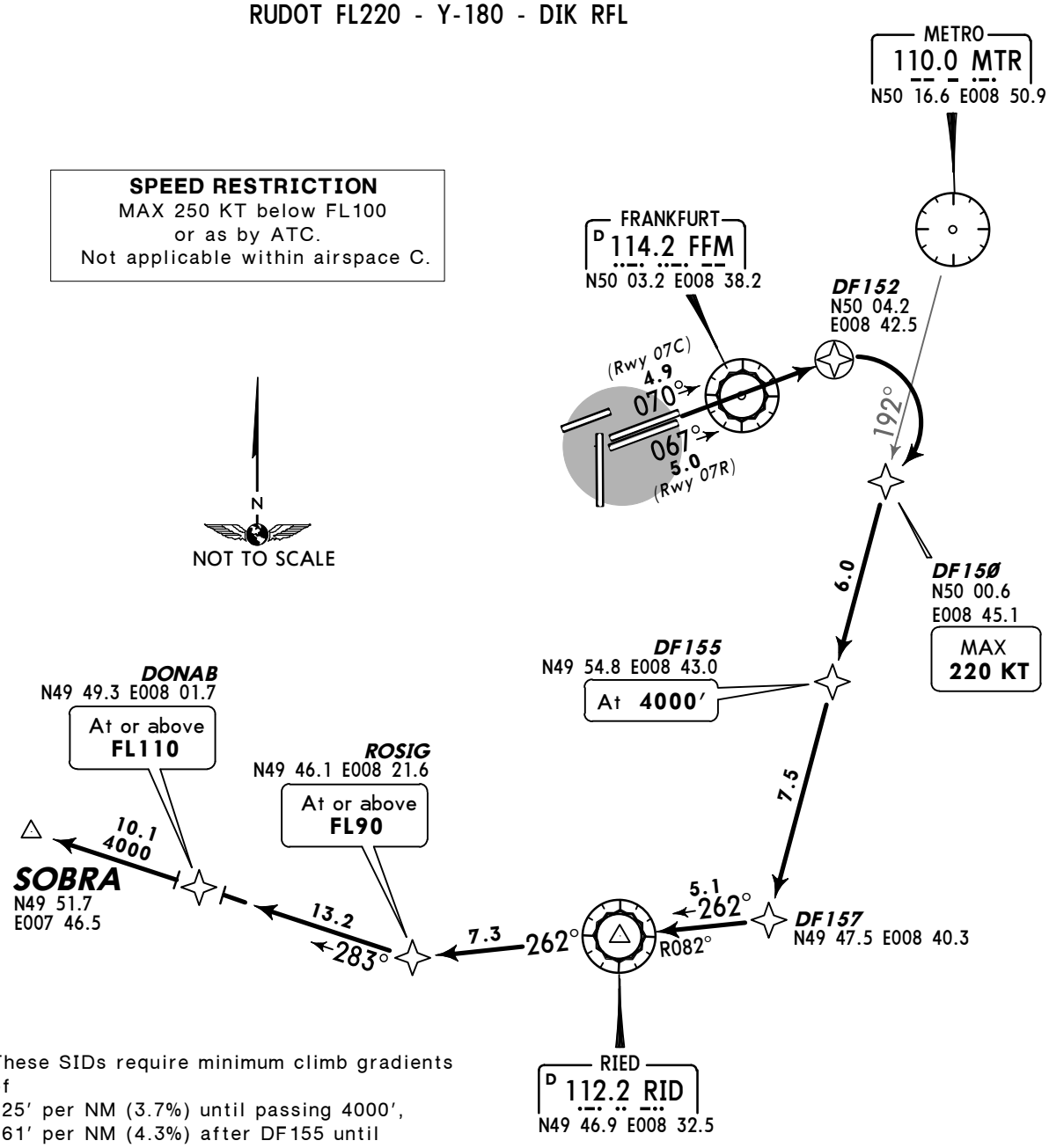
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SOBRA FOUR DELTA (SOBRA 4D) *[SOBR4D]*
RWYS 07C/R RNAV DEPARTURE (OVERLAY 10-3J8)

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y-180/Y-181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y-180 - DIK RFL





These SIDs require minimum climb gradients of
225′ per NM (3.7%) until passing 4000′,
261′ per NM (4.3%) after DF155 until passing FL90 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
261′ per NM	327	435	653	871	1089	1306
225′ per NM	281	375	562	749	937	1124

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **4000′**

ROUTING

(800′+) - DF152 - DF150 (K220-) - DF155 (4000′) - DF157 - RID - ROSIG (FL90+) - DONAB (FL110+) - SOBRA.

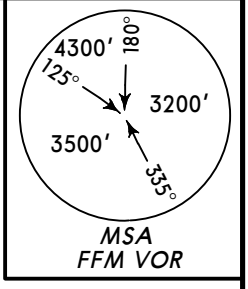
CHANGES: RWY layout; chart reindexed.

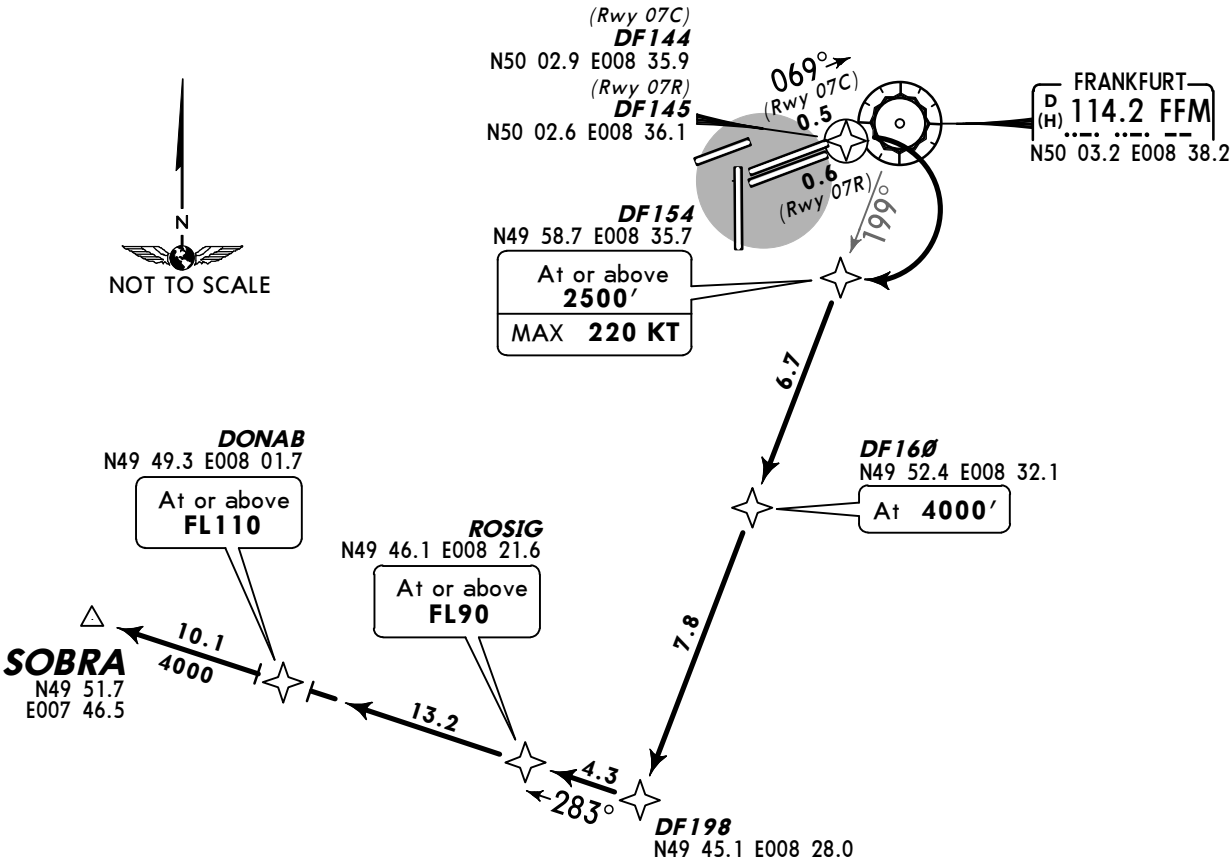
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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SOBRA FOUR ECHO (SOBRA 4E) *[SOBR4E]*
RWYS 07C/R RNAV DEPARTURE (OVERLAY 10-3K)

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y-180/Y-181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y-180 - DIK RFL





This SID requires minimum climb gradients of
383′ per NM (6.3%) until passing 2500′,
401′ per NM (6.6%) after DF160 until passing FL90 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
401′ per NM	501	668	1003	1337	1671	2005
383′ per NM	479	638	957	1276	1595	1914

If unable to comply advise FRANKFURT Delivery prior to start-up.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

ROUTING

(800′+) - DF144 (07C)/DF145 (07R) - DF154 (2500′+; K220-) - DF160 (4000′) - DF198 - ROSIG (FL90+) - DONAB (FL110+) - SOBRA.

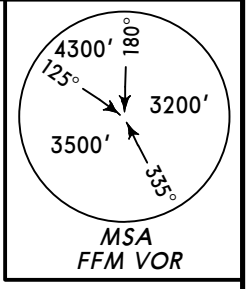
CHANGES: Initial contact.

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*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

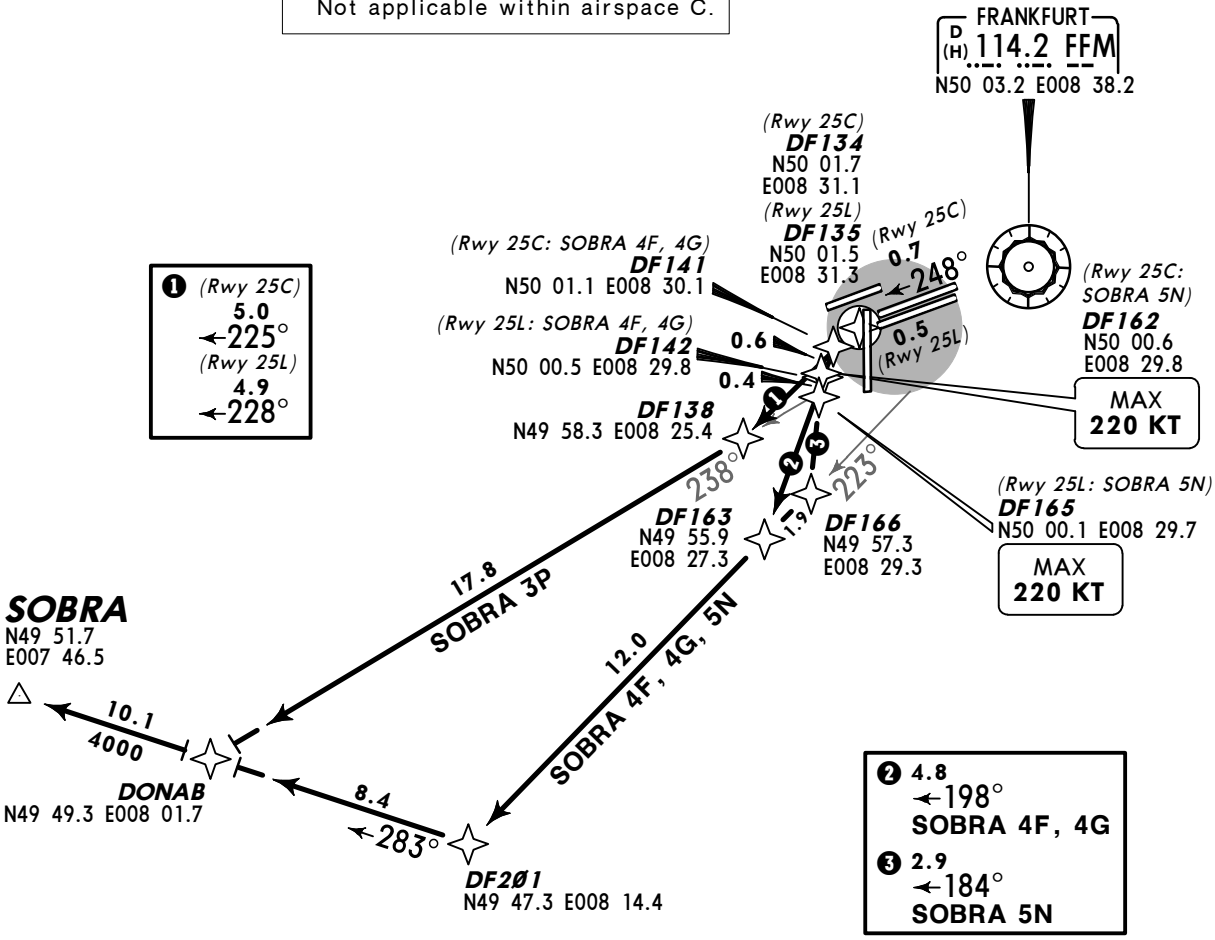
SOBRA FOUR FOXTROT (SOBRA 4F) *[SOBR4F]*
SOBRA FOUR GOLF (SOBRA 4G) *[SOBR4G]*
SOBRA FIVE NOVEMBER (SOBRA 5N) *[SOBR5N]*
SOBRA THREE PAPA (SOBRA 3P) *[SOBR3P]*
RWYS 25L/C RNAV DEPARTURES (OVERLAY 10-3L)

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y-180/Y-181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y-180 - DIK RFL





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

SID	ROUTING
SOBRA 4F, 4G	(800′+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF163 - DF201 - DONAB - SOBRA.
SOBRA 5N	(800′+) - DF134 (25C)/DF135 (25L) - DF162 (25C; K220-)/DF165 (25L; K220-) - DF166 - DF201 - DONAB - SOBRA.
SOBRA 3P	(800′+) - DF134 (25C)/DF135 (25L) - DF138 - DONAB - SOBRA.

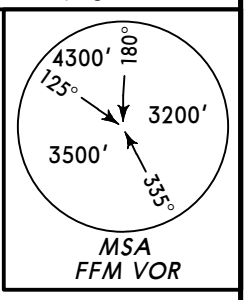
CHANGES: Communications.

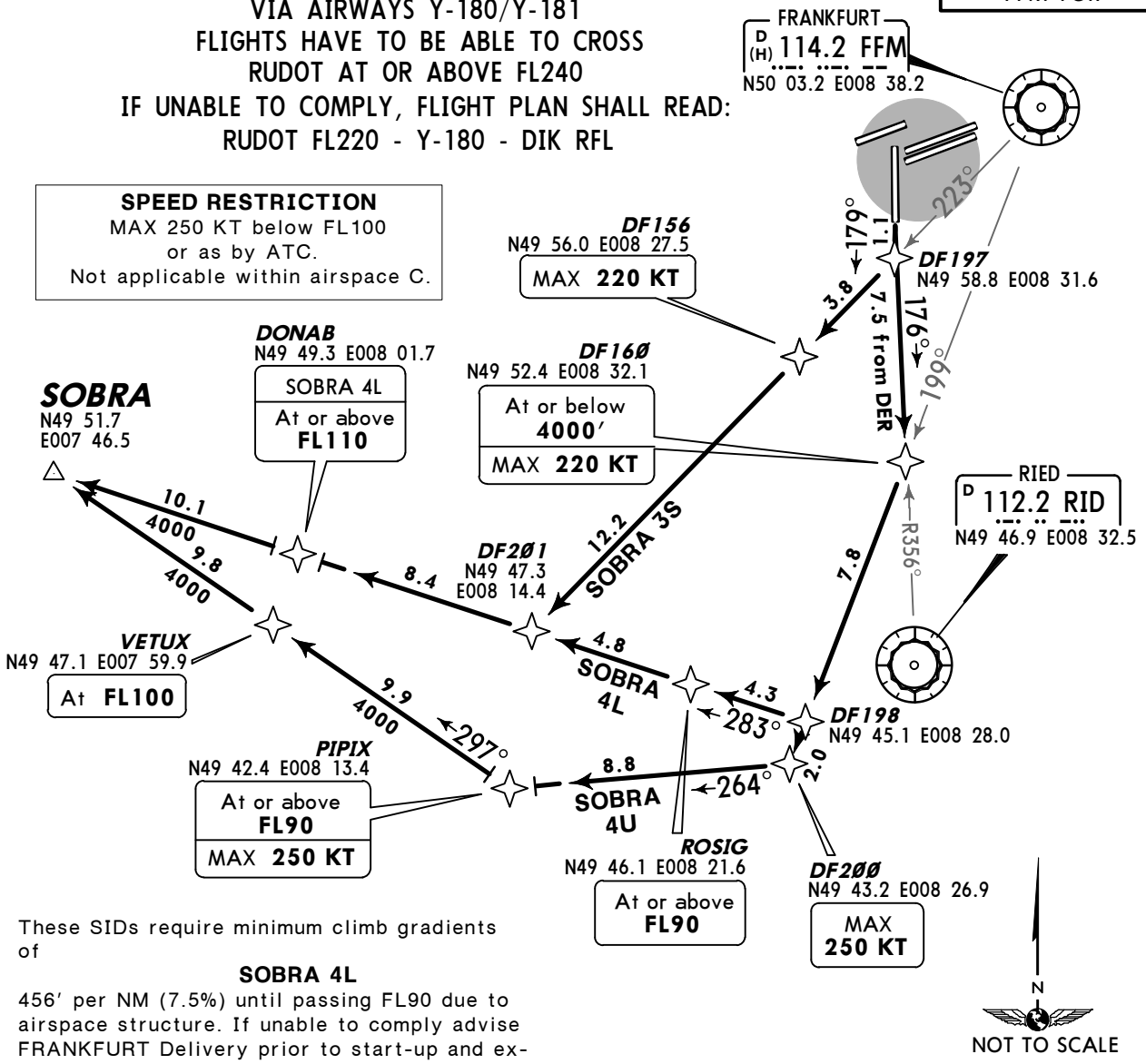
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*LANGEN Radar SOBRA 4L, 4U 136.12 SOBRA 3S 120.15	*Apt Elev* 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

SOBRA FOUR LIMA (SOBRA 4L) *[SOBR4L]*
SOBRA THREE SIERRA (SOBRA 3S) *[SOBR3S]*
SOBRA FOUR UNIFORM (SOBRA 4U) *[SOBR4U]*
RWY 18 RNAV DEPARTURES (OVERLAY 10-3L1)

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y-180/Y-181
FLIGHTS HAVE TO BE ABLE TO CROSS
RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y-180 - DIK RFL





These SIDs require minimum climb gradients of

SOBRA 4L

456′ per NM (7.5%) until passing FL90 due to airspace structure. If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via SOBRA 4U.

SOBRA 4U

328′ per NM (5.4%) until passing FL90 due to airspace structure. If unable to comply advise FRANKFURT Delivery prior to start-up and expect routing via ULKIG 5U.

Gnd speed-KT	75	100	150	200	250	300
456′ per NM	570	760	1139	1519	1899	2279
328′ per NM	410	547	820	1094	1367	1641

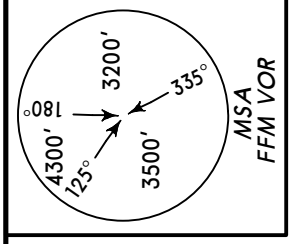
Initial climb clearance **4000′**

SID	ROUTING
SOBRA 4L Will be assigned when landing direction is 07	(800′+) - DF160 (4000′-; K220-) - DF198 - ROSIG (FL90+) - DONAB (FL110+) - SOBRA.
SOBRA 3S Only to be used when landing direction is 25	(800′+) - DF197 - DF156 (K220-) - DF201 - DONAB - SOBRA.
SOBRA 4U	(800′+) - DF160 (4000′-; K220-) - DF200 (K250-) - PIPIX (FL90+; K250-) - VETUX (FL100) - SOBRA.

CHANGES: Communications; initial contact.

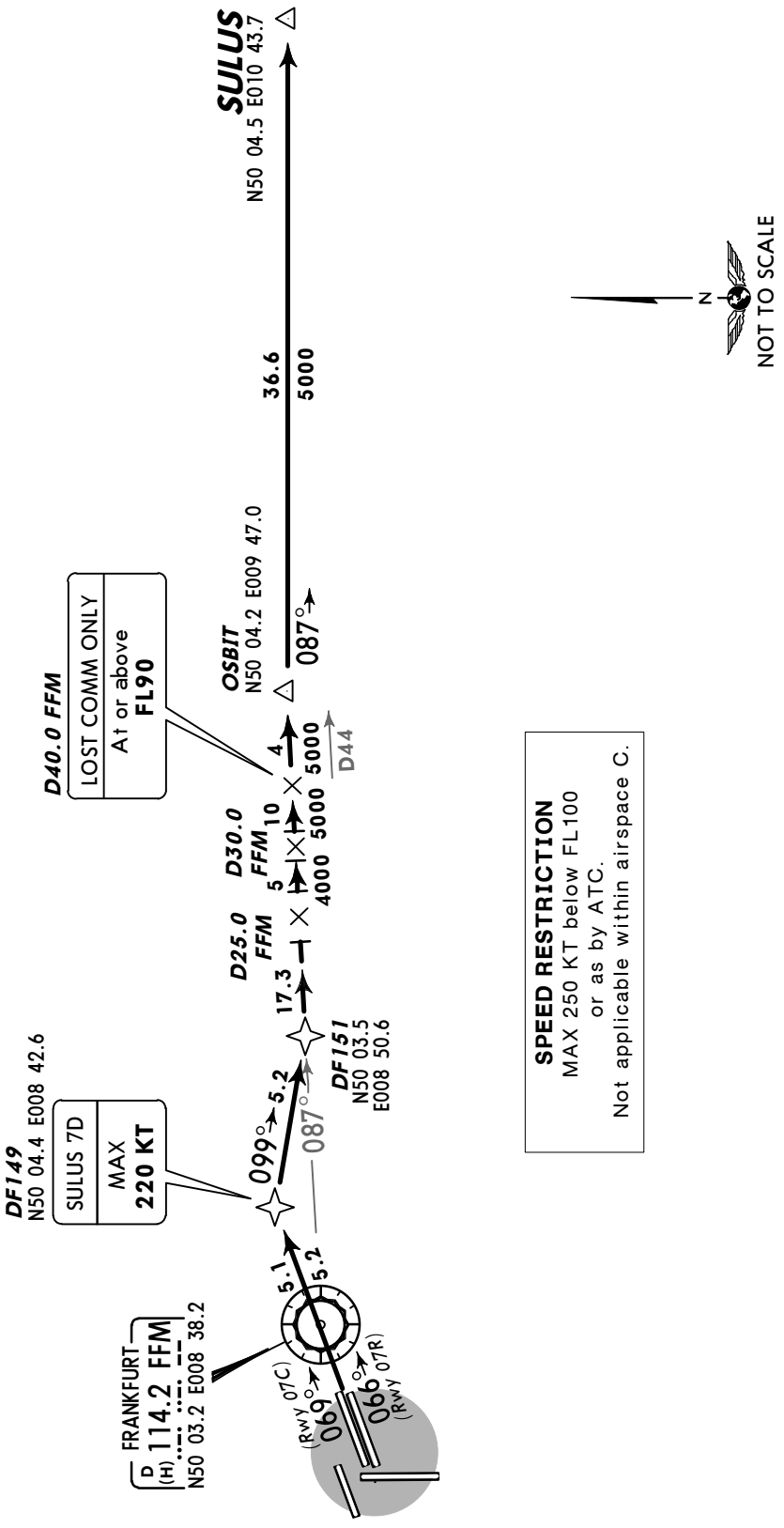
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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



SULUS SEVEN DELTA (SULUS 7D) *[SULU7D]*
SULUS FIVE ECHO (SULUS 5E) *[SULU5E]*
RWYS 07C/R RNAV DEPARTURES
(OVERLAY 10-3L2)

NOT FOR FLIGHTS DESTINATION EDDN



Initial climb clearance 4000′	
SID	ROUTING
SULUS 7D	(800′+) - DF149 (K220-) - DF151 - OSBIT - SULUS.
SULUS 5E	(800′+) - DF149 - DF151 - OSBIT - SULUS.

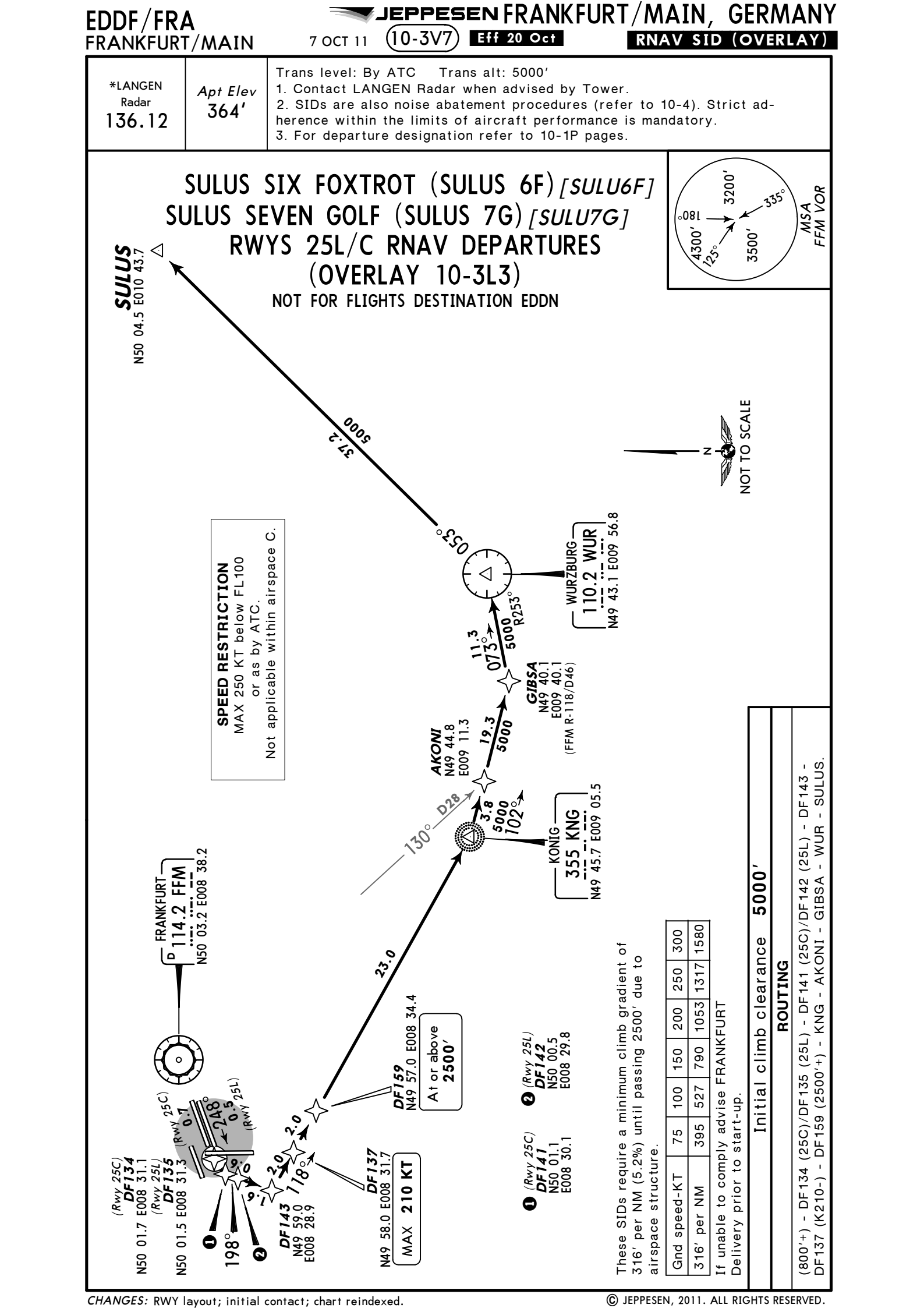
CHANGES: Initial contact.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SULUS SIX FOXTROT (SULUS 6F) *[SULU6F]*
SULUS SEVEN GOLF (SULUS 7G) *[SULU7G]*
RWYS 25L/C RNAV DEPARTURES
(OVERLAY 10-3L3)

NOT FOR FLIGHTS DESTINATION EDDN



These SIDs require a minimum climb gradient of 316′ per NM (5.2%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance 5000′

ROUTING

(800′+) - DF134 (25C)/DF135 (25L) - DF141 (25C)/DF142 (25L) - DF143 - DF137 (K210-) - DF159 (2500′+) - KNG - AKONI - GIBSA - WUR - SULUS.

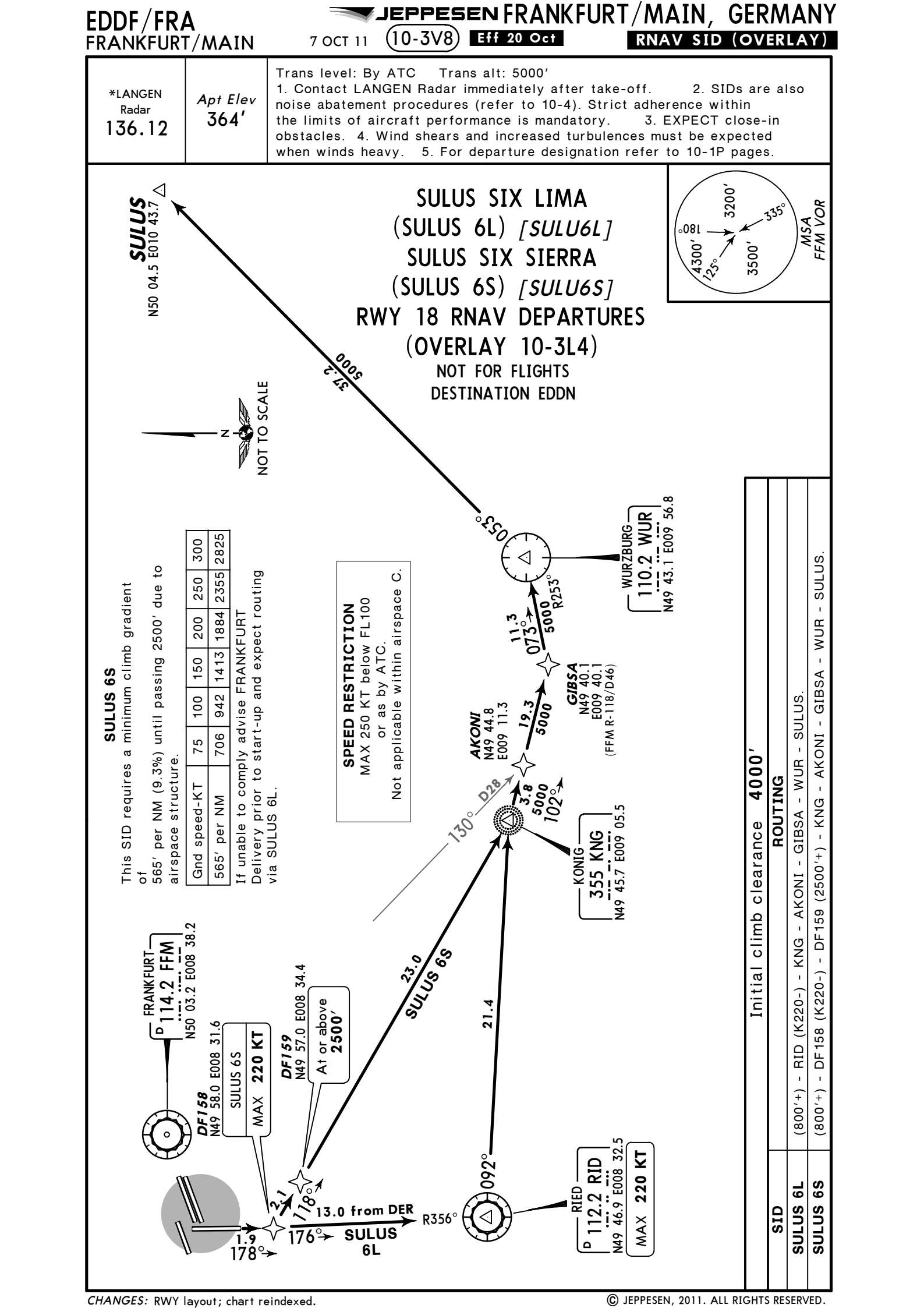
CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

SULUS SIX LIMA (SULUS 6L) [SULU6L]
SULUS SIX SIERRA (SULUS 6S) [SULU6S]
RWY 18 RNAV DEPARTURES
(OVERLAY 10-3L4)

NOT FOR FLIGHTS
DESTINATION EDDN



Initial climb clearance 4000′

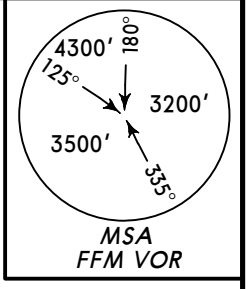
SID	ROUTING
SULUS 6L	(800′+) - RID (K220-) - KNG - AKONI - GIBSA - WUR - SULUS.
SULUS 6S	(800′+) - DF158 (K220-) - DF159 (2500′+) - KNG - AKONI - GIBSA - WUR - SULUS.

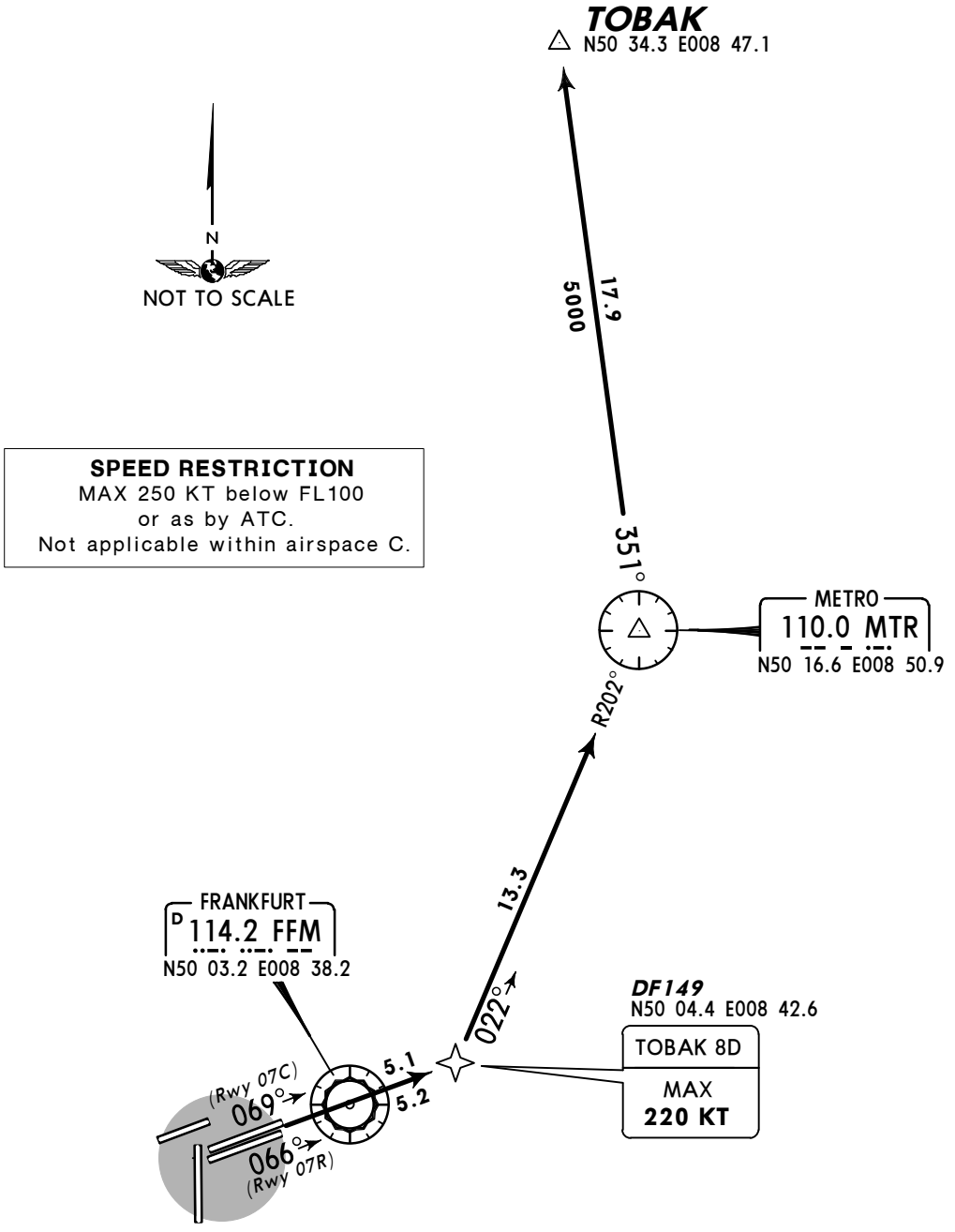
CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK EIGHT DELTA (TOBAK 8D) *[TOBA8D]*
TOBAK SEVEN ECHO (TOBAK 7E) *[TOBA7E]*
RWYS 07C/R RNAV DEPARTURES (OVERLAY 10-3L6)
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10





Initial climb clearance **5000′**

SID	ROUTING
TOBAK 8D	(800′+) - DF149 (K220-) - MTR - TOBAK.
TOBAK 7E	(800′+) - DF149 - MTR - TOBAK.

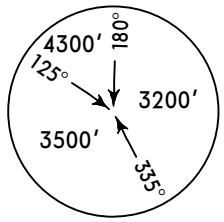
CHANGES: RWY layout; chart reindexed.

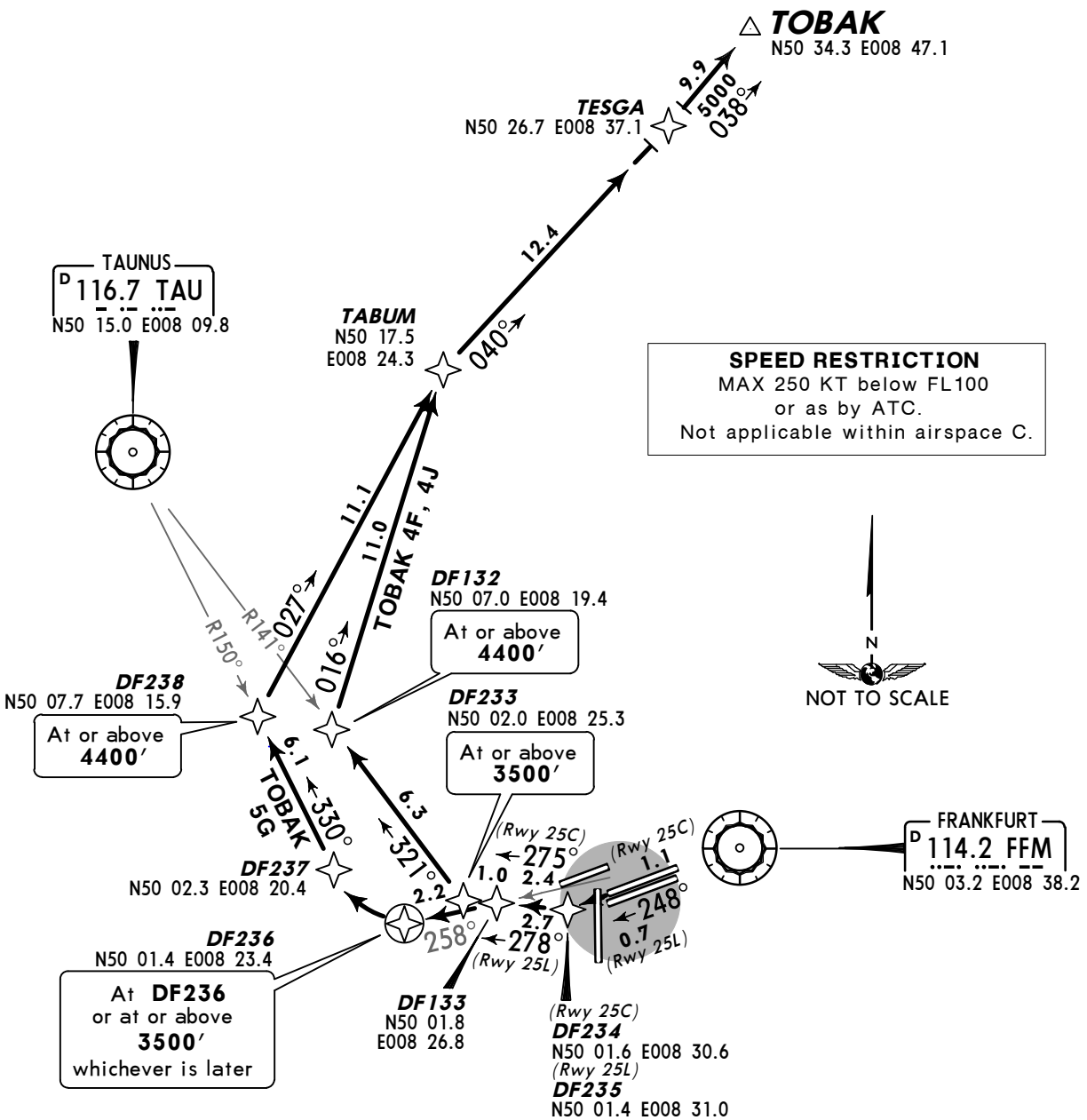
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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK FOUR FOXTROT (TOBAK 4F) *[TOBA4F]*
TOBAK FIVE GOLF (TOBAK 5G) *[TOBA5G]*
TOBAK FOUR JULIETT (TOBAK 4J) *[TOBA4J]*
RWYS 25L/C RNAV DEPARTURES (OVERLAY 10-3L7)

NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10





TOBAK 4F, 4J

These SIDs require a minimum climb gradient of
729′ per NM (12%) until DF233 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
729′ per NM	911	1215	1823	2430	3038	3646

If unable to comply advise FRANKFURT Delivery prior to start-up
TOBAK 4J: and expect routing via TOBAK 5G.

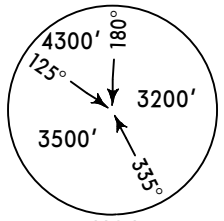
Initial climb clearance **5000′**

SID	ROUTING
TOBAK 4F, 4J	(800′+) - DF234 (25C)/DF235 (25L) - DF233 (3500′+) - DF132 (4400′+) - TABUM - TESGA - TOBAK.
TOBAK 5G	(800′+) - DF234 (25C)/DF235 (25L) - DF133 - DF236 - (3500′+) - DF237 - DF238 (4400′+) - TABUM - TESGA - TOBAK.

CHANGES: RWY layout; initial contact; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

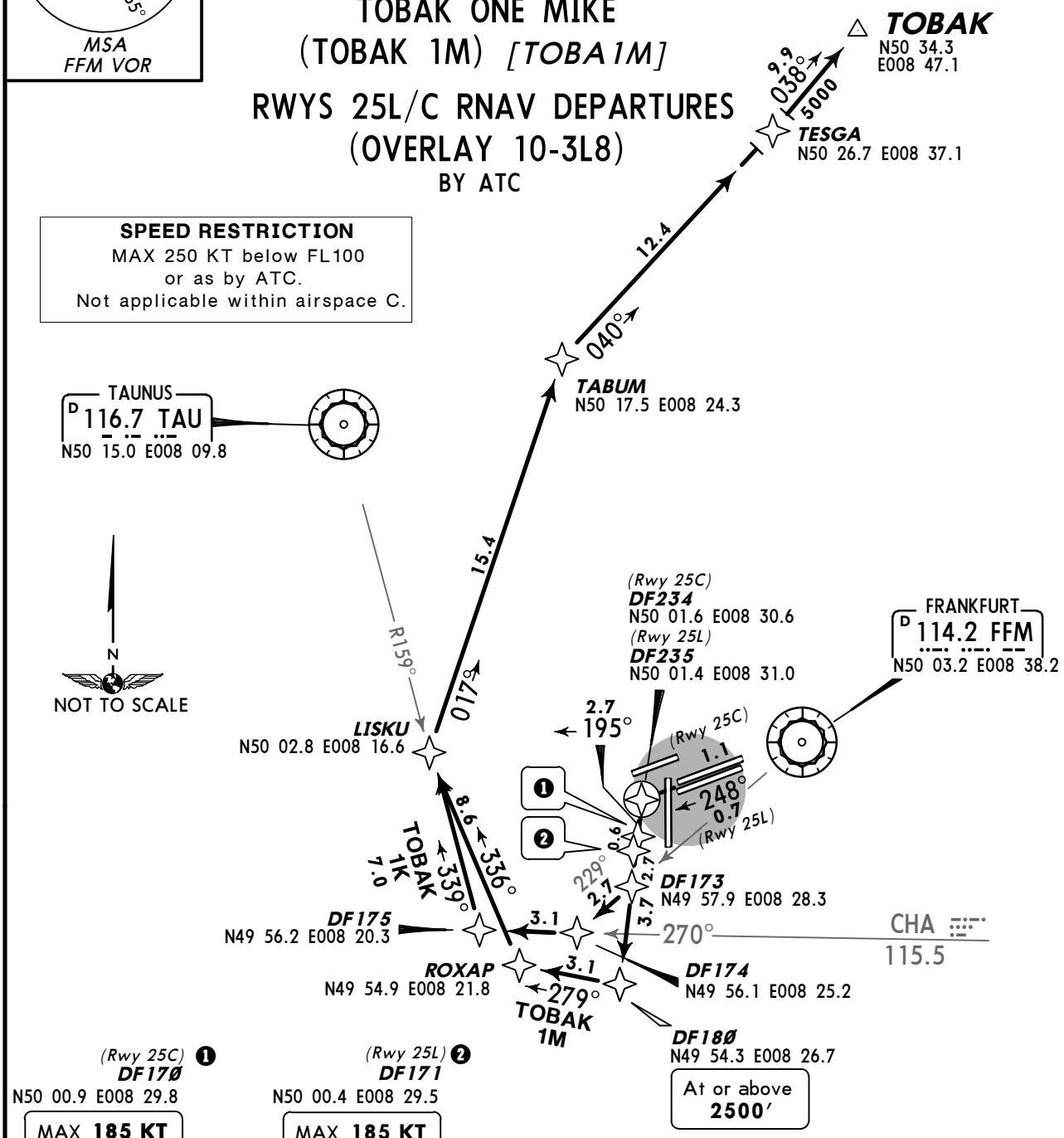


TOBAK ONE KILO
(TOBAK 1K) *[TOBA1K]*
NOT TO BE FILED IN FLIGHT PLAN

TOBAK ONE MIKE
(TOBAK 1M) *[TOBA1M]*

RWYS 25L/C RNAV DEPARTURES
(OVERLAY 10-3L8)
BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of
TOBAK 1K: 243′ per NM (4%) until passing 4400′ due to airspace structure.
TOBAK 1M: 249′ per NM (4.1%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

If unable to comply advise FRANKFURT Delivery prior to start-up.

Initial climb clearance **5000′**

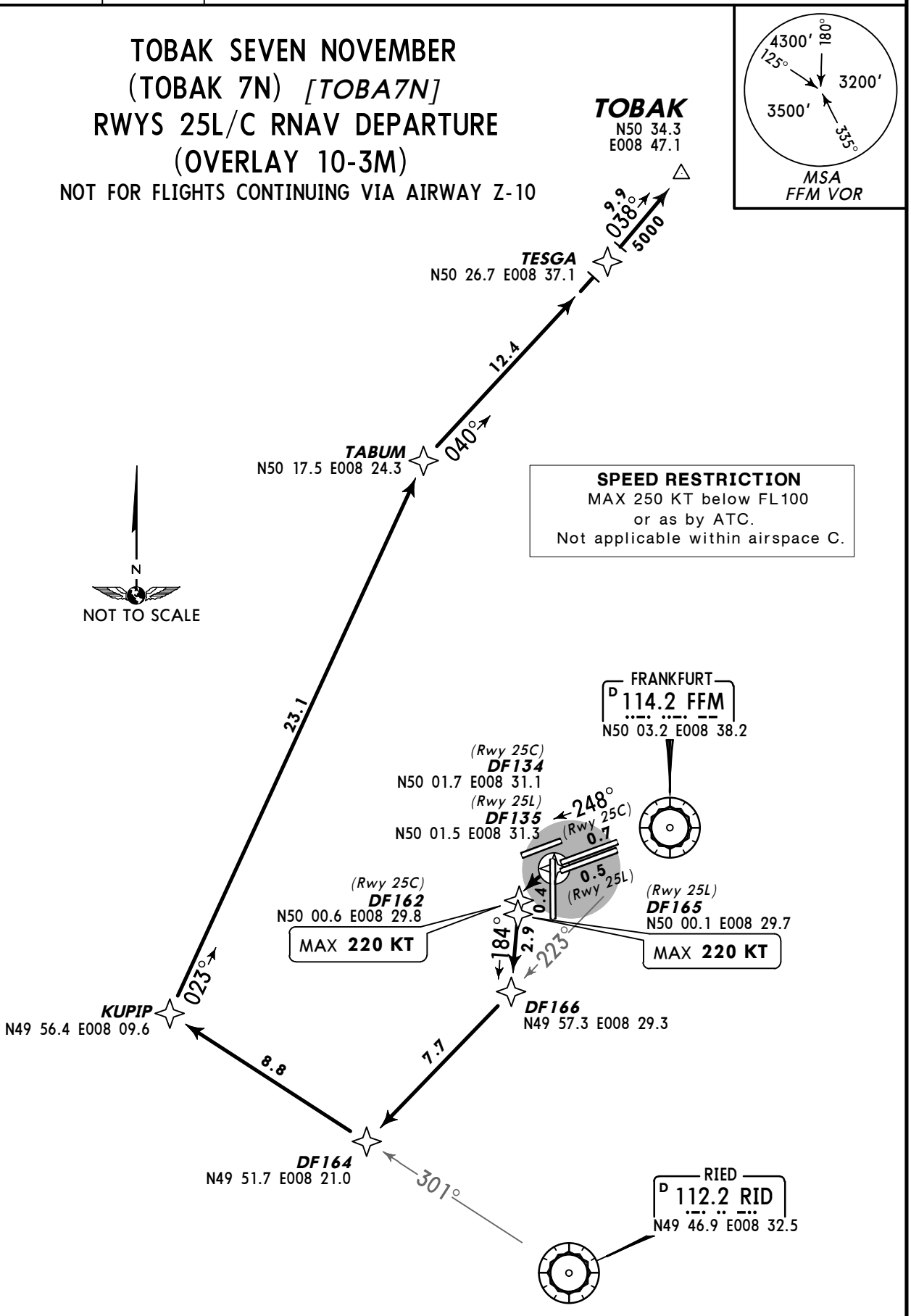
SID	ROUTING
TOBAK 1K	(800+) - DF234 (25C)/DF235 (25L) - DF170 (25C; K185-)/DF171 (25L; K185-) - DF173 - DF174 - DF175 - LISKU - TABUM - TESGA - TOBAK.
TOBAK 1M	(800+) - DF234 (25C)/DF235 (25L) - DF170 (25C; K185-)/DF171 (25L; K185-) - DF180 (2500′+) - ROXAP - LISKU - TABUM - TESGA - TOBAK.

CHANGES: RNAV SIDs established; RNAV SIDs SULUS 6L & 6S transferred.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK SEVEN NOVEMBER
(TOBAK 7N) *[TOBA7N]*
RWYS 25L/C RNAV DEPARTURE
(OVERLAY 10-3M)
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10



Initial climb clearance **5000′**

ROUTING

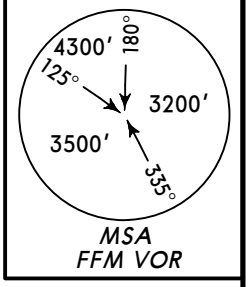
(800′+) - DF134 (25C)/DF135 (25L) - DF162 (25C; K220-)/DF165 (25L; K220-) - DF166 - DF164 - KUPIP - TABUM - TESGA - TOBAK.

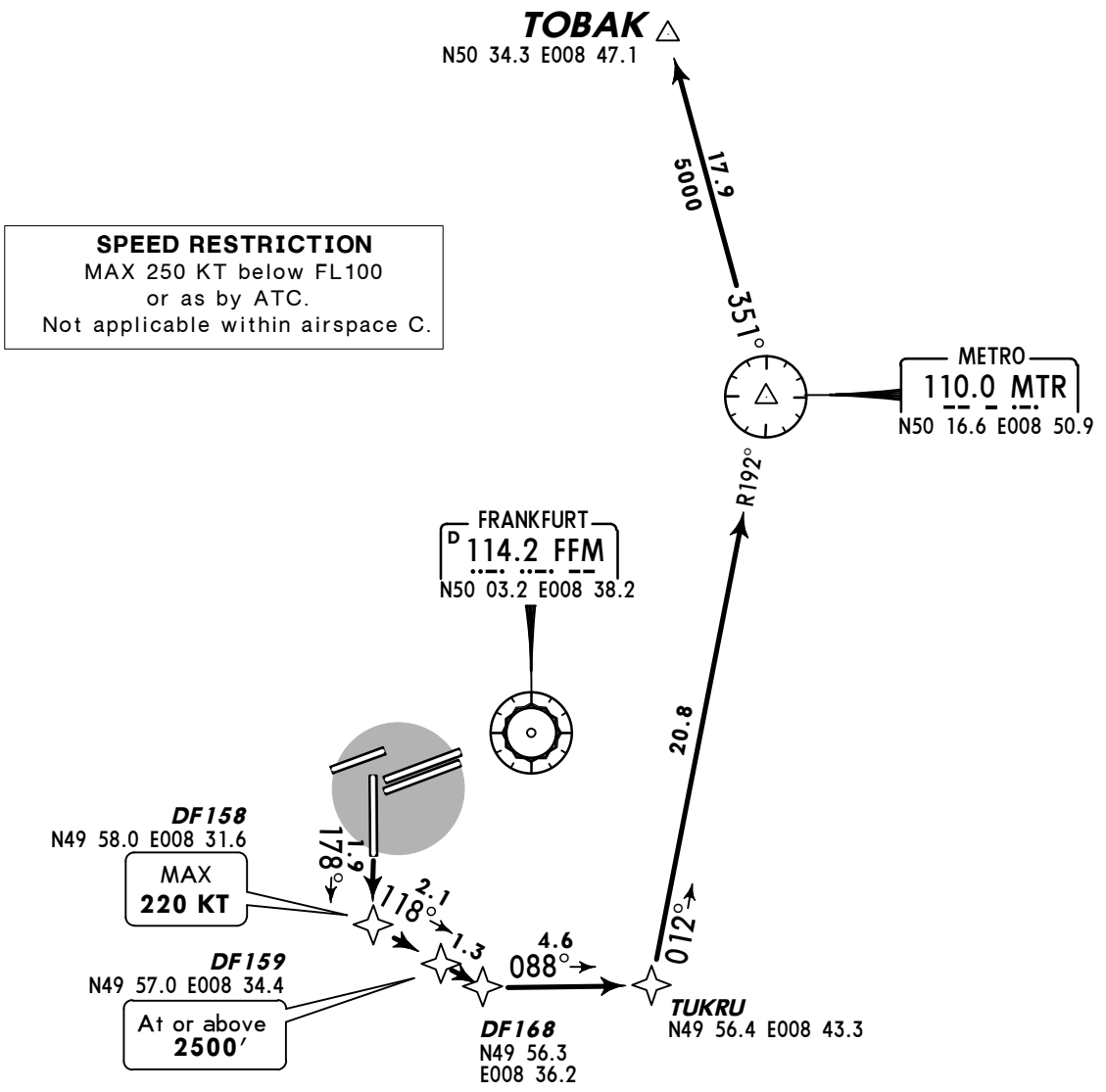
CHANGES: RWY layout; SID renumb & revised; initial contact; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

TOBAK TWO ROMEO (TOBAK 2R) *[TOBA2R]*
RWY 18 RNAV DEPARTURE (OVERLAY 10-3N)
BY ATC
WILL ONLY BE ASSIGNED BETWEEN 2300-0500LT
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

This SID requires a minimum climb gradient of
565′ per NM (9.3%) until passing 2500′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
565′ per NM	706	942	1413	1884	2355	2825

If unable to comply advise FRANKFURT Delivery prior to start-up.



Initial climb clearance **4000′**

ROUTING

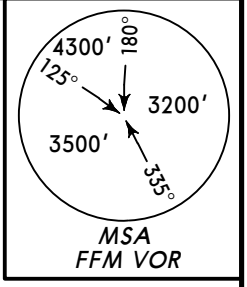
(800+) - DF158 (K220-) - DF159 (2500′+) - DF168 - TUKRU - MTR - TOBAK.

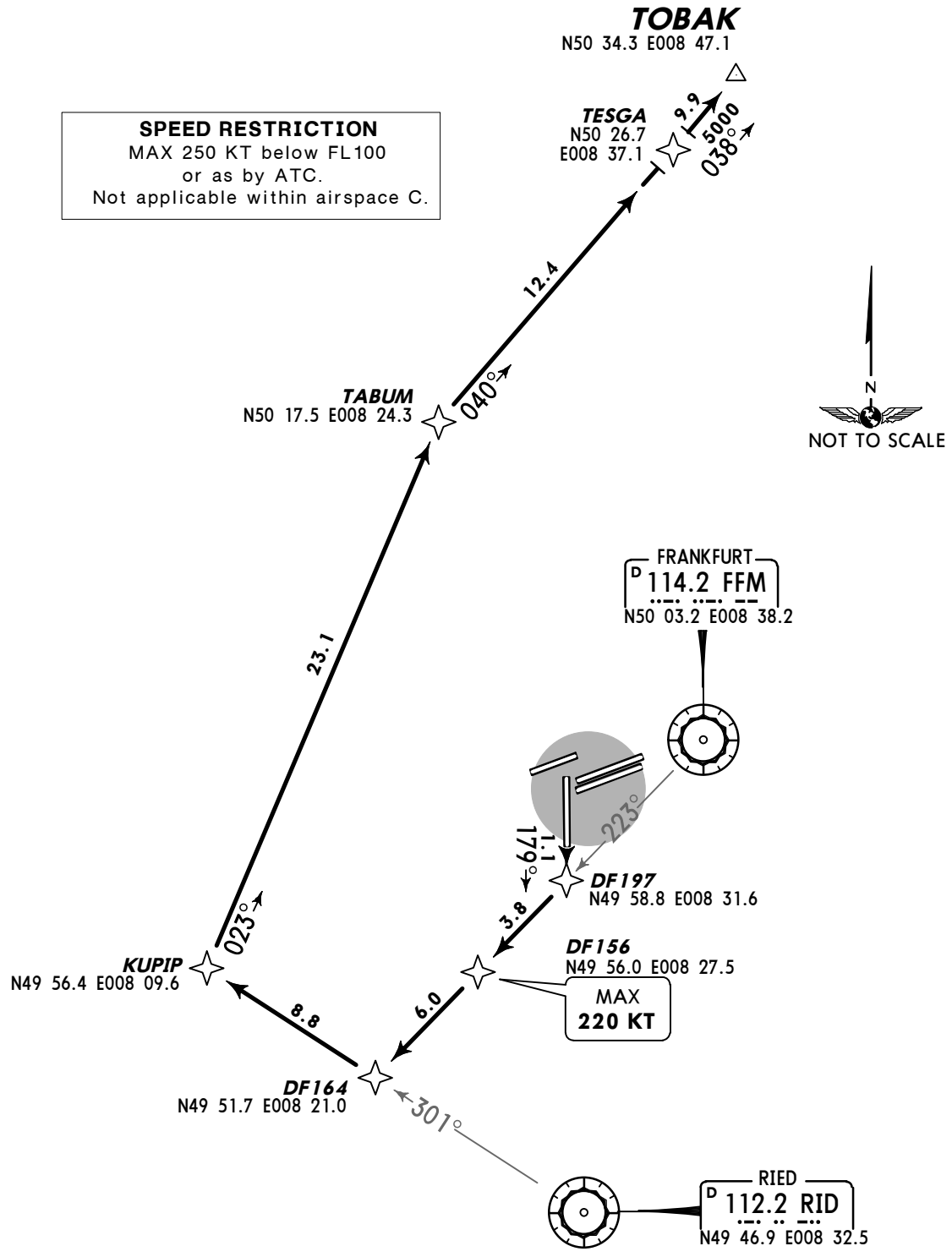
CHANGES: RWY layout; chart reindexed.

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*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

TOBAK FIVE SIERRA (TOBAK 5S) *[TOBA5S]*
RWY 18 RNAV DEPARTURE (OVERLAY 10-3N1)
BY ATC
WILL ONLY BE ASSIGNED WHEN LANDING DIRECTION IS RWY 25
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10





Initial climb clearance **4000′**

ROUTING

(800′+) - DF197 - DF156 (K220-) - DF164 - KUPIP - TABUM - TESGA - TOBAK.

CHANGES: RWY layout; RNAV SID revised; chart reindexed.

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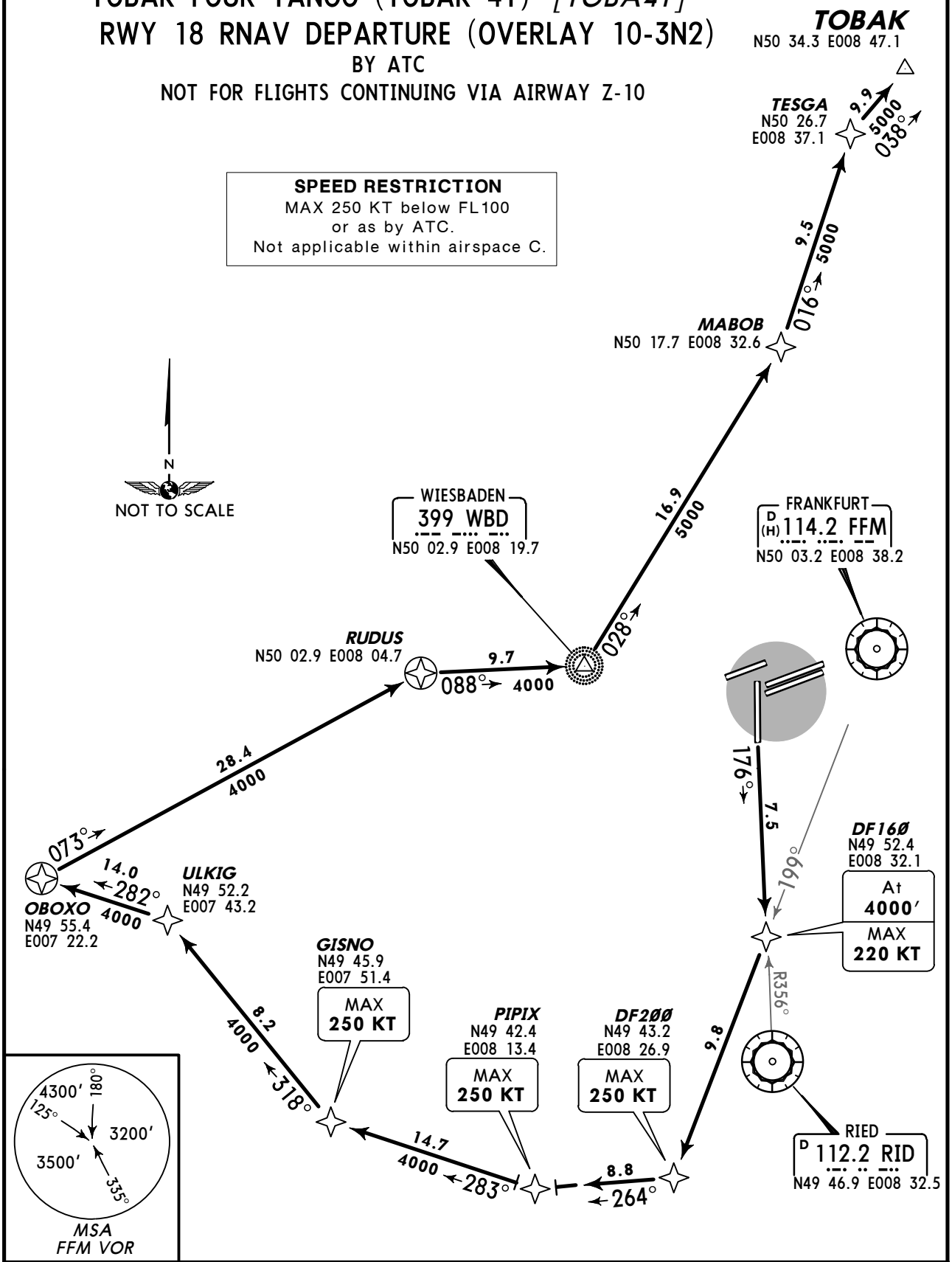
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

TOBAK FOUR TANGO (TOBAK 4T) *[TOBA4T]*

RWY 18 RNAV DEPARTURE (OVERLAY 10-3N2)

BY ATC

NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10



Initial climb clearance **4000′**

ROUTING

(800′+) - DF160 (4000′; K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG - OBOXO - RUDUS - WBD - MABOB - TESGA - TOBAK.

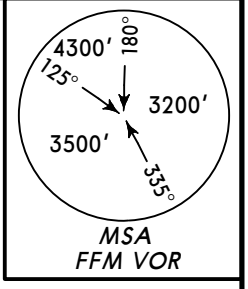
CHANGES: Crossing at DF160 established; initial contact.

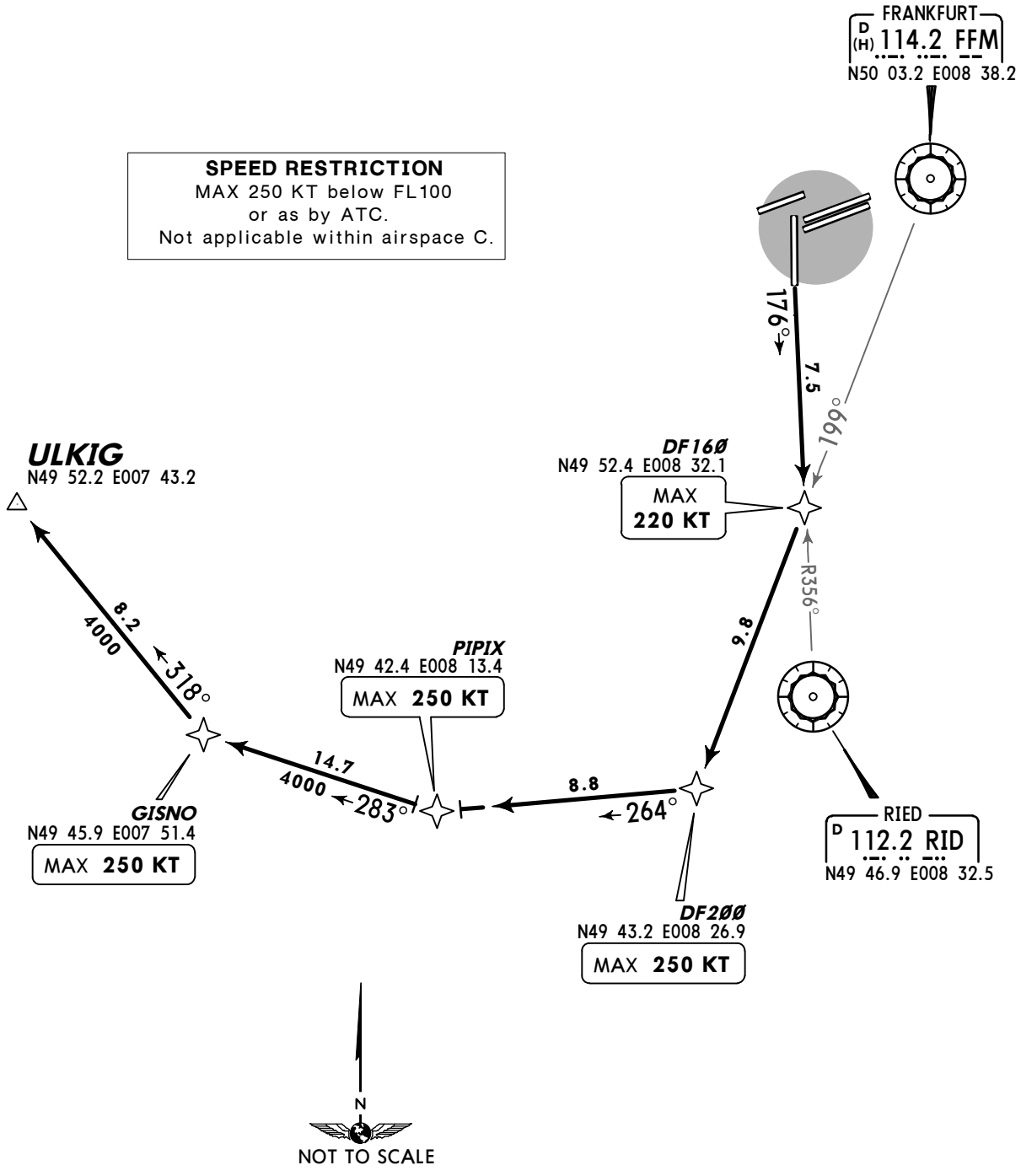
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*LANGEN Radar 136.12	*Apt Elev* 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

ULKIG FIVE UNIFORM (ULKIG 5U) *[ULKI5U]*
RWY 18 RNAV DEPARTURE (OVERLAY 10-3N3)

FOR FLIGHTS INTENDING TO PROCEED AT OR ABOVE FL250
VIA AIRWAYS Y-180/Y-181
FLIGHTS HAVE TO BE ABLE TO CROSS RUDOT AT OR ABOVE FL240
IF UNABLE TO COMPLY, FLIGHT PLAN SHALL READ:
RUDOT FL220 - Y-180 - DIK RFL





Initial climb clearance **4000′**

ROUTING

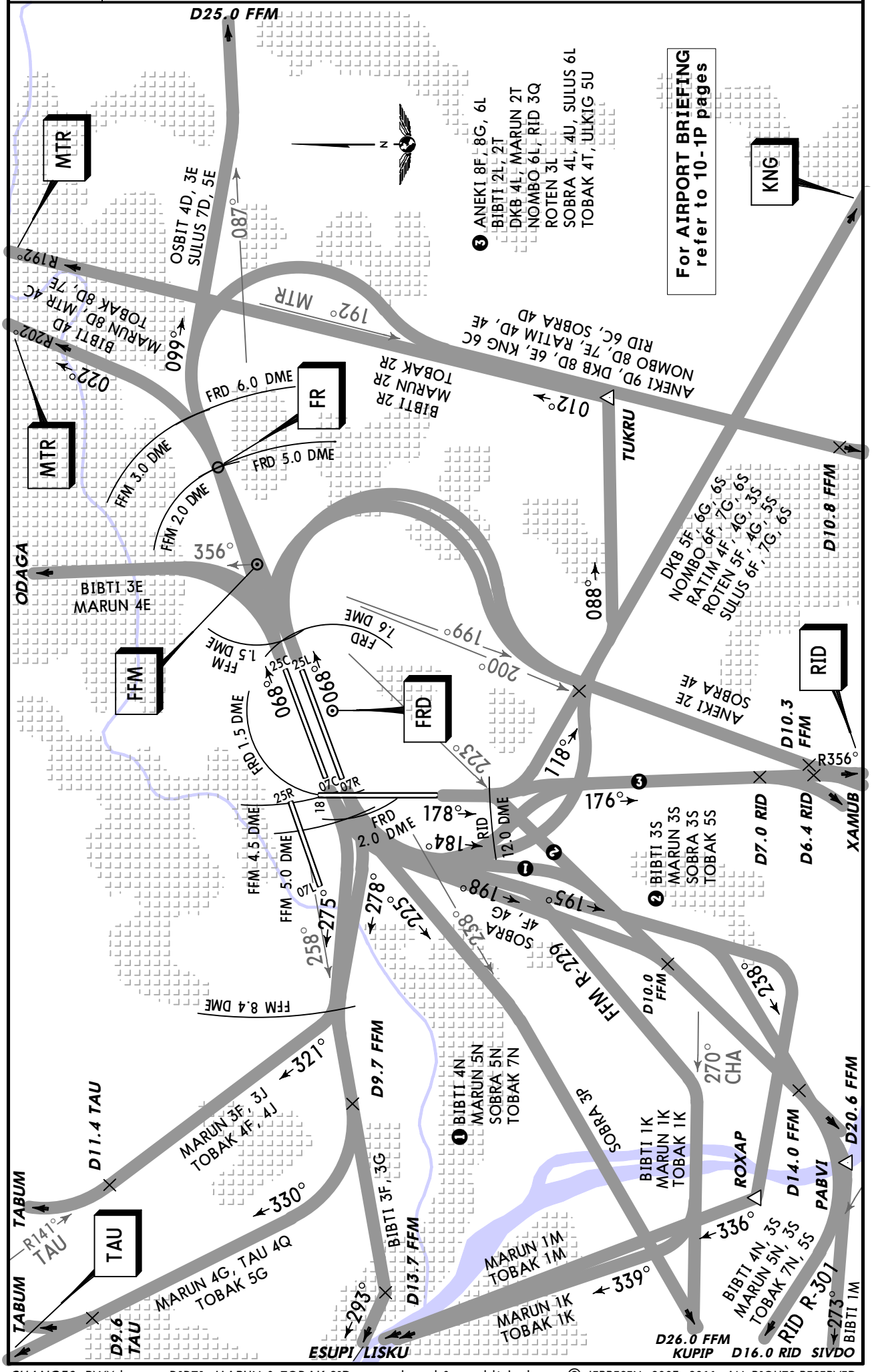
(800′+) - DF160 (K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG.

CHANGES: Initial contact.

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Apt Elev 364'

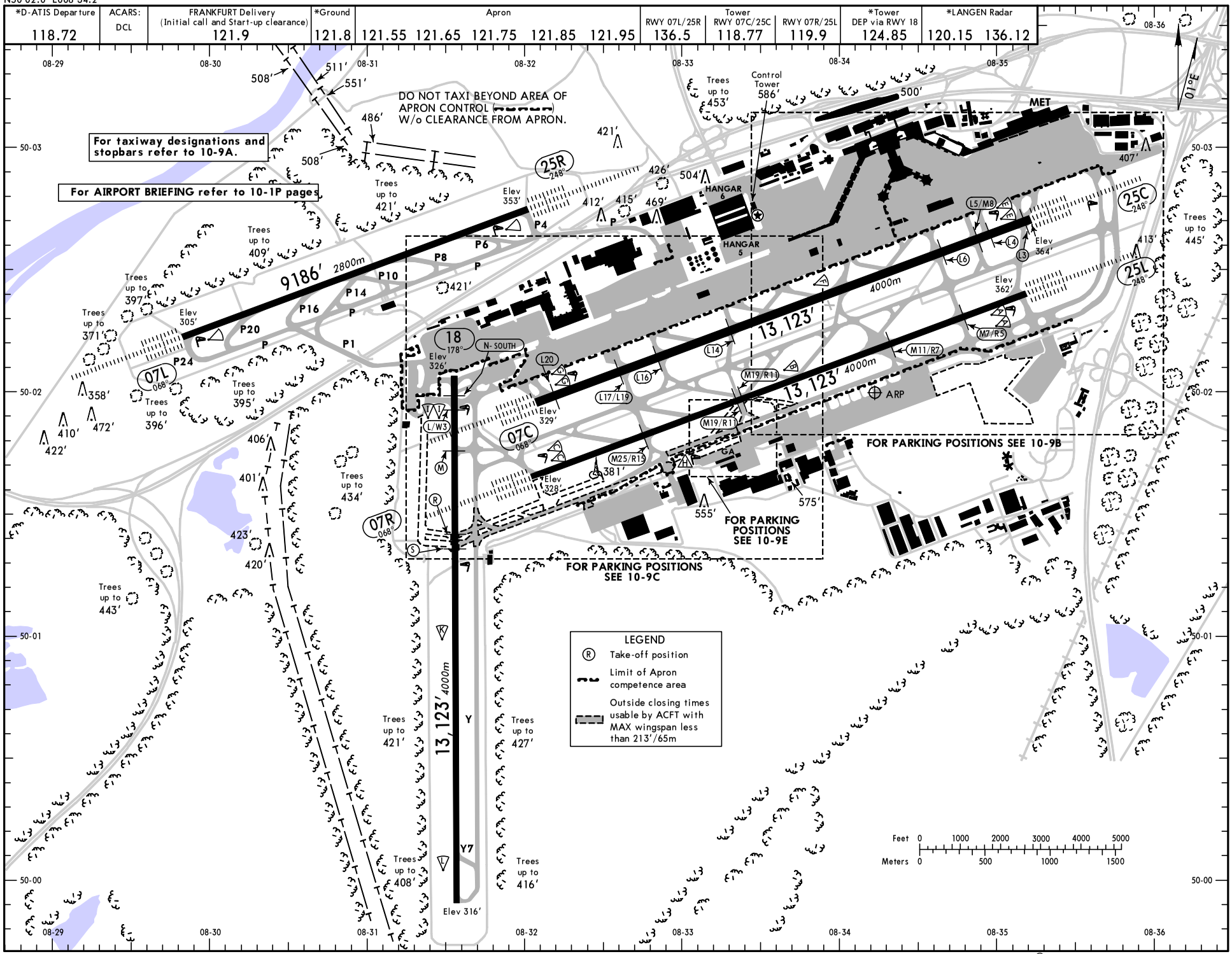
NOISE ABATEMENT



CHANGES: RWY layout; BIBTI, MARUN & TOBAK SIDs renumbered & established.

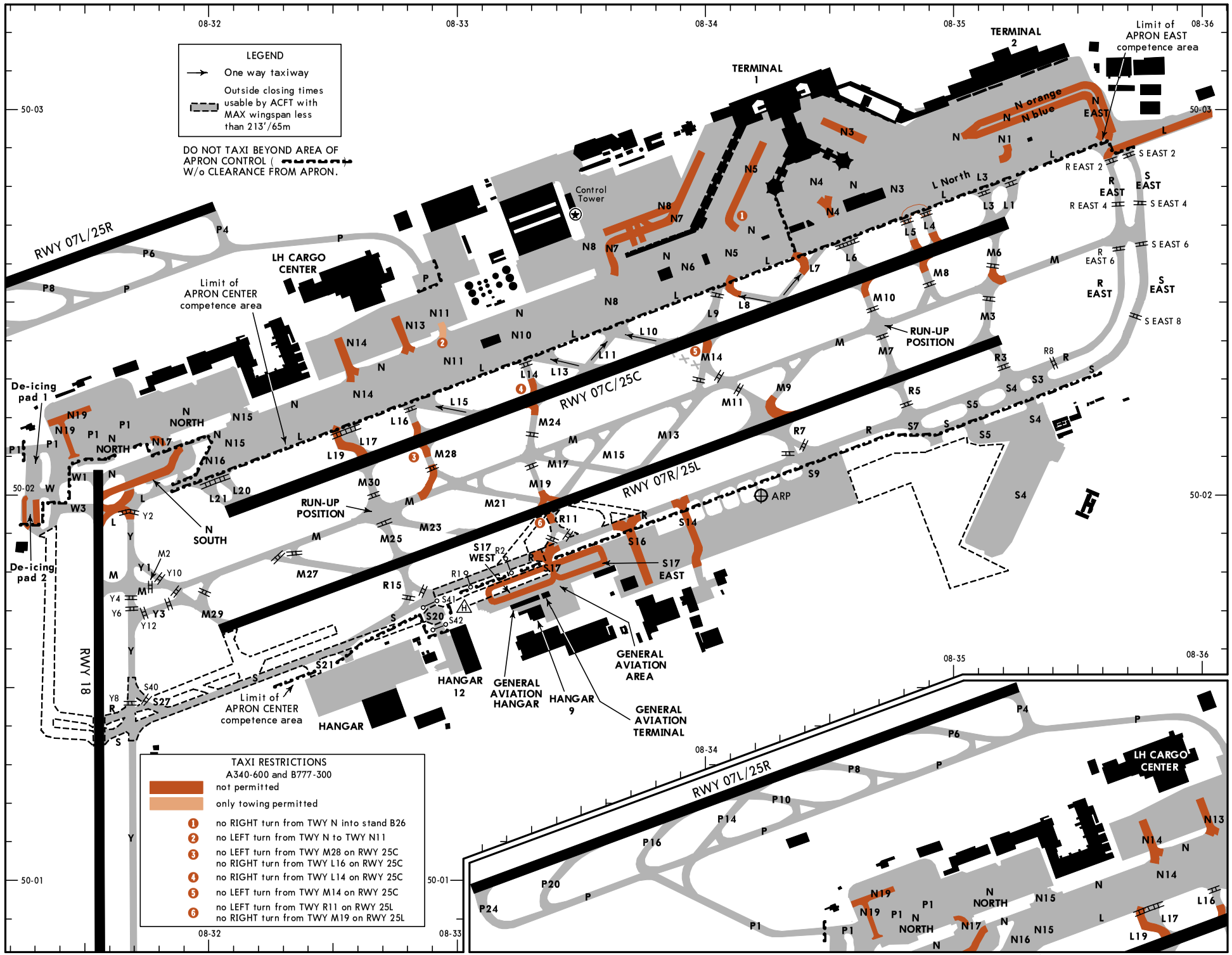
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*D-ATIS Departure	ACARS:	FRANKFURT Delivery (Initial call and Start-up clearance)	*Ground	Apron	RWY 07L/25R	Tower RWY 07C/25C	RWY 07R/25L	*Tower DEP via RWY 18	*LANGEN Radar
118.72	DCL	121.9	121.8	121.55 121.65 121.75 121.85 121.95	136.5	118.77	119.9	124.85	120.15 136.12



CHANGES: Usability of taxiways.

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CHANGES: Usability of taxiways.

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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND Threshold	LANDING BEYOND Glide Slope	TAKE-OFF	WIDTH
07L 25R	HIRL CL *(15m)* ALSF-II TDZ REIL PAPI (3.0°)		8214' *2504m* 7971' *2430m*	NA	148' *45m*

PAPI systems: For all acft on ILS CAT I approaches PAPI is only usable up to a height of 200' referring to the respective threshold.

07C	HIRL ❶CL ❷ALSF-II TDZ REIL PAPI-L (3.0°) ❸ RVR		11,968' *3648m*	❺	197' *60m*
25C	HIRL ❶CL ❷ALSF-II TDZ REIL PAPI-L (3.0°) ❹ RVR				

PAPI systems: For all acft on ILS CAT I approaches PAPI is only usable up to a height of 200' referring to the respective threshold.

❶ spacing 60m. ❷ spacing 15m.
❸ HST-L11 & L7
❹ HST-L8, L10, L13 & L15
❺ TAKE-OFF RUN AVAILABLE

RWY 07C:

From rwy head	13,123'(4000m)
position L20	12,927'(3940m)
position L17/L19	10,866'(3312m)
position L16	9882'(3012m)
position L14	7913'(2412m)

RWY 25C:

From rwy head	13,123'(4000m)
position L3	13,031'(3972m)
position L4	12,090'(3685m)
position L5/M8	11,745'(3580m)
position L6	10,689'(3258m)

07R	HIRL ❼CL ❽ALSF-II TDZ REIL PAPI-L (3.0°) ❾ RVR		11,975' *3650m*	⓫	148' *45m*
❻ 25L	HIRL ❼CL ❽ALSF-II TDZ REIL PAPI-L (3.0°) ❿ RVR		12,021' *3664m*		

PAPI systems: For all acft on ILS CAT I approaches PAPI is only usable up to a height of 200' referring to the respective threshold.

❻ TDZ Rwy 25L grooved.
❼ spacing 60m. ❽ spacing 15m.
❾ HST-M15, M13 & M9
❿ HST-M17, M21, M23 & M27
⓫ TAKE-OFF RUN AVAILABLE

RWY 07R:

From rwy head	13,123'(4000m)
position M25/R15	10,105'(3080m)
position M19/R11	7644'(2330m)

RWY 25L:

From rwy head	13,123'(4000m)
position M7/R5	11,450'(3490m)
position M11/R7	9350'(2850m)
position M19/R11	5607'(1709m)

18	HIRL *(60m)* CL *(15m)* RVR	NA		⓬	148' *45m*

⓬ TAKE-OFF RUN AVAILABLE

RWY 18:

From rwy head	13,025'(3970m)
position N-SOUTH	12,746'(3885m)
position L/W3	12,467'(3800m)
position M	11,319'(3450m)
position R	9203'(2805m)
position S	8973'(2735m)

Standard TAKE-OFF **1**

Rwys 07C/R, 18, 25L/C
LVP must be in Force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

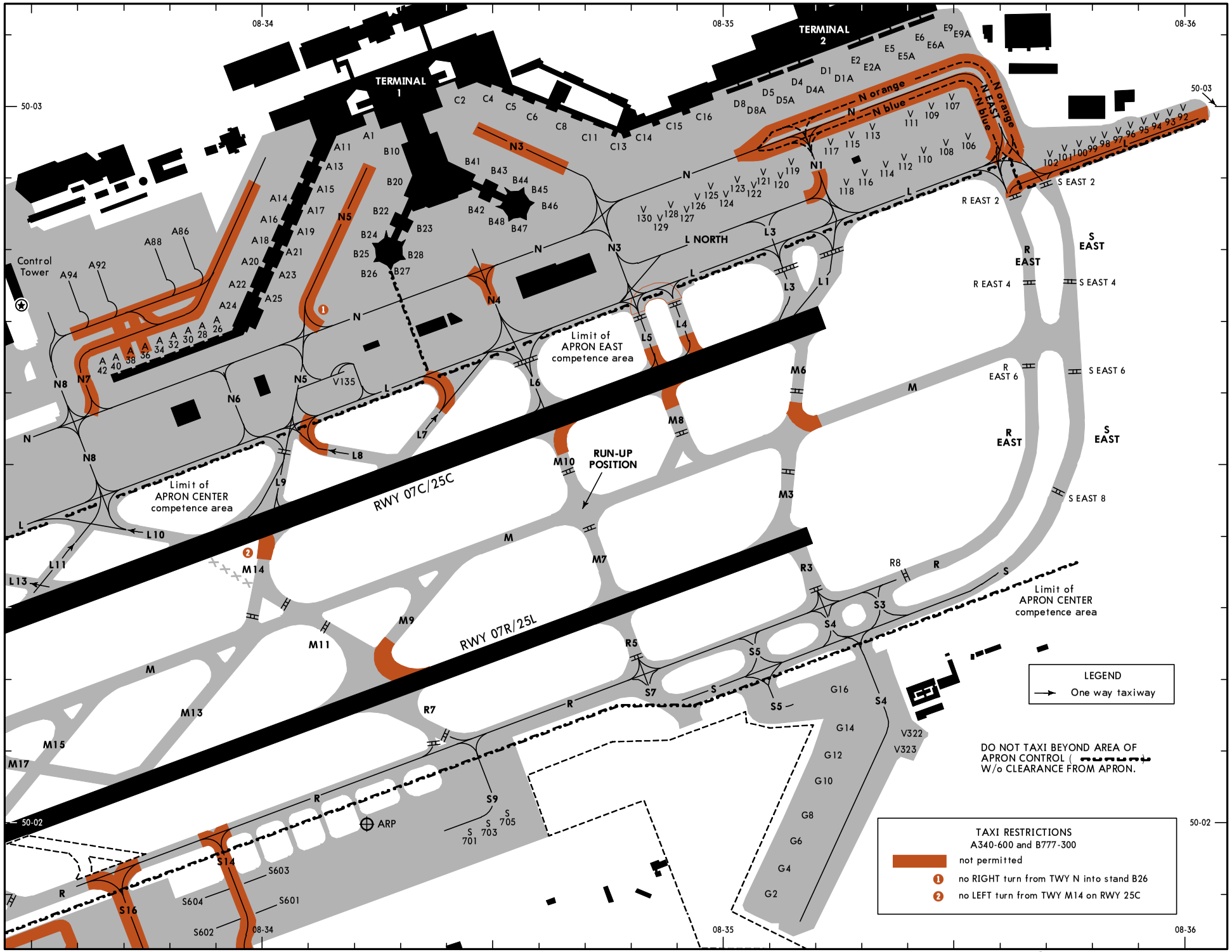
1 Operators applying U.S. Ops Specs: CL required below 300m; approved HUD required below 150m.

CHANGES: New runway 07L/25R.

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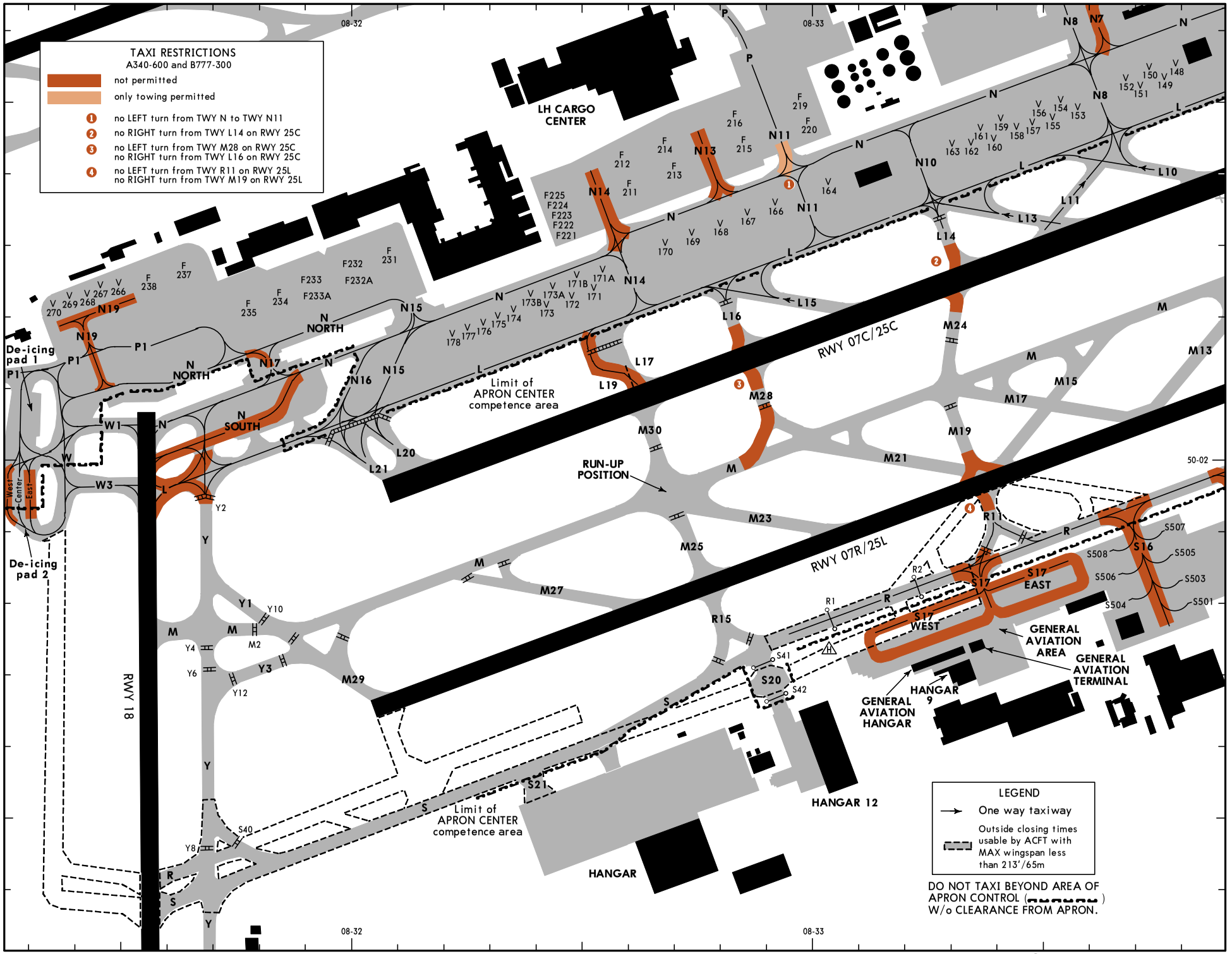
FRANKFURT/MAIN, GERMANY

FRANKFURT/MAIN



CHANGES: None.

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CHANGES: Usability of taxiways.

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INS COORDINATES

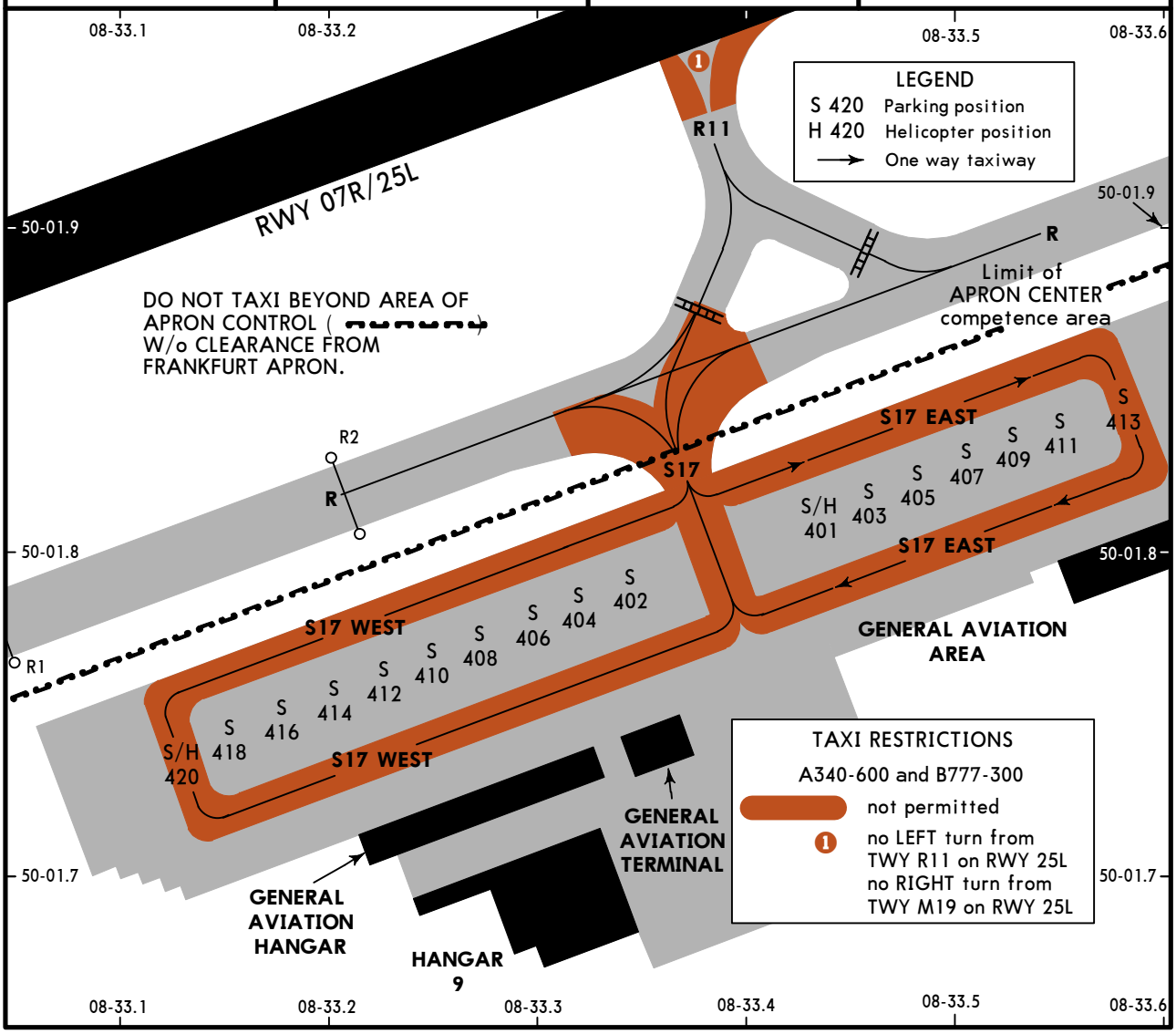
STAND No.	COORDINATES	STAND No.	COORDINATES
A1	N50 03.0 E008 34.3	G16	N50 02.2 E008 35.2
A11	N50 03.0 E008 34.2	S401, S402	N50 01.8 E008 33.4
A13	N50 02.9 E008 34.2	S403	N50 01.8 E008 33.5
A14, A15	N50 02.9 E008 34.1	S404	N50 01.8 E008 33.4
A16	N50 02.8 E008 34.1	S405	N50 01.8 E008 33.5
A17	N50 02.9 E008 34.1	S406	N50 01.8 E008 33.3
A18, A19	N50 02.8 E008 34.1	S407	N50 01.8 E008 33.5
A20	N50 02.8 E008 34.0	S408	N50 01.8 E008 33.3
A21	N50 02.8 E008 34.1	S409	N50 01.8 E008 33.6
A22	N50 02.7 E008 34.0	S410	N50 01.8 E008 33.3
A23	N50 02.8 E008 34.0	S411	N50 01.8 E008 33.6
A24, A25	N50 02.7 E008 34.0	S412	N50 01.8 E008 33.3
A26 thru A30	N50 02.7 E008 33.9	S413	N50 01.8 E008 33.6
A32, A34	N50 02.7 E008 33.8	S414	N50 01.8 E008 33.2
A36	N50 02.6 E008 33.8	S416 thru S420	N50 01.7 E008 33.2
A38 thru A42	N50 02.6 E008 33.7	S501, S503	N50 01.8 E008 33.9
A86	N50 02.9 E008 33.8	S504	N50 01.8 E008 33.7
A88	N50 02.8 E008 33.8	S505	N50 01.9 E008 33.8
A92, A94	N50 02.8 E008 33.6	S506	N50 01.8 E008 33.6
B10, B20	N50 02.9 E008 34.3	S507	N50 01.9 E008 33.8
B22 thru B28	N50 02.8 E008 34.3	S508	N50 01.9 E008 33.6
B41 thru B43	N50 02.9 E008 34.5	S601	N50 01.9 E008 34.1
B44 thru B46	N50 02.9 E008 34.6	S602	N50 01.9 E008 33.9
B47	N50 02.8 E008 34.6	S603	N50 01.9 E008 34.1
B48	N50 02.9 E008 34.5	S604	N50 01.9 E008 33.9
C2, C4	N50 03.0 E008 34.5	S701	N50 02.0 E008 34.4
C5, C6	N50 03.0 E008 34.6	S703, S705	N50 02.0 E008 34.5
C8, C11	N50 03.0 E008 34.7		
C13, C14	N50 03.0 E008 34.8		
C15	N50 03.0 E008 34.9		
C16	N50 03.0 E008 35.0		
D1 thru D4A	N50 03.1 E008 35.2		
D5 thru D8A	N50 03.0 E008 35.1		
E2, E2A	N50 03.1 E008 35.3		
E5 thru E6A	N50 03.1 E008 35.4		
E9, E9A	N50 03.1 E008 35.5		
F211	N50 02.4 E008 32.7		
F212	N50 02.4 E008 32.6		
F213, F214	N50 02.4 E008 32.7		
F215	N50 02.4 E008 32.9		
F216	N50 02.5 E008 32.9		
F219, F220	N50 02.5 E008 33.0		
F221 thru F223	N50 02.3 E008 32.5		
F224, F225	N50 02.4 E008 32.4		
F231	N50 02.3 E008 32.1		
F232, F232A	N50 02.3 E008 32.0		
F233, F233A, F234	N50 02.3 E008 31.9		
F235	N50 02.2 E008 31.8		
F237	N50 02.3 E008 31.7		
F238	N50 02.2 E008 31.6		
G2, G4	N50 01.9 E008 35.1		
G6	N50 02.0 E008 35.1		
G8	N50 02.0 E008 35.2		
G10, G12	N50 02.1 E008 35.2		
G14	N50 02.1 E008 35.3		

CHANGES: Stands. Coordinates.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
V92 thru V94	N50 03.0 E008 36.0	V163	N50 02.4 E008 33.3
V95 thru V98	N50 03.0 E008 35.9	V164	N50 02.4 E008 33.1
V99 thru V101	N50 03.0 E008 35.8	V166, V167	N50 02.3 E008 32.9
V102	N50 02.9 E008 35.7	V168, V169	N50 02.3 E008 32.8
V106	N50 03.0 E008 35.6	V170	N50 02.3 E008 32.7
V107 thru V111	N50 03.0 E008 35.5	V171 thru V173B	N50 02.2 E008 32.5
V112, V113	N50 03.0 E008 35.4	V174	N50 02.2 E008 32.4
V114	N50 02.9 E008 35.4	V175 thru V177	N50 02.2 E008 32.3
V115 thru V118	N50 02.9 E008 35.3	V178	N50 02.1 E008 32.2
V119, V120	N50 02.9 E008 35.2	V266, V267	N50 02.3 E008 31.5
V121 thru V123	N50 02.9 E008 35.1	V268 thru V270	N50 02.2 E008 31.4
V124, V125	N50 02.9 E008 35.0	V322	N50 02.1 E008 35.5
V126, V127	N50 02.8 E008 35.0	V323	N50 02.1 E008 35.4
V128 thru V130	N50 02.8 E008 34.9		
V148 thru V150	N50 02.5 E008 33.8		
V151, 152	N50 02.5 E008 33.7		
V153 thru 155	N50 02.5 E008 33.6		
V156, V157	N50 02.5 E008 33.5		
V158, V159	N50 02.4 E008 33.5		
V160 thru V162	N50 02.4 E008 33.4		



CHANGES: V165 withdrawn.

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ADVANCED VISUAL DOCKING GUIDANCE SYSTEM (A-VDGS)

1. GENERAL

The following procedures take place during taxi-in and are displayed on the position's panel:

1.1. Start of Docking

The system is started by activating the button with the scheduled aircraft type on the remote control unit. "Wait" is displayed until the docking surface is checked.

1.2. Capture

Aircraft type is displayed on the panel. An arrow pointing upwards shows the screening of the aircraft.

1.3.Tracking

As soon as the laser has captured the aircraft, the arrow is replaced by a vertical yellow line (centerline indicator). A flashing red arrow shows the required steering direction. The vertical yellow arrow shows the aircraft's position in comparison to the centerline and the azimuth guidance.

1.4. Closing Rate

During the closing rate the panel shows the remaining distance between the aircraft's current position and the stop position, commencing at a distance determined by the system (i. e. 98'/30m). The centerline indicator reduces digit by digit with the aircraft approaching the stop position. Having reached the final digit the panel will show "STOP".

1.5. Decrease Speed "SLOW"

If the aircraft is approaching faster than the acceptable speed, the panel will display "SLOW".

1.6. Azimuth Guidance

The aircraft is as far from stop position as displayed on the panel. The vertical yellow arrow shows the aircraft's position in comparison to the centerline, a flashing red arrow (deviation indicator) shows the required steering direction.

1.7. Stop-Position Reached

As soon as the aircraft has reached the correct stop position, the panel will display "STOP".

1.8. Docking Completed

As soon as the aircraft is parked the panel will display "OK".

1.9. Overshoot

If the aircraft has overshot the stop position, the panel will display "TOO FAR".

1.10. Interruption of Guidance During Tracking

Should clear view to the aircraft be interrupted by any object or the detected aircraft lost during docking close to the stop position, the panel will display "WAIT". In that case pilots shall interrupt docking until display "WAIT" is extinguished.

CHANGES: New A-VDGS.

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2. FURTHER DISPLAYS

2.1. SLOW
Is displayed in bad weather conditions or poor view and when capture of aircraft is interrupted.

2.2. STOP and ID FAIL
Should capture of aircraft fail up to 39′/12m ahead of stop position, taxiing shall be aborted. In this case, aircraft may not coninue taxiing without the aid of apron supervision.

2.3. WAIT and GATE BLOCK
If the panel displays this message, the aircraft may not continue taxiing without the aid of apron supervision.

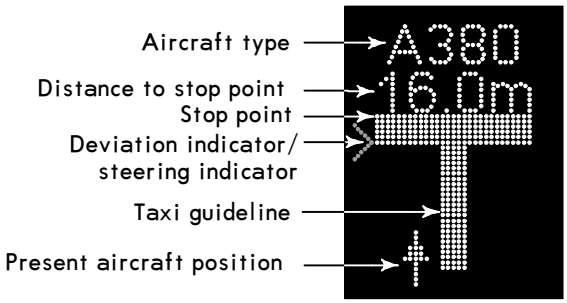
2.4. WAIT and VIEW BLOCK
If the view to the approaching aircraft is hindered, for instance due to contaminated laser lens or other objects reaching into the position, the aircraft may not continue taxiing without the aid of apron supervision.

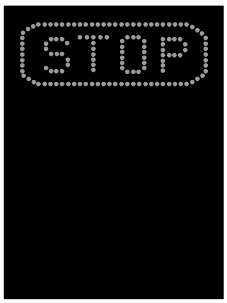
2.5. STOP
In case of emergency, an emergency button provided at the aircraft stand can be pushed by either apron supervision or any other authorized personnel. In this case "STOP" will be displayed on the panel and aircraft may not continue taxiing without the aid of apron supervision.

2.6. IRREGULARITIES
Should power outage or system shutdown or other irregularities occur, display will be extinguished or the panel will display figures determined by the system.

3. DISPLAY OF IMAGES AND FUNCTIONS ON THE PANEL

3.1. Examples:

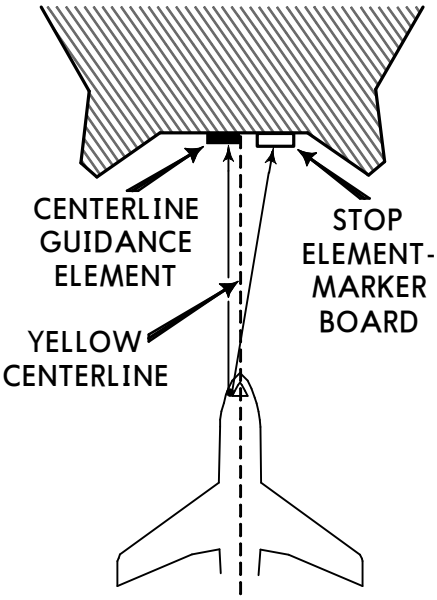




Depending on the system type, displays can be slightly different or additional.

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AIRCRAFT GUIDANCE FOR NOSE-IN STANDS (AGNIS)



GENERAL

The visual guidance system for nose-in parking positions AGNIS (Aircraft Guidance for Nose-In Stands) consists of the following elements:

1. CENTERLINE GUIDANCE ELEMENT
2. YELLOW CENTERLINE
3. STOP ELEMENT - MARKER BOARD

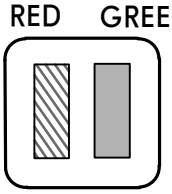
CAUTION

The system is aligned with the LEFT hand pilot seat only. In case of AGNIS failure, nose-in positioning will be guided by marshaller.

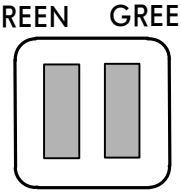
NOTE: Nose-in parking aircraft (on push-back position) have to use towing truck when leaving parking position.

CENTERLINE GUIDANCE ELEMENT

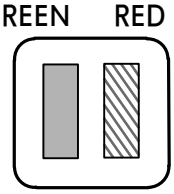
Approach the parking position along the yellow centerline so that both vertical slots in the Centerline Guidance Element show GREEN. Adjustments to the left or right shall always be made towards the GREEN.



LEFT of centerline. Turn towards GREEN. (RIGHT)



Aircraft on centerline.



RIGHT of centerline. Turn towards GREEN. (LEFT)

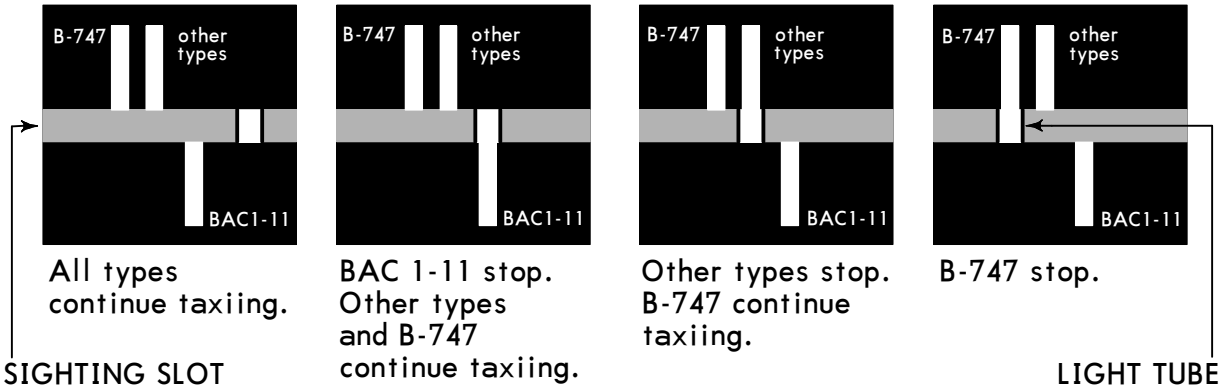
STOP ELEMENT - MARKER BOARD

The aircraft is stopped at the correct position by means of the Stop Element. When the tubular light, visible through the horizontal slot in the marker board, registers in line with the appropriate vertical reference mark, the aircraft has reached the correct stopping position.

CAUTION

Be sure to select the correct vertical reference mark corresponding to your type of aircraft. Marker board layouts are different for the various nose-in parking positions.

AGNIS CENTRE LINE GUIDANCE STOP ELEMENT - MARKER BOARD



All types continue taxiing.

BAC 1-11 stop. Other types and B-747 continue taxiing.

Other types stop. B-747 continue taxiing.

B-747 stop.

CHANGES: Chart reindexed. Heading.

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FRANKFURT/MAIN, GERMANY

FRANKFURT/MAIN

STRAIGHT-IN RWY		A	B	C	D
07L	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS ❶	**405′**(100′)	**412′**(107′)	**425′**(120′)	**438′**(133′)
		RA100′R300m	**RA106′R300m**	**RA119′R300m**	**RA131′R400m**
	ILS ❶	**505′**(200′)	**505′**(200′)	**505′**(200′)	**513′**(208′)
		R550m	**R550m**	**R550m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
07C	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**429′**(100′)	**429′**(100′)	**429′**(100′)	**429′**(100′)
		RA101′R300m	**RA101′R300m**	**RA101′R300m**	**RA101′R300m**
	ILS	**529′**(200′)	**529′**(200′)	**529′**(200′)	**529′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**820′**(491′)	**820′**(491′)	**820′**(491′)	**820′**(491′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**690′**(361′)	**690′**(361′)	**690′**(361′)	**720′**(391′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**790′**(461′)	**820′**(491′)	**840′**(511′)	**840′**(511′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR	**910′**(581′)	**910′**(581′)	**910′**(581′)	**910′**(581′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**820′**(491′)	**820′**(491′)	**820′**(491′)	**820′**(491′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
07R	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**428′**(100′)	**428′**(100′)	**428′**(100′)	**428′**(100′)
		RA101′R300m	**RA101′R300m**	**RA101′R300m**	**RA101′R300m**
	ILS	**528′**(200′)	**528′**(200′)	**528′**(200′)	**528′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**810′**(482′)	**810′**(482′)	**810′**(482′)	**810′**(482′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**680′**(352′)	**680′**(352′)	**680′**(352′)	**680′**(352′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**810′**(482′)	**810′**(482′)	**830′**(502′)	**840′**(512′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR	**800′**(472′)	**800′**(472′)	**810′**(482′)	**810′**(482′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**810′**(482′)	**810′**(482′)	**810′**(482′)	**810′**(482′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

❶ Missed apch climb gradient mim 4.6% up to 3500′.

CHANGES: Rwy 07L added.

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FRANKFURT/MAIN, GERMANY

FRANKFURT/MAIN

STRAIGHT-IN RWY		A	B	C	D
25L	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**462′**(100′)	**462′**(100′)	**462′**(100′)	**462′**(100′)
		RA95′ R300m	**RA95′ R300m**	**RA95′ R300m**	**RA95′ R300m**
	ILS	**562′**(200′)	**562′**(200′)	**562′**(200′)	**562′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**830′**(468′)	**830′**(468′)	**830′**(468′)	**830′**(468′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**770′**(408′)	**770′**(408′)	**770′**(408′)	**770′**(408′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**770′**(408′)	**820′**(458′)	**820′**(458′)	**830′**(468′)
		R900m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR	**860′**(498′)	**860′**(498′)	**860′**(498′)	**860′**(498′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**910′**(548′)	**910′**(548′)	**910′**(548′)	**910′**(548′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
25C	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**464′**(100′)	**464′**(100′)	**464′**(100′)	**464′**(100′)
		RA98′ R300m	**RA98′ R300m**	**RA98′ R300m**	**RA98′ R300m**
	ILS	**564′**(200′)	**564′**(200′)	**564′**(200′)	**564′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**810′**(446′)	**810′**(446′)	**810′**(446′)	**810′**(446′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**760′**(396′)	**760′**(396′)	**760′**(396′)	**760′**(396′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**790′**(426′)	**790′**(426′)	**840′**(476′)	**840′**(476′)
		R900m	**R1000m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR	**880′**(516′)	**880′**(516′)	**880′**(516′)	**880′**(516′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**910′**(546′)	**910′**(546′)	**910′**(546′)	**910′**(546′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
25R	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS ❶	**453′**(100′)	**457′**(104′)	**471′**(118′)	**484′**(131′)
		RA103′R300m	**RA107′R300m**	**RA122′R300m**	**RA144′R400m**
	ILS ❶	**553′**(200′)	**553′**(200′)	**553′**(200′)	**559′**(206′)
		R550m	**R550m**	**R550m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m

❶ Missed apch climb gradient mim 5.0% up to 2000′.

CHANGES: Rwy 25R added.

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TAKE-OFF RWY 07C/R, 18, 25L/C

	LVP must be in Force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: Rwy designation.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN 7 OCT 11 (11-1) Eff 20 Oct

FRANKFURT/MAIN, GERMANY
MISSED APCH CLIMB GRAD MIM 4.6%
ILS Rwy 07L

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	136.5	121.8

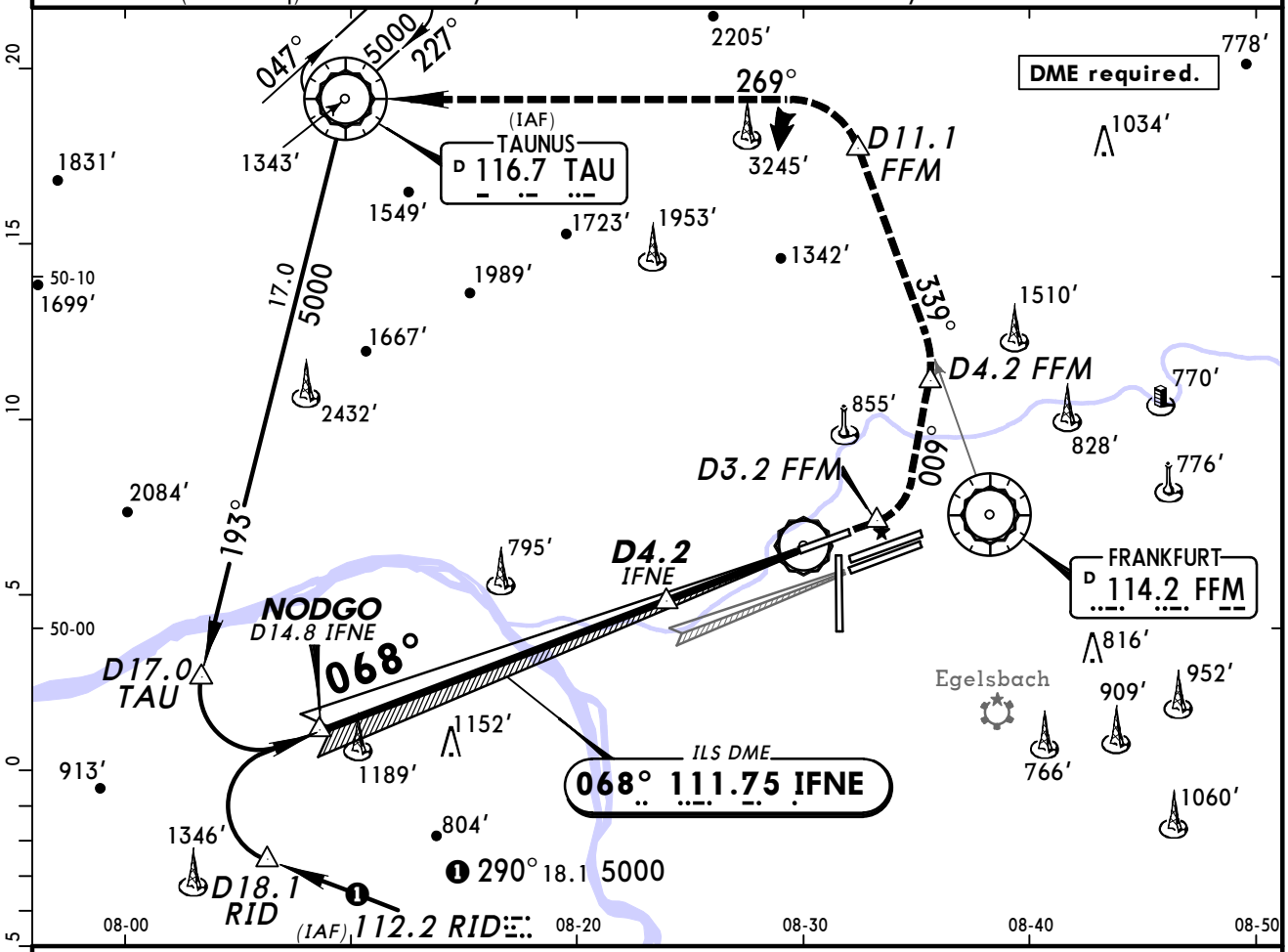
BRIEFING STRIP

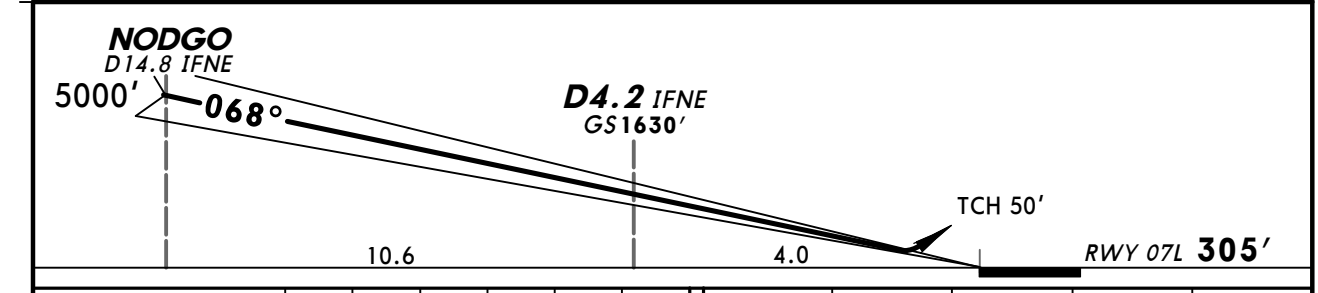
LOC	Final	GS	ILS	Apt Elev 364′
IFNE	Apch Crs	D4.2 IFNE	DA(H)	RWY 305′
111.75	068°	1630′ (1325′)	Refer to Minimums	

MISSED APCH: Climb STRAIGHT AHEAD. At D3.2 FFM turn LEFT onto 009°. At D4.2 FFM turn LEFT to intercept R-339 FFM. At D11.1 FFM turn LEFT to intercept R-089 inbound TAU VOR climbing to 5000′.
In case of Missed apch inform ATC immediately.

MSA FFM VOR: 4300′ (180°–125°), 3200′, 3500′, (335°–180°)

Alt Set: hPa(IN on req) | Rwy Elev: 11 hPa | Trans level: By ATC | Trans alt: 5000′





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II (REIL, PAPI, PAPI) | Inform ATC | D3.2 FFM | 009° LT | D4.2 FFM

Standard STRAIGHT-IN LANDING RWY **07L**

Missed apch climb gradient mim 4.6% up to 3500′

DA(H) ABC: **505′** (200′)
D: **513′** (208′)

	FULL	Limited	ALS out
A	RVR 550m	RVR 750m	RVR 1200m
B			
C			
D			

PANS OPS 4

CHANGES: New procedure.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN 7 OCT 11 (11-1A) Eff 20 Oct

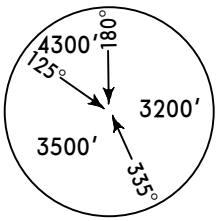
FRANKFURT/MAIN, GERMANY
❶CAT II/III ILS Rwy 07L

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	136.5	121.8

BRIEFING STRIP™

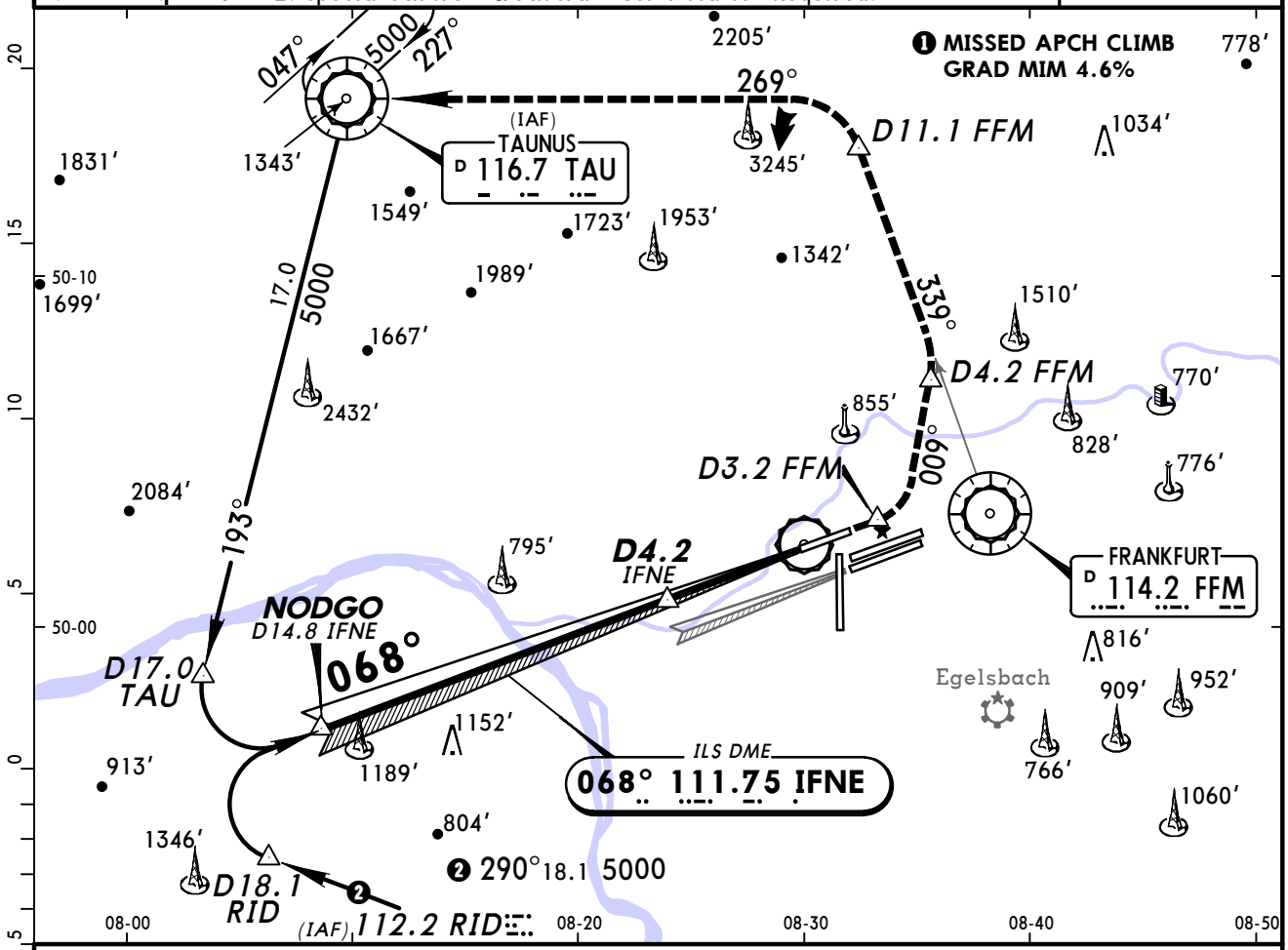
LOC IFNE	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev / RWY
111.75	068°	D4.2 IFNE 1630′ (1325′)	Refer to Minimums	364′ / RWY 305′

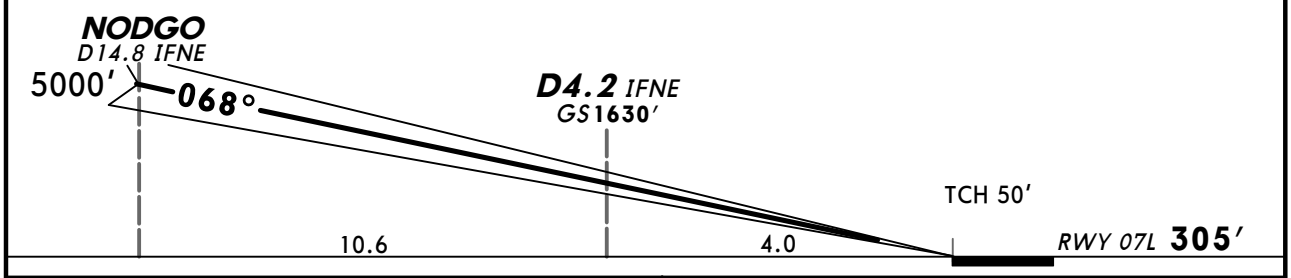
MISSED APCH: Climb STRAIGHT AHEAD. At D3.2 FFM turn LEFT onto 009°. At D4.2 FFM turn LEFT to intercept R-339 FFM. At D11.1 FFM turn LEFT to intercept R-089 inbound TAU VOR climbing to 5000′.
In case of Missed apch inform ATC immediately.



MSA FFM VOR

Alt Set: hPa(IN on req) Rwy Elev: 11 hPa Trans level: By ATC Trans alt: 5000′
1. **DME required.** 2. Special Aircrew & Aircraft Certification Required.





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II
REIL PAPI PAPI

Inform ATC

D3.2 FFM

009° LT

D4.2 FFM

Standard STRAIGHT-IN LANDING RWY **07L**

CAT IIIA ILS	CAT II ILS Missed apch climb gradient mim 4.6% up to 3500′	
	A: RA 100′ DA(H) 405′ (100′)	
	B: RA 106′ DA(H) 412′ (107′)	D: RA 131′ DA(H) 438′ (133′)
DH 50′	C: RA 119′ DA(H) 425′ (120′)	
RVR 200m	RVR 300m ❶	RVR 400m

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

PANS OPS 4

CHANGES: New procedure.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY
7 OCT 11 (11-2) Eff 20 Oct
ILS or LOC Rwy 07C

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

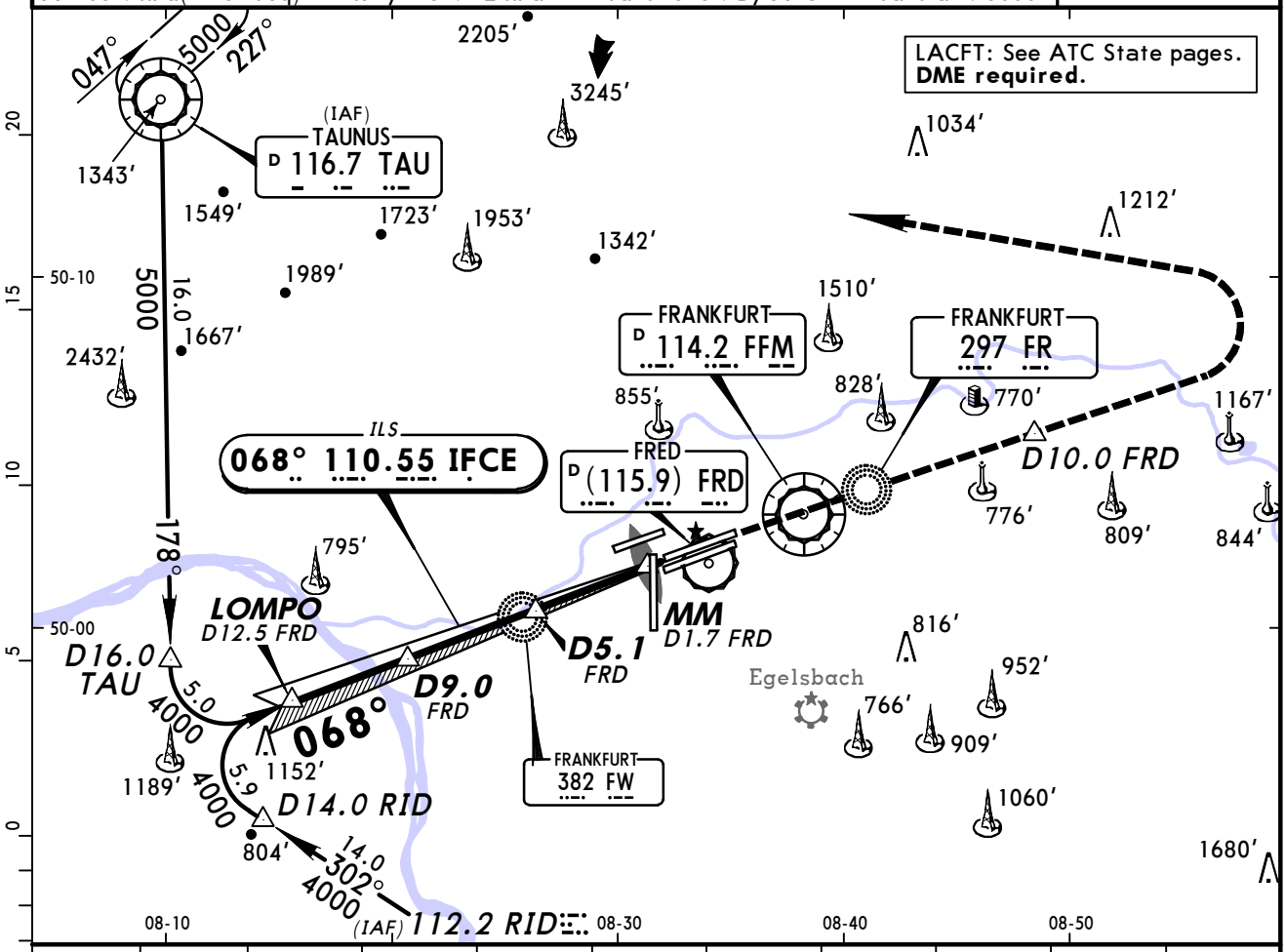
BRIEFING STRIP

LOC IFCE	Final Apch Crs	GS	ILS DA(H)	Apt Elev / RWY
110.55	068°	D5.1 FRD 1630′ (1301′)	Refer to Minimums	Apt Elev 364′ RWY 329′

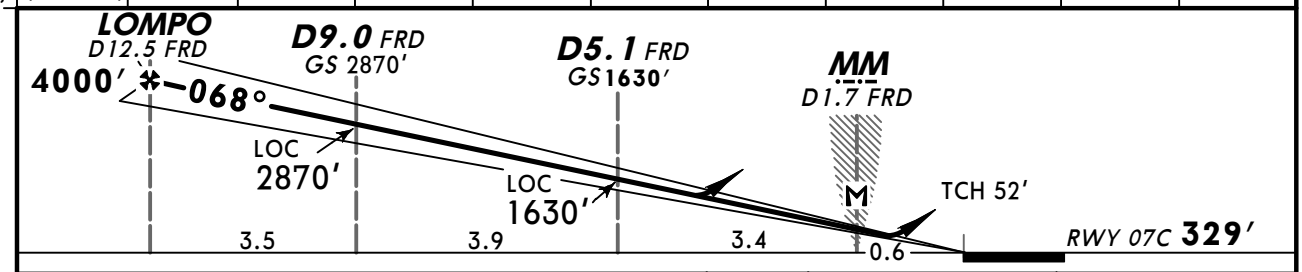
MISSED APCH: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

MSA FFM VOR: 4300′ (180°–125°), 3200′, 3500′, 335°

Alt Set: hPa(IN on req) | Rwy Elev: 12 hPa | Trans level: By ATC | Trans alt: 5000′



LOC (GS out)	FRD DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	3510′	3190′	2870′	2550′	2230′	1910′	1600′	1280′	960′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.7 FRD						

ALSF-II, REIL, PAPI

D10.0 FRD 5000′ whichever is later via FR 297

Standard STRAIGHT-IN LANDING RWY **07C**

	ILS 1			LOC (GS out)	
	DA(H) 529′ (200′)			DA(H) 820′ (491′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m	
B					
C				RVR 1500m	CMV 2300m
D					

1 LACFT: DA(H) 595′(266′), FULL: R600m, Limited: R750m, ALS out: R1300m.

PANS OPS 4

CHANGES: Chart reindexed. Tower frequency.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (11-2A) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
CAT II/III ILS Rwy 07C

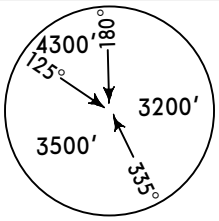
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

BRIEFING STRIP™

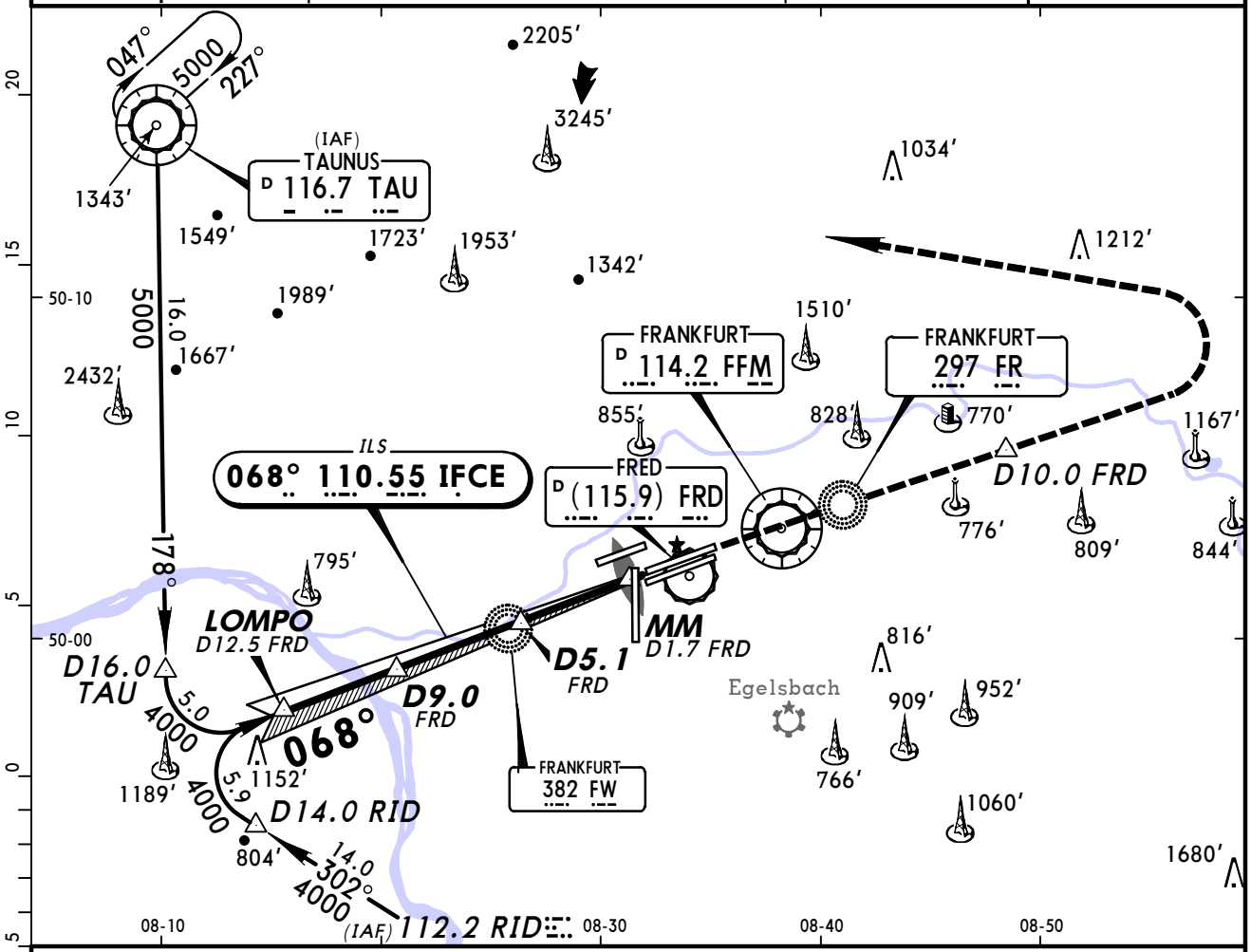
LOC IFCE	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev / RWY
110.55	068°	D5.1 FRD 1630′ (1301′)	Refer to Minimums	Apt Elev 364′ RWY 329′

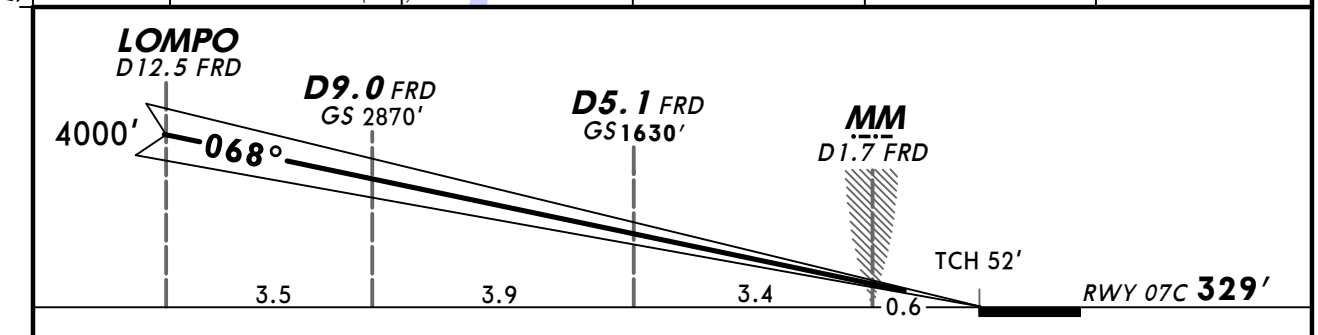
MISSED APCH: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

Alt Set: hPa(IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′
1. **DME required.** 2. Special Aircrew & Aircraft Certification Required.



MSA FFM VOR





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

D10.0 FRD whichever is later 5000′ via FR 297

Standard STRAIGHT-IN LANDING RWY **07C**

CAT IIIA ILS	CAT II ILS ABCD
DH 50′	RA 101′ DA(H) 429′ (100′)
RVR 200m	RVR 300m 1

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

PANS OPS 4

CHANGES: Chart reindexed. Tower frequency.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

7 OCT 11 (11-3) Eff 20 Oct

ILS or LOC Rwy 07R

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

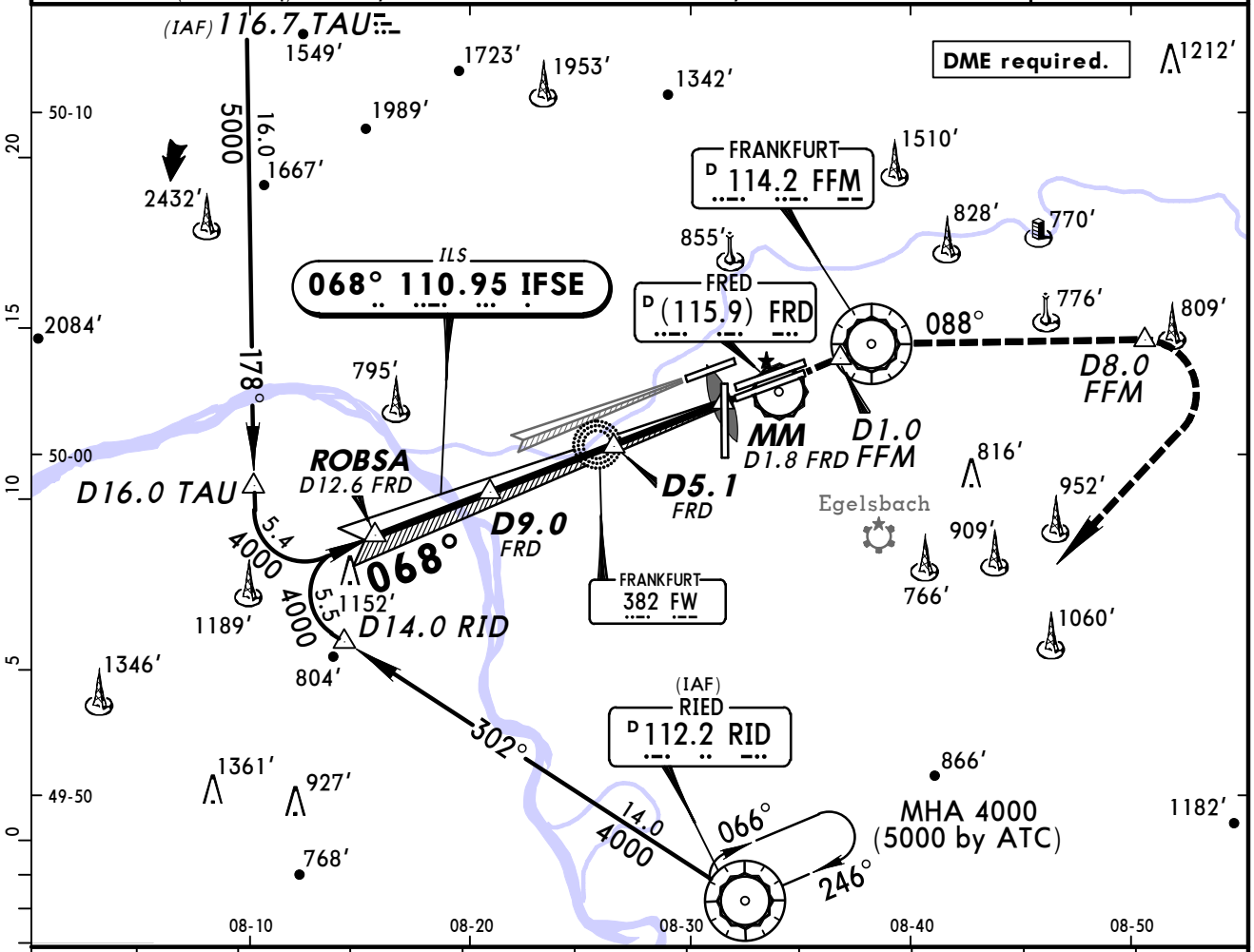
BRIEFING STRIP

LOC IFSE	Final Apch Crs	GS	ILS DA(H)	Apt Elev / RWY
110.95	068°	D5.1 FRD 1590′ (1262′)	528′ (200′)	Apt Elev 364′ RWY 328′

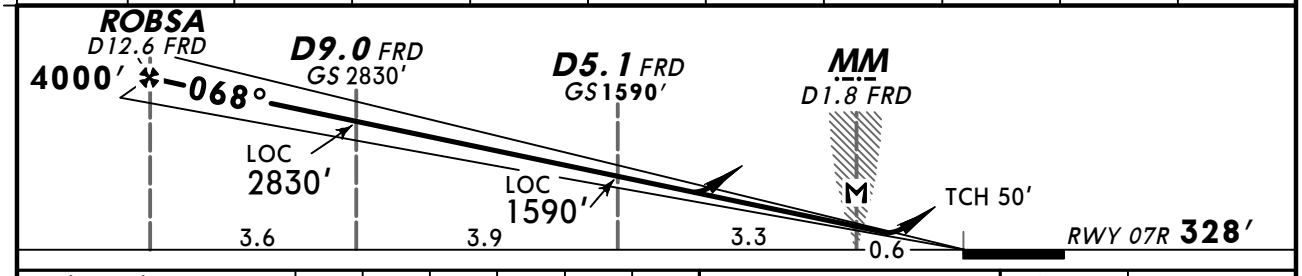
MISSED APCH: Climb STRAIGHT AHEAD to D1.0 inbound FFM, then turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′.

MSA FFM VOR: 4300′ (125°–180°), 3200′, 3500′, 335°

Alt Set: hPa(IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



LOC (GS out)	FRD DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	3470′	3150′	2830′	2520′	2200′	1880′	1560′	1240′	920′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.8 FRD						

ALSF-II, REIL, PAPI

D1.0 inbound FFM

Standard STRAIGHT-IN LANDING RWY **07R**

PANS OPS 4

	ILS DA(H) 528′ (200′)			LOC (GS out) DA(H) 810′ (482′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m	
B					
C				RVR 1500m	CMV 2300m
D					

CHANGES: Chart reindexed. MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 | 11-3A | Eff 20 Oct

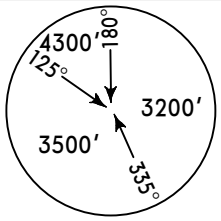
JEPPESEN FRANKFURT/MAIN, GERMANY
CAT II/III ILS Rwy 07R

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

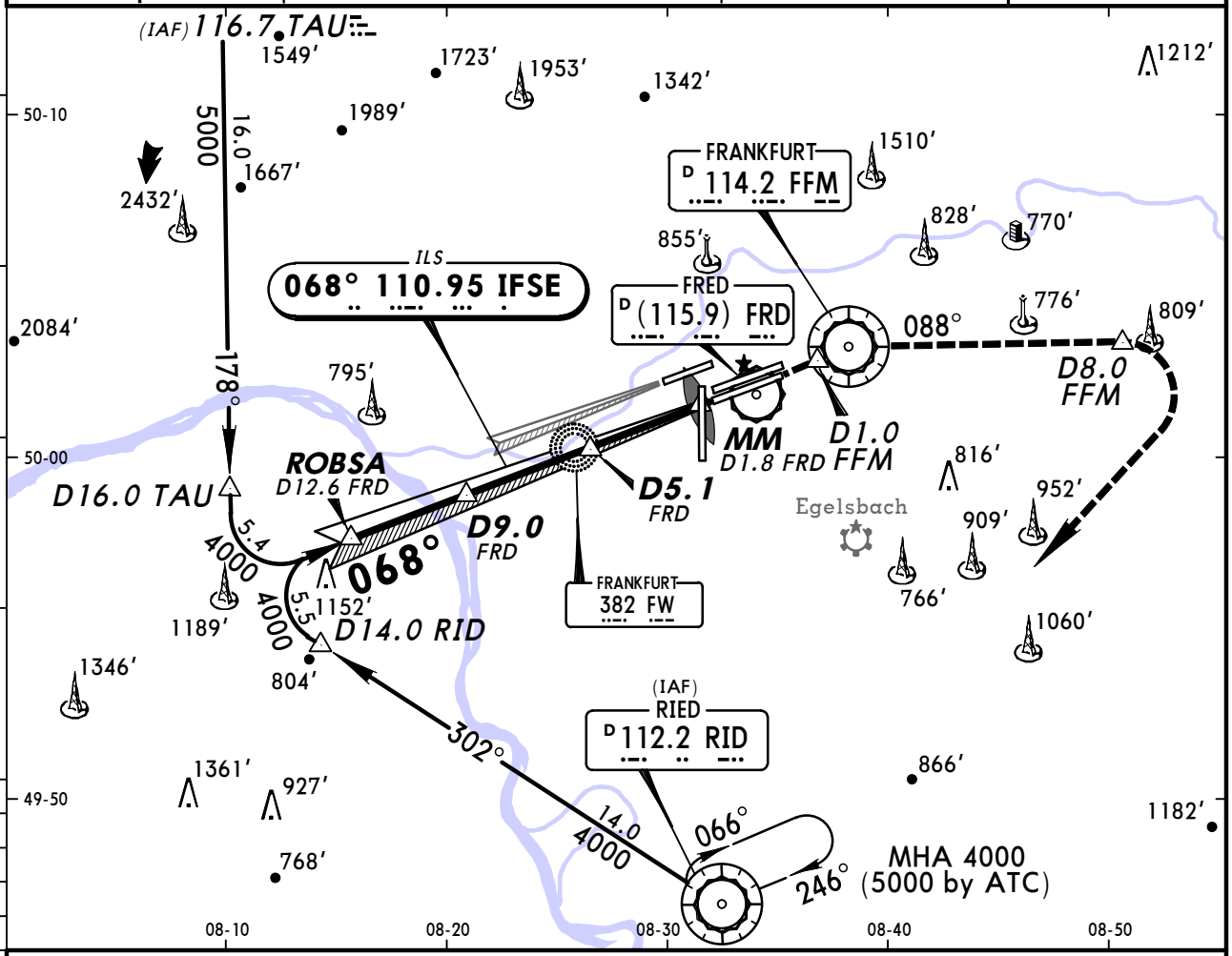
LOC IFSE	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev / RWY
110.95	068°	D5.1 FRD 1590′ (1262′)	Refer to Minimums	Apt Elev 364′ RWY 328′

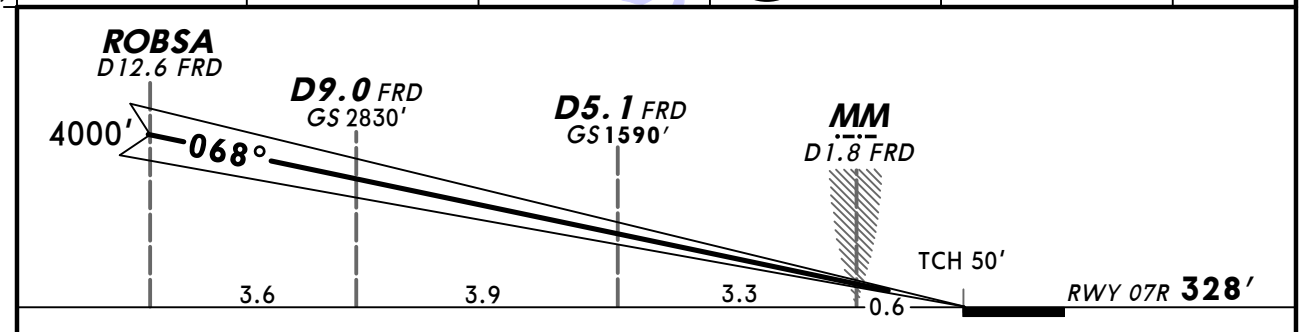
MISSED APCH: Climb STRAIGHT AHEAD to D1.0 inbound FFM, then turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′.

Alt Set: hPa(IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′
1. **DME required.** 2. Special Aircrew & Acft Certification Required.



MSA FFM VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

D1.0 inbound FFM

Standard STRAIGHT-IN LANDING RWY **07R**

CAT IIIA ILS	CAT II ILS ABCD
DH 50′	RA 101′ DA(H) 428′ (100′)
RVR 200m	RVR 300m 1

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

CHANGES: Chart reindexed. MHA.

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BRIEFING STRIP™

PANS OPS 4

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

7 OCT 11 (11-4) Eff 20 Oct

ILS or LOC Rwy 25L

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

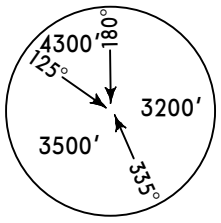
BRIEFING STRIP™

LOC	Final	GS	ILS	Apt Elev 364′
IFSW	Apch Crs	D4.2 IFSW	DA(H)	RWY 362′
111.15	248°	1710′ (1348′)	Refer to Minimums	

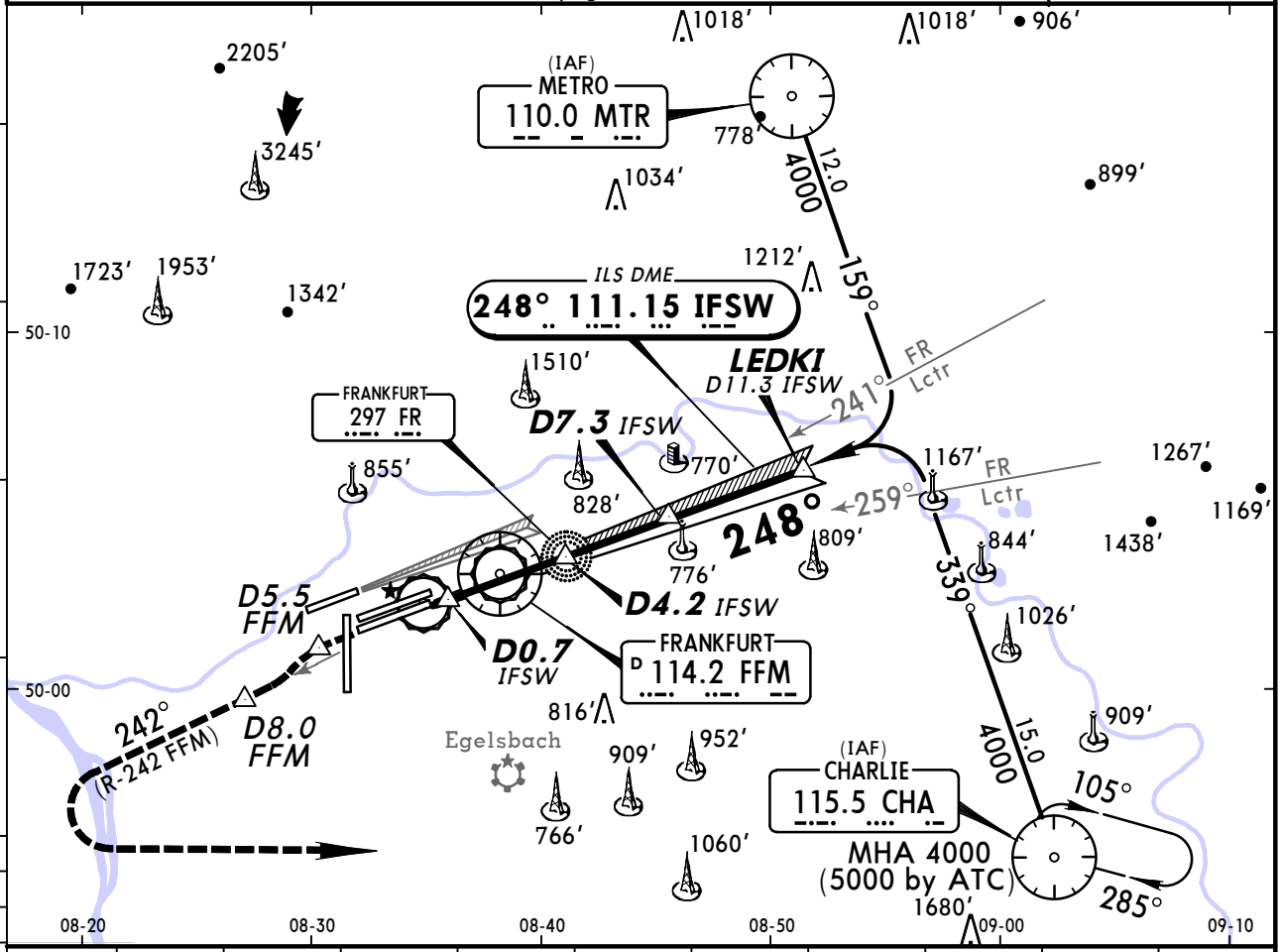
MISSED APCH: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-242 FFM. Then on R-242 FFM to D8.0 FFM or 5000′, whichever is later, then turn LEFT to CHA VOR and maintain 5000′.

Alt Set: hPa(IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′

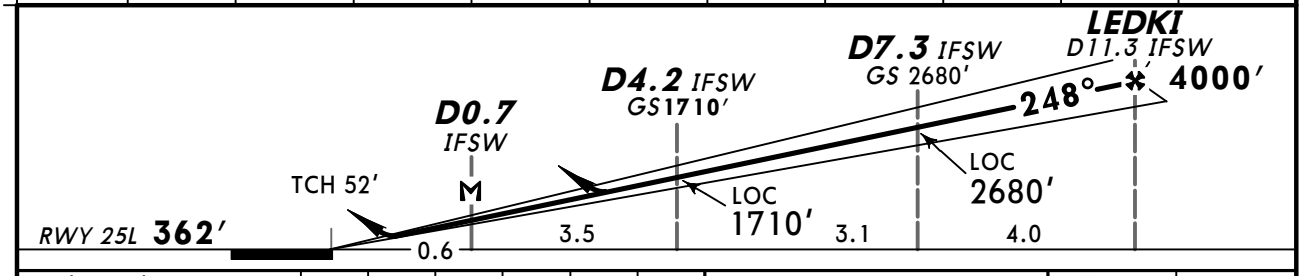
1. **DME required.** 2. CAUTION: Independent taxiing acft on Twy R- and S-EAST underneath short final. 3. LACFT: See ATC State pages.



MSA FFM VOR



LOC (GS out)	IFSW DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
	ALTITUDE	990′	1310′	1630′	1950′	2270′	2580′	2900′	3220′	3540′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at D0.7 IFSW						

ALSF-II
REIL
PAPI

D5.5 FFM

Standard STRAIGHT-IN LANDING RWY 25L

	ILS 1			LOC (GS out)	
	DA(H) 562′ (200′)			DA(H) 830′ (468′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m	RVR 1500m
B					
C					CMV 2200m
D					

1 LACFT: DA(H) 580′(218′).

PANS OPS 4

CHANGES: Chart reindexed. MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (11-4A) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY

CAT II/III ILS Rwy 25L

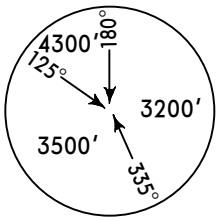
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

LOC	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev / RWY
IFSW 111.15	248°	D4.2 IFSW 1710′ (1348′)	Refer to Minimums	Apt Elev 364′ RWY 362′

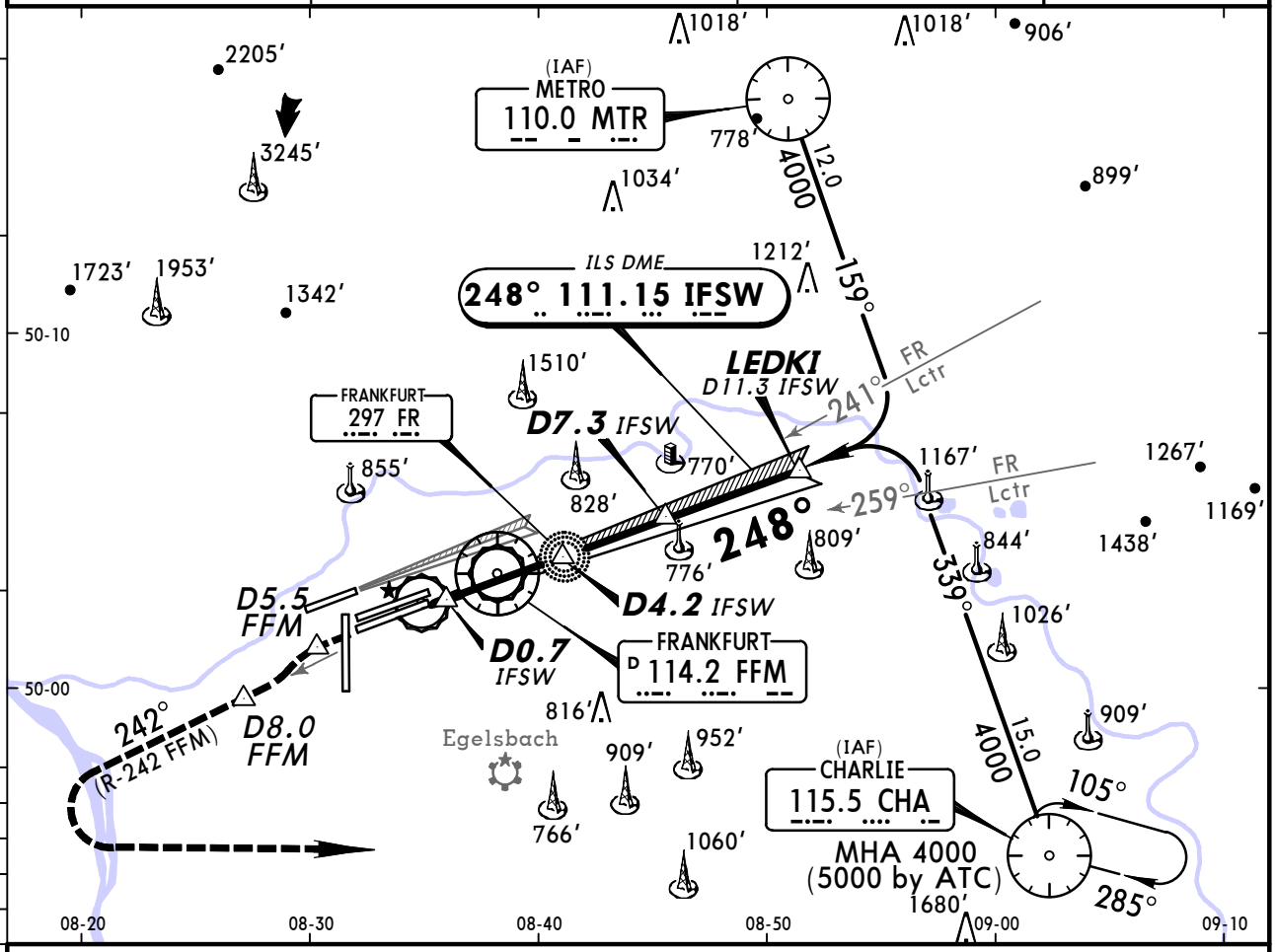
MISSED APCH: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-242 FFM. Then on R-242 FFM to D8.0 FFM or 5000′, whichever is later, then turn LEFT to CHA VOR and maintain 5000′.

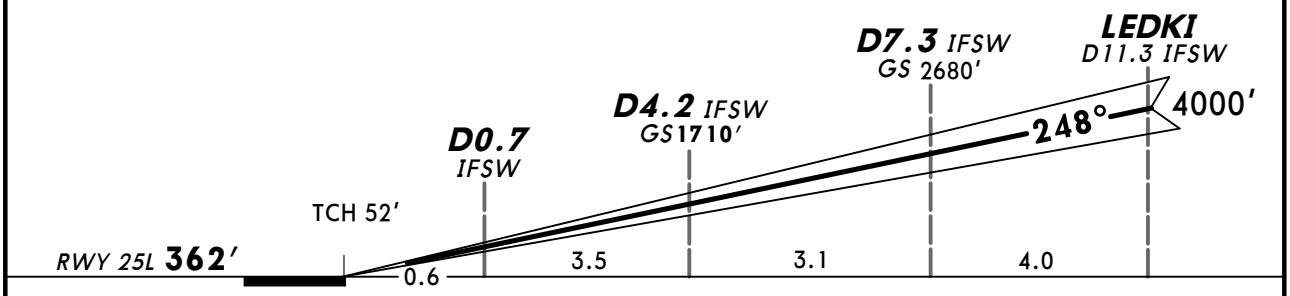
Alt Set: hPa(IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′

1. **DME required.** 2. CAUTION: Independent taxiing acft on Twy R- and S-EAST underneath short final. 3. Special Aircrew & Acft Certification Required.



MSA
FFM VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

D5.5 FFM

Standard STRAIGHT-IN LANDING RWY **25L**

CAT IIIA ILS	CAT II ILS
DH 50′	ABCD RA 95′ DA(H) 462′ (100′)
RVR 200m	RVR 300m 1

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

PANS OPS 4

CHANGES: Chart reindexed. MHA.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

7 OCT 11 (11-5) Eff 20 Oct

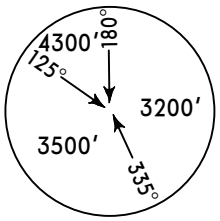
ILS or LOC Rwy 25C

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

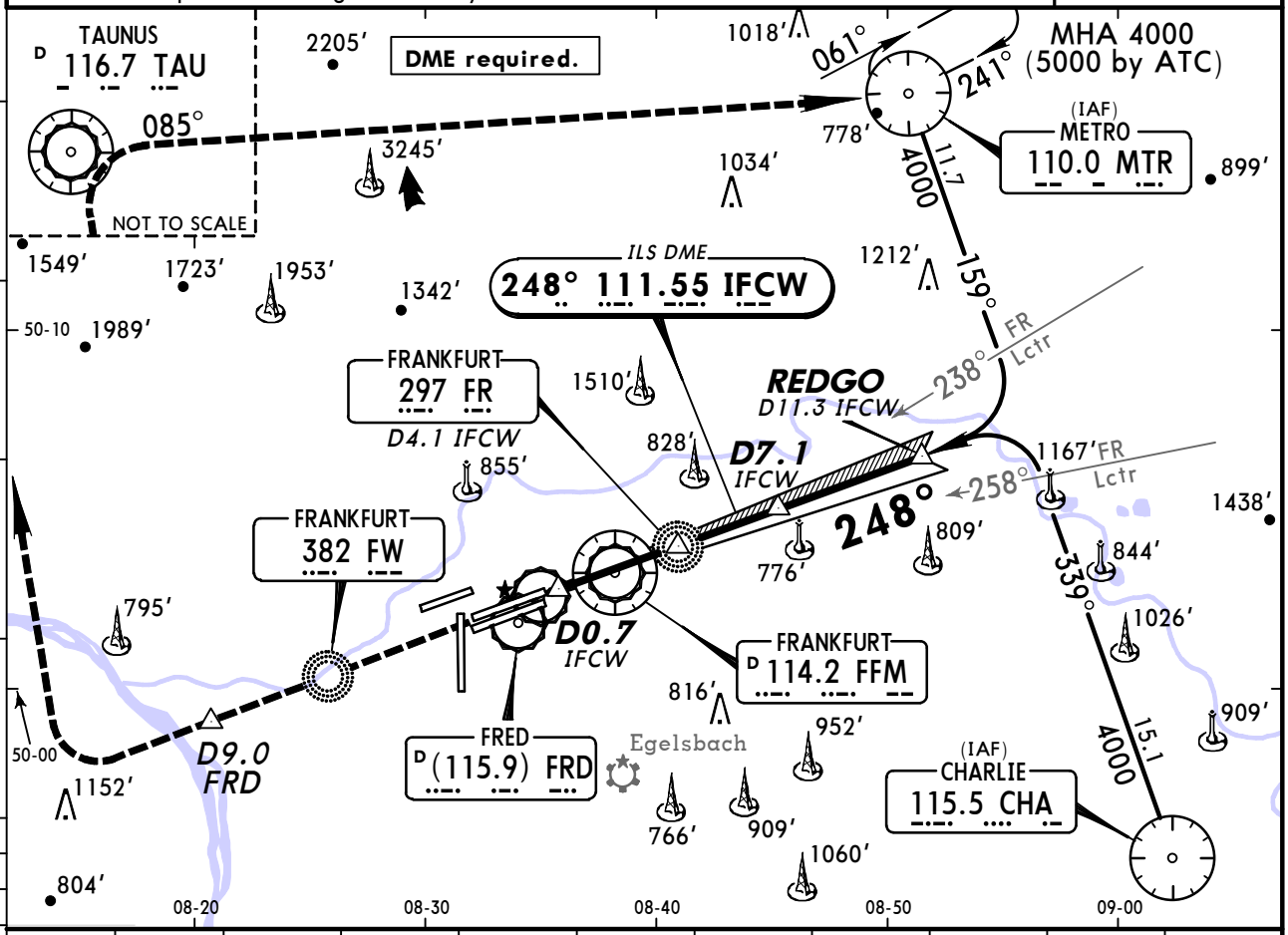
LOC IFCW	Final Apch Crs	GS Lctr	ILS DA(H)	Apt Elev 364′
111.55	248°	1660′ (1296′)	564′ (200′)	RWY 364′

MISSED APCH: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR VOR and maintain 5000′. In case of Missed apch inform ATC immediately.

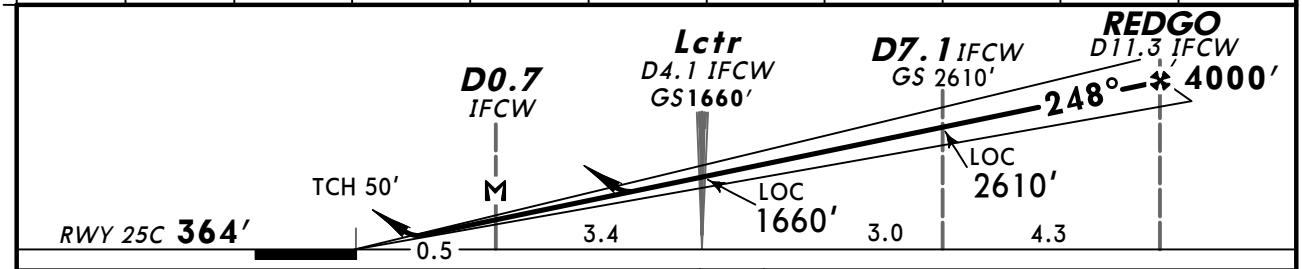
Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′
CAUTION: Independent taxiing acft on Twy R- and S-EAST underneath short final.



MSA
FFM VOR



LOC (GS out)	IFCW DME	2.0	3.0	4.0	5.0	6.0	8.0	9.0	10.0	11.0
	ALTITUDE	990′	1310′	1630′	1950′	2270′	2900′	3220′	3540′	3860′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at D0.7 IFCW						

ALSF-II
REIL
PAPI

Inform ATC

D9.0 FRD — 5000′ whichever later

Standard STRAIGHT-IN LANDING RWY 25C

	ILS DA(H) 564′ (200′)			LOC (GS out) DA(H) 810′ (446′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

PANS OPS 4

CHANGES: Chart reindexed. Tower frequency. MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 | 11-5A | Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY

CAT II/III ILS Rwy 25C

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

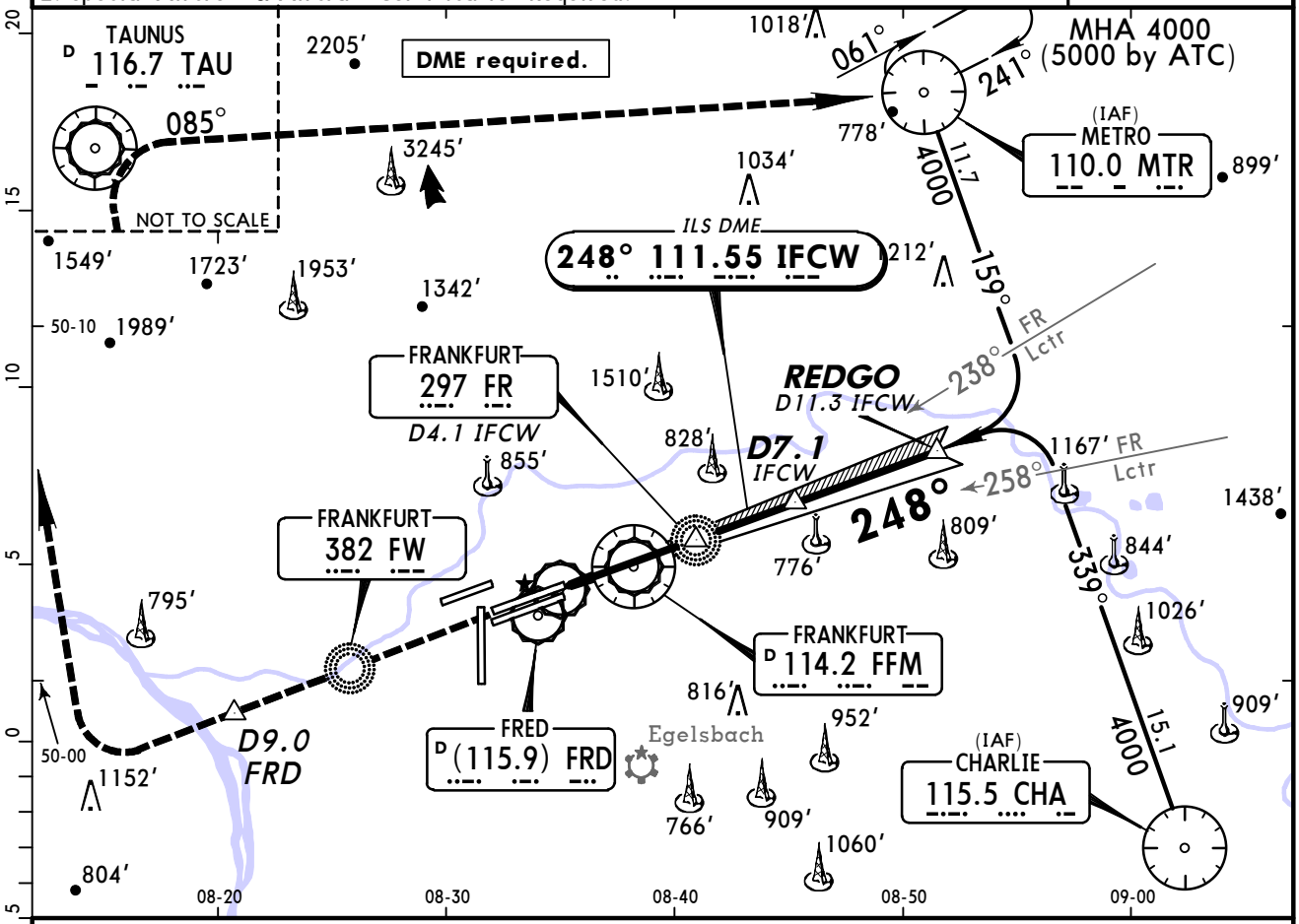
LOC	Final	GS	CAT II & IIIA ILS	Apt Elev 364′
IFCW	Apch Crs	Lctr	Refer to Minimums	RWY 364′
111.55	248°	1660′ (1296′)		

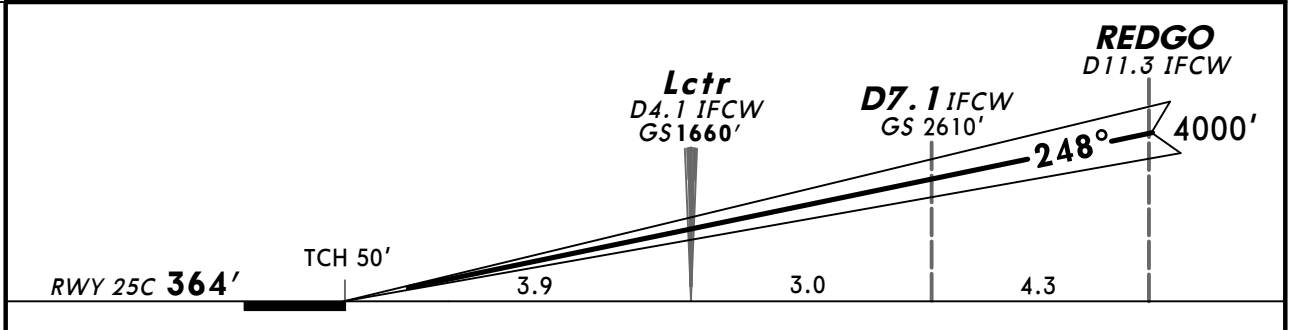
MISSED APCH: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR VOR and maintain 5000′. In case of Missed apch inform ATC immediately.

Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′

1. CAUTION: Independent taxiing acft on Twy R- and S-EAST underneath short final.
2. Special Aircrew & Aircraft Certification Required.

MSA
FFM VOR
4300′ 180° 125° 3200′ 3500′ 335°





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

Inform ATC

D9.0 FRD 5000′ whichever later

Standard STRAIGHT-IN LANDING RWY 25C

CAT IIIA ILS	CAT II ILS
	ABCD
DH 50′	RA 98′
	DA(H) 464′ (100′)
RVR 200m	RVR 300m 1

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

CHANGES: Chart reindexed. Tower frequency. MHA.

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BRIEFING STRIP™

PANS OPS 4

EDDF/FRA
FRANKFURT/MAIN

JEPPESEN 7 OCT 11 (11-6) Eff 20 Oct

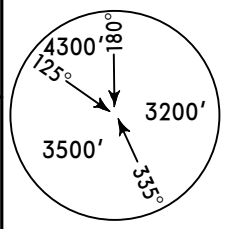
FRANKFURT/MAIN, GERMANY
MISSED APCH CLIMB GRAD MIM 5.0%
ILS Rwy 25R

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	136.5	121.8

BRIEFING STRIP TM

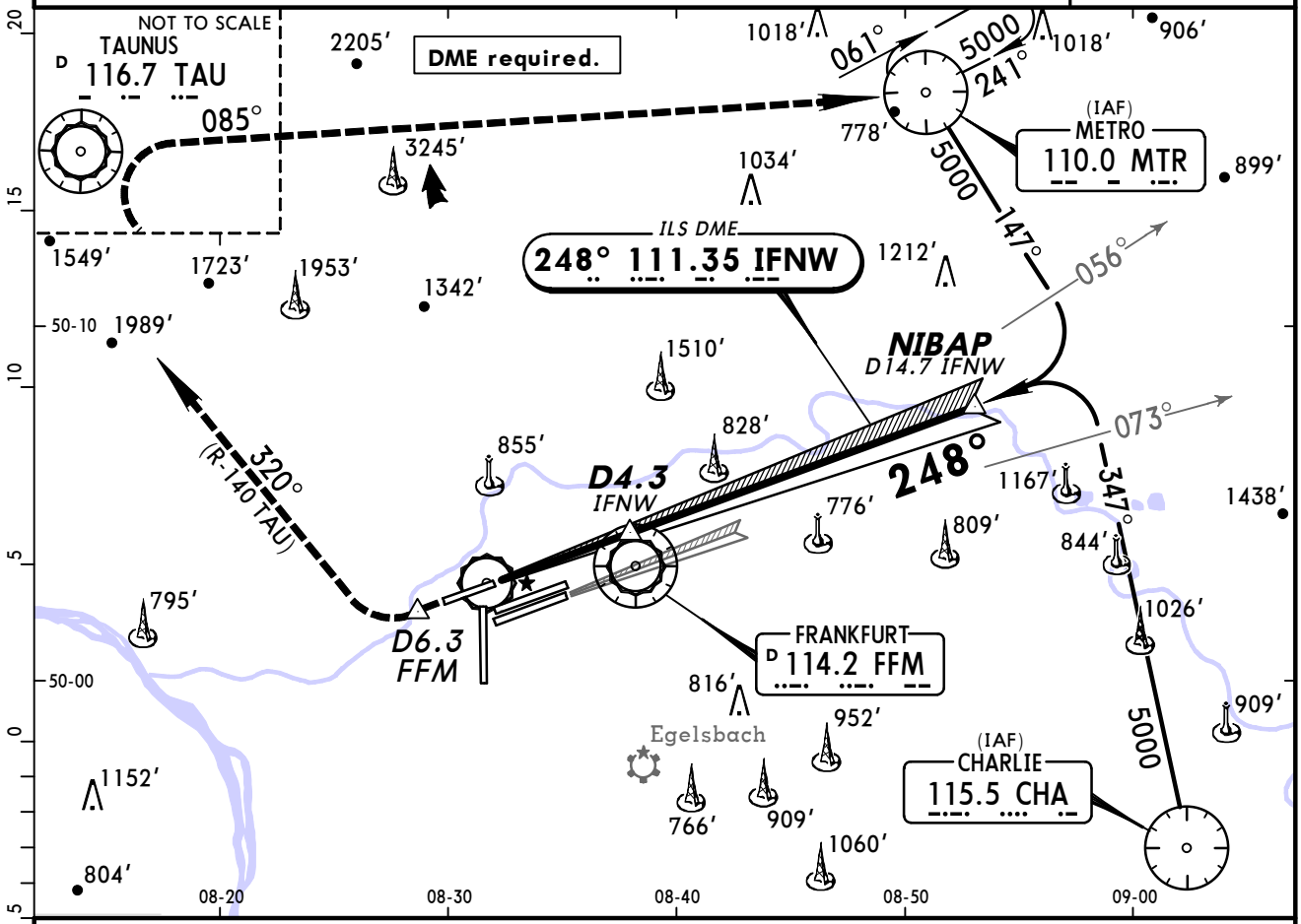
LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev / RWY
IFNW 111.35	248°	D4.3 IFNW 1680′ (1327′)	Refer to Minimums	Apt Elev 364′ RWY 353′

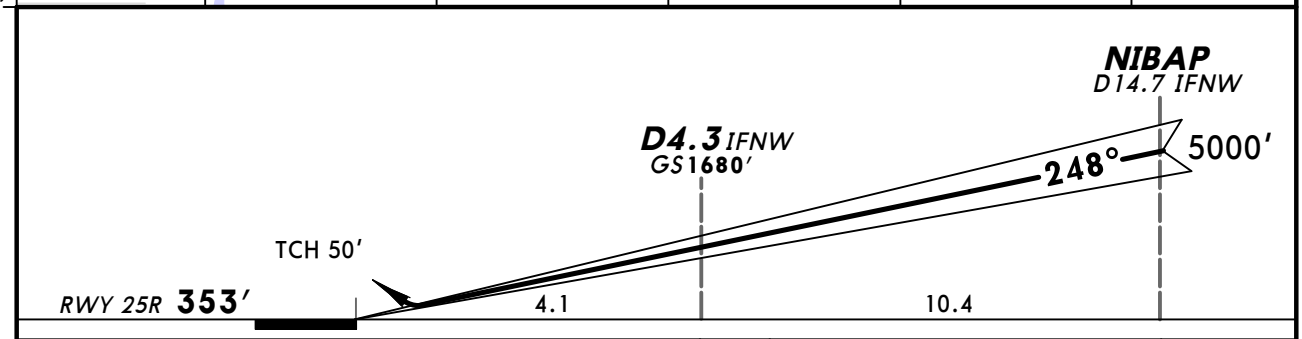
MISSED APCH: Climb STRAIGHT AHEAD to D6.3 FFM at 800′ or above, then turn RIGHT to intercept R-140 inbound TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR VOR climbing to 5000′.
In case of Missed apch inform ATC immediately.



MSA
FFM VOR

Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II REIL PAPI PAPI

Inform ATC

MIM 800′ at D6.3 FFM

Standard STRAIGHT-IN LANDING RWY **25R**

Missed apch climb gradient mim 5.0% up to 2000′

DA(H) ABC: **553′** (200′)
D: **559′** (206′)

	FULL	Limited	ALS out
A	RVR 550m	RVR 750m	RVR 1200m
B			
C			
D			

PANS OPS 4

CHANGES: New procedure.

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EDDF/FRA
FRANKFURT/MAIN

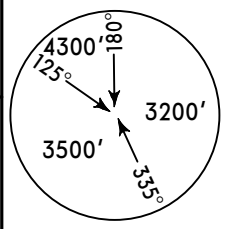
JEPPESEN 7 OCT 11 (11-6A) Eff 20 Oct 1

FRANKFURT/MAIN, GERMANY
CAT II/III ILS Rwy 25R

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	136.5	121.8

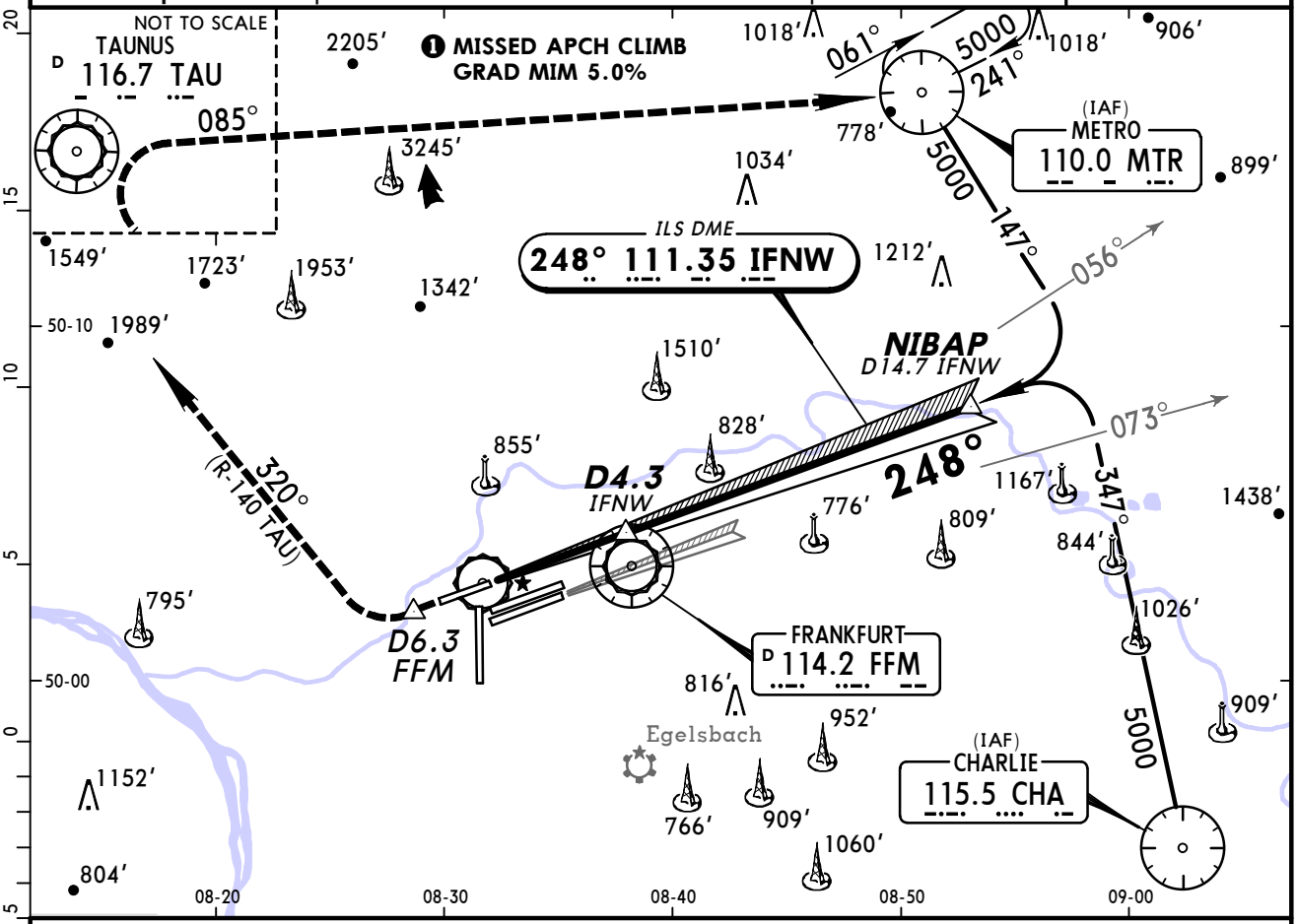
LOC	Final	GS	CAT II & IIIA ILS	Apt Elev 364′
IFNW	Apch Crs	D4.3 IFNW	Refer to Minimums	RWY 353′
111.35	248°	1680′ (1327′)		

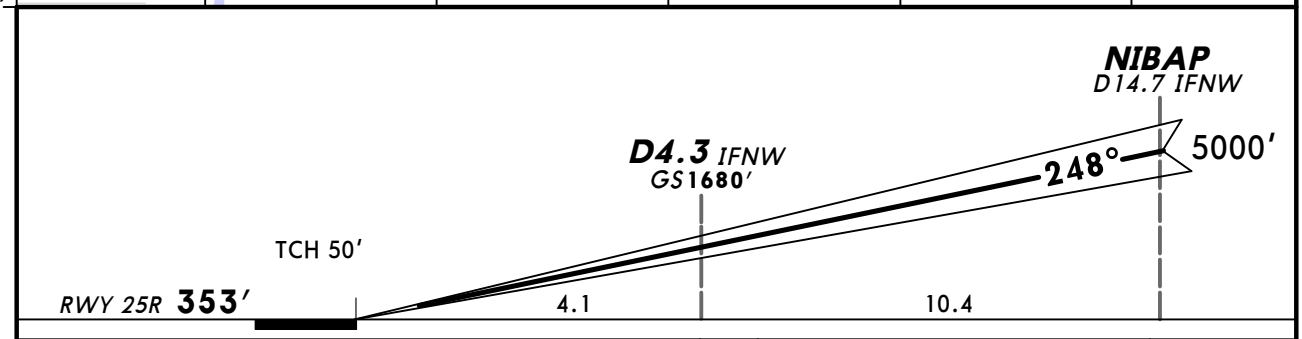
MISSED APCH: Climb STRAIGHT AHEAD to D6.3 FFM at 800′ or above, then turn RIGHT to intercept R-140 inbound TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR VOR climbing to 5000′. In case of Missed apch inform ATC immediately.



MSA
FFM VOR

Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′
1. **DME required.** 2. Special Aircrew & Aircraft Certification Required.





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II REIL PAPI PAPI

Inform ATC

MIM 800′ at D6.3 FFM

Standard STRAIGHT-IN LANDING RWY **25R**

CAT IIIA ILS	CAT II ILS Missed apch climb gradient mim 5.0% up to 2000′	
	A: RA 103′ DA(H) 453′ (100′) B: RA 107′ DA(H) 457′ (104′) C: RA 122′ DA(H) 471′ (118′)	D: RA 144′ DA(H) 484′ (131′)
DH 50′		
RVR 200m	RVR 300m 1	RVR 400m

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

PANS OPS 4

CHANGES: New procedure.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (12-1) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
RNAV (GPS) Z Rwy 07C

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

BRIEFING STRIP™

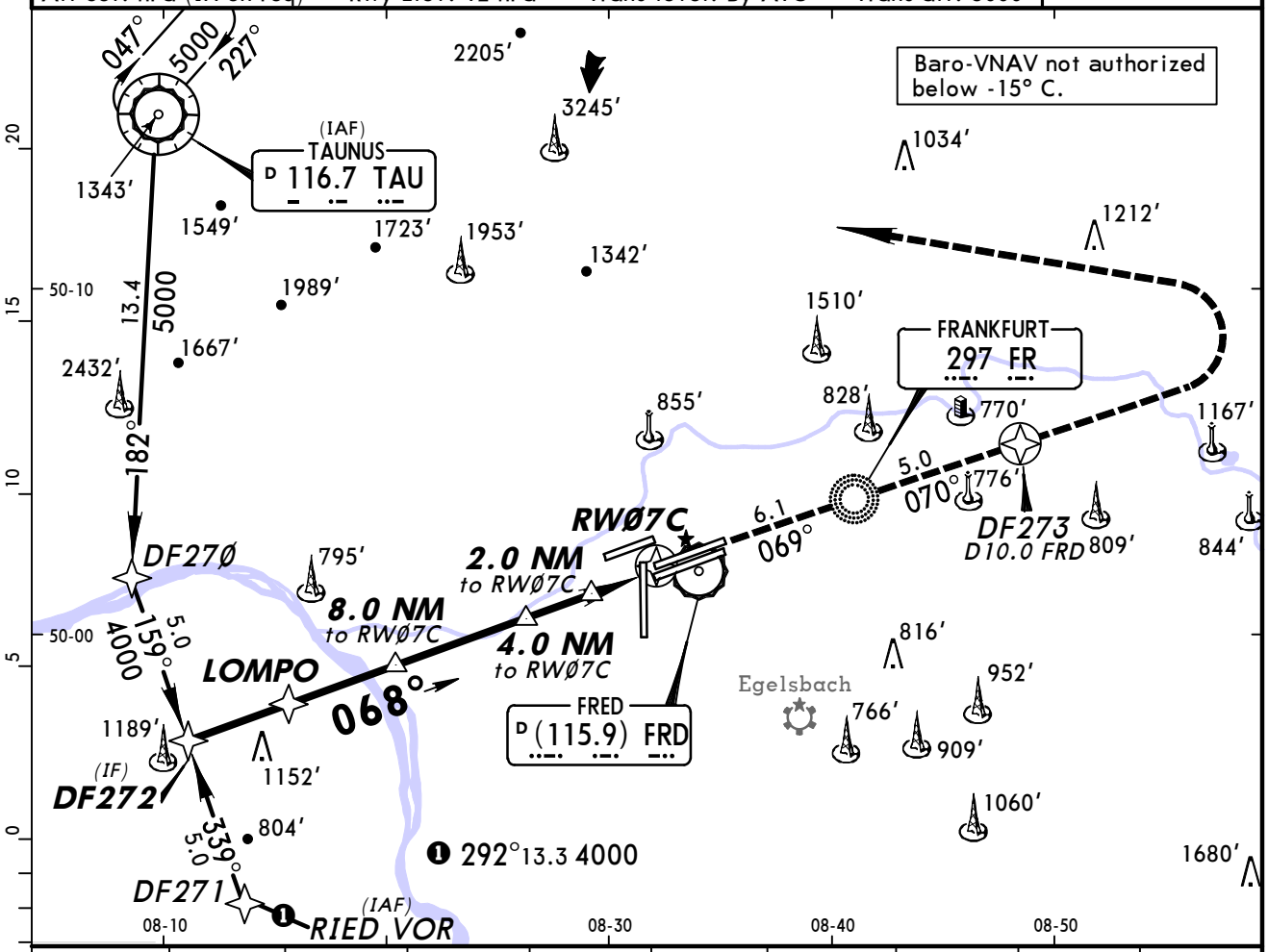
RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	068°	LOMPO 4000′ (3671′)	Refer to Minimums	Apt Elev 364′ RWY 329′

MISSED APCH RNAV: Climb on track 069° via FR Lctr to DF273 or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.
NON-RNAV: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

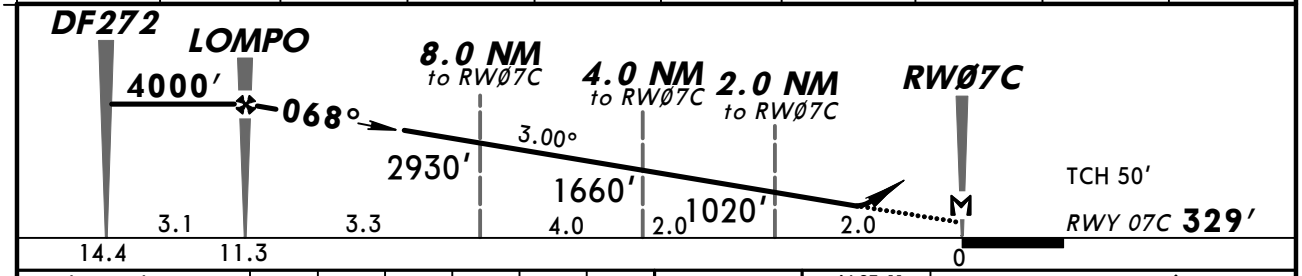
4300′
MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′

Baro-VNAV not authorized below -15° C.



NM to RWØ7C	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3570′	3250′	2930′	2610′	2290′	1980′	1660′	1340′	1020′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RWØ7C						

ALSF-II
REIL
PAPI

DF273 5000′
D10.0 FRD via FR 297
whichever is later

Standard STRAIGHT-IN LANDING RWY **07C**

	LNAV/VNAV	LNAV
DA(H)	ABC: 690′ (361′) D: 720′ (391′)	B: 820′ (491′) A: 790′ (461′) CD: 840′ (511′)

PANS OPS 4

	ALS out		ALS out
A	RVR 1000m	RVR 1500m	RVR 1500m
B			
C		RVR 1700m	RVR 1600m / CMV 2400m
D	RVR 1100m	RVR 1800m	

CHANGES: Tower frequency.

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EDDF/FRA FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

7 OCT 11 (12-2) Eff 20 Oct

RNAV (GPS) Y Rwy 07C

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

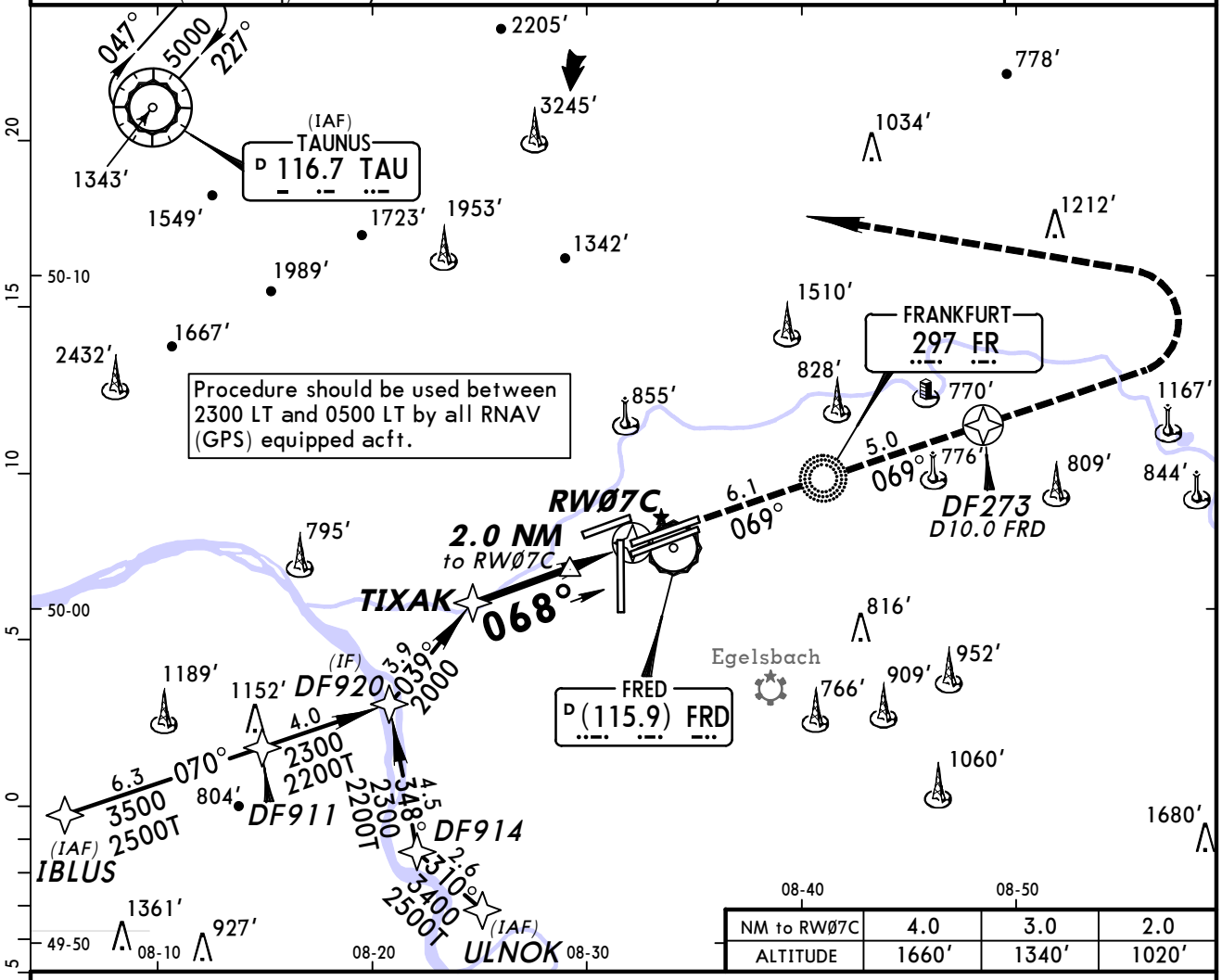
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV DA(H)	Apt Elev / RWY
	068°	TIXAK 2000′ (1671′)	Refer to Minimums	Apt Elev 364′ RWY 329′

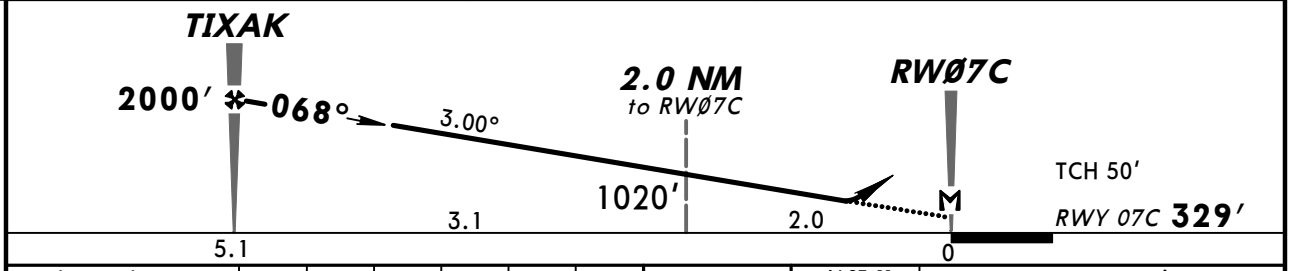
MISSED APCH RNAV: Climb on track 069° via FR Lctr to DF273 or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.
NON-RNAV: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

4300′ MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



NM to RW07C	4.0	3.0	2.0
ALTITUDE	1660′	1340′	1020′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW07C						

ALSF-II
REIL
PAPI

DF273 5000′
D10.0 FRD via FR 297
whichever is later

Standard STRAIGHT-IN LANDING RWY **07C**

LNAV

DA(H) B: **820′** (491′)
A: **790′** (461′) CD: **840′** (511′)

PANS OPS 4

		ALS out
A	RVR 1500m	
B		
C	RVR 1600m	CMV 2400m
D		

CHANGES: Tower frequency.

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EDDF/FRA FRANKFURT/MAIN

7 OCT 11 | 12-3 | Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY RNAV (GPS) Z Rwy 07R

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

BRIEFING STRIP™

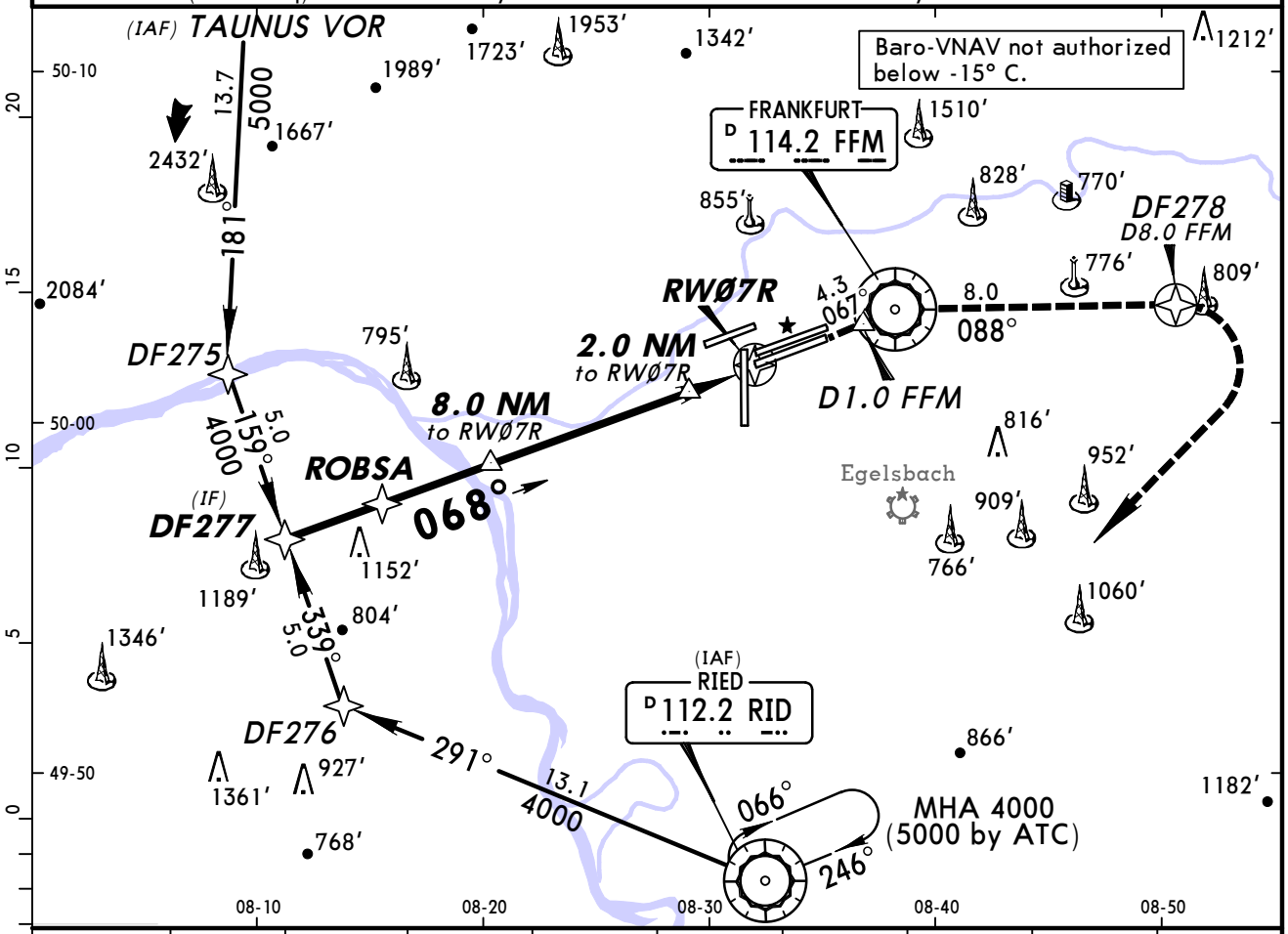
RNAV	Final Apch Crs	Minimum Alt ROBSA	LNAV/VNAV DA(H)	Apt Elev / RWY
	068°	4000′ (3672′)	680′ (352′)	364′ / 328′

MISSED APCH RNAV: Climb on track 067° to FFM VOR, then turn RIGHT on track 088° to DF278 or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′. **NON-RNAV**: Climb STRAIGHT AHEAD to D1.0 inbound FFM. Turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later. Turn RIGHT to RID VOR and maintain 5000′.

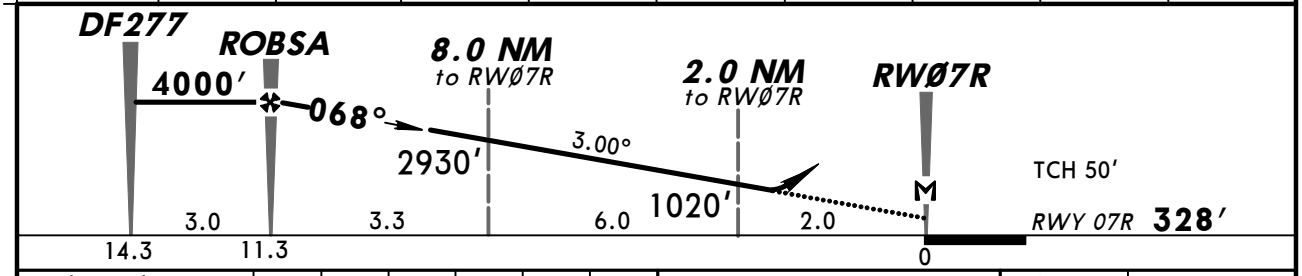
4300′

MSA ARP

Alt Set: hPa (IN on req)	Rwy Elev: 12 hPa	Trans level: By ATC	Trans alt: 5000′



NM to RW07R	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3570′	3250′	2930′	2610′	2290′	1970′	1660′	1340′	1020′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW07R						

ALSF-II
REIL
PAPI

Refer to Missed apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 07R

	LNAV/VNAV DA(H) 680′ (352′)		LNAV DA(H) C: 830′ (502′) AB: 810′ (482′) D: 840′ (512′)	
		ALS out		ALS out
A	RVR 900m	RVR 1500m	RVR 1500m	
B				
C		RVR 1600m	RVR 1600m	CMV 2400m
D				

CHANGES: MHA.

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EDDF/FRA FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

7 OCT 11 (12-4) Eff 20 Oct

RNAV (GPS) Y Rwy 07R

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

BRIEFING STRIP

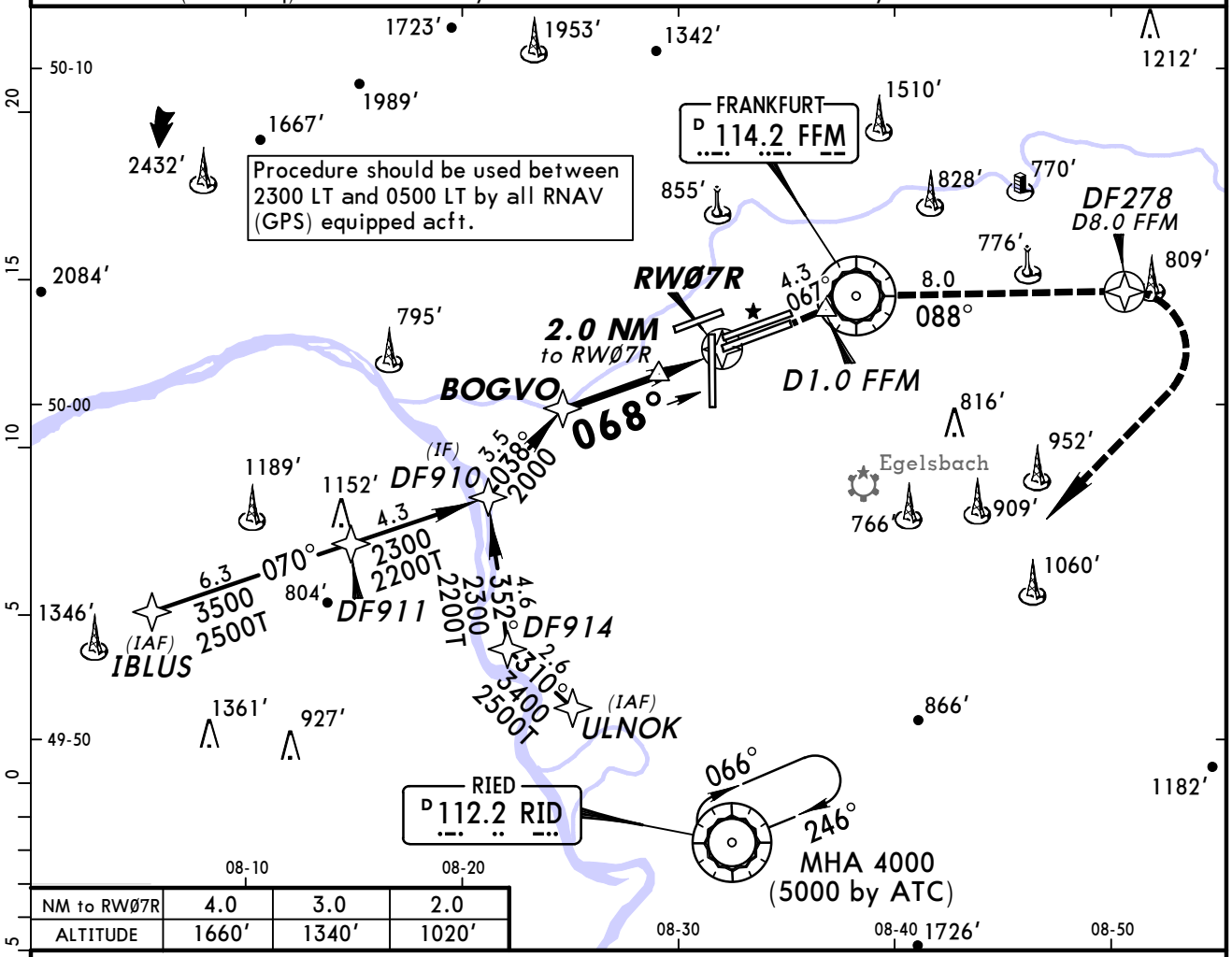
RNAV	Final Apch Crs	Minimum Alt	LNAV DA(H)	Apt Elev / RWY
	068°	BOGVO 2000′ (1672′)	Refer to Minimums	Apt Elev 364′ RWY 328′

MISSED APCH RNAV: Climb on track 067° to FFM VOR, then turn RIGHT on track 088° to DF278 or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′. **NON-RNAV**: Climb STRAIGHT AHEAD to D1.0 inbound FFM. Turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later. Turn RIGHT to RID VOR and maintain 5000′.

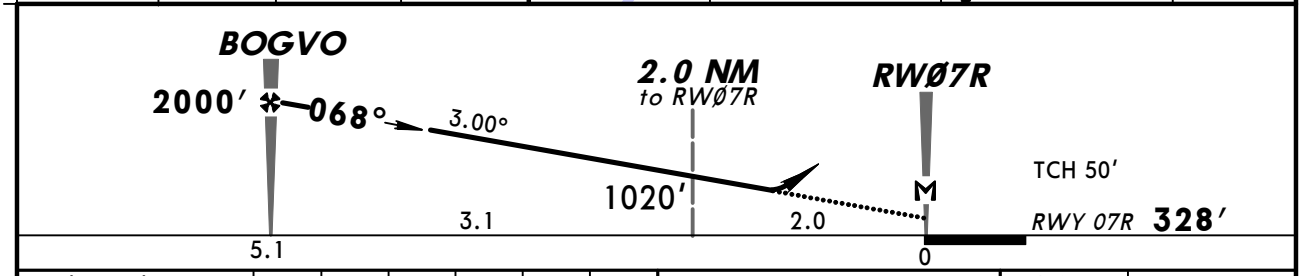
4300′

MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 12 hPa | Trans level: By ATC | Trans alt: 5000′



NM to RWØ7R	4.0	3.0	2.0
ALTITUDE	1660′	1340′	1020′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RWØ7R						

ALSF-II
REIL
PAPI

Refer to Missed apch above

Standard STRAIGHT-IN LANDING RWY 07R

LNAV

DA(H)	
AB: 810′ (482′)	C: 830′ (502′)
	D: 840′ (512′)

ALS out

PANS OPS 4

A	RVR 1500m	
B		
C	RVR 1600m	CMV 2400m
D		

CHANGES: MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (12-5) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
RNAV (GPS) Z Rwy 25L

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

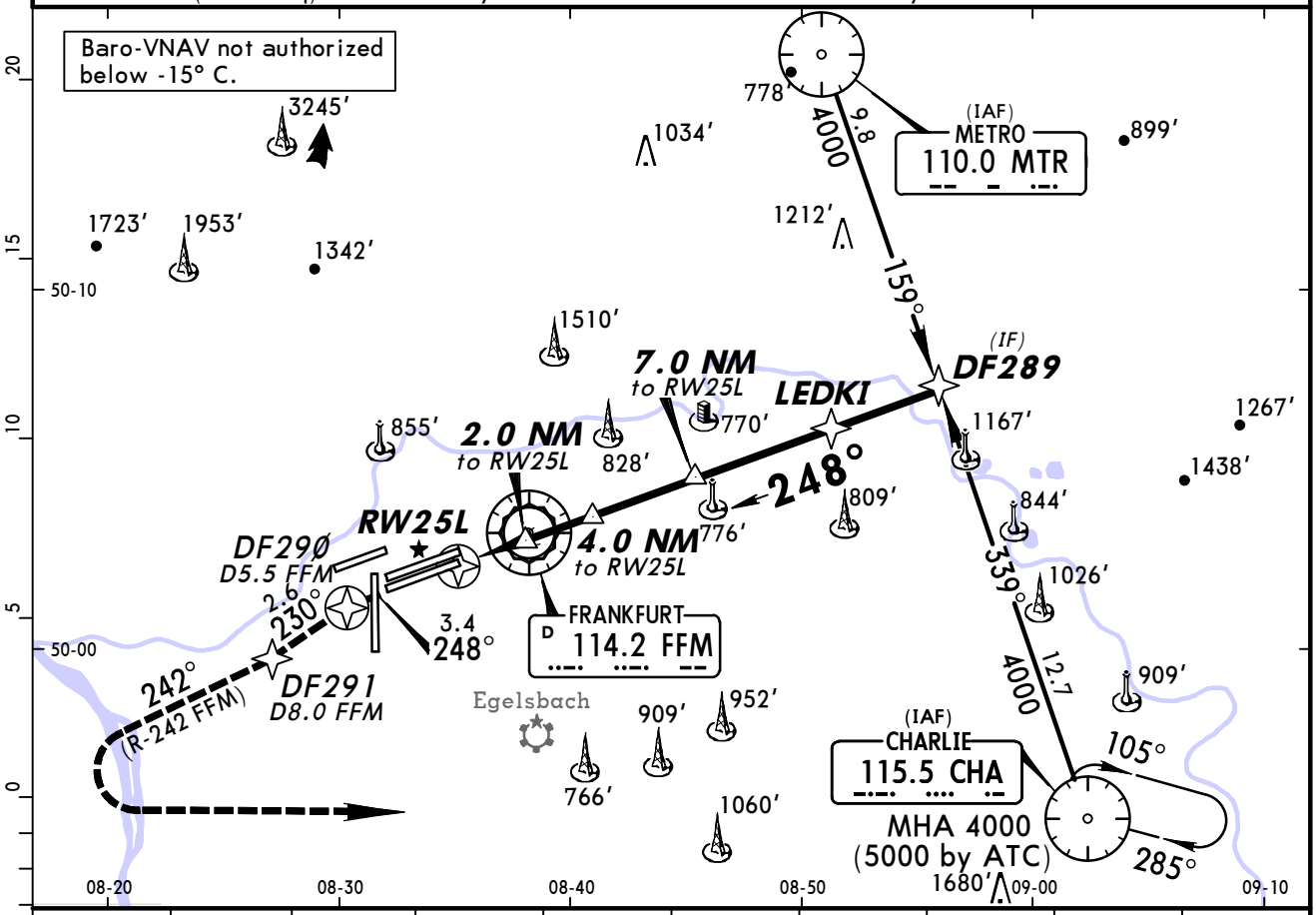
BRIEFING STRIP TM

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	248°	LEDKI 4000′ (3638′)	770′ (408′)	Apt Elev 364′ / RWY 362′

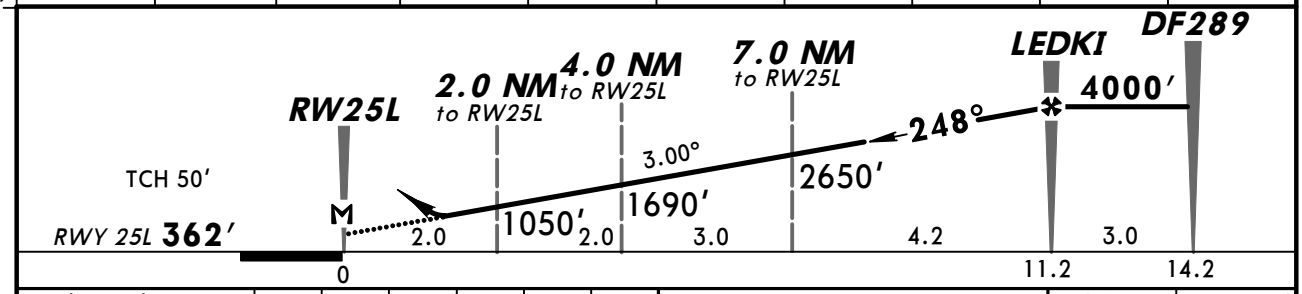
MISSED APCH RNAV: Climb on track 248° to DF29Ø, then turn LEFT on track 230° to DF291. Then turn RIGHT on track 242° climb to 5000′, then turn LEFT to CHA VOR and maintain 5000′. **NON-RNAV**: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-242 FFM. Then on R-242 FFM to D8.0 FFM or 5000′, whichever is later, then turn LEFT to CHA VOR and maintain 5000′.

4300′
MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 13 hPa | Trans level: By ATC | Trans alt: 5000′



NM to RW25L	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	1050′	1370′	1690′	2010′	2330′	2650′	2960′	3280′	3600′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW25L						

ALSF-II
REIL
PAPI

DF29Ø
D5.5 FFM

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **25L**

	LNAV/VNAV DA(H) 770′ (408′)		LNAV DA(H) A: 770′ (408′) D: BC: 820′ (458′) 830′ (468′)	
		ALS out		ALS out
A	RVR 1200m	RVR 1500m	RVR 1200m	RVR 1500m
B			RVR 1400m	
C		RVR 1900m		CMV 2100m
D			RVR 1500m	CMV 2200m

CHANGES: MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (12-6) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
RNAV (GPS) Y Rwy 25L

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

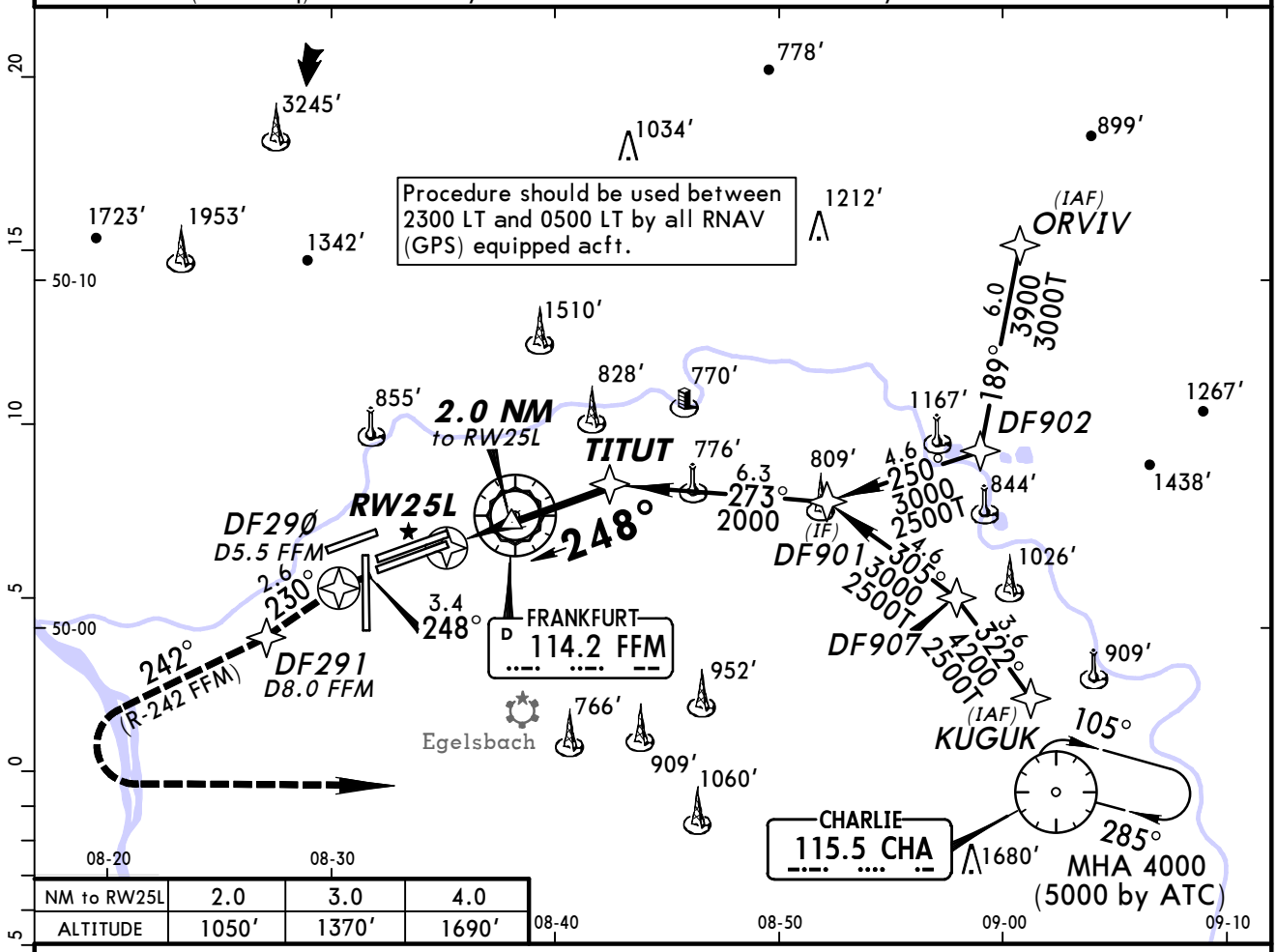
BRIEFING STRIP ™

RNAV	Final Apch Crs 248°	Minimum Alt TITUT 2000′ (1638′)	LNAV DA(H) Refer to Minimums	Apt Elev 364′ RWY 362′

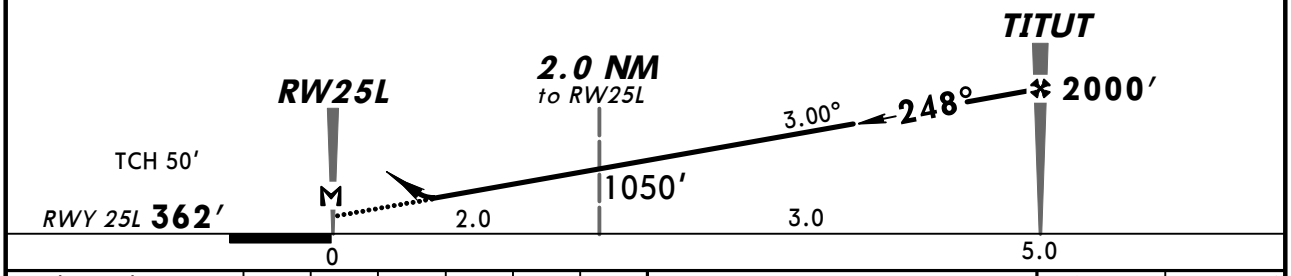
MISSED APCH RNAV: Climb on track 248° to DF29Ø, then turn LEFT on track 230° to DF291. Then turn RIGHT on track 242° climb to 5000′, then turn LEFT to CHA VOR and maintain 5000′. **NON-RNAV**: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-242 FFM. Then on R-242 FFM to D8.0 FFM or 5000′, whichever is later, then turn LEFT to CHA VOR and maintain 5000′.

4300′
MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 13 hPa | Trans level: By ATC | Trans alt: 5000′



NM to RW25L	2.0	3.0	4.0
ALTITUDE	1050′	1370′	1690′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW25L						

ALSF-II
REIL
PAPI

DF29Ø
D5.5 FFM

Standard STRAIGHT-IN LANDING RWY 25L

LNAV

DA(H) BC: **820′** (458′)
A: **770′** (408′) D: **830′** (468′)

		ALS out
A	RVR 1200m	RVR 1500m
B	RVR 1400m	
C		CMV 2100m
D	RVR 1500m	CMV 2200m

PANS OPS 4

CHANGES: MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (12-7) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
RNAV (GPS) Z Rwy 25C

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

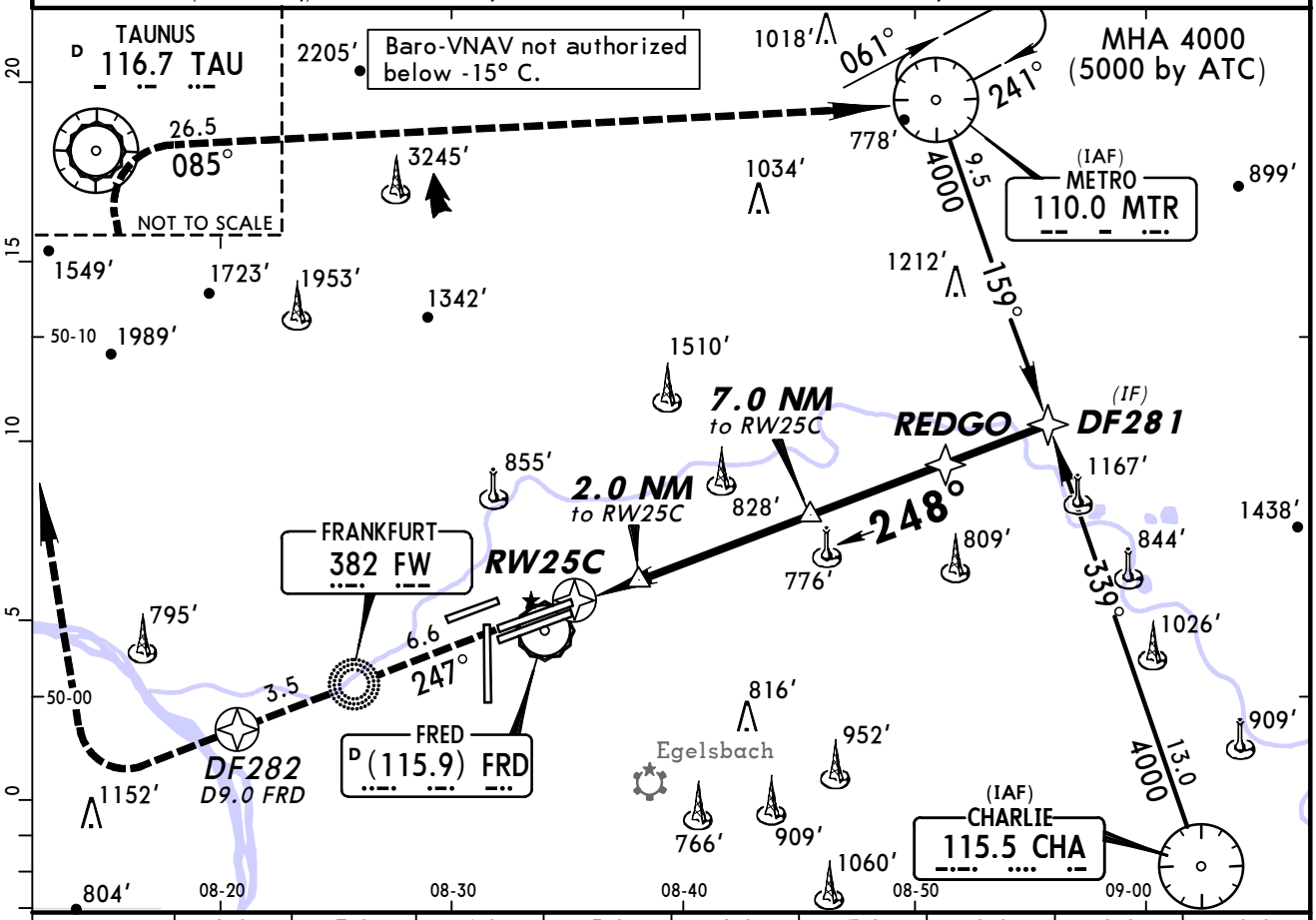
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	248°	REDGO 4000′ (3636′)	760′ (396′)	Apt Elev 364′ / RWY 364′

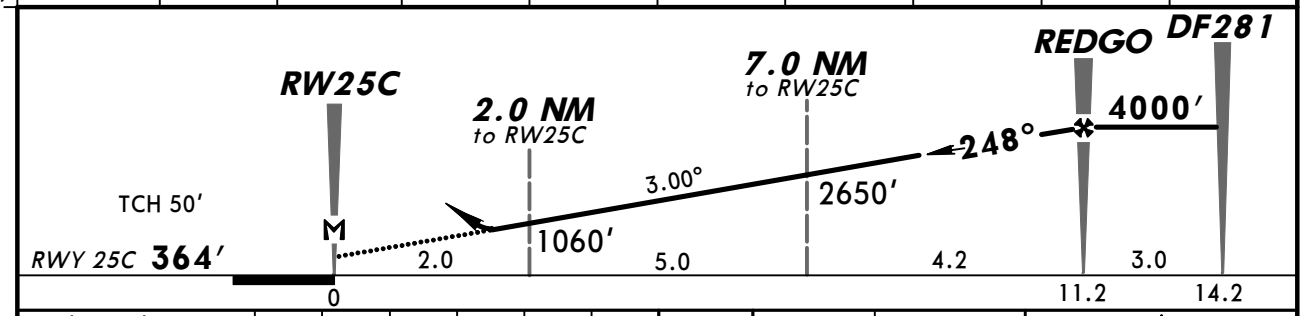
MISSED APCH RNAV: Climb on track 247° via FW Lctr to DF282 or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT on 085° to MTR VOR and maintain 5000′. **NON-RNAV**: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR to MTR VOR and maintain 5000′.

4300′
MSA ARP

Alt Set: hPa (IN on req)	Rwy Elev: 13 hPa	Trans level: By ATC	Trans alt: 5000′



NM to RW25C	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	1060′	1370′	1690′	2010′	2330′	2650′	2970′	3280′	3600′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW25C						

ALSF-II
REIL
PAPI

DF282
D9.0 FRD
5000′
whichever later
via
FW
382

Standard STRAIGHT-IN LANDING RWY 25C

	LNAV/VNAV		LNAV	
	DA(H) 760′ (396′)		DA(H) AB: 790′ (426′) CD: 840′ (476′)	
		ALS out		ALS out
A	RVR 1100m	RVR 1500m	RVR 1300m	RVR 1500m
B				
C		RVR 1800m	RVR 1500m	CMV 2200m
D				

PANS OPS 4

CHANGES: Tower frequency. MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (12-8) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
RNAV (GPS) Y Rwy 25C

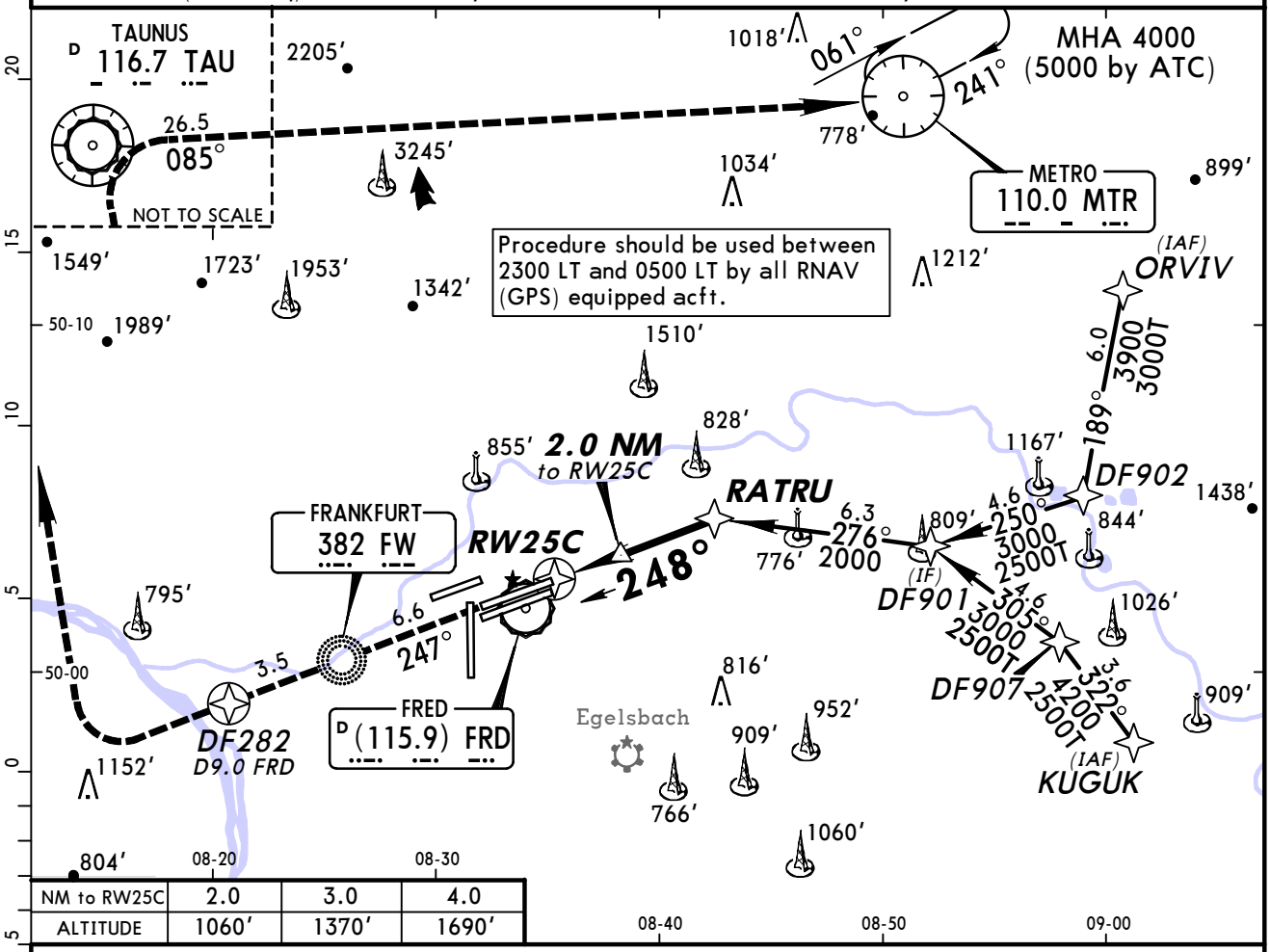
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

RNAV	Final Apch Crs	Minimum Alt	LNAV DA(H)	Apt Elev / RWY
	248°	RATRU 2000′ (1636′)	Refer to Minimums	364′ / RWY 364′

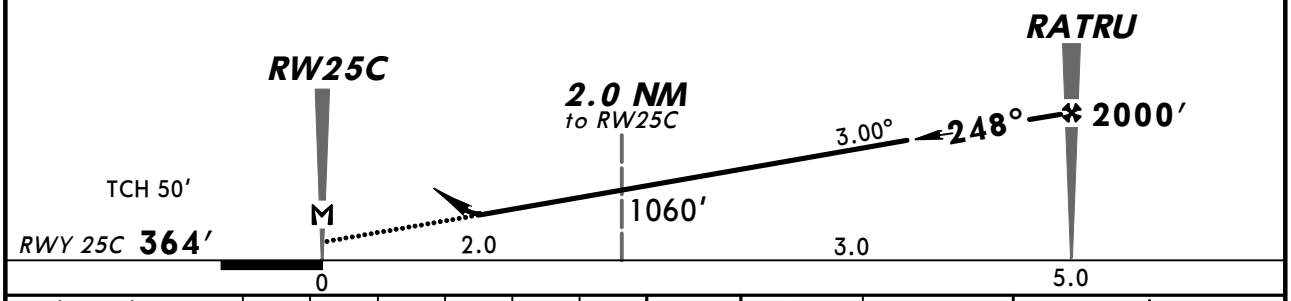
MISSED APCH RNAV: Climb on track 247° via FW Lctr to DF282 or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT on 085° to MTR VOR and maintain 5000′. **NON-RNAV**: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR to MTR VOR and maintain 5000′.

4300′ MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 13 hPa | Trans level: By ATC | Trans alt: 5000′



NM to RW25C	2.0	3.0	4.0
ALTITUDE	1060′	1370′	1690′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW25C						

ALSF-II
REIL
PAPI

DF282 D9.0 FRD — 5000′ whichever later — via FW 382

Standard STRAIGHT-IN LANDING RWY **25C**

LNAV

DA(H) AB: **790′** (426′)
CD: **840′** (476′)

PANS OPS 4

		ALS out
A	RVR 1300m	RVR 1500m
B		
C	RVR 1500m	CMV 2200m
D		

CHANGES: Tower frequency. MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (13-1) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
VOR Rwy 07C

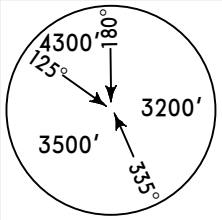
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

BRIEFING STRIP

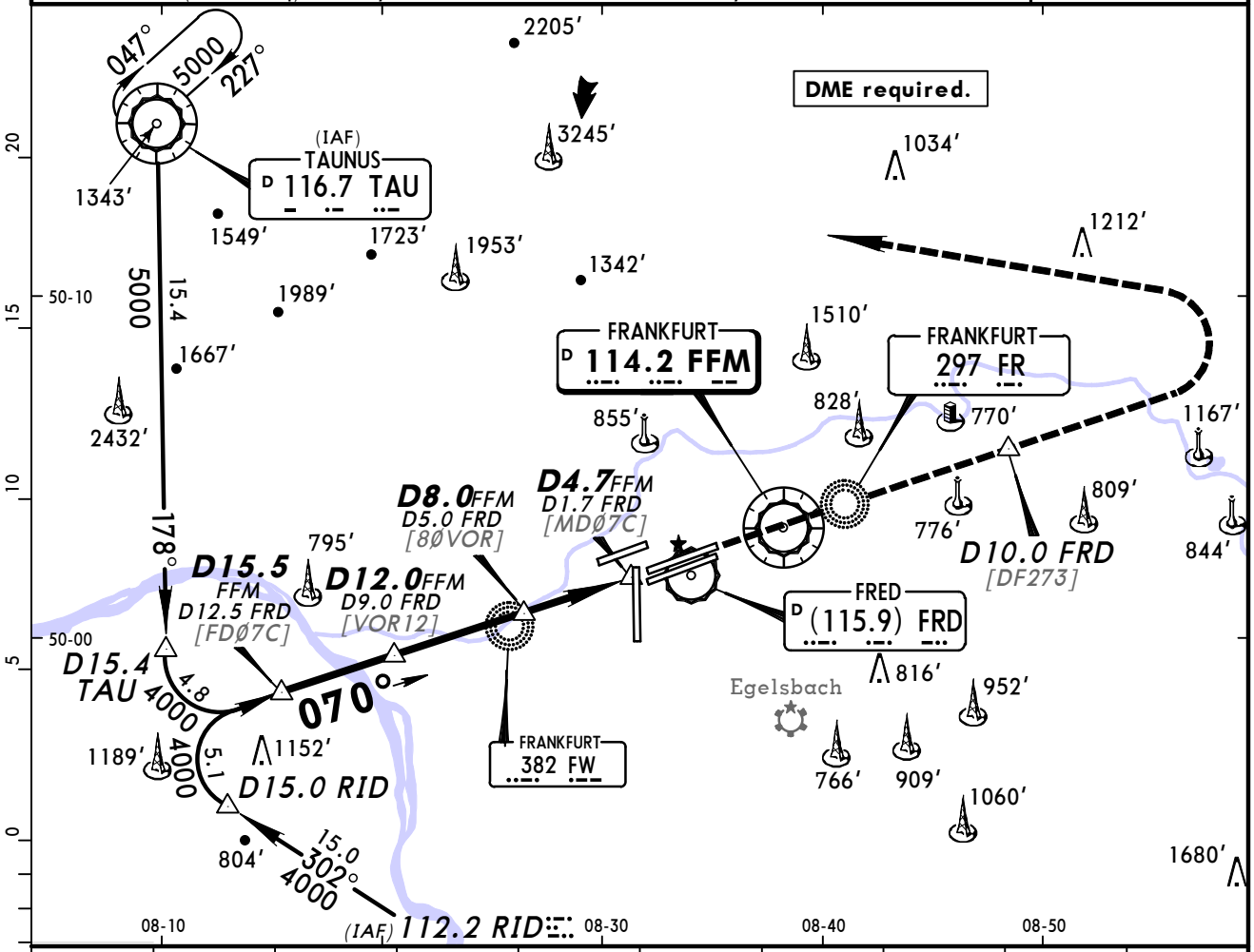
VOR FFM	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
114.2	070°	D15.5 FFM 4000′ (3671′)	910′ (581′)	Apt Elev 364′ RWY 329′

MISSED APCH: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

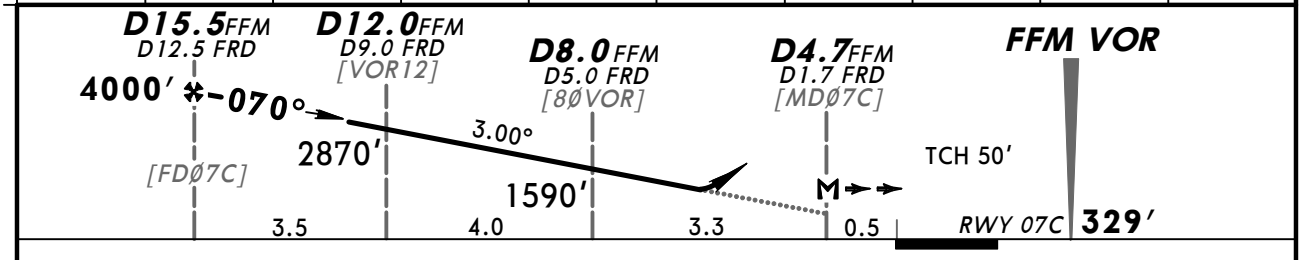
Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



MSA FFM VOR



FFM DME	14.0	13.0	12.0	11.0	10.0	9.0	8.0	7.0	6.0
ALTITUDE	3500′	3190′	2870′	2550′	2230′	1910′	1590′	1280′	960′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D4.7 FFM/D1.7 FRD							

ALSF-II
REIL
PAPI

D10.0 FRD ↑ whichever is later ↑ 5000′ via FR 297

Standard STRAIGHT-IN LANDING RWY **07C**

DA(H) **910′** (581′)

ALS out

PANS OPS 4

A	RVR 1500m	
B		
C	RVR 2000m	CMV 2400m
D		

CHANGES: Tower frequency.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (13-2) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
VOR Rwy 07R

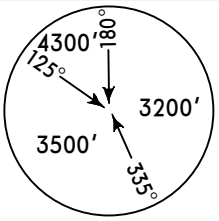
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

BRIEFING STRIP

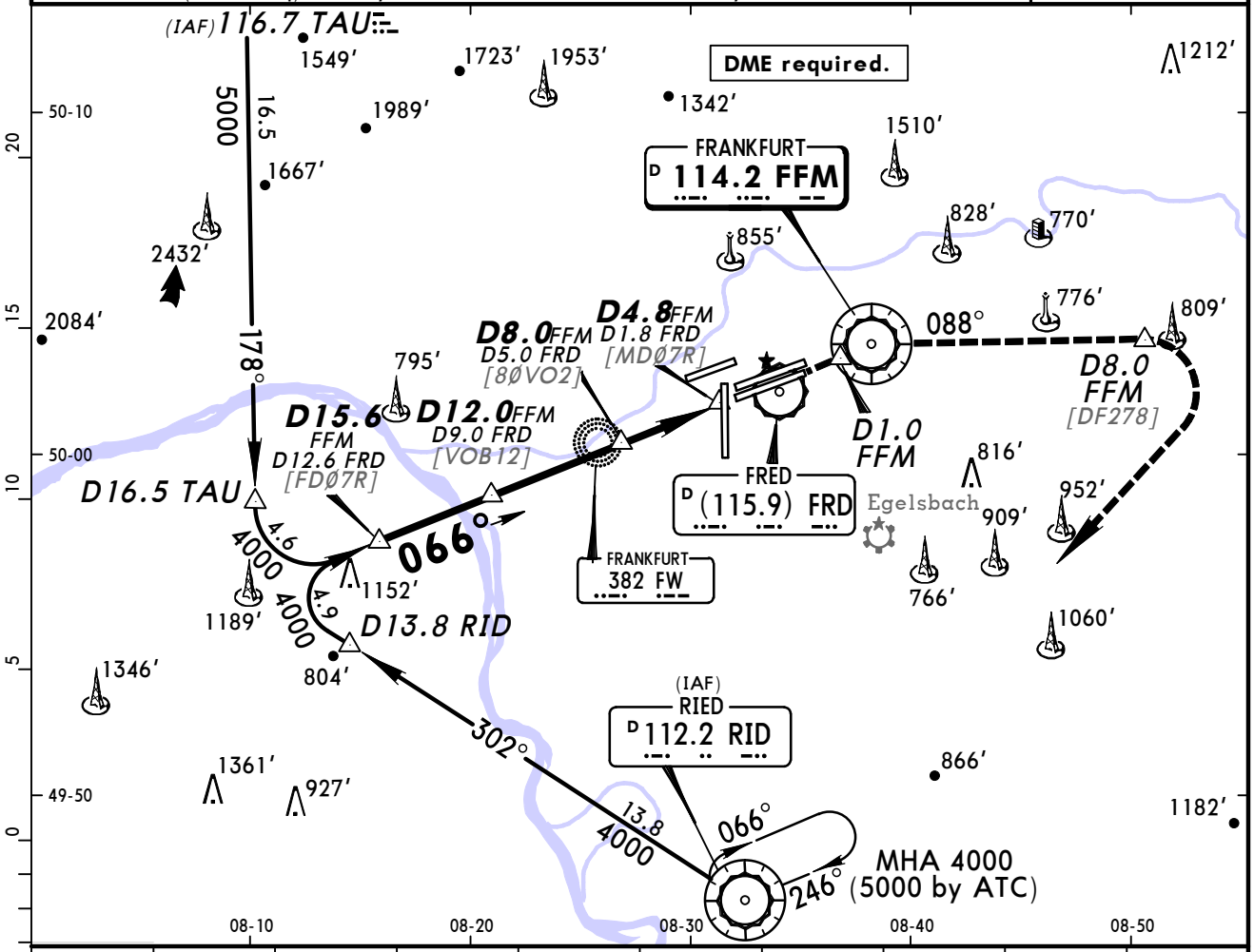
VOR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
FFM 114.2	066°	D15.6 FFM 4000′ (3672′)	Refer to Minimums	Apt Elev 364′ RWY 328′

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 inbound FFM, then turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′.

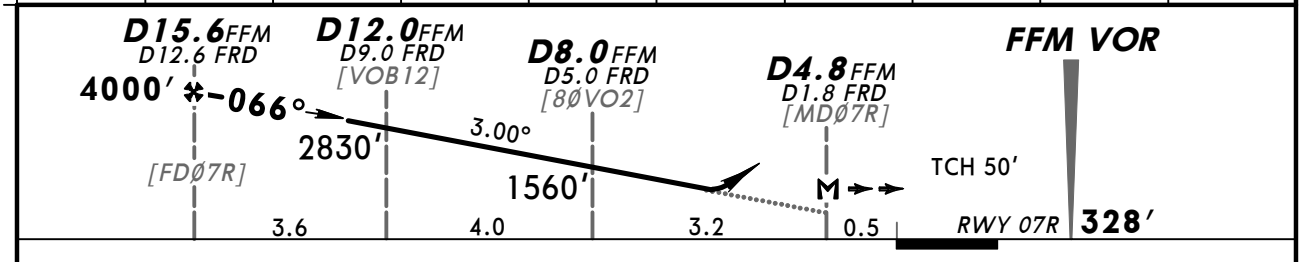
Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



MSA FFM VOR



FFM DME	14.0	13.0	12.0	11.0	10.0	9.0	8.0	7.0	6.0
ALTITUDE	3470′	3150′	2830′	2520′	2200′	1880′	1560′	1240′	920′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D4.8 FFM/D1.8 FRD							

ALSF-II
REIL
PAPI

D1.0 inbound FFM

Standard STRAIGHT-IN LANDING RWY **07R**

DA(H) AB: **800′** (472′) CD: **810′** (482′)

PANS OPS 4

		ALS out
A	RVR 1500m	
B		
C	RVR 1500m	CMV 2300m
D		

CHANGES: MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (13-3) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
VOR Rwy 25L

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

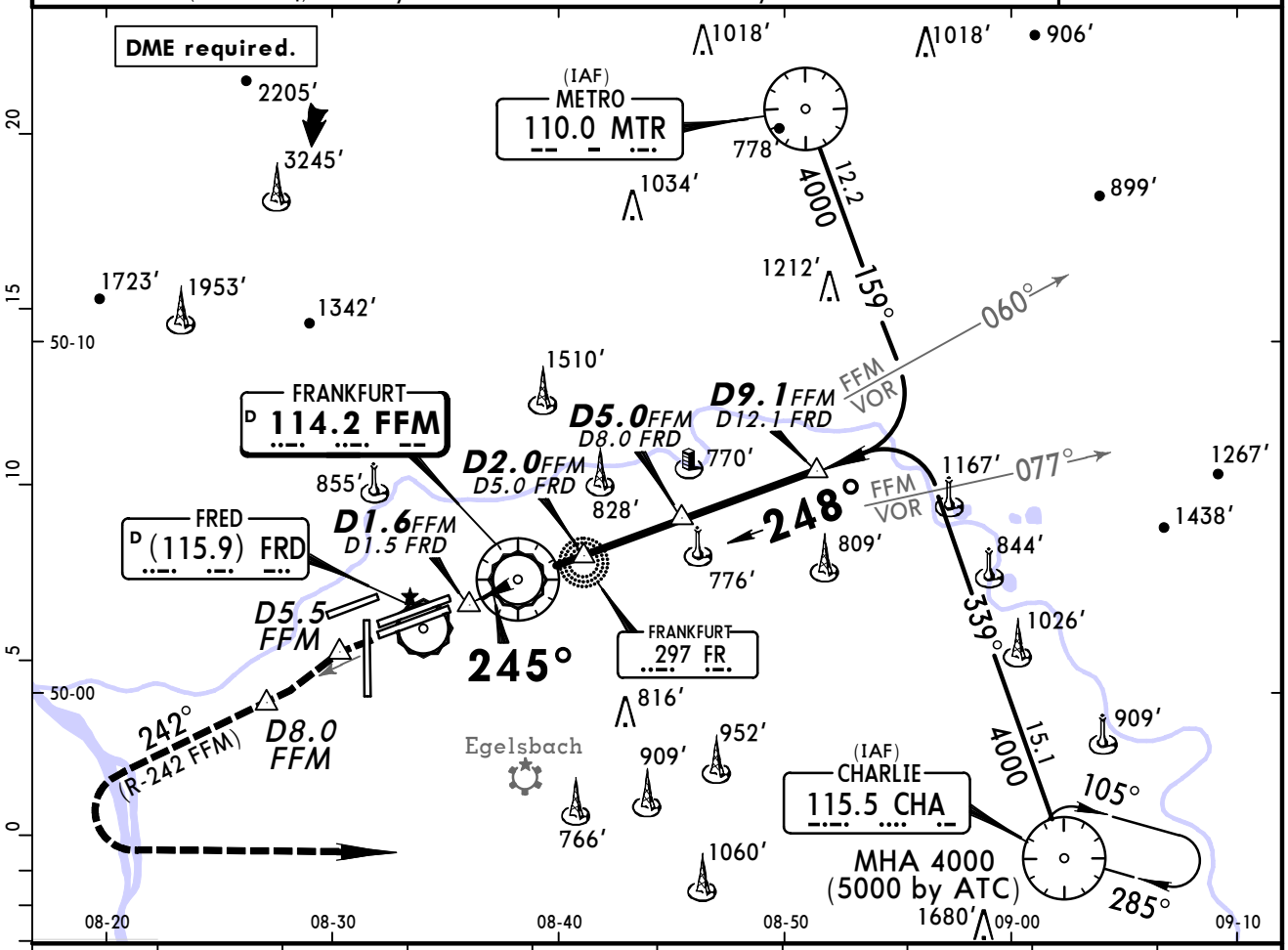
BRIEFING STRIP ™

VOR FFM 114.2	Final Apch Crs See Below	Minimum Alt D9.1 FFM 4000′ (3638′)	DA(H) 860′ (498′)	Apt Elev 364′ RWY 362′

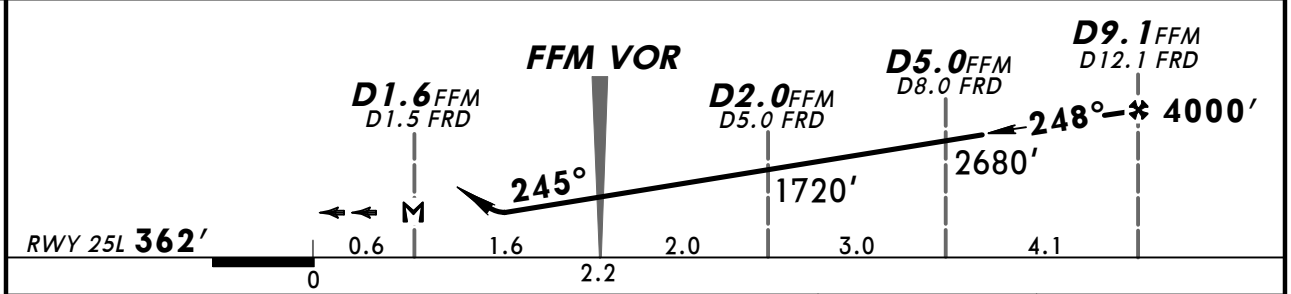
MISSED APCH: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-242 FFM. Then on R-242 FFM to D8.0 FFM or 5000′, whichever is later, then turn LEFT to CHA VOR climb and maintain 5000′.

MSA FFM VOR: 4300′ (180°–125°), 3200′, 3500′, (335°–125°)

Alt Set: hPa (IN on req) | Rwy Elev: 13 hPa | Trans level: By ATC | Trans alt: 5000′



FFM DME	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1090′	1400′	1720′	2040′	2360′	2680′	3000′	3310′	3630′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.6 after FFM VOR/D1.5 FRD							

ALSF-II, REIL, PAPI

D5.5 FFM

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **25L**

DA(H) **860′** (498′)

	ALS out
A	RVR 1500m
B	
C	RVR 1500m
D	CMV 2300m

CHANGES: MHA.

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EDDF/FRA FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

7 OCT 11 (13-4) Eff 20 Oct

VOR Rwy 25C

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

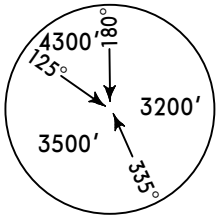
BRIEFING STRIP™

VOR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
FFM 114.2	See Below	D9.2 FFM 4000′ (3636′)	880′ (516′)	Apt Elev 364′ RWY 364′

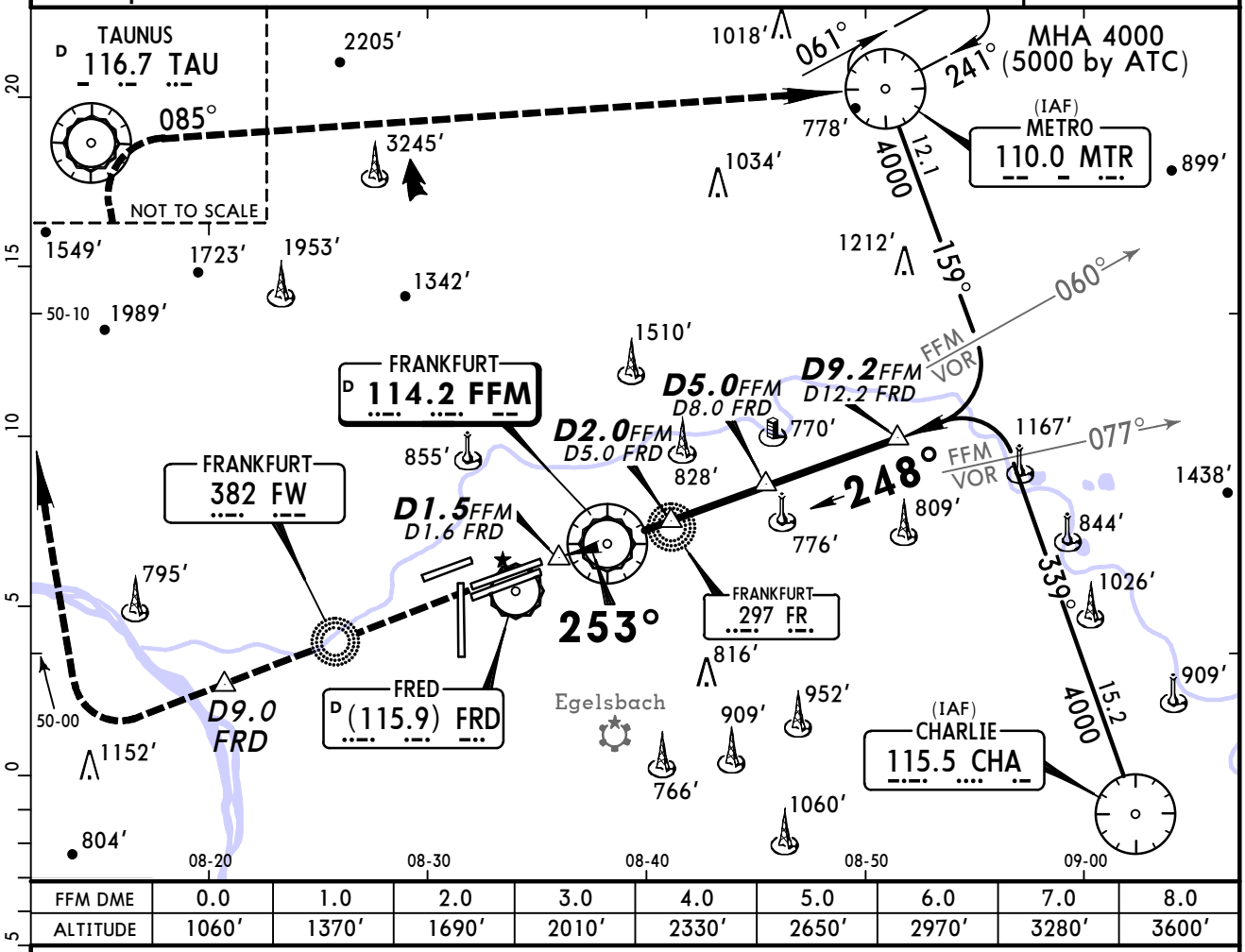
MISSED APCH: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR to MTR VOR and maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′

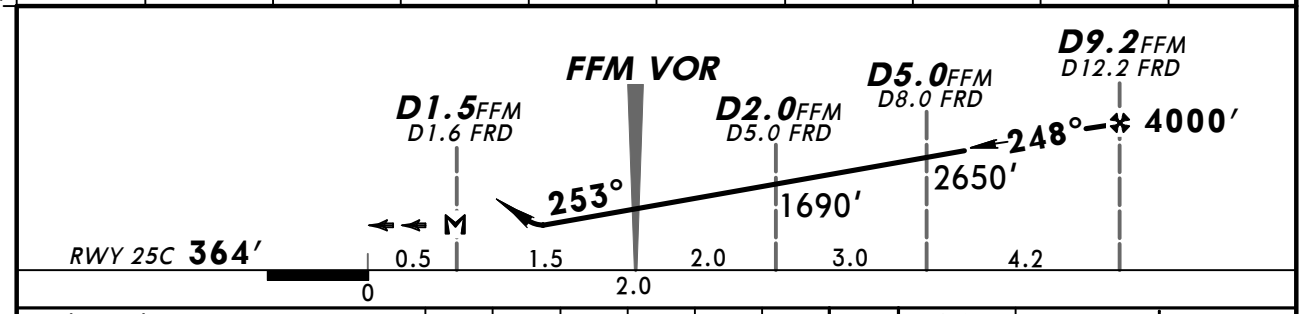
DME required.



MSA FFM VOR



FFM DME	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1060′	1370′	1690′	2010′	2330′	2650′	2970′	3280′	3600′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.5 after FFM VOR/D1.6 FRD							

ALSF-II
REIL
PAPI

D9.0 FRD whichever later 5000′

Standard STRAIGHT-IN LANDING RWY **25C**

DA(H) **880′** (516′)

		ALS out
A	RVR 1500m	
B		
C	RVR 1600m	CMV 2400m
D		

PANS OPS 4

CHANGES: Tower frequency. MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (16-1) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY

NDB Rwy 07C

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

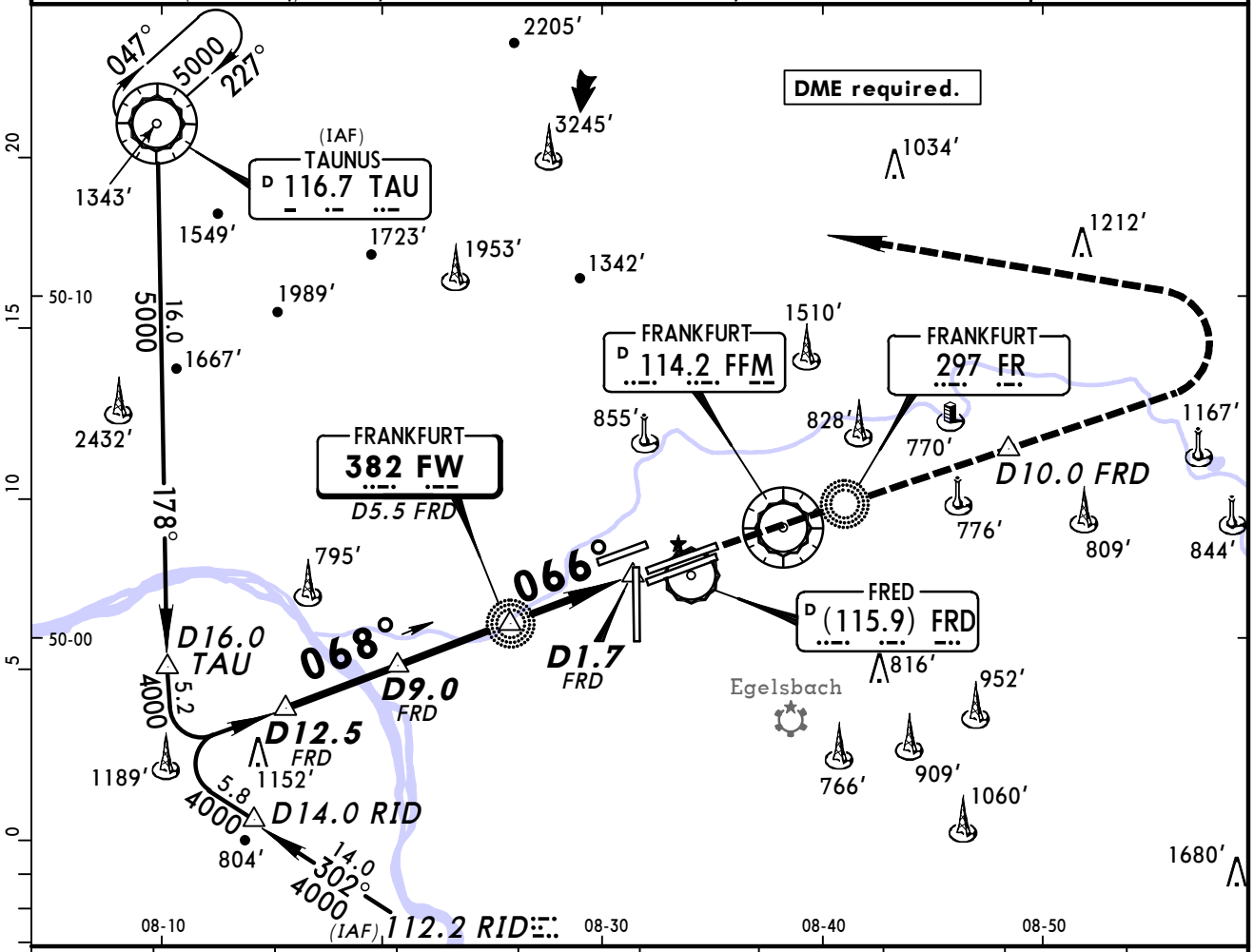
Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
FW 382	See Below	D12.5 FRD 4000′ (3671′)	820′ (491′)	Apt Elev 364′ RWY 329′

MISSED APCH: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

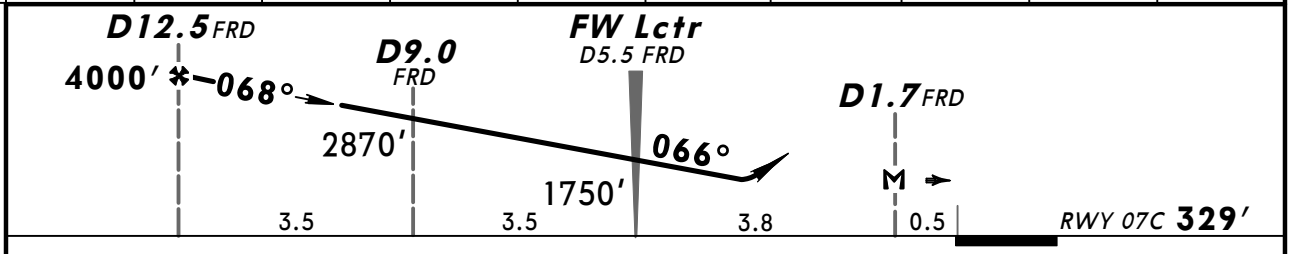
Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′

MSA FFM VOR: 4300′ (125°–180°), 3200′ (180°–335°), 3500′ (335°–125°)

BRIEFING STRIP



FRD DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	3500′	3190′	2870′	2550′	2230′	1910′	1590′	1280′	960′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.7 FRD						

ALSF-II
REIL
PAPI

D10.0 FRD whichever is later 5000′ via FR 297

Standard STRAIGHT-IN LANDING RWY **07C**

DA(H) **820′** (491′)

		ALS out
A	RVR 1500m	
B		
C	RVR 1500m	CMV 2300m
D		

PANS OPS 4

CHANGES: Tower frequency.

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EDDF/FRA FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

7 OCT 11 (16-2) Eff 20 Oct

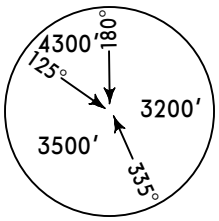
NDB Rwy 07R

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

BRIEFING STRIP ™

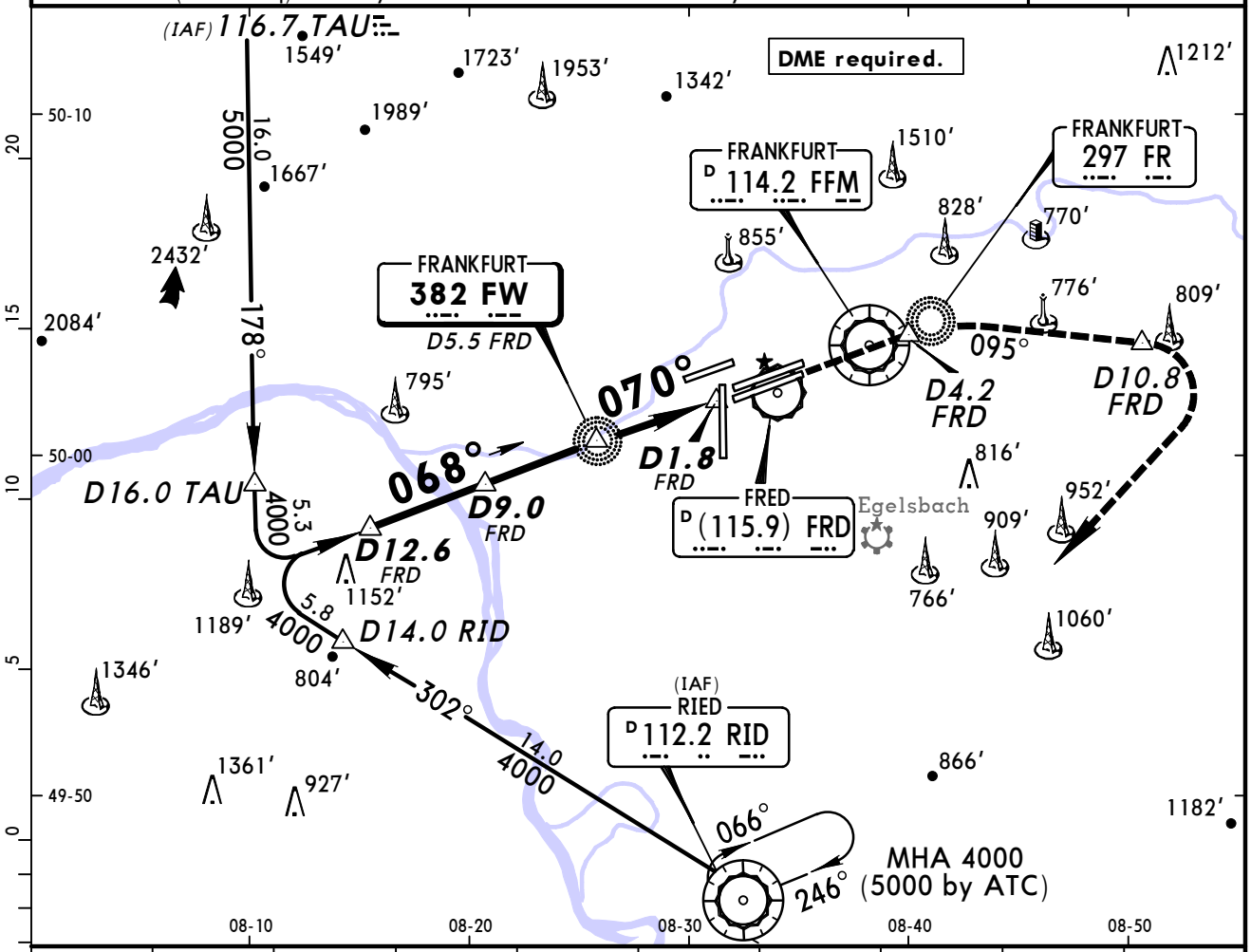
Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
FW 382	See Below	D12.6 FRD 4000′ (3672′)	810′ (482′)	Apt Elev 364′ RWY 328′

MISSED APCH: Climb inbound FR Lctr to D4.2 FRD, then turn RIGHT on 095° outbound FR Lctr to D10.8 FRD or 5000′, whichever is later, then turn RIGHT to RID VOR, climb and maintain 5000′.

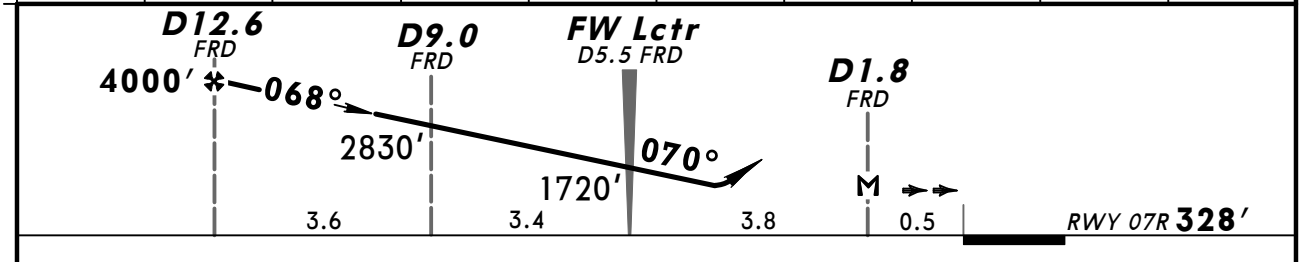


MSA FFM VOR

Alt Set: hPa(IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



FRD DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	3470′	3150′	2830′	2520′	2200′	1880′	1560′	1240′	920′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.8 FRD						

ALSF-II
REIL
PAPI

D4.2 FRD

Standard STRAIGHT-IN LANDING RWY **07R**

DA(H) **810′** (482′)

	ALS out
A	RVR 1500m
B	
C	RVR 1500m
D	CMV 2300m

PANS OPS 4

CHANGES: MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (16-3) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY

NDB Rwy 25L

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

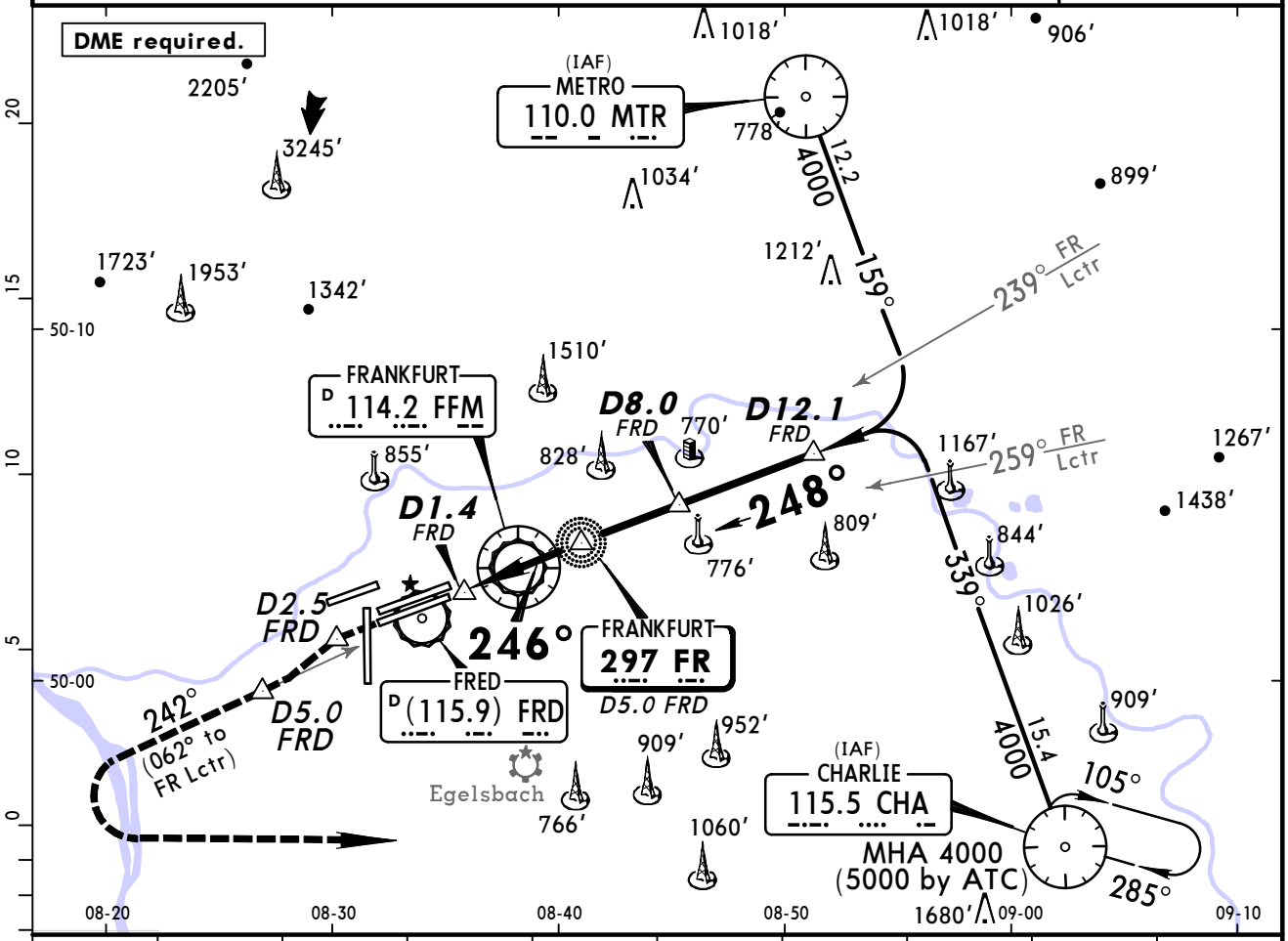
BRIEFING STRIP

Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
FR 297	See Below	D12.1 FRD 4000′ (3638′)	910′ (548′)	Apt Elev 364′ RWY 362′

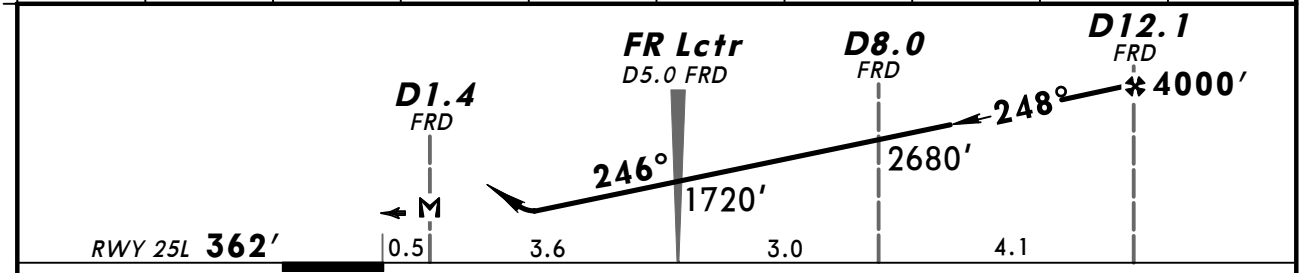
MISSED APCH: Climb STRAIGHT AHEAD to D2.5 FRD, then turn LEFT on track 242° outbound FR Lctr to D5.0 FRD or 5000′, whichever is later, then turn LEFT to CHA VOR and maintain 5000′.

MSA FFM VOR: 4300′ (180°–125°), 3200′ (125°–335°), 3500′ (335°–180°)

Alt Set: hPa(IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′



FRD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
ALTITUDE	1090′	1400′	1720′	2040′	2360′	2680′	3000′	3310′	3630′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.4 FRD						

ALSF-II, REIL, PAPI

D2.5 FRD

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **25L**

DA(H) **910′** (548′)

ALS out

A	RVR 1500m	
B		
C	RVR 1800m	CMV 2400m
D		

CHANGES: MHA.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (16-4) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY

NDB Rwy 25C

*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

BRIEFING STRIP TM

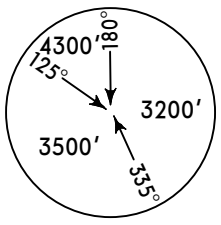
Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
FR 297	See Below	D12.3 FRD 4000′ (3636′)	910′ (546′)	Apt Elev 364′ RWY 364′

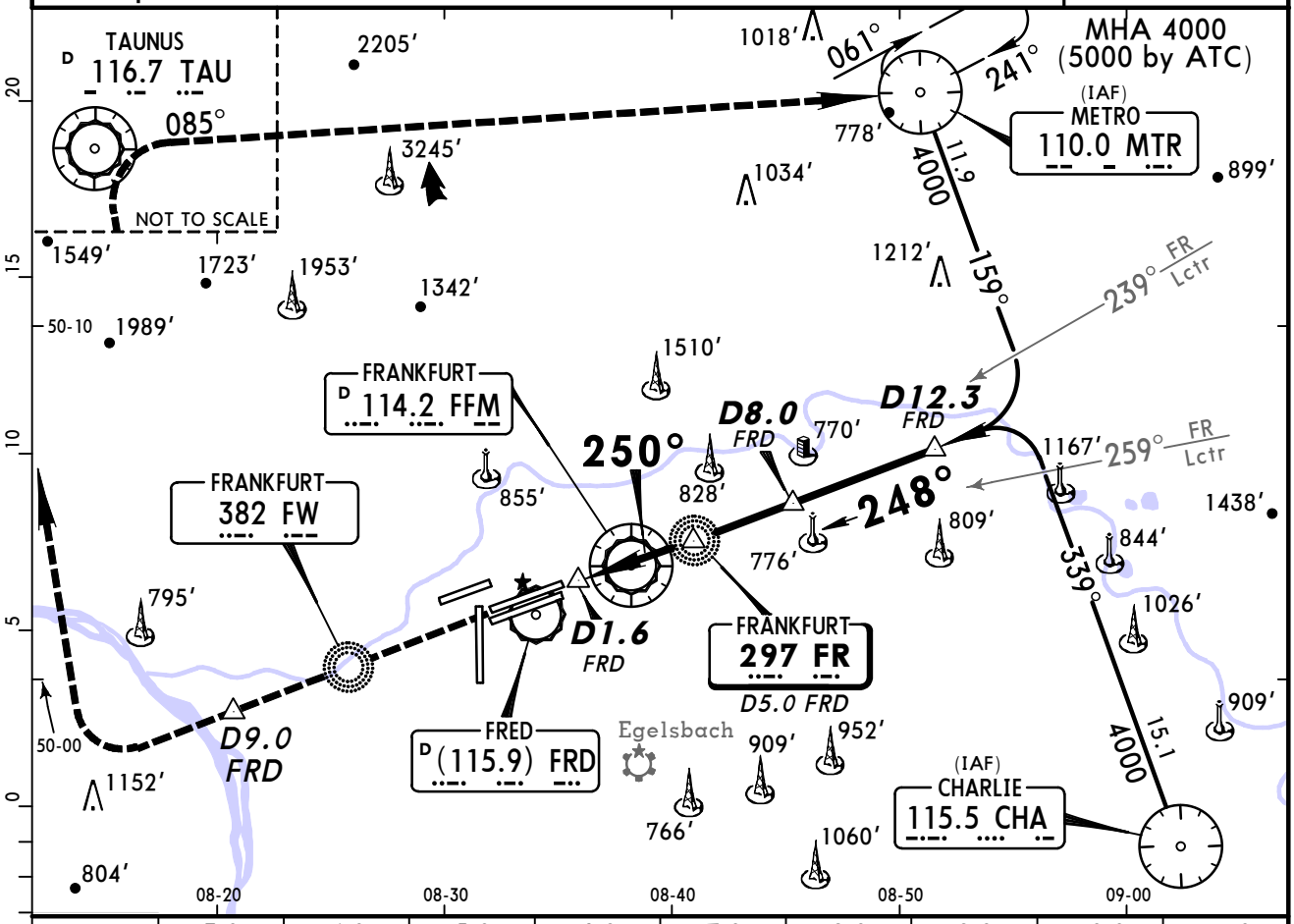
MISSED APCH: Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR to MTR VOR and maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′

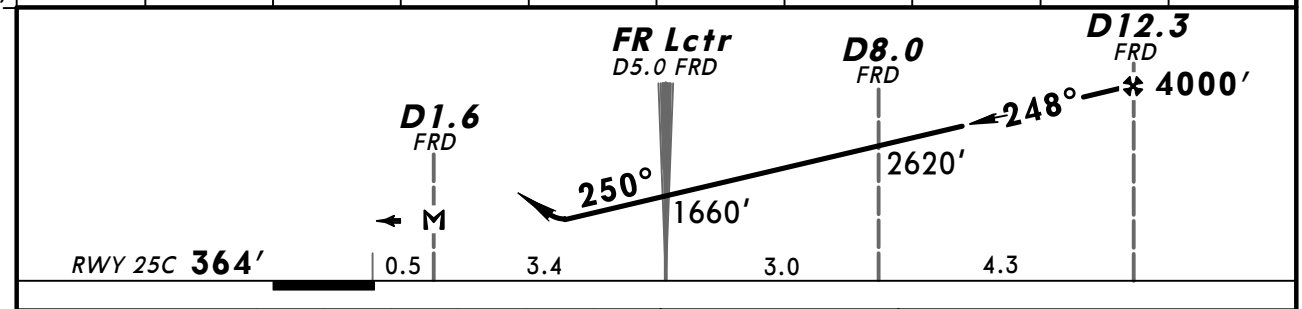
DME required.

MSA FFM VOR





FRD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
ALTITUDE	1020′	1340′	1660′	1980′	2300′	2620′	2930′	3250′	3570′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.6 FRD						

ALSF-II
REIL
PAPI

D9.0 FRD whichever later 5000′

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **25C**

DA(H) **910′** (546′)

ALS out

A	RVR 1500m	
B		
C	RVR 1800m	CMV 2400m
D		

CHANGES: Tower frequency. MHA.

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General Information

Location: Munster/Osnabruck Deu
IATA Code: FMO
Lat/Long: N52° 08.1' E007° 41.1'
Elevation: 160 ft

Airport Use: Public
Magnetic Variation: 1.2°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0621 Z
Sunset: 1704 Z,

Runway Information

Runway: 07
Length x Width: 7119 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 156 ft
Lighting: Edge, ALS, Centerline

Runway: 25
Length x Width: 7119 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 159 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 656 ft

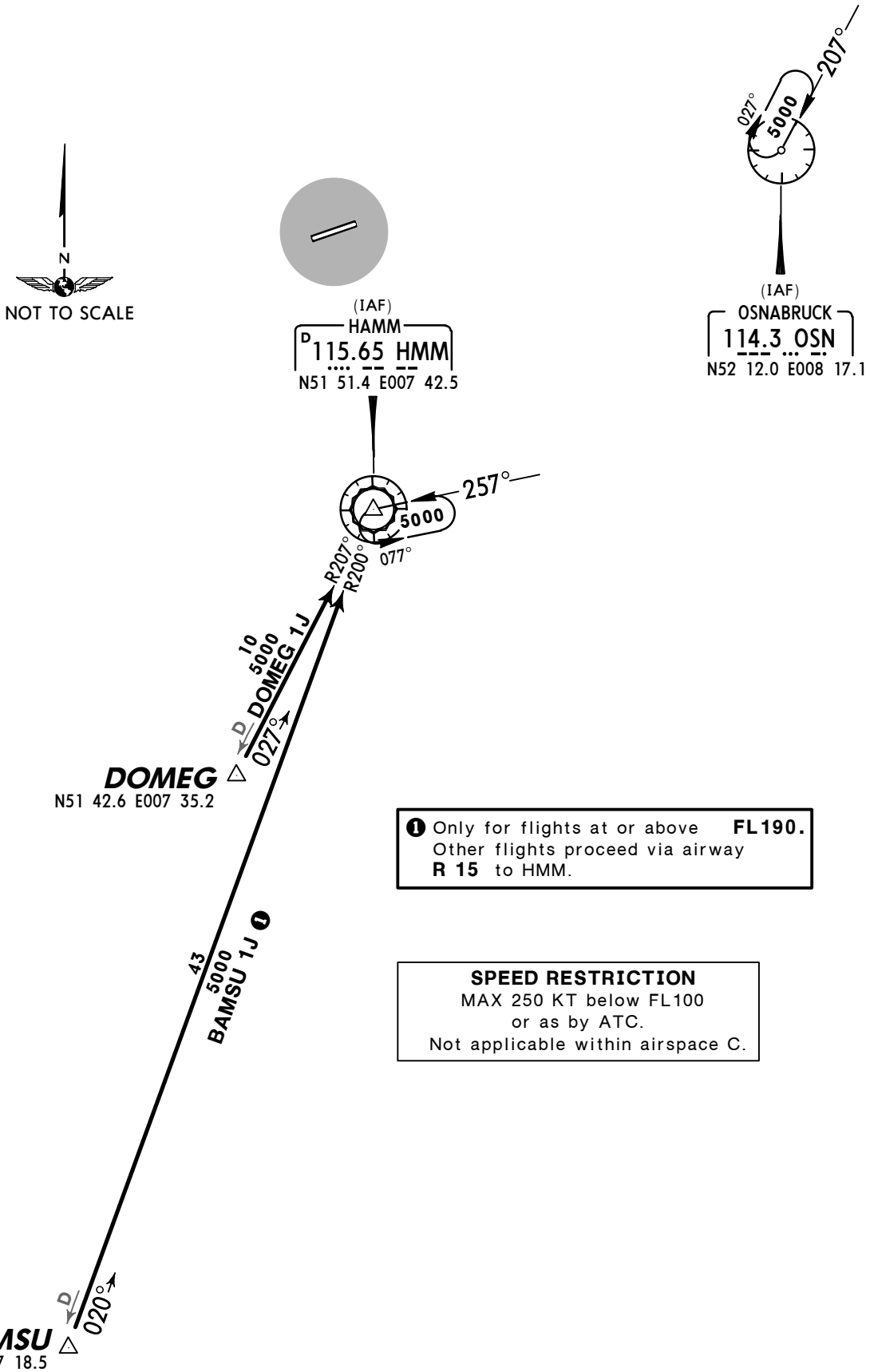
Communication Information

ATIS 127.175
Munster Tower 129.8 At or below 4000 ft Out to 25 mi.
Munster Tower 31.492 Military
Munster Ground Control 121.875
Munster Ground Control 31.492 Military

*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
127.17	160′	Trans level: By ATC Trans alt: 5000′

BAMSU ONE JULIETT (BAMSU 1J) *[BAMS1J]* ❶
DOMEG ONE JULIETT (DOMEG 1J) *[DOME1J]*
RWYS 07, 25 ARRIVALS

2600′
MSA
ARP



❶ Only for flights at or above **FL190.** Other flights proceed via airway **R 15** to HMM.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

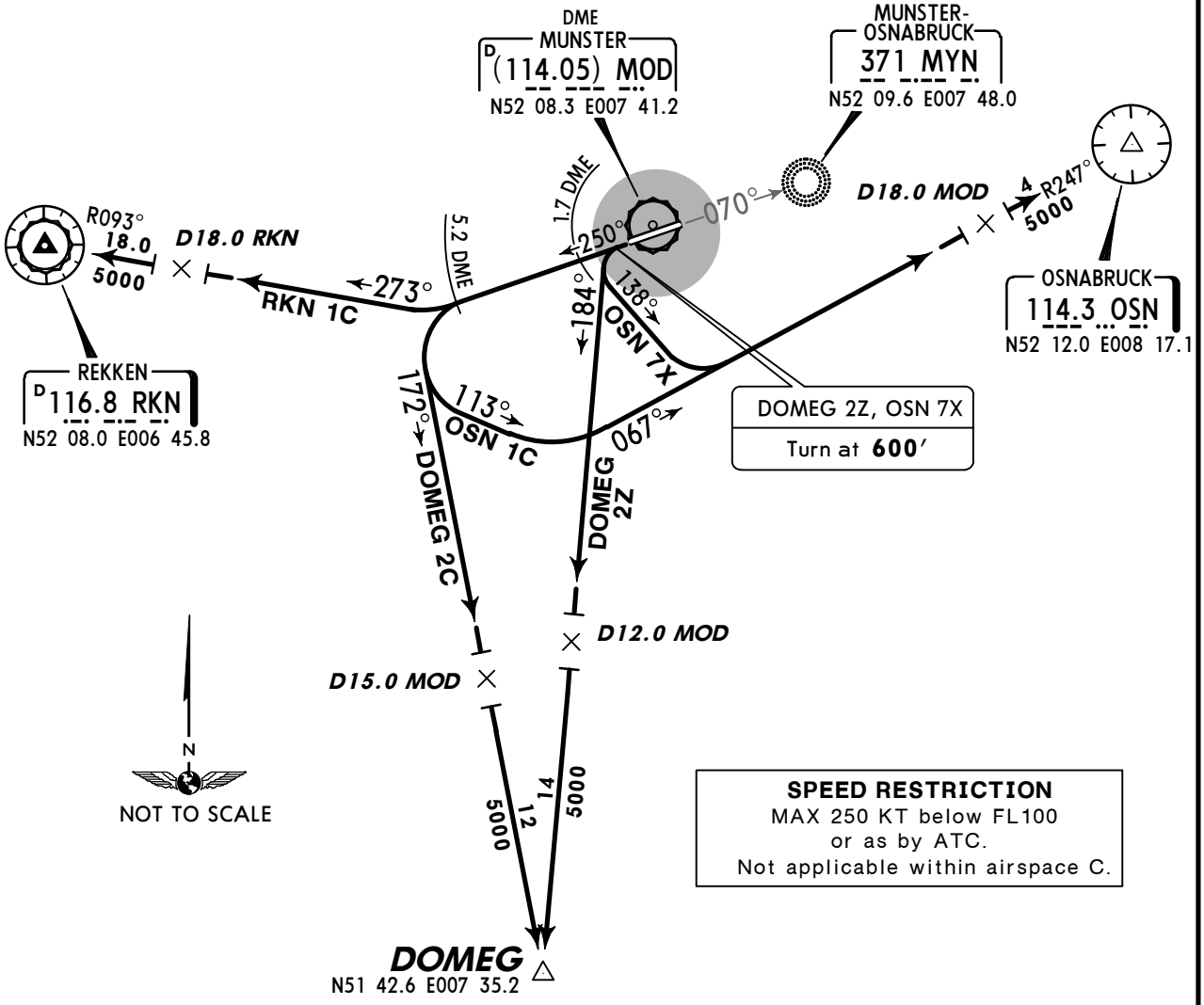
CHANGES: MSA.

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LANGEN Radar	Apt Elev	
129.3	160′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

2600′
MSA
ARP

DOMEG TWO CHARLIE (DOMEG 2C)
DOMEG TWO ZULU (DOMEG 2Z)
OSNABRUCK ONE CHARLIE (OSN 1C)
OSNABRUCK SEVEN X-RAY (OSN 7X)
REKKEN ONE CHARLIE (RKN 1C)
RWY 25 DEPARTURES



Initial climb clearance **5000′**

SID	ROUTING
DOMEG 2C ❶	Climb on 250° bearing from MYN to MOD 5.2 DME, turn LEFT, 172° track to DOMEG.
DOMEG 2Z ❶❷	Climb on 250° bearing from MYN to 600′, turn LEFT (complete turn within MOD 1.7 DME), 184° track to DOMEG.
OSN 1C	Climb on 250° bearing from MYN to MOD 5.2 DME, turn LEFT, 113° track, intercept OSN R-247 inbound to OSN.
OSN 7X ❸	Climb on 250° bearing from MYN to 600′, turn LEFT (complete turn within MOD 1.7 DME), 138° track, intercept OSN R-247 inbound to OSN.
RKN 1C	Climb on 250° bearing from MYN to MOD 5.2 DME, turn RIGHT, intercept RKN R-093 inbound to RKN.

❶ After passing 2000′ BRNAV equipment necessary.
❷ For JET aircraft up to 20t MTOW & PROP/TURBOPROP aircraft. If unable to comply file SID DOMEG 2C.
❸ For PROP/TURBOPROP aircraft only. If unable to comply file SID OSN 1C.

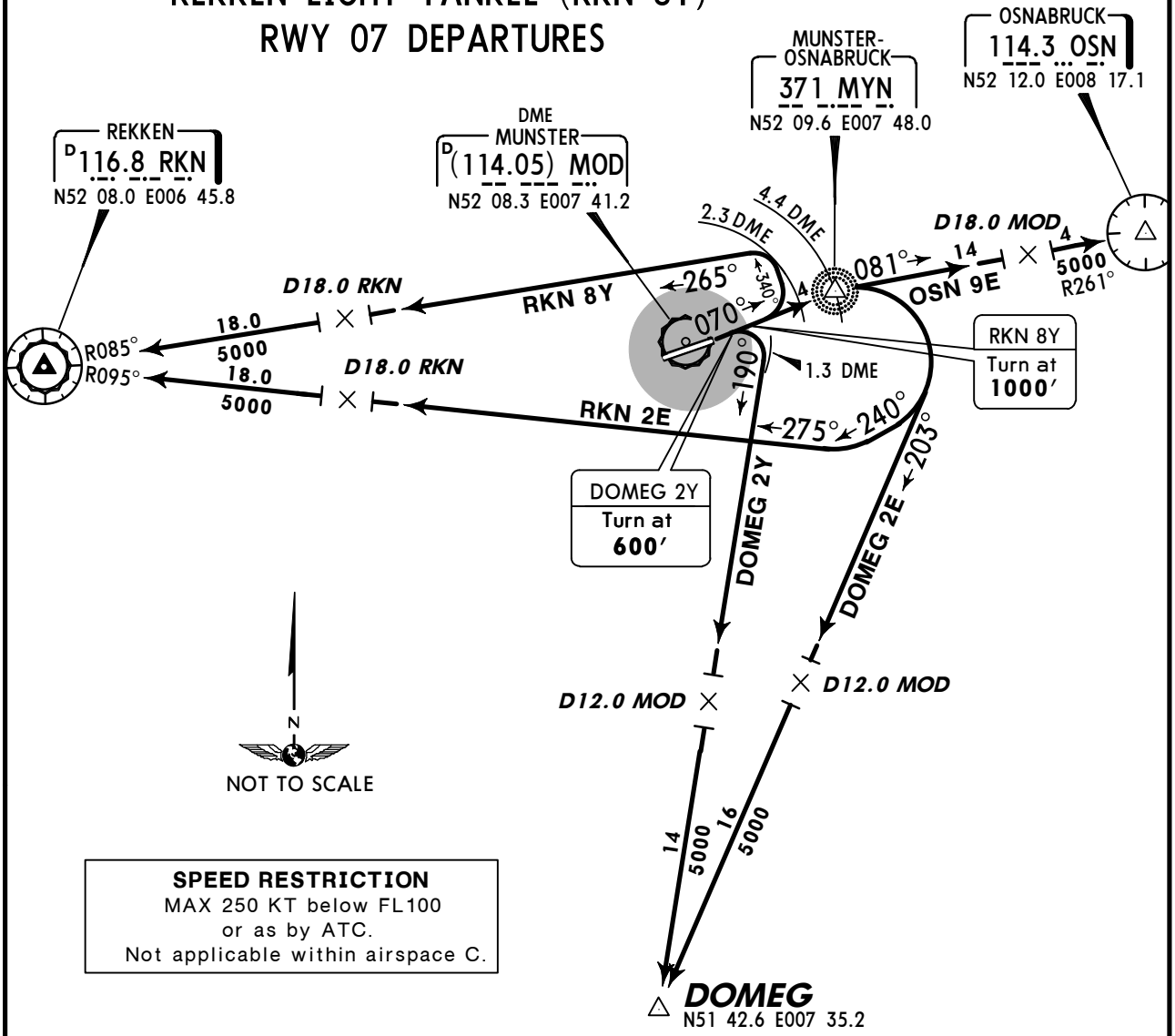
CHANGES: None.

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LANGEN Radar	Apt Elev	
129.3	160′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

2600′
MSA
ARP

DOMEG TWO ECHO (DOMEG 2E)
DOMEG TWO YANKEE (DOMEG 2Y)
OSNABRUCK NINE ECHO (OSN 9E)
REKKEN TWO ECHO (RKN 2E)
REKKEN EIGHT YANKEE (RKN 8Y)
RWY 07 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

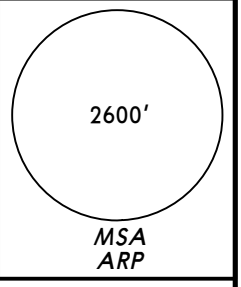
SID	ROUTING
DOMEG 2E ❶	To MYN (MOD 4.4 DME), turn RIGHT, 203° track to DOMEG.
DOMEG 2Y ❶❷	Climb on 070° bearing towards MYN, at 600′, turn RIGHT (complete turn within MOD 1.3 DME), 190° track to DOMEG.
OSN 9E	To MYN (MOD 4.4 DME), turn RIGHT, intercept OSN R-261 inbound to OSN.
RKN 2E	To MYN (MOD 4.4 DME), turn RIGHT, 240° track, intercept RKN R-095 inbound to RKN.
RKN 8Y ❸	Climb on 070° bearing towards MYN, at 1000′ turn LEFT (complete turn within MOD 2.3 DME), 340° track, intercept RKN R-085 inbound to RKN.

❶ After passing 2000′ BRNAV equipment necessary.
❷ For PROP/TURBOPROP aircraft up to 5.7t MTOW. If unable to comply file SID DOMEG 2E.
❸ For JET aircraft up to 20t MTOW & PROP/TURBOPROP aircraft. If unable to comply file SID RKN 2E.

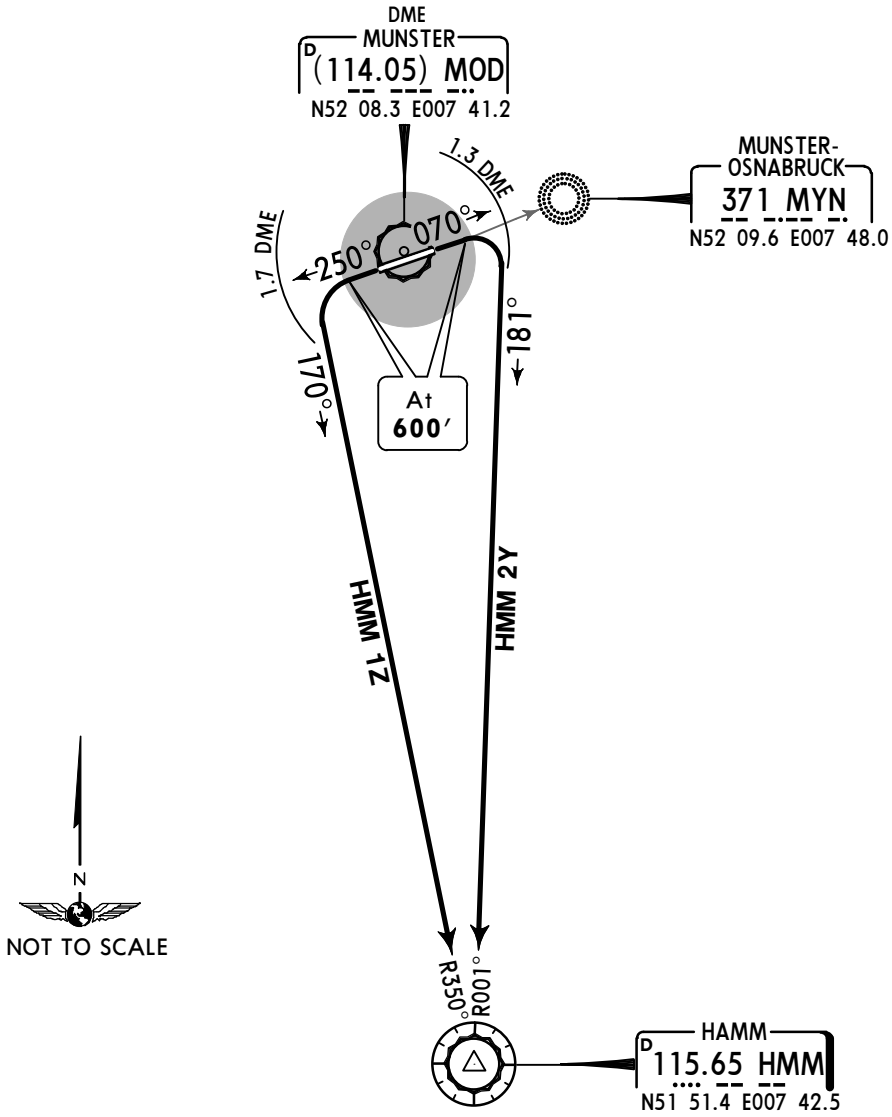
CHANGES: SID RKN 7Y renumbered 8Y & revised.

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LANGEN Radar	*Apt Elev*	
129.3	160′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** EXPECT close-in obstacles.



HAMM TWO YANKEE (HMM 2Y)
HAMM ONE ZULU (HMM 1Z)
RWYS 07, 25 DEPARTURES
FOR NON RNAV FLIGHTS ONLY
NO RNAV OVERLAY EXISTING



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
HMM 2Y ❶	**07**	Climb on 070° bearing towards MYN, at **600′** turn RIGHT (complete turn within MOD 1.3 DME), intercept HMM R-001 inbound to HMM.
HMM 1Z ❷	**25**	Climb on 250° bearing from MYN to **600′**, turn LEFT (complete turn within MOD 1.7 DME), intercept HMM R-350 inbound to HMM.

❶ For PROP/TURBOPROP aircraft up to 5.7t MTOW.
❷ For JET aircraft up to 20t MTOW & PROP/TURBOPROP aircraft.

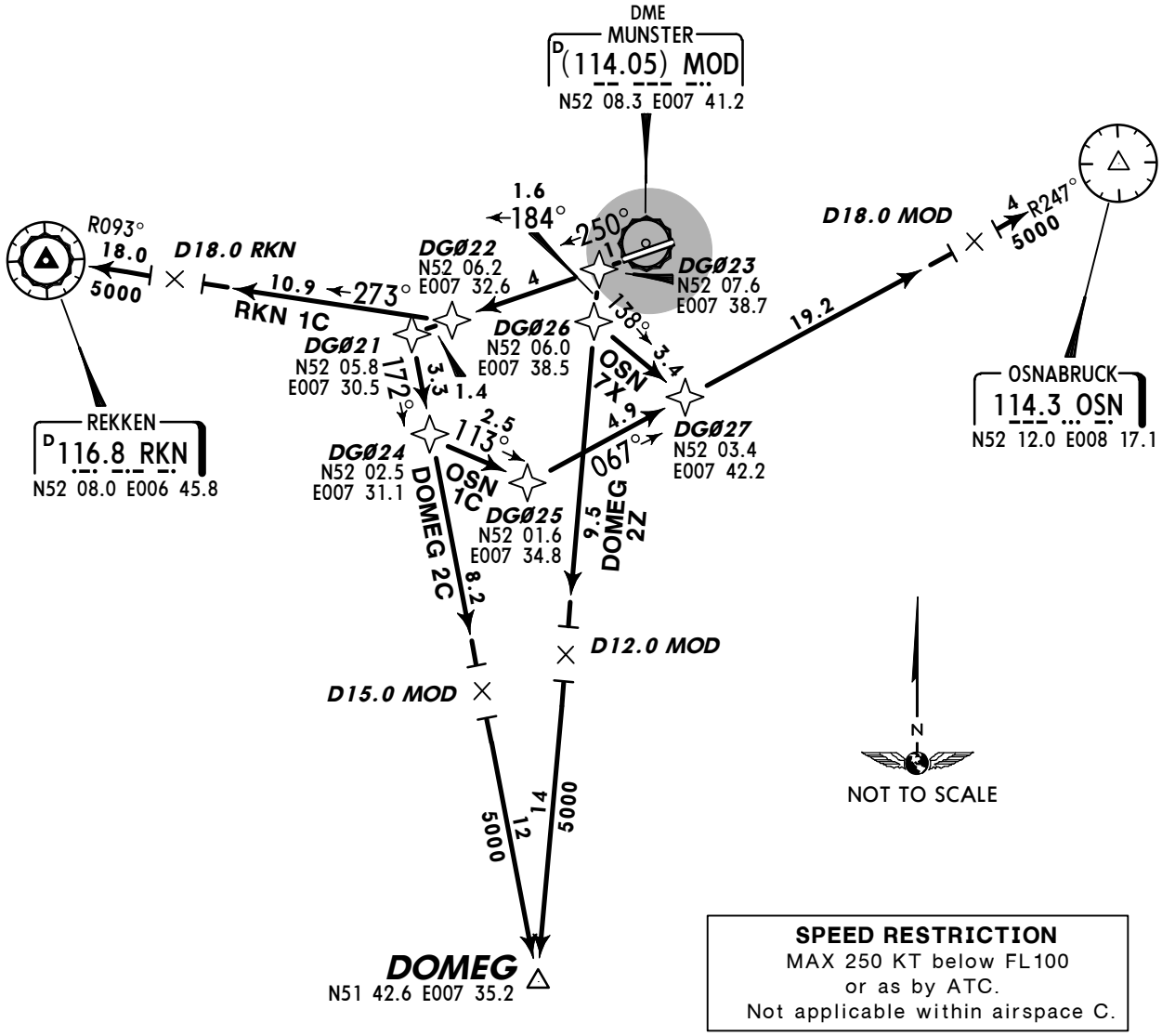
CHANGES: MSA.

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LANGEN Radar	Apt Elev	
129.3	160′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

2600′
MSA
ARP

DOMEG TWO CHARLIE (DOMEG 2C)*[DOME2C]*
DOMEG TWO ZULU (DOMEG 2Z)*[DOME2Z]*
OSNABRUCK ONE CHARLIE (OSN 1C)
OSNABRUCK SEVEN X-RAY (OSN 7X)
REKKEN ONE CHARLIE (RKN 1C)
RWY 25 RNAV DEPARTURES (OVERLAY 10-3)



Initial climb clearance **5000′**

SID	ROUTING
DOMEG 2C	(600′+) - DG021 - DOMEG.
DOMEG 2Z ❶	(600′+) - DG023 - DOMEG.
OSN 1C	(600′+) - DG021 - DG024 - DG025 - OSN.
OSN 7X ❷	(600′+) - DG023 - DG026 - DG027 - OSN.
RKN 1C	(600′+) - DG022 - RKN.

❶ For JET aircraft up to 20t MTOW & PROP/TURBOPROP aircraft. If unable to comply file SID DOMEG 2C.
❷ For PROP/TURBOPROP aircraft only. If unable to comply file SID OSN 1C.

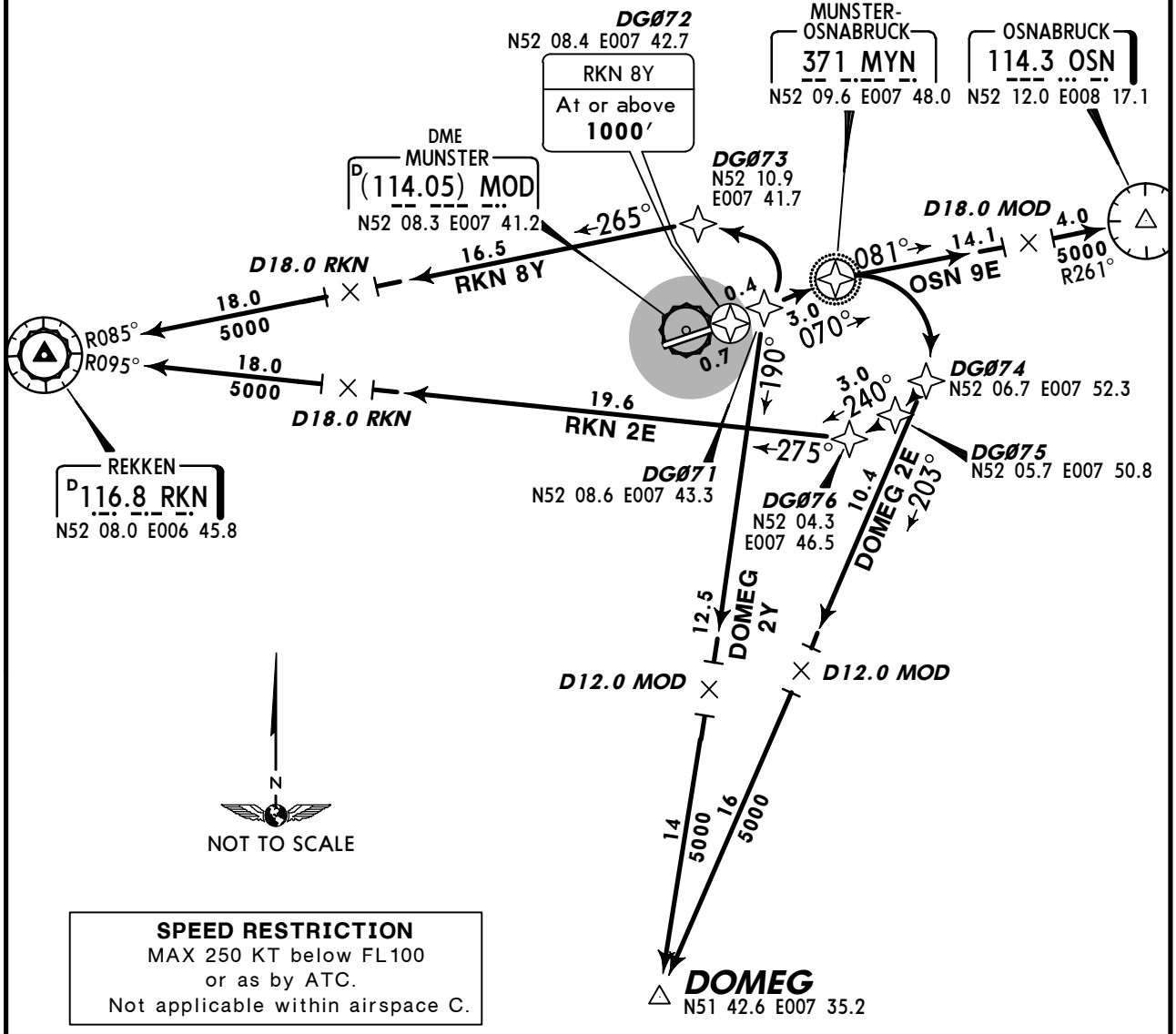
CHANGES: None.

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LANGEN Radar	Apt Elev	
129.3	160′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

2600′
MSA
ARP

DOMEG TWO ECHO (DOMEG 2E)*[DOME2E]*
DOMEG TWO YANKEE (DOMEG 2Y)*[DOME2Y]*
OSNABRUCK NINE ECHO (OSN 9E)
REKKEN TWO ECHO (RKN 2E)
REKKEN EIGHT YANKEE (RKN 8Y)
RWY 07 RNAV DEPARTURES (OVERLAY 10-3A)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	ROUTING
DOMEG 2E	(600′+) - MYN - DG074 - DOMEG.
DOMEG 2Y❶	(600′+) - DG071 - DOMEG.
OSN 9E	(600′+) - MYN - OSN.
RKN 2E	(600′+) - MYN - DG075 - DG076 - RKN.
RKN 8Y❷	(1000′+) - DG072 (1000′+) - DG073 - RKN.

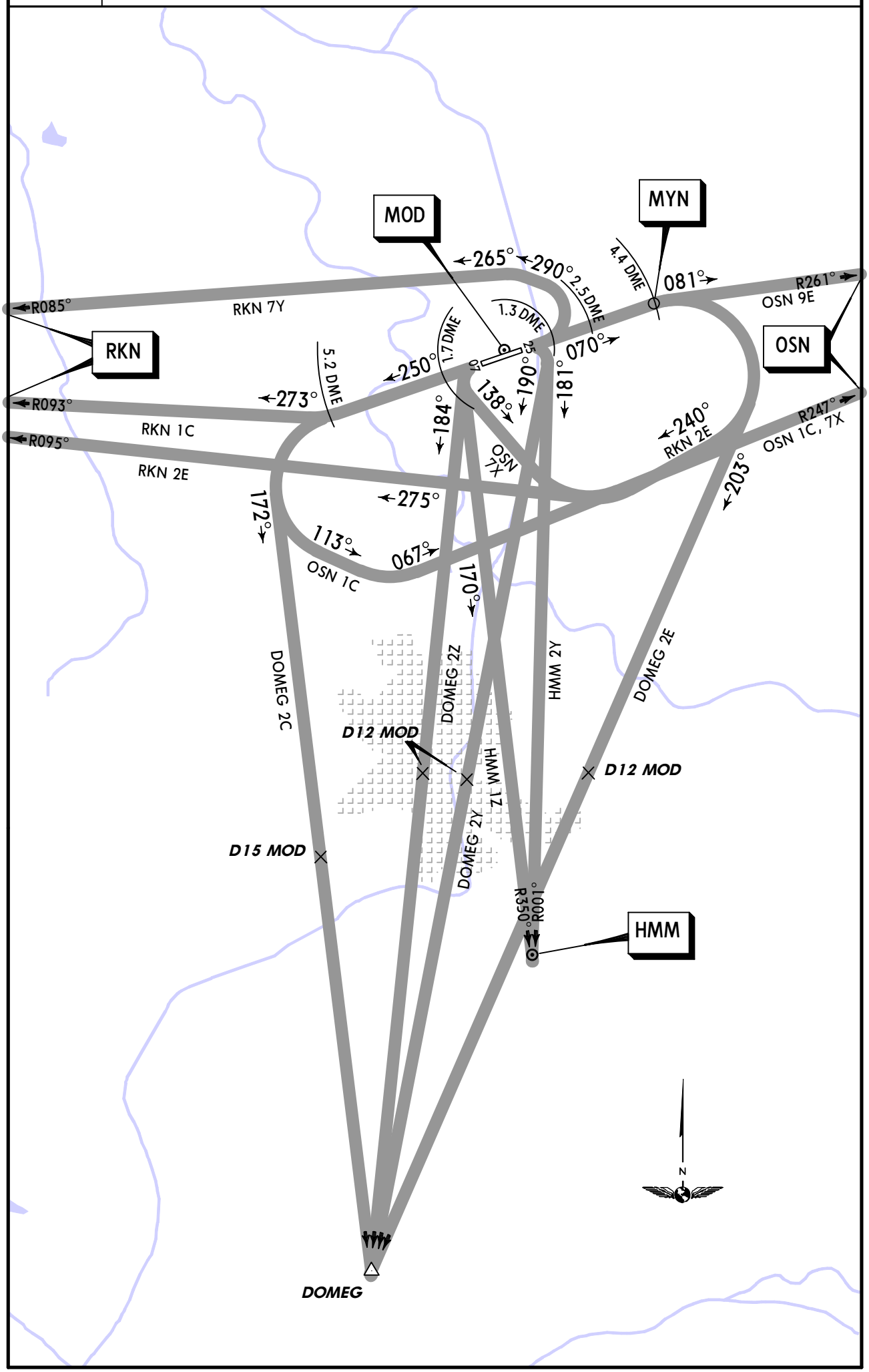
❶ For PROP/TURBOPROP aircraft up to 5.7t MTOW. If unable to comply file SID DOMEG 2E.
❷ For JET aircraft up to 20t MTOW & PROP/TURBOPROP aircraft. If unable to comply file SID RKN 2E.

CHANGES: RNAV SID RKN 7Y renumbered 8Y & revised.

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Apt Elev
160'

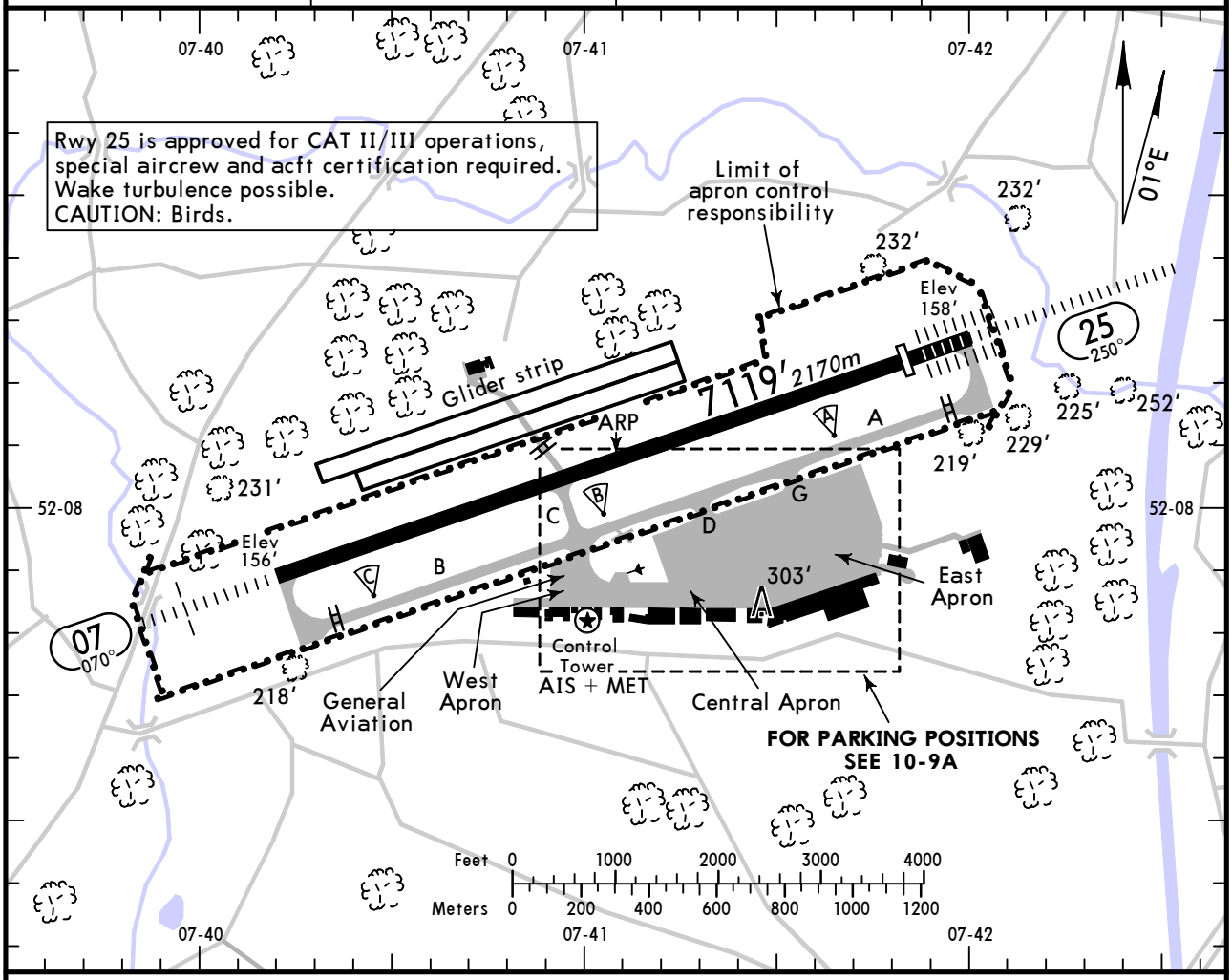
NOISE ABATEMENT



CHANGES: SID RKN 1E renumbered 2E & revised.

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*D-ATIS	*MUNSTER Ground	Tower	LANGEN Radar (DEP)
127.17	121.87	129.8	129.3



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
07	HIRL CL ❶ HIALS SFL PAPI-L (3.0°) RVR		6147′ *1874m*	❷	148′ *45m*
25	HIRL CL ❶ ALSF-II TDZ PAPI-L (3.0°) RVR	6463′ *1970m*	5491′ *1674m*		

❶ spacing 15m.

❷ TAKE-OFF RUN AVAILABLE

RWY 07
From rwy head 7119′ (2170m)
twy C int 4216′ (1285m)

RWY 25
From rwy head 7119′ (2170m)
twy C int 2920′ (890m)

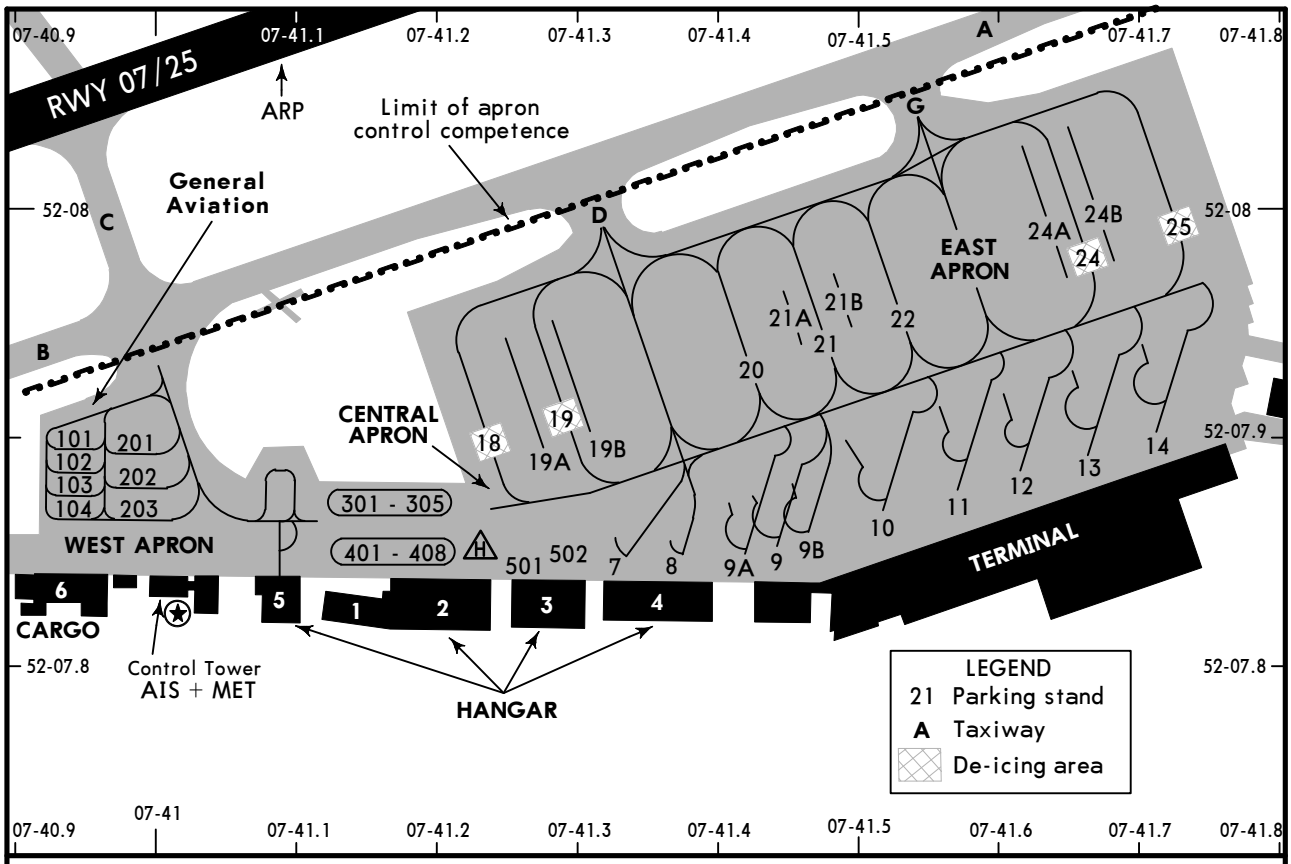
Standard TAKE-OFF ❶

	LVP must be in Force: Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

❶ Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: Spacing.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
7	N52 07.9 E007 41.3	22	N52 08.0 E007 41.5
8, 9, 9A	N52 07.9 E007 41.4	24	N52 08.0 E007 41.7
9B, 10	N52 07.9 E007 41.5	24A	N52 08.0 E007 41.6
11, 12	N52 07.9 E007 41.6	24B, 25	N52 08.0 E007 41.7
13, 14	N52 07.9 E007 41.7	101 thru 104	N52 07.9 E007 40.9
18	N52 07.9 E007 41.2	201 thru 203	N52 07.9 E007 41.0
19 thru 19B	N52 07.9 E007 41.3	301, 302	N52 07.9 E007 41.1
20	N52 07.9 E007 41.4	303 thru 305	N52 07.9 E007 41.2
21	N52 07.9 E007 41.5	401 thru 403	N52 07.9 E007 41.1
21A, 21B	N52 08.0 E007 41.5	404 thru 408	N52 07.9 E007 41.2
		501, 502	N52 07.9 E007 41.3

CHANGES: None.

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MUNSTER/OSNABRUCK, GERMANY

MUNSTER/OSNABRUCK

STRAIGHT-IN RWY		A	B	C	D
07	ILS	**356**′(200′)	**356**′(200′)	**356**′(200′)	**356**′(200′)
		R700m	**R700m**	**R700m**	**R700m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**620**′(464′)	**620**′(464′)	**620**′(464′)	**620**′(464′)
		R1400m	**R1500m**	**R1600m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**510**′(354′)	**510**′(354′)	**510**′(354′)	**510**′(354′)
		R1200m	**R1300m**	**R1400m**	**R1600m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**550**′(394′)	**550**′(394′)	**550**′(394′)	**550**′(394′)
		R1200m	**R1300m**	**R1400m**	**R1600m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**550**′(394′)	**550**′(394′)	**550**′(394′)	**550**′(394′)
		R1200m	**R1300m**	**R1400m**	**R1600m**
	ALS out	R1500m	R1500m	R1800m	R2000m
25	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**259**′(100′)	**259**′(100′)	**259**′(100′)	**259**′(100′)
		RA103′R300m	**RA103′R300m**	**RA103′R300m**	**RA103′R300m**
	ILS	**359**′(200′)	**359**′(200′)	**359**′(200′)	**367**′(208′)
		R550m	**R550m**	**R550m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**630**′(471′)	**630**′(471′)	**630**′(471′)	**630**′(471′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**530**′(371′)	**530**′(371′)	**530**′(371′)	**530**′(371′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**560**′(401′)	**560**′(401′)	**560**′(401′)	**560**′(401′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**560**′(401′)	**560**′(401′)	**560**′(401′)	**560**′(401′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m

TAKE-OFF RWY 07, 25

	LVP must be in Force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: TAKE-OFF Minimums.

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EDDG/FMO
MUNSTER/OSNABRUCK

JEPPESEN MUNSTER/OSNABRUCK, GERMANY

5 MAR 10 (11-1) Eff 11 Mar

ILS or LOC Rwy 07

*D-ATIS	LANGEN Radar (APP)	MUNSTER Tower (within 25 NM up to 4000'AGL)	*Ground
127.17	129.3	129.8	121.87

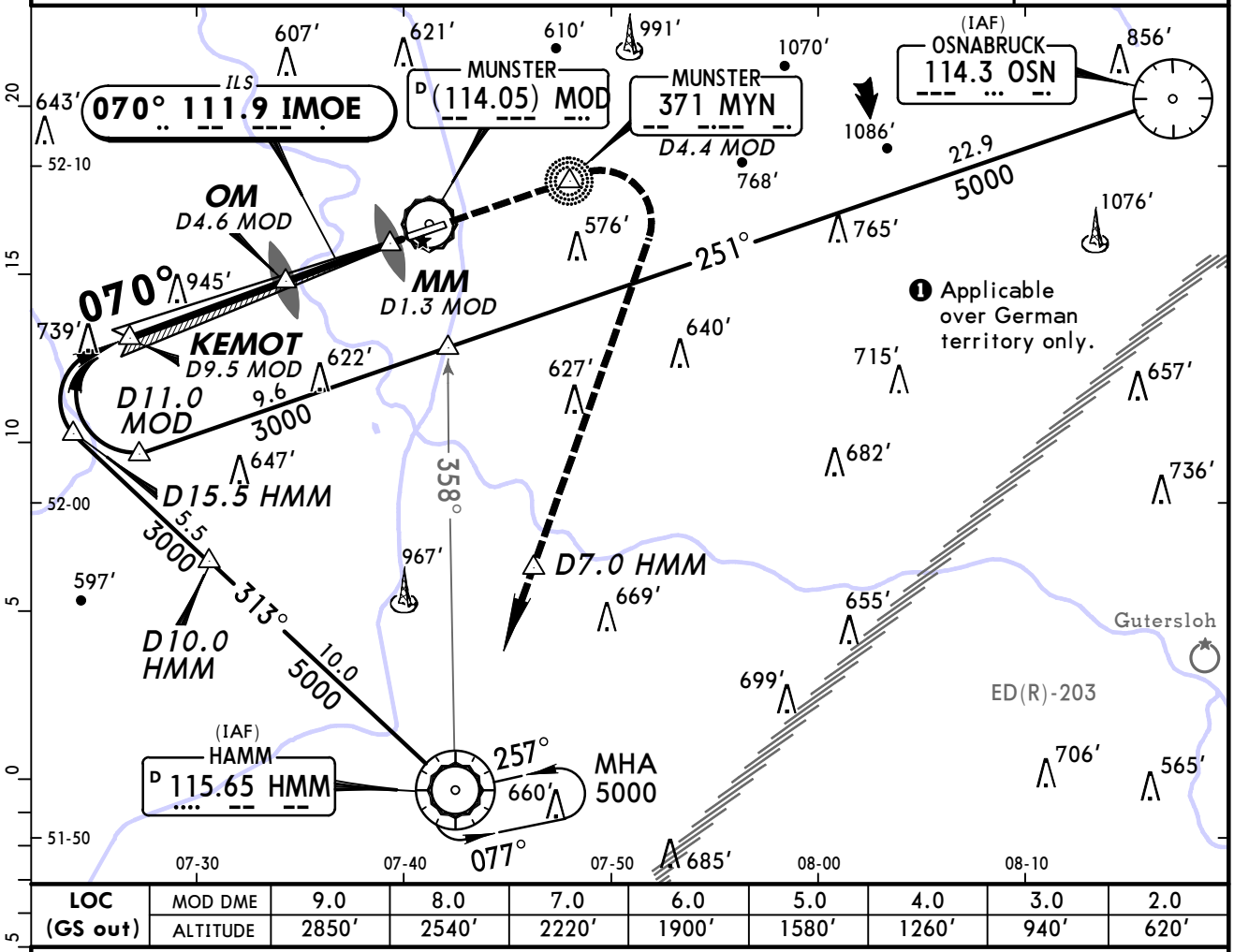
BRIEFING STRIP™

LOC IMOE	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev 160'
111.9	070°	1450' (1294')	356' (200')	RWY 156'

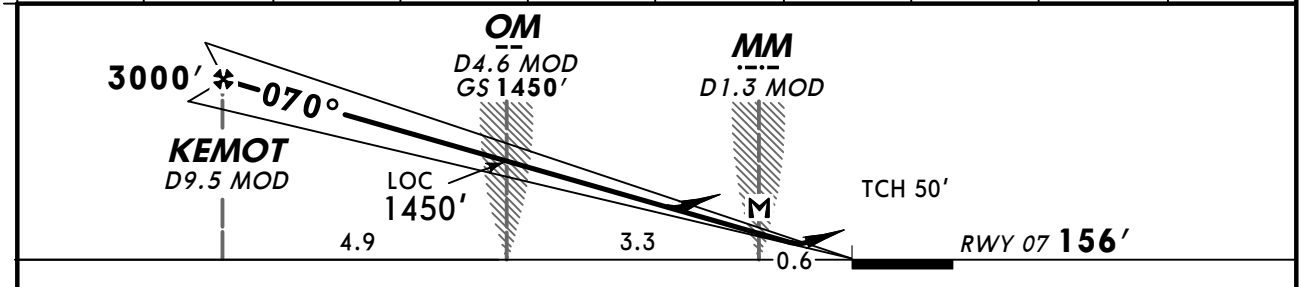
MISSED APCH: Climb STRAIGHT AHEAD to MYN NDB, then turn RIGHT to HMM VOR climbing to 4000'. At D7.0 HMM climb to 5000'.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000'
LOC: **DME REQUIRED.**

2600'
MSA
ARP ❶



LOC (GS out)	MOD DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	2850'	2540'	2220'	1900'	1580'	1260'	940'	620'



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.3 MOD						

HIALS
PAPI

MYN
371

Standard STRAIGHT-IN LANDING RWY **07**

	ILS DA(H) 356' (200')		LOC (GS out) DA(H) 620' (464')	
	FULL/Limited	ALS out		ALS out
A	RVR 750m	RVR 1200m	RVR 1500m	
B				
C			RVR 1800m	CMV 2200m
D				

PANS OPS 4

CHANGES: Minimums.

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EDDG/FMO
MUNSTER/OSNABRUCK

JEPPESEN MUNSTER/OSNABRUCK, GERMANY

5 MAR 10 (11-2) Eff 11 Mar

ILS or LOC Rwy 25

*D-ATIS	LANGEN Radar (APP)	MUNSTER Tower (within 25 NM up to 4000'AGL)	*Ground
127.17	129.3	129.8	121.87

BRIEFING STRIP™

LOC IMOW 110.1	Final Apch Crs 250°	GS LOM 1490' (1331')	ILS DA(H) Refer to Minimums	Apt Elev 160' RWY 159'

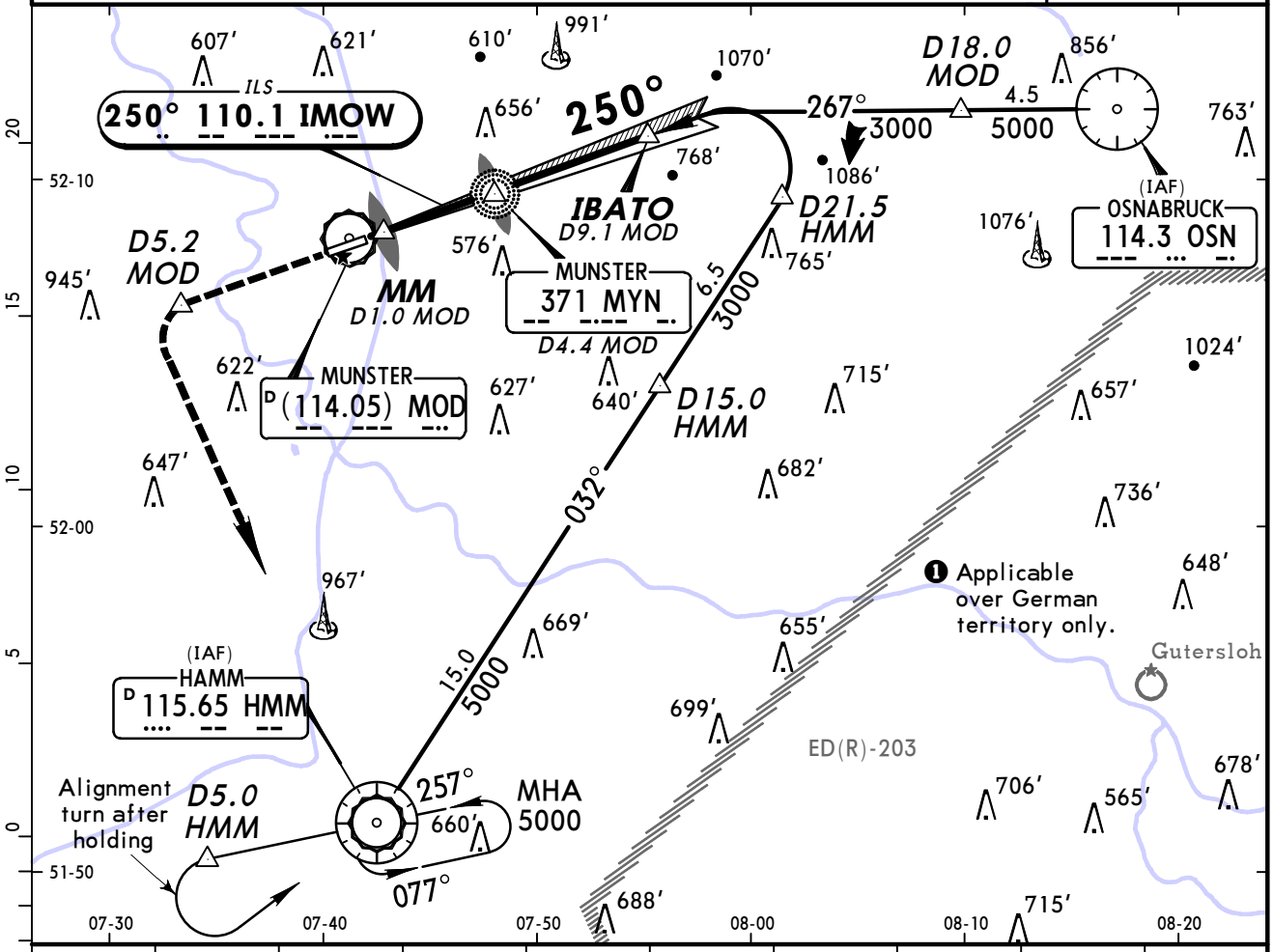
MISSED APCH: Climb STRAIGHT AHEAD to D5.2 MOD, then turn LEFT to HMM VOR climbing to 5000'.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000'

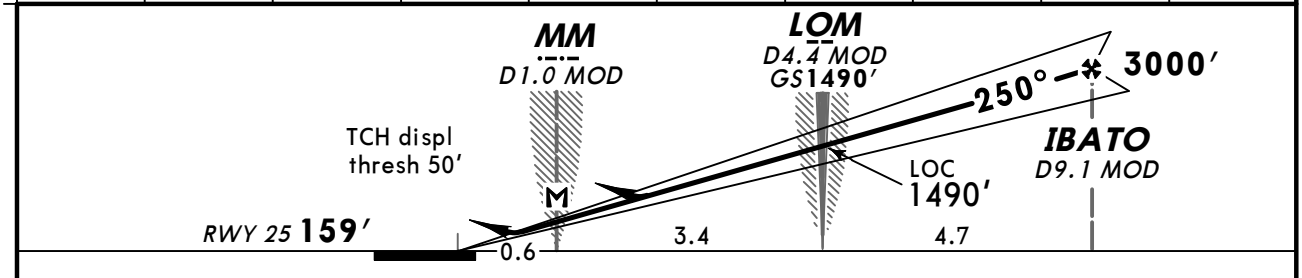
LOC: **DME REQUIRED.**

2600'

MSA ARP❶



LOC (GS out)	MOD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	720'	1040'	1360'	1680'	2000'	2310'	2630'	2950'



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/ D1.0 MOD						

ALSF-II
PAPI

D5.2 MOD

Standard STRAIGHT-IN LANDING RWY 25

	ILS			LOC (GS out)	
	DA(H) ABC: 359' (200') D: 367' (208')			DA(H) 630' (471')	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m	
B					
C				RVR 1500m	CMV 2200m
D					

PANS OPS 4

CHANGES: Minimums.

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EDDG/FMO
MUNSTER/OSNABRUCK

JEPPESEN MUNSTER/OSNABRUCK, GERMANY

5 MAR 10 (11-2A) Eff 11 Mar

CAT II ILS Rwy 25

*D-ATIS	LANGEN Radar (APP)	MUNSTER Tower (within 25 NM up to 4000'AGL)	*Ground
127.17	129.3	129.8	121.87

BRIEFING STRIP™

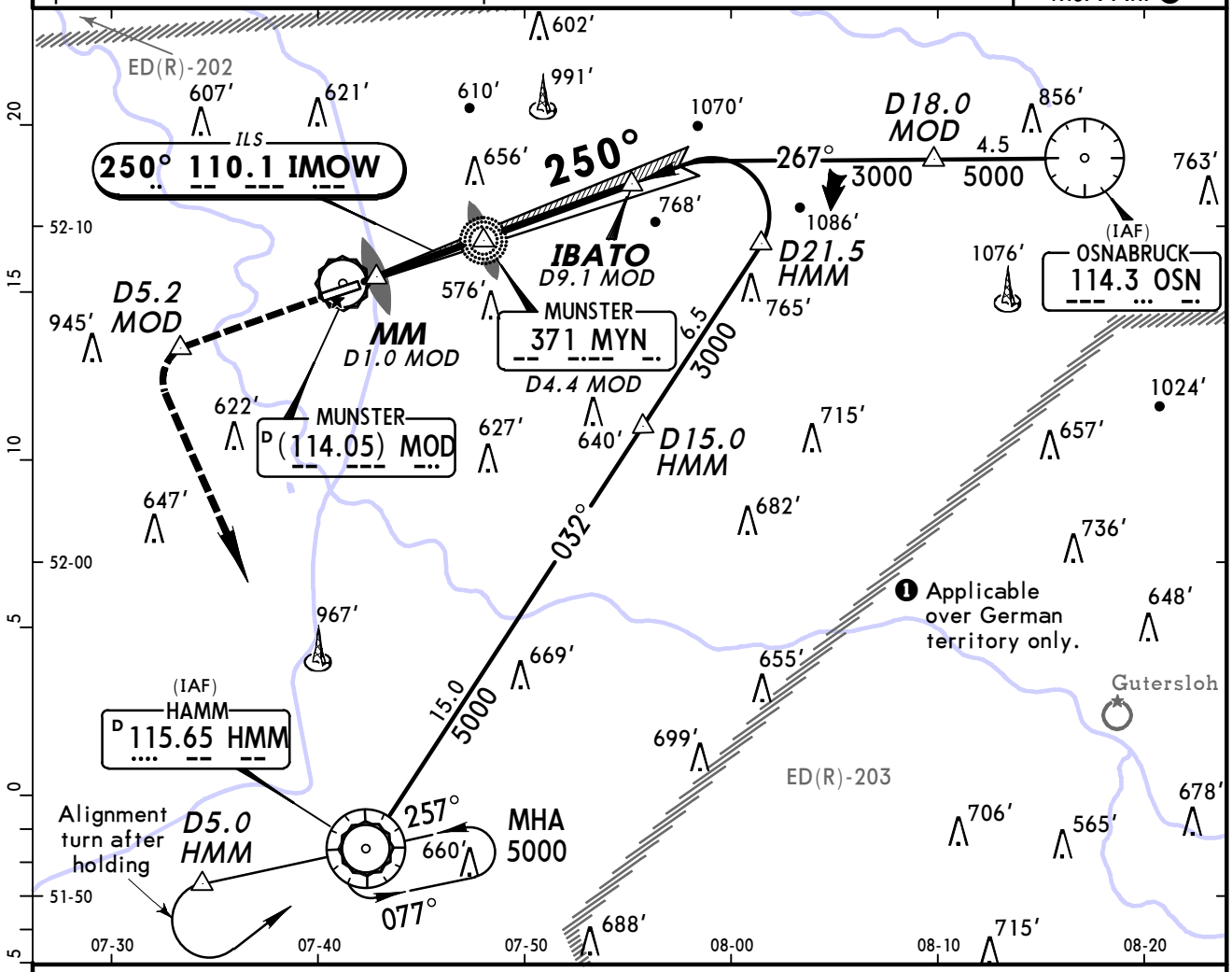
LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev 160'
IMOW	250°	LOM 1490' (1331')	RA 103' DA(H) 259' (100')	RWY 159'

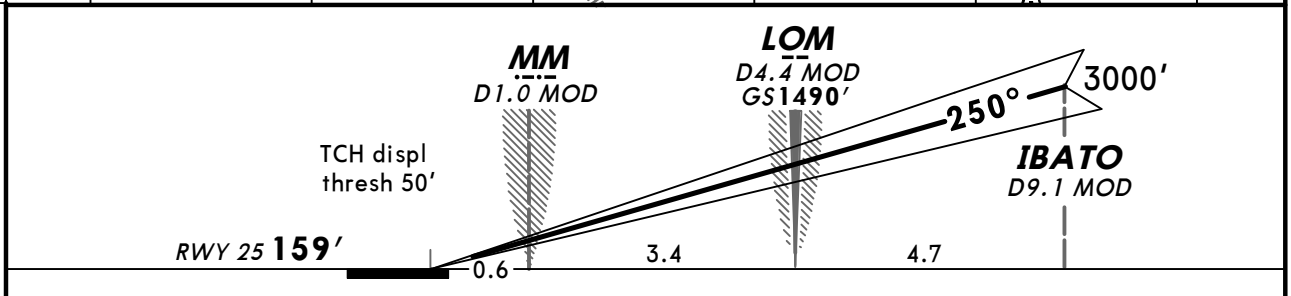
MISSED APCH: Climb STRAIGHT AHEAD to D5.2 MOD, then turn LEFT to HMM VOR climbing to 5000'.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000'
Special Aircrew & Acft Certification Required.

2600'

MSA ARP 1





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
PAPI

D5.2 MOD

PANS OPS 4

Standard

STRAIGHT-IN LANDING RWY 25
CAT II ILS
ABCD
RA 103'
DA(H) 259' (100')

RVR 300m 1

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

CHANGES: Minimums.

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EDDG/FMO
MUNSTER/OSNABRUCK

JEPPESEN MUNSTER/OSNABRUCK, GERMANY

5 MAR 10 (12-1) Eff 11 Mar

RNAV (GPS) Rwy 07

*D-ATIS	LANGEN Radar (APP)	MUNSTER Tower (within 25 NM up to 4000'AGL)	*Ground
127.17	129.3	129.8	121.87

BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	070°	KEMOT 3000′ (2844′)	510′ (354′)	160′ / 156′

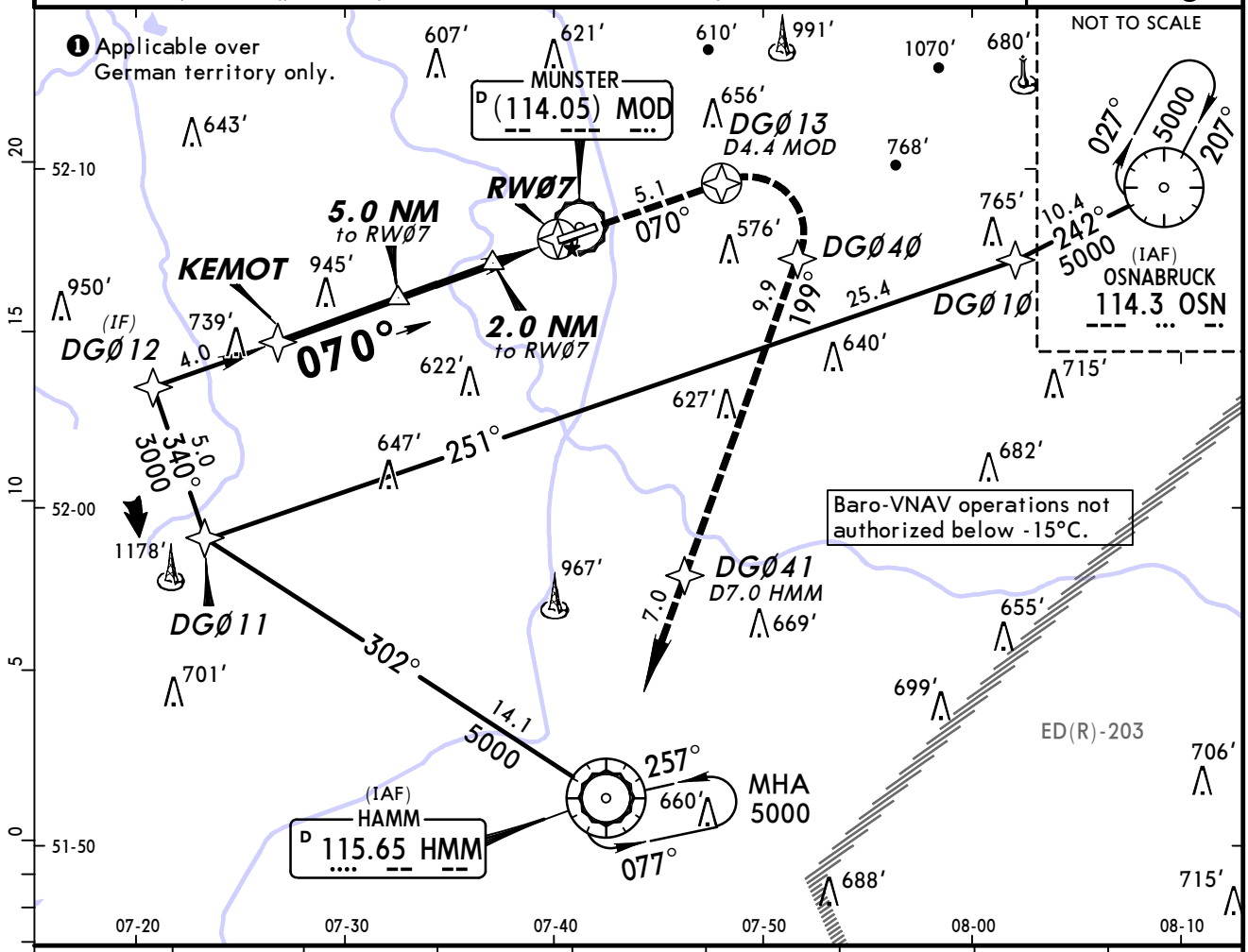
MISSED APCH: Climb STRAIGHT AHEAD on 070° to DGØ13/D4.4 MOD, then turn RIGHT via DGØ4Ø on 199° to HMM VOR to 4000′. At DGØ41/D7.0 HMM climb to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′

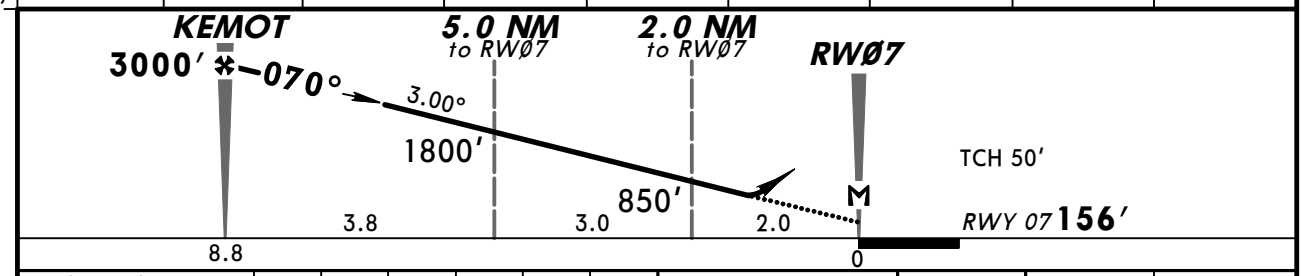
MSA ARP ❶ — 2600′

NOT TO SCALE

❶ Applicable over German territory only.



DIST to RWØ7	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
ALTITUDE	2760′	2440′	2120′	1800′	1480′	1170′	850′	530′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RWØ7						

HIALS
PAPI

070°

DGØ13
D4.4 MOD

Standard STRAIGHT-IN LANDING RWY **07**

	LNAV/VNAV DA(H) 510′ (354′)		LNAV DA(H) 550′ (394′)	
		ALS out		ALS out
A	RVR 1200m	RVR 1500m	RVR 1400m	RVR 1500m
B				
C		RVR 1600m		RVR 1800m
D				

PANS OPS 4

CHANGES: Minimums.

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EDDG/FMO
MUNSTER/OSNABRUCK

JEPPESEN 5 MAR 10 (12-2) Eff 11 Mar

MUNSTER/OSNABRUCK, GERMANY
RNAV (GPS) Rwy 25

*D-ATIS	LANGEN Radar (APP)	MUNSTER Tower (within 25 NM up to 4000'AGL)	*Ground
127.17	129.3	129.8	121.87

BRIEFING STRIP™

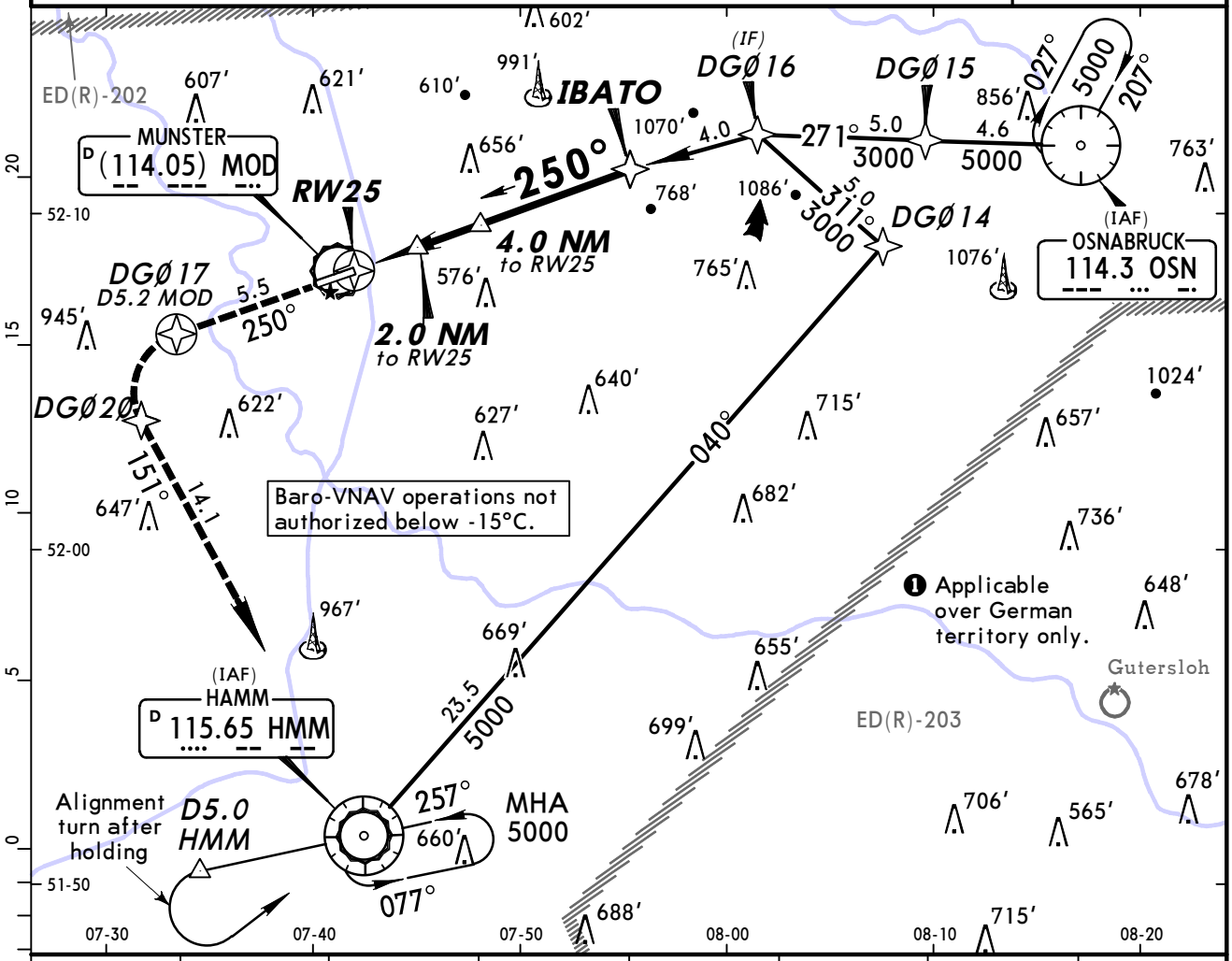
RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 160'
	250°	IBATO 3000' (2841')	530' (371')	RWY 159'

MISSED APCH: Climb STRAIGHT AHEAD on 250° to DGØ17/D5.2 MOD, then turn LEFT via DGØ2Ø on 151° to HMM VOR to 5000'.

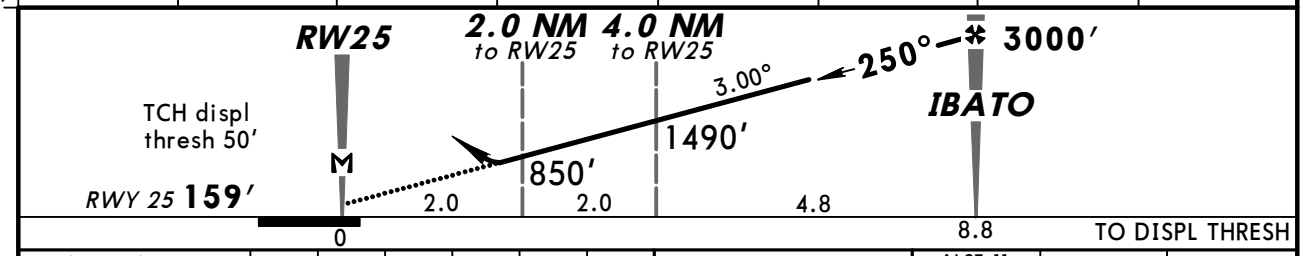
2600'

MSA ARP❶

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000'



DIST to RW25	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	850'	1170'	1490'	1800'	2120'	2440'	2760'



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW25						

ALSF-II
PAPI

250°

DGØ17
D5.2 MOD

Standard STRAIGHT-IN LANDING RWY **25**

PANS OPS 4

	LNAV/VNAV DA(H) 530' (371')		LNAV DA(H) 560' (401')	
		ALS out		ALS out
A	RVR 1000m	RVR 1500m	RVR 1200m	RVR 1500m
B				
C		RVR 1700m		RVR 1900m
D				

CHANGES: Procedure. Minimums.

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EDDG/FMO
MUNSTER/OSNABRUCK

JEPPESEN MUNSTER/OSNABRUCK, GERMANY

5 MAR 10 (16-1) Eff 11 Mar

NDB Rwy 07

*D-ATIS	LANGEN Radar (APP)	MUNSTER Tower (within 25 NM up to 4000'AGL)	*Ground
127.17	129.3	129.8	121.87

BRIEFING STRIP™

NDB MYN 371	Final Apch Crs 070°	Minimum Alt KEMOT 3000′ (2844′)	DA(H) 550′ (394′)	Apt Elev 160′ RWY 156′

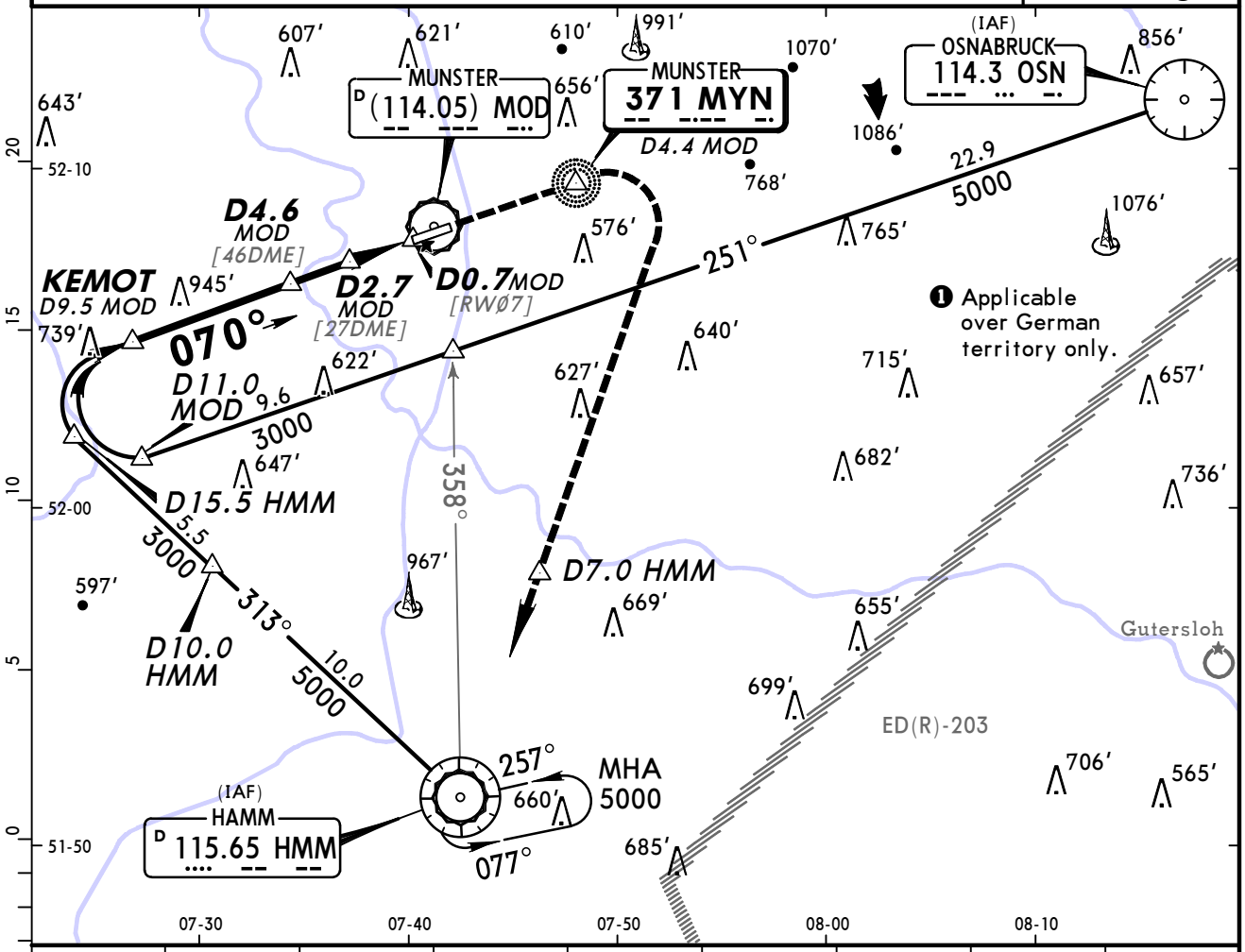
MISSED APCH: Climb STRAIGHT AHEAD to NDB, then turn RIGHT to HMM VOR climbing to 4000′. At D7.0 HMM climb to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′

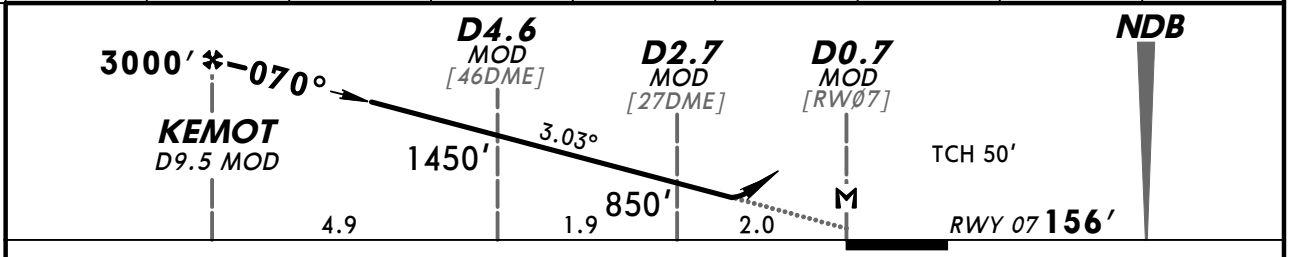
DME REQUIRED.

2600′

MSA ARP❶



MOD DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2850′	2540′	2220′	1900′	1580′	1260′	940′	620′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.03°	375	482	536	643	750	858
MAP at D0.7 MOD						

HIALS PAPI

MYN 371

Standard STRAIGHT-IN LANDING RWY **07**

DA(H) **550′** (394′)

PANS OPS 4

	ALS out
A	RVR 1500m
B	
C	RVR 1400m
D	RVR 1800m

CHANGES: Descent angle. Minimums.

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EDDG/FMO
MUNSTER/OSNABRUCK

JEPPESEN MUNSTER/OSNABRUCK, GERMANY

5 MAR 10 (16-2) Eff 11 Mar

NDB Rwy 25

*D-ATIS	LANGEN Radar (APP)	MUNSTER Tower (within 25 NM up to 4000'AGL)	*Ground
127.17	129.3	129.8	121.87

BRIEFING STRIP™

NDB MYN	Final Apch Crs	Minimum Alt IBATO	DA(H)	Apt Elev 160' RWY 159'
371	250°	3000' (2841')	560' (401')	

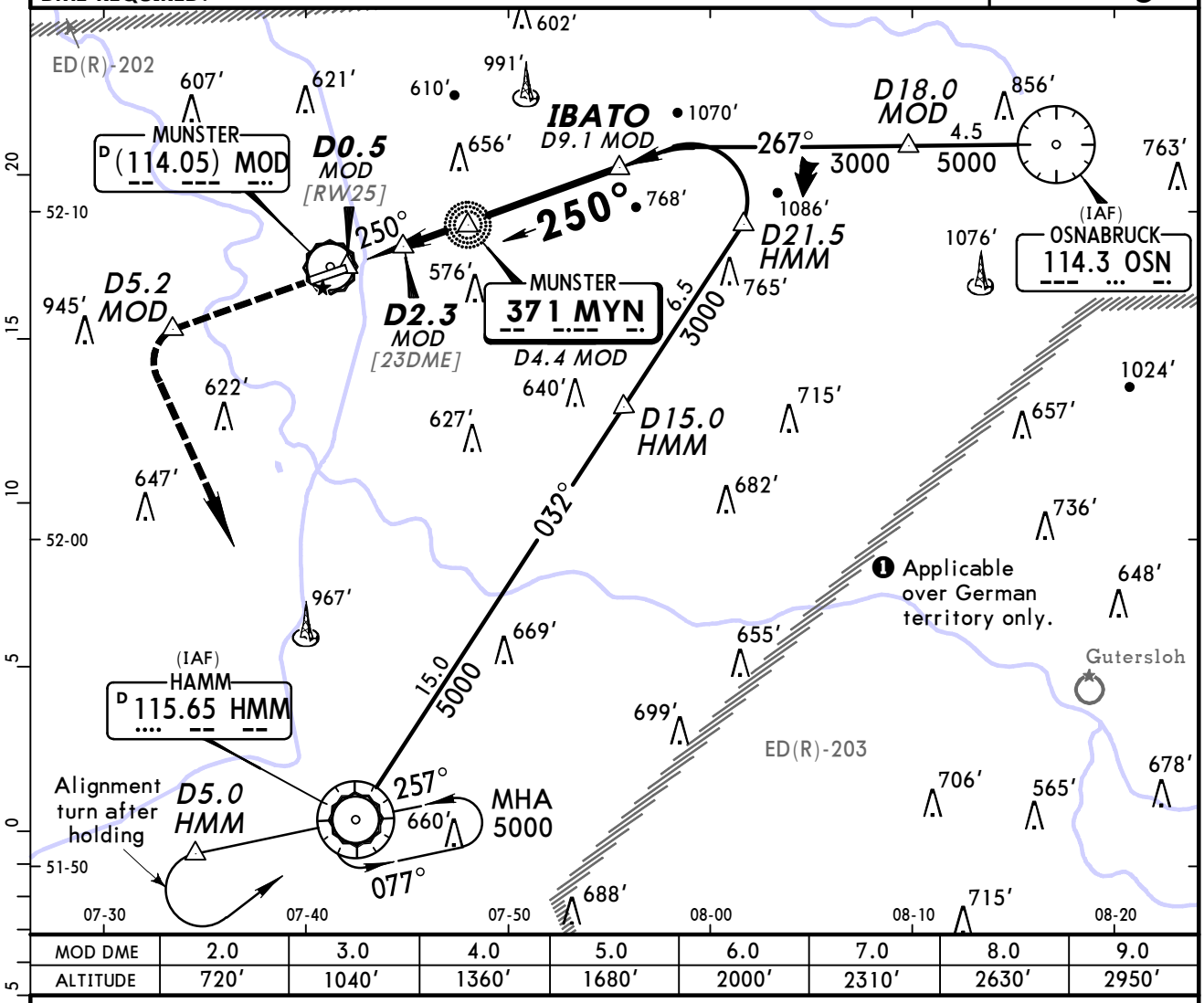
MISSED APCH: Climb STRAIGHT AHEAD to D5.2 MOD, then turn LEFT to HMM VOR climbing to 5000'.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000'

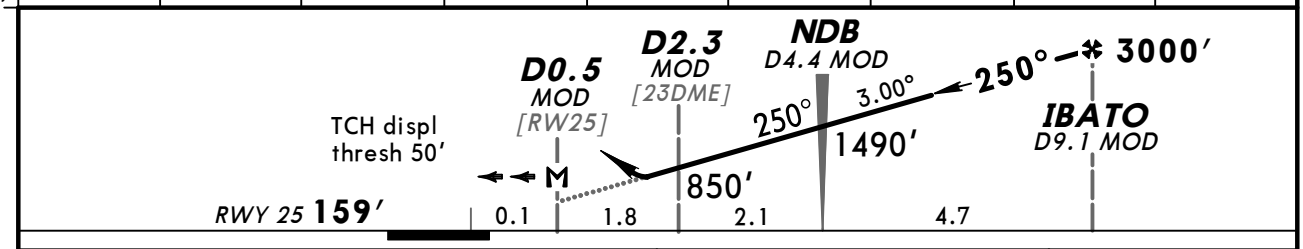
DME REQUIRED.

2600'

MSA ARP❶



MOD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	720'	1040'	1360'	1680'	2000'	2310'	2630'	2950'



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D0.5 MOD						

ALSF-II
PAPI

D5.2
MOD

Standard STRAIGHT-IN LANDING RWY **25**

DA(H) **560'** (401')

PANS OPS 4

	ALS out
A	RVR 1500m
B	
C	RVR 1200m
D	RVR 1900m

CHANGES: Minimums.

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General Information

Location: Hamburg Deu
IATA Code: HAM
Lat/Long: N53° 37.8' E009° 59.3'
Elevation: 53 ft

Airport Use: Public
Magnetic Variation: 1.9°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0614 Z
Sunset: 1652 Z,

Runway Information

Runway: 05
Length x Width: 10663 ft x 151 ft
Surface Type: asphalt
TDZ-Elev: 32 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 978 ft

Runway: 15
Length x Width: 12028 ft x 151 ft
Surface Type: asphalt
TDZ-Elev: 53 ft
Lighting: Edge, ALS, Centerline, REIL

Runway: 23
Length x Width: 10663 ft x 151 ft
Surface Type: asphalt
TDZ-Elev: 43 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 512 ft

Runway: 33
Length x Width: 12028 ft x 151 ft
Surface Type: asphalt
TDZ-Elev: 35 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 1463 ft

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Communication Information

ATIS 123.125
Hamburg Ground Tower 121.8
Hamburg Tower 126.85
Hamburg Tower 121.275
Hamburg Tower 27.845
Hamburg Apron Ramp/Taxi Control 121.75
Hamburg Apron Ramp/Taxi Control 121.7
Hamburg Director Approach Control 118.2
Hamburg Director Approach Control 35.755 Military

1. GENERAL

1.1. ATIS

*ATIS 123.12

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. RWY USAGE

RWY 33 shall be used for take-offs. Exceptions are permitted only if required by traffic situation or for reasons of air traffic safety, especially due to weather and RWY conditions.
Take-offs from RWY 15 and landings on RWY 33 are permitted only if required for reasons of air traffic safety, especially due to weather and RWY conditions.

2200-0700LT
RWY 15 shall be used for landings. Exceptions are permitted only if the weather minima established for the IFR approach procedure to RWY 15 are not reached and for reasons of air traffic safety as well as in exceptional traffic situations. Additional exceptions may be granted by the Aerodrome Control Service in agreement with the 'Luftaufsichtsstelle'.

1.2.2. NIGHT FLYING RESTRICTIONS

1.2.2.1. Jet-ACFT not licensed in accordance with ICAO Annex 16

- Take-offs and landings are not permitted between 2000-0700LT.

1.2.2.2. Jet-ACFT licensed in accordance with ICAO Annex 16, Volume I, Part II, Chapter 2

- Take-offs are not permitted between 2000-0700LT.
- Landings are not permitted between 2100-0700LT.
- For take-offs in scheduled air services and regular inclusive tour charter traffic with scheduled time of departure before 2000LT, an exception to the night flying restrictions may be taken for granted in cases of provably unavoidable delays until 2100LT.

1.2.2.3. Jet-ACFT licensed in accordance with ICAO Annex 16, Volume I, Part II, Chapter 3, propeller-driven ACFT and other ACFT not covered in paras 1.2.2.1. and 1.2.2.2.

- Take-offs and landings are not permitted between 2300-0600LT.
- For take-offs and landings in scheduled 'passenger' air services and regular inclusive tour charter traffic with scheduled time of arrival or departure before 2300LT, an exception to the night flying restriction may be taken for granted in cases of provably unavoidable delays until 2400LT.

1.2.2.4. EXEPTIONS

Exempt from the restrictions mentioned in paras 1.2.2.1. to 1.2.2.3 are:
- ACFT provably approaching Hamburg APT as alternate or emergency aerodrome for meteorological, technical or other safety reasons.
- ACFT on a mission in disasters, rendering medical assistance and SAR services or on an urgent police mission.
- ACFT operated in the night airmail service of the 'Deutsche Post AG' after detailed instructions by the 'Wirtschaftsbehoerde'.

Additional exceptions from the regulations may be granted in individual cases, especially if required to avoid serious disturbances in air traffic or in cases of special public interest.

Requests shall be submitted
- if possible until 2230LT at the latest;
- to:

Behoerde fuer Umwelt und Gesundheit
-Der Fluglaermschutzbeauftragte-
Postfach 634107
22323 Hamburg
Tel.: (040) 5075 2348

The ATC clearance does not comprise the exceptional permission from the ''Fluglaermschutzbeauftragten'' required as stated above.

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1. GENERAL

1.2.3. REVERSE THRUST

Reverse thrust other than idle thrust shall only be used to an extent necessary for safety reasons.

1.2.4. RUN-UP TESTS

Engine test-runs outside the noise abatement hangar are permitted only after prior consent and on specific instruction by the 'Luftaufsichtsstelle' of the 'Wirtschaftsbehoerde', Tel.: (040) 5075 2599 or 2600. Idle thrust test runs between 0600-2300LT are not covered by this regulation.
The permission for a run-up-test from the 'Luftaufsichtsstelle' does not include the neccessary ATC clearance for taxiing.

Engine test runs of rotorcraft:
Engine test runs shall be reported to the traffic observer (Tel.: +4940-5075 1713) located at the GAT. Engine test runs shall be conducted on Apron 4 between the western edge and the ACFT Stand Taxilane - V on an area provided for this and marked by a white cross. Hovering flights towards this position are not allowed. The aerodrome operator reserves the right to assign another position if nesessary.
Compensation runs may be conducted on request on RWY 33 abeam TWY R as well as on TWY L in front of taxi holding position RWY 05, but not for landings on RWY 05.
The positions are marked with a yellow circle of 60m diameter.
If specially requested, compensation runs may be interrupted and ACFT requested to leave its position if called upon to do so by the APT operator, the local air navigation services and/or air supervision authority (Luftaufsicht).

1.2.5. AUXILIARY POWER UNITS (APUs)

In order to reduce noise and air pollution, the on-board APU shall be switched of on remote ACFT stands equipped with stationary or mobile supply units. The supplier of ground handling services may request an extra fee for the supply.
ACFT shall shut down the APU max 5 minutes after arrival on the parking stand provided that external power is available.
APU may be switched on 10 minutes prior to departure only.
ACFT with only one cabin entrance may switch on the APU immediately prior to the boarding process starts, provided the outside air temperature is 25°C or above.

In case of other justified reasons the APU may be switched on after reporting this to 'Hamburg Apron' on frequency 121.700 MHz.

1.3. LOW VISIBILITY PROCEDURES

1.3.1. ACFT GUIDANCE UNDER CAT II/III OPERATIONS

ACFT having landed are requested to report leaving the color coded section of the TWY in order to draw attention to the fact that the ACFT has left the ILS protection area.
At CAT II/III intermediate holding positions and on additional TWY sections equipped with stop bars, the latter may, under no circumstances, be crossed when switched on.
In apron areas with taxi guideline lighting (Apron 2, L5 and L6 only), ACFT will be guided by means of green centerline lights when CAT II/III operations are activated.
In the apron areas without centerline lighting (Aprons 1 and 4, as well as parts of Apron 2). Follow-me cars will be assigned by Apron if required, or at the request of the pilot.
The taxilanes L5, L6 and L7 on Apron 2 have intermediate holding position lights at the junctions to TWYs K and L.
These intermediate holding position lights are operated in conjunction with the lighting for the taxi guidelines.
The intermediate holding position lights consist of 5 yellow unindirectional underfloor lights. ACFT may cross these without special permission - unless they are expressly requested to hold.

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1. GENERAL

1.4. TAXI PROCEDURES

1.4.1. GENERAL

On Aprons 1 and 2, ACFT may only taxi on or along the yellow guidelines and are permitted only at minimum thrust.
B747 and larger ACFT will be guided by a Follow-me car.
ACFT crossing RWY 33 via TWY I-North or I-South in direction TWY K, may only taxi along the yellow guidelines.
Within the General Aviation area, the wingtip clearance on Taxilane L7 is 10 '/3m, on Taxilanes L8 thru L10 is 15 '/4.5m.
Pilots taxiing between Aprons 2 and 4 shall request clearance for crossong TWY K from Ground.
Additional taxi-holding positions are located in front of the CAT I stop bars on TWYs I, K and R. These taxi-holding positions are named I-North,I-South, K, R.
If instructed by HAMBURG Apron/HAMBURG Ground/HAMBURG Tower, pilots shall stop at these points.

TWY Y RESTRICTIONS

ACFT with a wingspan less than 262'/80 m may taxi through the gateway under their own power. ACFT permitted to taxi onto apron 6 under their own power will be requested to stop by a ground marking after passing through the gateway. The engines shall be turned off and the ACFT will subsequently be towed to its destination.
ACFT wanting to leave apron 6 in the direction of ACFT stand taxilane Y will be towed up to the gateway. The engines may be turned on here and not earlier. After requesting and receiving a start-up/taxi clearance from HAMBURG Ground, ACFT may continue to taxi under their own power in accordance with instructions.
ACFT with a wingspan of more than 262'/80m must wait in front of the gateway with the engines turned off. They will then be towed through the open gateway in the presence of a wing-walker.

1.4.2. TWY LIMITATIONS

TWY R and the southern part of Apron 1 MAX wingspan less than 171 '/52m.
Taxilane Q will be marked off by a gateway between taxilane K and apron 5. The gateway has a width of 197 '/60m and a height of 8 '/2.43m AGL. ACFT with a wingspan of less than 118 '/36m may taxi through the gateway under their own power. ACFT with a wingspan of 118 '/36m or more shall stop in front of the gateway and turn off engines. They will then be towed to their destination.
Eastern part of Apron 2 including Taxilane L7 MAX wingspan less than 98 '/30m.
TWYs V, W and Apron 4 MAX wingspan less than 79 '/24m.
Western part of Apron 2 including Taxilanes L8, L9 and L10 MAX wingspan less than 49'/15m.

1.5. PARKING INFORMATION

Stands 04, 05, 06, 07, 08, 15 thru 20, 31, 32 and 37 thru 40 equipped with Visual Docking Guidance System.
On stands 04 thru 43 and 81 thru 95 push-back required.
On stands 04 thru 48, onboard APU must be switched off as long as power supply and fresh air are provided in return for extra fees.

1.6. OTHER INFORMATION

CAUTION: Birds in vicinity of APT.

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2. ARRIVAL

2.1. CAT II/III OPERATIONS

RWY 23 approved for CAT II/III operations, special aircrew and ACFT certification required.

2.2. TAXI PROCEDURES

Arriving ACFT will be passed by Tower to Apron and will taxi as instructed by Apron to the position assigned. Change-over will take place as early as possible, at the latest when reaching the boundary of responsibility. Parking of ACFT at all positions without Visual Docking Guidance System performed by marshaller.

2.3. OTHER INFORMATION

2.3.1. FUEL SAVING AND NOISE REDUCING ILS APPROACH PROCEDURES (CONTINUOUS DESCENT APPROACH - CDA)

2.3.1.1. General

For the purpose of fuel-saving and noise abatement during approach the following approach procedure is announced. It may be requested by the pilot or offered by the controller. It can be performed only in connection with an ILS approach.

2.3.1.2. Procedure

- ACFT will be guided by the approach control unit by means of radar vectoring and will be cleared for a continuous descent to the intermediate approach altitude in such a way that after reaching this intermediate approach altitude on the localizer course, about 1 NM will be left for intercepting the glide path in level flight. This intermediate approach segment will serve to reduce speed.
  Intermediate approach altitude: 3000'.
  It is assumed that the continuous descent will be performed at a rate of 300 ft/NM (descent angle approx 3°), down to the cleared altitude.

  If, for specific reasons (e.g. separation, airspace structure, obstacles), altitudes above the intermediate approach altitude have to be initially assigned, these restrictions will be lifted early enough to allow a continuous descent at a rate of 300 ft/NM.

  Details about the distance from touchdown will be transmitted to the pilot together with the clearance for descent and usually at 20, 15 and 10 NM from touchdown. This should enable the pilot to correct the rate of descent as required.

- In case of traffic situations allowing no CDA (e.g. approaches of ACFT with different performance data), pilots will be informed by the notice NO CDA POSSIBLE. In this case, approaches must be conducted according to the previous procedures.

2.3.1.3. NOISE ABATEMENT

On approaches in accordance with the CDA, pilots are also expected to use the approach techniques recommended for noise abatement in the vicinity of APTs (see AIR TRAFFIC CONTROL page GERMANY-1).

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3. DEPARTURE

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

3.1.1. START-UP

3.1.1.1. GENERAL

Pilots shall request start-up clearance from Ground. On initial radio contact the respective apron designation shall always be indicated.
After clearance to start the engines, pilots will receive instruction to establish contact on the frequency of Apron.

3.1.1.2. GENERAL AVIATION APRONS

On initial radio contact the taxilane shall be indicated additionally.

3.1.2. PUSH-BACK & TAXI

"Nose-in positions" may only be left with push-back facility. Reverse thrust shall not be used. To obtain push-back instructions from a nose-in position, pilots must request permission from Apron.
In order to avoid delays in taxiing, pilots are instructed to start engines during push-back. After completion of push-back "ready to taxi" shall be reported to Apron.

To obtain instructions for taxiing from a taxi-out position, pilots must request taxi clearance from Apron reporting "ready to taxi".
On initial radio contact with Apron, pilots shall report position and RWY assigned.
Permission for push-back or taxiing from a position may only be requested if the pilot can perform the maneuver immediately.

3.2. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

3.3. OTHER INFORMATION

3.3.1. DATALINK DEPARTURE CLEARANCE (DCL)

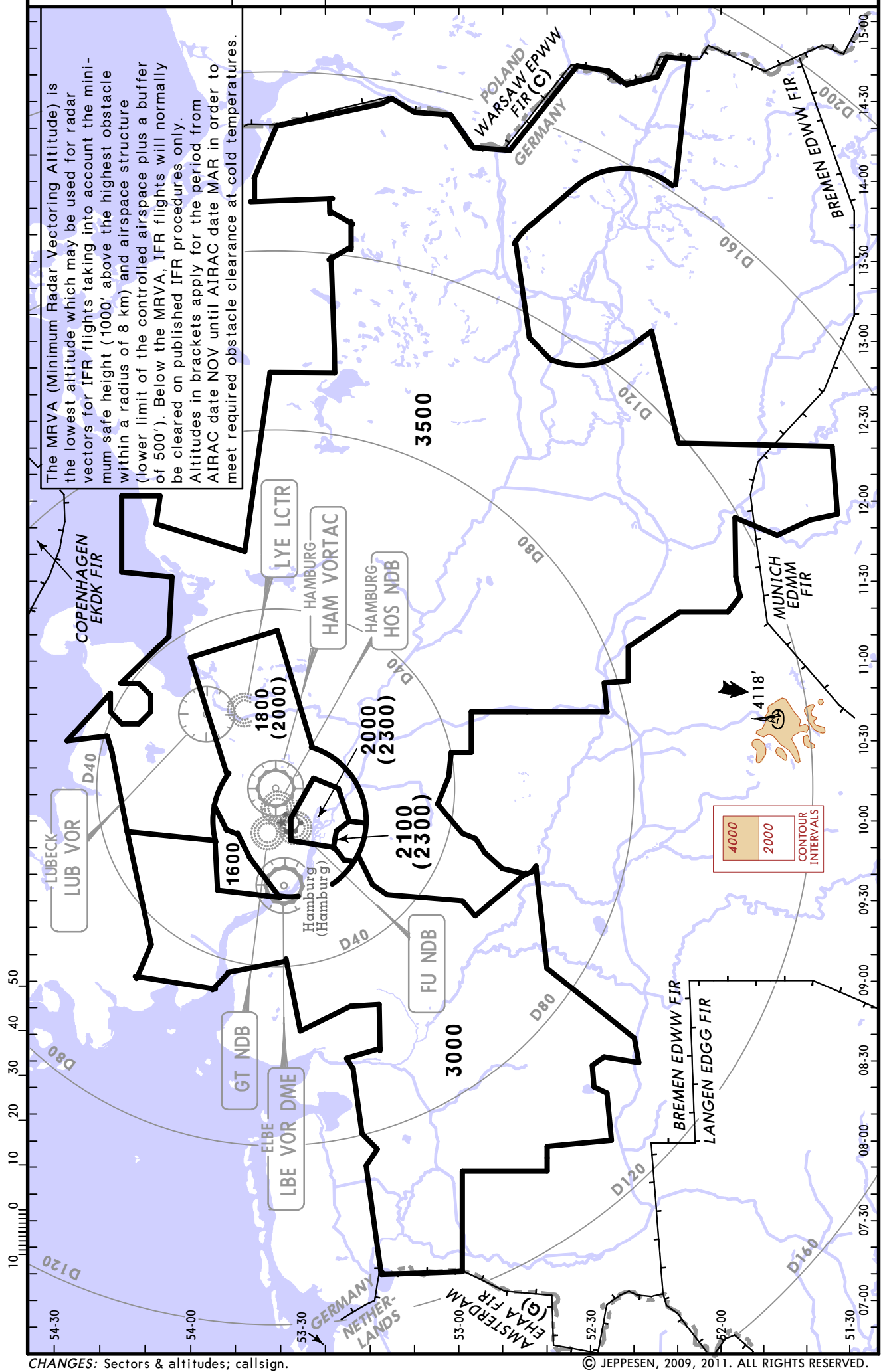
Temporal parameters:

t_i	25 min prior to EOBT for unregulated flights.
	30 min prior to CTOT for ATFM regulated flights.
t_t	11 min prior to EOBT for unregulated flights.
	16 min prior to CTOT for ATFM regulated flights.
t_0	1 min
t_1	5 min
t_2	1 min

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BREMEN Radar (APP)	Apt Elev	Alt Set: hPa (IN on request)
134.25 136.67	53′	Trans level: By ATC Trans alt: 5000′

The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000′ above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500′). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only. Altitudes in brackets apply for the period from AIRAC date NOV until AIRAC date MAR in order to meet required obstacle clearance at cold temperatures.

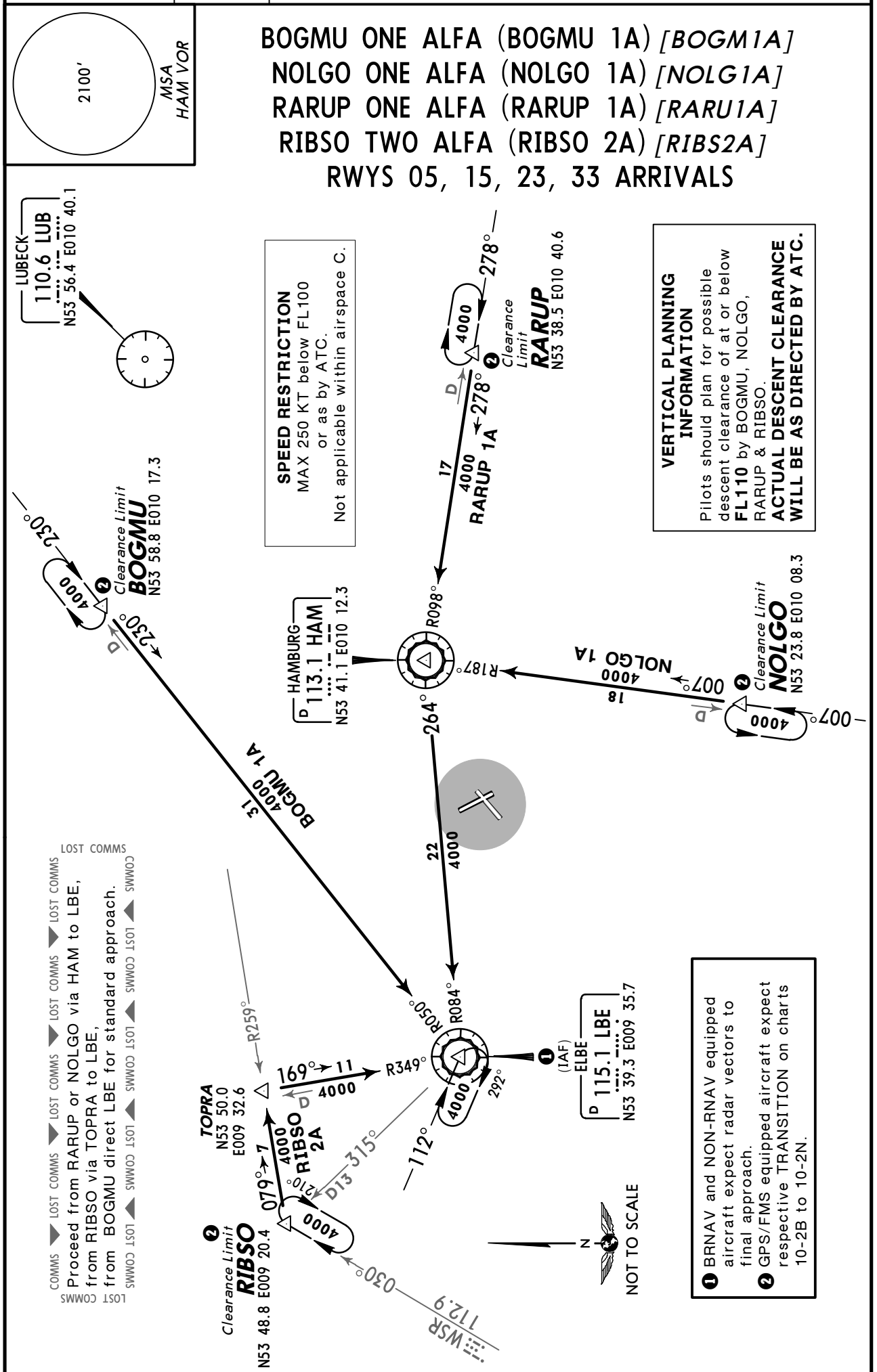


CHANGES: Sectors & altitudes; callsign.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
123.12	53′	Trans level: By ATC Trans alt: 5000′

BOGMU ONE ALFA (BOGMU 1A) *[BOGM1A]*
NOLGO ONE ALFA (NOLGO 1A) *[NOLG1A]*
RARUP ONE ALFA (RARUP 1A) *[RARU1A]*
RIBSO TWO ALFA (RIBSO 2A) *[RIBS2A]*
RWYS 05, 15, 23, 33 ARRIVALS



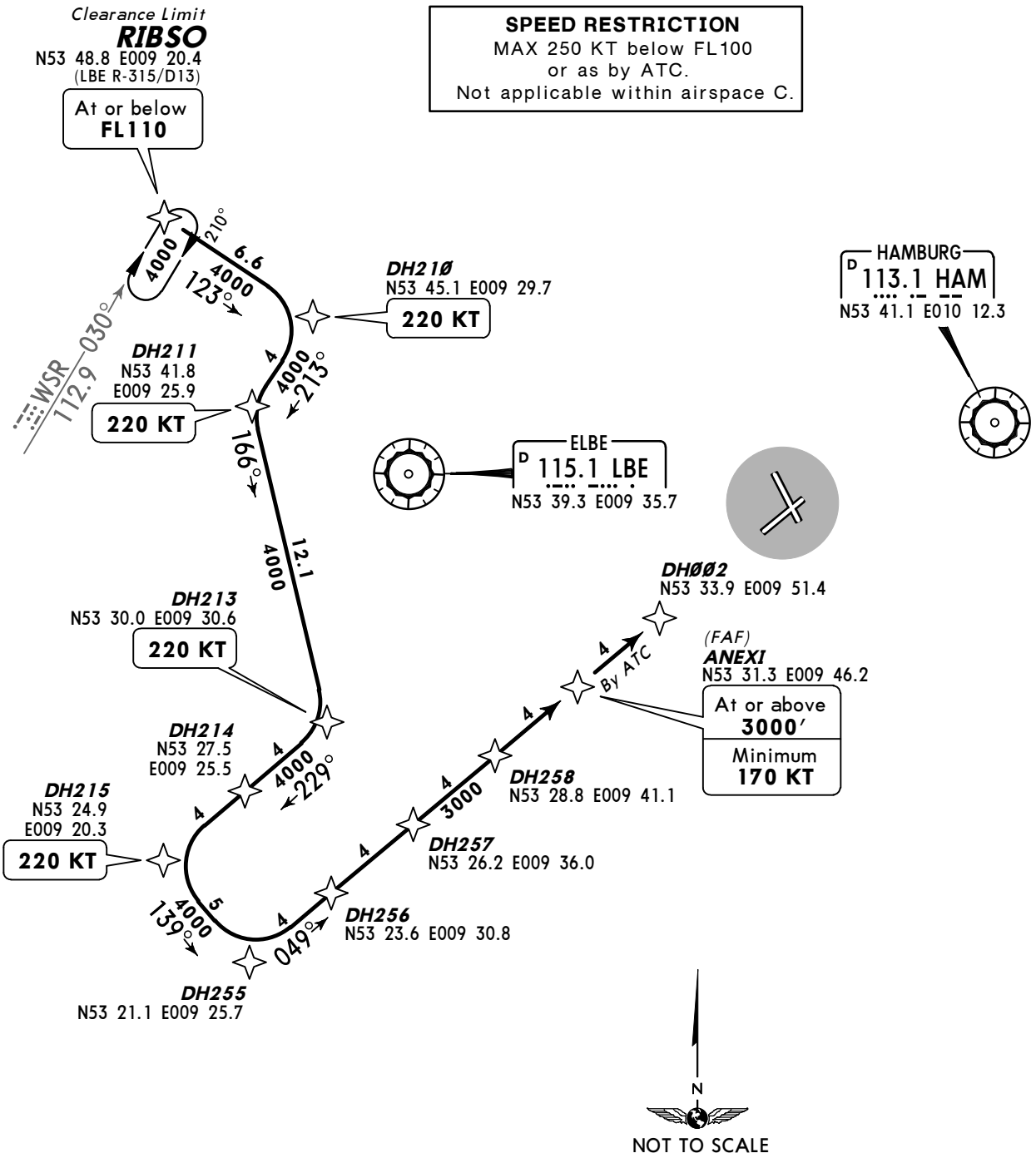
CHANGES: MSA raised.

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*D-ATIS	Apt Elev	
123.12	53′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions on Transition are always mandatory unless cancelled by ATC.

2100′
MSA
HAM VOR

RIBSO Ø5 *[RIBØ5]*
RWY 05 RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM NORTHWEST



ROUTING

RIBSO **(FL110-)** - DH210 (K220) - DH211 (K220) - DH213 (K220) - DH215 (K220) - DH255 - ANEXI **(3000′+;** K170+).

CHANGES: None.

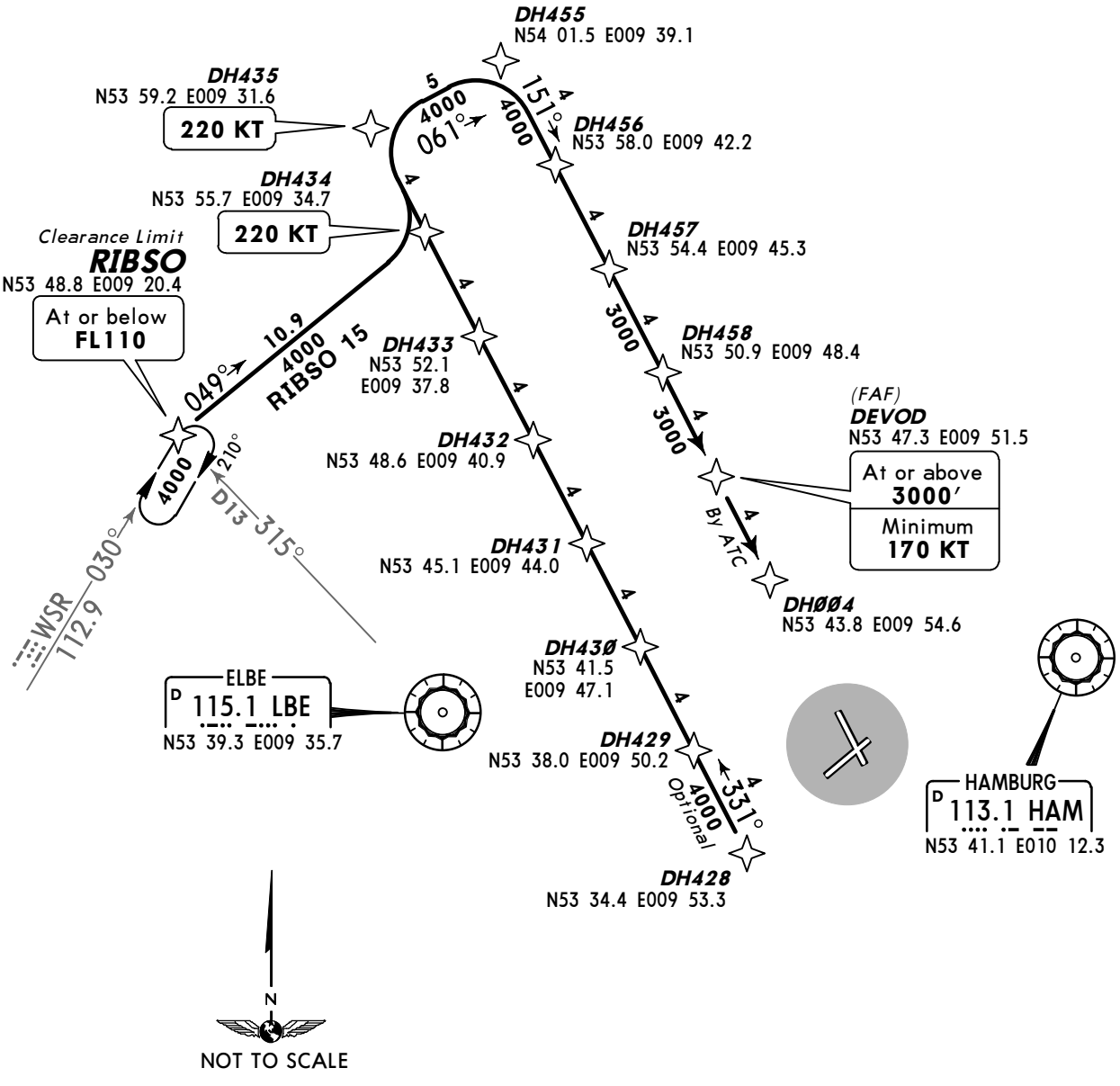
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*D-ATIS 123.12	*Apt Elev* 53′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions on Transition are always mandatory unless cancelled by ATC.

2100′
MSA
HAM VOR

RIBSO 15 *[RIB15]*
RWY 15 RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM NORTHWEST

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



ROUTING

RIBSO **(FL110-)** - DH434 (K220) - DH435 (K220) - DH455 - DEVOD **(3000′+;** K170+).

CHANGES: Tracks updated.

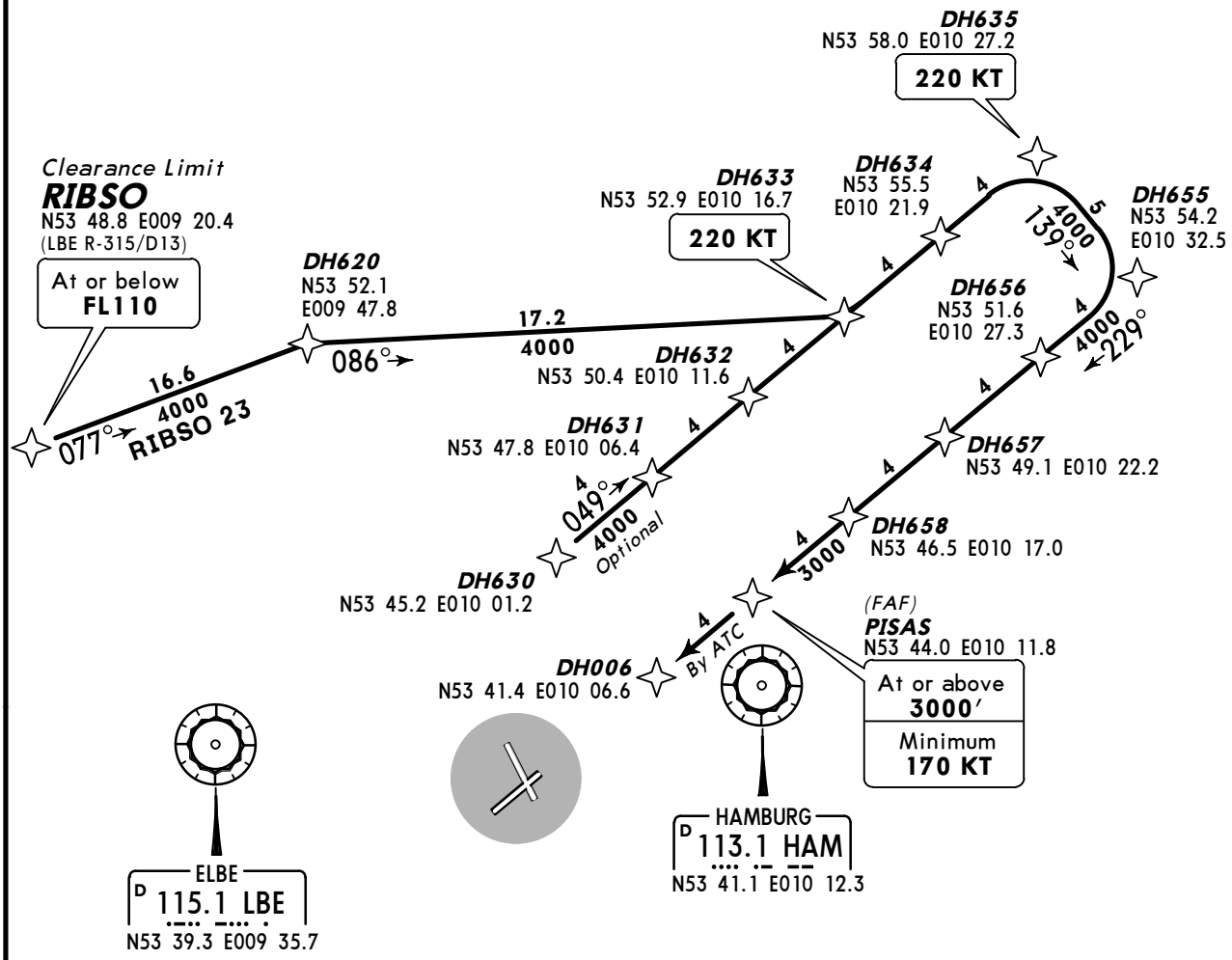
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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition are always mandatory unless cancelled by ATC.
123.12	53′	

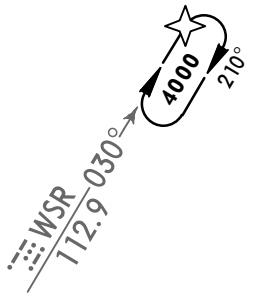
2100′
MSA
HAM VOR

RIBSO 23 *[RIB23]*
RWY 23 RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM NORTHWEST

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



HOLDING OVER RIBSO



ROUTING

RIBSO **(FL110-)** - DH620 - DH633 (K220) - DH635 (K220) - DH655 - PISAS **(3000′+;** K170+).

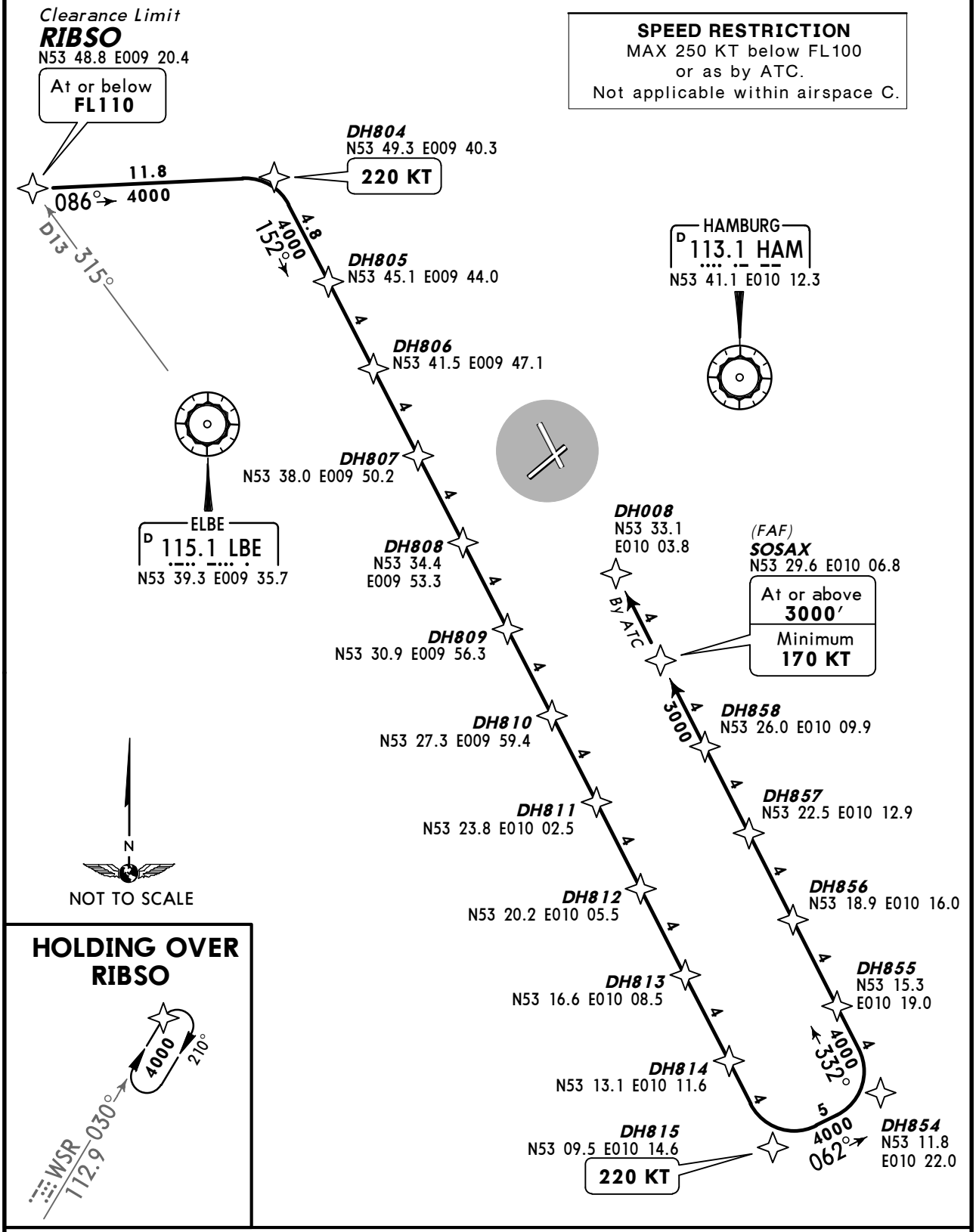
CHANGES: MSA raised.

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*D-ATIS	Apt Elev	
123.12	53′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition are always mandatory unless cancelled by ATC.

2100′
MSA
HAM VOR

RIBSO 33 *[RIB33]*
RWY 33 RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM NORTHWEST



HOLDING OVER RIBSO

ROUTING

RIBSO **(FL110-)** - DH804 (K220) - DH815 (K220) - DH854 - SOSAX **(3000′+;** K170+).

CHANGES: MSA raised.

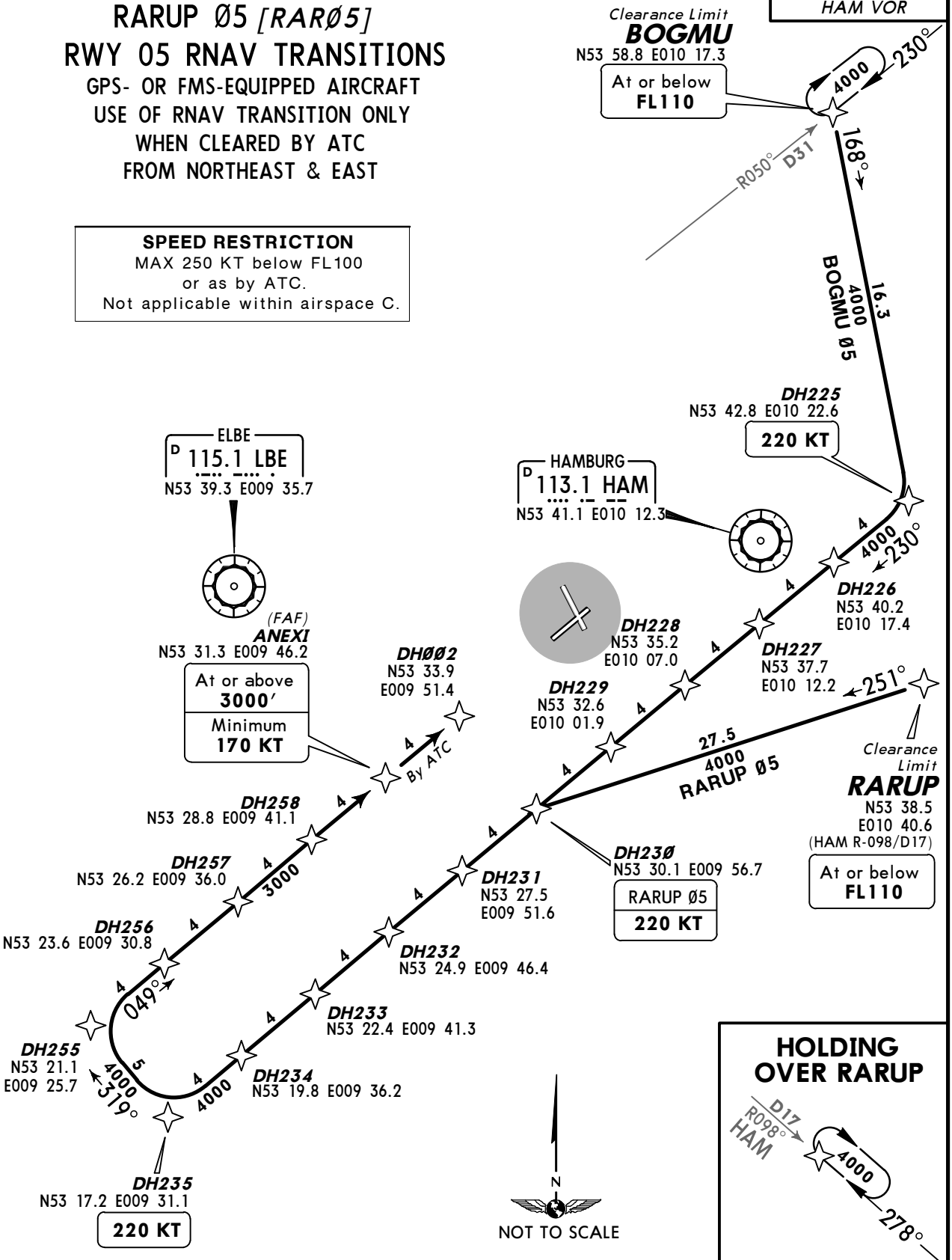
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*D-ATIS	Apt Elev	
123.12	53′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions on Transition are always mandatory unless cancelled by ATC.

2100′
MSA
HAM VOR

BOGMU Ø5 *[BOGØ5]*
RARUP Ø5 *[RARØ5]*
RWY 05 RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC
FROM NORTHEAST & EAST

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



TRANSITION	ROUTING
BOGMU Ø5	BOGMU **(FL110-)** - DH225 (K220) - DH235 (K220) - DH255 - ANEXI **(3000′+;** K170+).
RARUP Ø5	RARUP **(FL110-)** - DH230 (K220) - DH235 (K220) - DH255 - ANEXI **(3000′+;** K170+).

CHANGES: None.

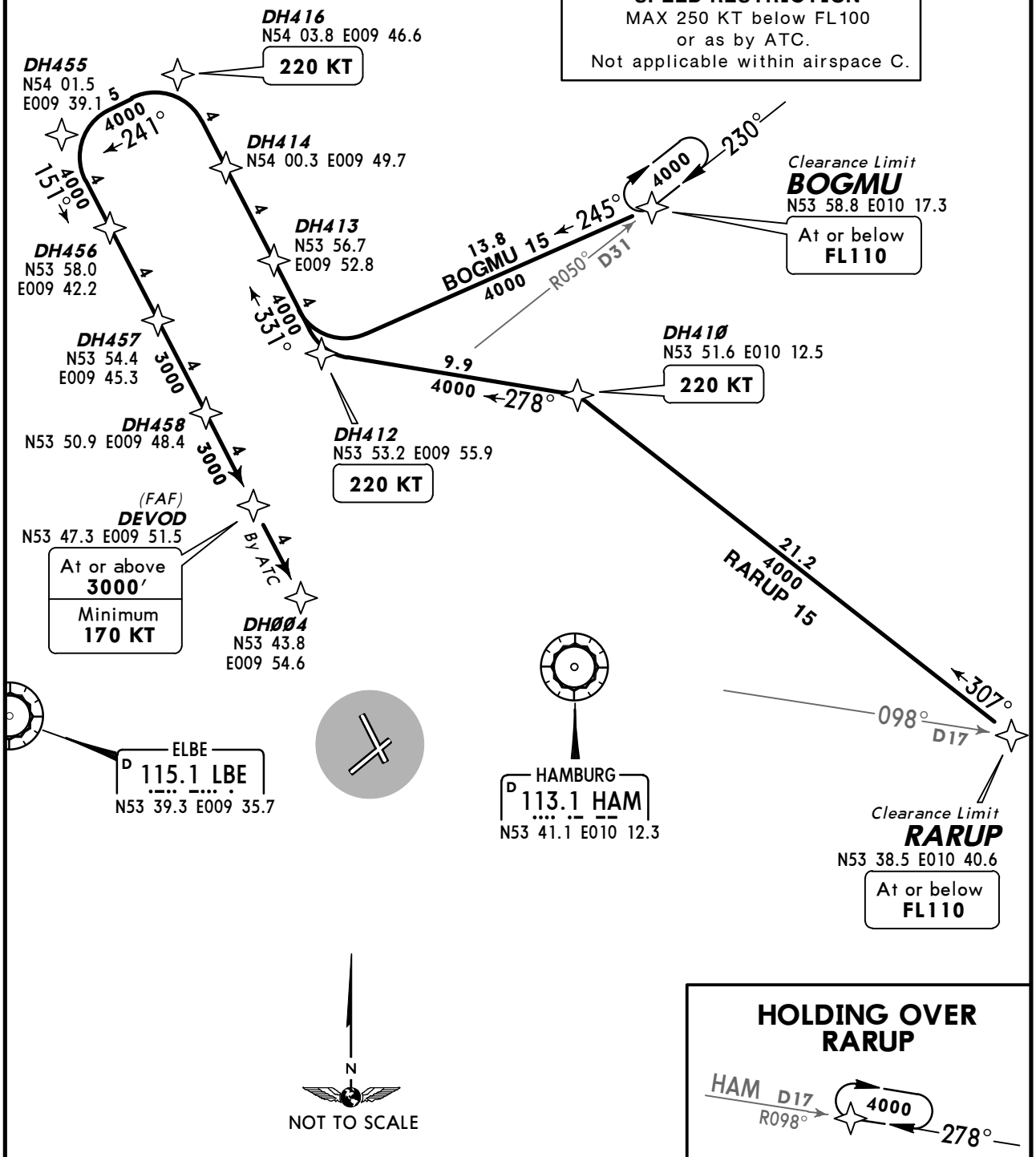
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*D-ATIS	Apt Elev	
123.12	53′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions on Transition are always mandatory unless cancelled by ATC.

2100′
MSA
HAM VOR

BOGMU 15 *[BOG15]*, RARUP 15 *[RAR15]*
RWY 15 RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM NORTHEAST & EAST

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



HOLDING OVER RARUP

TRANSITION	ROUTING
BOGMU 15	BOGMU **(FL110-)** - DH412 (K220) - DH416 (K220) - DH455 - DEVOD **(3000′+;** K170+).
RARUP 15	RARUP **(FL110-)** - DH410 (K220) - DH412 (K220) - DH416 (K220) - DH455 - DEVOD **(3000′+;** K170+).

CHANGES: Tracks updated.

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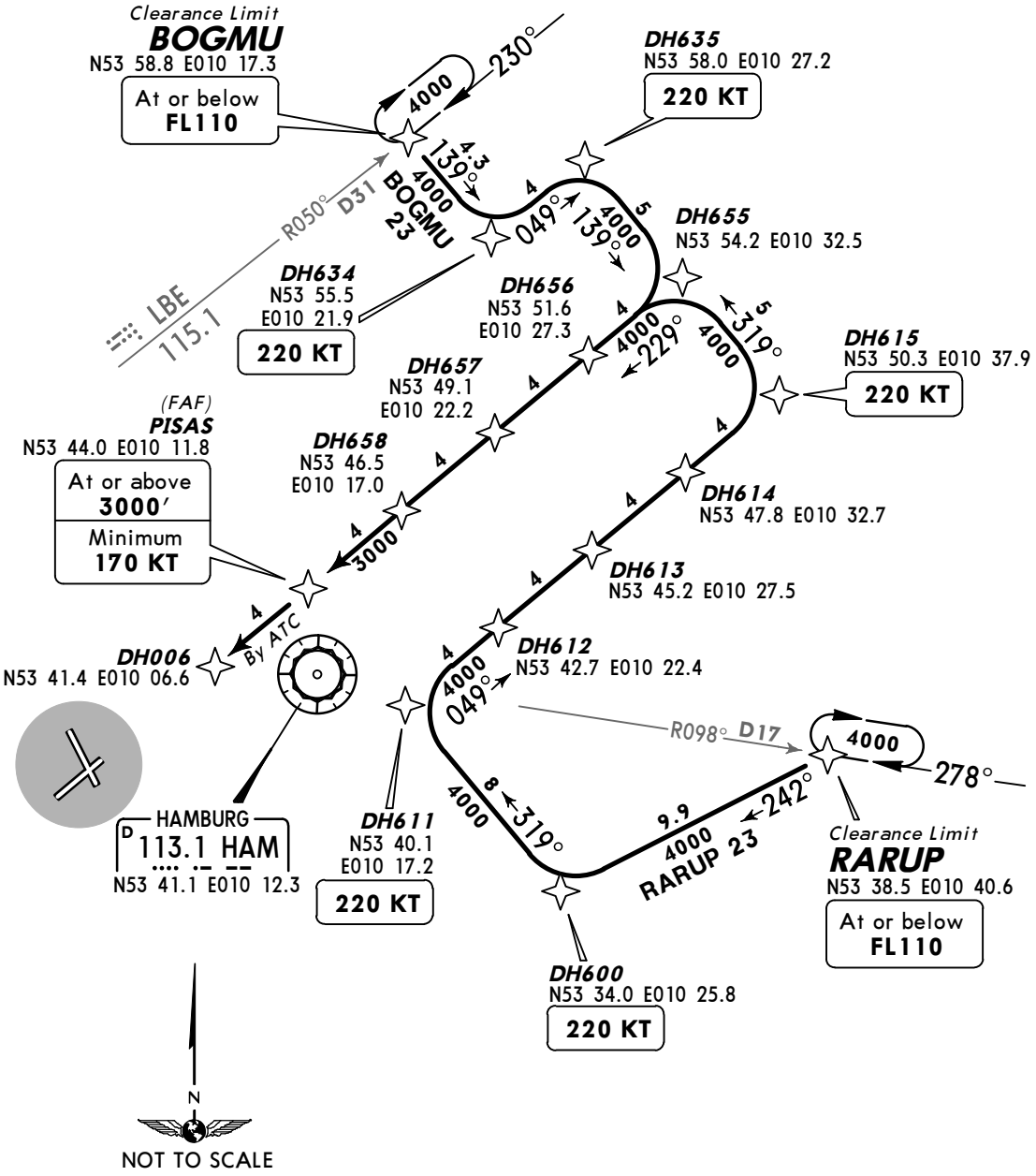
*D-ATIS	*Apt Elev*	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition are always mandatory unless cancelled by ATC.
123.12	53′	

2100′
MSA
HAM VOR

BOGMU 23 *[BOG23]*, RARUP 23 *[RAR23]*
RWY 23 RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM NORTHEAST & EAST

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



TRANSITION	ROUTING
BOGMU 23	BOGMU **(FL110-)** - DH634 (K220) - DH635 (K220) - DH655 - PISAS **(3000′+;** K170+).
RARUP 23	RARUP **(FL110-)** - DH600 (K220) - DH611 (K220) - DH615 (K220) - DH655 - PISAS **(3000′+;** K170+).

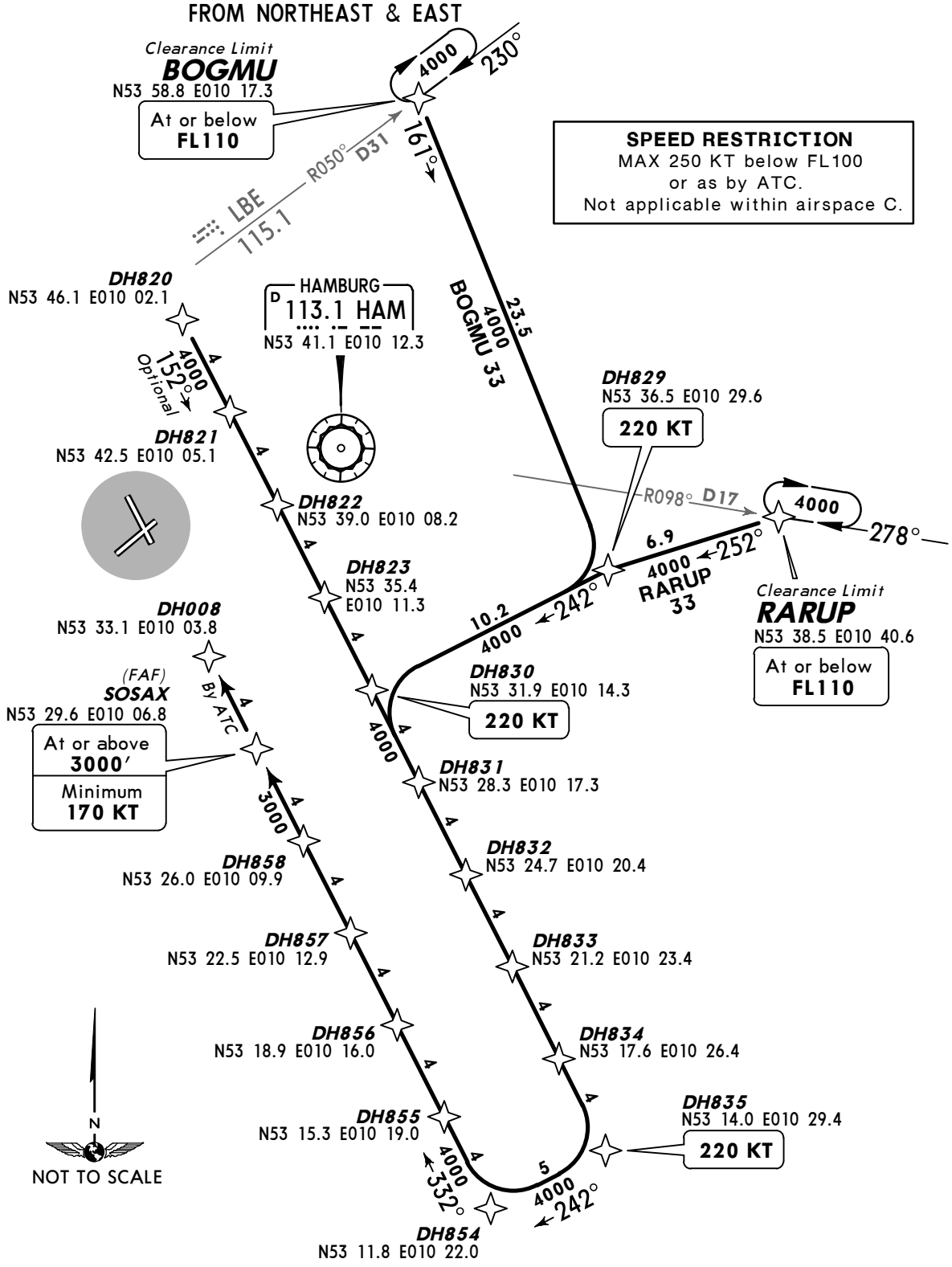
CHANGES: MSA raised.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition are always mandatory unless cancelled by ATC.
123.12	53′	

2100′
MSA
HAM VOR

BOGMU 33 *[BOG33]*, RARUP 33 *[RAR33]*
RWY 33 RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM NORTHEAST & EAST



TRANSITION	ROUTING
BOGMU 33	BOGMU **(FL110-)** - DH829 (K220) - DH830 (K220) - DH835 (K220) - DH854 - SOSAX **(3000′+;** K170+).
RARUP 33	RARUP **(FL110-)** - DH829 (K220) - DH830 (K220) - DH835 (K220) - DH854 - SOSAX **(3000′+;** K170+).

CHANGES: MSA raised.

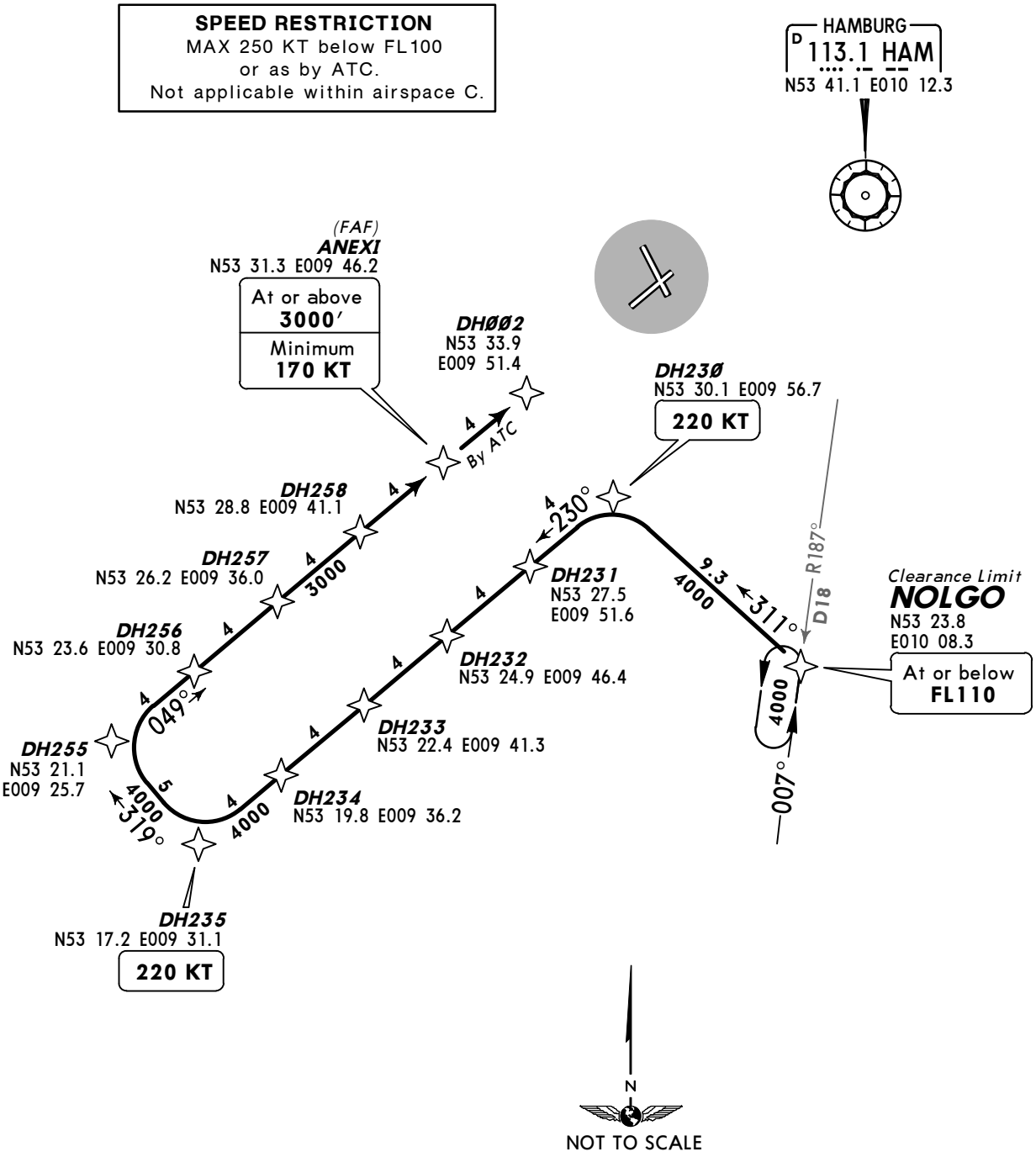
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*D-ATIS	Apt Elev	
123.12	53′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions on Transition are always mandatory unless cancelled by ATC.

2100′
MSA
HAM VOR

NOLGO Ø5 *[NOLØ5]*
RWY 05 RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM SOUTH

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



ROUTING

NOLGO **(FL110-)** - DH230 (K220) - DH235 (K220) - DH255 - ANEXI **(3000′+;** K170+).

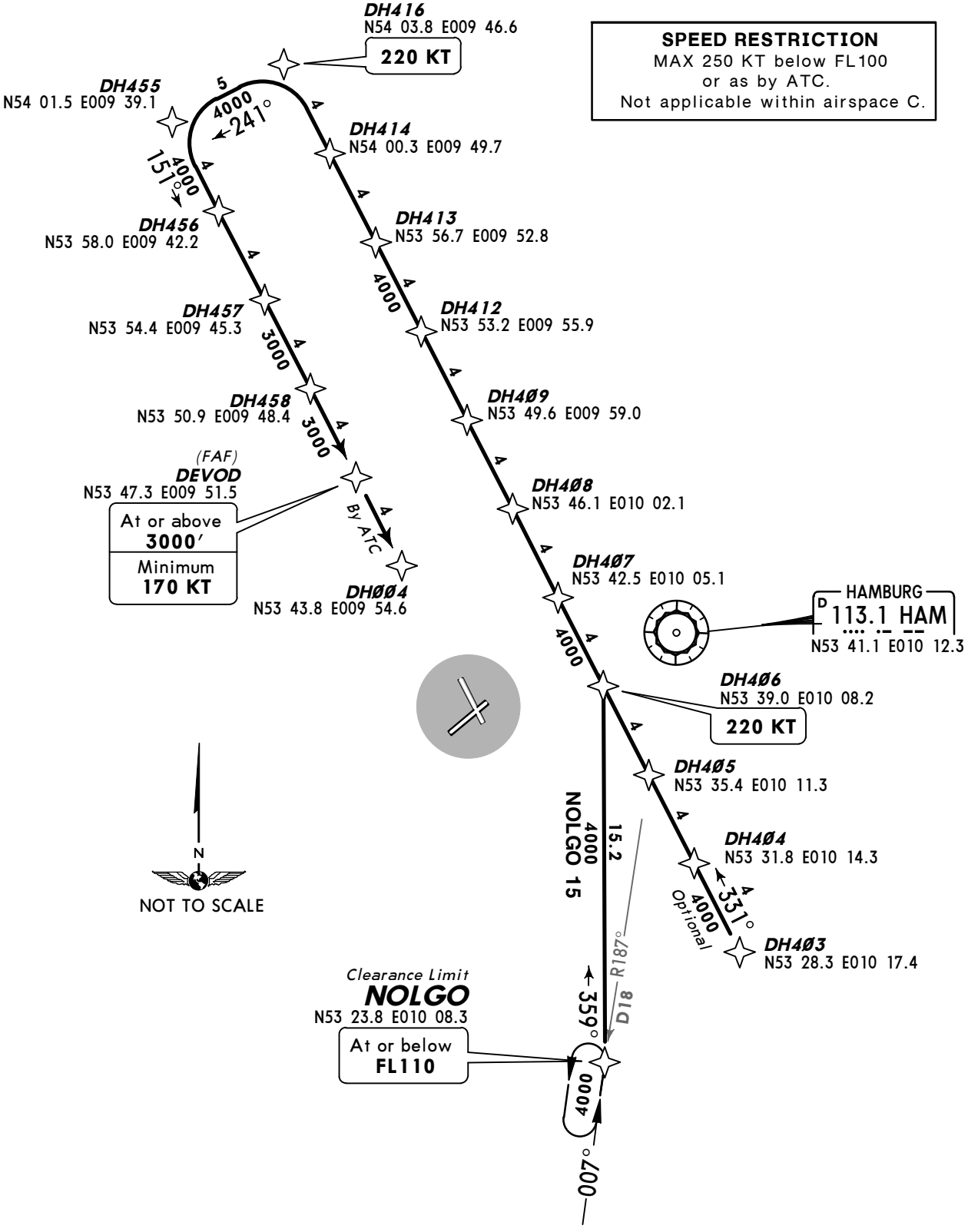
CHANGES: None.

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*D-ATIS	Apt Elev	
123.12	53′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions on Transition are always mandatory unless cancelled by ATC.

2100′
MSA
HAM VOR

NOLGO 15 *[NOL15]*
RWY 15 RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM SOUTH



ROUTING

NOLGO **(FL110-)** - DH406 (K220) - DH416 (K220) - DH455 - DEVOD **(3000′+;** K170+).

CHANGES: Optional transition established; tracks updated.

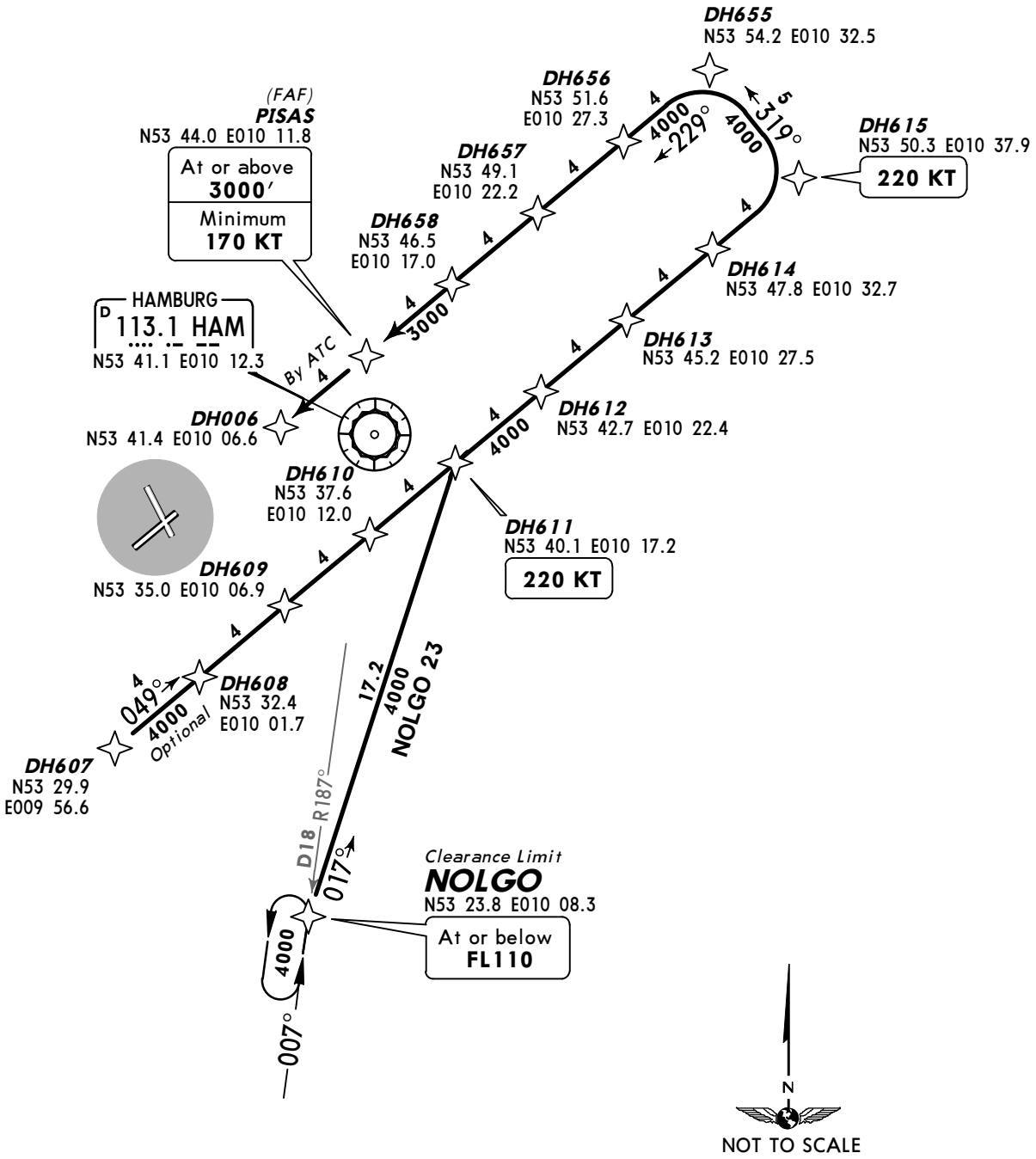
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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition are always mandatory unless cancelled by ATC.
123.12	53′	

2100′
MSA
HAM VOR

NOLGO 23 *[NOL23]*
RWY 23 RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM SOUTH

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



ROUTING

NOLGO **(FL110-)** - DH611 (K220) - DH615 (K220) - DH655 - PISAS **(3000′+;** K170+).

CHANGES: MSA raised.

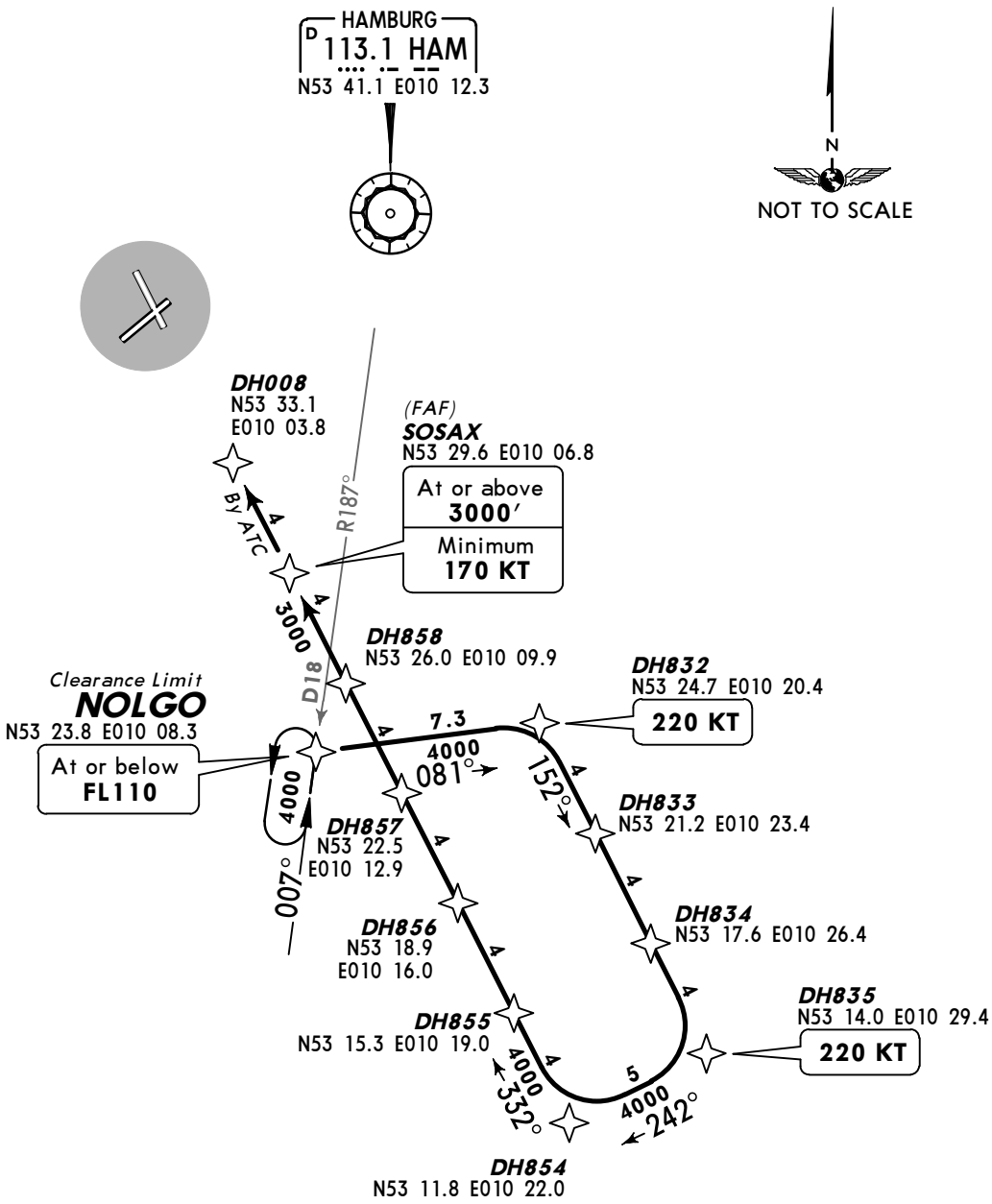
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*D-ATIS	Apt Elev	
123.12	53′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition are always mandatory unless cancelled by ATC.

2100′
MSA
HAM VOR

NOLGO 33 *[NOL33]*
RWY 33 RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM SOUTH

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



ROUTING

NOLGO **(FL110-)** - DH832 (K220) - DH835 (K220) - DH854 - SOSAX **(3000′+;** K170+).

CHANGES: MSA raised.

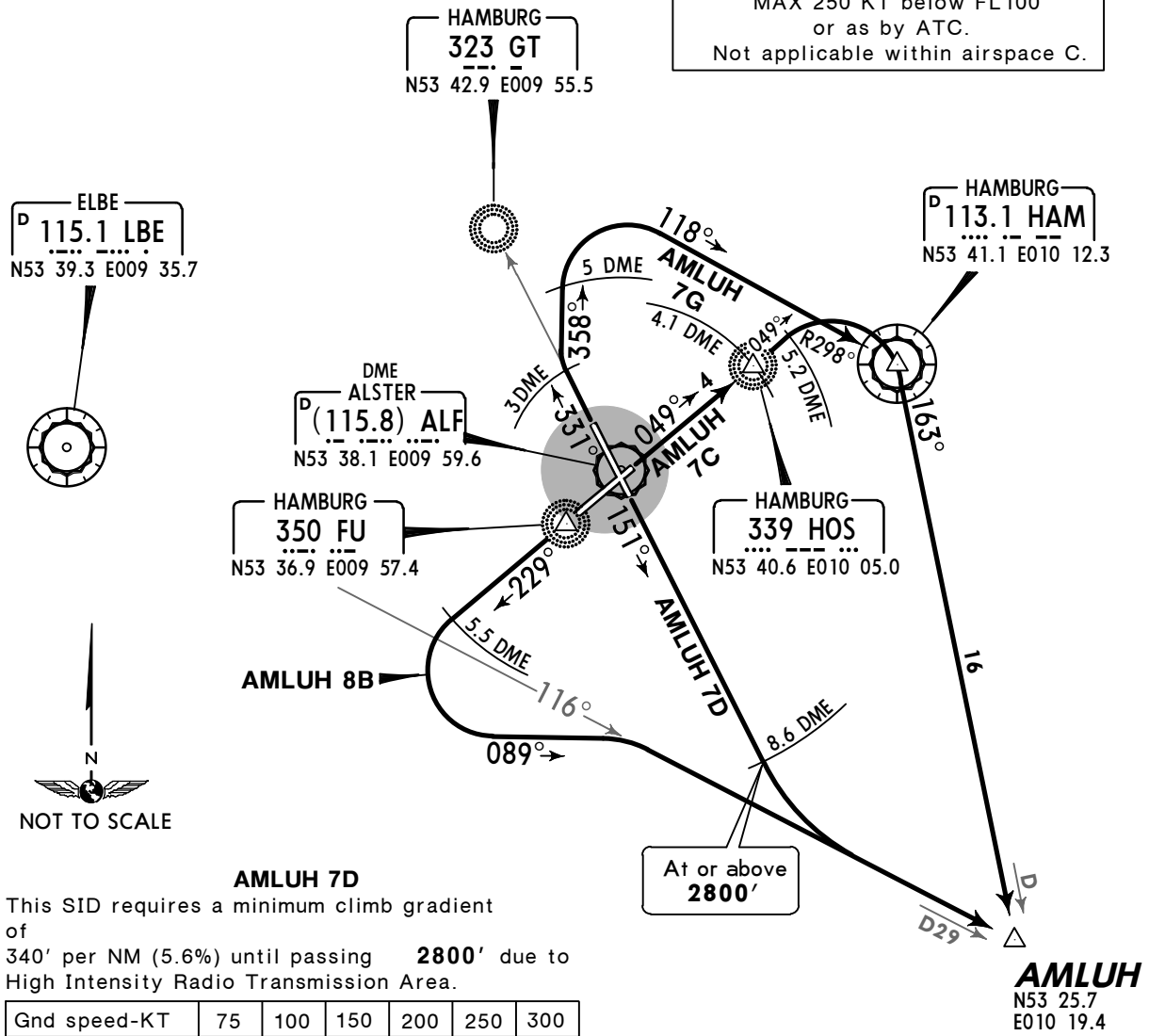
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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.
136.67	53′	

2100′
MSA
HAM VOR

AMLUH EIGHT BRAVO (AMLUH 8B)
AMLUH SEVEN CHARLIE (AMLUH 7C)
AMLUH SEVEN DELTA (AMLUH 7D)
AMLUH SEVEN GOLF (AMLUH 7G)
RWYS 23, 05, 15, 33 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



AMLUH 7D

This SID requires a minimum climb gradient of
340′ per NM (5.6%) until passing **2800′** due to High Intensity Radio Transmission Area.

Gnd speed-KT	75	100	150	200	250	300
340′ per NM	425	567	851	1134	1418	1701

If unable to comply advise ATC prior to start-up.

Initial climb clearance **5000′**

SID	RWY	ROUTING
AMLUH 8B	**23**	Climb straight ahead via FU to ALF 5.5 DME, turn LEFT, 089° track, intercept LBE R-116 to AMLUH.
AMLUH 7C	**05**	To HOS (ALF 4.1 DME), 049° bearing to ALF 5.2 DME, turn RIGHT, intercept HAM R-163 to AMLUH.
AMLUH 7D	**15**	Intercept 151° bearing from GT to ALF 8.6 DME, turn LEFT, intercept LBE R-116 to AMLUH.
AMLUH 7G	**33**	Intercept 331° bearing towards GT, at ALF 3 DME turn RIGHT, 358° track, at ALF 5 DME turn RIGHT, intercept HAM R-298 inbound to HAM, turn RIGHT, HAM R-163 to AMLUH.

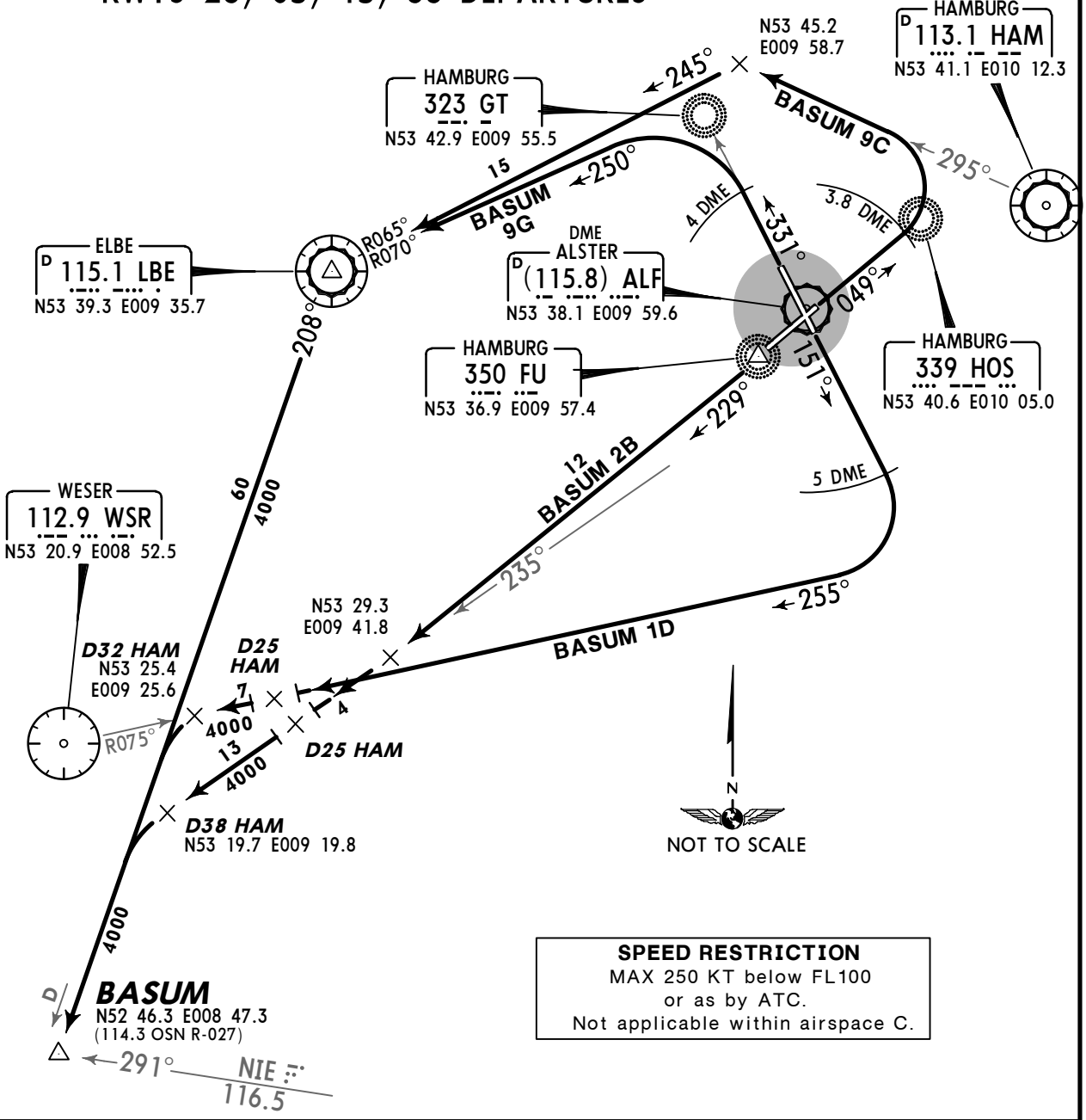
CHANGES: SIDs AMLUH 7B, 6D & 6G renumbered 8B, 7D & 7G.

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BREMEN Radar	Apt Elev	
134.25	53′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.

2100′
MSA
HAM VOR

BASUM TWO BRAVO (BASUM 2B)
BASUM NINE CHARLIE (BASUM 9C)
BASUM ONE DELTA (BASUM 1D)
BASUM NINE GOLF (BASUM 9G)
RWYS 23, 05, 15, 33 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
BASUM 2B	**23**	Climb straight ahead to FU, 229° bearing, intercept HAM R-235 to D38 HAM, turn LEFT, intercept LBE R-208 to BASUM.
BASUM 9C	**05**	Intercept 049° bearing towards HOS, at ALF 3.8 DME turn LEFT, intercept HAM R-295, intercept LBE R-065 inbound to LBE, turn LEFT, LBE R-208 to BASUM.
BASUM 1D	**15**	Intercept 151° bearing from GT to ALF 5 DME, turn RIGHT, intercept WSR R-075 inbound to D32 HAM, turn LEFT, intercept LBE R-208 to BASUM.
BASUM 9G	**33**	Intercept 331° bearing towards GT, at ALF 4 DME turn LEFT, intercept LBE R-070 inbound to LBE, turn LEFT, LBE R-208 to BASUM.

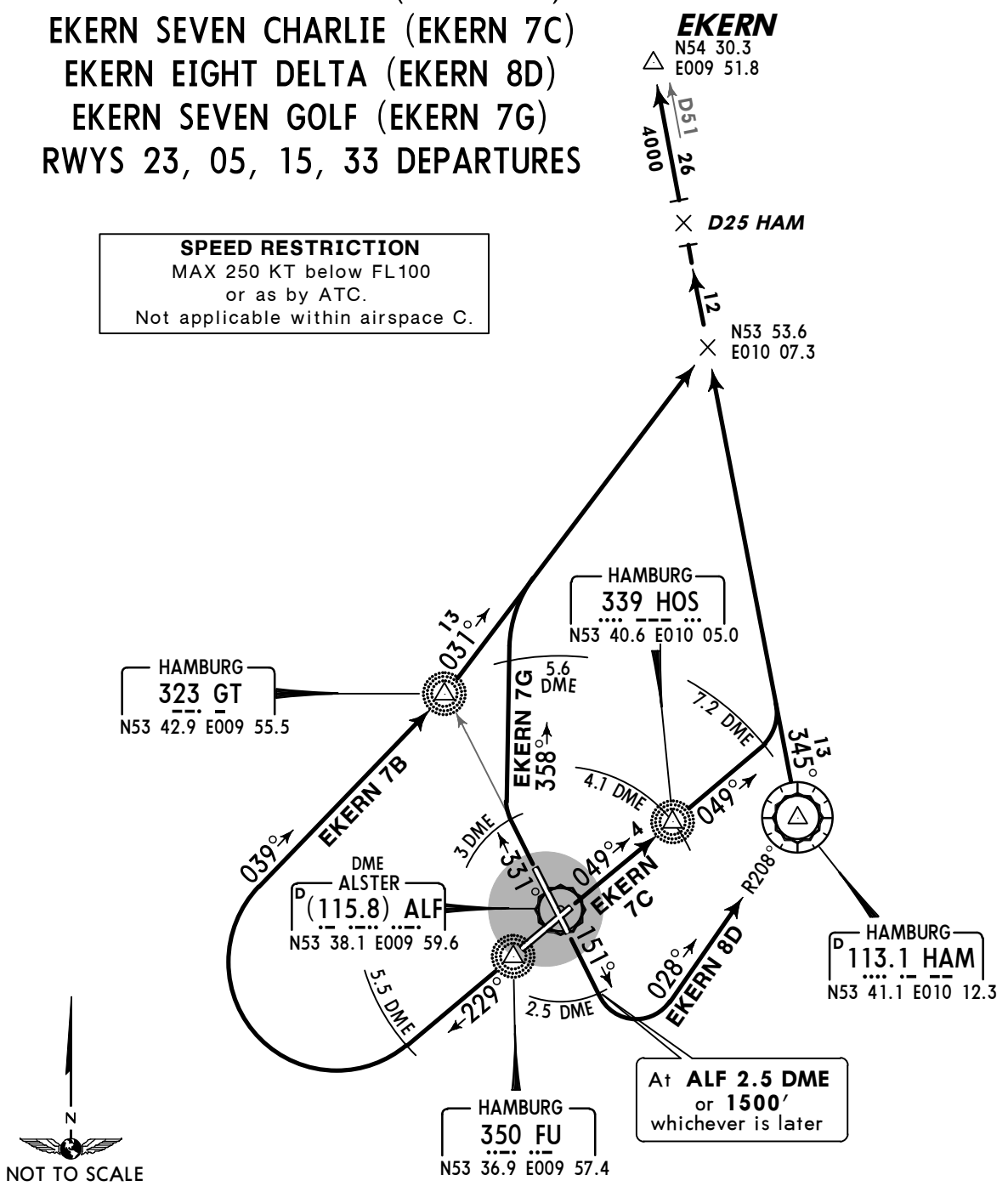
CHANGES: SIDs BASUM 1B, 9D, 8G renumbered 2B, 1D, 9G.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.
136.67	53′	

2100′
MSA
HAM VOR

EKERN SEVEN BRAVO (EKERN 7B)
EKERN SEVEN CHARLIE (EKERN 7C)
EKERN EIGHT DELTA (EKERN 8D)
EKERN SEVEN GOLF (EKERN 7G)
RWYS 23, 05, 15, 33 DEPARTURES



Initial climb clearance **5000′**

SID	RWY	ROUTING
EKERN 7B	**23**	Climb straight ahead via FU to ALF 5.5 DME, turn RIGHT, intercept 039° bearing to GT, 031° bearing, intercept HAM R-345 to EKERN.
EKERN 7C	**05**	To HOS (ALF 4.1 DME), 049° bearing to ALF 7.2 DME, turn LEFT, intercept HAM R-345 to EKERN.
EKERN 8D	**15**	Intercept 151° bearing from GT, at ALF 2.5 DME or **1500′,** whichever is later, turn LEFT, intercept HAM R-208 inbound to HAM, turn LEFT, HAM R-345 to EKERN.
EKERN 7G	**33**	Intercept 331° bearing towards GT, at ALF 3 DME turn RIGHT, 358° track, at ALF 5.6 DME turn RIGHT, intercept 031° bearing from GT, intercept HAM R-345 to EKERN.

CHANGES: SIDs EKERN 6B, 7D, 6G renumbered 7B, 8D, 7G.

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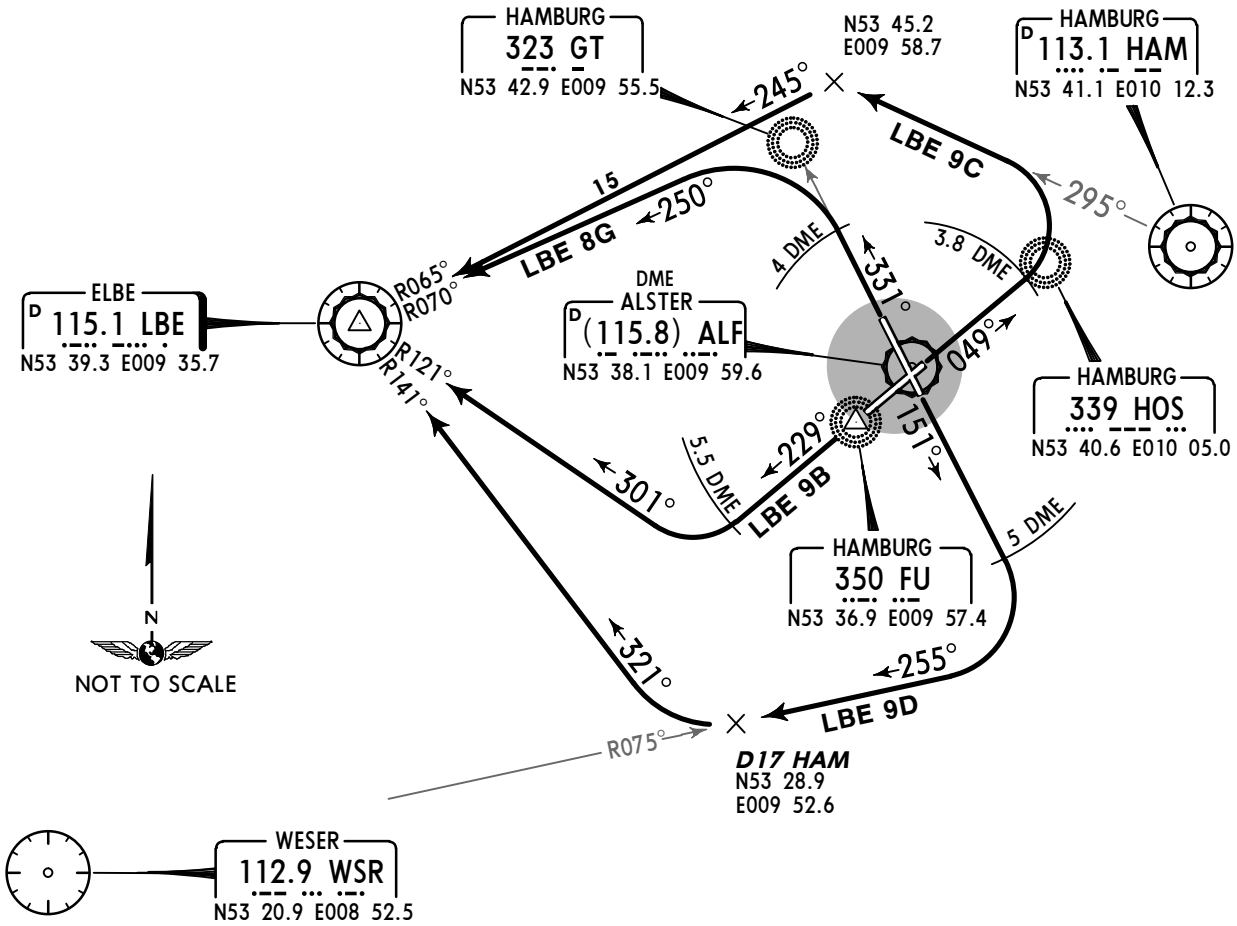
BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.
134.25	53′	

2100′
MSA
HAM VOR

ELBE NINE BRAVO (LBE 9B)
ELBE NINE CHARLIE (LBE 9C)
ELBE NINE DELTA (LBE 9D)
ELBE EIGHT GOLF (LBE 8G)
RWYS 23, 05, 15, 33 DEPARTURES

NO ACCESS TO AIRWAYS
R-15, UM-170, (U)N-125, N-850 & UL-126

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

SID	RWY	ROUTING
LBE 9B	**23**	Climb straight ahead via FU to ALF 5.5 DME, turn RIGHT, intercept LBE R-121 inbound to LBE.
LBE 9C	**05**	Intercept 049° bearing towards HOS, at ALF 3.8 DME turn LEFT, intercept HAM R-295, intercept LBE R-065 inbound to LBE.
LBE 9D	**15**	Intercept 151° bearing from GT to ALF 5 DME, turn RIGHT, intercept WSR R-075 inbound to D17 HAM, turn RIGHT, intercept LBE R-141 inbound to LBE.
LBE 8G	**33**	Intercept 331° bearing towards GT, at ALF 4 DME turn LEFT, intercept LBE R-070 inbound to LBE.

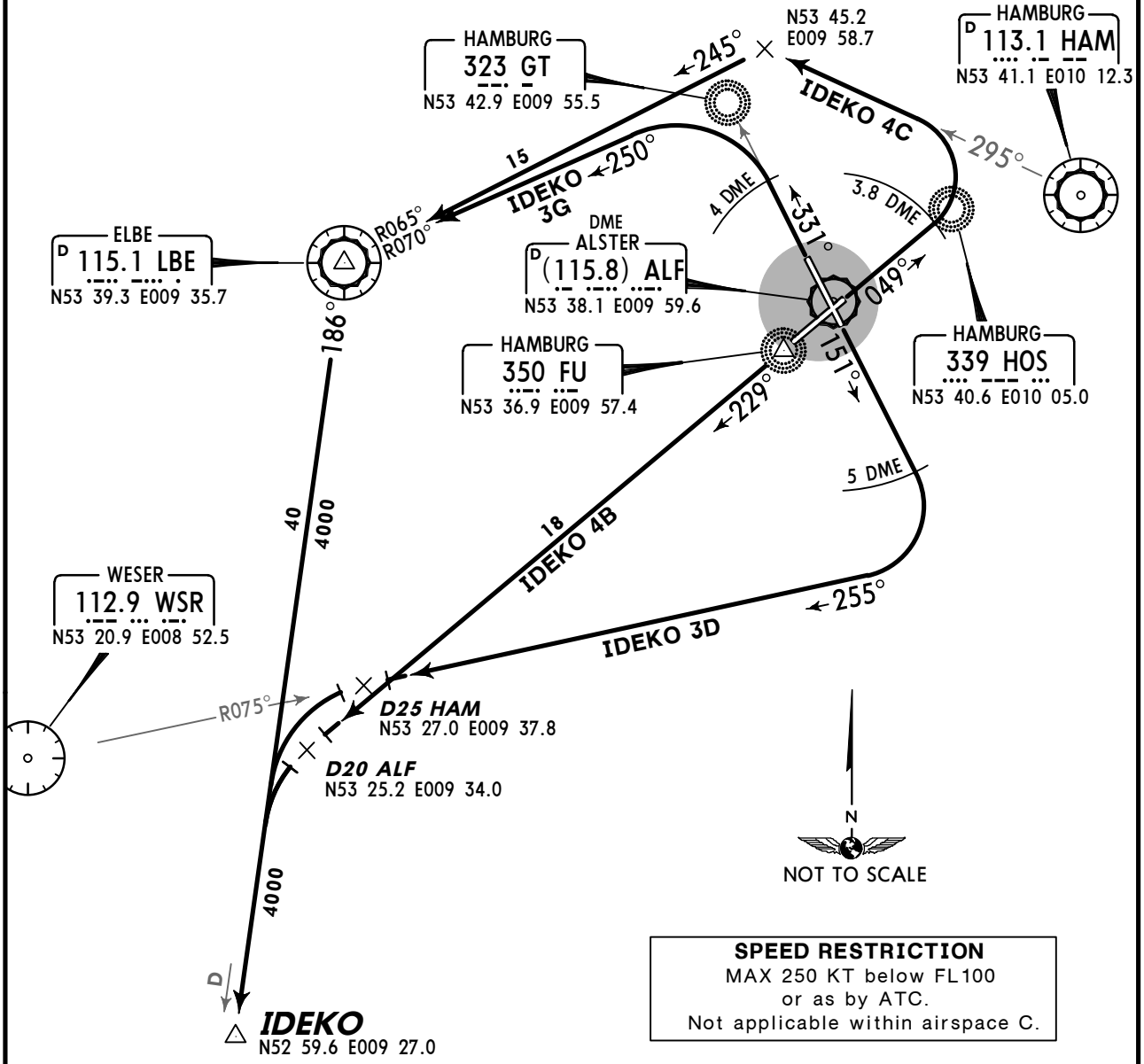
CHANGES: SIDs LBE 8B, 8D, 7G renumbered 9B, 9D, 8G.

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BREMEN Radar	*Apt Elev*	
134.25	53′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.

2100′
MSA
HAM VOR

IDEKO FOUR BRAVO (IDEKO 4B)
IDEKO FOUR CHARLIE (IDEKO 4C)
IDEKO THREE DELTA (IDEKO 3D)
IDEKO THREE GOLF (IDEKO 3G)
RWYS 23, 05, 15, 33 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
IDEKO 4B	**23**	Climb straight ahead to FU, 229° bearing to D20 ALF, turn LEFT, intercept LBE R-186 to IDEKO.
IDEKO 4C	**05**	Intercept 049° bearing towards HOS, at ALF 3.8 DME turn LEFT, intercept HAM R-295, intercept LBE R-065 inbound to LBE, turn LEFT, LBE R-186 to IDEKO.
IDEKO 3D	**15**	Intercept 151° bearing from GT to ALF 5 DME, turn RIGHT, intercept WSR R-075 inbound to D25 HAM, turn LEFT, intercept LBE R-186 to IDEKO.
IDEKO 3G	**33**	Intercept 331° bearing towards GT, at ALF 4 DME turn LEFT, intercept LBE R-070 inbound to LBE, turn LEFT, LBE R-186 to IDEKO.

CHANGES: SID IDEKO 3B, 2D, 2G renumbered 4B, 3D, 3G.

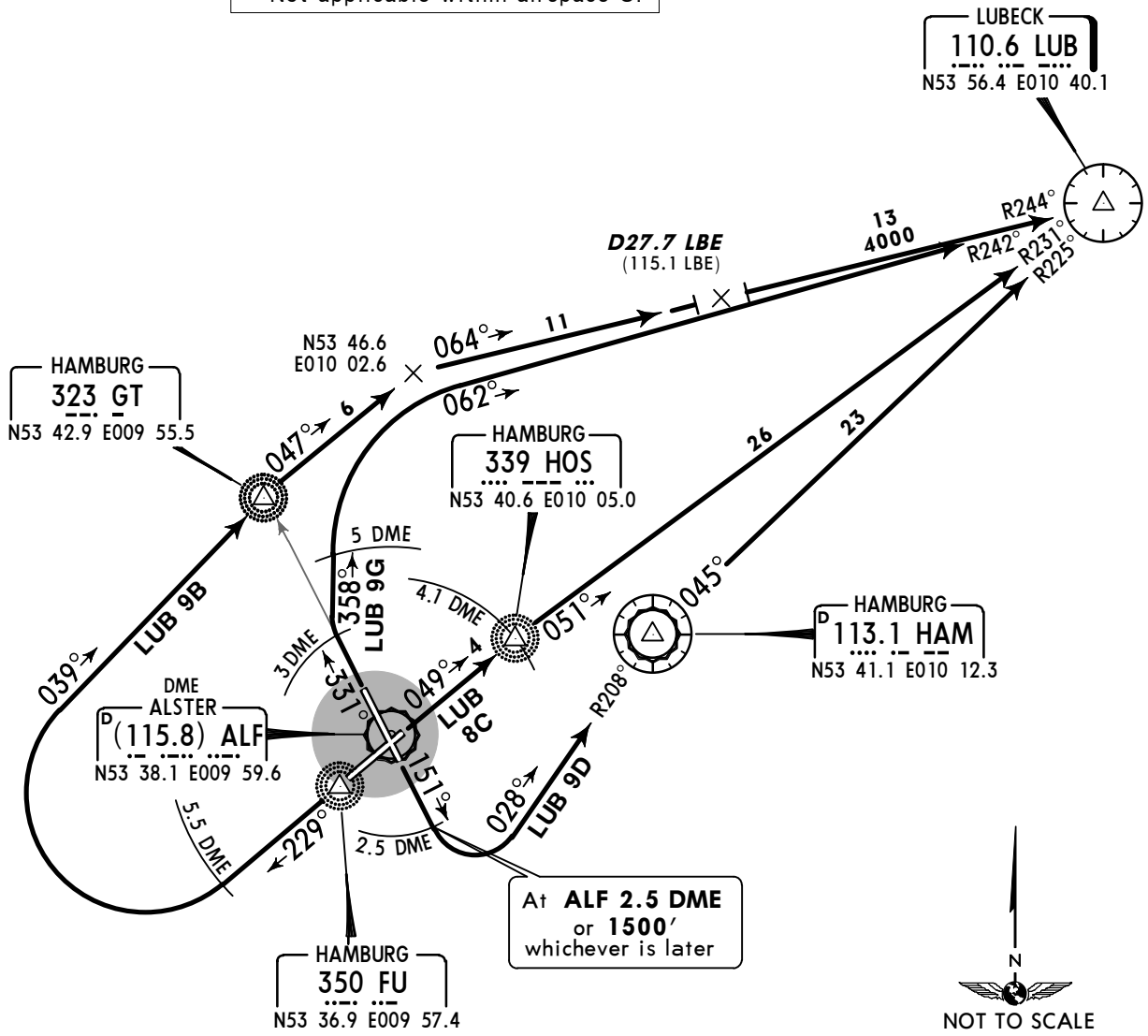
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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.
136.67	53′	

2100′
MSA
HAM VOR

LUBECK NINE BRAVO (LUB 9B)
LUBECK EIGHT CHARLIE (LUB 8C)
LUBECK NINE DELTA (LUB 9D)
LUBECK NINE GOLF (LUB 9G)
RWYS 23, 05, 15, 33 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

SID	RWY	ROUTING
LUB 9B	**23**	Climb straight ahead via FU to ALF 5.5 DME, turn RIGHT, intercept 039° bearing to GT, 047° bearing, intercept LUB R-244 inbound to LUB.
LUB 8C	**05**	To HOS (ALF 4.1 DME), intercept LUB R-231 inbound to LUB.
LUB 9D	**15**	Intercept 151° bearing from GT, at ALF 2.5 DME or **1500′,** whichever is later, turn LEFT, intercept HAM R-208 inbound to HAM, turn RIGHT, HAM R-045 to LUB.
LUB 9G	**33**	Intercept 331° bearing towards GT, at ALF 3 DME turn RIGHT, 358° track, at ALF 5 DME turn RIGHT, intercept LUB R-242 inbound to LUB.

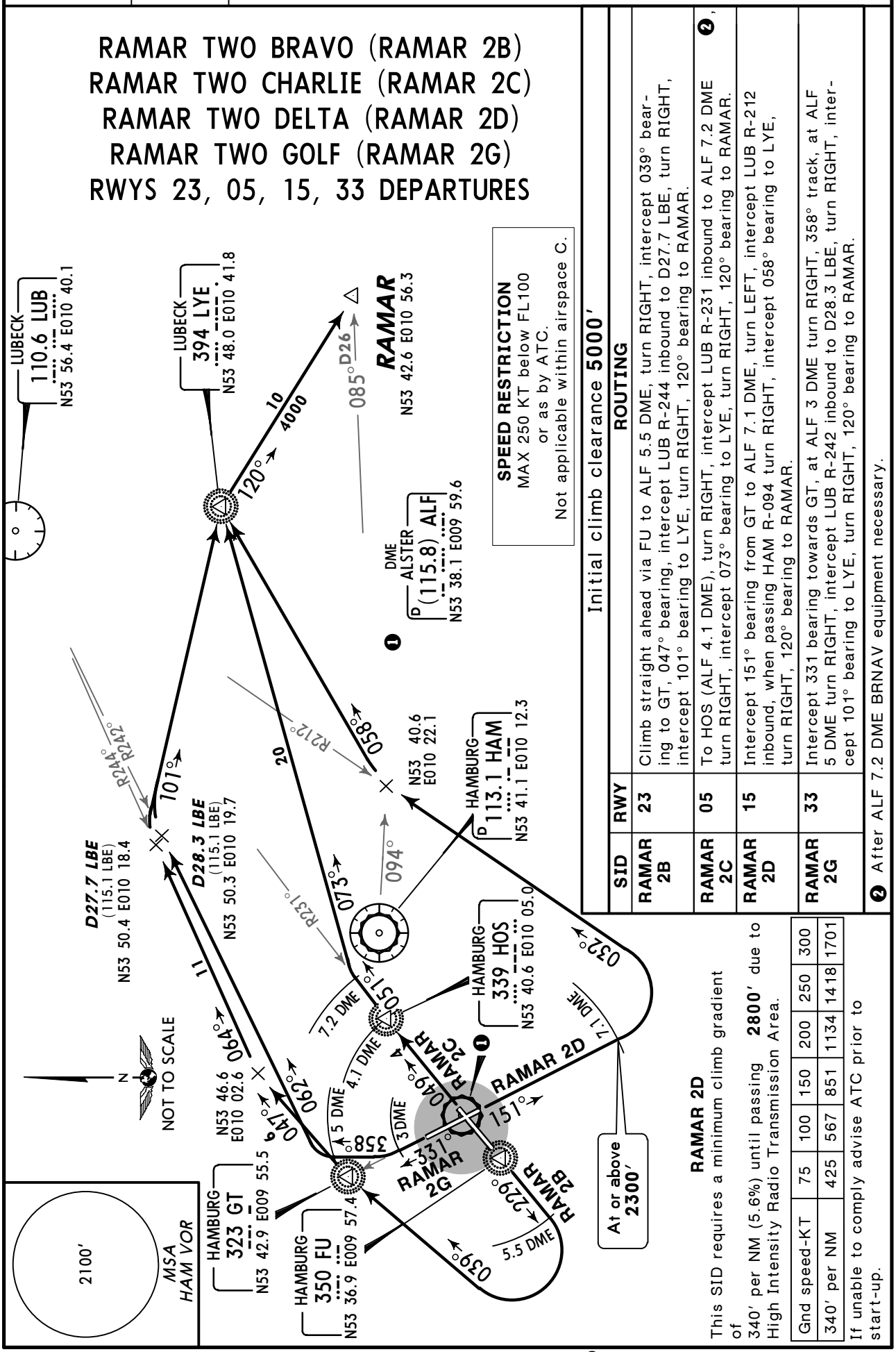
CHANGES: SIDs LUB 8B, 8D, 8G renumbered 9B, 9D, 9G.

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BREMEN Radar	*Apt Elev*	
136.67	53′	

Trans level: By ATC Trans alt: 5000′
1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
3. Rwys 23, 05, 15: EXPECT close-in obstacles.

RAMAR TWO BRAVO (RAMAR 2B)
RAMAR TWO CHARLIE (RAMAR 2C)
RAMAR TWO DELTA (RAMAR 2D)
RAMAR TWO GOLF (RAMAR 2G)
RWYS 23, 05, 15, 33 DEPARTURES



Gnd speed-KT	75	100	150	200	250	300
340′ per NM	425	567	851	1134	1418	1701

SID	RWY	ROUTING
RAMAR 2B	23	Climb straight ahead via FU to ALF 5.5 DME, turn RIGHT, intercept 039° bearing to GT, 047° bearing, intercept LUB R-244 inbound to D27.7 LBE, turn RIGHT, intercept 101° bearing to LYE, turn RIGHT, 120° bearing to RAMAR.
RAMAR 2C	05	To HOS (ALF 4.1 DME), turn RIGHT, intercept LUB R-231 inbound to ALF 7.2 DME ❷, turn RIGHT, intercept 073° bearing to LYE, turn RIGHT, 120° bearing to RAMAR.
RAMAR 2D	15	Intercept 151° bearing from GT to ALF 7.1 DME, turn LEFT, intercept LUB R-212 inbound, when passing HAM R-094 turn RIGHT, intercept 058° bearing to LYE, turn RIGHT, 120° bearing to RAMAR.
RAMAR 2G	33	Intercept 331 bearing towards GT, at ALF 3 DME turn RIGHT, 358° track, at ALF 5 DME turn RIGHT, intercept LUB R-242 inbound to D28.3 LBE, turn RIGHT, intercept 101° bearing to LYE, turn RIGHT, 120° bearing to RAMAR.

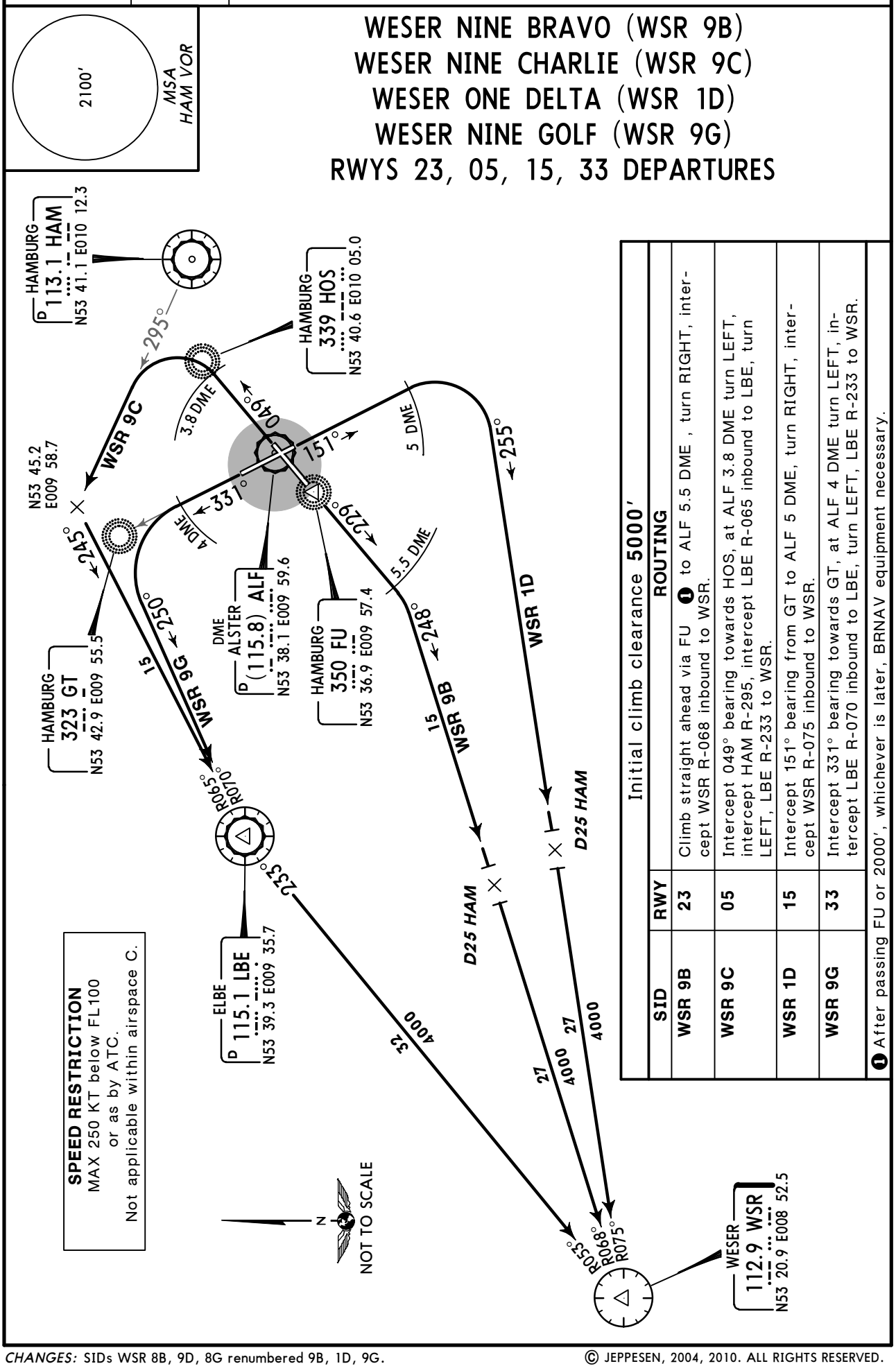
❷ After ALF 7.2 DME BRNAV equipment necessary.

CHANGES: SIDs renumbered.

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BREMEN Radar	*Apt Elev*
134.25	53′

Trans level: By ATC Trans alt: 5000′
1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
3. Rwys 23, 05, 15: EXPECT close-in obstacles.



Initial climb clearance **5000′**

SID	RWY	ROUTING
WSR 9B	23	Climb straight ahead via FU ❶ to ALF 5.5 DME , turn RIGHT, intercept WSR R-068 inbound to WSR.
WSR 9C	05	Intercept 049° bearing towards HOS, at ALF 3.8 DME turn LEFT, intercept HAM R-295, intercept LBE R-065 inbound to LBE, turn LEFT, LBE R-233 to WSR.
WSR 1D	15	Intercept 151° bearing from GT to ALF 5 DME, turn RIGHT, intercept WSR R-075 inbound to WSR.
WSR 9G	33	Intercept 331° bearing towards GT, at ALF 4 DME turn LEFT, intercept LBE R-070 inbound to LBE, turn LEFT, LBE R-233 to WSR.

❶ After passing FU or 2000′, whichever is later, BRNAV equipment necessary.

CHANGES: SIDs WSR 8B, 9D, 8G renumbered 9B, 1D, 9G.

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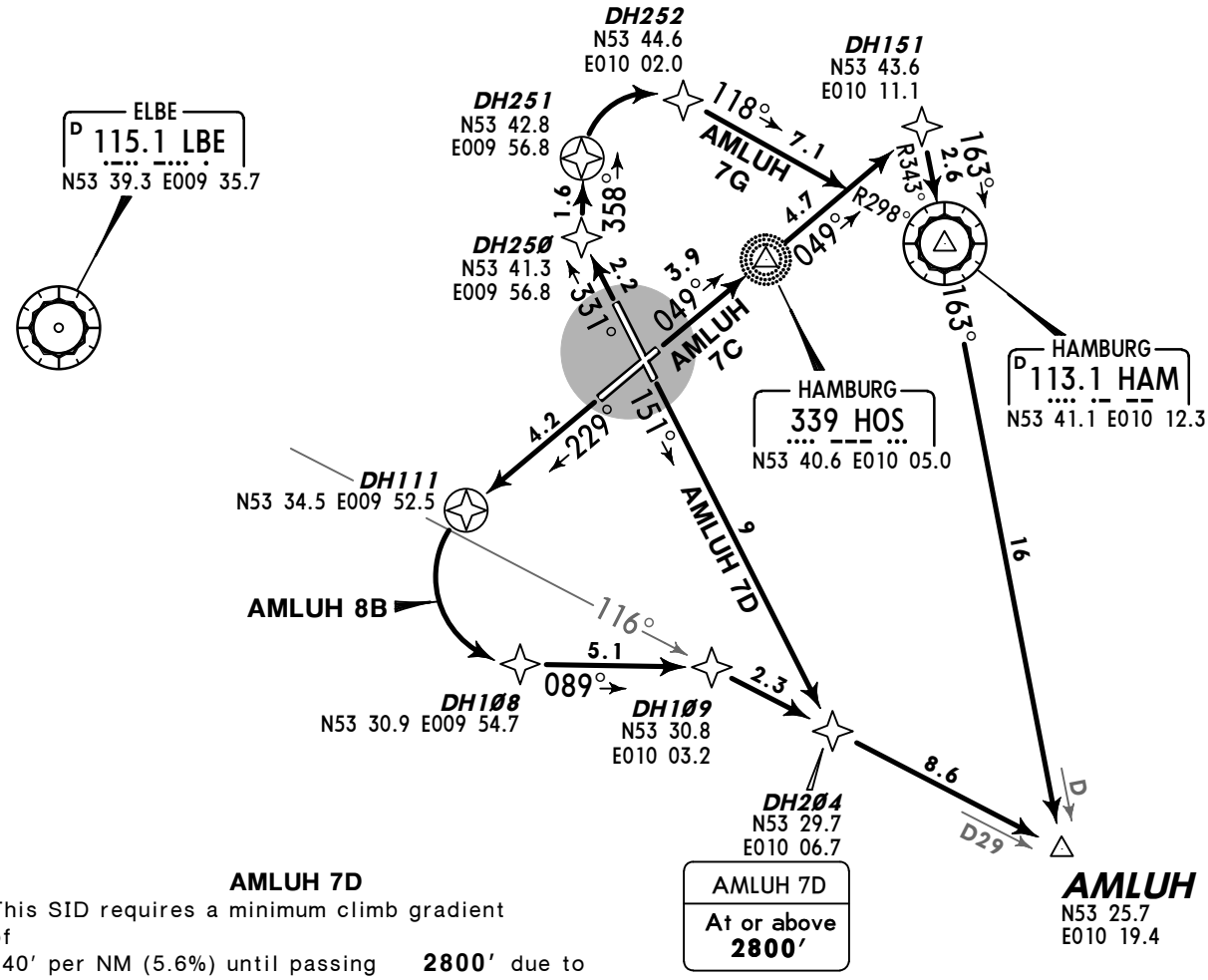
BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.
136.67	53′	

2100′
MSA
HAM VOR

AMLUH EIGHT BRAVO (AMLUH 8B)*[AMLU8B]*
AMLUH SEVEN CHARLIE (AMLUH 7C)*[AMLU7C]*
AMLUH SEVEN DELTA (AMLUH 7D)*[AMLU7D]*
AMLUH SEVEN GOLF (AMLUH 7G)*[AMLU7G]*
RWYS 23, 05, 15, 33 RNAV DEPARTURES
(OVERLAY 10-3)

N
NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



AMLUH 7D
This SID requires a minimum climb gradient of
340′ per NM (5.6%) until passing **2800′** due to High Intensity Radio Transmission Area.

Gnd speed-KT	75	100	150	200	250	300
340′ per NM	425	567	851	1134	1418	1701

If unable to comply advise ATC prior to start-up.

AMLUH 7D
At or above **2800′**

Initial climb clearance **5000′**

SID	RWY	ROUTING
AMLUH 8B	**23**	**(500′+) -** DH111 - DH108 - DH109 - AMLUH.
AMLUH 7C	**05**	**(500′+) -** HOS - DH151 - AMLUH.
AMLUH 7D	**15**	**(500′+) -** DH204 **(2800′+) -** AMLUH.
AMLUH 7G	**33**	**(500′+) -** DH250 - DH251 - DH252 - HAM - AMLUH.

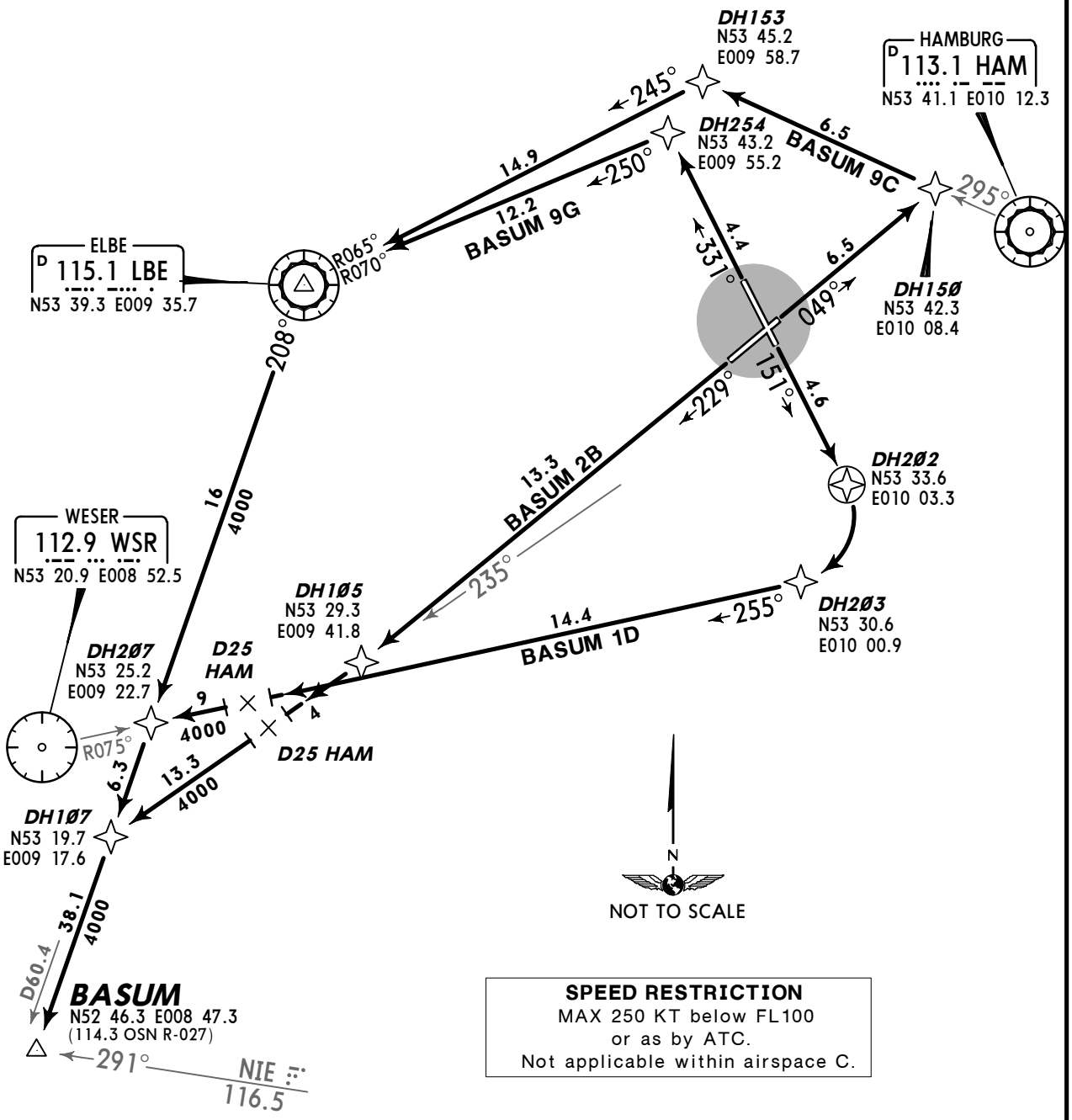
CHANGES: RNAV SIDs AMLUH 7B, 6D, 6G renumbered 8B, 7D, 7G.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.
134.25	53′	

2100′
MSA
HAM VOR

BASUM TWO BRAVO (BASUM 2B) *[BASU2B]*
BASUM NINE CHARLIE (BASUM 9C) *[BASU9C]*
BASUM ONE DELTA (BASUM 1D) *[BASU1D]*
BASUM NINE GOLF (BASUM 9G) *[BASU9G]*
RWYS 23, 05, 15, 33 RNAV DEPARTURES
(OVERLAY 10-3A)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
BASUM 2B	**23**	**(500′+) -** DH105 - DH107 - BASUM.
BASUM 9C	**05**	**(500′+) -** DH150 - DH153 - LBE - BASUM.
BASUM 1D	**15**	**(500′+) -** DH202 - DH203 - DH207 - BASUM.
BASUM 9G	**33**	**(500′+) -** DH254 - LBE - BASUM.

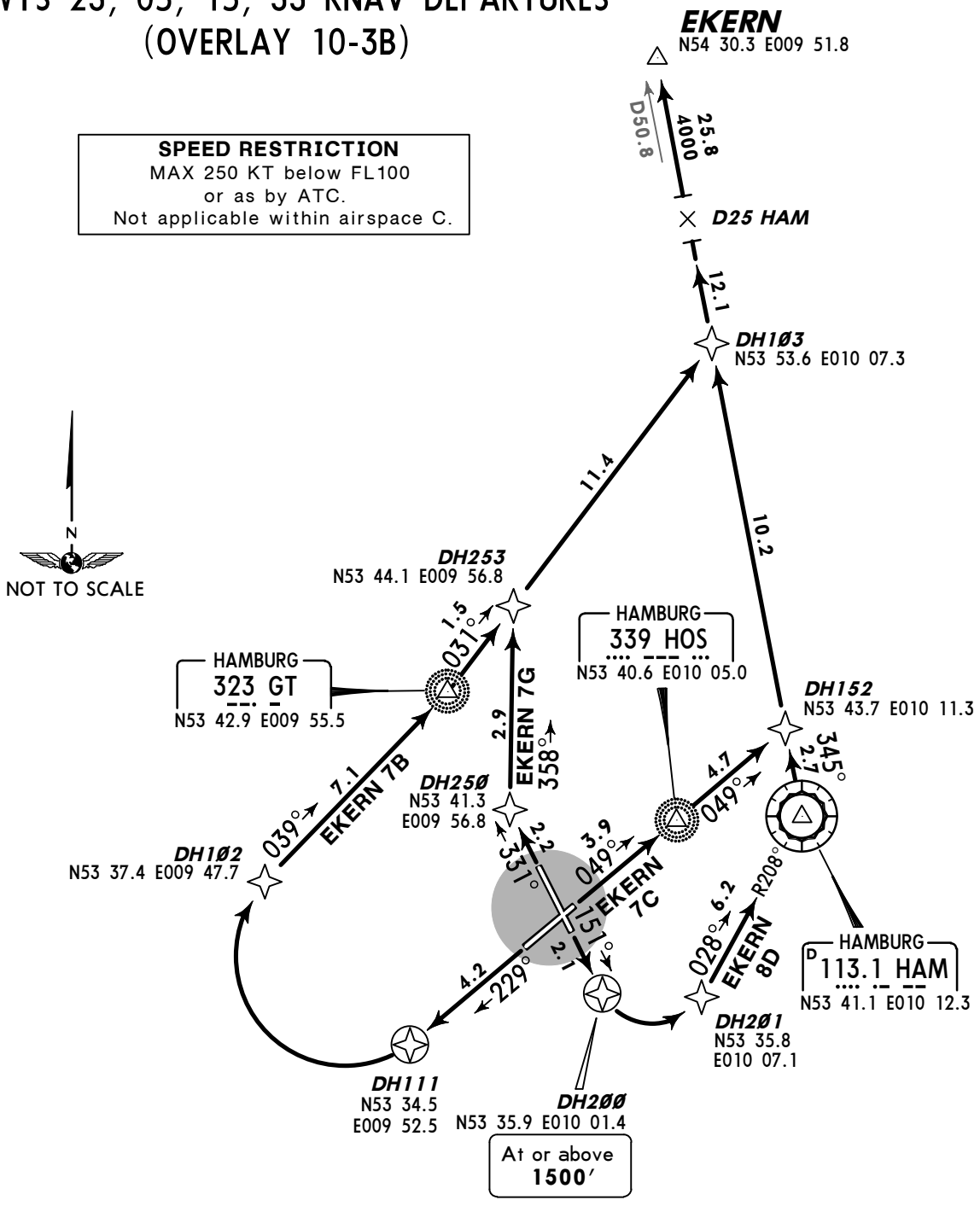
CHANGES: RNAV SID BASUM 1B, 9D, 8G renumbered 2B, 1D, 9G.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.
136.67	53′	

2100′
MSA
HAM VOR

EKERN SEVEN BRAVO (EKERN 7B) *[EKER7B]*
EKERN SEVEN CHARLIE (EKERN 7C) *[EKER7C]*
EKERN EIGHT DELTA (EKERN 8D) *[EKER8D]*
EKERN SEVEN GOLF (EKERN 7G) *[EKER7G]*
RWYS 23, 05, 15, 33 RNAV DEPARTURES (OVERLAY 10-3B)



Initial climb clearance **5000′**

SID	RWY	ROUTING
EKERN 7B	**23**	**(500′+) -** DH111 - DH102 - GT - DH103 - EKERN.
EKERN 7C	**05**	**(500′+) -** HOS - DH152 - EKERN.
EKERN 8D	**15**	**(500′+) -** DH200 **(1500′+) -** DH201 - HAM - EKERN.
EKERN 7G	**33**	**(500′+) -** DH250 - DH253 - DH103 - EKERN.

CHANGES: RNAV SIDs EKERN 6B, 7D, 6G renumbered 7B, 8D, 7G and revised.

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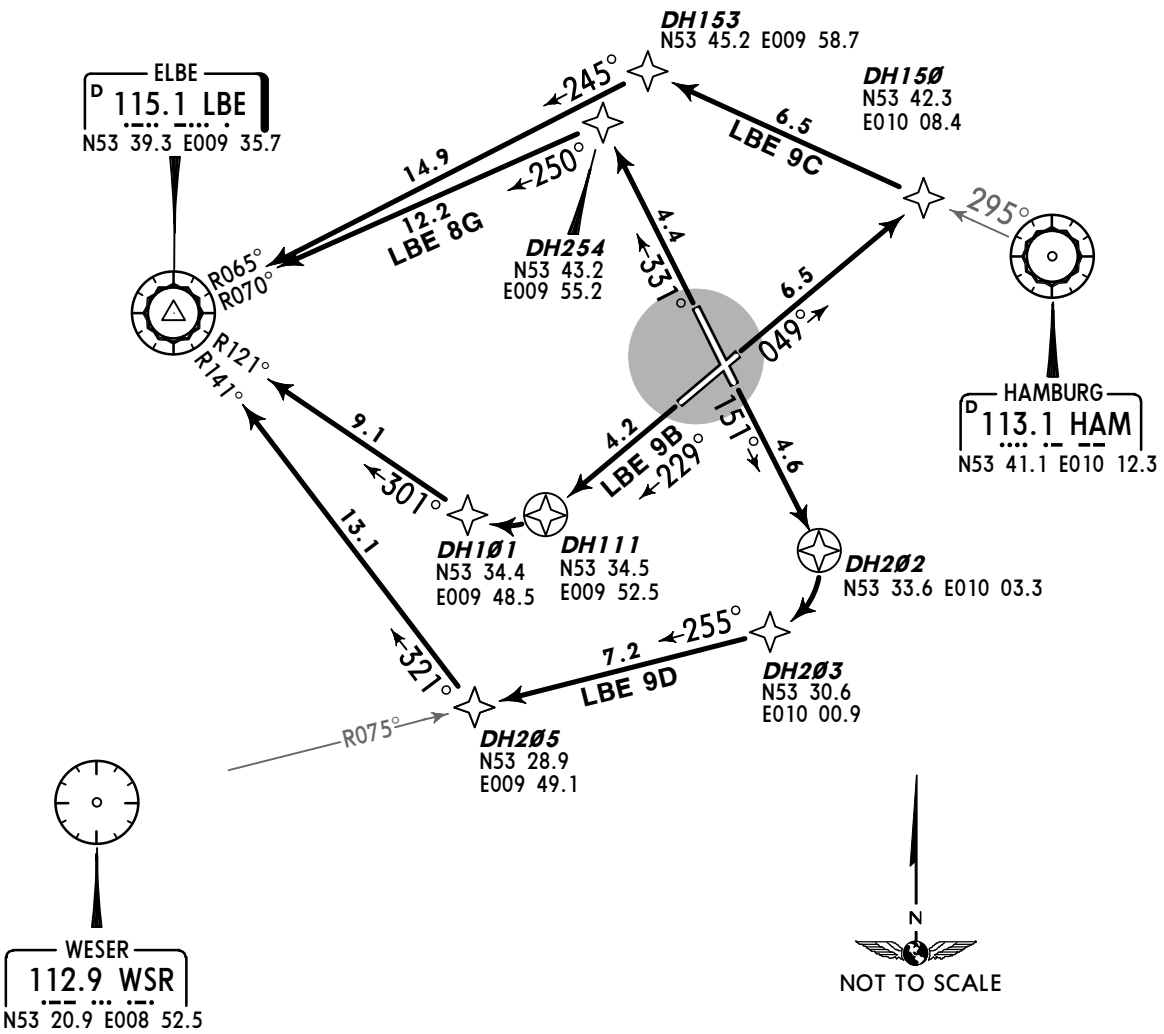
BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.
134.25	53′	

2100′
MSA
HAM VOR

ELBE NINE BRAVO (LBE 9B)
ELBE NINE CHARLIE (LBE 9C)
ELBE NINE DELTA (LBE 9D)
ELBE EIGHT GOLF (LBE 8G)
RWYS 23, 05, 15, 33 RNAV DEPARTURES
(OVERLAY 10-3C)

NO ACCESS TO AIRWAYS
R-15, UM-170, (U)N-125, N-850 & UL-126

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

SID	RWY	ROUTING
LBE 9B	**23**	**(500′+)** - DH111 - DH101 - LBE.
LBE 9C	**05**	**(500′+)** - DH150 - DH153 - LBE.
LBE 9D	**15**	**(500′+)** - DH202 - DH203 - DH205 - LBE.
LBE 8G	**33**	**(500′+)** - DH254 - LBE.

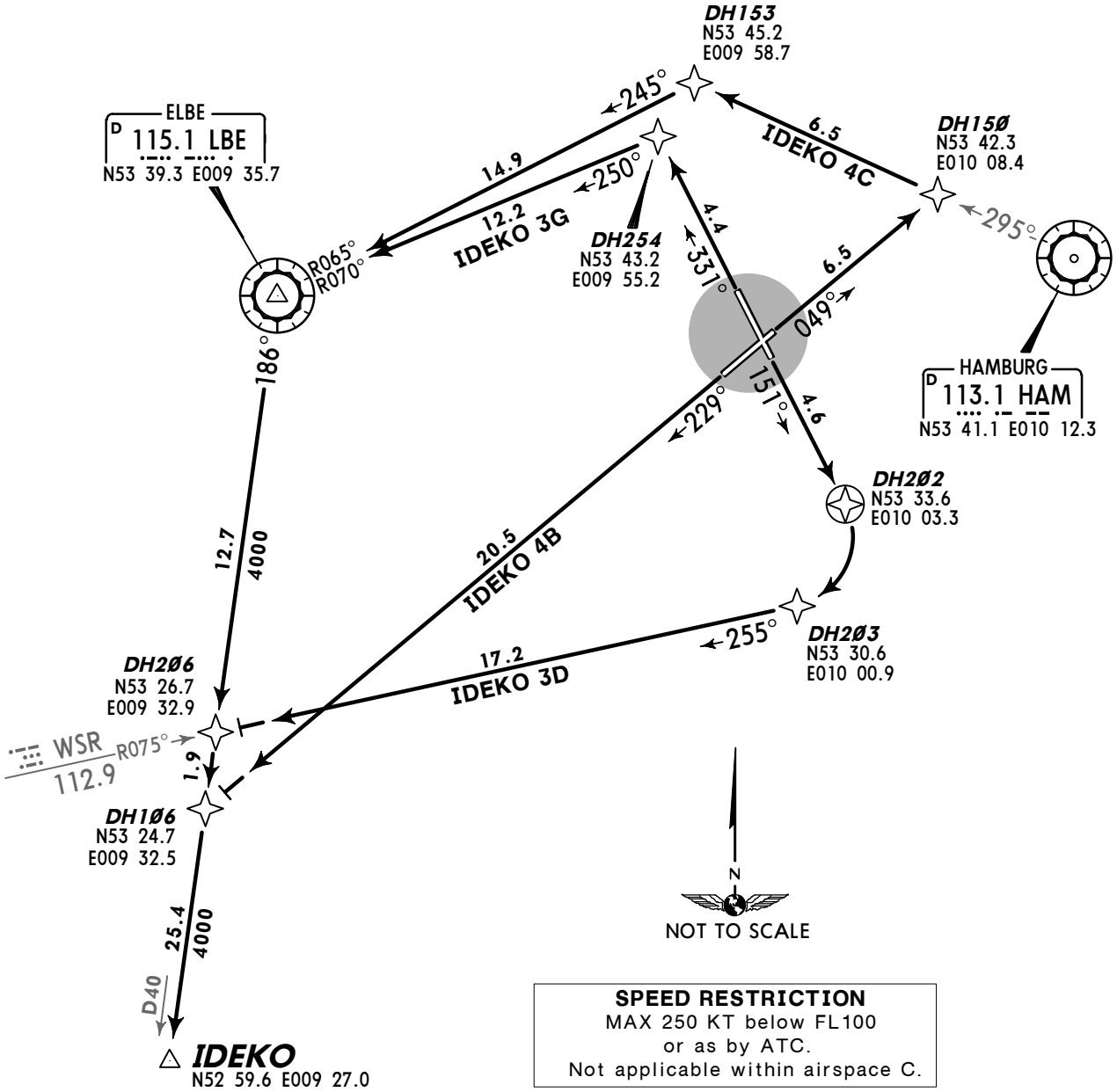
CHANGES: RNAV SIDs LBE 8B, 8D, 7G renumbered 9B, 9D, 8G and revised

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.
134.25	53′	

2100′
MSA
HAM VOR

IDEKO FOUR BRAVO (IDEKO 4B) *[IDEK4B]*
IDEKO FOUR CHARLIE (IDEKO 4C) *[IDEK4C]*
IDEKO THREE DELTA (IDEKO 3D) *[IDEK3D]*
IDEKO THREE GOLF (IDEKO 3G) *[IDEK3G]*
RWYS 23, 05, 15, 33 RNAV DEPARTURES
(OVERLAY 10-3D)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
IDEKO 4B	**23**	**(500′+) -** DH106 - IDEKO.
IDEKO 4C	**05**	**(500′+) -** DH150 - DH153 - LBE - IDEKO.
IDEKO 3D	**15**	**(500′+) -** DH202 - DH203 - DH206 - IDEKO.
IDEKO 3G	**33**	**(500′+) -** DH254 - LBE - IDEKO.

CHANGES: RNAV SIDs IDEKO 3B, 2D, 2G renumbered 4B, 3D, 3G and revised.

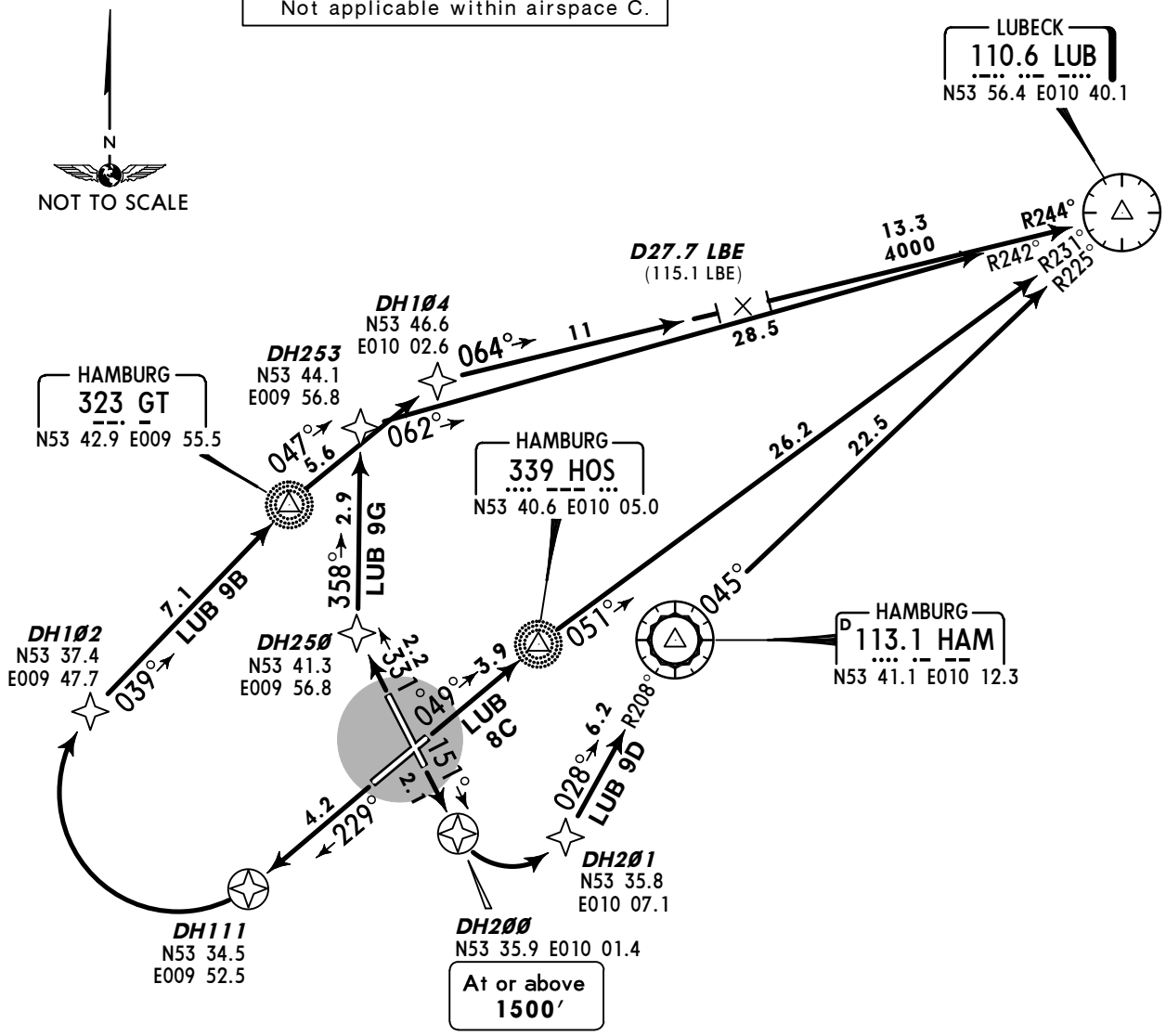
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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.
136.67	53′	

2100′
MSA
HAM VOR

LUBECK NINE BRAVO (LUB 9B)
LUBECK EIGHT CHARLIE (LUB 8C)
LUBECK NINE DELTA (LUB 9D)
LUBECK NINE GOLF (LUB 9G)
RWYS 23, 05, 15, 33 RNAV DEPARTURES
(OVERLAY 10-3E)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

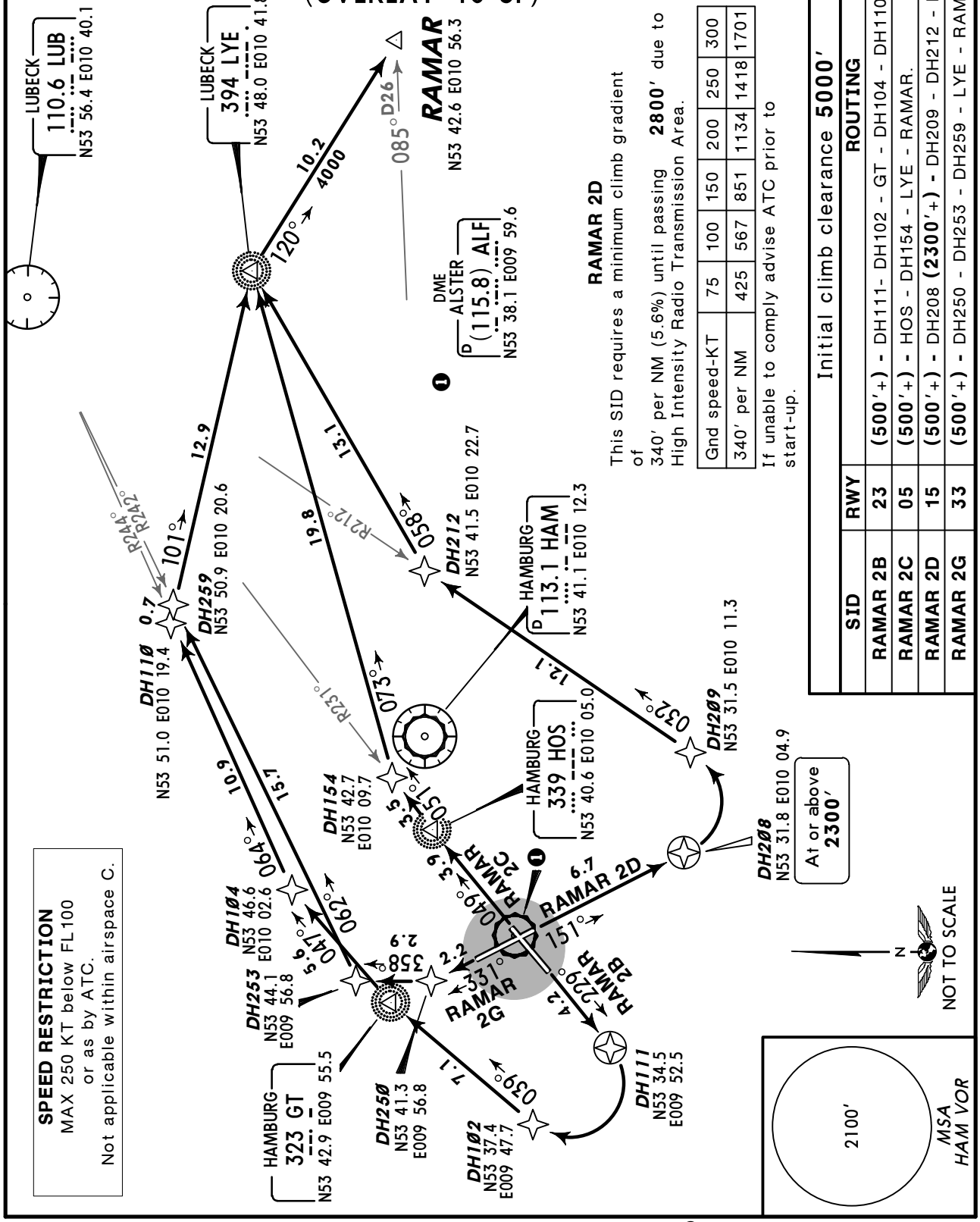
SID	RWY	ROUTING
LUB 9B	**23**	**(500′+) -** DH111 - DH102 - GT - DH104 - LUB.
LUB 8C	**05**	**(500′+) -** HOS - LUB.
LUB 9D	**15**	**(500′+) -** DH200 **(1500′+) -** DH201 - HAM - LUB.
LUB 9G	**33**	**(500′+) -** DH250 - DH253 - LUB.

CHANGES: RNAV SIDs LUB 8B, 8D, 8G renumbered 9B, 9D, 9G and revised.

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BREMEN Radar	*Apt Elev*	
136.67	53′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwys 23, 05, 15: EXPECT close-in obstacles.

RAMAR TWO BRAVO (RAMAR 2B) *[RAMA2B]*
RAMAR TWO CHARLIE (RAMAR 2C) *[RAMA2C]*
RAMAR TWO DELTA (RAMAR 2D) *[RAMA2D]*
RAMAR TWO GOLF (RAMAR 2G) *[RAMA2G]*
RWYS 23, 05, 15, 33 RNAV DEPARTURES
(OVERLAY 10-3F)



RAMAR 2D

This SID requires a minimum climb gradient of 340′ per NM (5.6%) until passing **2800′** due to High Intensity Radio Transmission Area.

Gnd speed-KT	75	100	150	200	250	300
340′ per NM	425	567	851	1134	1418	1701

If unable to comply advise ATC prior to start-up.

Initial climb clearance **5000′**

SID	RWY	ROUTING
RAMAR 2B	23	**(500′+) -** DH111- DH102 - GT - DH104 - DH110 - LYE - RAMAR.
RAMAR 2C	05	**(500′+) -** HOS - DH154 - LYE - RAMAR.
RAMAR 2D	15	**(500′+) -** DH208 **(2300′+) -** DH209 - DH212 - LYE - RAMAR.
RAMAR 2G	33	**(500′+) -** DH250 - DH253 - DH259 - LYE - RAMAR.

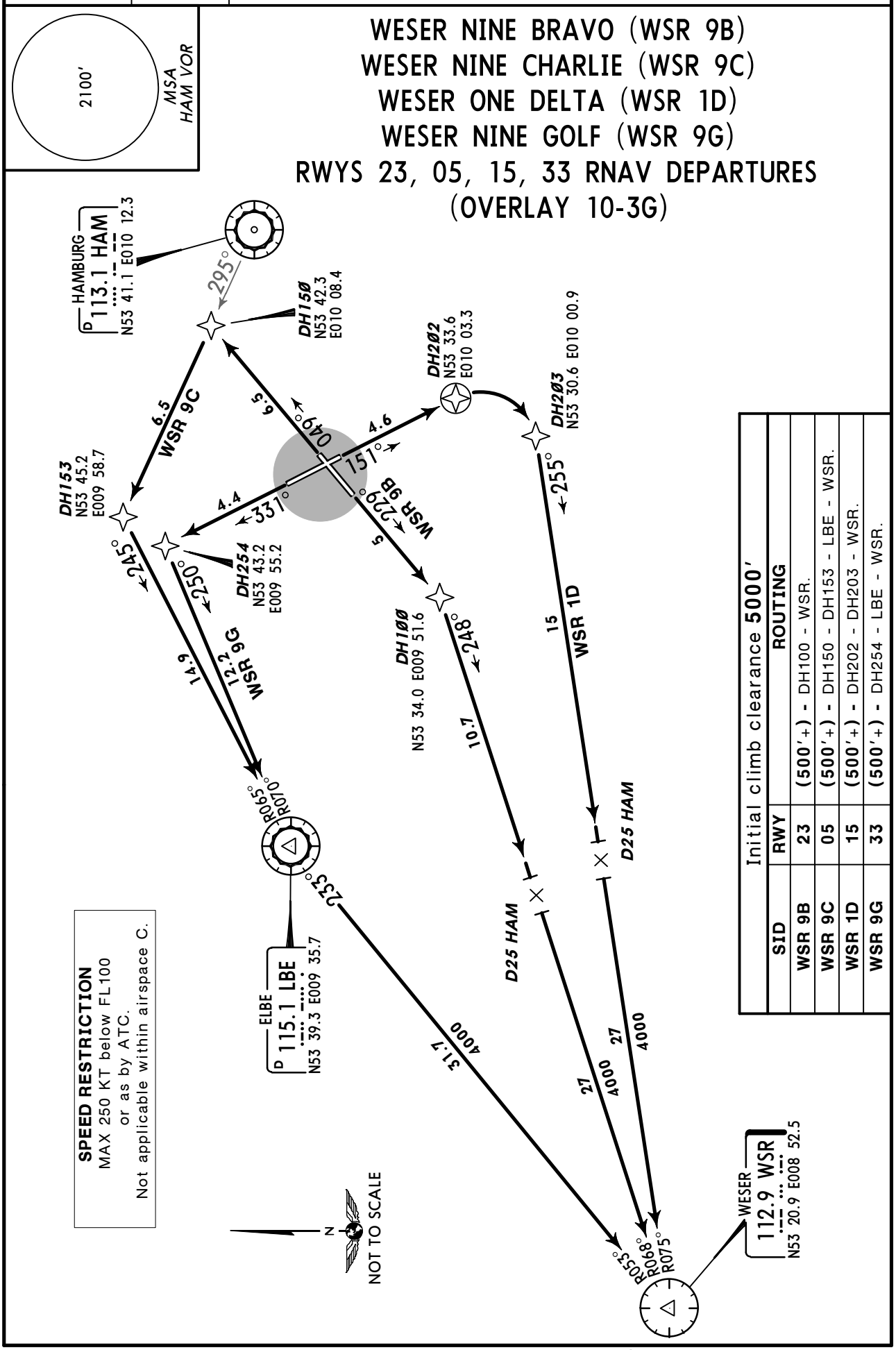
CHANGES: RNAV SIDs renumbered.

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BREMEN Radar	*Apt Elev*
134.25	53′

Trans level: By ATC Trans alt: 5000′
1. Remain on Tower frequency until passing 2000′, then contact BREMEN Radar.
2. SIDs are also noise abatement procedures (refer to 10-4).
Strict adherence within the limits of aircraft performance is mandatory.
3. Rwys 23, 05, 15: EXPECT close-in obstacles.

WESER NINE BRAVO (WSR 9B)
WESER NINE CHARLIE (WSR 9C)
WESER ONE DELTA (WSR 1D)
WESER NINE GOLF (WSR 9G)
RWYS 23, 05, 15, 33 RNAV DEPARTURES
(OVERLAY 10-3G)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

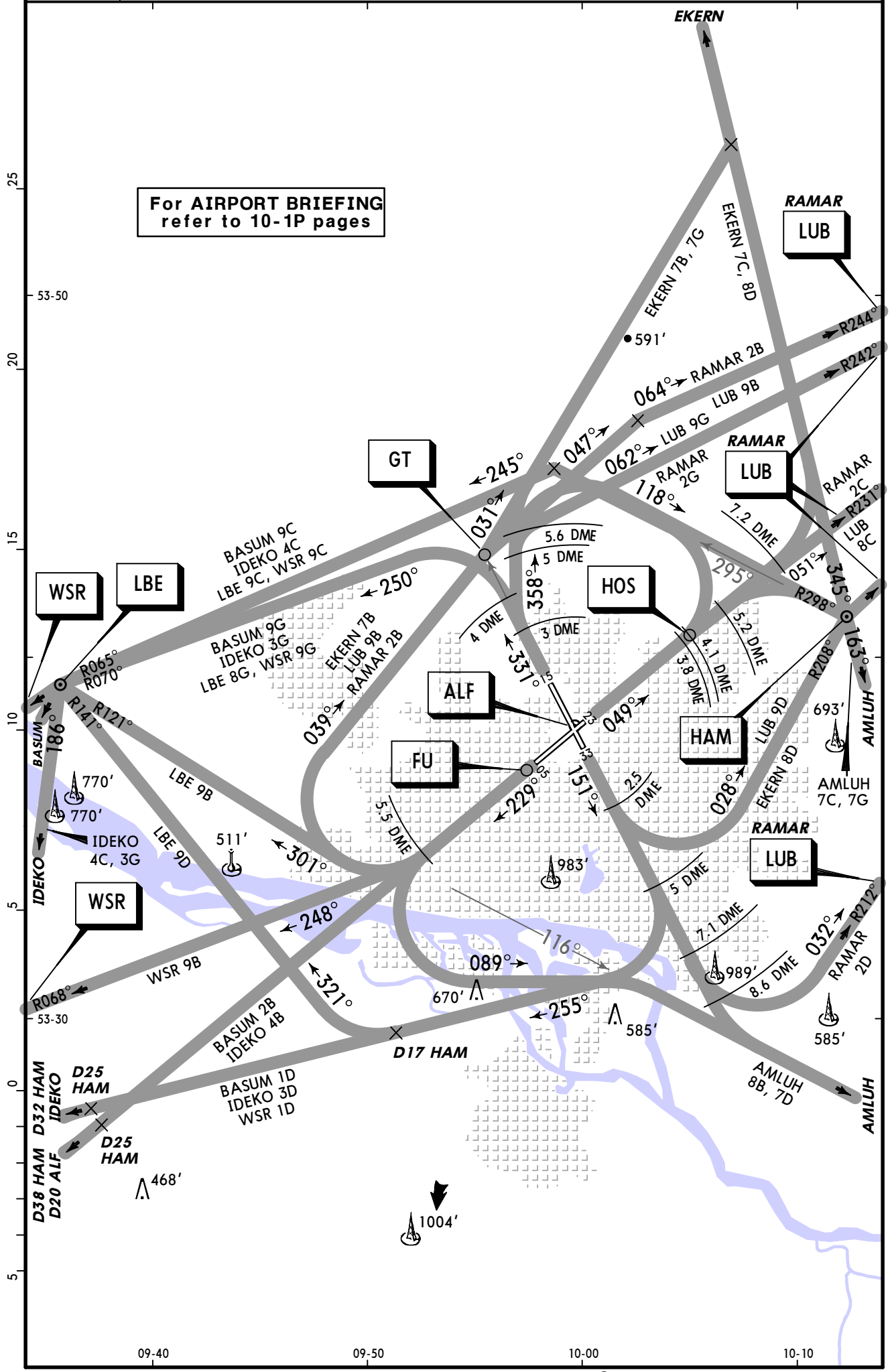
SID	RWY	ROUTING
WSR 9B	23	(500′+) - DH100 - WSR.
WSR 9C	05	(500′+) - DH150 - DH153 - LBE - WSR.
WSR 1D	15	(500′+) - DH202 - DH203 - WSR.
WSR 9G	33	(500′+) - DH254 - LBE - WSR.

CHANGES: RNAV SIDs WSR 8B, 9D, 8G renumbered 9B, 1D, 9G and revised.

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Apt Elev
53′

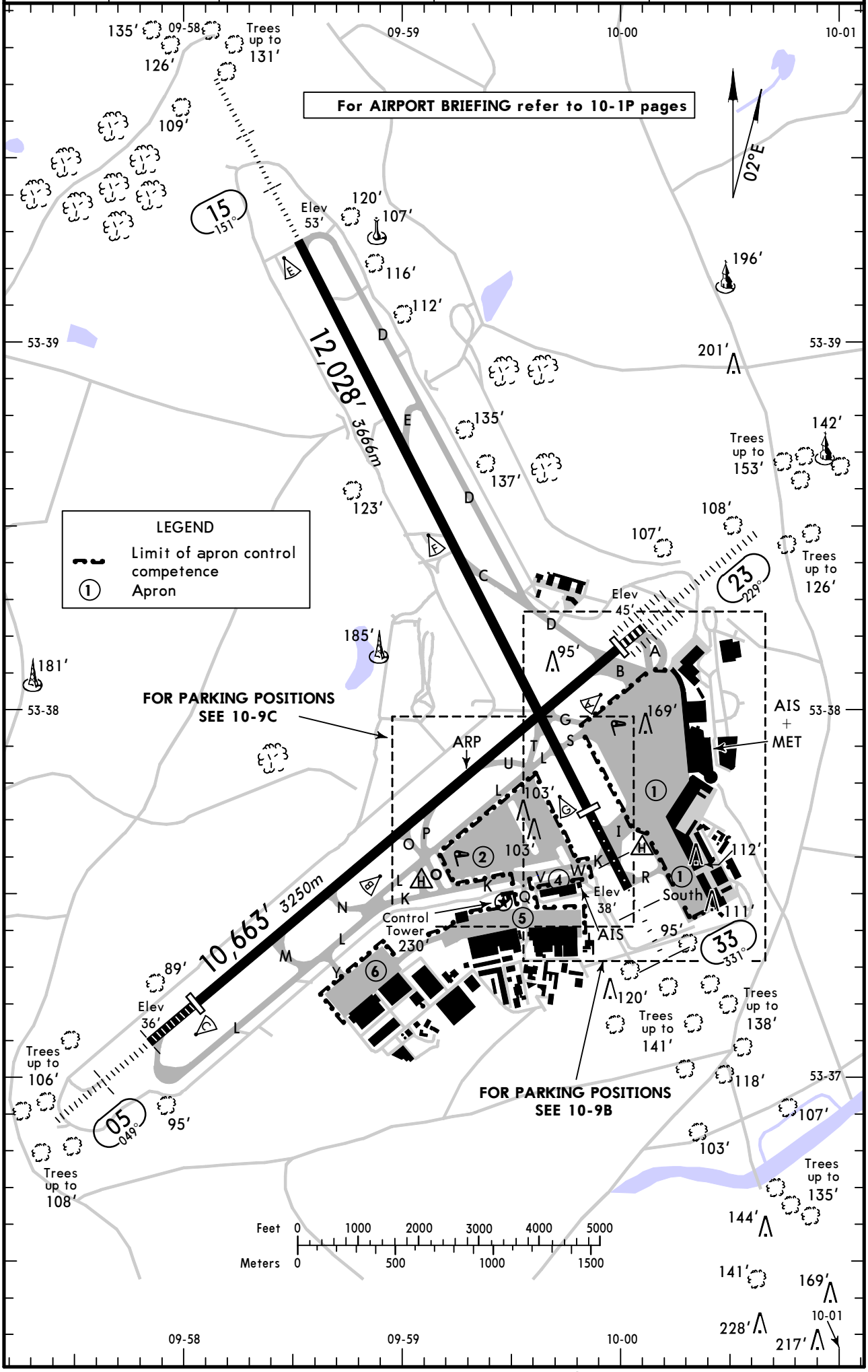
NOISE ABATEMENT



CHANGES: SIDs renumbered & revised.

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*D-ATIS	ACARS: DCL D-ATIS	HAMBURG Ground	Apron 1	Apron 2	Tower
123.12		121.8	121.7	121.75	126.85



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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
05	HIRL CL *(15m)* HIALS SFL REIL PAPI-L(3.0°) RVR	9685′ *2952m*	8648′ *2636m*	❶	151′ *46m*
23	HIRL CL *(15m)* ALSF-II TDZ REIL PAPI-L(3.0°) RVR	10,151′ *3094m*	8940′ *2725m*		

❶ TAKE-OFF RUN AVAILABLE

RWY 05:

From rwy head	10,663′ (3250m)
twy M int	8071′ (2460m)
twy N int	6824′ (2080m)
twy O int	5249′ (1600m)
twy P int	4724′ (1440m)

RWY 23:

From rwy head	10,663′ (3250m)
twy A-West int	10,558′ (3218m)
twy B-East int	10,007′ (3050m)
twy G int	8694′ (2650m)
twy U int	7415′ (2260m)
twy O int	5512′ (1680m)

RWY										
15	HIRL CL *(30m)* HIALS SFL REIL PAPI-L(3.0°) RVR		11,009′ *3356m*	❷	151′ *46m*
33	HIRL CL *(30m)* HIALS SFL REIL PAPI-L(3.0°) RVR	10,565′ *3220m*			

❷ TAKE-OFF RUN AVAILABLE

RWY 15:

From rwy head	12,028′ (3666m)
twy E int	8333′ (2540m)
twy C int	5807′ (1770m)

RWY 33:

From rwy head	12,028′ (3666m)
twy K int	11,385′ (3470m)
twy I-North int	10,991′ (3350m)
twy S/L int	9482′ (2890m)
twy G/T int	8957′ (2730m)
twy C int	6201′ (1890m)

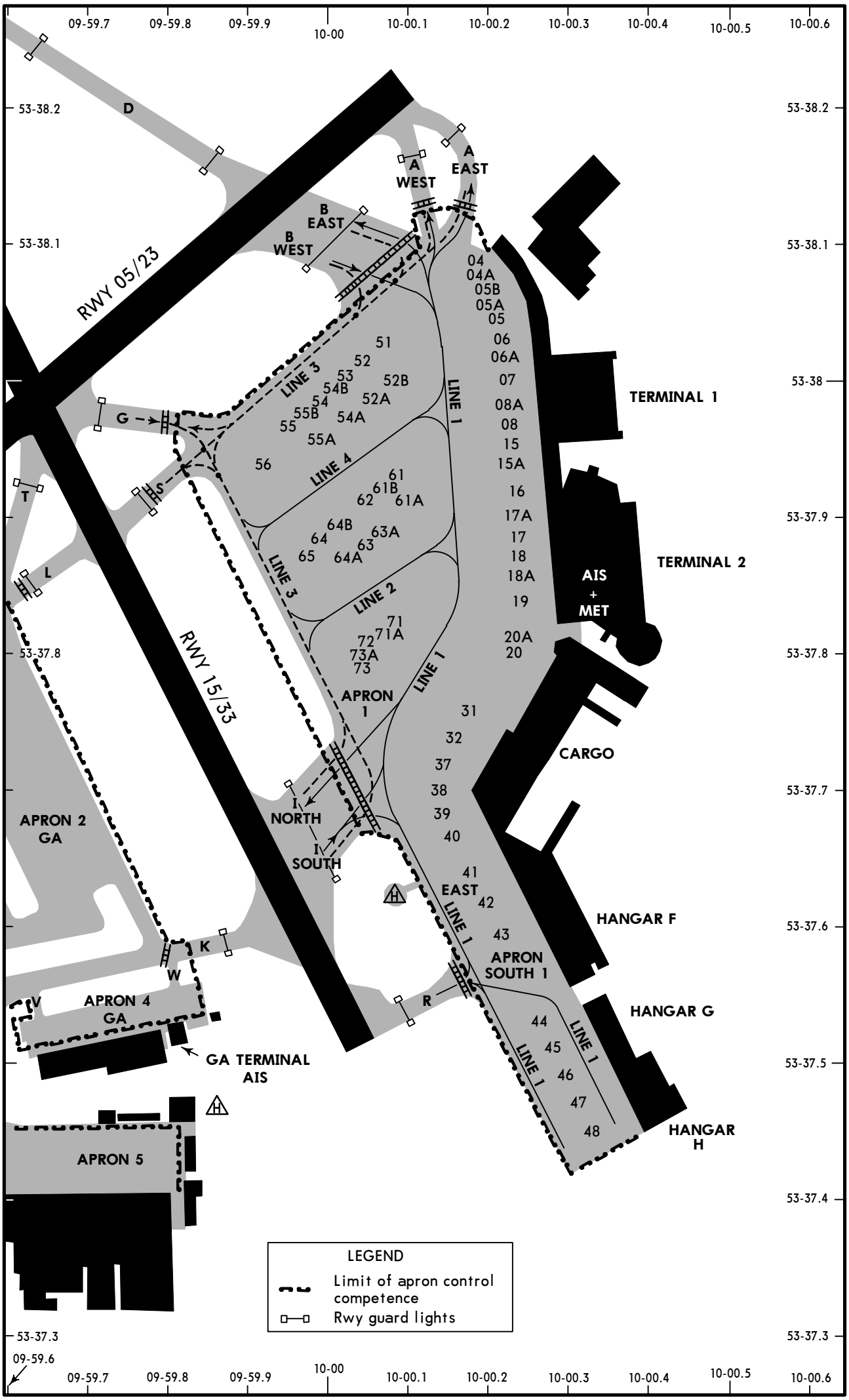
Standard TAKE-OFF **1**

	LVP must be in Force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

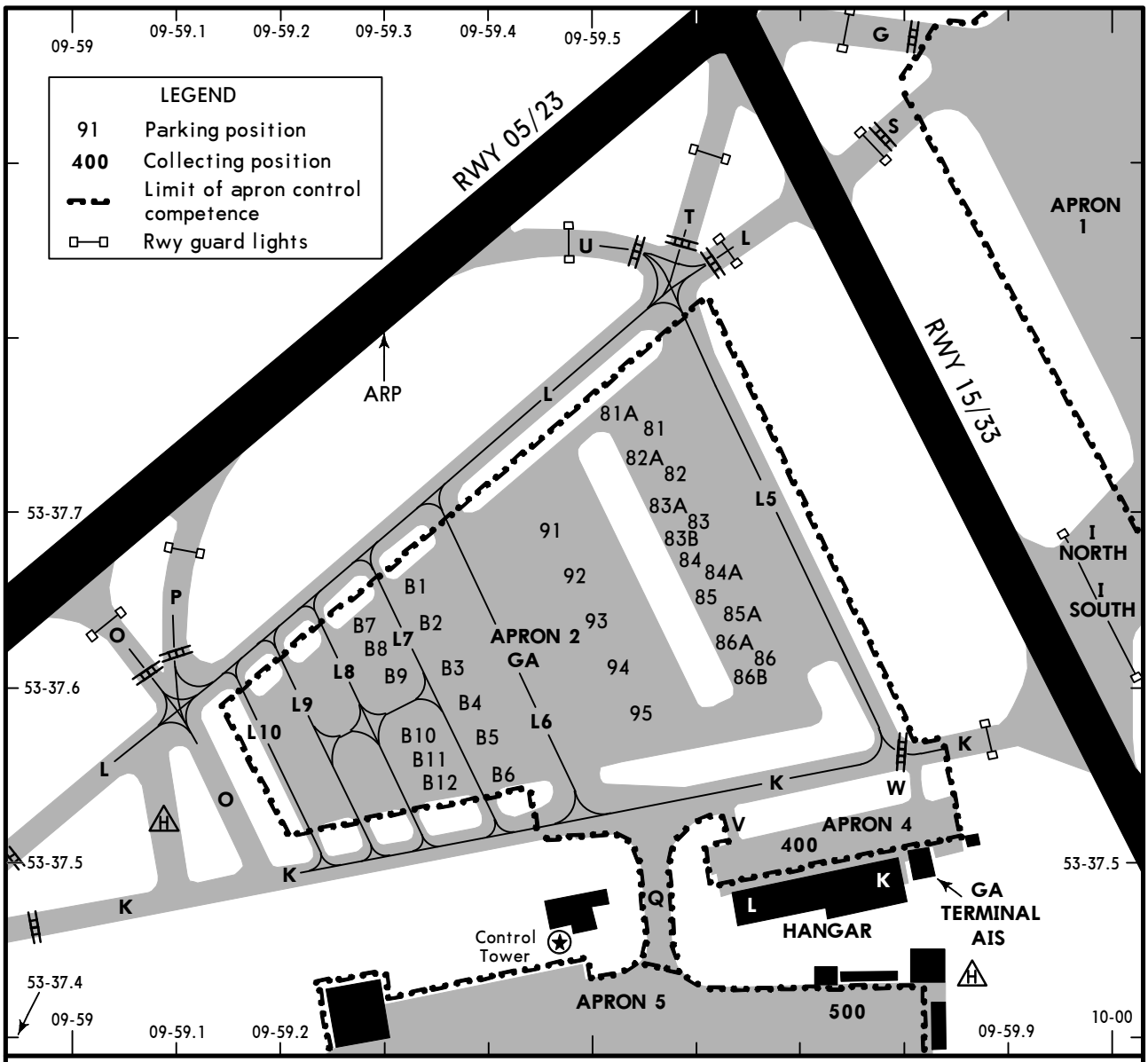
CHANGES: None.

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CHANGES: Holding positions. Parking Stands. Rwy guard lights.

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INS COORDINATES

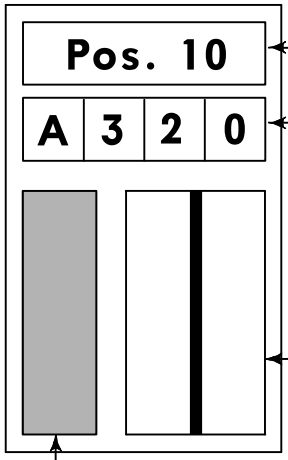
STAND No.	COORDINATES	STAND No.	COORDINATES
04, 04A	N53 38.2 E010 00.3	63A	N53 37.9 E010 00.1
05 thru 08A	N53 38.1 E010 00.3	64 thru 65	N53 37.9 E010 00.0
15 thru 16	N53 38.0 E010 00.3	71 thru 72	N53 37.8 E010 00.1
17 thru 19	N53 37.9 E010 00.3	73, 73A	N53 37.8 E010 00.0
20, 20A	N53 37.8 E010 00.3	81, 81A	N53 37.8 E009 59.5
31, 32	N53 37.8 E010 00.2	82 thru 85A	N53 37.7 E009 59.6
37 thru 40	N53 37.7 E010 00.2	86, 86A, 86B	N53 37.6 E009 59.7
41 thru 43	N53 37.6 E010 00.2	91 thru 93	N53 37.7 E009 59.5
44	N53 37.5 E010 00.2	94	N53 37.6 E009 59.5
45 thru 48	N53 37.5 E010 00.3	95	N53 37.6 E009 59.6
51 thru 52B	N53 38.0 E010 00.1	B1	N53 37.7 E009 59.3
53 thru 55B	N53 38.0 E010 00.0	B2	N53 37.6 E009 59.3
56	N53 37.9 E009 59.9	B3 thru B6	N53 37.6 E009 59.4
61 thru 62	N53 37.9 E010 00.1	B7 thru B12	N53 37.6 E009 59.3
63	N53 37.9 E010 00.0		

CHANGES: Holding position. Stands. RWY guard lights.

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VISUAL DOCKING GUIDANCE SYSTEM

APIS - AIRCRAFT POSITIONING & INFORMATION SYSTEM



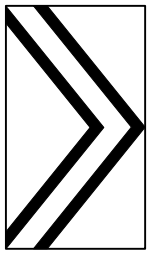
Steady Position Information

Alphanumerical Information
- Flight number until turning into centerline
- ACFT Type after entering centerline
- STOP command
- OK if correctly positioned

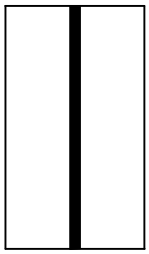
Steer Information (see below)

Yellow bar indicates stop position reference

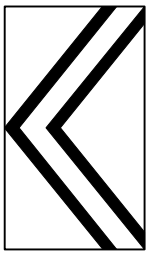
STEER INFORMATION



Steer RIGHT



On Centerline



Steer LEFT

CHANGES: Chart reindexed.

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STRAIGHT-IN RWY		A	B	C	D
05	ILS	**232**′(200′)	**232**′(200′)	**249**′(217′)	**259**′(227′)
		R550m	**R550m**	**R600m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**560**′(528′)	**560**′(528′)	**560**′(528′)	**560**′(528′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**510**′(478′)	**510**′(478′)	**510**′(478′)	**510**′(478′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV)	**530**′(498′)	**530**′(498′)	**530**′(498′)	**530**′(498′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**620**′(588′)	**620**′(588′)	**620**′(588′)	**620**′(588′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**560**′(528′)	**560**′(528′)	**560**′(528′)	**560**′(528′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
15	ILS	**253**′(200′)	**253**′(200′)	**253**′(200′)	**260**′(207′)
		R550m	**R550m**	**R550m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**500**′(447′)	**500**′(447′)	**500**′(447′)	**500**′(447′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**580**′(527′)	**580**′(527′)	**580**′(527′)	**580**′(527′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV)	**590**′(537′)	**590**′(537′)	**590**′(537′)	**590**′(537′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**620**′(567′)	**620**′(567′)	**620**′(567′)	**620**′(567′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**560**′(507′)	**560**′(507′)	**560**′(507′)	**560**′(507′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
23	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**143**′(100′)	**143**′(100′)	**143**′(100′)	**143**′(100′)
		RA 98′ R300m	**RA 98′ R300m**	**RA 98′ R300m**	**RA 98′ R300m**
	ILS	**262**′(219′)	**271**′(228′)	**281**′(238′)	**291**′(248′) ❶
		R600m	**R600m**	**R600m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**500**′(457′)	**500**′(457′)	**500**′(457′)	**500**′(457′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

❶ LACFT: DA(H) 314′ (271′), FULL: R650m, ALS out: R1200m.

CHANGES: ILS rwy 15 and 23.

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STRAIGHT-IN RWY		A	B	C	D
23	RNAV (LNAV/VNAV)	**410**′(367′)	**460**′(417′)	**460**′(417′)	**460**′(417′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**480**′(437′)	**480**′(437′)	**480**′(437′)	**480**′(437′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**590**′(547′)	**590**′(547′)	**590**′(547′)	**590**′(547′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**570**′(527′)	**570**′(527′)	**570**′(527′)	**570**′(527′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
33	LOC	**480**′(445′)	**480**′(445′)	**480**′(445′)	**480**′(445′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**480**′(445′)	**480**′(445′)	**480**′(445′)	**480**′(445′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**550**′(515′)	**550**′(515′)	**550**′(515′)	**550**′(515′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**600**′(565′)	**600**′(565′)	**600**′(565′)	**600**′(565′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

TAKE-OFF RWY 05, 15, 23, 33

	Rwy 23 LVP must be in Force	**Rwys 23, 33 LVP must be in Force**			**All Rwys**	
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

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STRAIGHT-IN RWY		DA(H) / MDA(H)	RVR (ALS/ALS out)
05	ILS	232′ (200′)	500m / 1000m
	LOC	560′ (528′)	1000m / 1000m
	RNAV (LNAV/VNAV)	510′ (478′)	1000m / 1000m
	RNAV (LNAV)	530′ (498′)	1000m / 1000m
	NDB	620′ (588′)	1000m / 1000m
	SRE	560′ (528′)	1000m / 1000m
15	ILS	253′ (200′)	500m / 1000m
	LOC	500′ (447′)	800m / 1000m
	RNAV (LNAV/VNAV)	580′ (527′)	1000m / 1000m
	RNAV (LNAV)	590′ (537′)	1000m / 1000m
	NDB	620′ (567′)	1000m / 1000m
	SRE	560′ (507′)	1000m / 1000m
23	CAT 2 ILS	143′ (100′)	RA 98′ - 300m
	ILS	262′ (219′)	550m / 1000m
	LOC	500′ (457′)	1000m / 1000m
	RNAV (LNAV/VNAV)	410′ (367′)	800m / 1000m
	RNAV (LNAV)	480′ (437′)	800m / 1000m
	NDB	590′ (547′)	1000m / 1000m
	SRE	570′ (527′)	1000m / 1000m
33	LOC	480′ (445′)	800m / 1000m
	RNAV (LNAV/VNAV)	480′ (445′)	800m / 1000m
	RNAV (LNAV)	550′ (515′)	1000m / 1000m
	SRE	600′ (565′)	1000m / 1000m

TAKE-OFF RWY 05, 15, 23, 33

LVP must be in Force ❶				
RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
150m	200m	200m	250m ❷	800m

❶ Without LVP 400m are stipulated.

❷ Or rejected take-off distance whichever is the greater.

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JEPPESEN
8 OCT 10 (11-1) Eff 21 Oct

HAMBURG, GERMANY
ILS or LOC Rwy 05

*D-ATIS	BREMEN Radar (APP)		HAMBURG Director (APP/R)		HAMBURG Tower	Ground
123.12	134.25	136.67	118.2	124.62	126.85	121.8

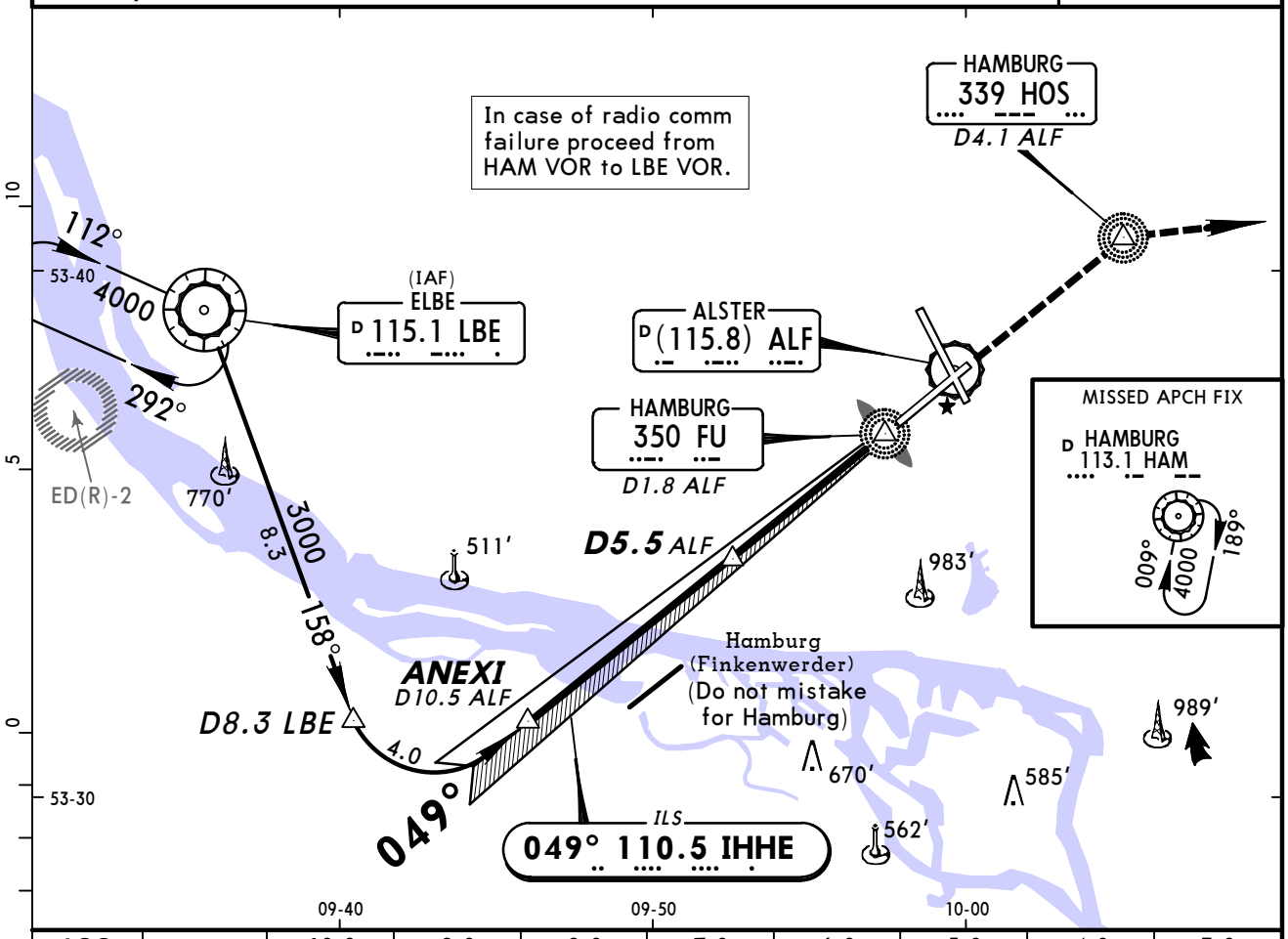
BRIEFING STRIP™

LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 53′
IHHE 110.5	049°	D5.5 ALF 1430′ (1398′)	Refer to Minimums	RWY 32′

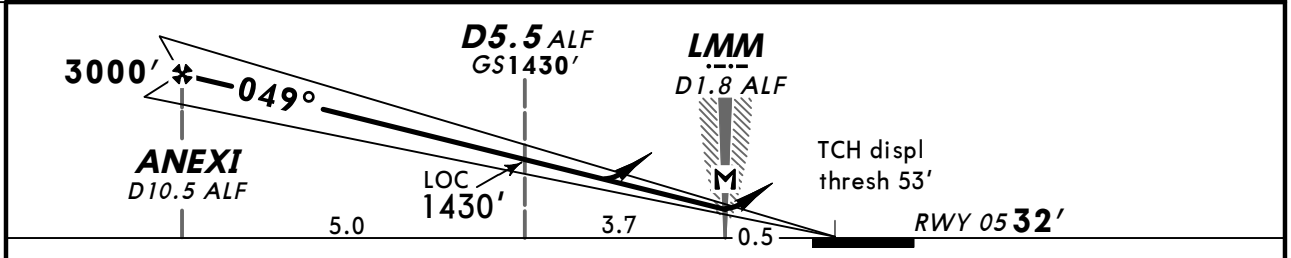
MISSED APCH: Climb direct to HOS NDB, then turn RIGHT direct to HAM VOR climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2100′
MSA HAM VOR



LOC (GS out)	ALF DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	2860′	2540′	2220′	1900′	1590′	1270′	950′	630′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at LMM/D1.8 ALF						

HIALS
REIL
PAPI

HOS 339

4000′ RT

HAM 113.1

Standard STRAIGHT-IN LANDING RWY **05**

	ILS			LOC (GS out)	
	DA(H) AB: **232′** (200′) C: **249′** (217′) D: **259′** (227′)			DA(H) **560′** (528′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m	RVR 1500m
B					
C				RVR 1700m	CMV 2400m
D					

PANS OPS 4

CHANGES: Bearing.

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EDDH/HAM
HAMBURG

JEPPESEN
8 OCT 10 (11-2) Eff 21 Oct

HAMBURG, GERMANY
ILS or LOC Rwy 15

*D-ATIS	BREMEN Radar (APP)		HAMBURG Director (APP/R)		HAMBURG Tower	Ground
123.12	134.25	136.67	118.2	124.62	126.85	121.8

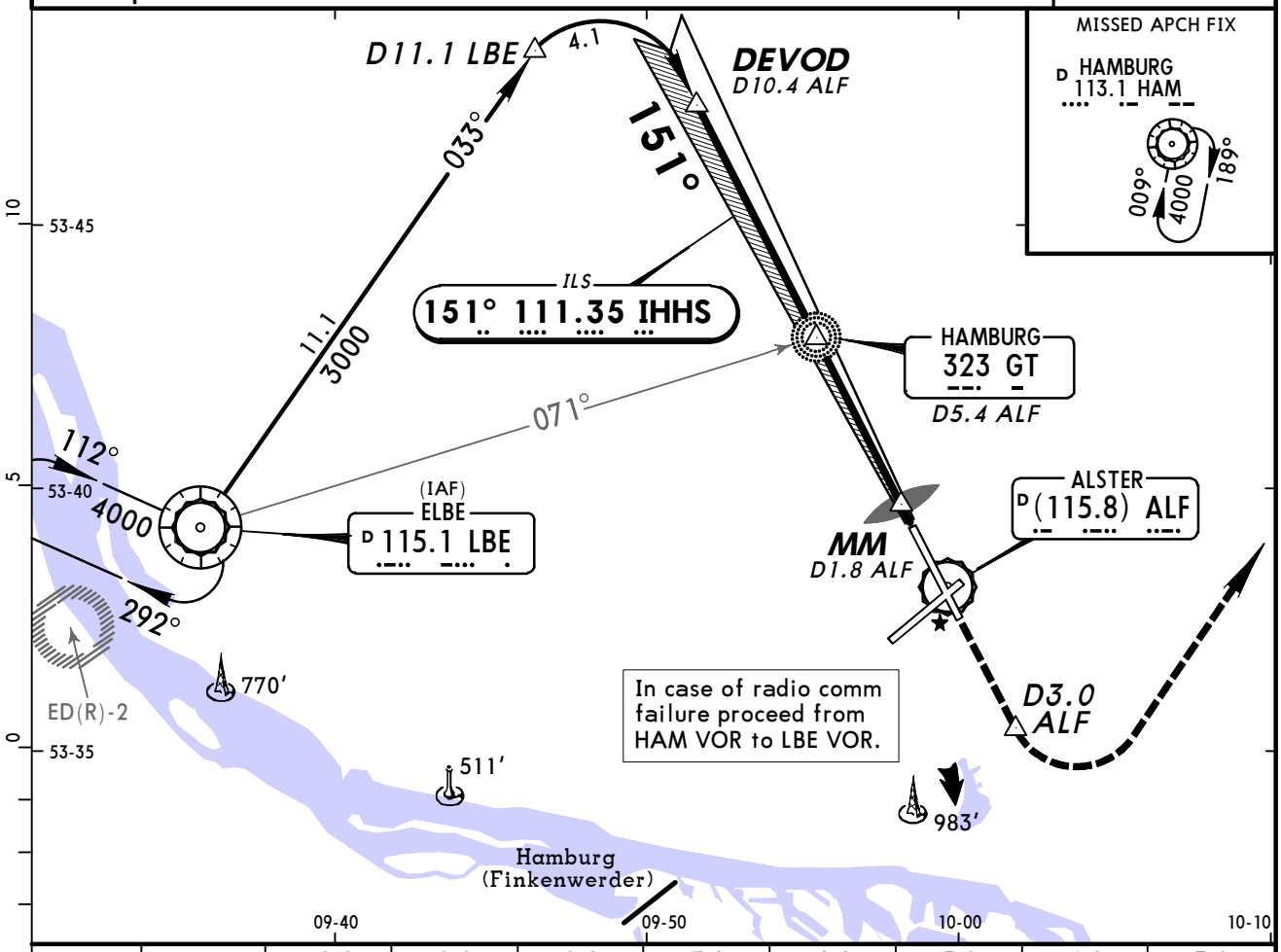
BRIEFING STRIP™

LOC	Final	GS	ILS	Apt Elev 53′
IHHS	Apch Crs	Lctr	DA(H)	
111.35	151°	1390′ (1337′)	Refer to Minimums	RWY 53′

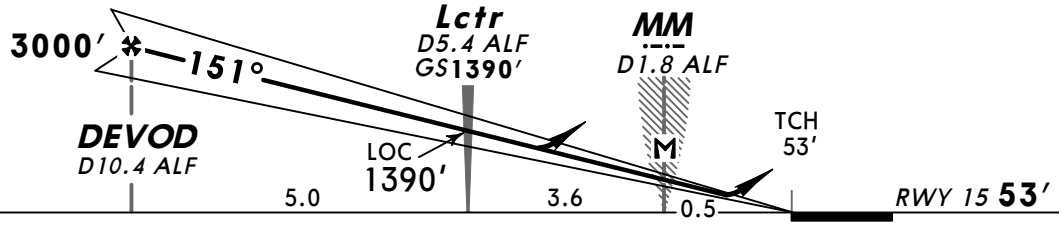
MISSED APCH: Climb STRAIGHT AHEAD to D3.0 ALF, then turn LEFT direct to HAM VOR climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 2 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2100′
MSA HAM VOR



LOC (GS out)	ALF DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	2880′	2560′	2240′	1930′	1610′	1290′	970′	650′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.8 ALF						

HIALS
REIL
PAPI

D3.0 ALF

4000′ LT

HAM 113.1

Standard STRAIGHT-IN LANDING RWY 15

	ILS			LOC (GS out)	
	DA(H) ABC: 253′ (200′) D: 260′ (207′)			DA(H) 500′ (447′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

PANS OPS 4

CHANGES: Bearing. Minimums.

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EDDH/HAM
HAMBURG

JEPPESEN
8 OCT 10 (11-3) Eff 21 Oct

HAMBURG, GERMANY
ILS or LOC Rwy 23

*D-ATIS	BREMEN Radar (APP)	HAMBURG Director (APP/R)	HAMBURG Tower	Ground
123.12	134.25 136.67	118.2 124.62	126.85	121.8

BRIEFING STRIP™

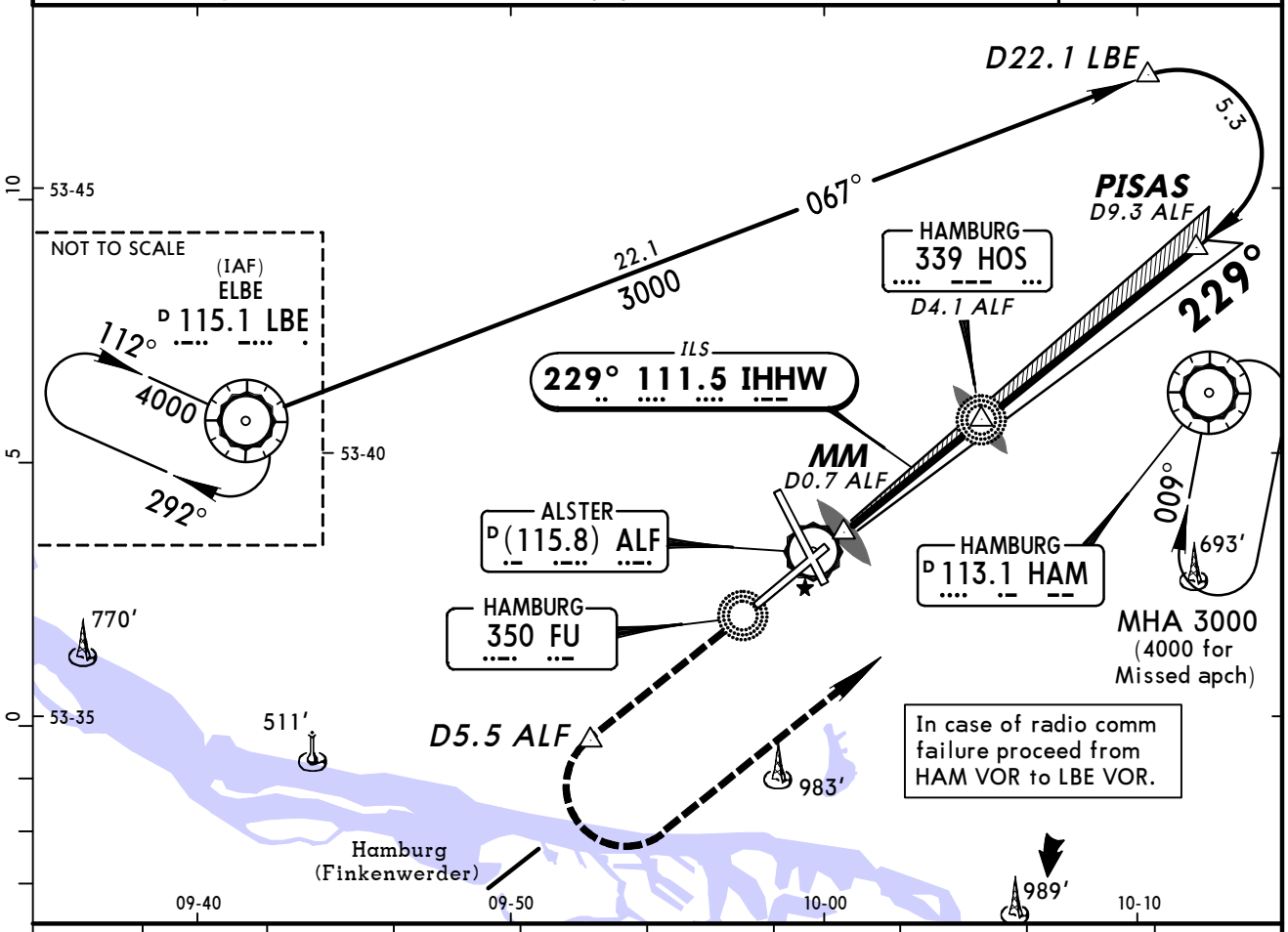
LOC	Final Apch Crs	GS LOM	ILS DA(H)	Apt Elev 53′
IHHW 111.5	229°	1340′ (1297′)	Refer to Minimums	RWY 43′

MISSED APCH: Climb STRAIGHT AHEAD via FU Lctr to D5.5 ALF, then turn LEFT to HAM VOR climbing to 4000′.

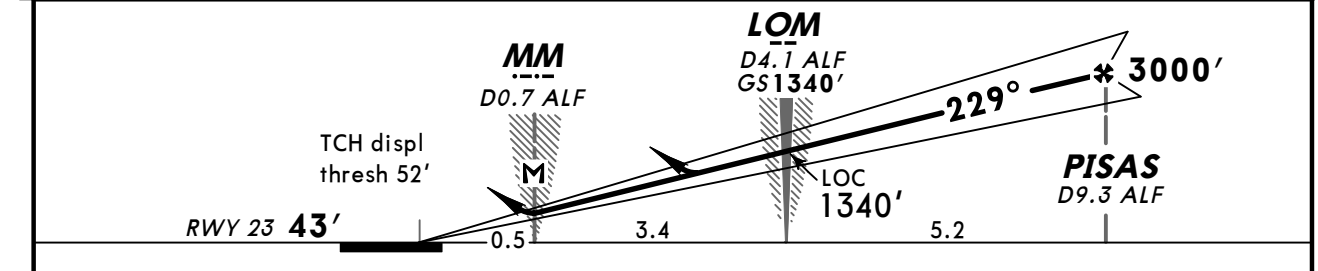
Alt Set: hPa (IN on req) Rwy Elev: 2 hPa Trans level: By ATC Trans alt: 5000′

1. LOC: **DME required.** 2. LACFT: See ATC State pages.

2100′
MSA HAM VOR



LOC (GS out)	ALF DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	670′	990′	1310′	1630′	1950′	2270′	2580′	2900′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D0.7 ALF						

ALSF-II
REIL
PAPI

D5.5 ALF via FU 350

4000′ LT

HAM 113.1

Standard STRAIGHT-IN LANDING RWY 23

ILS 1				LOC (GS out)	
DA(H) A: 262′ (219′) B: 271′ (228′) C: 281′ (238′) D: 291′ (248′)				DA(H) 500′ (457′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D			RVR 1300m		

PANS OPS 4

1 LACFT: DA(H) 314′ (271′), FULL: RVR 600m, Limited: RVR 750m, ALS out: RVR 1300m.

CHANGES: Bearing.

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EDDH/HAM
HAMBURG

JEPPESEN
8 OCT 10
Eff 21 Oct
11-3A

HAMBURG, GERMANY
CAT II ILS Rwy 23

*D-ATIS	BREMEN Radar (APP)	HAMBURG Director (APP/R)	HAMBURG Tower	Ground
123.12	134.25 136.67	118.2 124.62	126.85	121.8

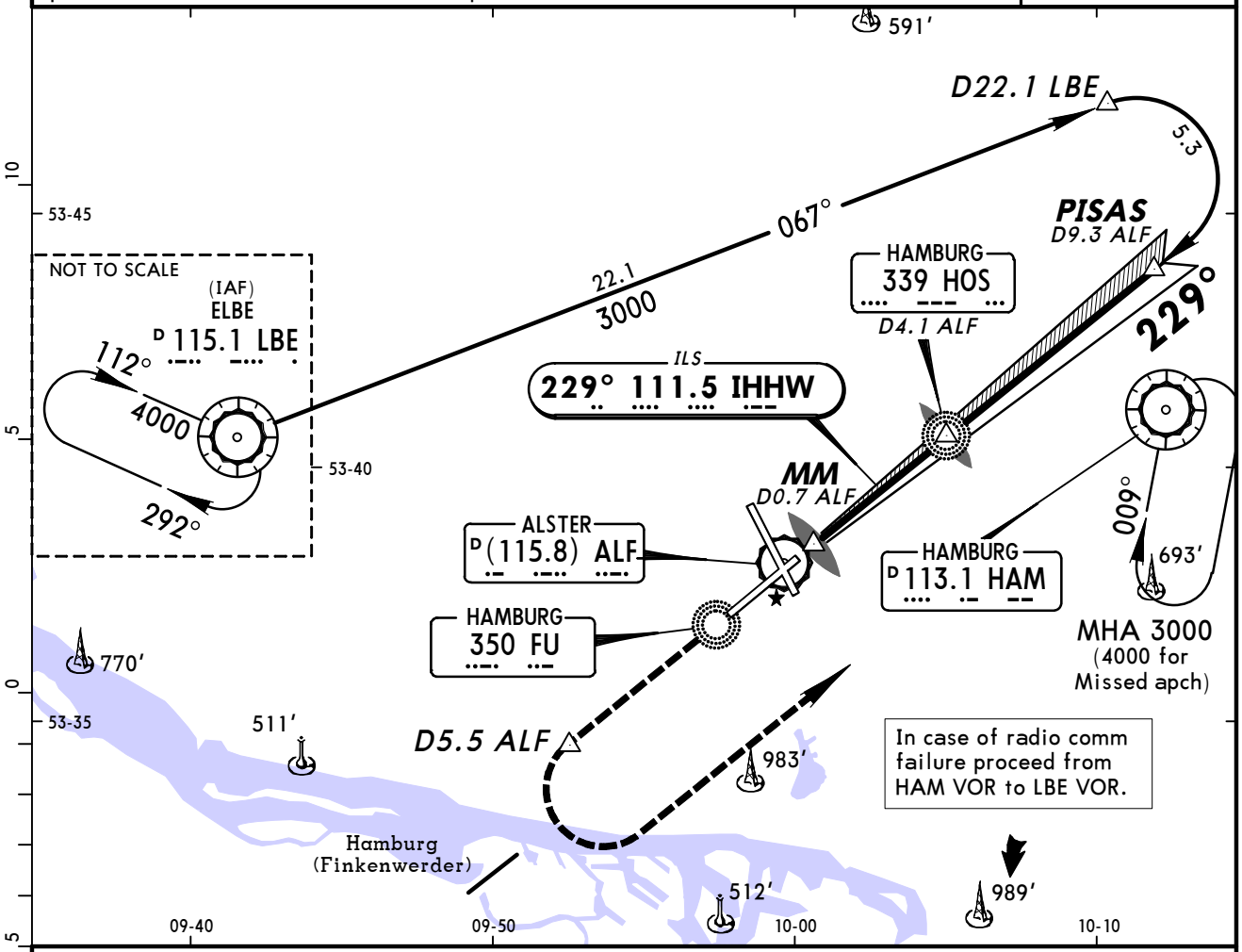
BRIEFING STRIP TM

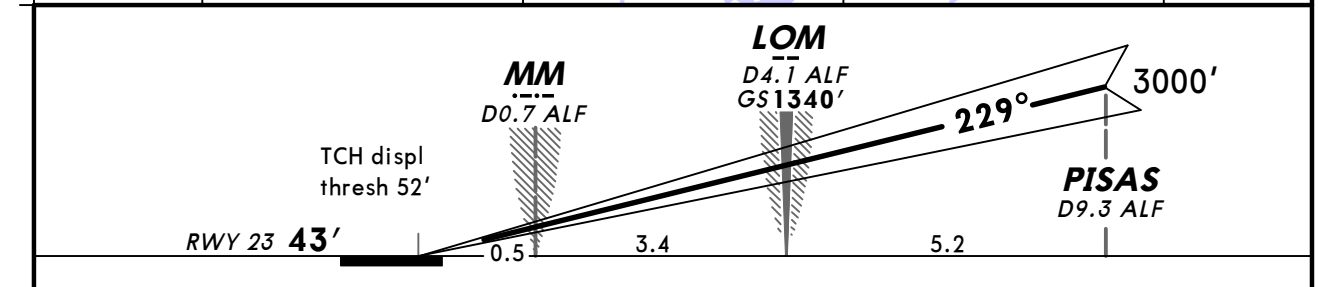
LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev 53′
IHHW	229°	LOM 1340′ (1297′)	RA 98′ DA(H) 143′ (100′)	RWY 43′
111.5				

MISSED APCH: Climb STRAIGHT AHEAD via FU Lctr to D5.5 ALF, then turn LEFT to HAM VOR climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 2 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.

2100′
MSA HAM VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

D5.5 ALF via FU 350

4000′ LT

HAM 113.1

Standard

STRAIGHT-IN LANDING RWY 23
CAT II ILS

ABCD
RA 98′
DA(H) **143′** (100′)

RVR 300m 1

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

PANS OPS 4

CHANGES: Bearing. Minimums.

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BRIEFING STRIP™

*D-ATIS	BREMEN Radar (APP)	HAMBURG Director (APP/R)	HAMBURG Tower	Ground
123.12	134.25 136.67	118.2 124.62	126.85	121.8

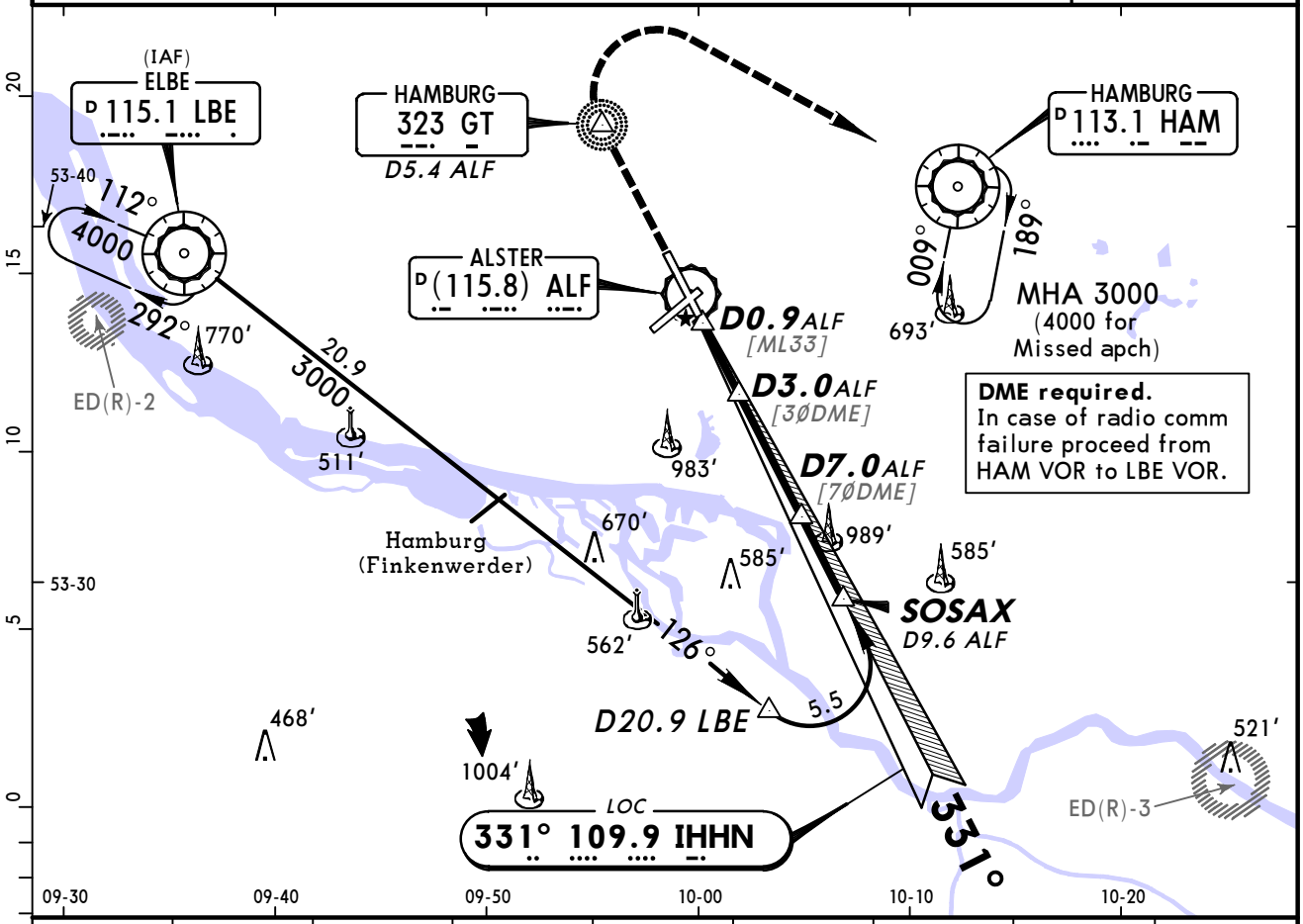
LOC	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 53′
IHHN 109.9	331°	SOSAX 3000′ (2965′)	480′ (445′)	RWY 35′

MISSED APCH: Climb direct to GT Lctr, then turn RIGHT direct to HAM VOR climbing to 4000′.

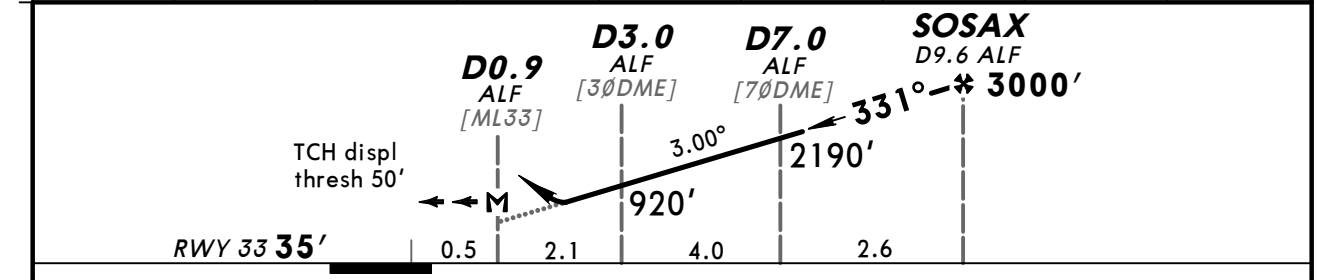
2100′

MSA HAM VOR

Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′



ALF DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	600′	920′	1240′	1550′	1870′	2190′	2510′	2830′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.9 ALF							

HIALS
REIL
PAPI

GT 323

4000′ RT

HAM 113.1

Standard STRAIGHT-IN LANDING RWY 33

DA(H) 480′ (445′)

	ALS out
A	RVR 1500m
B	
C	CMV 2100m
D	
RVR 1400m	

PANS OPS 4

CHANGES: Bearings.

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EDDH/HAM
HAMBURG

JEPPESEN
8 OCT 10 (12-1) Eff 21 Oct

HAMBURG, GERMANY
RNAV (GPS) Rwy 05

*D-ATIS	BREMEN Radar (APP)	HAMBURG Director (APP/R)	HAMBURG Tower	Ground
123.12	134.25 136.67	118.2 124.62	126.85	121.8

BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 53′
	049°	ANEXI 3000′ (2968′)	510′ (478′)	RWY 32′

MISSED APCH RNAV: Climb on track 049° to DHØ3Ø, then turn RIGHT on track 085° to HAM VOR climbing to 4000′.
NON-RNAV: Climb direct to HOS NDB, then turn RIGHT direct to HAM VOR climbing to 4000′.

2100′

MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′

Baro-VNAV not authorized below -15° C.

In case of radio comm failure proceed from HAM VOR to LBE VOR.

HAMBURG 339 HOS
D4.1 ALF

DHØ3Ø 4.0 085°

112° 53-40 4000

(IAF) ELBE D 115.1 LBE

ALSTER D (115.8) ALF

5.9 049°

292°

770′

ED(R)-2

MISSED APCH FIX
D HAMBURG 113.1 HAM
009° 4000 189°

RWØ5

7.5 4000 174°

511′

3.0 NM to RWØ5

983′

DHØ2Ø 4.0 3000 139°

ANEXI 049°

4.0 049°

Hamburg (Finkenwerder) (Do not mistake for Hamburg)

989′

670′

585′

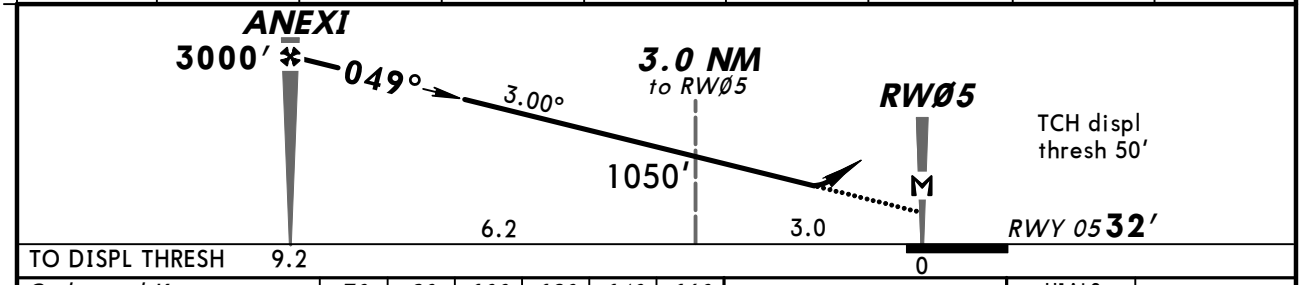
562′

53-30

(IF) DHØ25

09-40 09-50 10-00

DIST to RWØ5	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2960′	2640′	2320′	2000′	1680′	1360′	1050′	730′



TO DISPL THRESH 9.2

Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ5							

HIALS
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 05

	LNAV/VNAV DA(H) 510′ (478′)		LNAV DA(H) 530′ (498′)	
		ALS out		ALS out
A	RVR 1500m	RVR 1500m	RVR 1500m	RVR 1500m
B				
C		CMV 2200m		CMV 2300m
D				

CHANGES: Bearing.

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EDDH/HAM
HAMBURG

JEPPESEN
8 OCT 10 (12-2) Eff 21 Oct

HAMBURG, GERMANY
RNAV (GPS) Rwy 15

*D-ATIS	BREMEN Radar (APP)	HAMBURG Director (APP/R)	HAMBURG Tower	Ground
123.12	134.25 136.67	118.2 124.62	126.85	121.8

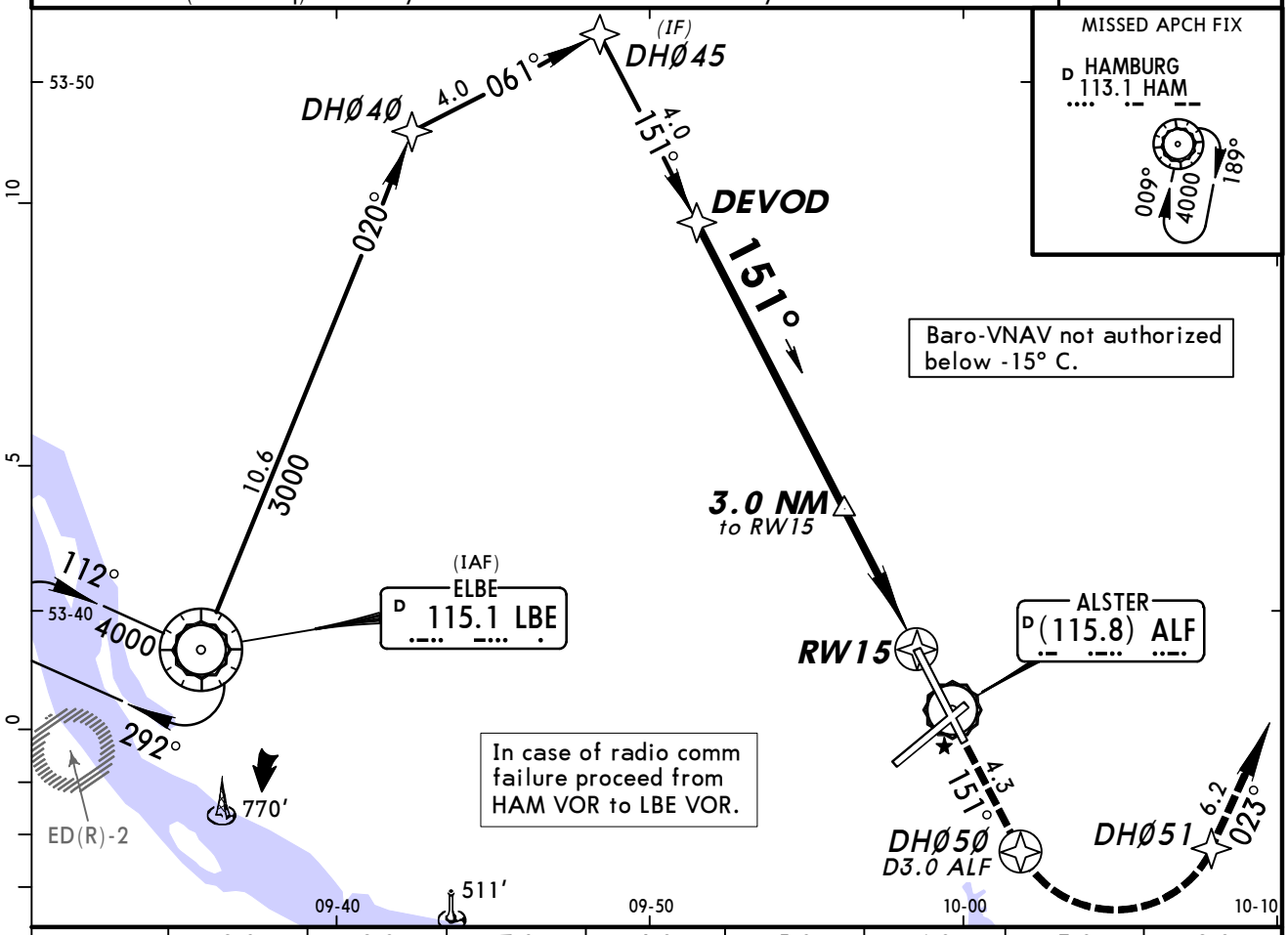
BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt DEVOD	LNAV/VNAV DA(H)	Apt Elev 53′ RWY 53′
	151°	3000′ (2947′)	580′ (527′)	

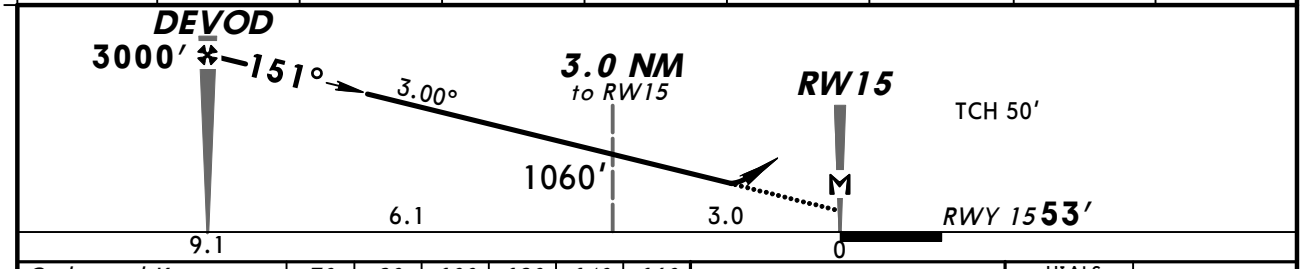
MISSED APCH RNAV: Climb on track 151° to DHØ5Ø, then turn LEFT via DHØ51 on track 023° to HAM VOR climbing to 4000′.
NON-RNAV: Climb STRAIGHT AHEAD to D3.0 ALF, then turn LEFT direct to HAM VOR climbing to 4000′.

Alt Set: hPa (IN on req)	Rwy Elev: 2 hPa	Trans level: By ATC	Trans alt: 5000′

2100′
MSA ARP



DIST to RW15	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2970′	2660′	2340′	2020′	1700′	1380′	1060′	740′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW15							

HIALS
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY 15

	LNAV/VNAV DA(H) 580′ (527′)		LNAV DA(H) 590′ (537′)	
		ALS out		ALS out
A	RVR 1500m	RVR 1500m	RVR 1500m	RVR 1500m
B				
C	RVR 1700m	CMV 2400m	RVR 1700m	CMV 2400m
D				

PANS OPS 4

CHANGES: Bearings.

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EDDH/HAM
HAMBURG

JEPPESEN
8 OCT 10 (12-3) Eff 21 Oct

HAMBURG, GERMANY
RNAV (GPS) Rwy 23

*D-ATIS	BREMEN Radar (APP)	HAMBURG Director (APP/R)	HAMBURG Tower	Ground
123.12	134.25 136.67	118.2 124.62	126.85	121.8

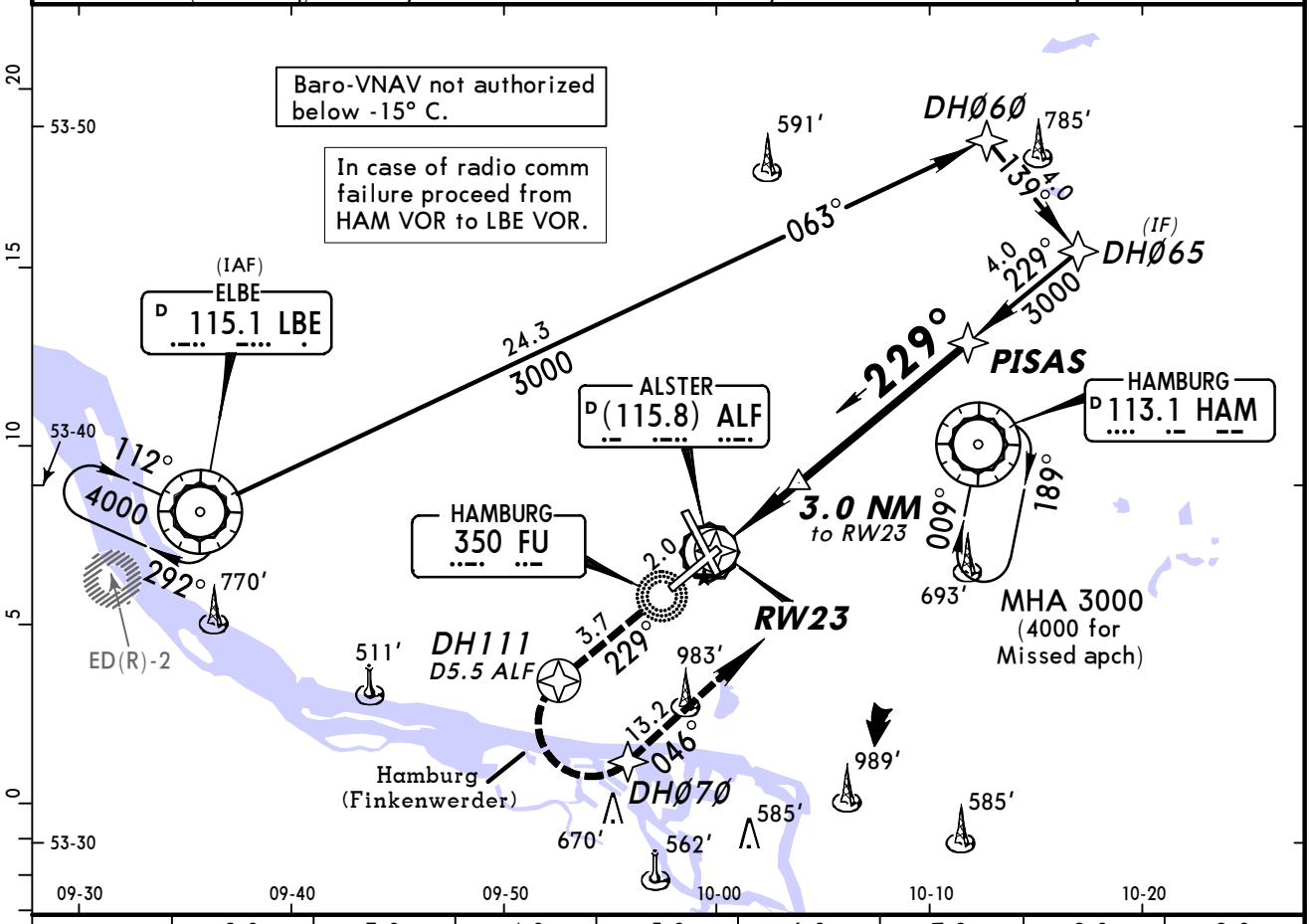
BRIEFING STRIP™

RNAV	Final Apch Crs 229°	Minimum Alt PISAS 3000′ (2957′)	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev 53′ RWY 43′

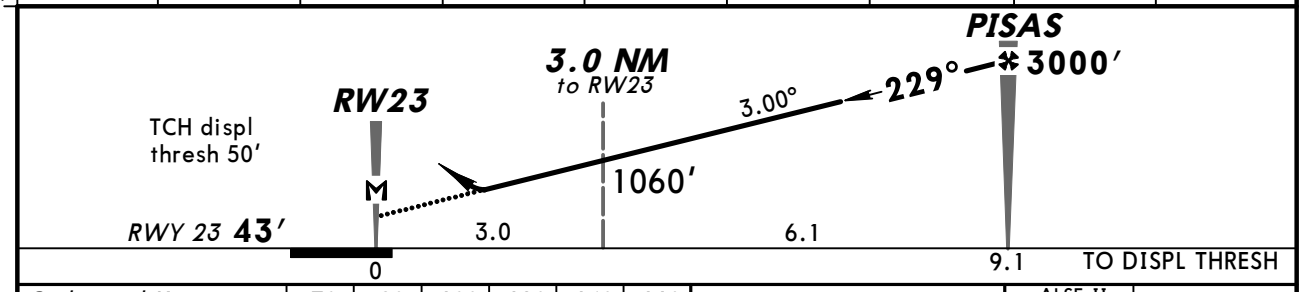
MISSED APCH RNAV: Climb on track 229° via FU Lctr to DH111, then turn LEFT via DHØ7Ø on track 046° to HAM VOR climbing to 4000′.
NON-RNAV: Climb STRAIGHT AHEAD via FU Lctr to DH111, then turn LEFT to HAM VOR climbing to 4000′.

2100′
MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 2 hPa Trans level: By ATC Trans alt: 5000′



DIST to RW23	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	740′	1060′	1370′	1690′	2010′	2330′	2650′	2970′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW23							

ALSF-II
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 23

	LNAV/VNAV DA(H) A: 410′ (367′) BCD: 460′ (417′)		LNAV DA(H) 480′ (437′)	
		ALS out		ALS out
A	RVR 1000m	RVR 1500m	RVR 1300m	RVR 1500m
B	RVR 1200m			
C		RVR 1900m		RVR 2000m
D				

CHANGES: None.

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EDDH/HAM
HAMBURG

JEPPESEN
8 OCT 10 (12-4) Eff 21 Oct

HAMBURG, GERMANY
RNAV (GPS) Rwy 33

*D-ATIS	BREMEN Radar (APP)	HAMBURG Director (APP/R)	HAMBURG Tower	Ground
123.12	134.25 136.67	118.2 124.62	126.85	121.8

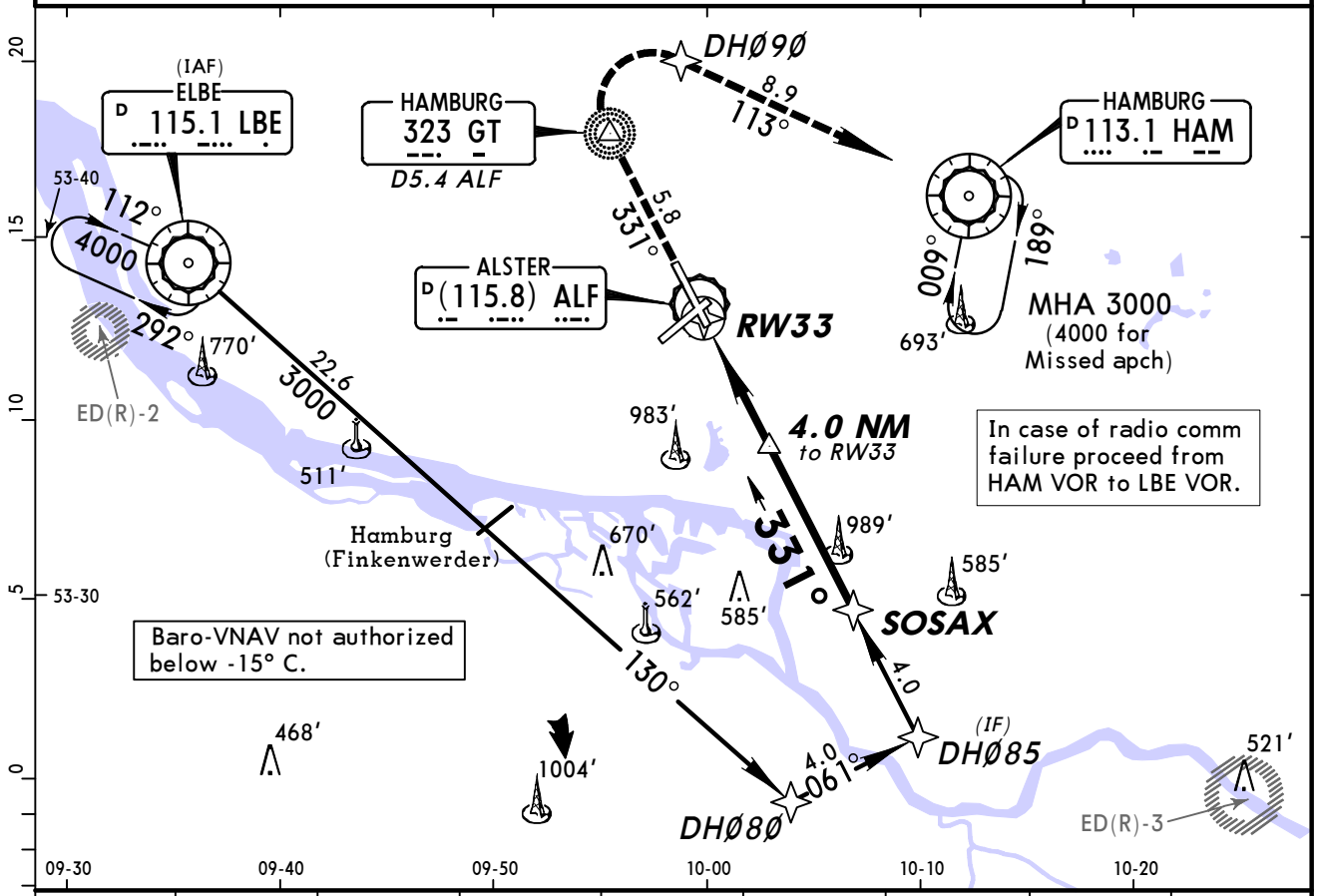
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt SOSAX	LNAV/VNAV DA(H)	Apt Elev 53′ RWY 35′
	331°	3000′ (2965′)	480′ (445′)	

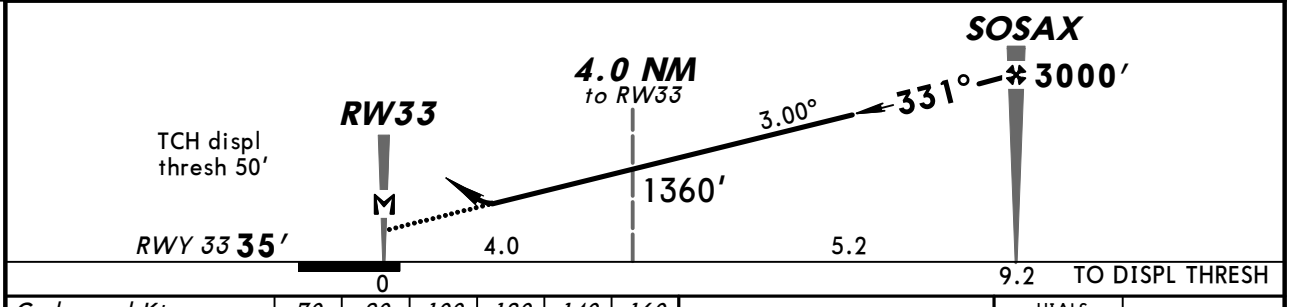
MISSED APCH RNAV: Climb on track 331° to GT Lctr, then turn RIGHT via DHØ9Ø on track 113° to HAM VOR climbing to 4000′.
NON-RNAV: Climb direct to GT Lctr, then turn RIGHT to HAM VOR climbing to 4000′.

2100′
MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′



DIST to RW33	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	730′	1050′	1360′	1680′	2000′	2320′	2640′	2960′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW33							

HIALS
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY 33

	LNAV/VNAV DA(H) 480′ (445′)		LNAV DA(H) 550′ (515′)	
		ALS out		ALS out
A	RVR 1400m	RVR 1500m	RVR 1500m	
B				
C		CMV 2100m	RVR 1600m	CMV 2400m
D				

PANS OPS 4

CHANGES: Bearings.

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EDDH/HAM
HAMBURG

JEPPESEN
8 OCT 10 (16-1) Eff 21 Oct

HAMBURG, GERMANY
NDB Rwy 05

*D-ATIS	BREMEN Radar (APP)		HAMBURG Director (APP/R)		HAMBURG Tower	Ground
123.12	134.25	136.67	118.2	124.62	126.85	121.8

BRIEFING STRIP™

Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 53′
FU	049°	D10.5 ALF	620′ (588′)	RWY 32′
350		3000′ (2968′)		

MISSED APCH: Climb direct to HOS NDB, then turn RIGHT direct to HAM VOR climbing to 4000′.

2100′

MSA HAM VOR

Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′

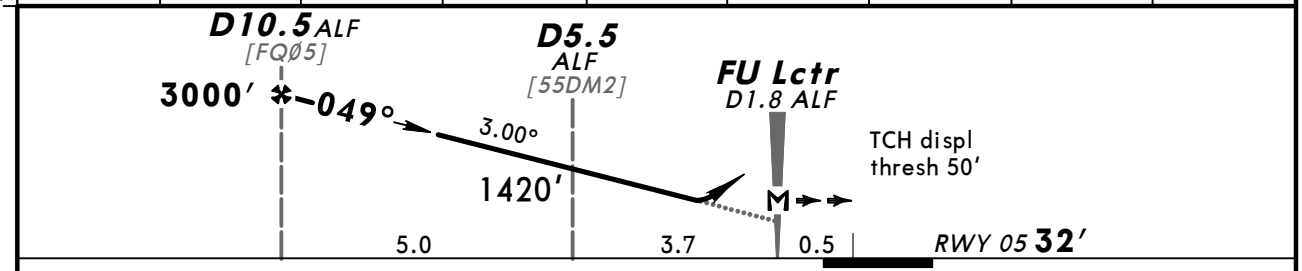
DME required.
In case of radio comm failure proceed from HAM VOR to LBE VOR.

HAMBURG
339 HOS
D4.1 ALF

112°
53-40
4000
292°
(IAF)
ELBE
D 115.1 LBE
ALSTER
D (115.8) ALF
HAMBURG
350 FU
D1.8 ALF
ED(R)-2
770′
3000
8.3
158°
511′
D5.5 ALF
[55DM2]
049°
983′
D10.5 ALF
[FQØ5]
D8.3 LBE
3.9
Hamburg
(Finkenwerder)
(Do not mistake for Hamburg)
670′
585′
562′
989′
53-30
09-40
09-50
10-00

MISSED APCH FIX
D HAMBURG
113.1 HAM
009°
189°
4000

ALF DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2860′	2540′	2220′	1900′	1580′	1260′	950′	630′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at FU Lctr/D1.8 ALF							

HIALS
REIL
PAPI

HOS 339

4000′ RT

HAM 113.1

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **05**

DA(H) **620′** (588′)

		ALS out
A	RVR 1500m	
B		
C	RVR 2000m	CMV 2400m
D		

CHANGES: Bearings. Descent angle.

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EDDH/HAM
HAMBURG

JEPPESEN
8 OCT 10 (16-2) Eff 21 Oct

HAMBURG, GERMANY
NDB Rwy 15

*D-ATIS	BREMEN Radar (APP)		HAMBURG Director (APP/R)		HAMBURG Tower	Ground
123.12	134.25	136.67	118.2	124.62	126.85	121.8

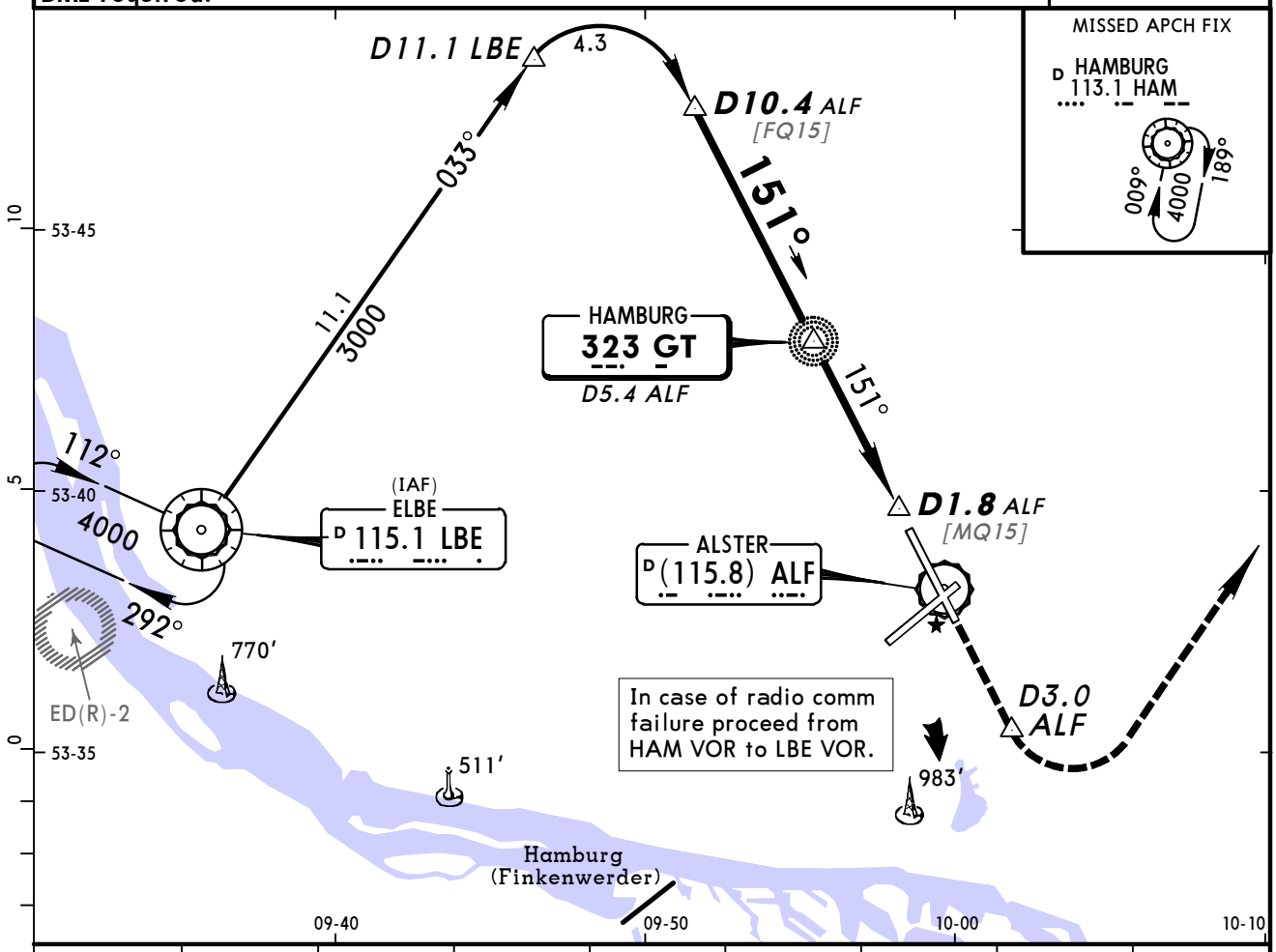
BRIEFING STRIP ™

Lctr GT	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
323	151°	D10.4 ALF 3000′ (2947′)	620′ (567′)	Apt Elev 53′ RWY 53′

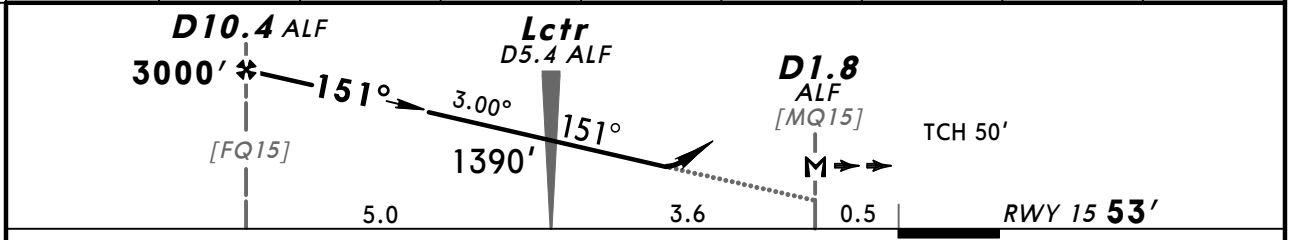
MISSED APCH: Climb STRAIGHT AHEAD to D3.0 ALF, then turn LEFT direct to HAM VOR climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 2 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2100′
MSA HAM VOR



ALF DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2880′	2560′	2240′	1920′	1600′	1290′	970′	650′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.8 ALF							

HIALS
REIL
PAPI
D3.0 ALF
4000′ LT
HAM 113.1

Standard STRAIGHT-IN LANDING RWY 15

DA(H) 620′ (567′)

	ALS out
A, B	RVR 1500m
C	RVR 1900m
D	CMV 2400m

PANS OPS 4

CHANGES: Bearing.

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EDDH/HAM
HAMBURG

JEPPESEN
8 OCT 10 (16-3) Eff 21 Oct

HAMBURG, GERMANY
NDB Rwy 23

*D-ATIS	BREMEN Radar (APP)		HAMBURG Director (APP/R)		HAMBURG Tower	Ground
123.12	134.25	136.67	118.2	124.62	126.85	121.8

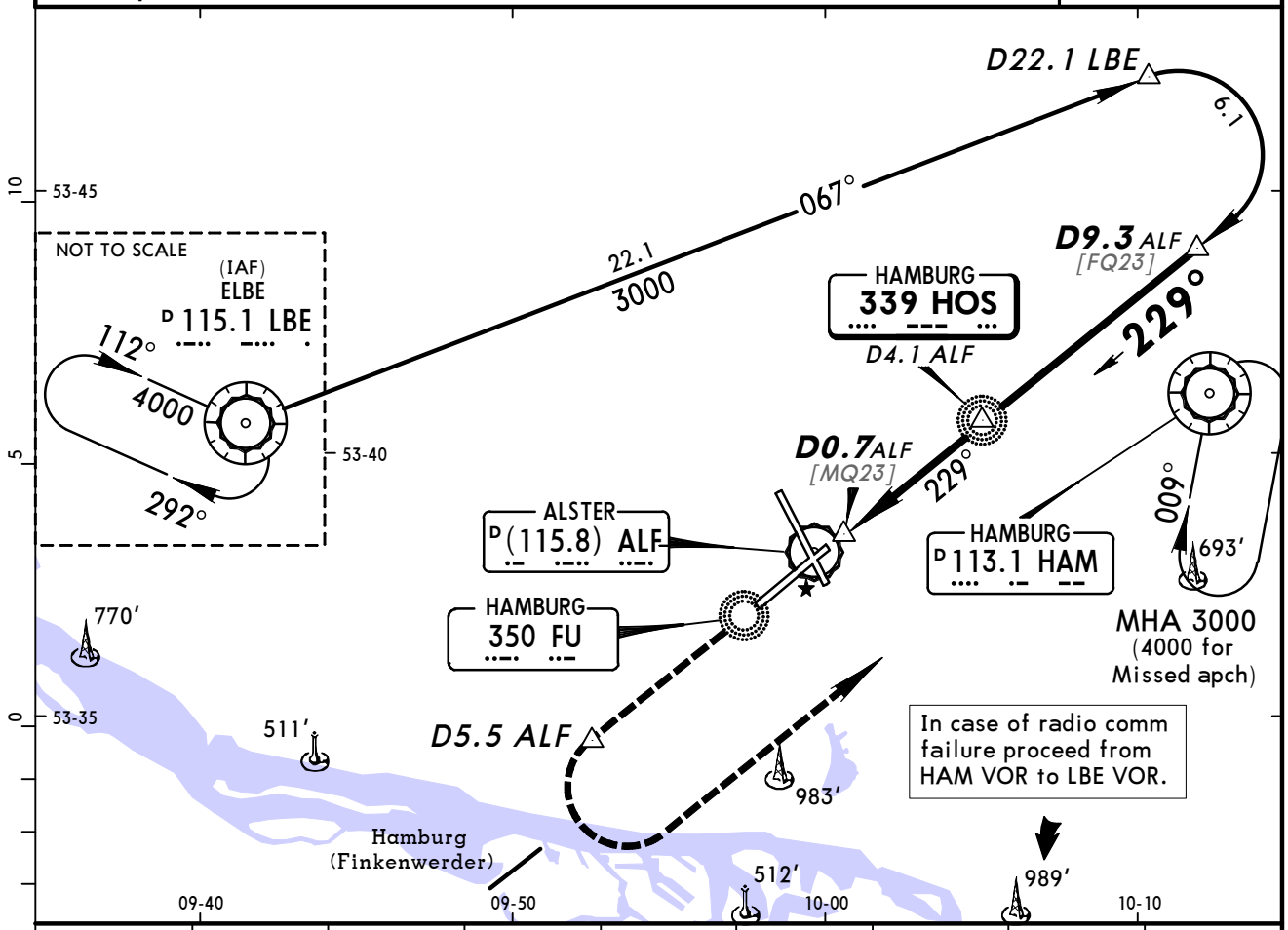
BRIEFING STRIP™

NDB HOS 339	Final Apch Crs 229°	Minimum Alt D9.3 ALF 3000′ (2957′)	DA(H) 590′ (547′)	Apt Elev 53′ RWY 43′

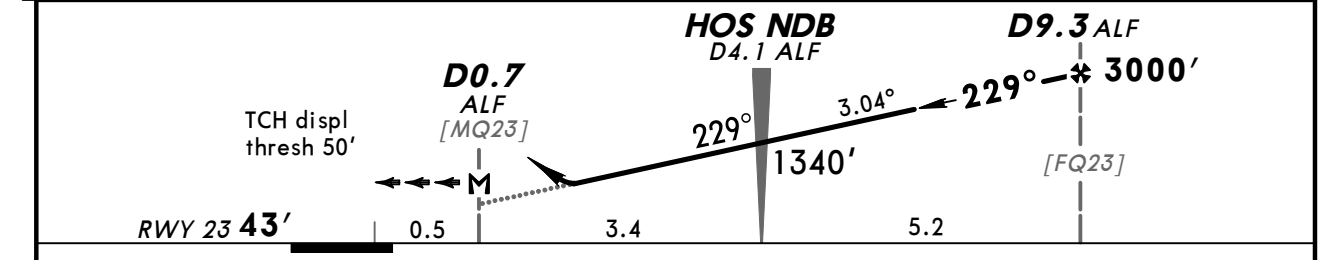
MISSED APCH: Climb STRAIGHT AHEAD via FU Lctr to D5.5 ALF, then turn LEFT to HAM VOR climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 2 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2100′
MSA HAM VOR



ALF DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	670′	990′	1310′	1630′	1950′	2270′	2580′	2900′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.04°	376	484	538	645	753	861
MAP at D0.7 ALF							

ALSF-II
REIL
PAPI

D5.5 ALF via FU 350

4000′ LT

HAM 113.1

Standard STRAIGHT-IN LANDING RWY 23

DA(H) 590′ (547′)

		ALS out
A	RVR 1500m	
B		
C	RVR 1800m	CMV 2400m
D		

PANS OPS 4

CHANGES: Bearing. Descent angle.

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BRIEFING STRIP ™

*D-ATIS	BREMEN Radar (APP)		HAMBURG Director (APP/R)		HAMBURG Tower	Ground
123.12	134.25	136.67	118.2	124.62	126.85	121.8

RADAR	Final Apch Crs By ATC	Minimum Alt See table below	DA(H) Refer to Minimums	Apt Elev 53′ RWY -See below

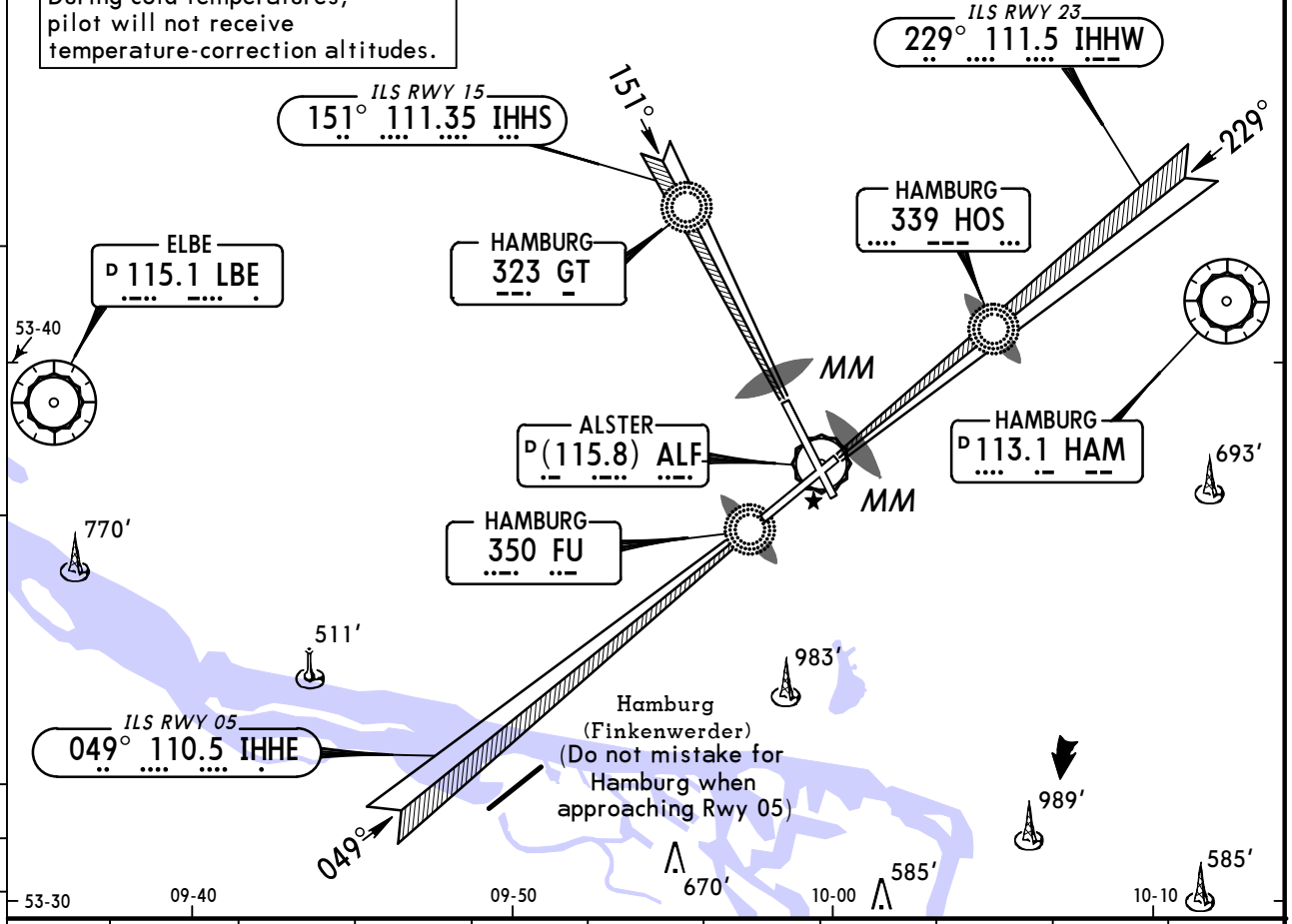
MISSED APCH: Climb STRAIGHT AHEAD to 4000′.

Alt Set: hPa (IN on req) Apt Elev: 2 hPa Trans level: By ATC Trans alt: 5000′

2100′

MSA HAM VOR

During cold temperatures, pilot will not receive temperature-correction altitudes.



RWY 05, 23, 33	RADAR FIX	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3100′	2800′	2500′	2200′	1900′	1600′	1300′	1000′	700′
RWY 15	RADAR FIX	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3200′	2900′	2600′	2300′	2000′	1700′	1400′	1100′	800′

Minimum Alt/NM	10.0 FAF	5.0
SRE 05	3100′	—
SRE 15	3200′	—
SRE 23	3100′	—
SRE 33	3100′	1400′

RWY	05	15	23	33
BASED ON ELEV.	32′	53′	43′	35′

Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	2.83°	350	450	500	600	700	800
MAP at THR							

Lighting-Refer to Airport Chart

4000′

PANS OPS 4

Standard

STRAIGHT-IN LANDING

	SRE 05 DA(H) 560′(528′)		SRE 15 DA(H) 560′(507′)		SRE 23 DA(H) 570′(527′)		SRE 33 DA(H) 600′(565′)	
		ALS out		ALS out		ALS out		ALS out
A B C D	RVR 1700m	CMV 2400m	RVR 1600m	CMV 2400m	RVR 1700m	CMV 2400m	RVR 1900m	CMV 2600m

CHANGES: Bearing. Recommended alt.

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General Information

Location: Cologne-Bonn Deu
IATA Code: CGN
Lat/Long: N50° 52.0' E007° 08.6'
Elevation: 302 ft

Airport Use: Public
Magnetic Variation: 1.1°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0621 Z
Sunset: 1708 Z,

Runway Information

Runway: 06
Length x Width: 8067 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 231 ft
Lighting: Edge, ALS, Centerline

Runway: 14L
Length x Width: 12516 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 230 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 14R
Length x Width: 6112 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 221 ft
Lighting: Edge, ALS, Centerline

Runway: 24
Length x Width: 8067 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 272 ft
Lighting: Edge, ALS, Centerline

Runway: 32L
Length x Width: 6112 ft x 148 ft

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Surface Type: concrete
TDZ-Elev: 259 ft
Lighting: Edge, ALS, Centerline

Runway: 32R
Length x Width: 12516 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 302 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Communication Information

ATIS 132.125
ATIS 112.15
Cologne-Bonn Ground Tower 121.725
Cologne-Bonn Delivery Tower 121.85
Cologne-Bonn Tower 124.975
Cologne-Bonn Tower 25.465 Military
Cologne-Bonn Tower 25.302 Military
Cologne-Bonn Military Ground Control 136.25 Military
Cologne-Bonn Military Ground Control 25.465 Military
Cologne-Bonn Apron Ramp/Taxi Control 121.95
Cologne-Bonn Director (Approach Control Radar) 121.05
Cologne-Bonn Director (Approach Control Radar) 38.952 Military

1. GENERAL

1.1. ATIS

D-ATIS 112.15 132.12

1.2. NIGHT FLYING RESTRICTIONS

1. Jet ACFT not licensed in accordance with ICAO Annex 16 and jet ACFT licensed in accordance with ICAO Annex 16, Volume I, Chapter 2:
   - Take-offs and landings are not permitted on all RWYs between 2000LT(1950LT off blocks)-0800LT.
2. Jet ACFT licensed in accordance with ICAO Annex 16, Volume I, Chapter 3 which are not included in the Bonus List published by the Ministry of Transport:
   - Scheduled and delayed take-offs as well as scheduled landings are not permitted on all RWYs between 2200LT(2150LT off blocks)-0600LT.
   - Delayed landings are not permitted on RWYs 14R and 06 between 2200LT-0600LT.
3. Jet ACFT licensed in accordance with ICAO Annex 16, Volume I, Chapter 3 which are included in the Bonus List (in case of a change to the List, jet ACFT which are no longer included may continue to be used until 31 October 2015, insofar as they have already been employed by ACFT operating agencies at Cologne-Bonn APT):
   - Scheduled and delayed take-offs are not permitted on RWYs 14R, 32L and 24 between 2200LT(2150LT off blocks)-0600LT.
   - Landings are not permitted on RWYs 14R and 06 between 2200LT-0600LT.
4. Propeller-driven ACFT not licensed in accordance with ICAO Annex 16 and/or LSL:
   - Take-offs and landings are not permitted on all RWYs between 2200LT(2150LT off block)-0600LT.
5. Propeller-driven ACFT licensed in accordance with ICAO Annex 16, Volume I, Chapters 3, 5, 6 or 10 and/or according to LSL Chapters III, V, VI or X:
   - Scheduled and delayed take-offs are not permitted on RWYs 14R, 32L and 24 between 2200LT(2150LT off blocks)-0600LT.
   - Landings are not permitted on RWYs 14R and 06 between 2200LT-0600LT.

EXCEPTIONS:

Exempt from the restrictions mentioned in para 1 - 5 are: Landings of ACFT provably approaching Cologne-Bonn APT as alternate aerodrome for meteorological, technical or other safety reasons as well as take-offs and landings of ACFT rendering medical assistance or on missions in disasters.

Take-offs of all kinds of ACFT are permitted on RWYs 06, 14L and 32R between 2200-0600LT only from THR or from the positions A5 (RWY 14L) and/or A1 (RWY 32R). Air Navigation Services Unit Cologne-Bonn may grant exceptions in individual cases if the traffic situation demands so.

Deviating from the regulations the Bezirksregierung Dusseldorf (Luftaufsicht Cologne-Bonn) may grant additional exceptions in justified individual cases, especially if necessary to avoid considerable disturbances of air traffic or in cases of special public interest. If appropriate, applications shall be submitted to:

Luftaufsicht Cologne-Bonn
Flughafen T1 M503
51147 Koeln
Tel: (02203) 40-2291
(0163) 9750221
Telefax: (02203) 40-2290

Exceptional permission for night landings during the closing times will not generally be granted by ATC via radio telephony. Accordingly, a landing clearance issued by ATC for safety reasons will not necessarily include the decision of the 'Luftaufsicht' about the admissibility of a night landing. In case of a landing or premature landing (before 0600LT) not approved by the 'Luftaufsicht', the pilot shall appear in person at the 'Luftaufsicht' immediately after landing in order to defend admissibility of the night landing.

Clearances for take-offs during closing times issued by ATC do not comprise the necessary exceptional permission by the 'Luftaufsicht'.

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1. GENERAL

1.3. REVERSE THRUST

Reverse thrust other than idle shall not be used for landings on RWYs 32R and 14L between 2200-0600LT except for safety reasons.

1.4. RUN-UP TESTS

Engine test-runs without the use of noise suppression facilities are generally not permitted.

1.5. TAXI PROCEDURES

1.5.1. GENERAL

TWY D between TWY A and TWY T MAX wingspan 213'/65m.
TWY B from TWY T up to TWY bridge of TWY B inclusively MAX wingspan 171'/52m.

TWY bridge of TWY B MAX 200 mt AUW.
TWY C between THR 32L and TWY A only for towing up to code C ACFT with wheel base less than 59'/18m.

For ACFT with a wingspan of more than 171'/52m, it is mandatory to use the yellow marked and green/ green lighted taxiing guide line on TWY M.

1.5.2. TAXIING ON THE APRONS

ACFT may taxi on the aprons without guidance by a Follow-me car only if permanent radio contact can be maintained with aerodrome control while taxiing. If a Follow-me car is employed, the pilot shall observe its signals. If the pilot requires the assistance of a Follow-me car when taxiing, he may request this from aerodrome control.
ACFT are permitted to taxi on the aprons only at the absolute minimum engine speed.
On the aprons, ACFT may only taxi on or along the yellow taxiing guide lines and on aprons C and D on or along the orange and blue taxiing guide lines, respectively. Deviations and shortcuts are not allowed. In exceptional cases, taxiing off the guide lines will be permitted under the guidance of a Follow-me car or in agreement with aerodrome control.

1.5.3. USE OF A380

General:
After leaving the RWY, ACFT shall stop and wait for the Follow-me car. As a rule, ACFT will be guided by a Follow-me car in the areas between the taxi-holding positions and the parking positions.

Taxiing onto and exiting from RWY 14L/32R:
Landing 14L: TWY A
Landing 32R: TWY A4
Take-off 14L: TWY A5
Take-off 32R: TWY A (On request, ACFT can be guided by a Follow-me car to the take-off area.)

Taxi-Holding positions in front of RWY 14L/32R:
Only the CAT II/III taxi-holding positions (pattern B markings) may be used.

Taxi-Holding positions in front of RWY 06/24:
The separate taxi-holding positions marked for A380 shall be used.

Taxiing on TWY A:
Attention is drawn to the reduced TWY width between RWY 06/24 and position area F.

Other:
ACFT with wingspan of 118'/36m or more may no longer taxi on TWY E if A380 is taxiing on TWY A (between RWY 06/24 and TWY A7).

1.6. PARKING INFORMATION

Visual Docking Guidance System APIS available on stands D1 thru D12.

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2. ARRIVAL

2.1. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

2.2. NOISE ABATEMENT PROCEDURES

2.2.1. CONTINUOUS DESCENT APPROACH (CDA)

CDA noise abatement procedure in progress daily between 2200-0800LT, for MD-11 and B744 at all times.
Depending on the traffic situation, ATC will either use radar vectoring to final approach with distance-to-go (DTG) information or clear ACFT for RNAV "transition and profile".
During radar vectoring pilots shall expect descent below FL70 approx 26 NM to touchdown. Unless otherwise instructed by ATC pilots are expected to reduce speed to MAX 220 KT prior to descent below FL70, aim for a low-noise CDA, maintain at least 190 KT to 12 NM final, extend gear 2000' AGL or later, perform final landing configuration approaching LOM and aim for a low-noise CDA without level flight below FL70.
Clearance for RNAV transition may include clearance to follow vertical profile.
When cleared for "transition and profile", pilots shall respect the published levels and speeds and aim for a low-noise CDA below FL 70. They should extend the landing gear only upon reaching 2000' GND or later and perform final landing configuration approaching LOM.
For monitoring purposes, a descent will be considered to be continuous provided that no route segment has a height change of less than 50' over a track distance of 2 NM, as recorded in the Flight Track and Aircraft Noise Monitoring System (FANOMOS).

2.3. CAT II/III OPERATIONS

RWY 14L/32R approved for CAT II/III operations, special aircrew and ACFT certification required.

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3. DEPARTURE

3.1. PUSH-BACK PROCEDURE

To receive instructions to push-back from a nose-in position, pilots are requested to establish contact with the driver of the ACFT tractor. The pilot may enquire only when the manoeuvre can be carried out immediately. The driver of the ACFT tractor will carry out the push-back procedure as soon as he has received the necessary clearance from ATC. In order to avoid delays, the engines shall be started during push-back. After push-back has been completed successfully, readiness to taxi shall be reported to aerodrome control.

3.2. NOISE ABATEMENT PROCEDURES

To improve adherence to the prescribed departure routes, the pilot-in-command shall use the autopilot at the earliest opportunity, unless otherwise instructed by ATC.

3.3. OTHER INFORMATION

3.3.1. DATALINK DEPARTURE CLEARANCE (DCL)

The following time parameters apply:

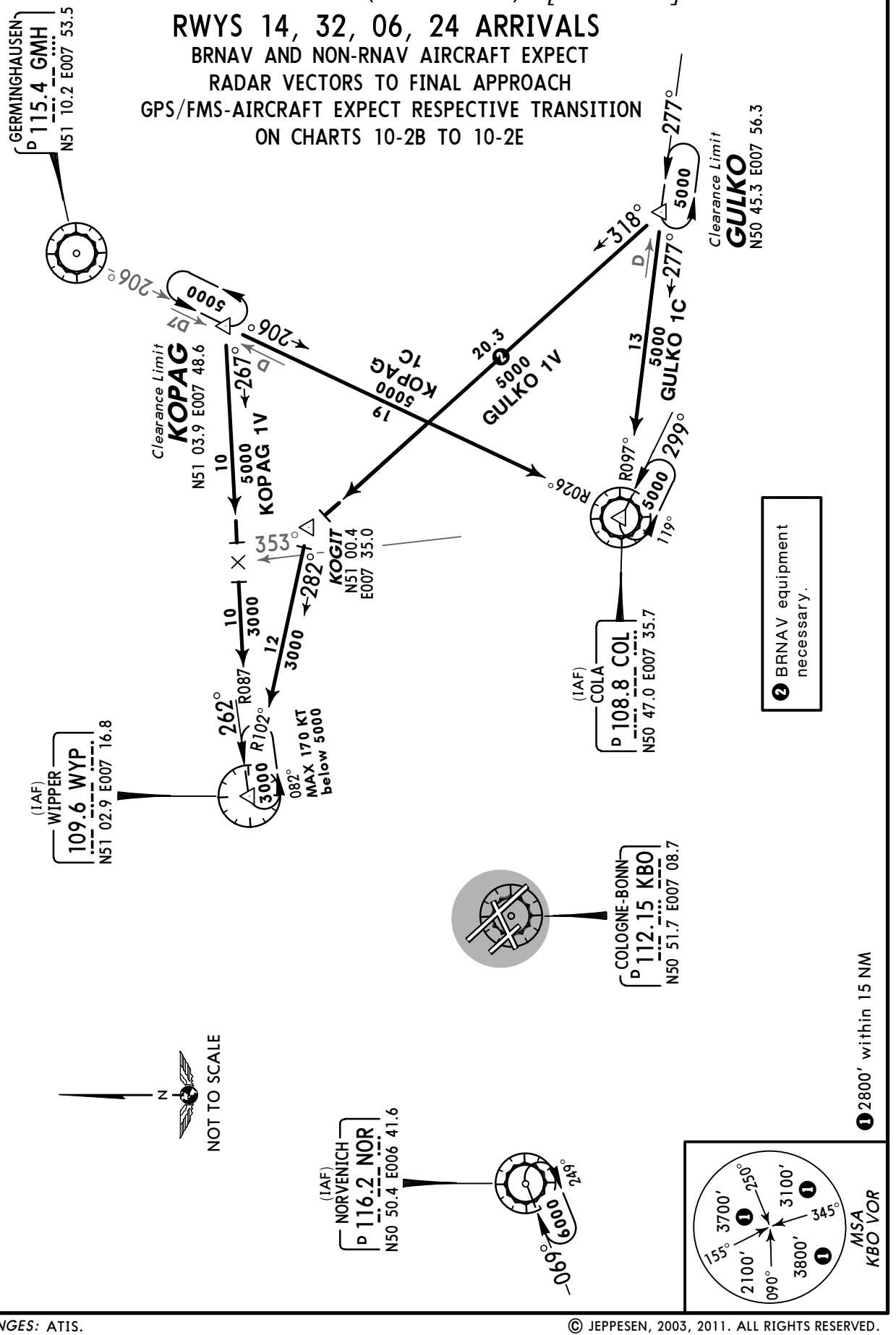
t_i	25 min prior to EOBT for unregulated flights. 30 min prior CTOT for ATFM regulated flights
t_t	11 min prior to EOBT for unregulated flights. 16 min prior to CTOT for ATFM regulated flights.
t_l	5 min

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D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
112.15 132.12	302′	Trans level: By ATC Trans alt: 5000′

GULKO ONE CHARLIE (GULKO 1C) *[GULK1C]*
GULKO ONE VICTOR (GULKO 1V) *[GULK1V]*
KOPAG ONE CHARLIE (KOPAG 1C) *[KOPA1C]*
KOPAG ONE VICTOR (KOPAG 1V) *[KOPA1V]*
RWYS 14, 32, 06, 24 ARRIVALS

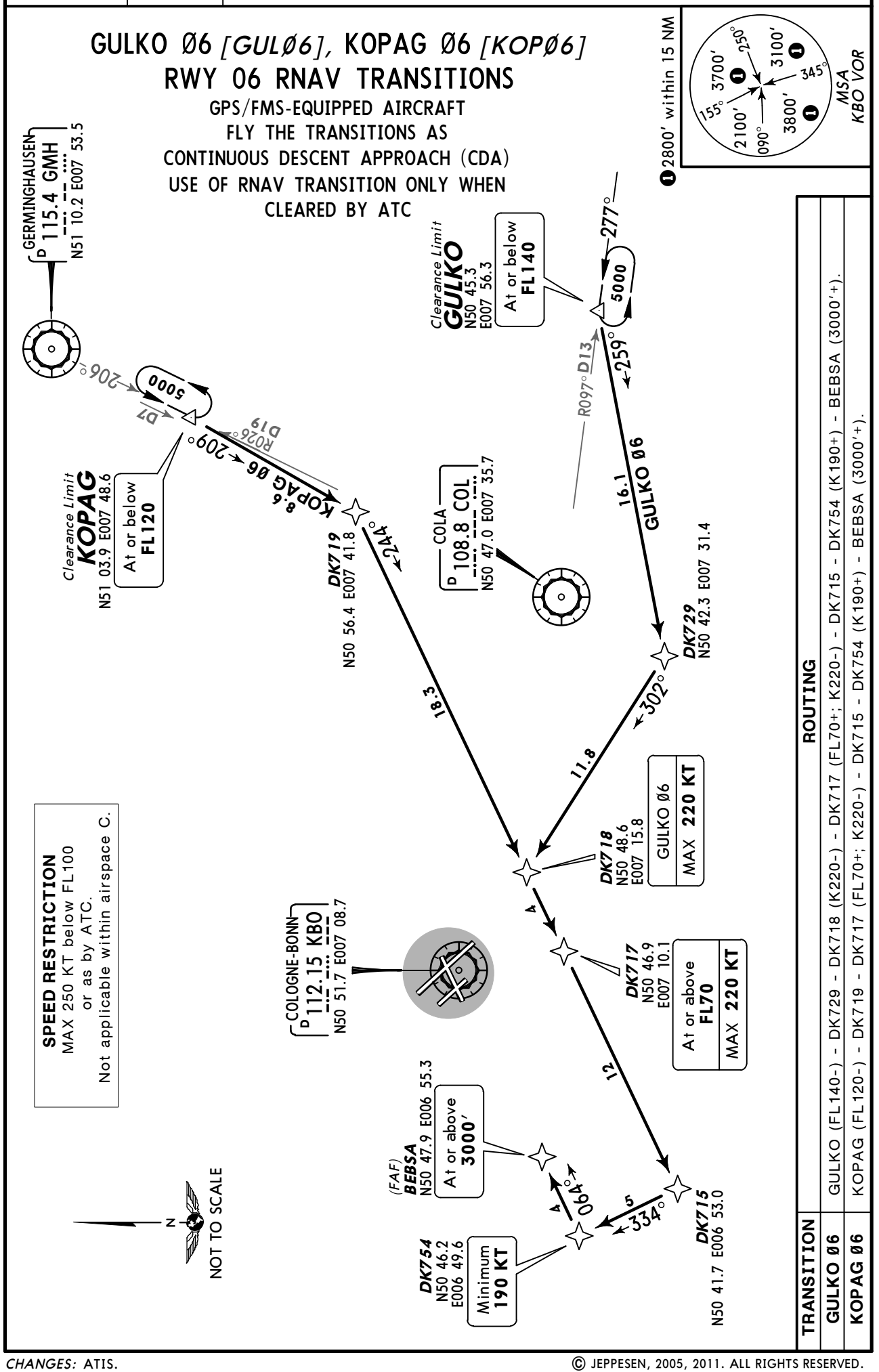
BRNAV AND NON-RNAV AIRCRAFT EXPECT
RADAR VECTORS TO FINAL APPROACH
GPS/FMS-AIRCRAFT EXPECT RESPECTIVE TRANSITION
ON CHARTS 10-2B TO 10-2E



CHANGES: ATIS.

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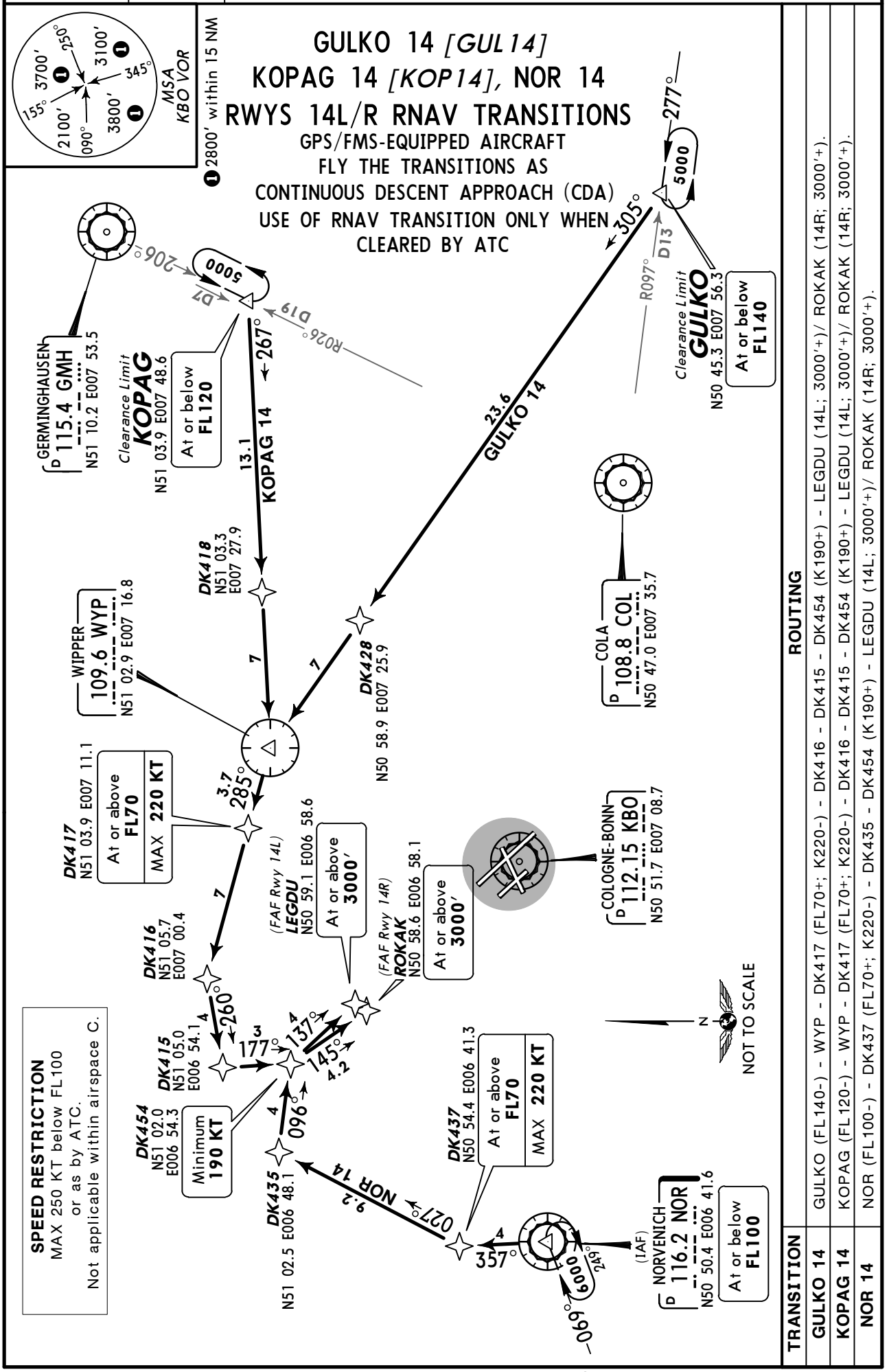
D-ATIS	Apt Elev	
112.15 132.12	302′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



CHANGES: ATIS.

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D-ATIS	Apt Elev	
112.15 132.12	302′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



TRANSITION	ROUTING
GULKO 14	GULKO (FL140-) - WYP - DK417 (FL70+; K220-) - DK416 - DK415 - DK454 (K190+) - LEGDU (14L; 3000′+)/ ROKAK (14R; 3000′+).
KOPAG 14	KOPAG (FL120-) - WYP - DK417 (FL70+; K220-) - DK416 - DK415 - DK454 (K190+) - LEGDU (14L; 3000′+)/ ROKAK (14R; 3000′+).
NOR 14	NOR (FL100-) - DK437 (FL70+; K220-) - DK435 - DK454 (K190+) - LEGDU (14L; 3000′+)/ ROKAK (14R; 3000′+).

CHANGES: ATIS.

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D-ATIS	Apt Elev	
112.15 132.12	302′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.

GULKO 24 *[GUL24]*, KOPAG 24 *[KOP24]*
NOR 24A *[NO24A]*, NOR 24B *[NO24B]*
RWY 24 RNAV TRANSITIONS

GPS/FMS-EQUIPPED AIRCRAFT
FLY THE TRANSITIONS AS
CONTINUOUS DESCENT APPROACH (CDA)
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC

GERMINGHAUSEN D 115.4 GMH N51 10.2 E007 53.5

MSA KBO VOR
3700′ 155° 250° 3100′
2100′ 090° 345° 3800′
2800′ within 15 NM

Clearance Limit KOPAG N51 03.9 E007 48.6
At or below FL120
MAX 220 KT

Clearance Limit GULKO N50 45.3 E007 56.3
At or below FL110

DK515 N50 59.2 E007 32.8
DK527 N50 52.4 E007 44.3
At or above FL70
MAX 220 KT
DK535 N51 00.0 E007 28.7
DK536 N51 03.8 E007 25.8
DK537 N50 59.5 E007 11.5
DK545 N50 56.9 E007 31.1
DK546 N50 52.9 E007 34.0
DK547 N50 48.7 E007 19.7
DK554 N50 57.1 E007 25.6
Minimum 190 KT
(FAF) KUKIT N50 55.8 E007 21.3
At or above 3000′

COLA D 108.8 COL N50 47.0 E007 35.7
COLOGNE-BONN D 112.15 KBO N50 51.7 E007 08.7
(IAF) NORVENICH D 116.2 NOR N50 50.4 E006 41.6
At or below FL140

206° D21 5000
R026° D19
244° 11 KOPAG 24
10.5 GULKO 24 313°
277° 5000
D13 R097°
10
4.2 154°
5.3 214°
5 3.4 273°
4.3 334°
3 10
064° 094° 069° 249°
6000
2.1 NOR 24A
24.2 NOR 24B

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

N
NOT TO SCALE

TRANSITION	ROUTING
GULKO 24	GULKO (FL110-) - DK527 (FL70+; K220-) - DK515 - DK554 (K190+) - KUKIT (3000′+).
KOPAG 24	KOPAG (FL120-; K220-) - DK554 (K190+) - KUKIT (3000′+).
NOR 24A	NOR (FL140-) - DK537 (FL70+; K220-) - DK536 - DK535 - DK554 (K190+) - KUKIT (3000′+).
NOR 24B	NOR (FL140-) - DK547 (FL70+; K220-) - DK546 - DK545 - DK554 (K190+) - KUKIT (3000′+).

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D-ATIS	Apt Elev	
112.15 132.12	302′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.

GULKO 32 *[GUL32]*
KOPAG 32 *[KOP32]*, NOR 32
RWYS 32L/R RNAV TRANSITIONS

GPS/FMS-EQUIPPED AIRCRAFT
FLY THE TRANSITIONS AS
CONTINUOUS DESCENT APPROACH (CDA)
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC

GERMINGHAUSEN
D 115.4 GMH
N51 10.2 E007 53.5

Clearance Limit
KOPAG
N51 03.9 E007 48.6
(COL D19)

At or below
FL120

206°
D7
5000
026°
204°
16.5
KOPAG 32

DK617
N50 48.9 E007 38.0

At or above
FL70
MAX 220 KT

COLA
D 108.8 COL
N50 47.0 E007 35.7

(FAF Rwy 32R)
RARIX
N50 45.2 E007 18.8

At or above
3000′

(FAF Rwy 32L)
LIRMU
N50 45.3 E007 17.3

At or above
3000′

COLOGNE-BONN
D 112.15 KBO
N50 51.7 E007 08.7

(IAF)
NORVENICH
D 116.2 NOR
N50 50.4 E006 41.6

At or below
FL140

125°
249°
6000
069°
090°
17.3
NOR 32

DK638
N50 40.5 E007 03.9

DK654
N50 41.7 E007 23.8

Minimum
190 KT

R097° D13
277°
5000
256°
7.3
GULKO
32

Clearance Limit
GULKO
N50 45.3 E007 56.3

At or below
FL110

DK627
N50 43.5 E007 45.1

At or above
FL70
MAX 220 KT

DK616
N50 41.6
E007 32.9

DK615
N50 40.8
E007 28.3

DK635
N50 38.8
E007 24.8

DK636
N50 36.8 E007 21.4

DK637
N50 38.1 E007 09.0

At or above
FL70
MAX 220 KT

NOT TO SCALE

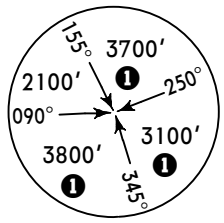
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

TRANSITION	ROUTING
GULKO 32	GULKO (FL110-) - DK627 (FL70+; K220-) - DK615 - DK654 (K190+) - RARIX (32R; 3000′+)/ LIRMU (32L; 3000′+).
KOPAG 32	KOPAG (FL120-) - DK617 (FL70+; K220-) - DK616 - DK615 - DK654 (K190+) - RARIX (32R; 3000′+)/ LIRMU (32L; 3000′+).
NOR 32	NOR (FL140-) - DK637 (FL70+; K220-) - DK636 - DK635 - DK654 (K190+) - RARIX (32R; 3000′+)/ LIRMU (32L; 3000′+).

2800′ within 15 NM
MSA
KBO VOR
155° 3700′
250°
345° 3100′
090° 2100′
3800′

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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwy 24: EXPECT close-in obstacles.

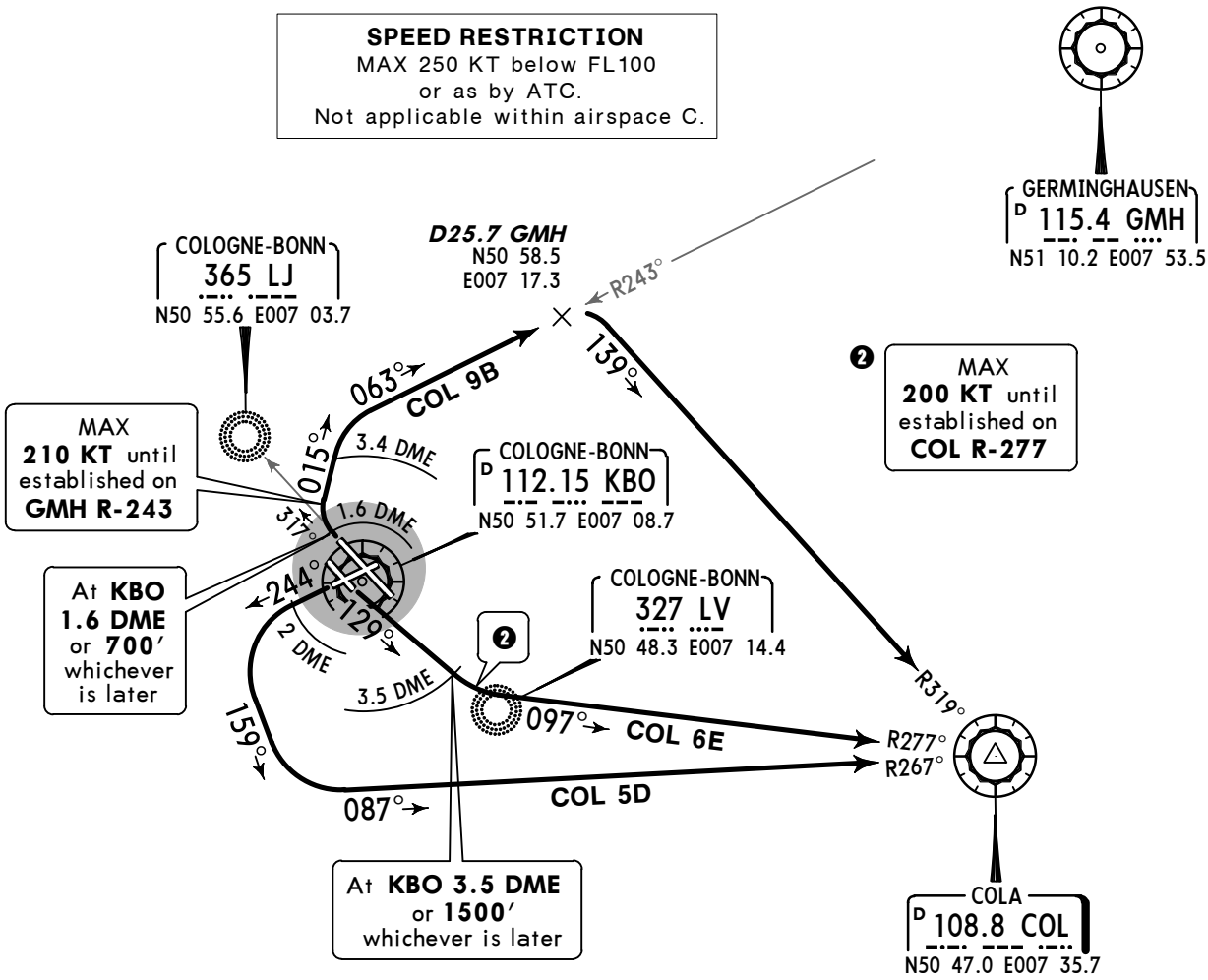


❶ 2800′ within 15 NM

COLA NINE BRAVO (COL 9B)
COLA FIVE DELTA (COL 5D)
COLA SIX ECHO (COL 6E)
RWYS 32R, 24, 14R DEPARTURES

ONLY FOR LOCAL TRAINING FLIGHTS AND FOR FLIGHTS TO EDDF
FOR SIDS RWYS 14L, 06, 32L REFER TO CHART 10-3A

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



COL 9B (daytime only)
This SID requires a minimum climb gradient of
425′ per NM (7%) until passing **5000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise ATC upon start-up.

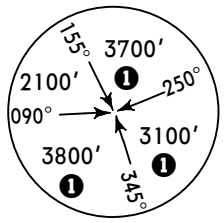
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
COL 9B	**32R**	Climb towards LJ, at KBO 1.6 DME or **700′,** whichever is later, turn RIGHT, 015° track, at KBO 3.4 DME turn RIGHT, intercept GMH R-243 inbound to D25.7 GMH, turn RIGHT, intercept COL R-319 inbound to COL.
COL 5D	**24**	On runway track to KBO 2 DME, turn LEFT, 159° track, intercept COL R-267 inbound to COL.
COL 6E	**14R**	Climb towards LV, at KBO 3.5 DME or **1500′,** whichever is later, turn LEFT, intercept COL R-277 inbound to COL.

CHANGES: SIDs COL 4D & 5E renumbered 5D & 6E & revised.

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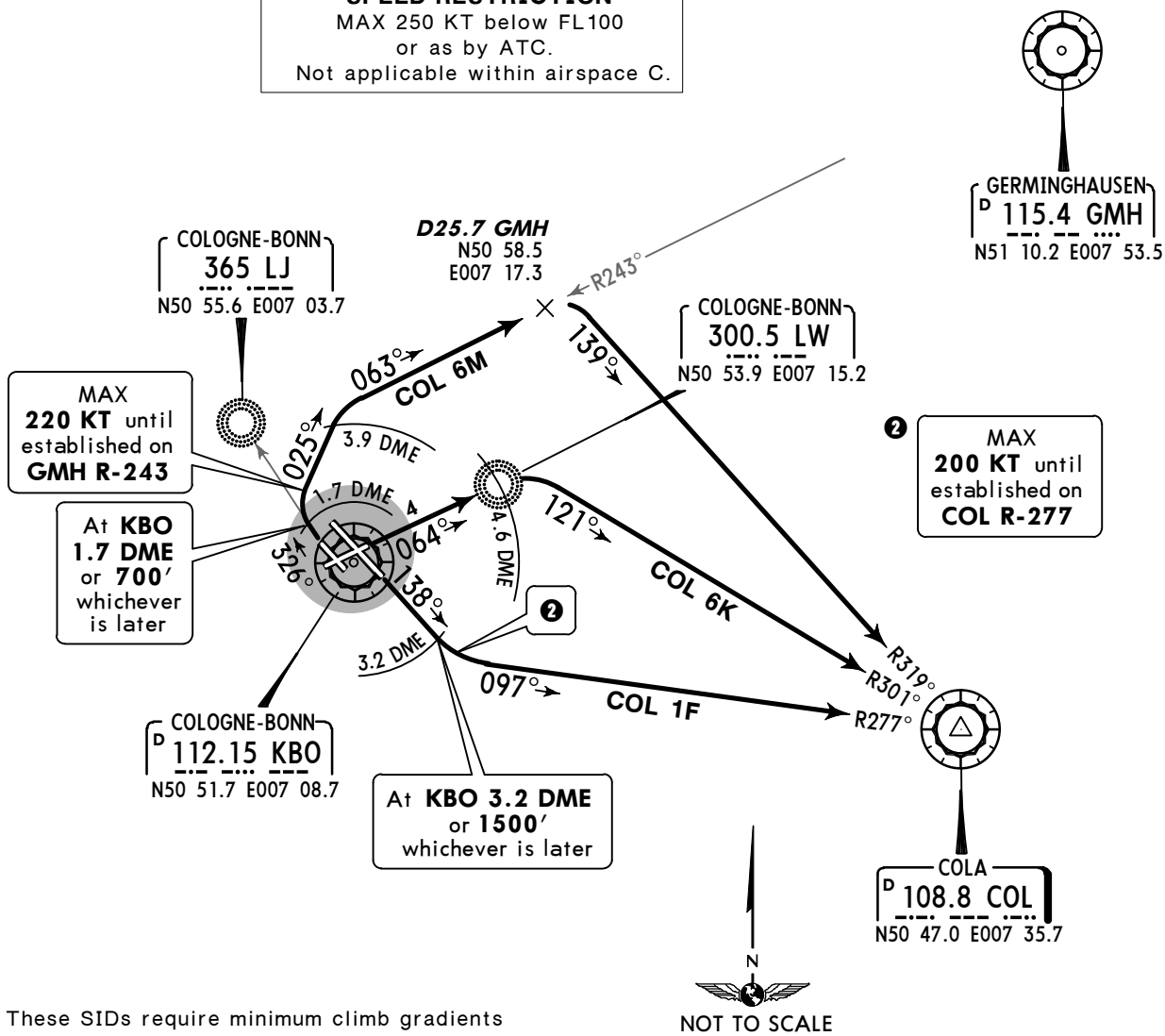
LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwy 06: EXPECT close-in obstacles.



❶ 2800′ within 15 NM

COLA ONE FOXTROT (COL 1F)
COLA SIX KILO (COL 6K)
COLA SIX MIKE (COL 6M)
RWYS 14L, 06, 32L DEPARTURES
ONLY FOR LOCAL TRAINING FLIGHTS AND FOR FLIGHTS TO EDDF

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

COL 6K
310′ per NM (5.1%) until passing **900′.**

COL 6M (daytime only)
401′ per NM (6.6%) until passing **5000′** due to airspace structure. If unable to comply advise ATC upon start-up.

Gnd speed-KT	75	100	150	200	250	300
401′ per NM	501	668	1003	1337	1671	2005
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
COL 1F	**14L**	Climb on 138° track to KBO 3.2 DME or **1500′,** whichever is later, turn LEFT, intercept COL R-277 inbound to COL.
COL 6K	**06**	On runway track to LW (KBO 4.6 DME), turn RIGHT, intercept COL R-301 inbound to COL.
COL 6M	**32L**	Climb towards LJ, at KBO 1.7 DME or **700′,** whichever is later, turn RIGHT, 025° track, at KBO 3.9 DME turn RIGHT, intercept GMH R-243 inbound to D25.7 GMH, turn RIGHT, intercept COL R-319 inbound to COL.

CHANGES: SID COL 1F revised.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
118.75	302′	1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 24: EXPECT close-in obstacles.

KUMIK SIX BRAVO (KUMIK 6B)
KUMIK FOUR DELTA (KUMIK 4D)
KUMIK THREE ECHO (KUMIK 3E)
RWYS 32R, 24, 14R DEPARTURES

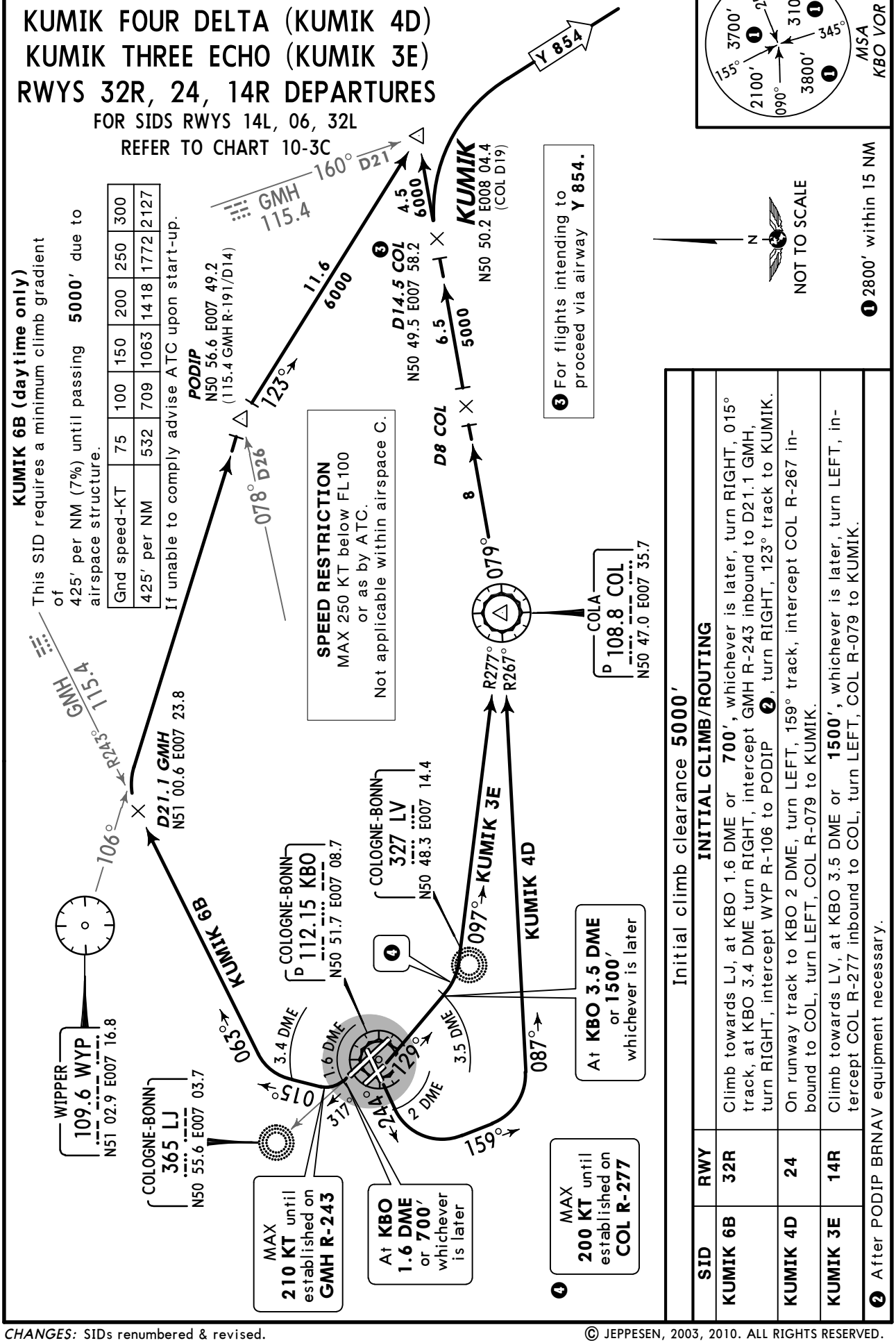
FOR SIDS RWYS 14L, 06, 32L
REFER TO CHART 10-3C

KUMIK 6B (daytime only)

This SID requires a minimum climb gradient of 425′ per NM (7%) until passing **5000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise ATC upon start-up.



Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
KUMIK 6B	32R	Climb towards LJ, at KBO 1.6 DME or **700′**, whichever is later, turn RIGHT, 015° track, at KBO 3.4 DME turn RIGHT, intercept GMH R-243 inbound to D21.1 GMH, turn RIGHT, intercept WYP R-106 to PODIP ❷, turn RIGHT, 123° track to KUMIK.
KUMIK 4D	24	On runway track to KBO 2 DME, turn LEFT, 159° track, intercept COL R-267 inbound to COL, turn LEFT, COL R-079 to KUMIK.
KUMIK 3E	14R	Climb towards LV, at KBO 3.5 DME or **1500′**, whichever is later, turn LEFT, intercept COL R-277 inbound to COL, turn LEFT, COL R-079 to KUMIK.

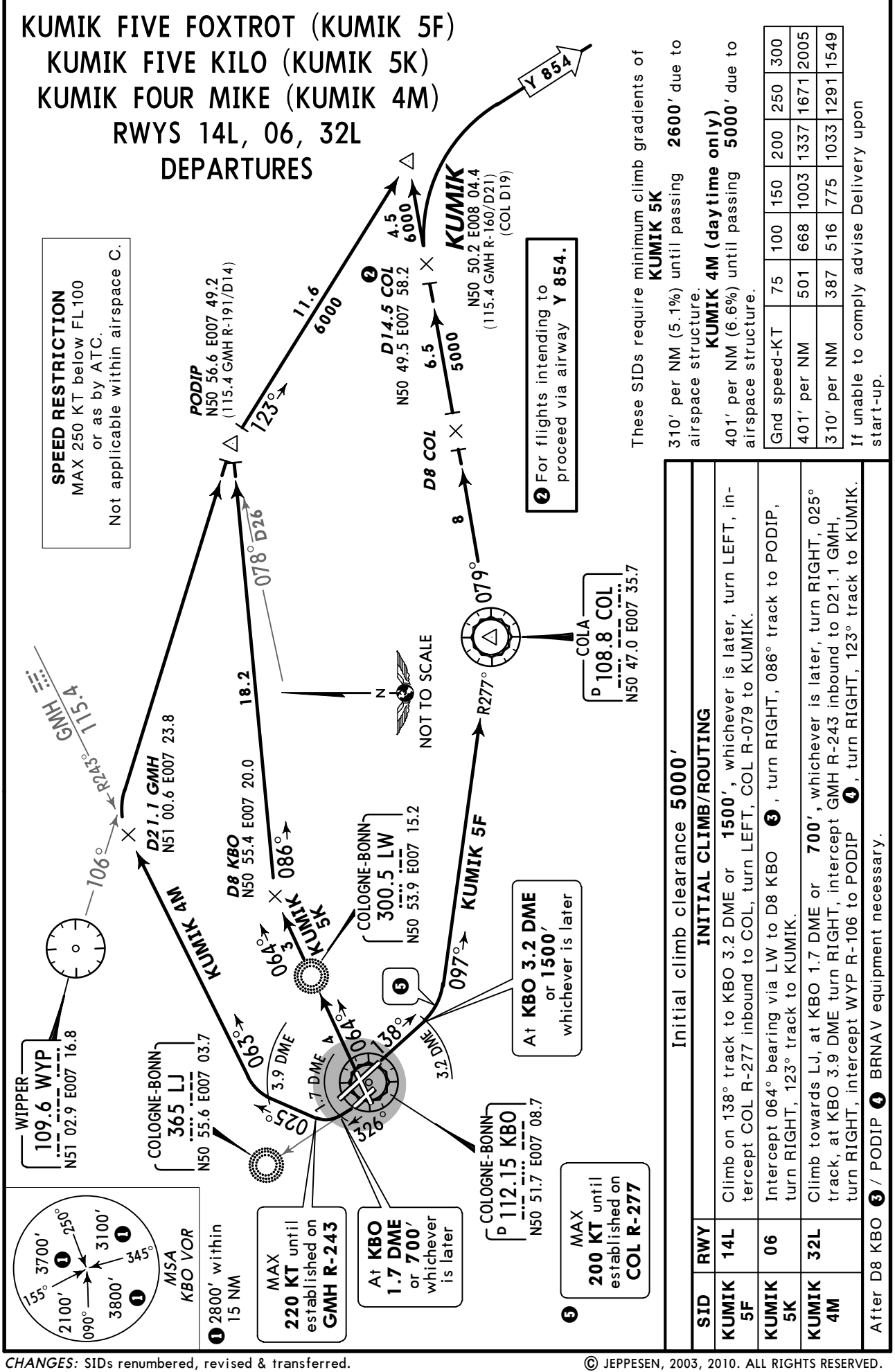
❷ After PODIP BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
118.75	302′	1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 06: EXPECT close-in obstacles.

KUMIK FIVE FOXTROT (KUMIK 5F)
KUMIK FIVE KILO (KUMIK 5K)
KUMIK FOUR MIKE (KUMIK 4M)
RWYS 14L, 06, 32L
DEPARTURES



These SIDs require minimum climb gradients of
KUMIK 5K
310′ per NM (5.1%) until passing **2600′** due to airspace structure.
KUMIK 4M (daytime only)
401′ per NM (6.6%) until passing **5000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
401′ per NM	501	668	1003	1337	1671	2005
310′ per NM	387	516	775	1033	1291	1549

If unable to comply advise Delivery upon start-up.

Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
KUMIK 5F	**14L**	Climb on 138° track to KBO 3.2 DME or **1500′**, whichever is later, turn LEFT, intercept COL R-277 inbound to COL, turn LEFT, COL R-079 to KUMIK.
KUMIK 5K	**06**	Intercept 064° bearing via LW to D8 KBO ❸, turn RIGHT, 086° track to PODIP, turn RIGHT, 123° track to KUMIK.
KUMIK 4M	**32L**	Climb towards LJ, at KBO 1.7 DME or **700′**, whichever is later, turn RIGHT, 025° track, at KBO 3.9 DME turn RIGHT, intercept GMH R-243 inbound to D21.1 GMH, turn RIGHT, intercept WYP R-106 to PODIP ❹, turn RIGHT, 123° track to KUMIK.

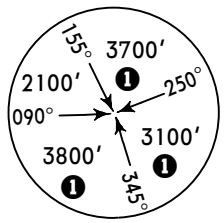
After D8 KBO ❸ / PODIP ❹ BRNAV equipment necessary.

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*LANGEN Radar 135.35	Apt Elev 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 24: EXPECT close-in obstacles.

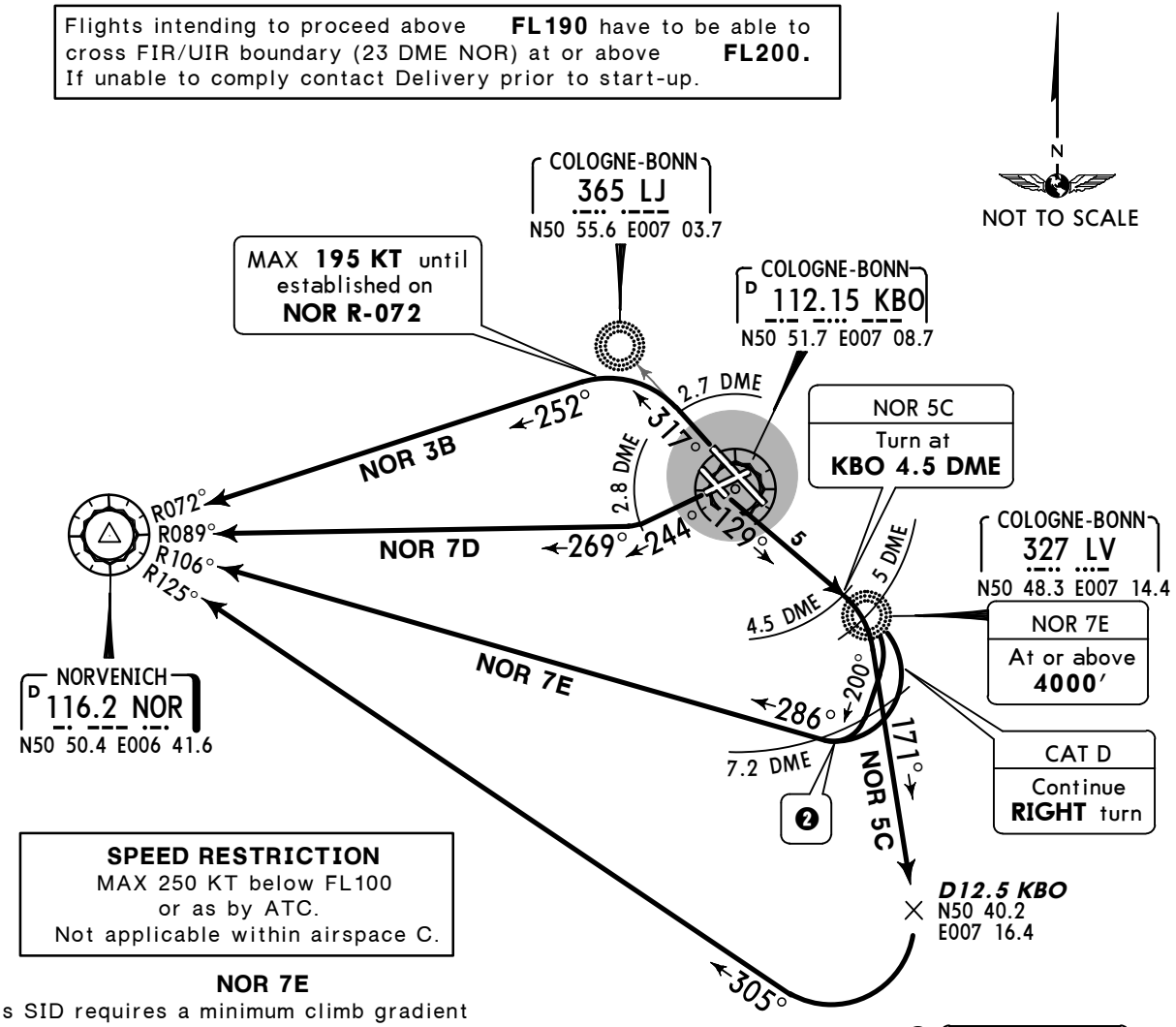
NORVENICH THREE BRAVO (NOR 3B)
NORVENICH FIVE CHARLIE (NOR 5C)
NORVENICH SEVEN DELTA (NOR 7D)
NORVENICH SEVEN ECHO (NOR 7E)
RWYS 32R, 14R, 24 DEPARTURES

FOR SIDS RWYS 14L, 06, 32L REFER TO CHART 10-3E
FOR SIDS RWY 14R/L BY ATC REFER TO CHART 10-3F



❶ 2800′ within 15 NM

Flights intending to proceed above **FL190** have to be able to cross FIR/UIR boundary (23 DME NOR) at or above **FL200.** If unable to comply contact Delivery prior to start-up.



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NOR 7E

This SID requires a minimum climb gradient of
735′ per NM (12.1%) due to airspace structure,
if unable to comply file SID NOR 5C.

Gnd speed-KT	75	100	150	200	250	300
735′ per NM	919	1225	1838	2451	3063	3676

Initial climb clearance **5000′**

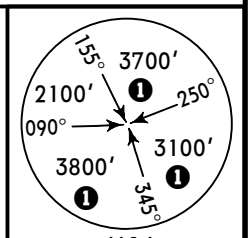
SID	RWY	INITIAL CLIMB/ROUTING
NOR 3B	**32R**	Towards LJ, at KBO 2.7 DME turn LEFT, intercept NOR R-072 inbound to NOR.
NOR 5C	**14R**	Towards LV, at KBO 4.5 DME turn RIGHT, intercept 171° bearing from LV to D12.5 KBO, turn RIGHT, intercept NOR R-125 inbound to NOR.
NOR 7D	**24**	On runway track to KBO 2.8 DME, turn RIGHT, intercept NOR R-089 inbound to NOR.
NOR 7E	**14R**	To LV (KBO 5 DME), turn RIGHT, 200° track (CAT D continue RIGHT turn) to KBO 7.2 DME, turn RIGHT, intercept NOR R-106 inbound to NOR.

CHANGES: SIDs NOR 6D & 6E renumbered 7D & 7E & revised.

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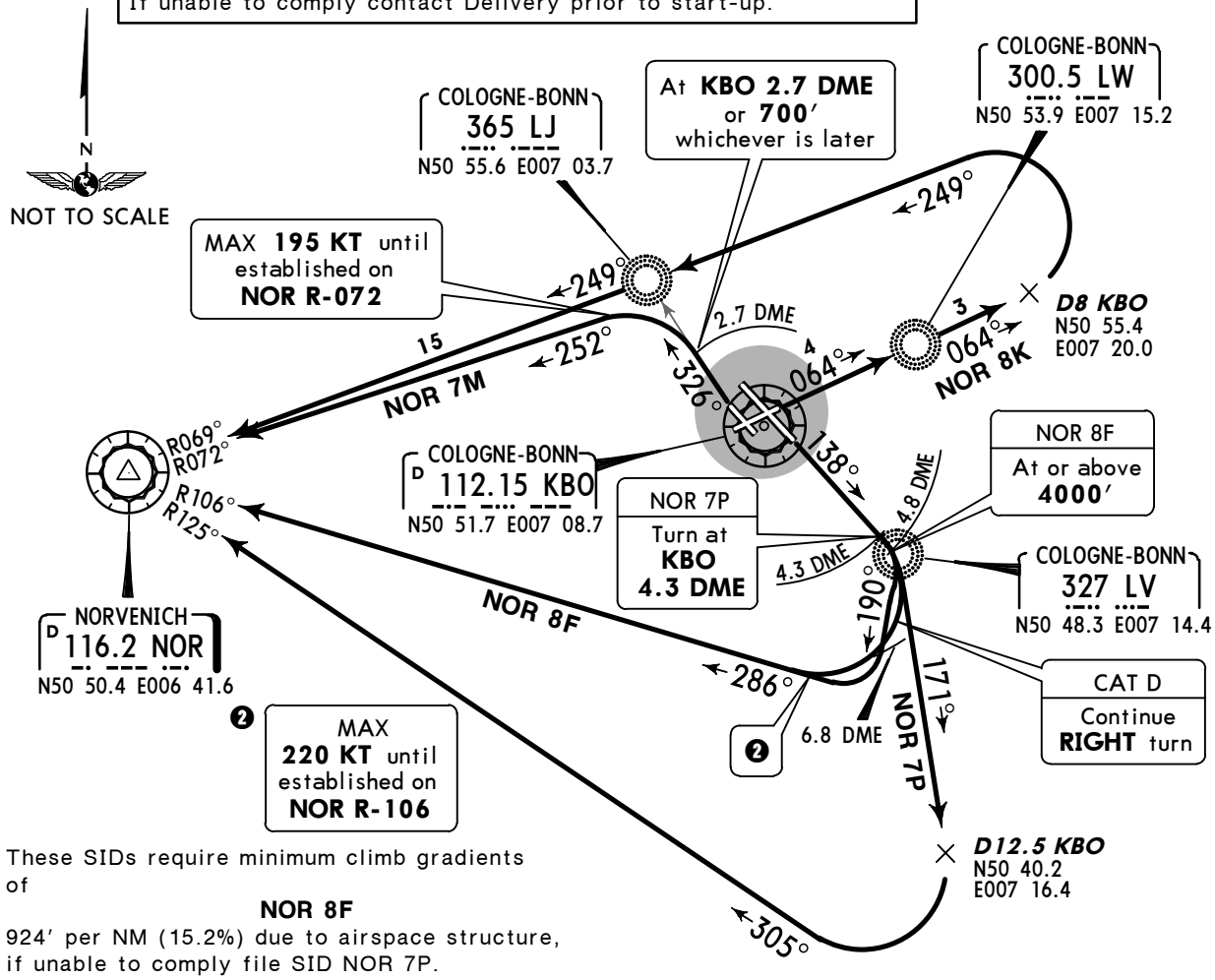
*LANGEN Radar 135.35	Apt Elev 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 06: EXPECT close-in obstacles.

NORVENICH EIGHT FOXTROT (NOR 8F)
NORVENICH EIGHT KILO (NOR 8K)
NORVENICH SEVEN MIKE (NOR 7M)
NORVENICH SEVEN PAPA (NOR 7P)
RWYS 14L, 06, 32L DEPARTURES
FOR SIDS RWY 14R/L BY ATC REFER TO CHART 10-3F



❶ 2800′ within 15 NM

Flights intending to proceed above **FL190** have to be able to cross FIR/UIR boundary (23 DME NOR) at or above **FL200.** If unable to comply contact Delivery prior to start-up.



These SIDs require minimum climb gradients of

NOR 8F

924′ per NM (15.2%) due to airspace structure, if unable to comply file SID NOR 7P.

NOR 8K

310′ per NM (5.1%) until passing **900′.**

Gnd speed-KT	75	100	150	200	250	300
924′ per NM	1154	1539	2309	3079	3848	4618
310′ per NM	387	516	775	1033	1291	1549

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

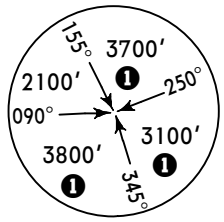
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
NOR 8F	**14L**	On 138° track to KBO 4.8 DME, turn RIGHT, intercept 190° bearing from LV (CAT D continue RIGHT turn) to KBO 6.8 DME, turn RIGHT, intercept NOR R-106 inbound to NOR.
NOR 8K	**06**	Intercept 064° bearing via LW to D8 KBO, turn LEFT, intercept 249° bearing to LJ, intercept NOR R-069 inbound to NOR.
NOR 7M	**32L**	Climb towards LJ, at KBO 2.7 DME or **700′,** whichever is later, turn LEFT, intercept NOR R-072 inbound to NOR.
NOR 7P	**14L**	On 138° track to KBO 4.3 DME, turn RIGHT, intercept 171° bearing from LV to D12.5 KBO, turn RIGHT, intercept NOR R-125 inbound to NOR.

CHANGES: SIDs NOR 7F & 7K renumbered 8F & 8K & revised.

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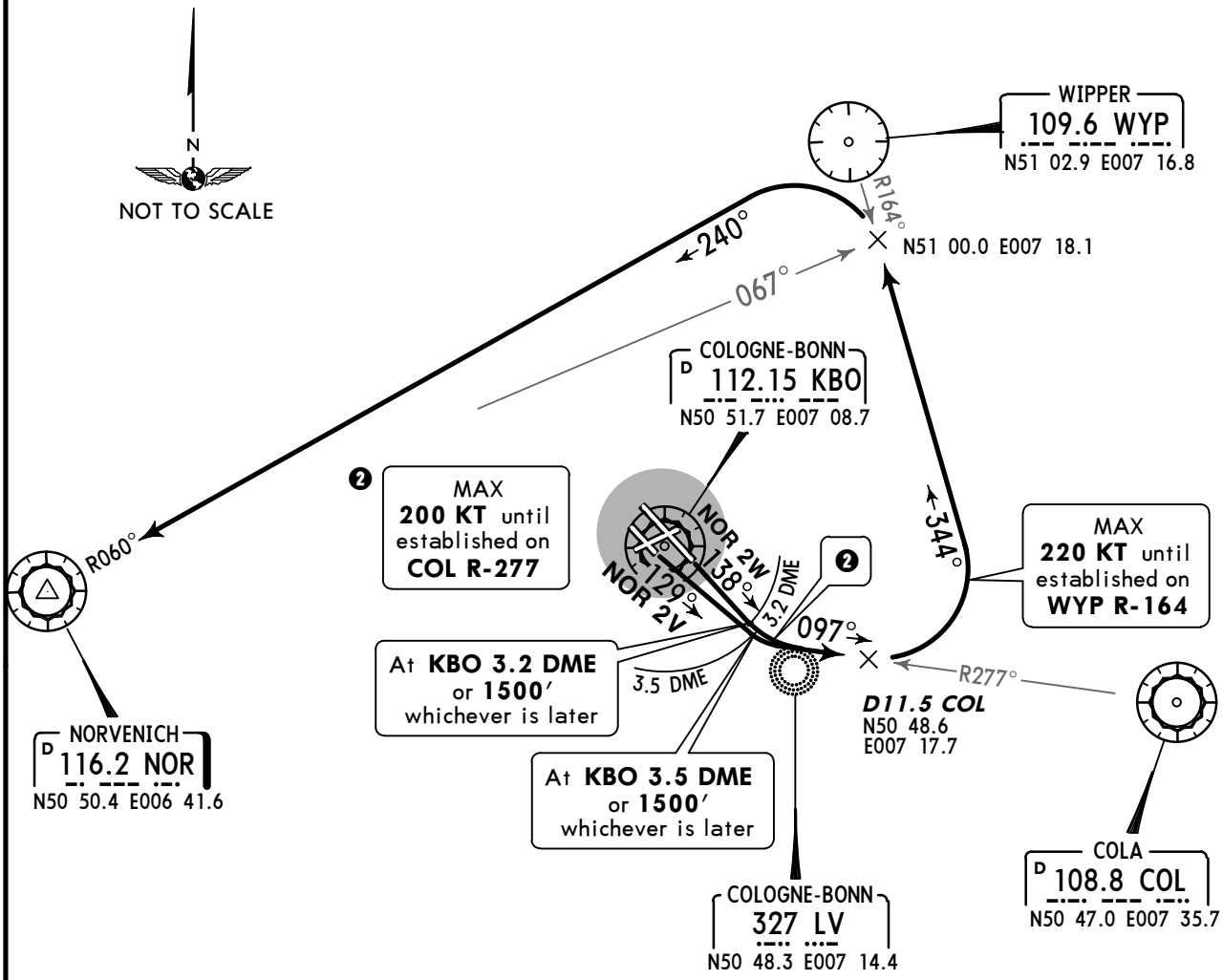
LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



❶ 2800′ within 15 NM

NORVENICH TWO VICTOR (NOR 2V)
NORVENICH TWO WHISKEY (NOR 2W)
RWYS 14R, 14L DEPARTURES
BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



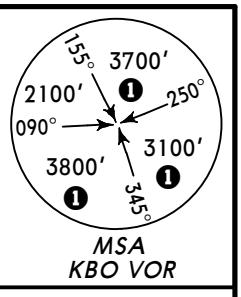
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
NOR 2V	**14R**	Climb towards LV, at KBO 3.5 DME or **1500′,** whichever is later, turn LEFT, intercept COL R-277 inbound to D11.5 COL, turn LEFT, intercept WYP R-164 inbound, when passing NOR R-067 turn LEFT, intercept NOR R-060 inbound to NOR.
NOR 2W	**14L**	Climb on 138° track to KBO 3.2 DME or **1500′,** whichever is later, turn LEFT, intercept COL R-277 inbound to D11.5 COL, turn LEFT, intercept WYP R-164 inbound, when passing NOR R-067 turn LEFT, intercept NOR R-060 inbound to NOR.

CHANGES: New chart (SIDs transferred).

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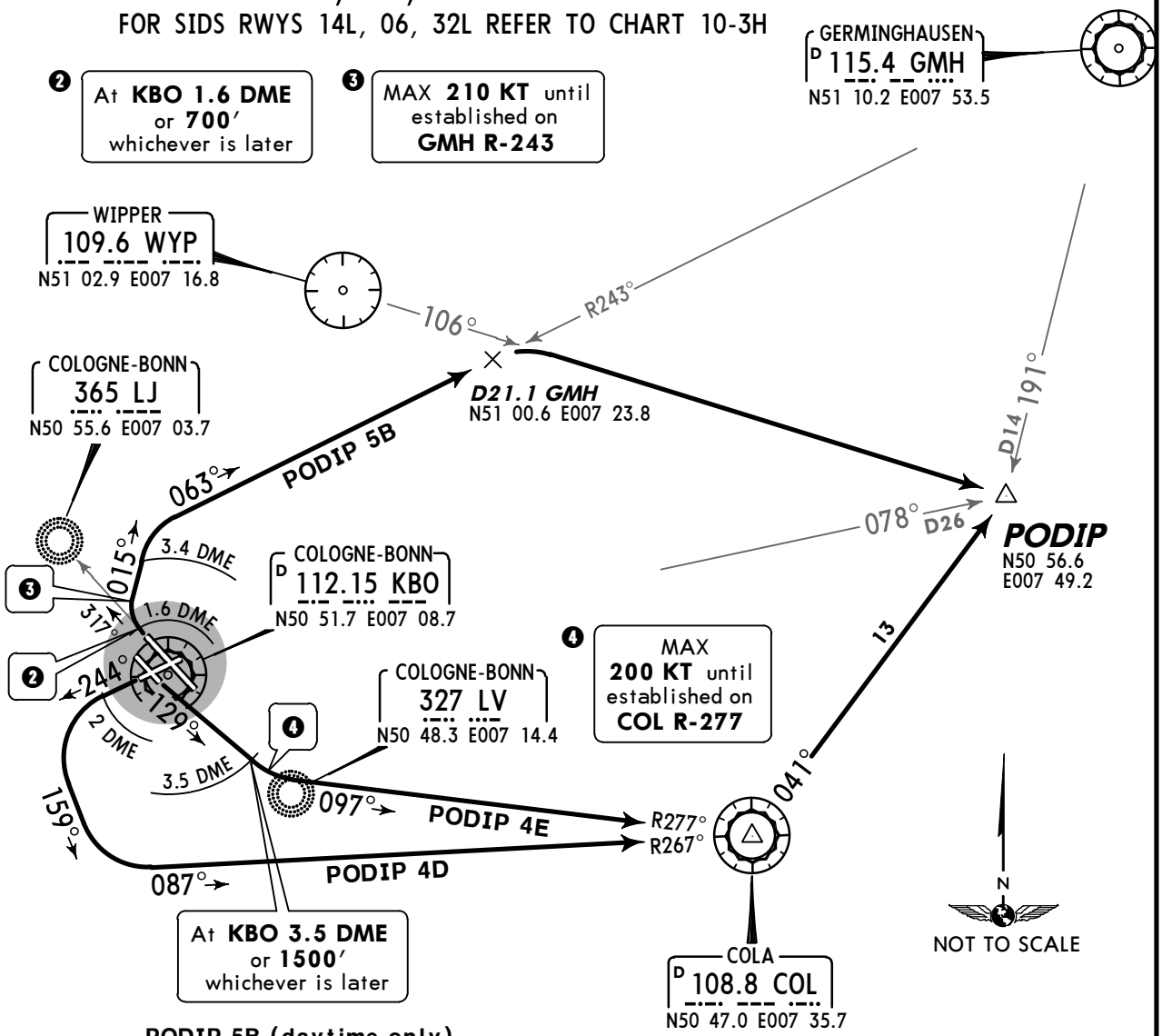
LANGEN Radar 118.75	Apt Elev 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 24: EXPECT close-in obstacles.



❶ 2800′ within 15 NM

PODIP FIVE BRAVO (PODIP 5B)
PODIP FOUR DELTA (PODIP 4D)
PODIP FOUR ECHO (PODIP 4E)
RWYS 32R, 24, 14R DEPARTURES

FOR SIDS RWYS 14L, 06, 32L REFER TO CHART 10-3H



PODIP 5B (daytime only)

This SID requires a minimum climb gradient of 425′ per NM (7%) until passing **5000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise ATC upon start-up.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

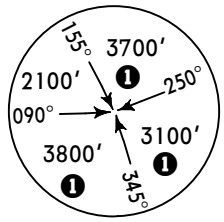
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
PODIP 5B	**32R**	Climb towards LJ, at KBO 1.6 DME or **700′,** whichever is later, turn RIGHT, 015° track, at KBO 3.4 DME turn RIGHT, intercept GMH R-243 inbound to D21.1 GMH, turn RIGHT, intercept WYP R-106 to PODIP.
PODIP 4D	**24**	On runway track to KBO 2 DME, turn LEFT, 159° track, intercept COL R-267 inbound to COL, turn LEFT, COL R-041 to PODIP.
PODIP 4E	**14R**	Climb towards LV, at KBO 3.5 DME or **1500′,** whichever is later, turn LEFT, intercept COL R-277 inbound to COL, turn LEFT, COL R-041 to PODIP.

CHANGES: SIDs renumbered, revised & transferred.

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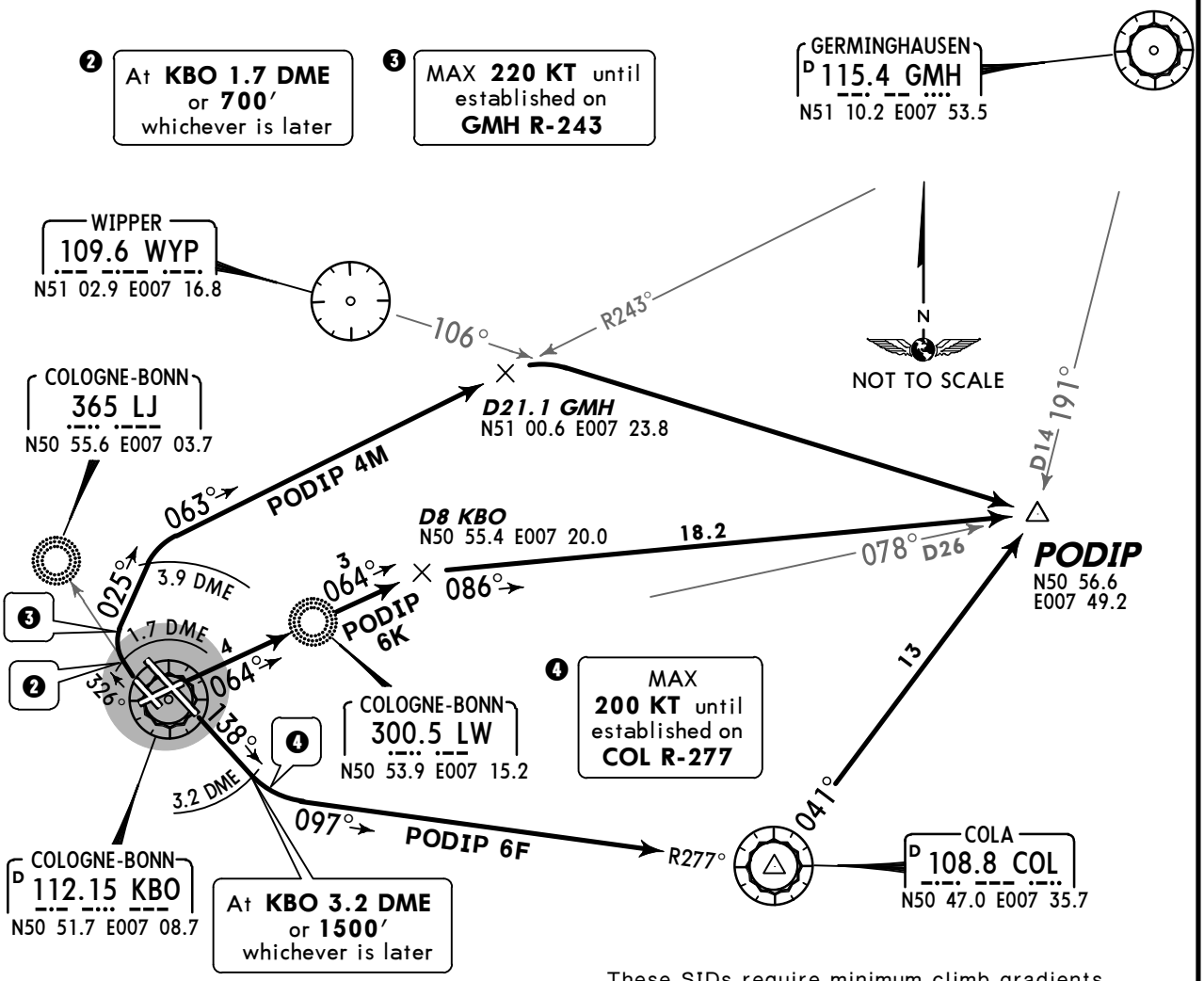
LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwy 06: EXPECT close-in obstacles.



❶ 2800′ within 15 NM

PODIP SIX FOXTROT (PODIP 6F)
PODIP SIX KILO (PODIP 6K)
PODIP FOUR MIKE (PODIP 4M)
RWYS 14L, 06, 32L DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Gnd speed-KT	75	100	150	200	250	300
401′ per NM	501	668	1003	1337	1671	2005
310′ per NM	387	516	775	1033	1291	1549

If unable to comply advise Delivery upon start-up.

These SIDs require minimum climb gradients of

PODIP 6K

310′ per NM (5.1%) until passing **2600′** due to airspace structure.

PODIP 4M (daytime only)

401′ per NM (6.6%) until passing **5000′** due to airspace structure.

Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
PODIP 6F	**14L**	Climb on 138° track to KBO 3.2 DME or **1500′,** whichever is later, turn LEFT, intercept COL R-277 inbound to COL, turn LEFT, COL R-041 to PODIP.
PODIP 6K	**06**	Intercept 064° bearing via LW to D8 KBO ❺, turn RIGHT, 086° track to PODIP.
PODIP 4M	**32L**	Climb towards LJ, at KBO 1.7 DME or **700′,** whichever is later, turn RIGHT, 025° track, at KBO 3.9 DME turn RIGHT, intercept GMH R-243 inbound to D21.1 GMH, turn RIGHT, intercept WYP R-106 to PODIP.

❺ After D8 KBO BRNAV equipment necessary.

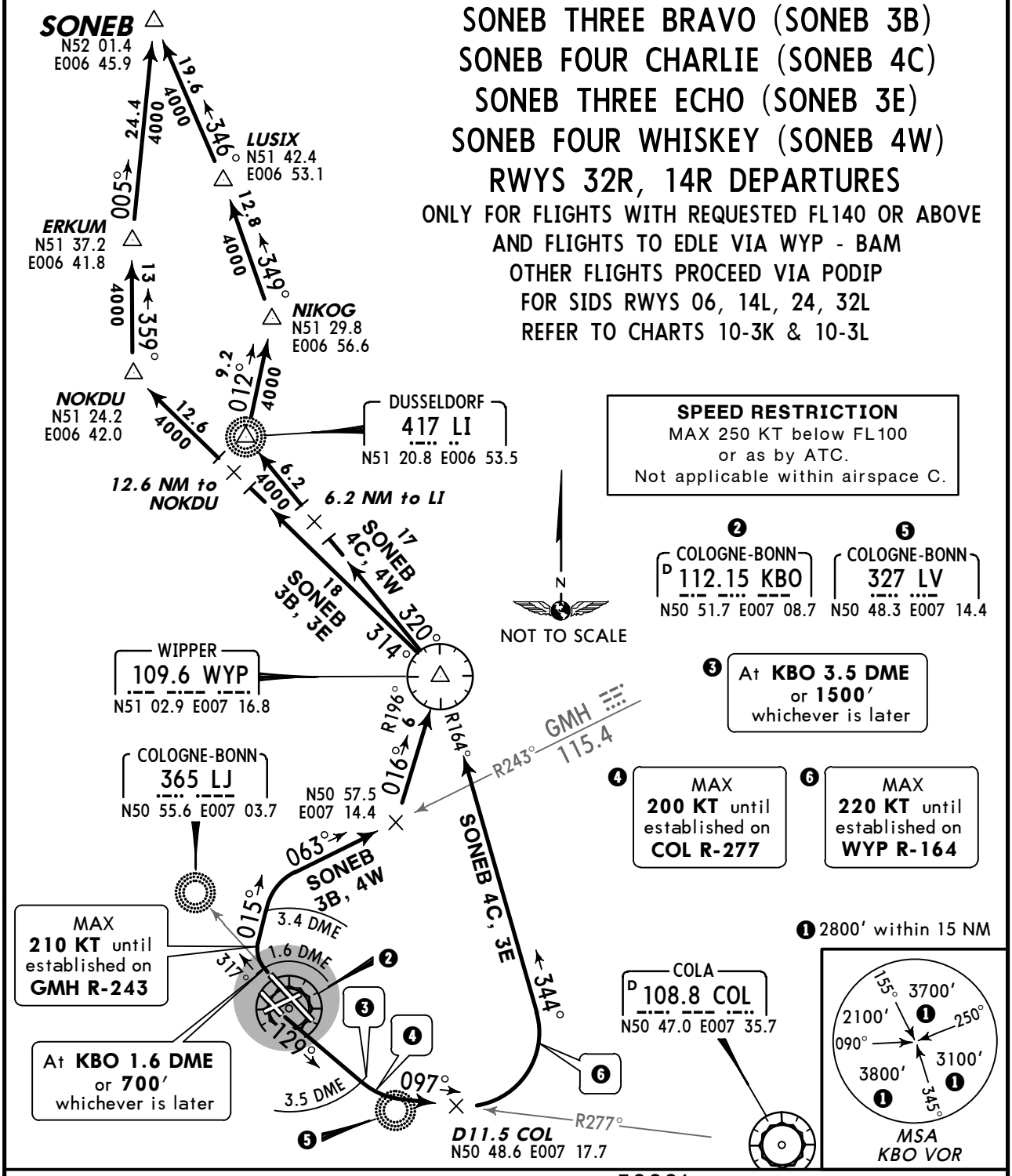
CHANGES: SIDs renumbered, revised & transferred.

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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

SONEB THREE BRAVO (SONEB 3B)
SONEB FOUR CHARLIE (SONEB 4C)
SONEB THREE ECHO (SONEB 3E)
SONEB FOUR WHISKEY (SONEB 4W)
RWYS 32R, 14R DEPARTURES

ONLY FOR FLIGHTS WITH REQUESTED FL140 OR ABOVE
AND FLIGHTS TO EDLE VIA WYP - BAM
OTHER FLIGHTS PROCEED VIA PODIP
FOR SIDS RWYS 06, 14L, 24, 32L
REFER TO CHARTS 10-3K & 10-3L



Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB
SONEB 3B **SONEB 4W** By ATC	**32R**	Climb towards LJ, at KBO 1.6 DME or **700′,** whichever is later, turn RIGHT, 015° track, at KBO 3.4 DME turn RIGHT, intercept GMH R-243 inbound, intercept WYP R-196 inbound to WYP ❼.
SONEB 4C By ATC **SONEB 3E**	**14R**	Climb towards LV, at KBO 3.5 DME or **1500′,** whichever is later, turn LEFT, intercept COL R-277 inbound to D11.5 COL, turn LEFT, intercept WYP R-164 inbound to WYP ❼.

SID	ROUTING
SONEB 3B, 3E	At WYP turn LEFT, WYP R-314 to NOKDU, turn RIGHT, 359° track to ERKUM, turn RIGHT, 005° track to SONEB.
SONEB 4C, 4W By ATC	At WYP turn LEFT, WYP R-320 to LI, turn RIGHT, 012° bearing to NIKOG, turn LEFT, 349° track to LUSIX, turn LEFT, 346° track to SONEB.

After WYP ❼ BRNAV equipment necessary.

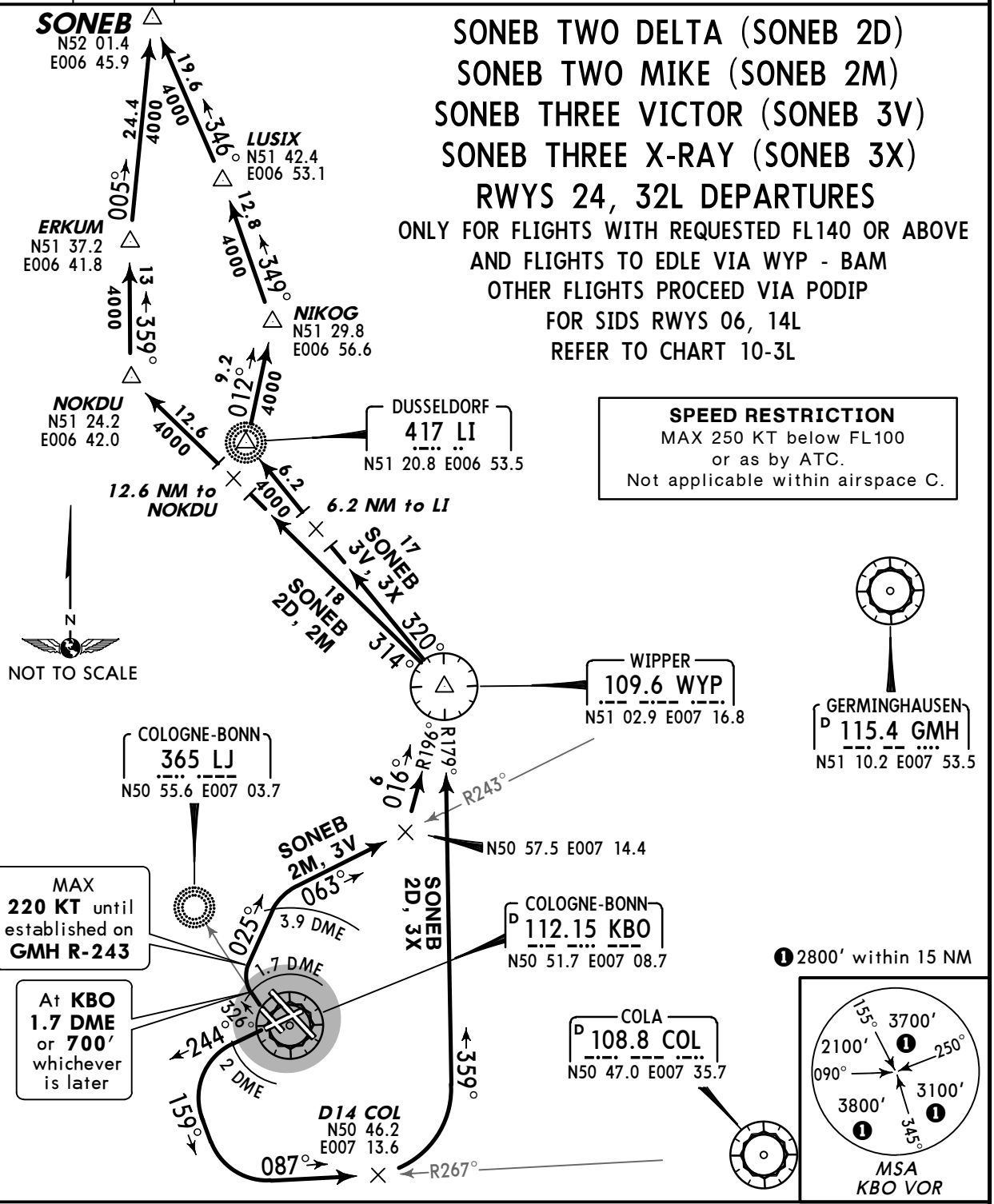
CHANGES: SIDs renumbered, revised & transferred.

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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 24: EXPECT close-in obstacles.

SONEB TWO DELTA (SONEB 2D)
SONEB TWO MIKE (SONEB 2M)
SONEB THREE VICTOR (SONEB 3V)
SONEB THREE X-RAY (SONEB 3X)
RWYS 24, 32L DEPARTURES

ONLY FOR FLIGHTS WITH REQUESTED FL140 OR ABOVE
AND FLIGHTS TO EDLE VIA WYP - BAM
OTHER FLIGHTS PROCEED VIA PODIP
FOR SIDS RWYS 06, 14L
REFER TO CHART 10-3L



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB
SONEB 2D **SONEB 3X** By ATC	**24**	On runway track to KBO 2 DME, turn LEFT, 159° track, intercept COL R-267 inbound to D14 COL, turn LEFT, intercept WYP R-179 inbound to WYP ❷.
SONEB 2M **SONEB 3V** By ATC	**32L**	Climb towards LJ, at KBO 1.7 DME or **700′,** whichever is later, turn RIGHT, 025° track, at KBO 3.9 DME turn RIGHT, intercept GMH R-243 inbound, intercept WYP R-196 inbound to WYP ❷.

SID	ROUTING
SONEB 2D, 2M	At WYP turn LEFT, WYP R-314 to NOKDU, turn RIGHT, 359° track to ERKUM, turn RIGHT, 005° track to SONEB.
SONEB 3V, 3X By ATC	At WYP turn LEFT, WYP R-320 to LI, turn RIGHT, 012° bearing to NIKOG, turn LEFT, 349° track to LUSIX, turn LEFT, 346° track to SONEB.

After WYP ❷ BRNAV equipment necessary.

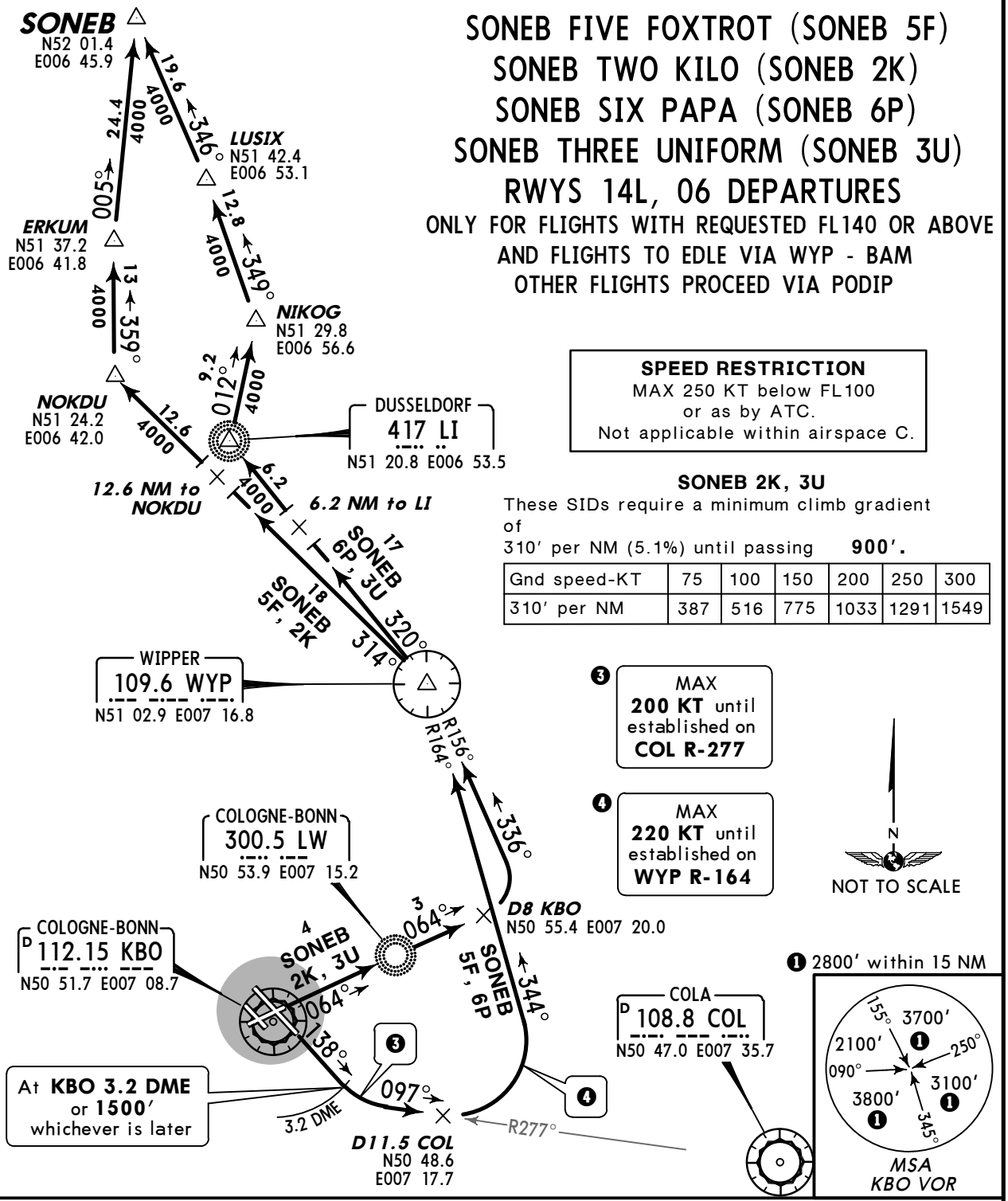
CHANGES: SIDs renumbered, revised & transferred.

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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 06: EXPECT close-in obstacles.

SONEB FIVE FOXTROT (SONEB 5F)
SONEB TWO KILO (SONEB 2K)
SONEB SIX PAPA (SONEB 6P)
SONEB THREE UNIFORM (SONEB 3U)
RWYS 14L, 06 DEPARTURES

ONLY FOR FLIGHTS WITH REQUESTED FL140 OR ABOVE
AND FLIGHTS TO EDLE VIA WYP - BAM
OTHER FLIGHTS PROCEED VIA PODIP



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

SONEB 2K, 3U
These SIDs require a minimum climb gradient of
310′ per NM (5.1%) until passing **900′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB
SONEB 5F **SONEB 6P** By ATC	**14L**	Climb on 138° track to KBO 3.2 DME or **1500′,** whichever is later, turn LEFT, intercept COL R-277 inbound to D11.5 COL, turn LEFT, intercept WYP R-164 inbound to WYP ❷.
SONEB 2K **SONEB 3U** By ATC	**06**	Intercept 064° bearing via LW to D8 KBO, turn LEFT, intercept WYP R-156 inbound to WYP ❷.

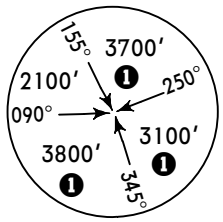
SID	ROUTING
SONEB 5F, 2K	At WYP turn LEFT, WYP R-314 to NOKDU, turn RIGHT, 359° track to ERKUM, turn RIGHT, 005° track to SONEB.
SONEB 6P, 3U By ATC	At WYP turn LEFT, WYP R-320 to LI, turn RIGHT, 012° bearing to NIKOG, turn LEFT, 349° track to LUSIX, turn LEFT, 346° track to SONEB.

After WYP ❷ BRNAV equipment necessary.

CHANGES: SIDs renumbered, reivsed & transferred.

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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 24: EXPECT close-in obstacles.



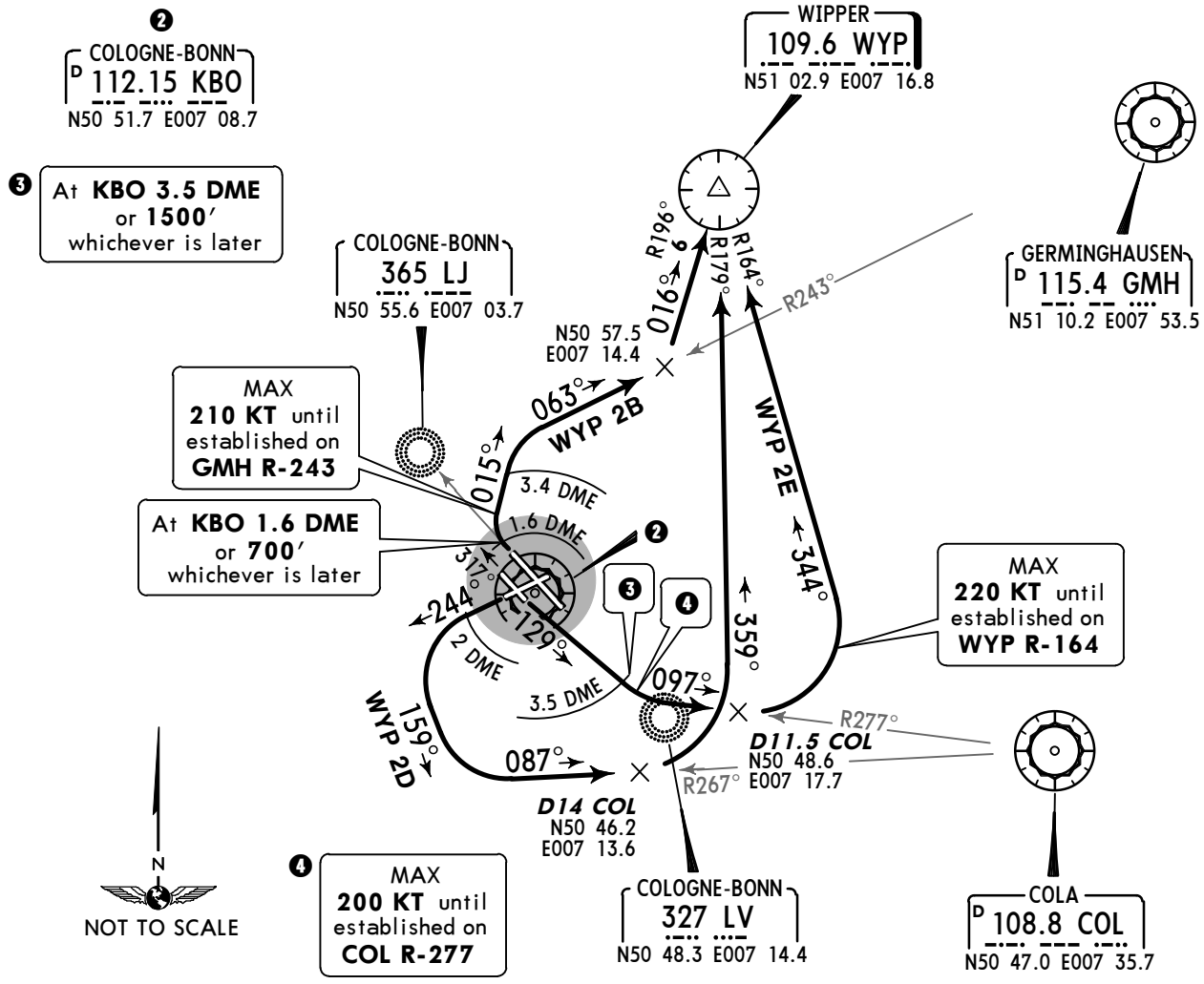
❶ 2800′ within 15 NM

WIPPER TWO BRAVO (WYP 2B)
WIPPER TWO DELTA (WYP 2D)
WIPPER TWO ECHO (WYP 2E)
RWYS 32R, 24, 14R DEPARTURES

BY ATC

FOR SIDS RWYS 14L, 06, 32L REFER TO CHART 10-3N

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



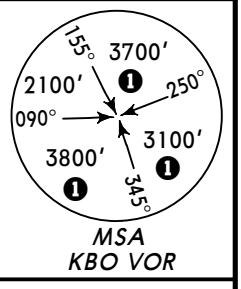
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
WYP 2B	**32R**	Climb towards LJ, at KBO 1.6 DME or **700′,** whichever is later, turn RIGHT, 015° track, at KBO 3.4 DME turn RIGHT, intercept GMH R-243 inbound, intercept WYP R-196 inbound to WYP.
WYP 2D	**24**	On runway track to KBO 2 DME, turn LEFT, 159° track, intercept COL R-267 inbound to D14 COL, turn LEFT, intercept WYP R-179 inbound to WYP.
WYP 2E	**14R**	Climb towards LV, at KBO 3.5 DME or **1500′,** whichever is later, turn LEFT, intercept COL R-277 inbound to D11.5 COL, turn LEFT, intercept WYP R-164 inbound to WYP.

CHANGES: SIDs WYP 1D & 1E renumbered 2D & 2E & revised; SIDs transferred.

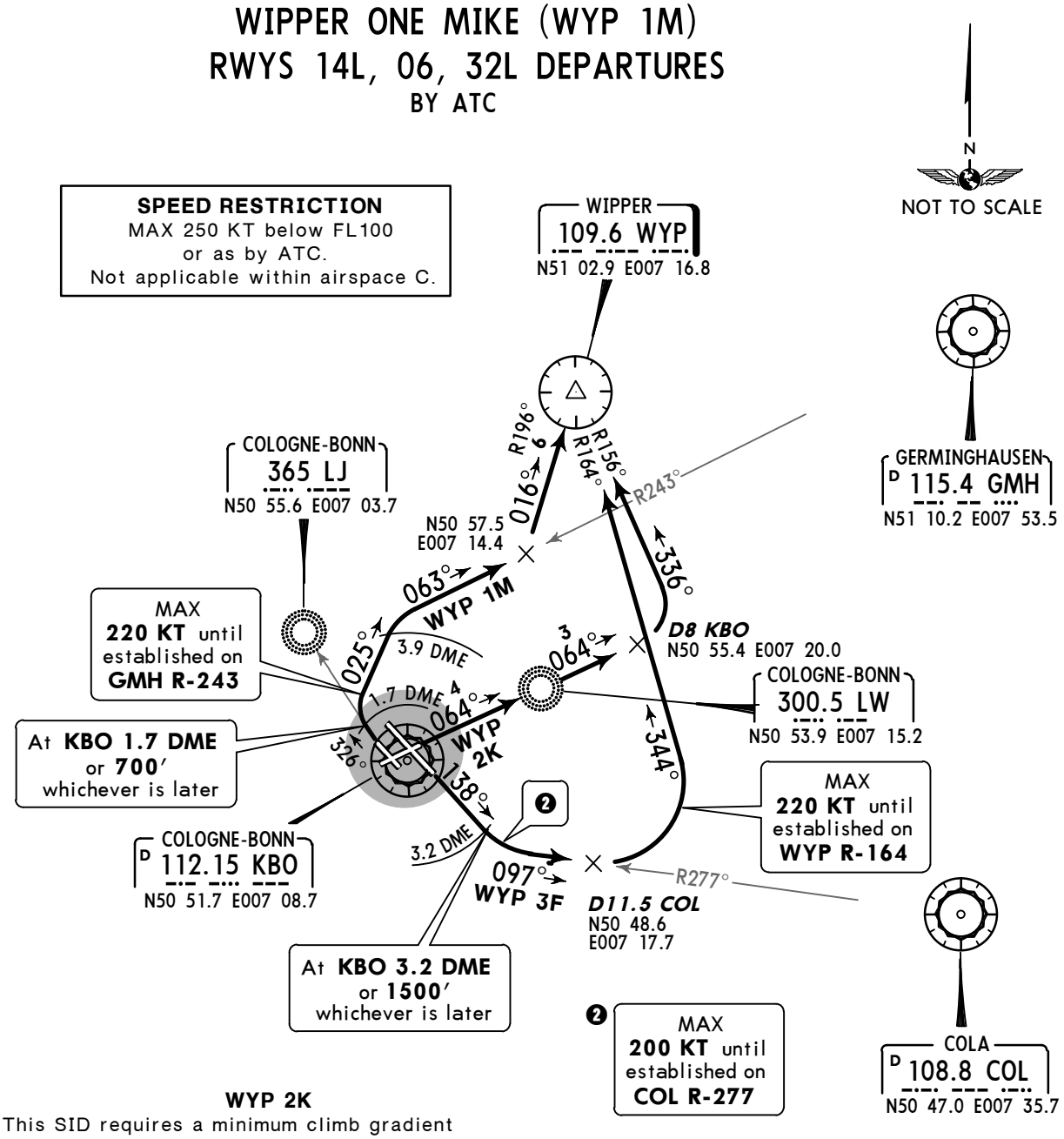
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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 06: EXPECT close-in obstacles.



❶ 2800′ within 15 NM

WIPPER THREE FOXTROT (WYP 3F)
WIPPER TWO KILO (WYP 2K)
WIPPER ONE MIKE (WYP 1M)
RWYS 14L, 06, 32L DEPARTURES
BY ATC



WYP 2K

This SID requires a minimum climb gradient of
310′ per NM (5.1%) until passing **900′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

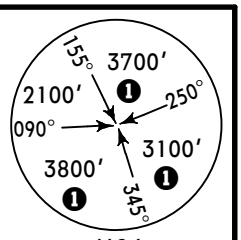
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
WYP 3F	**14L**	Climb on 138° track to KBO 3.2 DME or **1500′,** whichever is later, turn LEFT, intercept COL R-277 inbound to D11.5 COL, turn LEFT, intercept WYP R-164 inbound to WYP.
WYP 2K	**06**	Intercept 064° bearing via LW to D8 KBO, turn LEFT, intercept WYP R-156 inbound to WYP.
WYP 1M	**32L**	Climb towards LJ, at KBO 1.7 DME or **700′,** whichever is later, turn RIGHT, 025° track, at KBO 3.9 DME turn RIGHT, intercept GMH R-243 inbound, intercept WYP R-196 inbound to WYP.

CHANGES: SIDs renumbered, revised & transferred.

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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwy 06: EXPECT close-in obstacles.

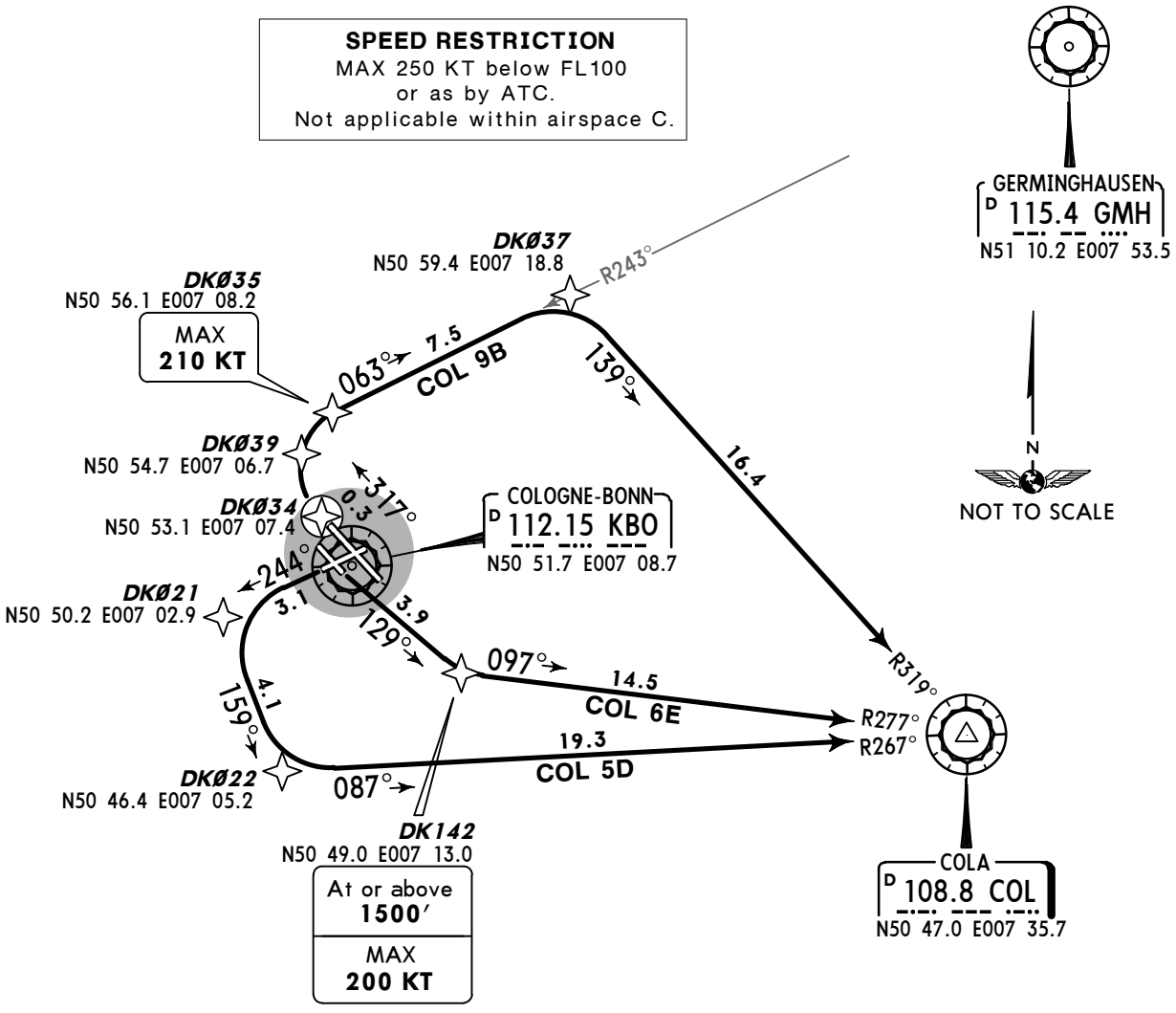


❶ 2800′ within 15 NM

COLA NINE BRAVO (COL 9B)
COLA FIVE DELTA (COL 5D)
COLA SIX ECHO (COL 6E)
RWYS 32R, 24, 14R RNAV DEPARTURES
(OVERLAY 10-3)

ONLY FOR LOCAL TRAINING FLIGHTS AND FOR FLIGHTS TO EDDF
FOR RNAV SIDS RWYS 14L, 06, 32L REFER TO CHART 10-3Q

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



COL 9B (daytime only)
This SID requires a minimum climb gradient of
425′ per NM (7%) until passing **5000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise ATC upon start-up.

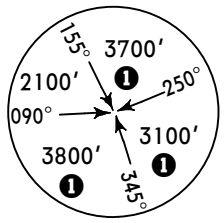
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
COL 9B	**32R**	**(700′+) -** DK034 - DK039 - DK035 (K210-) - DK037 - COL.
COL 5D	**24**	**(700′+) -** DK021 - DK022 - COL.
COL 6E	**14R**	**(700′+) -** DK142 **(1500′+**; K200-) - COL.

CHANGES: RNAV SIDs COL 4D & 5E renumb 5D & 6E & revised; RNAV SIDs transf.

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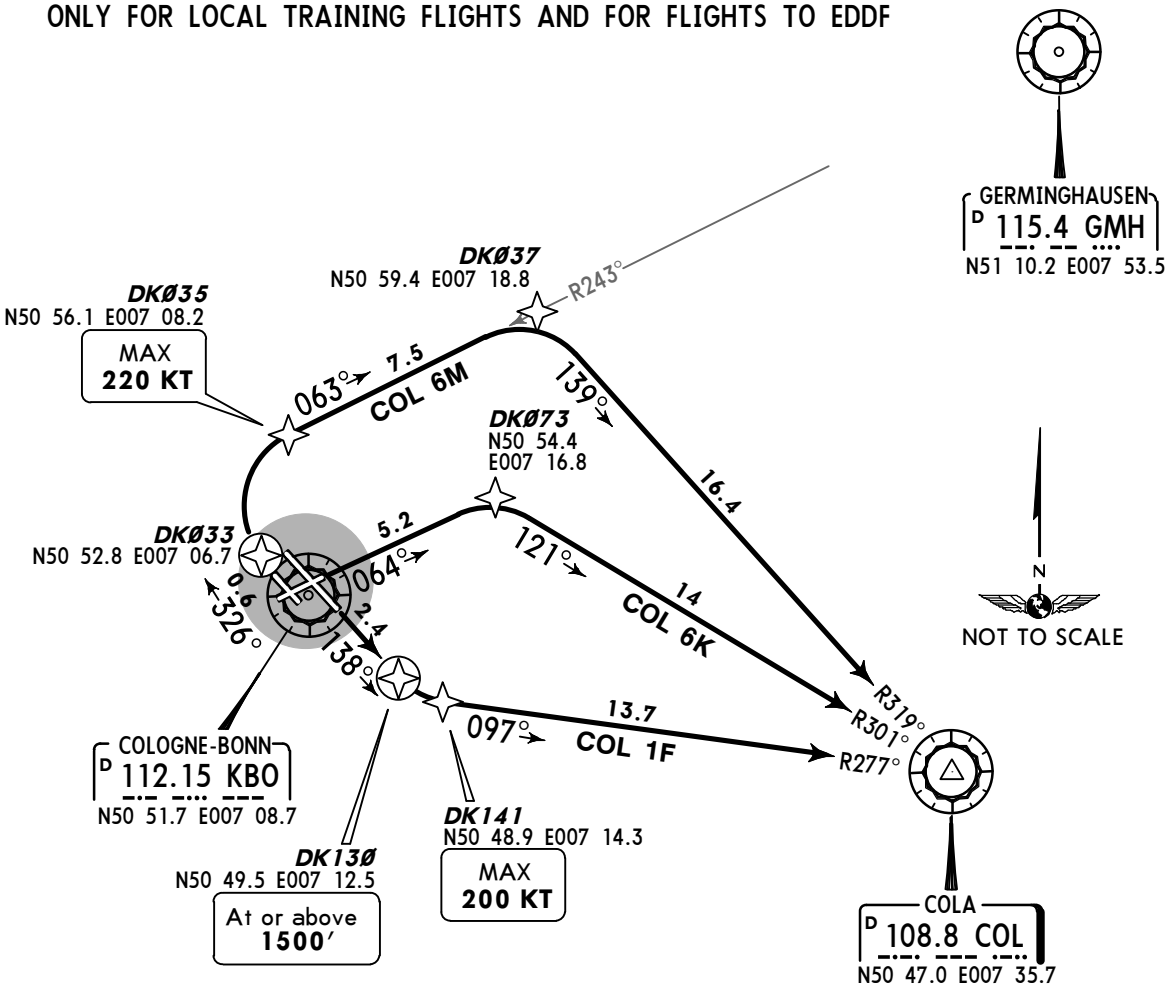
LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwy 06: EXPECT close-in obstacles.



❶ 2800′ within 15 NM

COLA ONE FOXTROT (COL 1F)
COLA SIX KILO (COL 6K)
COLA SIX MIKE (COL 6M)
RWYS 14L, 06, 32L RNAV DEPARTURES
(OVERLAY 10-3A)

ONLY FOR LOCAL TRAINING FLIGHTS AND FOR FLIGHTS TO EDDF



These SIDs require minimum climb gradients of

COL 6K

310′ per NM (5.1%) until passing **900′.**

COL 6M (daytime only)

401′ per NM (6.6%) until passing **5000′** due to airspace structure. If unable to comply advise ATC upon start-up.

Gnd speed-KT	75	100	150	200	250	300
401′ per NM	501	668	1003	1337	1671	2005
310′ per NM	387	516	775	1033	1291	1549

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
COL 1F	**14L**	**(700′+) -** DK130 **(1500′+) -** DK141 (K200-) - COL.
COL 6K	**06**	**(900′+) -** DK073 - COL.
COL 6M	**32L**	**(700′+) -** DK033 - DK035 (K220-) - DK037 - COL.

CHANGES: RNAV SIDs transferred.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
118.75	302′	1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 24: EXPECT close-in obstacles.

KUMIK SIX BRAVO (KUMIK 6B) *[KUMI6B]*
KUMIK FOUR DELTA (KUMIK 4D) *[KUMI4D]*
KUMIK THREE ECHO (KUMIK 3E) *[KUMI3E]*
RWYS 32R, 24, 14R RNAV DEPARTURES (OVERLAY 10-3B)

FOR RNAV SIDS RWYS 14L, 06, 32L REFER TO CHART 10-3T

NOT TO SCALE

WIPPER 109.6 WYP N51 02.9 E007 16.8

COLOGNE-BONN 112.15 KBO N50 51.7 E007 08.7

COLA 108.8 COL N50 47.0 E007 35.7

DK038 N51 01.3 E007 24.9

DK035 N50 56.1 E007 08.2

DK039 N50 54.7 E007 06.7

DK034 N50 53.1 E007 07.4

DK021 N50 50.2 E007 02.9

DK022 N50 46.4 E007 05.2

DK142 N50 49.0 E007 13.0

PODIP N50 56.6 E007 49.2

DK150 N50 49.5 E007 58.2

KUMIK N50 50.2 E008 04.4 (115.4 GMH R-160/D21) (COL D19)

D14 191° GMH 115.4

D26 078°

123°

106°

243° R GMH 115.4

16.1

11.8 KUMIK 6B

063°

317°

0.3

3.9

129°

24°

3.1

4.1

159°

087°

097°

14.5 KUMIK 3E

19.3 KUMIK 4D

079°

R277°

R267°

8

D8 COL

4.5 6000

11.6 6000

6.5 5000

Y 854

MAX 210 KT

MAX 200 KT

At or above 1500′

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

❶ 2800′ within 15 NM

MSA KBO VOR

❷ For flights intending to proceed via airway **Y 854.**

KUMIK 6B (daytime only)
This SID requires a minimum climb gradient of 425′ per NM (7%) until passing **5000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise ATC upon start-up.

Initial climb clearance **5000′**

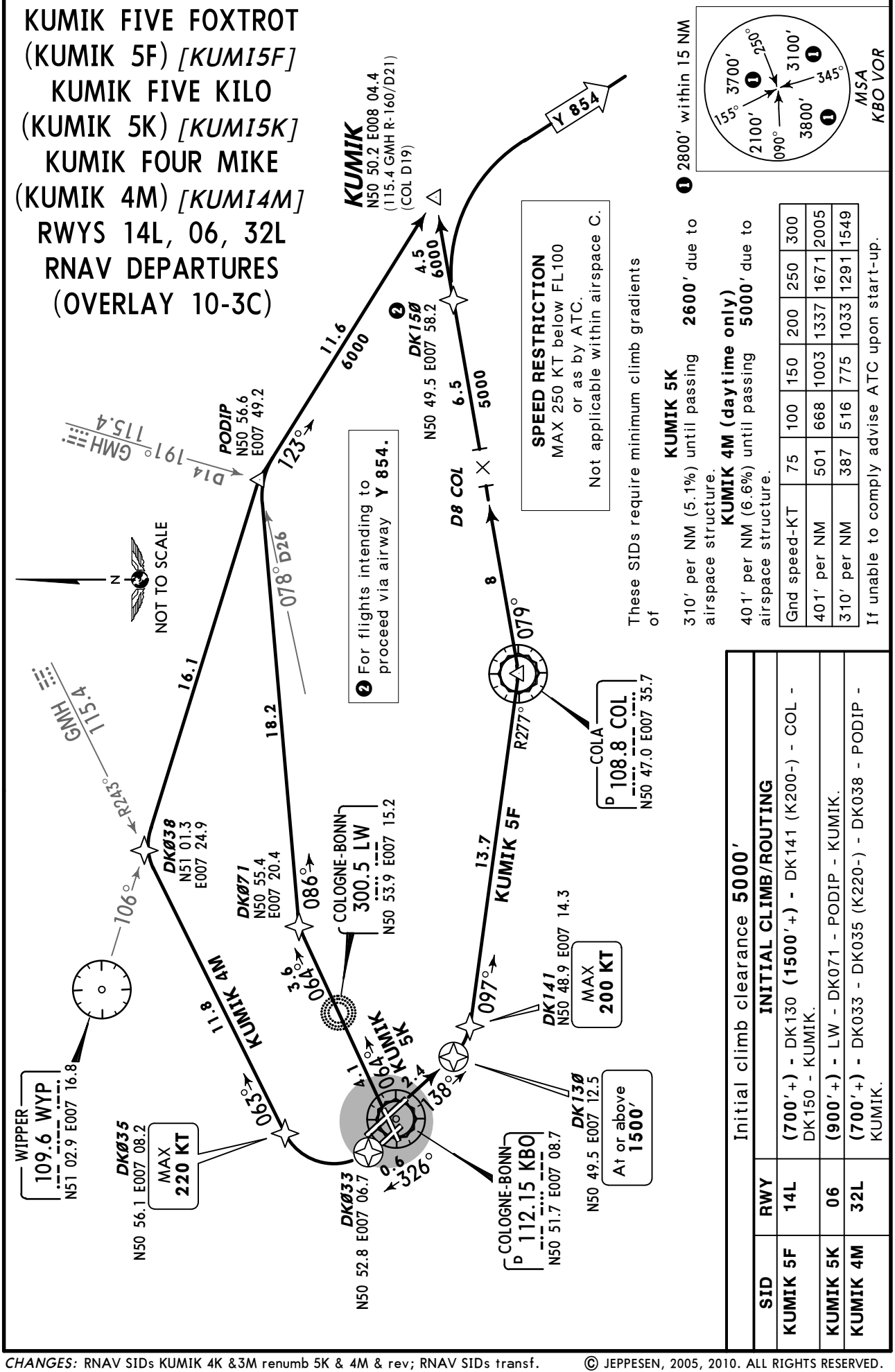
SID	RWY	INITIAL CLIMB/ROUTING
KUMIK 6B	32R	**(700′+) -** DK034 - DK039 - DK035 (K210-) - DK038 - PODIP - KUMIK.
KUMIK 4D	24	**(700′+) -** DK021 - DK022 - COL - DK150 - KUMIK.
KUMIK 3E	14R	**(700′+) -** DK142 **(1500′+** ; K200-) - COL - DK150 - KUMIK.

CHANGES: RNAV SIDs renumbered, revised & transferred.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 06: EXPECT close-in obstacles.
118.75	302′	

KUMIK FIVE FOXTROT (KUMIK 5F) *[KUMI5F]*
KUMIK FIVE KILO (KUMIK 5K) *[KUMI5K]*
KUMIK FOUR MIKE (KUMIK 4M) *[KUMI4M]*
RWYS 14L, 06, 32L
RNAV DEPARTURES
(OVERLAY 10-3C)



Gnd speed-KT	75	100	150	200	250	300
401′ per NM	501	668	1003	1337	1671	2005
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
KUMIK 5F	14L	(700′+) - DK130 (1500′+) - DK141 (K200-) - COL - DK150 - KUMIK.
KUMIK 5K	06	(900′+) - LW - DK071 - PODIP - KUMIK.
KUMIK 4M	32L	(700′+) - DK033 - DK035 (K220-) - DK038 - PODIP - KUMIK.

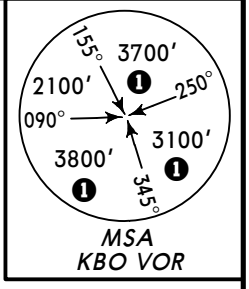
CHANGES: RNAV SIDs KUMIK 4K &3M renumb 5K & 4M & rev; RNAV SIDs transf.

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*LANGEN Radar 135.35	Apt Elev 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict a dherence within the limits of aircraft performance is mandatory. 3. RWY 24: EXPECT close-in obstacles.

NORVENICH THREE BRAVO (NOR 3B)
NORVENICH FIVE CHARLIE (NOR 5C)
NORVENICH SEVEN DELTA (NOR 7D)
NORVENICH SEVEN ECHO (NOR 7E)
RWYS 32R, 14R, 24 RNAV DEPARTURES
(OVERLAY 10-3D)

FOR RNAV SIDS RWYS 14L, 06, 32L REFER TO CHART 10-3V
FOR RNAV SIDS RWY 14R/L BY ATC REFER TO CHART 10-3W

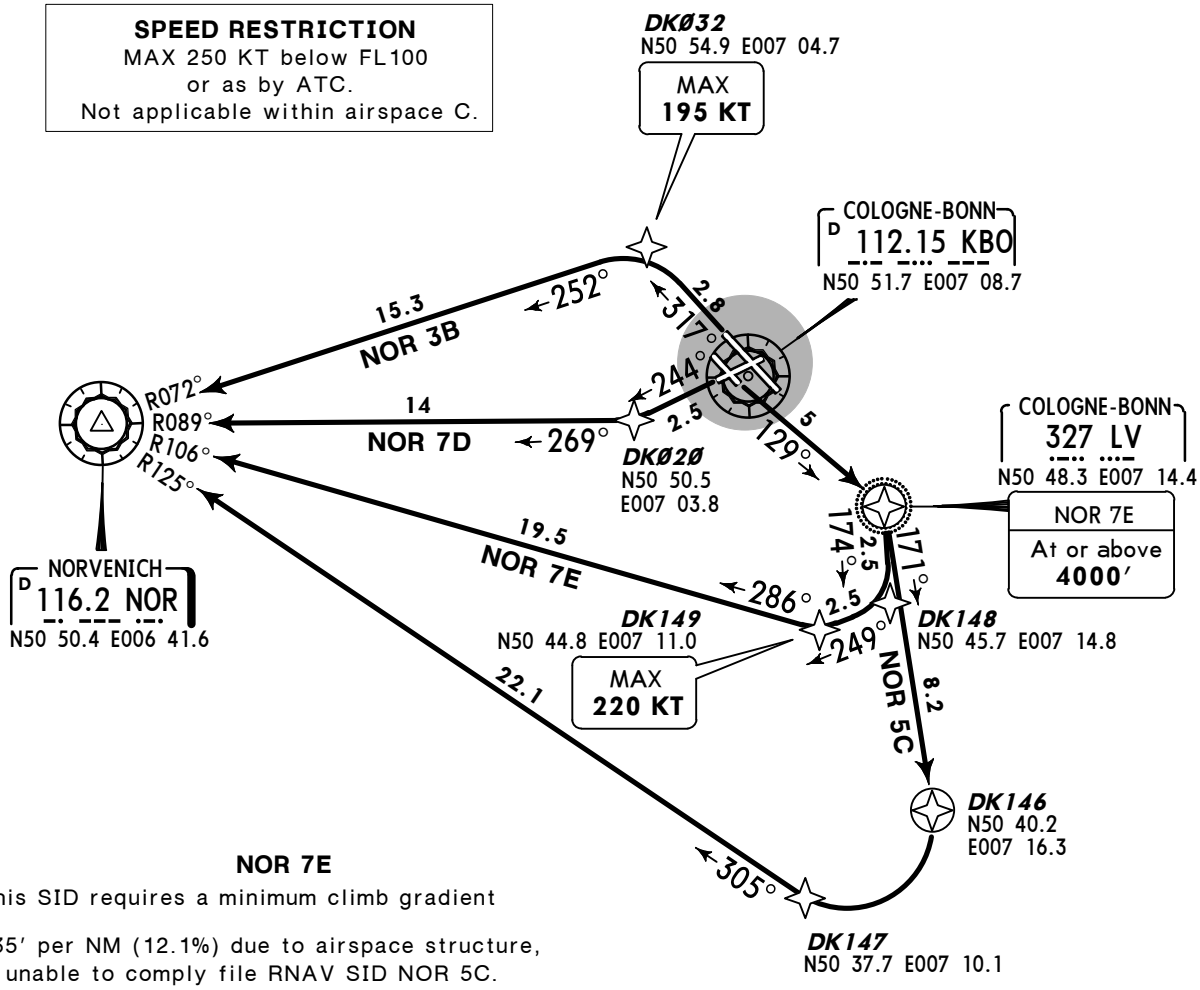


1 2800′ within 15 NM

Flights intending to proceed above **FL190** have to be able to cross FIR/UIR boundary (23 DME NOR) at or above **FL200.** If unable to comply contact Delivery prior to start-up.

N
NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



NOR 7E

This SID requires a minimum climb gradient of
735′ per NM (12.1%) due to airspace structure,
if unable to comply file RNAV SID NOR 5C.

Gnd speed-KT	75	100	150	200	250	300
735′ per NM	919	1225	1838	2451	3063	3676

Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
NOR 3B	**32R**	**(700′+) -** DK032 (K195-) - NOR.
NOR 5C	**14R**	**(700′+) -** LV - DK146 - DK147 - NOR.
NOR 7D	**24**	**(700′+) -** DK020 - NOR.
NOR 7E	**14R**	**(700′+) -** LV **(4000′+) -** DK148 - DK149 (K220-) - NOR.

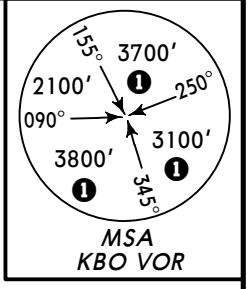
CHANGES: RNAV SIDs NOR 6D & 6E renumb 7D & 7E & revised; RNAV SIDs transf.

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*LANGEN Radar 135.35	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 06: EXPECT close-in obstacles.

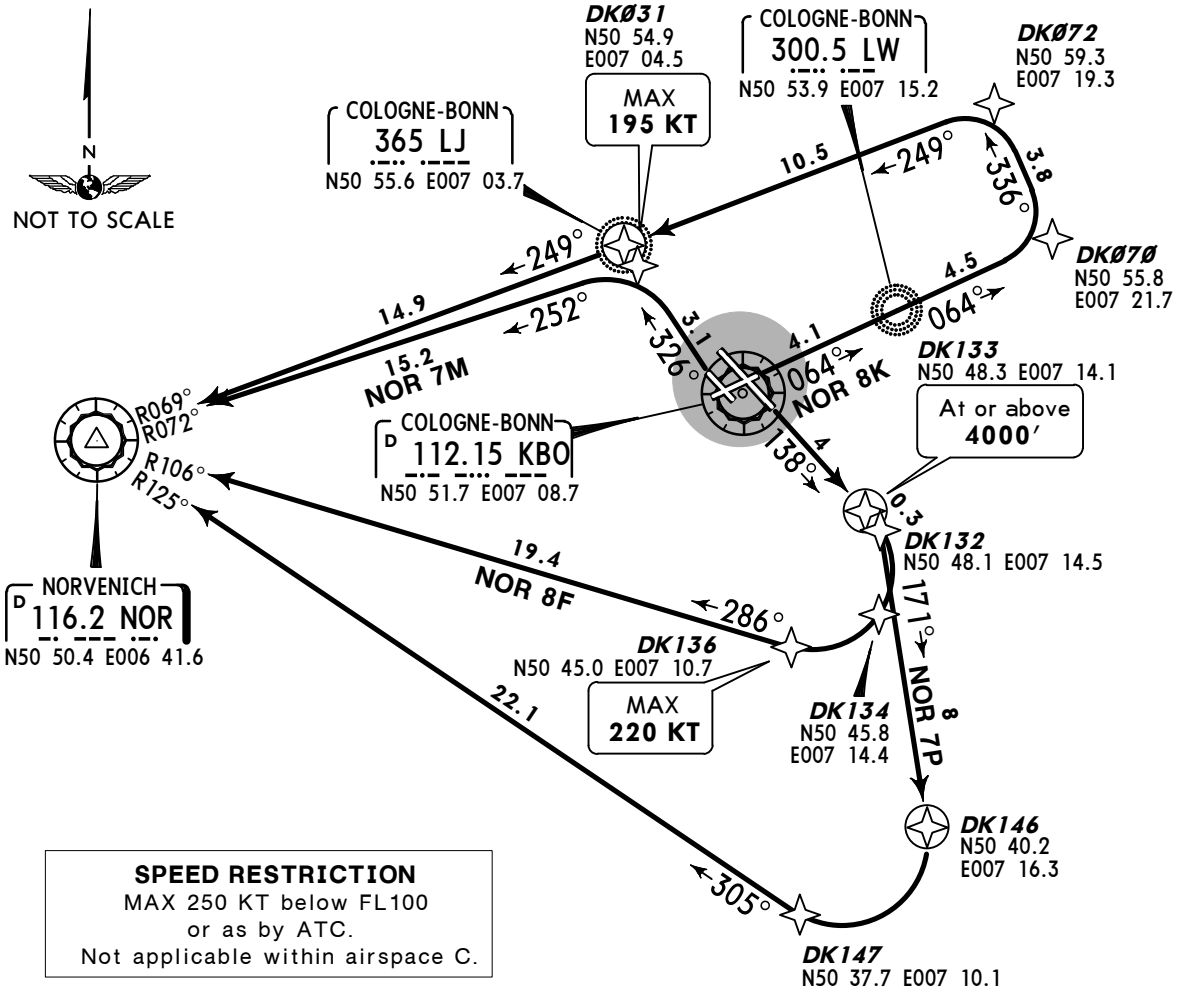
NORVENICH EIGHT FOXTROT (NOR 8F)
NORVENICH EIGHT KILO (NOR 8K)
NORVENICH SEVEN MIKE (NOR 7M)
NORVENICH SEVEN PAPA (NOR 7P)
RWYS 14L, 06, 32L RNAV DEPARTURES
(OVERLAY 10-3E)

FOR RNAV SIDS RWY 14R/L BY ATC REFER TO CHART 10-3W



1 2800′ within 15 NM

Flights intending to proceed above **FL190** have to be able to cross FIR/UIR boundary (23 DME NOR) at or above **FL200.** If unable to comply contact Delivery prior to start-up.



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of

NOR 8F
924′ per NM (15.2%) due to airspace structure, if unable to comply file RNAV SID NOR 7P.

NOR 8K
310′ per NM (5.1%) until passing **900′.**

Gnd speed-KT	75	100	150	200	250	300
924′ per NM	1154	1539	2309	3079	3848	4618
310′ per NM	387	516	775	1033	1291	1549

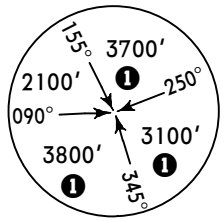
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
NOR 8F	**14L**	**(700′+) -** DK133 **(4000′+) -** DK134 - DK136 (K220-) - NOR.
NOR 8K	**06**	**(900′+) -** LW - DK070 - DK072 - LJ - NOR.
NOR 7M	**32L**	**(700′+) -** DK031 (K195-) - NOR.
NOR 7P	**14L**	**(700′+) -** DK132 - DK146 - DK147 - NOR.

CHANGES: RNAV SIDs NOR 7F & 7K renumb 8F & 8K & revised; RNAV SIDs transf.

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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

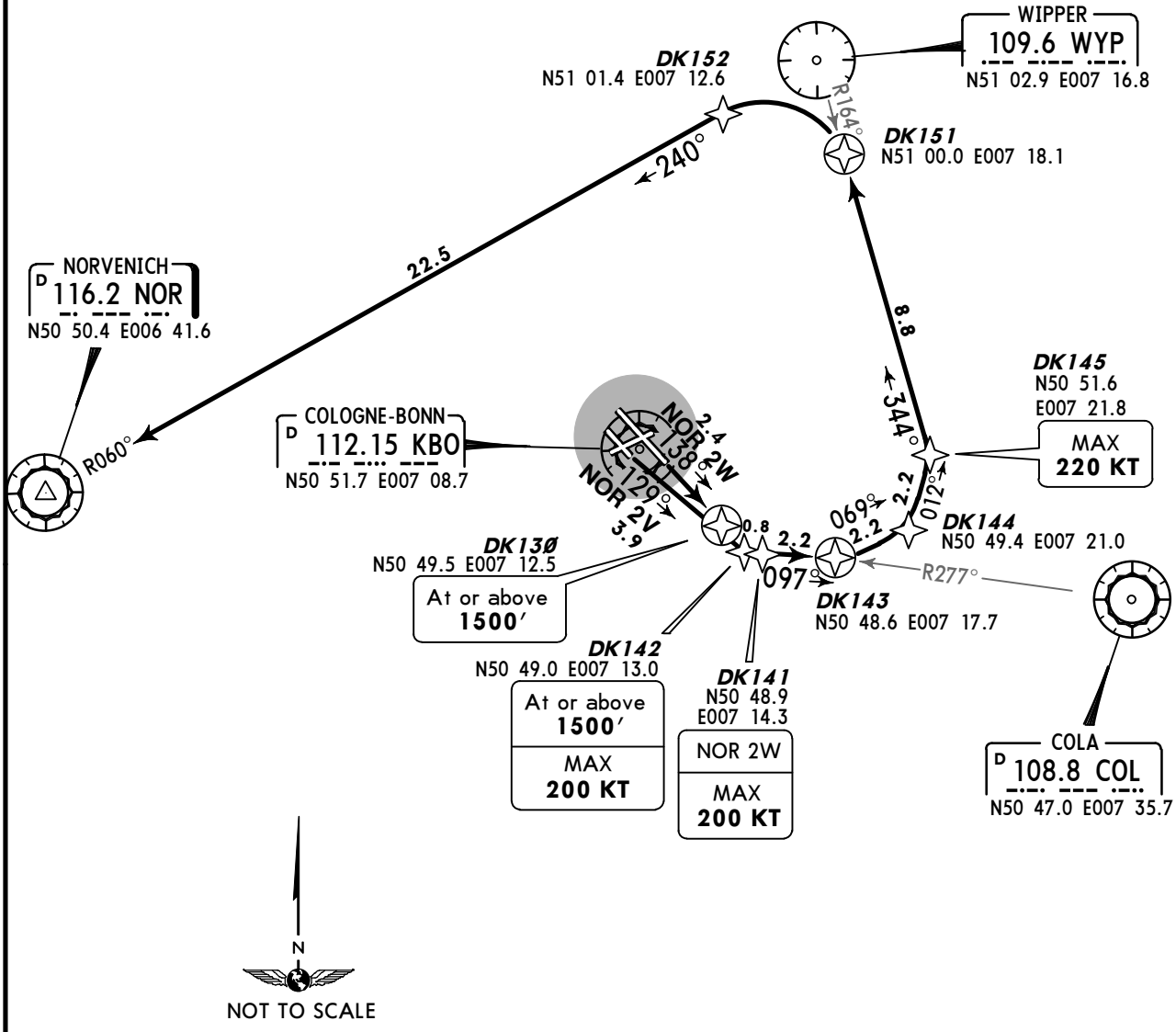


2800′ within 15 NM

NORVENICH TWO VICTOR (NOR 2V)
NORVENICH TWO WHISKEY (NOR 2W)
RWYS 14R, 14L RNAV DEPARTURES
(OVERLAY 10-3F)

BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
NOR 2V	**14R**	**(700′+) -** DK142 **(1500′+** ; K200-) - DK143 - DK144 - DK145 (K220-) - DK151 - DK152 - NOR.
NOR 2W	**14L**	**(700′+) -** DK130 **(1500′+) -** DK141 (K200-) - DK143 - DK144 - DK145 (K220-) - DK151 - DK152 - NOR.

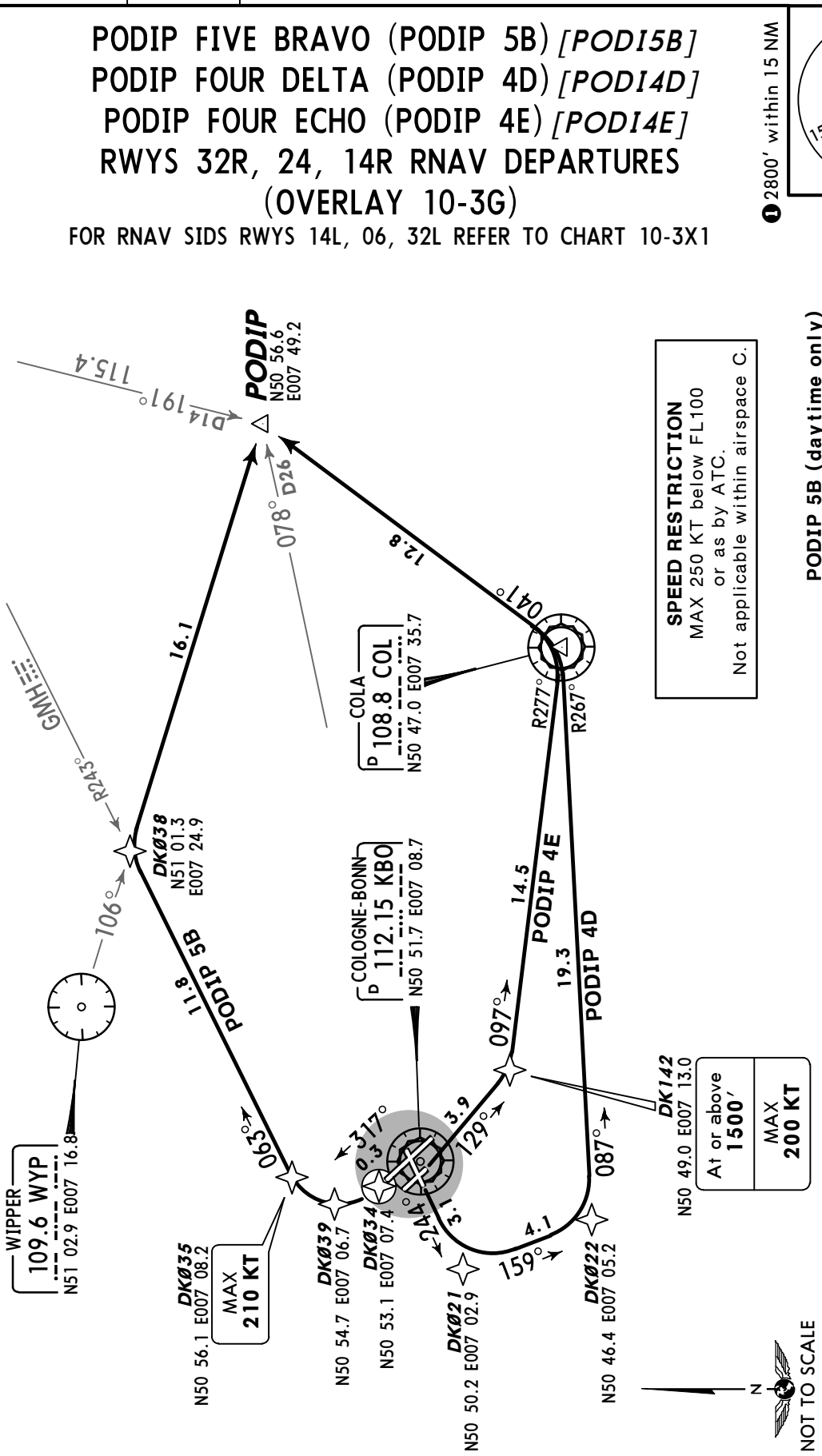
CHANGES: RNAV SID NOR 1V renumbered 2V & revised; RNAV SIDs transferred.

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LANGEN Radar	*Apt Elev*	
118.75	302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2 .SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 24: EXPECT close-in obstacles.

PODIP FIVE BRAVO (PODIP 5B) *[PODI5B]*
PODIP FOUR DELTA (PODIP 4D) *[PODI4D]*
PODIP FOUR ECHO (PODIP 4E) *[PODI4E]*
RWYS 32R, 24, 14R RNAV DEPARTURES
(OVERLAY 10-3G)

FOR RNAV SIDS RWYS 14L, 06, 32L REFER TO CHART 10-3X1

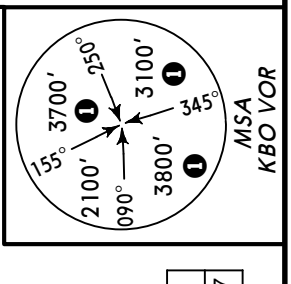


SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

PODIP 5B (daytime only)
This SID requires a minimum climb gradient of 425′ per NM (7%) until passing **5000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise ATC upon start-up.



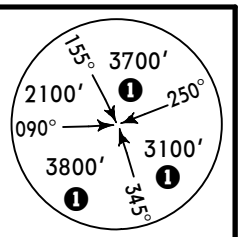
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
PODIP 5B	32R	(700′+) - DK034 - DK039 - DK035 (K210-) - DK038 - PODIP.
PODIP 4D	24	(700′+) - DK021 - DK022 - COL - PODIP.
PODIP 4E	14R	(700′+) - DK142 (1500′+; K200-) - COL - PODIP.

CHANGES: RNAV SIDs renumbered, revised & transferred.

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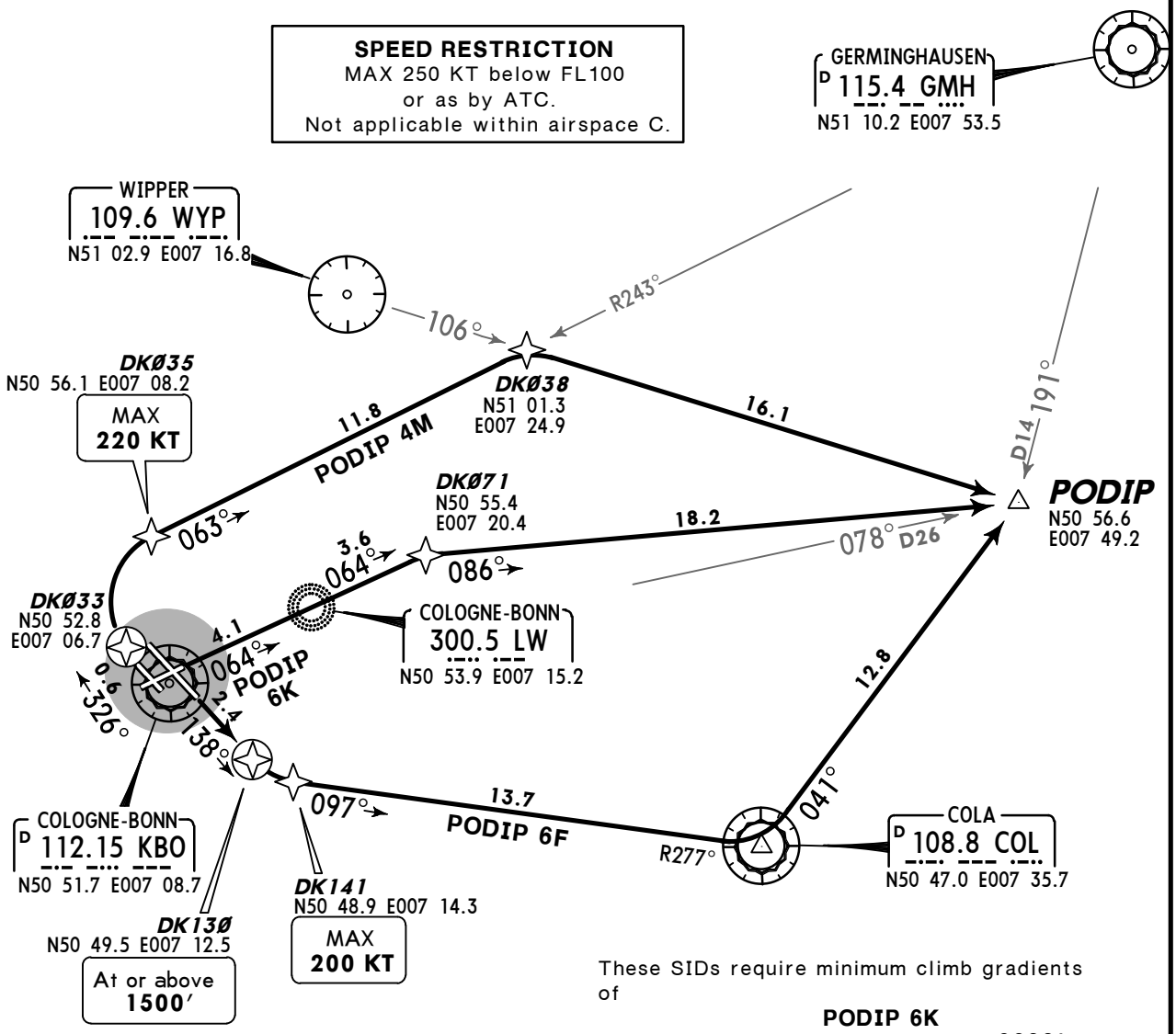
LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwy 06: EXPECT close-in obstacles.



❶ 2800′ within 15 NM

PODIP SIX FOXTROT (PODIP 6F) *[POD16F]*
PODIP SIX KILO (PODIP 6K) *[POD16K]*
PODIP FOUR MIKE (PODIP 4M) *[POD14M]*
RWYS 14L, 06, 32L RNAV DEPARTURES
(OVERLAY 10-3H)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

PODIP 6K
310′ per NM (5.1%) until passing **2600′** due to airspace structure.

PODIP 4M (daytime only)
401′ per NM (6.6%) until passing **5000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
401′ per NM	501	668	1003	1337	1671	2005
310′ per NM	387	516	775	1033	1291	1549

If unable to comply advise Delivery upon start-up.

N
NOT TO SCALE

Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
PODIP 6F	**14L**	**(700′+) -** DK130 **(1500′+) -** DK141 (K200-) - COL - PODIP.
PODIP 6K	**06**	**(900′+) -** LW - DK071 - PODIP.
PODIP 4M	**32L**	**(700′+) -** DK033 - DK035 (K220-) - DK038 - PODIP.

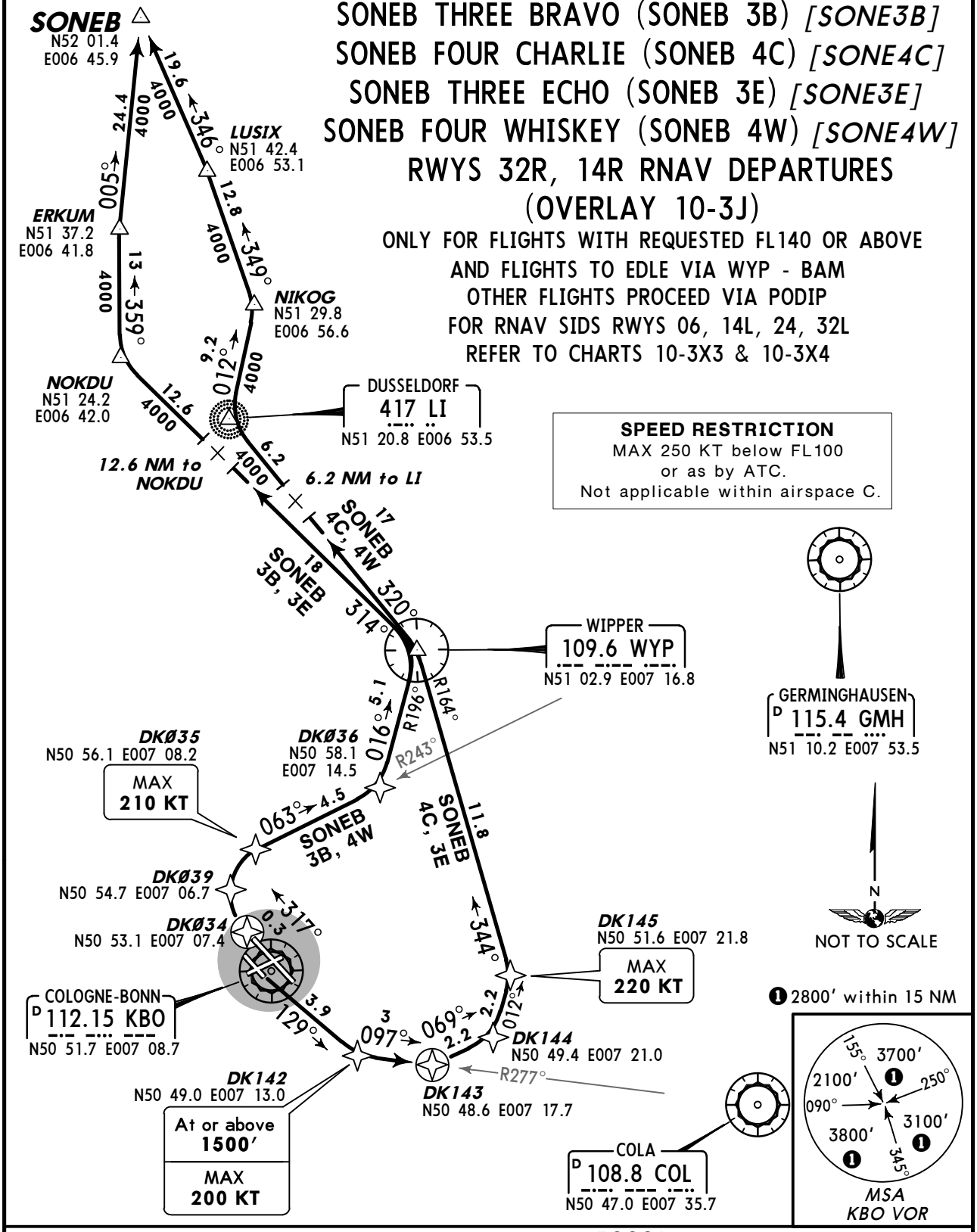
CHANGES: RNAV SIDs renumbered, revised & transferred.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
118.75	302′	1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

SONEB THREE BRAVO (SONEB 3B) *[SONE3B]*
SONEB FOUR CHARLIE (SONEB 4C) *[SONE4C]*
SONEB THREE ECHO (SONEB 3E) *[SONE3E]*
SONEB FOUR WHISKEY (SONEB 4W) *[SONE4W]*
RWYS 32R, 14R RNAV DEPARTURES
(OVERLAY 10-3J)

ONLY FOR FLIGHTS WITH REQUESTED FL140 OR ABOVE
AND FLIGHTS TO EDLE VIA WYP - BAM
OTHER FLIGHTS PROCEED VIA PODIP
FOR RNAV SIDS RWYS 06, 14L, 24, 32L
REFER TO CHARTS 10-3X3 & 10-3X4



Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
SONEB 3B	**32R**	**(700′+) -** DK034 - DK039 - DK035 (K210-) - DK036 - WYP - NOKDU - ERKUM - SONEB.
SONEB 4C By ATC	**14R**	**(700′+) -** DK142 **(1500′+;** K200-) - DK143 - DK144 - DK145 (K220-) - WYP - LI - NIKOG - LUSIX - SONEB.
SONEB 3E		**(700′+) -** DK142 **(1500′+;** K200-) - DK143 - DK144 - DK145 (K220-) - WYP - NOKDU - ERKUM - SONEB.
SONEB 4W By ATC	**32R**	**(700′+) -** DK034 - DK039 - DK035 (K210-) - DK036 - WYP - LI - NIKOG - LUSIX - SONEB.

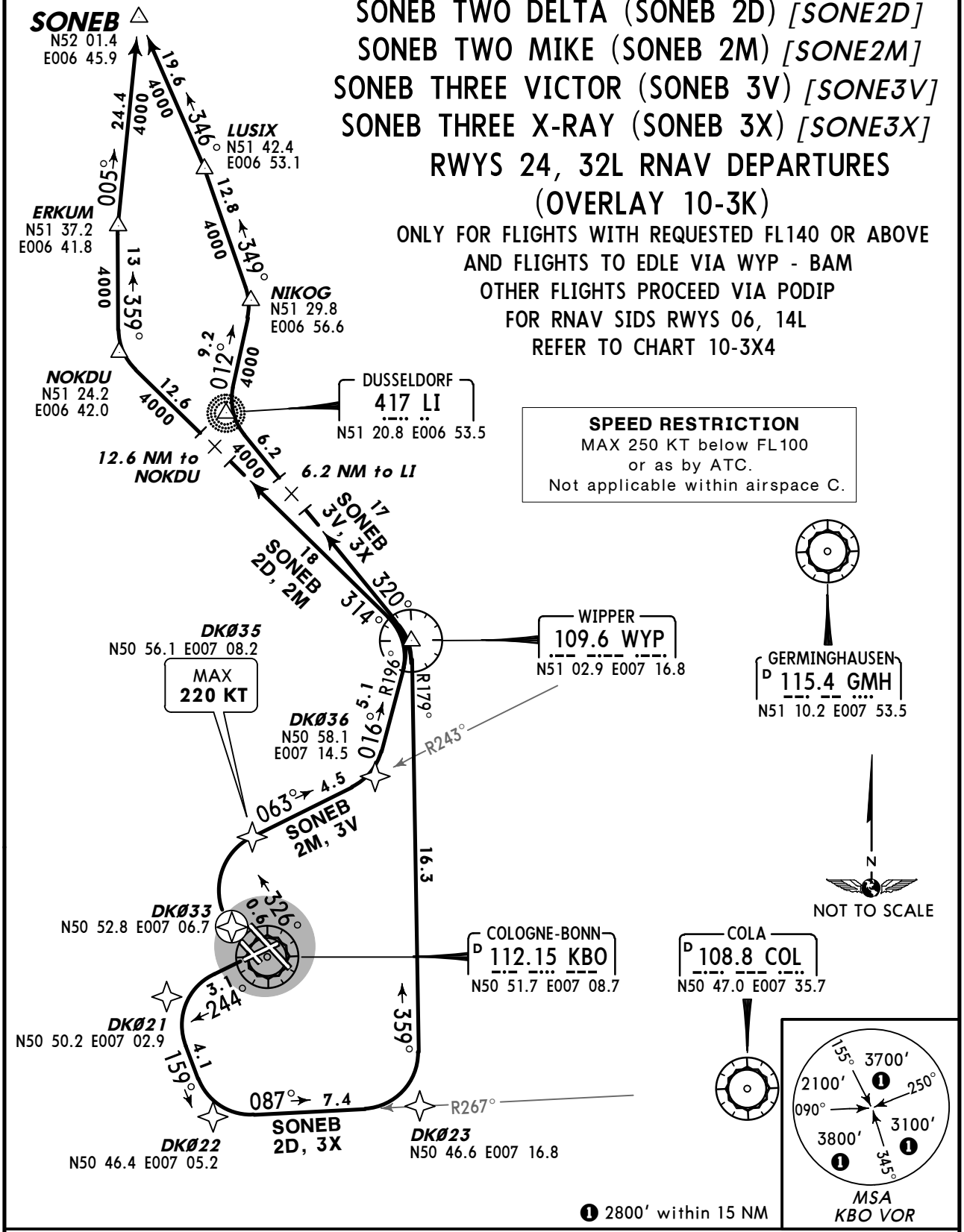
CHANGES: RNAV SIDs renumbered, revised & transferred.

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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 24: EXPECT close-in obstacles.

SONEB TWO DELTA (SONEB 2D) *[SONE2D]*
SONEB TWO MIKE (SONEB 2M) *[SONE2M]*
SONEB THREE VICTOR (SONEB 3V) *[SONE3V]*
SONEB THREE X-RAY (SONEB 3X) *[SONE3X]*
RWYS 24, 32L RNAV DEPARTURES
(OVERLAY 10-3K)

ONLY FOR FLIGHTS WITH REQUESTED FL140 OR ABOVE AND FLIGHTS TO EDLE VIA WYP - BAM
OTHER FLIGHTS PROCEED VIA PODIP
FOR RNAV SIDS RWYS 06, 14L
REFER TO CHART 10-3X4



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ 2800′ within 15 NM

Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
SONEB 2D	**24**	**(700′+) -** DK021 - DK022 - DK023 - WYP - NOKDU - ERKUM - SONEB.
SONEB 2M	**32L**	**(700′+) -** DK033 - DK035 (K220-) - DK036 - WYP - NOKDU - ERKUM - SONEB.
SONEB 3V By ATC		**(700′+) -** DK033 - DK035 (K220-) - DK036 - WYP - LI - NIKOG - LUSIX - SONEB.
SONEB 3X By ATC	**24**	**(700′+) -** DK021 - DK022 - DK023 - WYP - LI - NIKOG - LUSIX - SONEB.

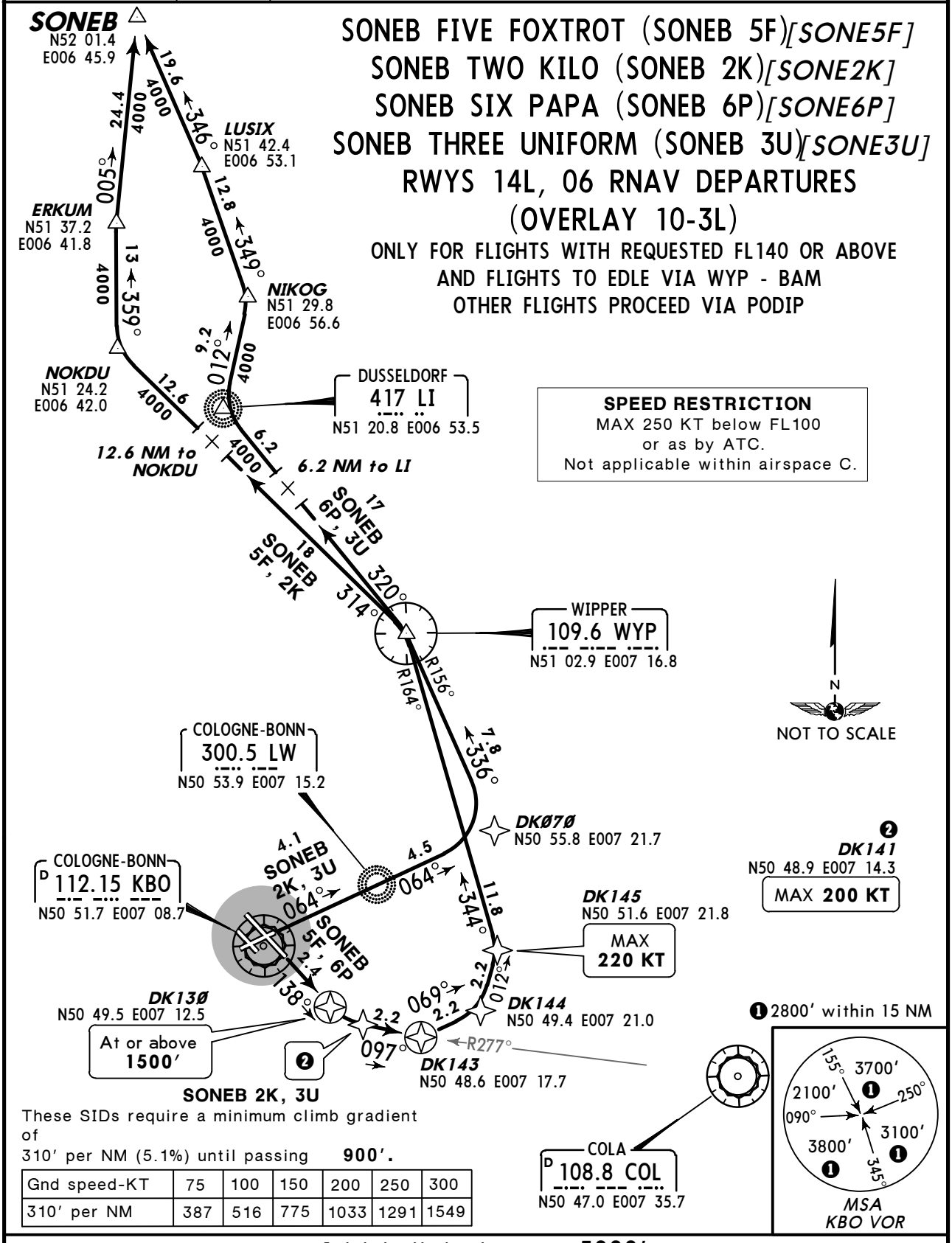
CHANGES: RNAV SIDs renumbered, revised & transferred.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 06: EXPECT close-in obstacles.
118.75	302′	

SONEB FIVE FOXTROT (SONEB 5F)*[SONE5F]*
SONEB TWO KILO (SONEB 2K)*[SONE2K]*
SONEB SIX PAPA (SONEB 6P)*[SONE6P]*
SONEB THREE UNIFORM (SONEB 3U)*[SONE3U]*
RWYS 14L, 06 RNAV DEPARTURES
(OVERLAY 10-3L)

ONLY FOR FLIGHTS WITH REQUESTED FL140 OR ABOVE AND FLIGHTS TO EDLE VIA WYP - BAM
OTHER FLIGHTS PROCEED VIA PODIP



SONEB 2K, 3U

These SIDs require a minimum climb gradient of 310′ per NM (5.1%) until passing **900′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

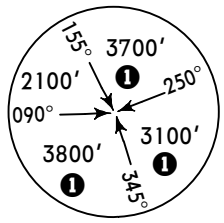
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
SONEB 5F	**14L**	**(700′+) -** DK130 **(1500′+) -** DK141 (K200-) - DK143 - DK144 - DK145 (K220-) - WYP - NOKDU - ERKUM - SONEB.
SONEB 2K	**06**	**(900′+) -** LW - DK070 - WYP - NOKDU - ERKUM - SONEB.
SONEB 6P By ATC	**14L**	**(700′+) -** DK130 **(1500′+) -** DK141 (K200-) - DK143 - DK144 - DK145 (K220-) - WYP - LI - NIKOG - LUSIX - SONEB.
SONEB 3U By ATC	**06**	**(900′+) -** LW - DK070 - WYP - LI - NIKOG - LUSIX - SONEB.

CHANGES: RNAV SIDs renumbered, revised & transferred.

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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 24: EXPECT close-in obstacles.



1 2800′ within 15 NM

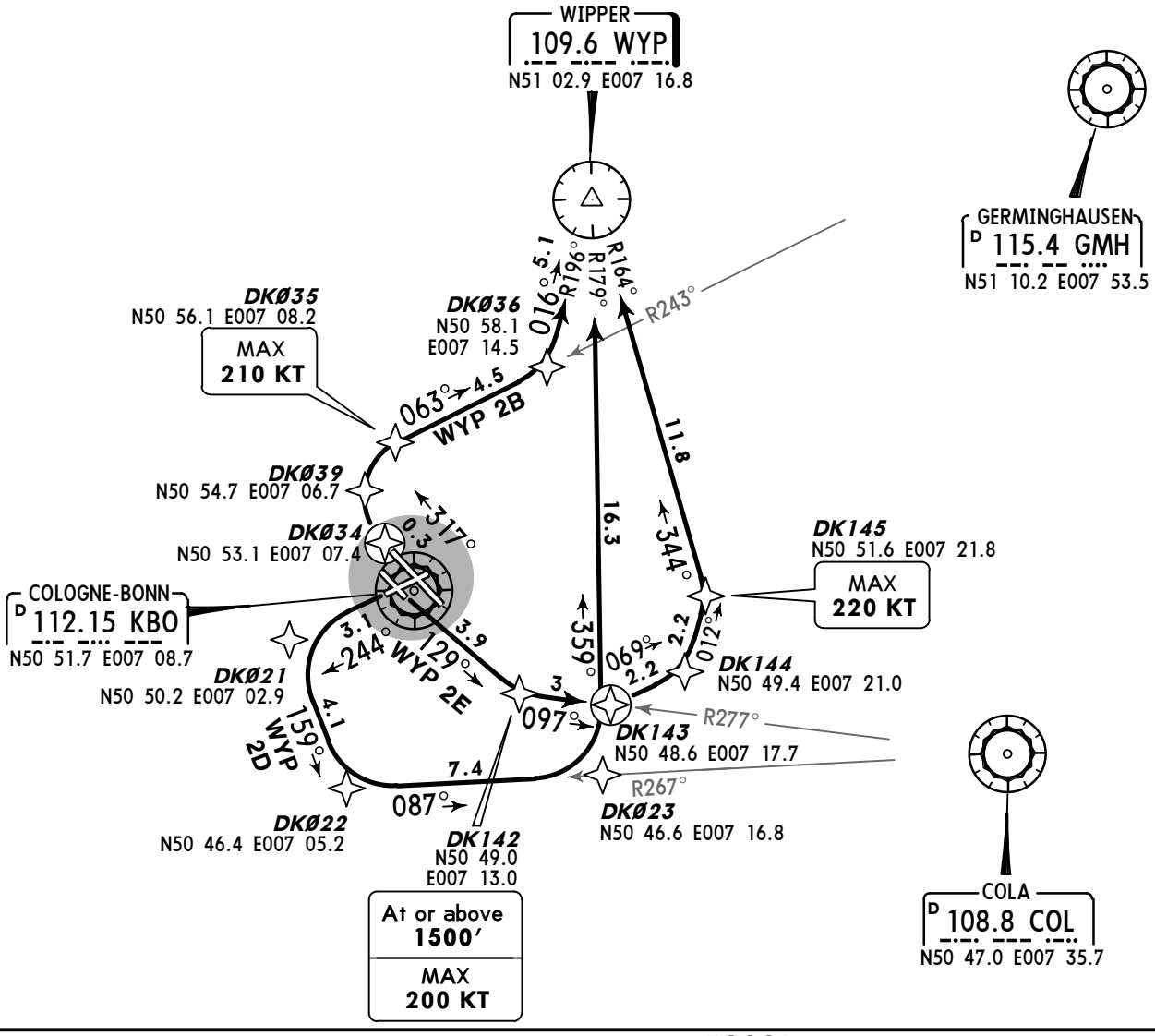
WIPPER TWO BRAVO (WYP 2B)
WIPPER TWO DELTA (WYP 2D)
WIPPER TWO ECHO (WYP 2E)
RWYS 32R, 24, 14R RNAV DEPARTURES
(OVERLAY 10-3M)

BY ATC

FOR SIDS RWYS 14L, 06, 32L REFER TO CHART 10-3X6

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





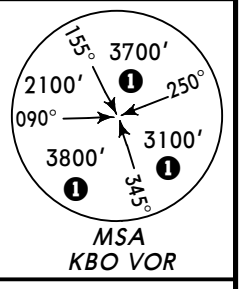
Initial climb clearance **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
WYP 2B	**32R**	**(700′+) -** DK034 - DK039 - DK035 (K210-) - DK036 - WYP.
WYP 2D	**24**	**(700′+) -** DK021 - DK022 - DK023 - WYP.
WYP 2E	**14R**	**(700′+) -** DK142 **(1500′+**; K200-) - DK143 - DK144 - DK145 (K220-) - WYP.

CHANGES: New chart (RNAV SIDs transferred).

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LANGEN Radar 118.75	*Apt Elev* 302′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 06: EXPECT close-in obstacles.

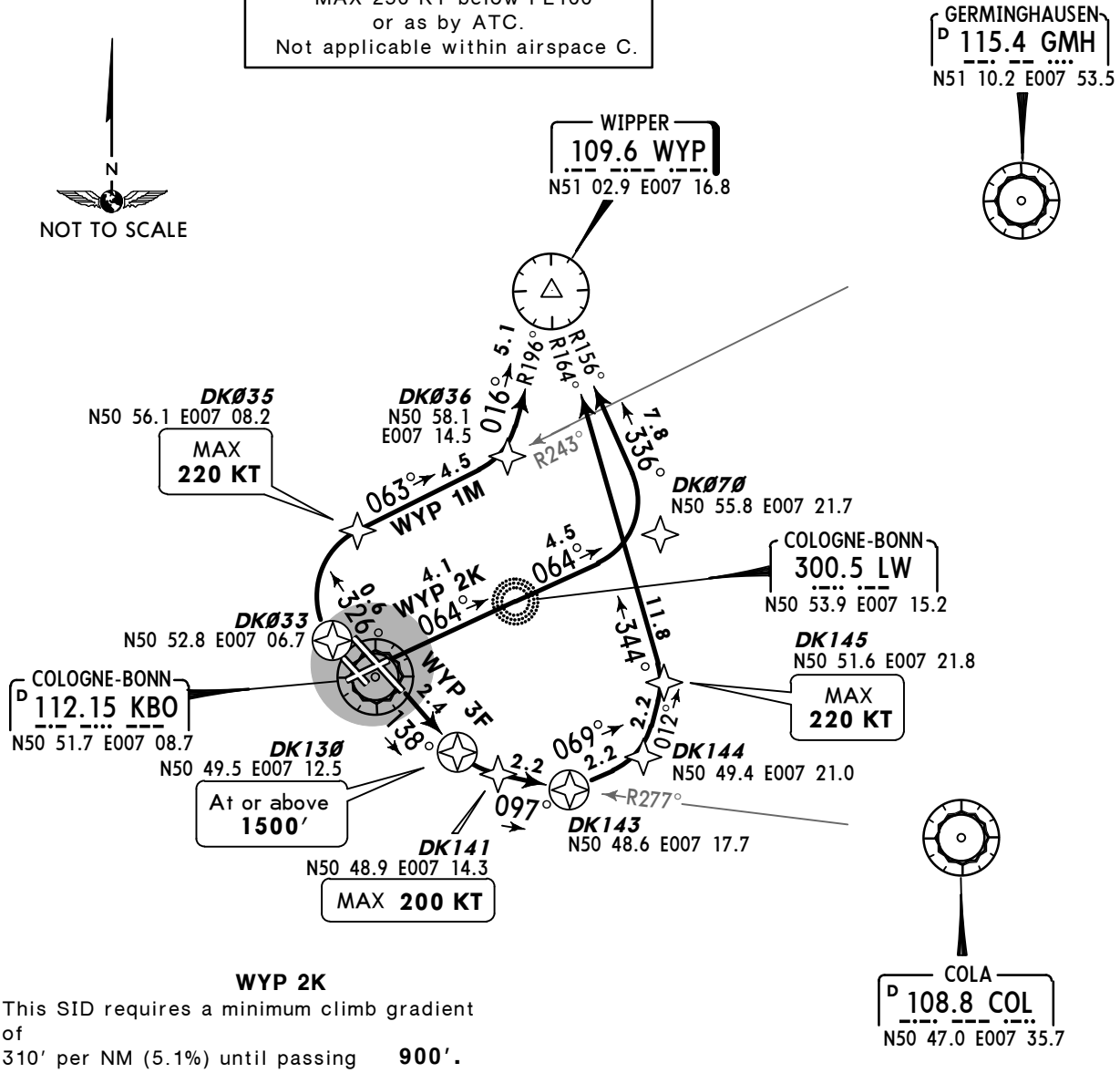


❶ 2800′ within 15 NM

WIPPER THREE FOXTROT (WYP 3F)
WIPPER TWO KILO (WYP 2K)
WIPPER ONE MIKE (WYP 1M)
RWYS 14L, 06, 32L RNAV DEPARTURES
(OVERLAY 10-3N)

BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



WYP 2K
This SID requires a minimum climb gradient of
310′ per NM (5.1%) until passing **900′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

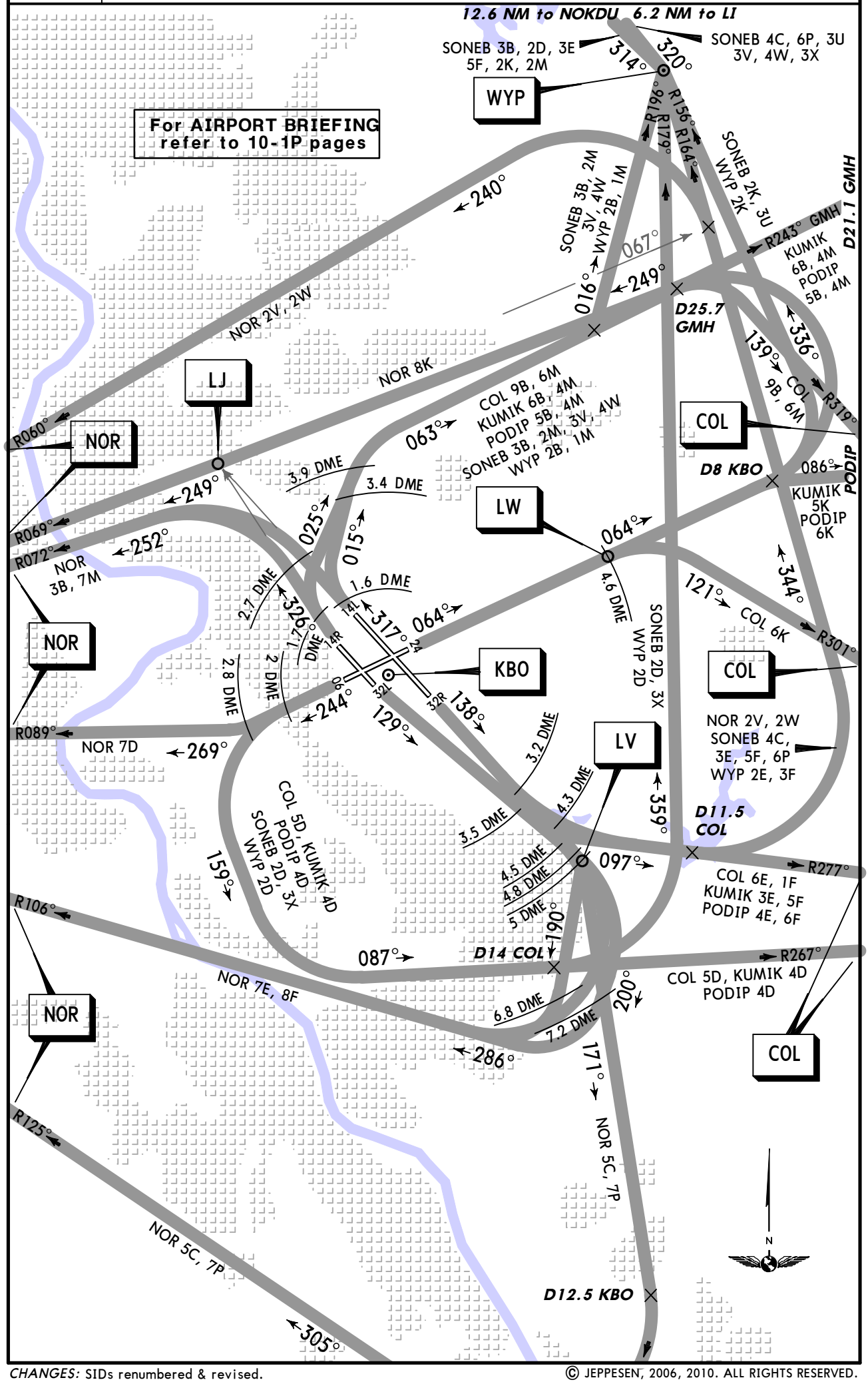
SID	RWY	INITIAL CLIMB/ROUTING
WYP 3F	**14L**	**(700′+) -** DK130 **(1500′+) -** DK141 (K200-) - DK143 - DK144 - DK145 (K220-) - WYP.
WYP 2K	**06**	**(900′+) -** LW - DK070 - WYP.
WYP 1M	**32L**	**(700′+) -** DK033 - DK035 (K220-) - DK036 - WYP.

CHANGES: New chart (RNAV SIDs transferred).

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Apt Elev 302'

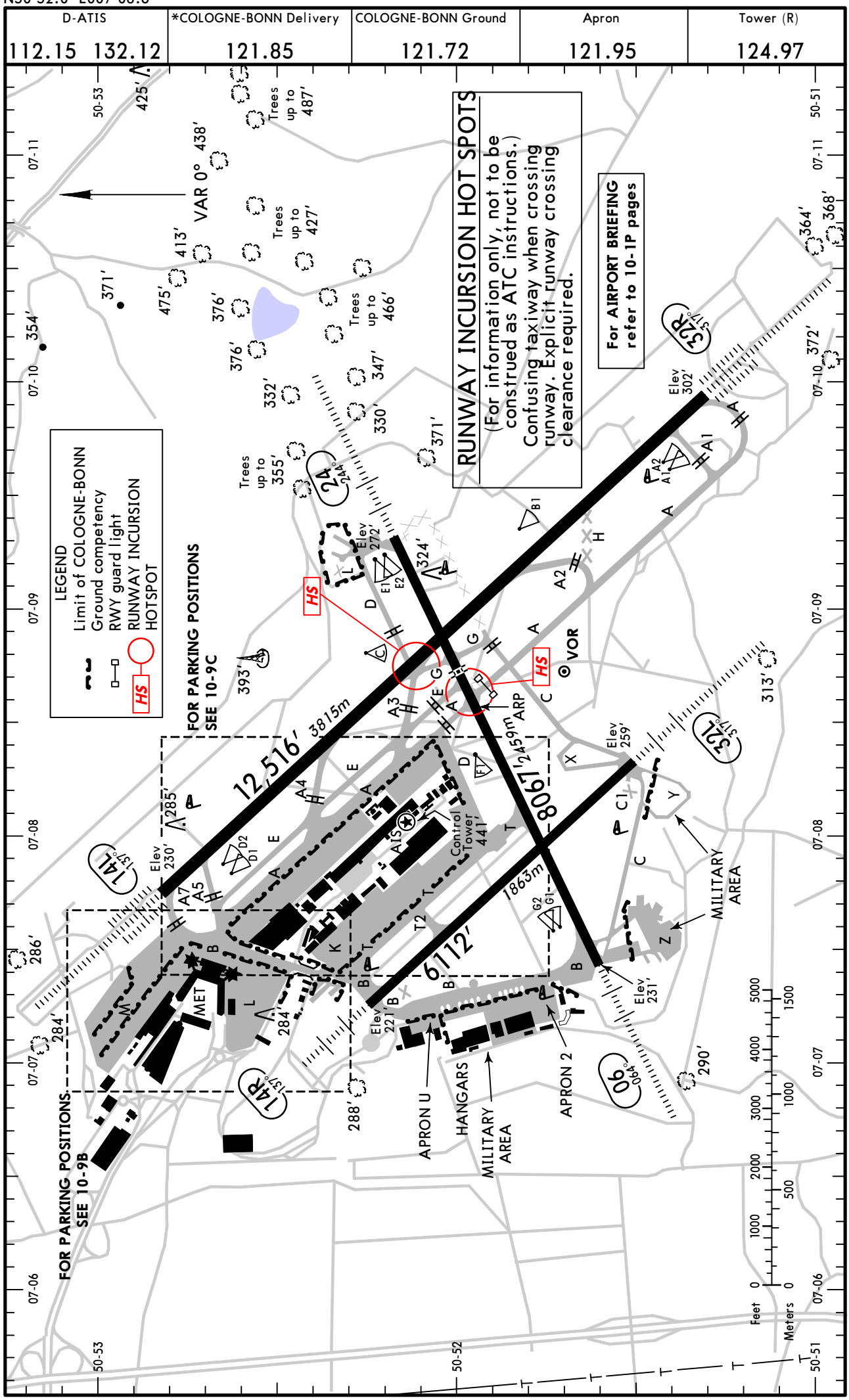
NOISE ABATEMENT



CHANGES: SIDs renumbered & revised.

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D-ATIS	*COLOGNE-BONN Delivery	COLOGNE-BONN Ground	Apron	Tower (R)
112.15 132.12	121.85	121.72	121.95	124.97



CHANGES: Hot spots.

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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND Threshold	LANDING BEYOND Glide Slope	TAKE-OFF	WIDTH
06 ❶ 24	HIRL CL *(30m)* HIALS PAPI-L (3.0°) RVR			❷	148′ *45m*
	HIRL CL *(30m)* HIALS SFL REIL PAPI-L (3.0°) RVR		7050′ *2149m*		

❶ Rwy partly grooved.
❷ TAKE OFF RUN AVAILABLE

RWY 06:
From rwy head 8067′ (2459m)
twy T int 5282′ (1610m)

RWY 24:
From rwy head 8067′ (2459m)
twy E int 5381′ (1640m)
twy A int 4954′ (1510m)

14L	HIRL CL *(15m)* ALSF-II TDZ REIL ❸ HST-A2 RVR		11,565′ *3525m*	❺	197′ *60m*
32R	HIRL CL *(15m)* ALSF-II TDZ REIL ❸ ❹ RVR		11,424′ *3482m*		

❸ PAPI-L (3.0°)
❹ HST-A3 & A4
❺ TAKE OFF RUN AVAILABLE

RWY 14L:
From rwy head 12,516′ (3815m)
twy A5 int 11,680′ (3560m)
twy A4 int 8990′ (2740m)
twy A3 int 6791′ (2070m)

RWY 32R:
From rwy head 12,516′ (3815m)
twy A1 int 11,713′ (3570m)
twy A2 int 8350′ (2545m)
twy A3 int 5840′ (1780m)

14R 32L	HIRL CL *(30m)* HIALS PAPI-L (3.0°)			❻	148′ *45m*

❻ TAKE OFF RUN AVAILABLE

RWY 14R:
From rwy head 6112′ (1863m)
twy T2 int 4364′ (1330m)

Standard

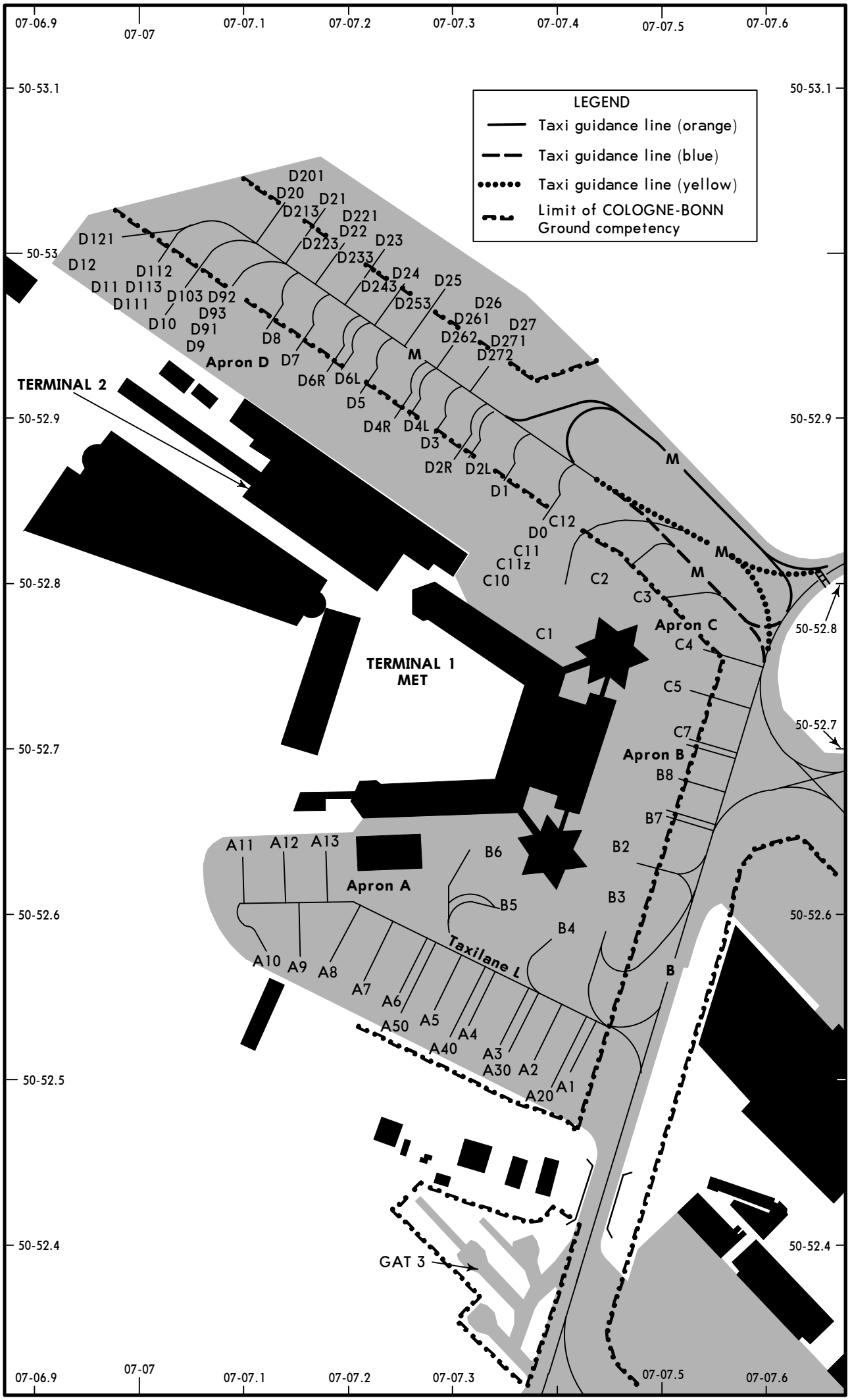
TAKE-OFF 1

	Approved Operators	LVP must be in force					
	HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

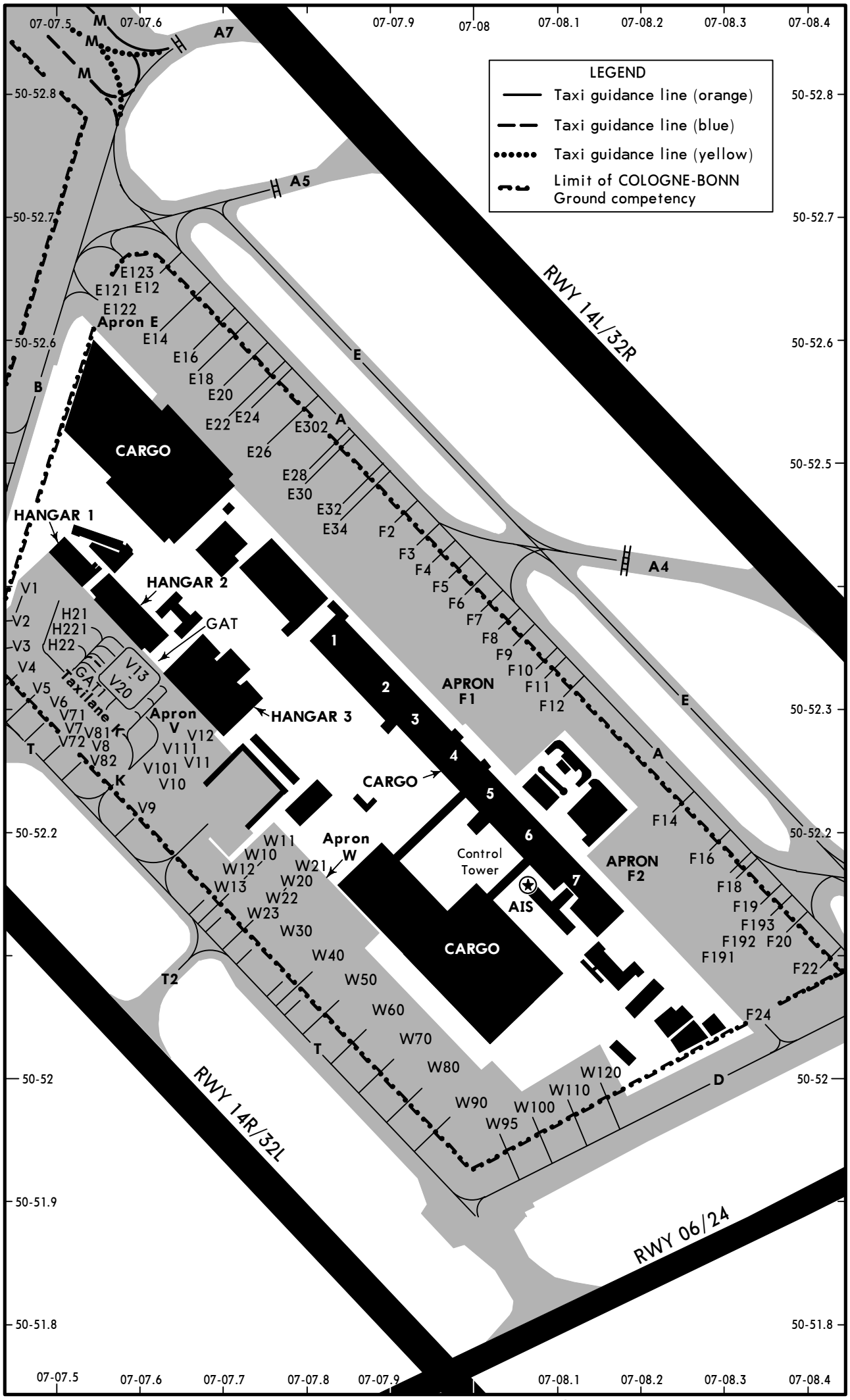
CHANGES: None.

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CHANGES: Stand D8R withdrawn.

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CHANGES: Construction terminated. Stands.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
A1	N50 52.5 E007 07.4	V2	N50 52.4 E007 07.4
A2 thru A4	N50 52.5 E007 07.3	V3	N50 52.3 E007 07.4
A5, A6	N50 52.5 E007 07.2	V4 thru V8	N50 52.3 E007 07.5
A7, A8	N50 52.6 E007 07.2	V9, V10	N50 52.2 E007 07.6
A9 thru A12	N50 52.6 E007 07.1	V11	N50 52.3 E007 07.6
A13	N50 52.6 E007 07.2	V12	N50 52.3 E007 07.7
A20	N50 52.5 E007 07.4	V13 thru V19	N50 52.3 E007 07.6
A30, A40	N50 52.5 E007 07.3	V20 thru V82	N50 52.3 E007 07.5
A50	N50 52.5 E007 07.2	V101	N50 52.2 E007 07.6
B2 thru B4	N50 52.6 E007 07.4	V111 thru V191	N50 52.3 E007 07.6
B5, B6	N50 52.6 E007 07.3	W10, W11, W12	N50 52.2 E007 07.7
B7, B8	N50 52.7 E007 07.4	W13	N50 52.1 E007 07.7
C1, C2, C3	N50 52.8 E007 07.4	W20, W21	N50 52.2 E007 07.8
C4	N50 52.8 E007 07.5	W22	N50 52.1 E007 07.8
C5, C7	N50 52.7 E007 07.5	W23	N50 52.1 E007 07.7
C10	N50 52.8 E007 07.3	W30, W40	N50 52.1 E007 07.8
C11, C11z, C12	N50 52.8 E007 07.4	W50, W60	N50 52.1 E007 07.9
D0 thru D2R	N50 52.8 E007 07.3	W70	N50 52.0 E007 07.9
D3 thru D6L	N50 52.9 E007 07.2	W80 thru W100	N50 52.0 E007 08.0
D6R thru D8	N50 52.9 E007 07.1	W110, W120	N50 52.0 E007 08.1
D9	N50 52.9 E007 07.0		
D10 thru D12	N50 53.0 E007 07.0		
D20 thru D23	N50 53.0 E007 07.2		
D24 thru D26	N50 53.0 E007 07.3		
D27	N50 53.0 E007 07.4		
D91	N50 52.9 E007 07.1		
D92, D93	N50 53.0 E007 07.1		
D103 thru D121	N50 53.0 E007 07.0		
D201	N50 53.0 E007 07.2		
D213	N50 53.0 E007 07.1		
D221 thru D243	N50 53.0 E007 07.2		
D253, D261, D262	N50 53.0 E007 07.3		
D271, D272	N50 52.9 E007 07.4		
E12, E14	N50 52.6 E007 07.6		
E16, E18	N50 52.6 E007 07.7		
E20 thru E26	N50 52.5 E007 07.7		
E28, E30	N50 52.5 E007 07.8		
E32, E34	N50 52.4 E007 07.8		
E121 thru E123	N50 52.6 E007 07.6		
E302	N50 52.5 E007 07.8		
F2 thru F5	N50 52.4 E007 07.9		
F6	N50 52.3 E007 07.9		
F7 thru F11	N50 52.3 E007 08.0		
F12	N50 52.3 E007 08.1		
F14, F16	N50 52.2 E007 08.2		
F18, F20	N50 52.1 E007 08.3		
F22	N50 52.1 E007 08.4		
F24	N50 52.0 E007 08.3		
F191 thru F193	N50 52.1 E007 08.3		
H21, H22, H221, V1	N50 52.4 E007 07.5		

CHANGES: Stands.

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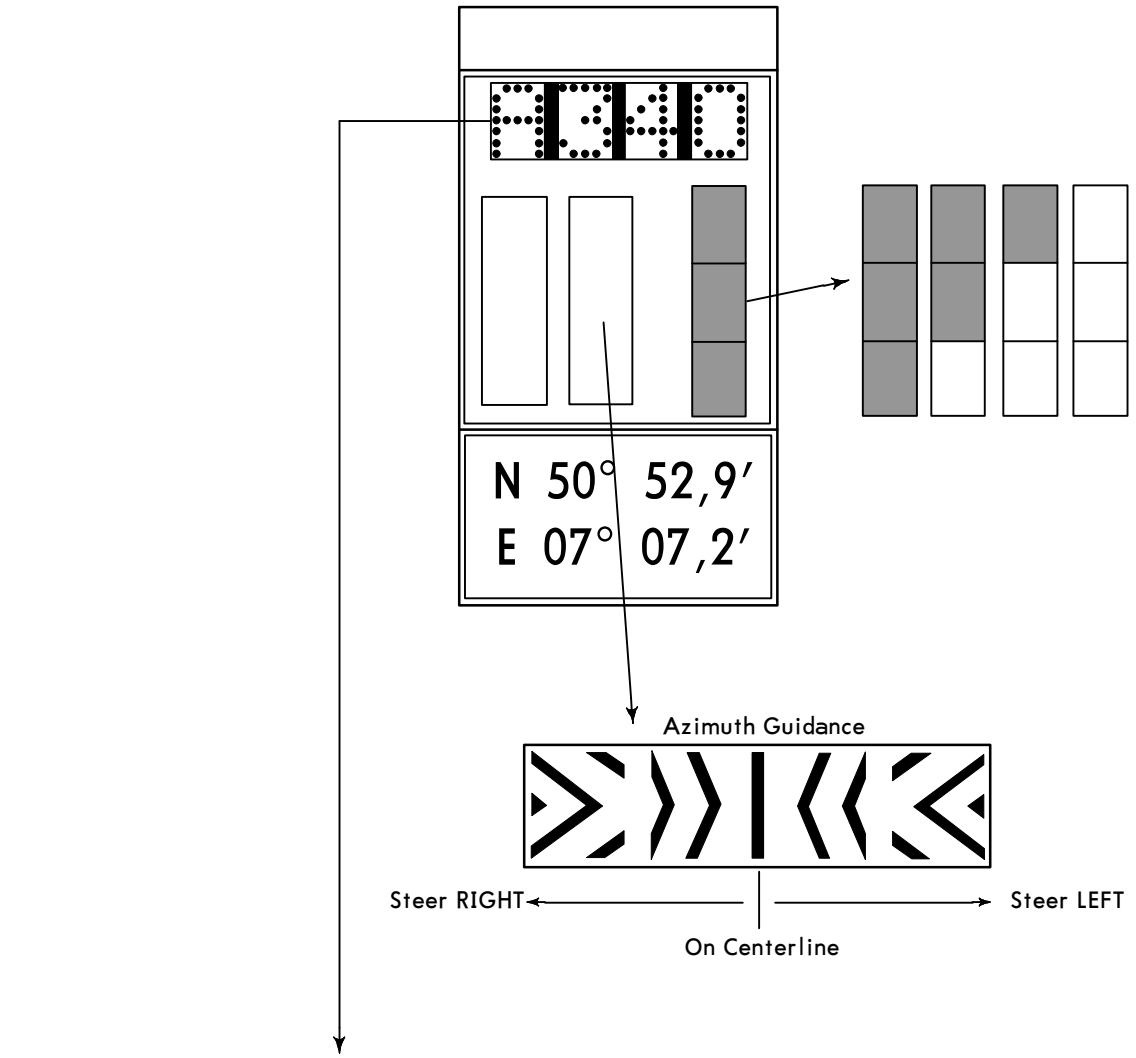
VISUAL DOCKING GUIDANCE SYSTEM "APIS"

(Aircraft Parking and Information System)

Pilot Instructions

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

- Intercept the centerline and watch the azimuth guidance display.
- Check that the correct aircraft type/series is displayed on the APIS display unit.
- Do not enter the stand if display shows STOP or wrong aircraft type/series.



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COLOGNE-BONN, GERMANY

COLOGNE-BONN

STRAIGHT-IN RWY		A	B	C	D
06	RNAV	**690**′(459′)	**690**′(459′)	**690**′(459′)	**690**′(459′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**690**′(459′)	**690**′(459′)	**690**′(459′)	**690**′(459′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
14L	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**330**′(100′)	**330**′(100′)	**330**′(100′)	**330**′(100′)
		RA106′ R300m	**RA106′ R300m**	**RA106′ R300m**	**RA106′ R300m**
	ILS	**430**′(200′)	**430**′(200′)	**430**′(200′)	**430**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**640**′(410′)	**640**′(410′)	**640**′(410′)	**640**′(410′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV(LNAV/VNAV)	**740**′(510′)	**740**′(510′)	**740**′(510′)	**740**′(510′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV(LNAV)	**760**′(530′)	**760**′(530′)	**760**′(530′)	**760**′(530′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**830**′(600′)	**830**′(600′)	**830**′(600′)	**830**′(600′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**830**′(600′)	**830**′(600′)	**830**′(600′)	**830**′(600′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
14R	RNAV	**720**′(499′)	**720**′(499′)	**720**′(499′)	**720**′(499′)
		V2100m❶	**V2100m❶**	**V2100m❶**	**V2100m❶**
	SRE	**750**′(529′)	**750**′(529′)	**750**′(529′)	**750**′(529′)
		V2100m❶	**V2100m❶**	**V2100m❶**	**V2100m❶**

❶ Flight visibility and ground visibility required.

CHANGES: Minimums Rwy 14R.

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COLOGNE-BONN, GERMANY

COLOGNE-BONN

STRAIGHT-IN RWY		A	B	C	D
24	ILS	**472**′(200′)	**472**′(200′)	**472**′(200′)	**472**′(200′) ❶
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**870**′(598′)	**870**′(598′)	**870**′(598′)	**870**′(598′)
		1500m ❷	**1500m** ❷	**1500m** ❷	**1600m**
	ALS out	1500m ❷	1500m ❷	2000m	2000m
	RNAV(LNAV/VNAV)	**850**′(578′)	**850**′(578′)	**850**′(578′)	**850**′(578′)
		1500m ❷	**1500m** ❷	**1500m** ❷	**1600m**
	ALS out	1500m ❷	1500m ❷	2000m	2000m
	RNAV(LNAV)	**870**′(598′)	**870**′(598′)	**870**′(598′)	**870**′(598′)
		1500m ❷	**1500m** ❷	**1500m** ❷	**1600m**
	ALS out	1500m ❷	1500m ❷	2000m	2000m
	NDB	**870**′(598′)	**870**′(598′)	**870**′(598′)	**870**′(598′)
		1500m ❷	**1500m** ❷	**1500m** ❷	**1600m**
	ALS out	1500m ❷	1500m ❷	2000m	2000m
	SRE	**960**′(688′)	**960**′(688′)	**960**′(688′)	**960**′(688′)
		1500m ❷	**1500m** ❷	**1500m** ❷	**1800m**
	ALS out	1500m ❷	1500m ❷	2000m	2000m
32L	RNAV(LNAV/VNAV)	**770**′(511′)	**770**′(511′)	**770**′(511′)	**770**′(511′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV(LNAV)	**780**′(521′)	**780**′(521′)	**780**′(521′)	**780**′(521′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**780**′(521′)	**780**′(521′)	**780**′(521′)	**780**′(521′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
32R	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**402**′(100′)	**402**′(100′)	**402**′(100′)	**402**′(100′)
		RA89′ R300m	**RA89′ R300m**	**RA89′ R300m**	**RA89′ R300m**
	ILS	**502**′(200′)	**502**′(200′)	**502**′(200′)	**502**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**740**′(438′)	**740**′(438′)	**740**′(438′)	**740**′(438′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**780**′(478′)	**780**′(478′)	**780**′(478′)	**780**′(478′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**780**′(478′)	**780**′(478′)	**780**′(478′)	**780**′(478′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**780**′(478′)	**780**′(478′)	**780**′(478′)	**780**′(478′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

❶ LACFT: DA(H) 591′(319′), R800m, ALS out R1200m.
❷ Flight visibility and ground visibility required.

CHANGES: None.

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TAKE-OFF RWY 14L, 32R

	LVP must be in Force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

TAKE-OFF RWY 06, 24

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

TAKE-OFF RWY 14R, 32L

	LVP must be in Force			
	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*200m*	*250m*	*400m*	*500m*
D	*250m*	*300m*		

CHANGES: New page.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
21 OCT 11 (11-1)

COLOGNE-BONN, GERMANY
ILS or LOC Rwy 14L

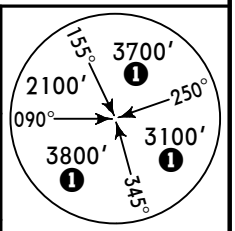
D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

BRIEFING STRIP™

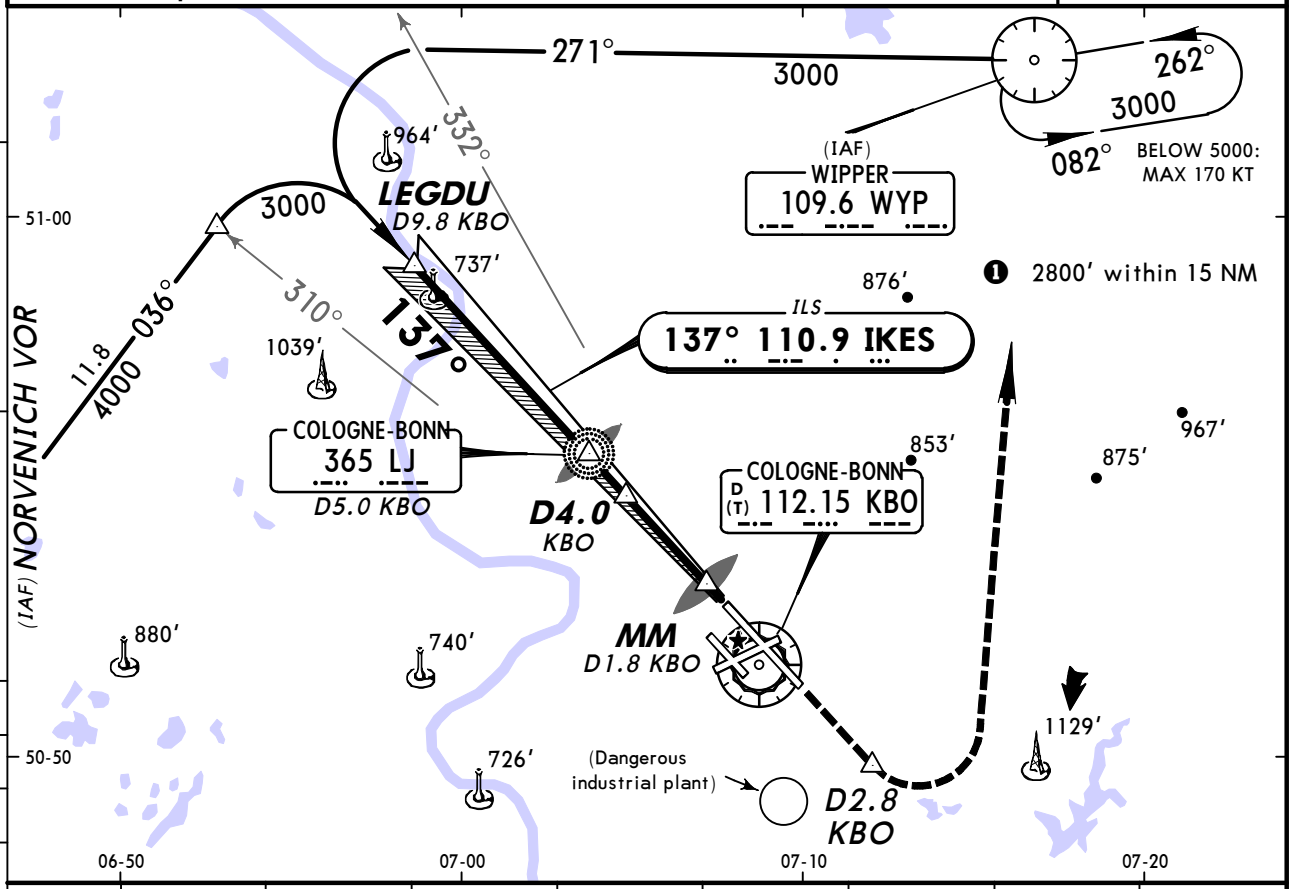
LOC	Final	GS	ILS	Apt Elev 302′
IKES	Apch Crs	LOM	DA(H)	RWY 230′
110.9	137°	1470′ (1240′)	430′ (200′)	

MISSED APCH: Climb STRAIGHT AHEAD to 3000′. When passing D2.8 KBO or 2000′, whichever is later, then turn LEFT to WYP VOR.

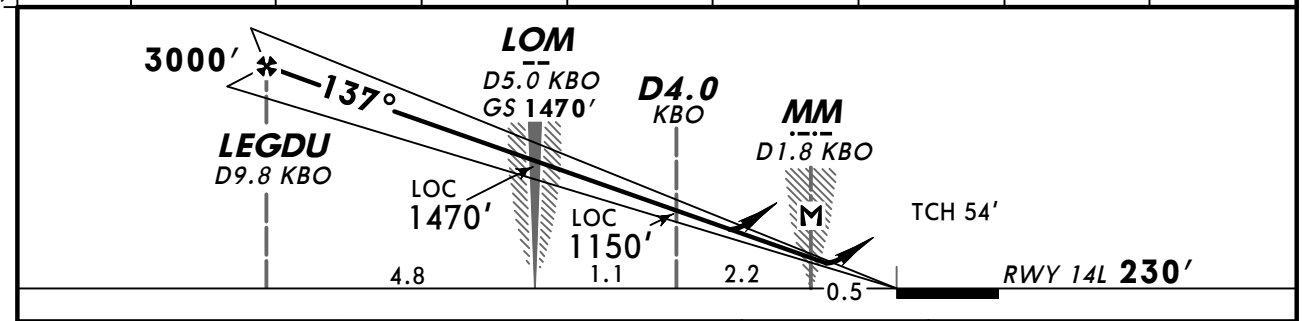
Alt Set: hPa (IN on req) Rwy Elev: 8 hPa Trans level: By ATC Trans alt: 5000′
LOC: **DME required.**



MSA
KBO VOR



LOC (GS out)	KBO DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	2740′	2420′	2100′	1790′	1470′	1150′	830′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.8 KBO						

ALSF-II
REIL
PAPI

D2.8 KBO 2000′
whichever later

Standard STRAIGHT-IN LANDING RWY 14L

	ILS DA(H) 430′ (200′)			LOC (GS out) DA(H) 640′ (410′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C					RVR 1900m
D					

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
21 OCT 11 (11-1A)

COLOGNE-BONN, GERMANY
CAT II/III ILS Rwy 14L

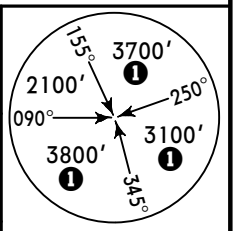
D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

BRIEFING STRIP™

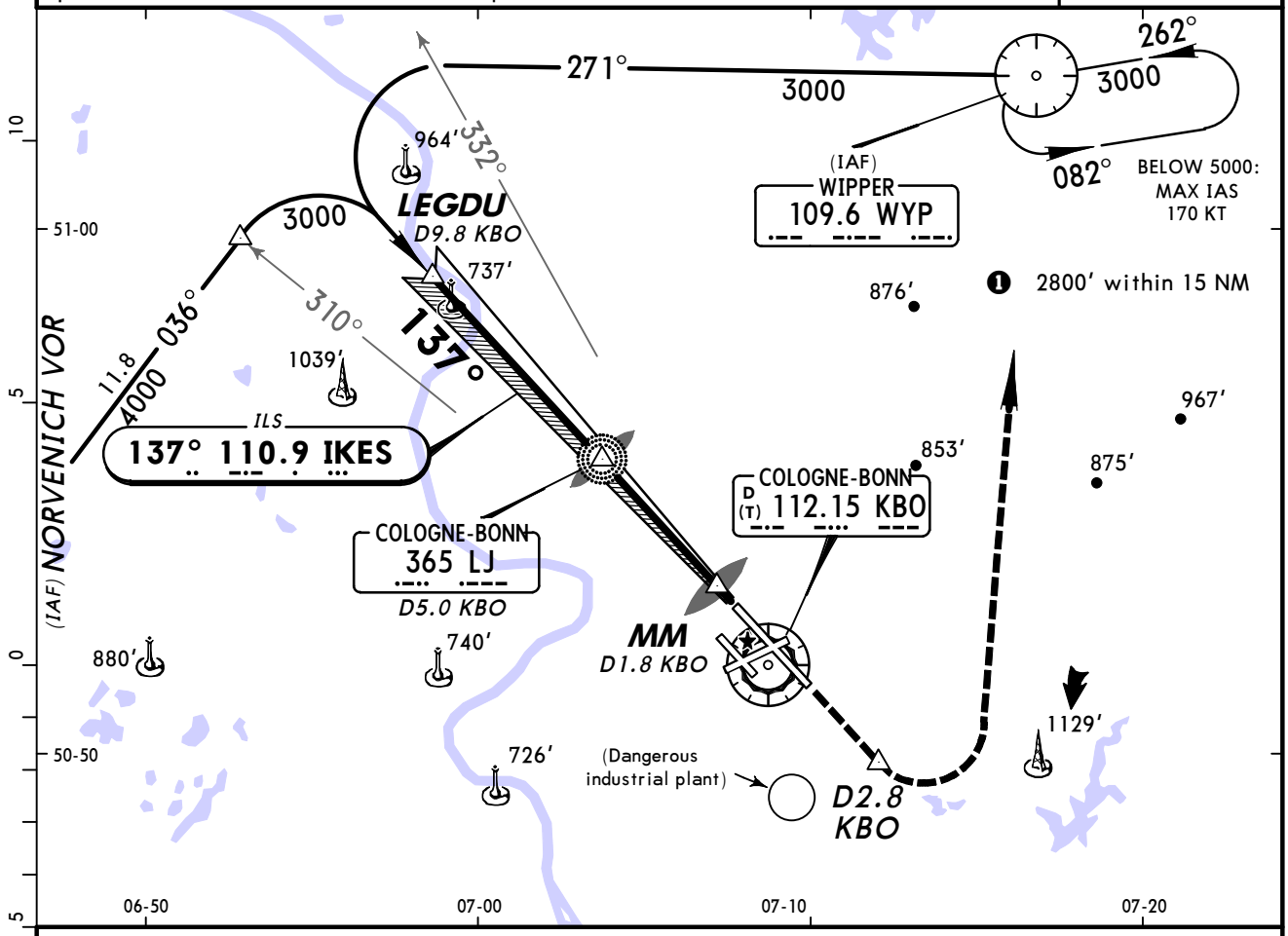
LOC IKES	Final Apch Crs	GS LOM	CAT II & IIIA ILS	Apt Elev 302′
110.9	137°	1470′ (1240′)	Refer to Minimums	RWY 230′

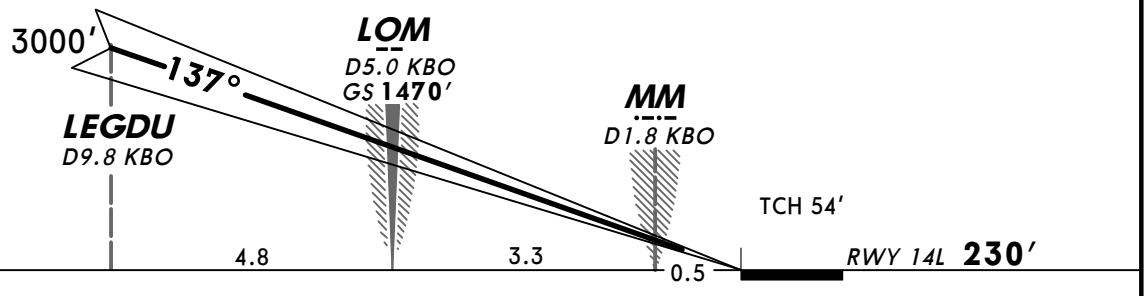
MISSED APCH: Climb STRAIGHT AHEAD to 3000′. When passing D2.8 KBO or 2000′, whichever is later, then turn LEFT to WYP VOR.

Alt Set: hPa (IN on req) Rwy Elev: 8 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.



MSA
KBO VOR





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

ALSF-II
REIL
PAPI

D2.8 KBO | 2000′ whichever later

Standard STRAIGHT-IN LANDING RWY 14L

CAT IIIA ILS	CAT II ILS
DH 50′	ABCD RA 106′ DA(H) 330′ (100′)
RVR 200m	RVR 300m 1

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

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN 21 OCT 11 (11-2)

COLOGNE-BONN, GERMANY
ILS or LOC Rwy 24

BRIEFING STRIP™

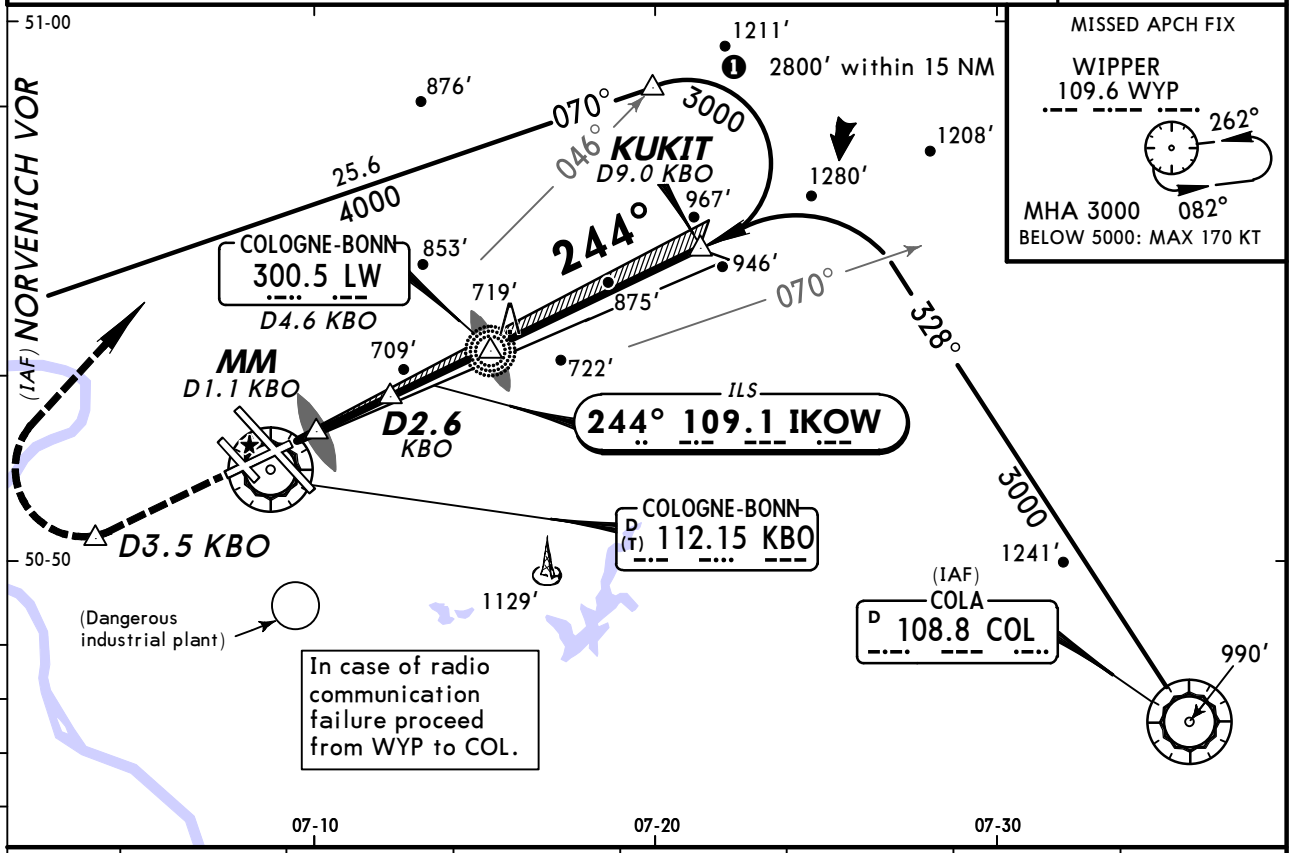
D-ATIS	COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15 132.12	121.05	124.97	121.72

LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 302′
IKOW	244°	LOM	Refer to	RWY 272′
109.1		1630′ (1358′)	Minimums	

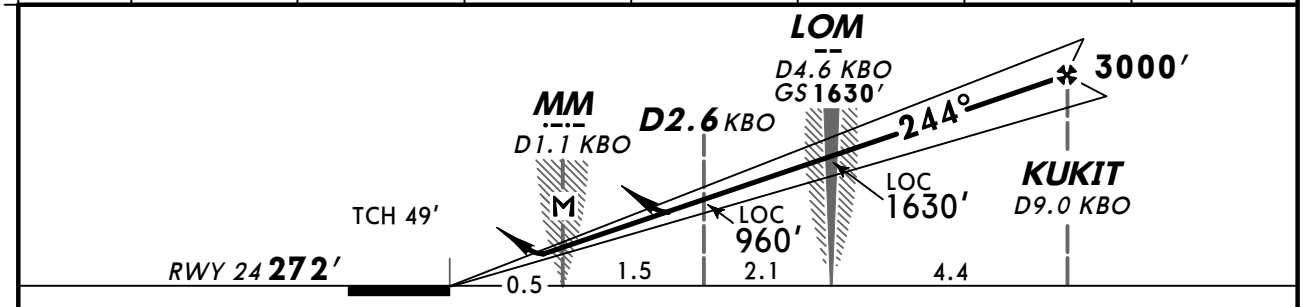
MISSED APCH: Climb STRAIGHT AHEAD to 5000′. When passing D3.5 KBO or 2000′, whichever is later, turn RIGHT to WYP VOR.

MSA
KBO VOR
155° 3700′ 1
2100′
250°
090°
3100′ 1
3800′ 1
345°

Alt Set: hPa (IN on req) Rwy Elev: 10 hPa Trans level: By ATC Trans alt: 5000′
1. LOC: **DME required.** 2. LACFT: See ATC State pages.



LOC (GS out)	KBO DME	3.0	4.0	5.0	6.0	7.0	8.0
	ALTITUDE	1090′	1410′	1730′	2050′	2360′	2680′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.1 KBO						

HIALS
REIL
PAPI

D3.5 KBO 2000′
whichever later

Standard STRAIGHT-IN LANDING RWY 24

	ILS 1 DA(H) 472′ (200′)			LOC (GS out) DA(H) 870′ (598′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	1500m 2	
B					
C				2000m	2400m
D					

1 LACFT: DA(H) 591′(319′), FULL: RVR 700m.
2 Flight visibility and ground visibility are required.

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
21 OCT 11 (11-3)

COLOGNE-BONN, GERMANY
ILS or LOC Rwy 32R

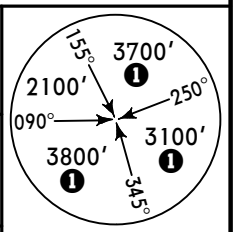
BRIEFING STRIP™

D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

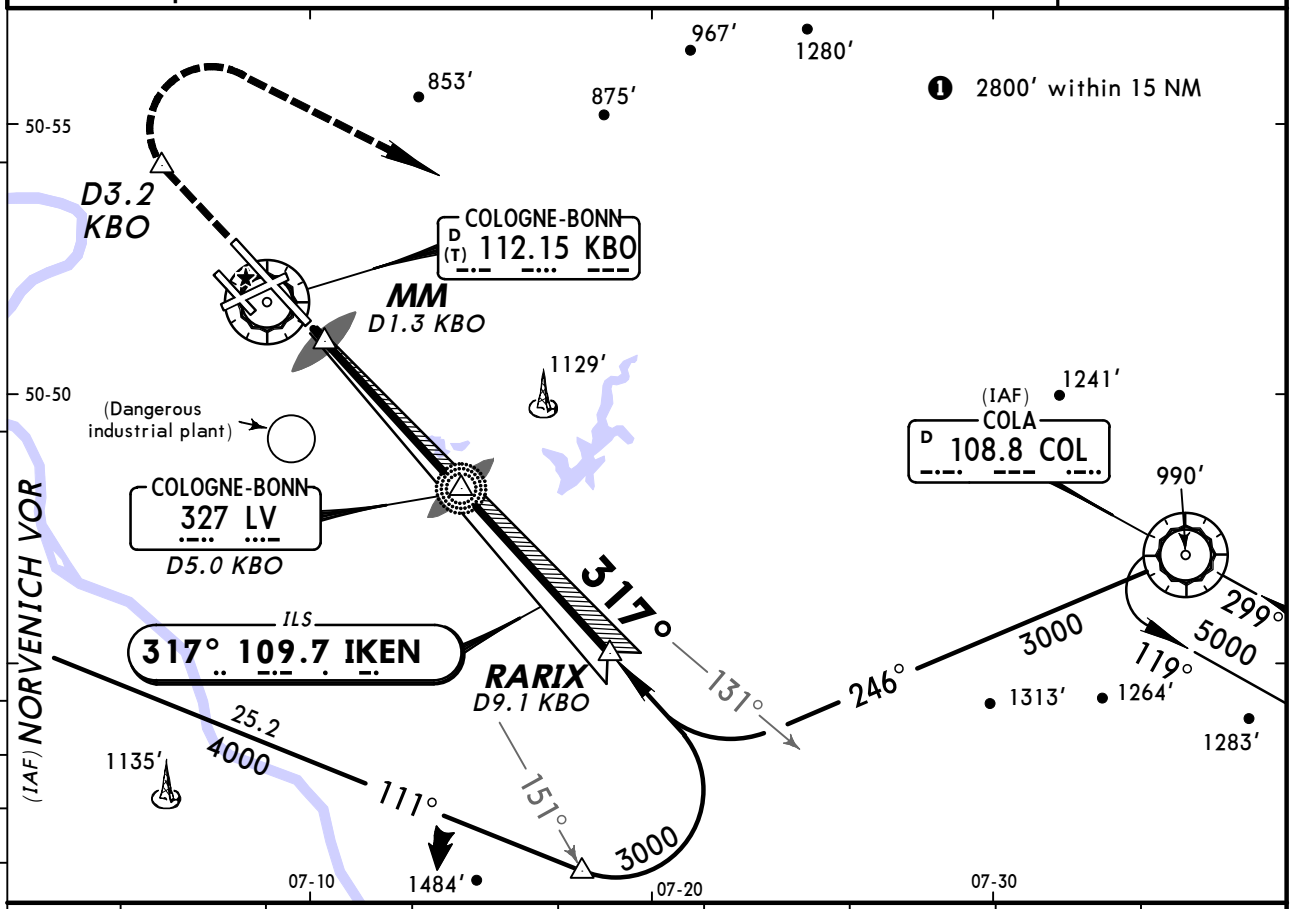
LOC	Final	GS	ILS	Apt Elev 302′
IKEN	Apch Crs	LOM	DA(H)	RWY 302′
109.7	317°	1660′ (1358′)	502′ (200′)	

MISSED APCH: Climb STRAIGHT AHEAD to 5000′. When passing D3.2 KBO or 2000′, whichever is later, then turn RIGHT to COL VOR.

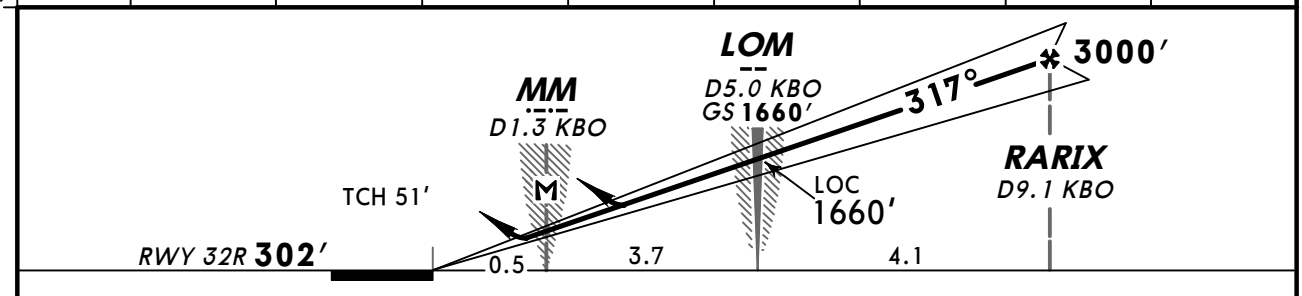
Alt Set: hPa (IN on req) Rwy Elev: 11 hPa Trans level: By ATC Trans alt: 5000′
LOC: **DME required.**



MSA
KBO VOR



LOC (GS out)	KBO DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	1030′	1340′	1660′	1980′	2300′	2620′	2940′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.3 KBO						

ALSF-II
REIL
PAPI

D3.2 KBO | 2000′ whichever later

Standard STRAIGHT-IN LANDING RWY **32R**

	ILS DA(H) 502′ (200′)			LOC (GS out) DA(H) 740′ (438′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1300m	RVR 1500m
B					
C					RVR 2000m
D					

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
21 OCT 11 (11-3A)

COLOGNE-BONN, GERMANY
CAT II/III ILS Rwy 32R

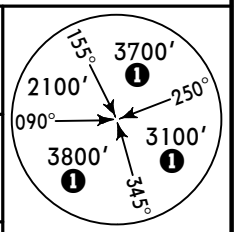
D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

BRIEFING STRIP™

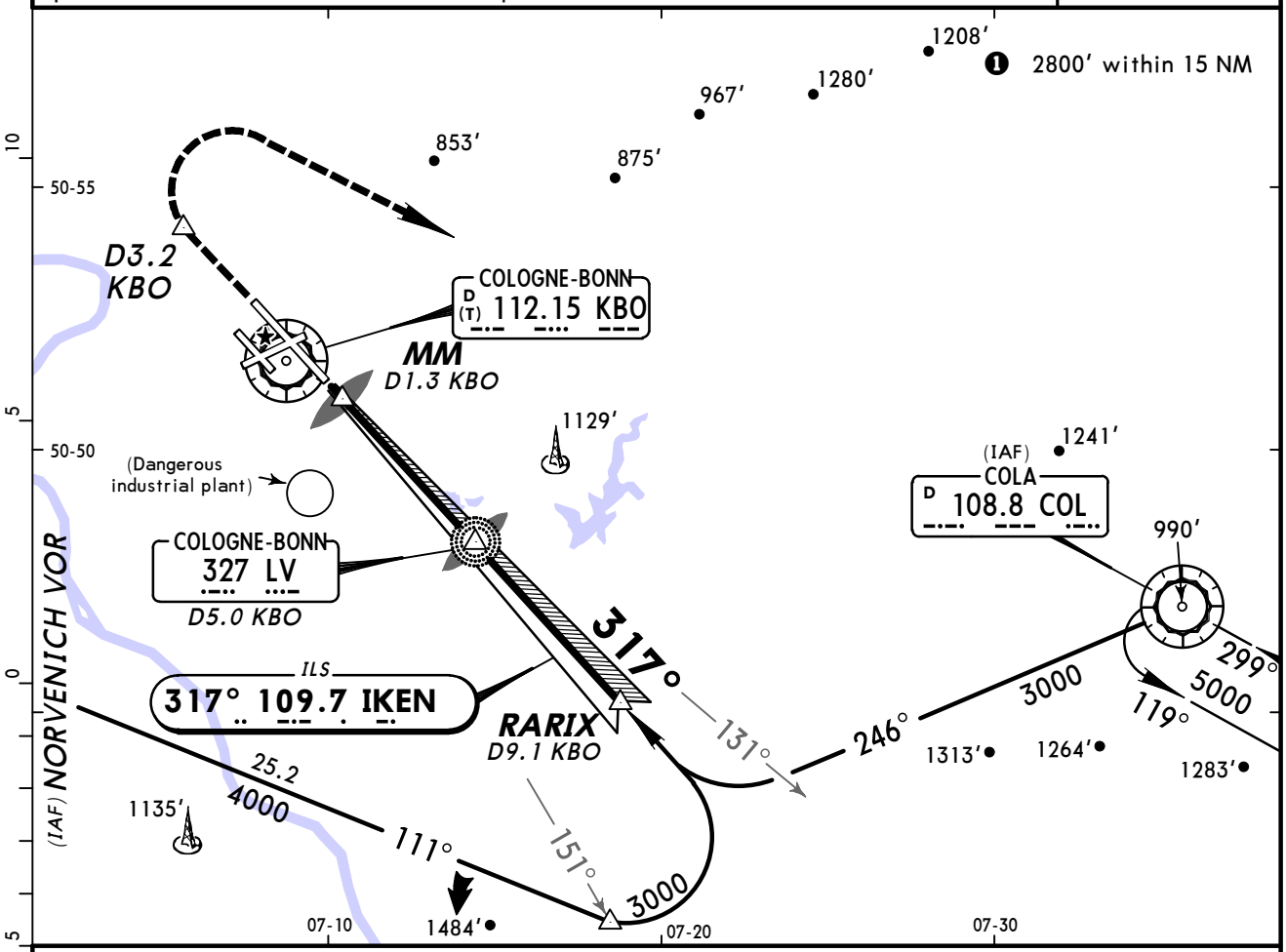
LOC IKEN 109.7	Final Apch Crs 317°	GS LOM 1660′ (1358′)	CAT II & IIIA ILS Refer to Minimums	Apt Elev 302′ RWY 302′

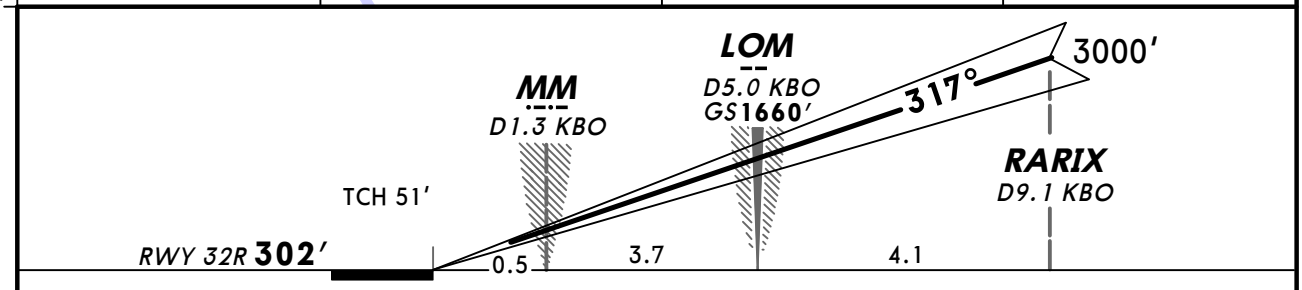
MISSED APCH: Climb STRAIGHT AHEAD to 5000′. When passing D3.2 KBO or 2000′, whichever is later, then turn RIGHT to COL VOR.

Alt Set: hPa (IN on req) Rwy Elev: 11 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.



MSA
KBO VOR





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

ALSF-II
REIL
PAPI

D3.2 | 2000′
KBO
whichever later

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **32R**

CAT IIIA ILS	CAT II ILS
DH **50′**	ABCD **RA 89′** DA(H) **402′** (100′)
RVR 200m	RVR 300m 1

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

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
21 OCT 11 (12-1)

COLOGNE-BONN, GERMANY
RNAV (GPS) Rwy 06

D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

RNAV	Final Apch Crs	Minimum Alt BEBSA	LNAV/VNAV DA(H)	Apt Elev / RWY
	064°	3000′ (2769′)	690′ (459′)	302′ / RWY 231′

MISSED APCH: Climb on 064° to 6000′. When passing DK76Ø or 2000′, whichever is later, turn LEFT via DK761 onto 249° to NOR VOR.
NON-RNAV: Climb STRAIGHT AHEAD to 6000′. When passing D3.2 KBO or 2000′, whichever is later, turn LEFT to NOR VOR.

Alt Set: hPa (IN on req) | Rwy Elev: 8 hPa | Trans level: By ATC | Trans alt: 5000′

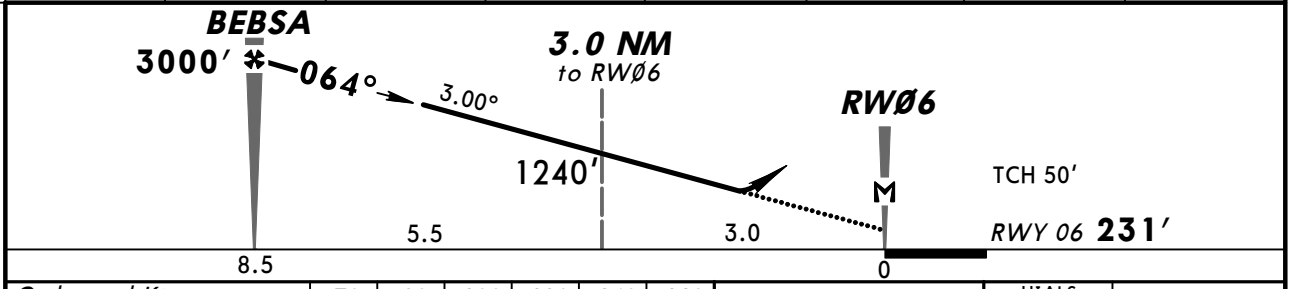
3800′
MSA
ARP

BRIEFING STRIP™

Baro-VNAV not authorized below -15° C.

1039′
DK761
853′
19.5
249°
COLOGNE-BONN
D (T) 112.15 KBO
(IAF)
NORVENICH
D 116.2 NOR
722′
DK76Ø
D3.2 KBO
4.0
064°
880′
740′
RWØ6
1129′
3.0 NM
to RWØ6
726′
(Dangerous industrial plant)
50-50
6.6
3500
249°
MHA
6000
130°
064°
4.0
3000
BEBSA
DK2ØØ
269°
16.4
5000
(IAF) COLA VOR
(IF)
DK755
11.8
4000
334°
5.0
3500
244°
1135′
06-50
DK7Ø5
07-00
07-10

DIST to RWØ6	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2830′	2510′	2200′	1880′	1560′	1240′	920′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ6							

HIALS
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **06**

	LNAV/VNAV DA(H) 690′ (459′)		LNAV DA(H) 690′ (459′)	
		ALS out		ALS out
A	RVR 1400m	RVR 1500m	RVR 1400m	RVR 1500m
B				
C		CMV 2100m		CMV 2100m
D				

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
21 OCT 11 (12-2)

COLOGNE-BONN, GERMANY
RNAV (GPS) Rwy 14L

D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

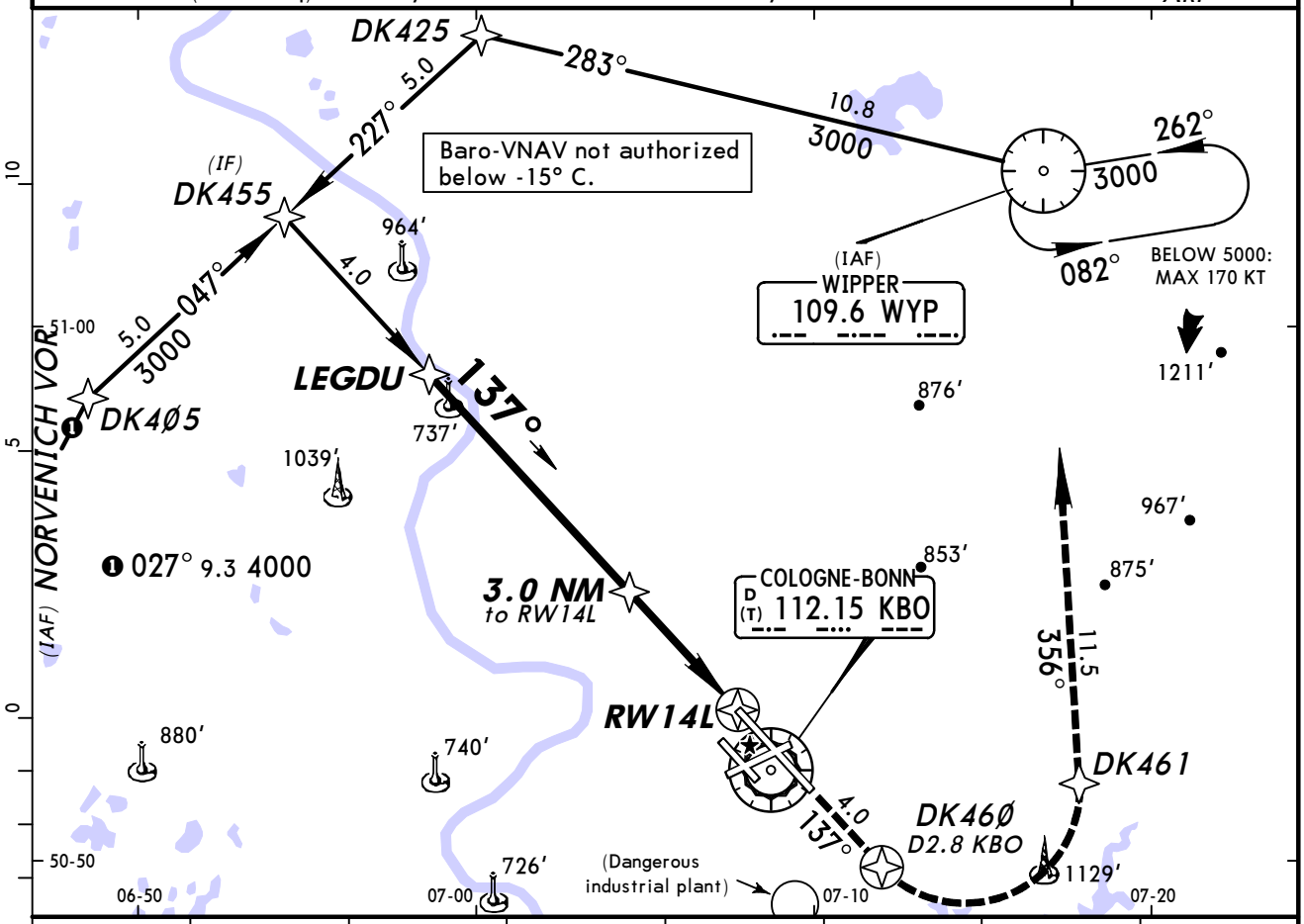
RNAV	Final Apch Crs	Minimum Alt LEGDU	LNAV/VNAV DA(H)	Apt Elev / RWY
	137°	3000′ (2770′)	740′ (510′)	302′ / RWY 230′

MISSED APCH: Climb on 137° to 3000′. When passing DK46Ø or 2000′, whichever is later, turn LEFT via DK461 onto 356° to WYP VOR.
NON-RNAV: Climb STRAIGHT AHEAD to 3000′. When passing D2.8 KBO or 2000′, whichever is later, turn LEFT to WYP VOR.

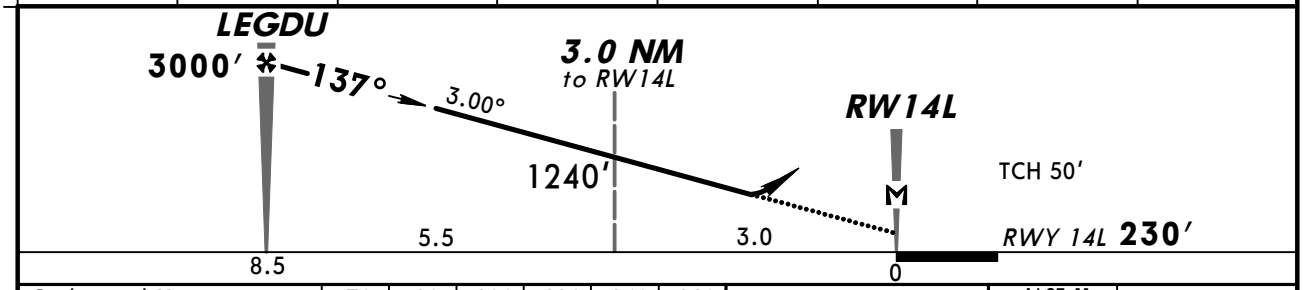
3800′
MSA
ARP

Alt Set: hPa (IN on req) Rwy Elev: 8 hPa Trans level: By ATC Trans alt: 5000′

BRIEFING STRIP™



DIST to RW14L	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2830′	2510′	2200′	1880′	1560′	1240′	920′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW14L							

ALSF-II
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY 14L

	LNAV/VNAV DA(H) 740′ (510′)		LNAV DA(H) 760′ (530′)	
		ALS out		ALS out
A, B	RVR 1500m		RVR 1500m	
C, D	RVR 1600m	CMV 2400m	RVR 1700m	CMV 2400m

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
18 NOV 11 (12-3)

COLOGNE-BONN, GERMANY
RNAV (GPS) Rwy 14R

D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

RNAV	Final Apch Crs	Minimum Alt ROKAK	LNAV/VNAV DA(H)	Apt Elev 302′ RWY 221′
	137°	3000′ (2779′)	720′ (499′)	

MISSED APCH: Climb on 137° to 6000′. When passing DK47Ø or 2000′, whichever is later, turn RIGHT via DK471 onto 283° to NOR VOR.

NON-RNAV: Climb STRAIGHT AHEAD to 6000′. When passing D2.0 KBO or 2000′, whichever is later, turn RIGHT to NOR VOR.

3800′ MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 8 hPa | Trans level: By ATC | Trans alt: 5000′

BRIEFING STRIP ™

Baro-VNAV not authorized below -15° C.

DK215 — 280° 11.0 3000 — (IAF) WIPPER VOR

227° 5.0 — (IF) DK255 — 964′

917′ — 51-00

DK2Ø5 — 5.0 3000 — 047° — 4.0 — ROKAK — 737′ — 876′

(IAF) NORVENICH D 116.2 NOR

028° — 1039′ — 137°

3.0 NM to RW14R

COLOGNE-BONN D (T) 112.15 KBO — 853′

8.7 4000

880′ — 740′ — RW14R

50-50 — 069° 6000 — 249° — 06-40 — 06-50

(Dangerous industrial plant) — 726′ — 283° DK471 16.7 — 07-00 — NOT TO SCALE

3.0 137° DK47Ø D2.0 KBO

DIST to RW14R	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2820′	2500′	2190′	1870′	1550′	1230′	910′

ROKAK 3000′ — 137° — 3.00° — 3.0 NM to RW14R — RW14R — TCH 50′ — 1230′ — 5.6 — 3.0 — RWY 14R 221′ — 8.6 — 0

Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW14R							

HIALS — PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY 14R

	LNAV/VNAV DA(H) 720′ (499′)		LNAV DA(H) 720′ (499′)	
		ALS out		ALS out
A	CMV 2100m 1		CMV 2100m 1	
B				
C	CMV 2100m 1	CMV 2300m	CMV 2100m 1	CMV 2300m
D				

1 Flight visibility and ground visibility required.

PANS OPS 4

CHANGES: Minimums.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
18 NOV 11 (12-4)

COLOGNE-BONN, GERMANY
RNAV (GPS) Rwy 24

D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt KUKIT	LNAV/VNAV DA(H)	Apt Elev 302′ RWY 272′
	244°	3000′ (2728′)	850′ (578′)	

MISSED APCH: Climb on 244° to 5000′. When passing DK56Ø or 2000′, whichever is later, turn RIGHT via DK561 onto 050° to WYP VOR.

NON-RNAV: Climb STRAIGHT AHEAD to 5000′. When passing D3.5 KBO or 2000′, whichever is later, turn RIGHT to WYP VOR.

3800′

MSA
ARP

Alt Set: hPa (IN on req) | Rwy Elev: 10 hPa | Trans level: By ATC | Trans alt: 5000′

MISSED APCH FIX
WIPPER
109.6 WYP
262°
MHA 3000 082°
BELOW 5000: MAX 170 KT

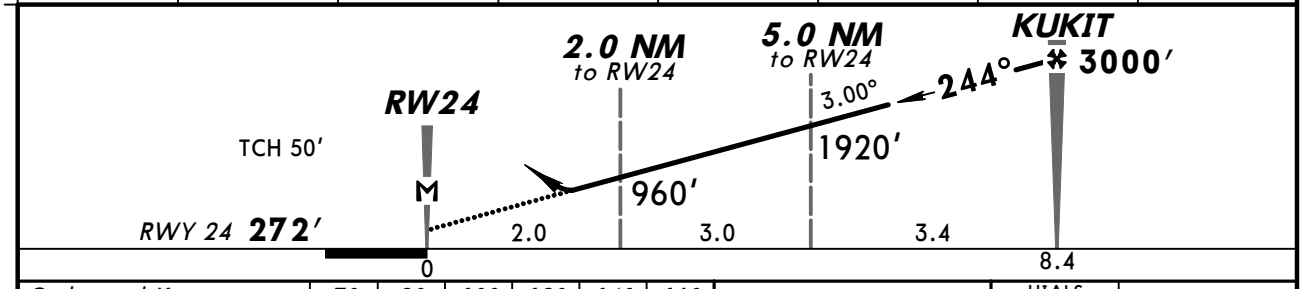
Baro-VNAV not authorized below -15° C.

DK525
1434′
066°
5.0
3000
154°
1211′
876′
29.0
4000
(IF)
DK555
1208′
KUKIT
967′
4.0
1280′
946′
853′
875′
719′
244°
722′
5.0 NM
to RW24
332°
(IAF)
NORVENICH VOR
13.9
050°
COLOGNE-BONN
D (T) 112.15 KBO
DK561
RW24
2.0 NM
to RW24
4.0
244°
740′
50-50
726′
DK56Ø
D3.5 KBO
(Dangerous industrial plant)
1129′
1241′
(IAF)
COLA
D 108.8 COL
11.8
3000
990′

In case of radio communication failure proceed from WYP VOR to COL VOR.

07-00 | 07-10 | 07-20 | 07-30

DIST to RW24	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	960′	1280′	1600′	1920′	2240′	2560′	2870′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW24							

HIALS
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **24**

	LNAV/VNAV DA(H) 850′ (578′)		LNAV DA(H) 870′ (598′)	
		ALS out		ALS out
A B	RVR 1500m		VIS 1500m 1	
C D	RVR 1900m	CMV 2400m	2000m	2400m

1 Flight visibility and ground visibility required.

PANS OPS 4

CHANGES: None.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
21 OCT 11 (12-5)

COLOGNE-BONN, GERMANY
RNAV (GPS) Rwy 32L

D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

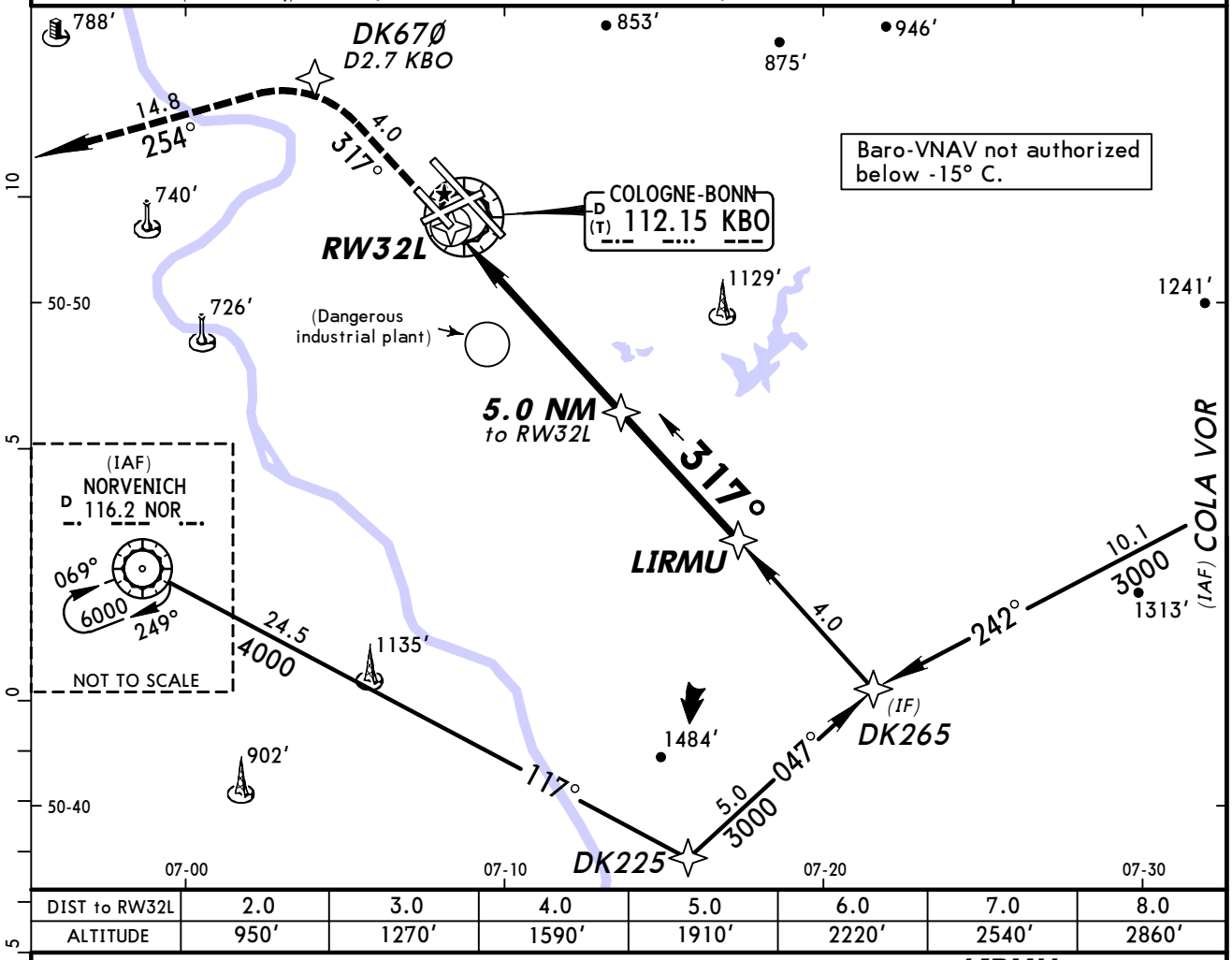
RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 302′
	317°	LIRMU 3000′ (2741′)	770′ (511′)	RWY 259′

MISSED APCH: Climb on 317° to 6000′. When passing DK67Ø or 2000′, whichever is later, turn LEFT onto 254° to NOR VOR.
NON-RNAV: Climb STRAIGHT AHEAD to 6000′. When passing D2.7 KBO or 2000′, whichever is later, turn LEFT to NOR VOR.

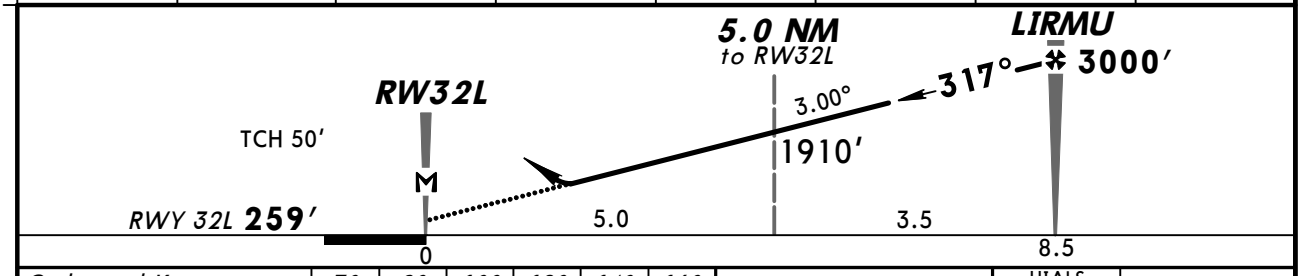
3800′
MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 9 hPa Trans level: By ATC Trans alt: 5000′

BRIEFING STRIP™



DIST to RW32L	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	950′	1270′	1590′	1910′	2220′	2540′	2860′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW32L							

HIALS
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **32L**

	LNAV/VNAV		LNAV	
	DA(H) 770′ (511′)		DA(H) 780′ (521′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1600m	CMV 2400m	RVR 1700m	CMV 2400m
D				

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN 21 OCT 11 (12-6)

COLOGNE-BONN, GERMANY
RNAV (GPS) Rwy 32R

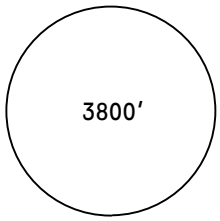
D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

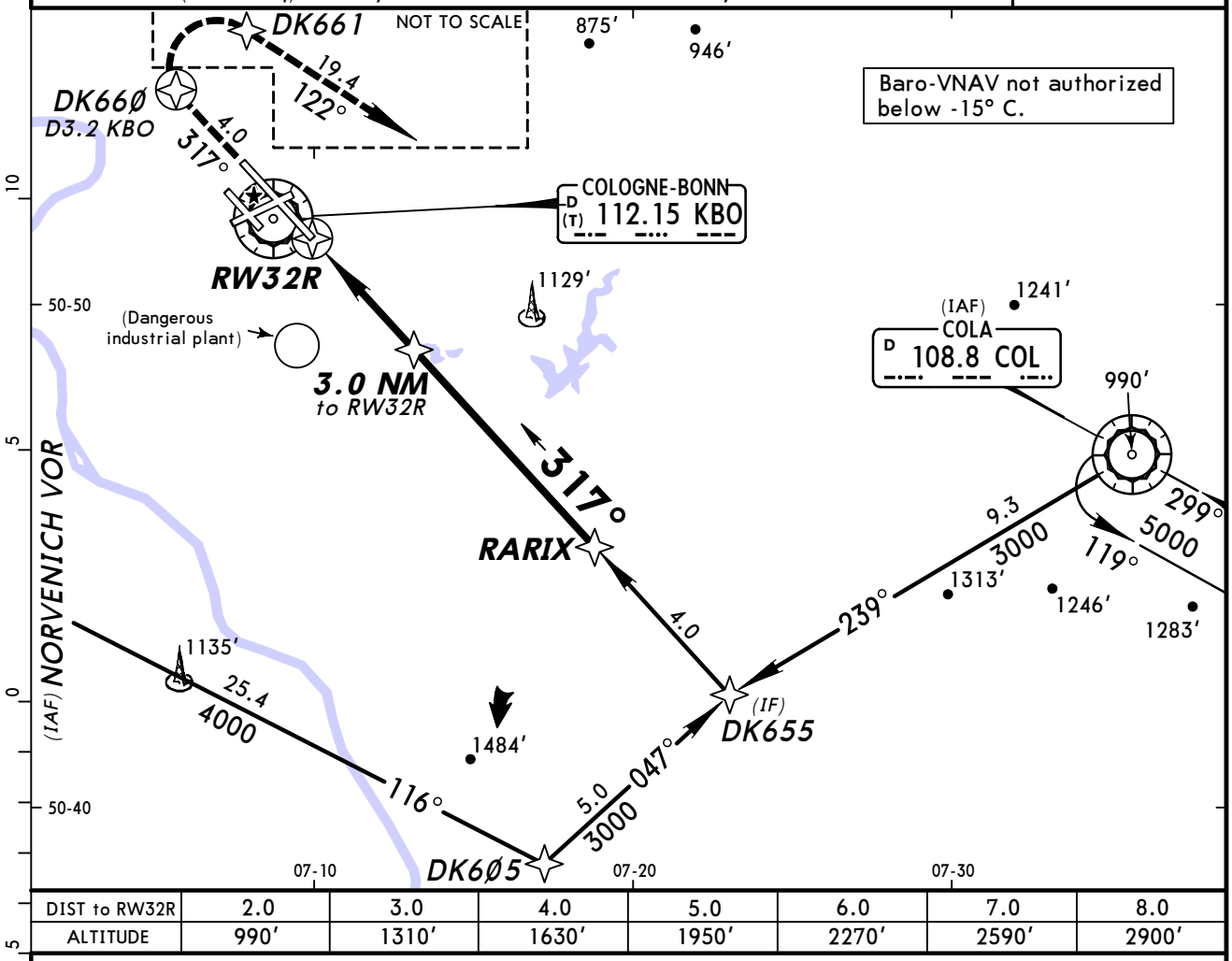
BRIEFING STRIP™

RNAV	Final Apch Crs 317°	Minimum Alt RARIX 3000′ (2698′)	LNAV/VNAV DA(H) 780′ (478′)	Apt Elev 302′ RWY 302′

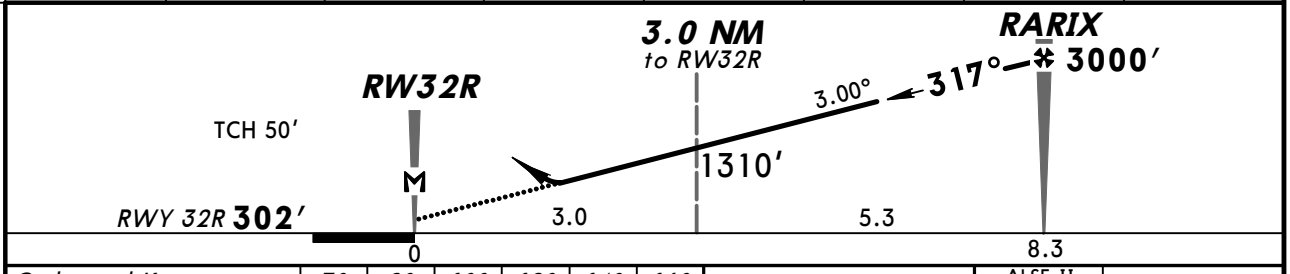
MISSED APCH: Climb on 317° to 5000′. When passing DK66Ø or 2000′, whichever is later, turn RIGHT via DK661 onto 122° to COL VOR.
NON-RNAV: Climb STRAIGHT AHEAD to 5000′. When passing D3.2 KBO or 2000′, whichever is later, turn RIGHT to COL VOR.

Alt Set: hPa (IN on req) Rwy Elev: 11 hPa Trans level: By ATC Trans alt: 5000′





DIST to RW32R	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	990′	1310′	1630′	1950′	2270′	2590′	2900′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW32R							

ALSF-II
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **32R**

	LNAV/VNAV DA(H) 780′ (478′)		LNAV DA(H) 780′ (478′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1500m	CMV 2200m	RVR 1500m	CMV 2200m
D				

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
21 OCT 11 (16-1)

COLOGNE-BONN, GERMANY
NDB Rwy 14L

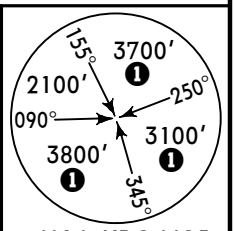
D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

BRIEFING STRIP™

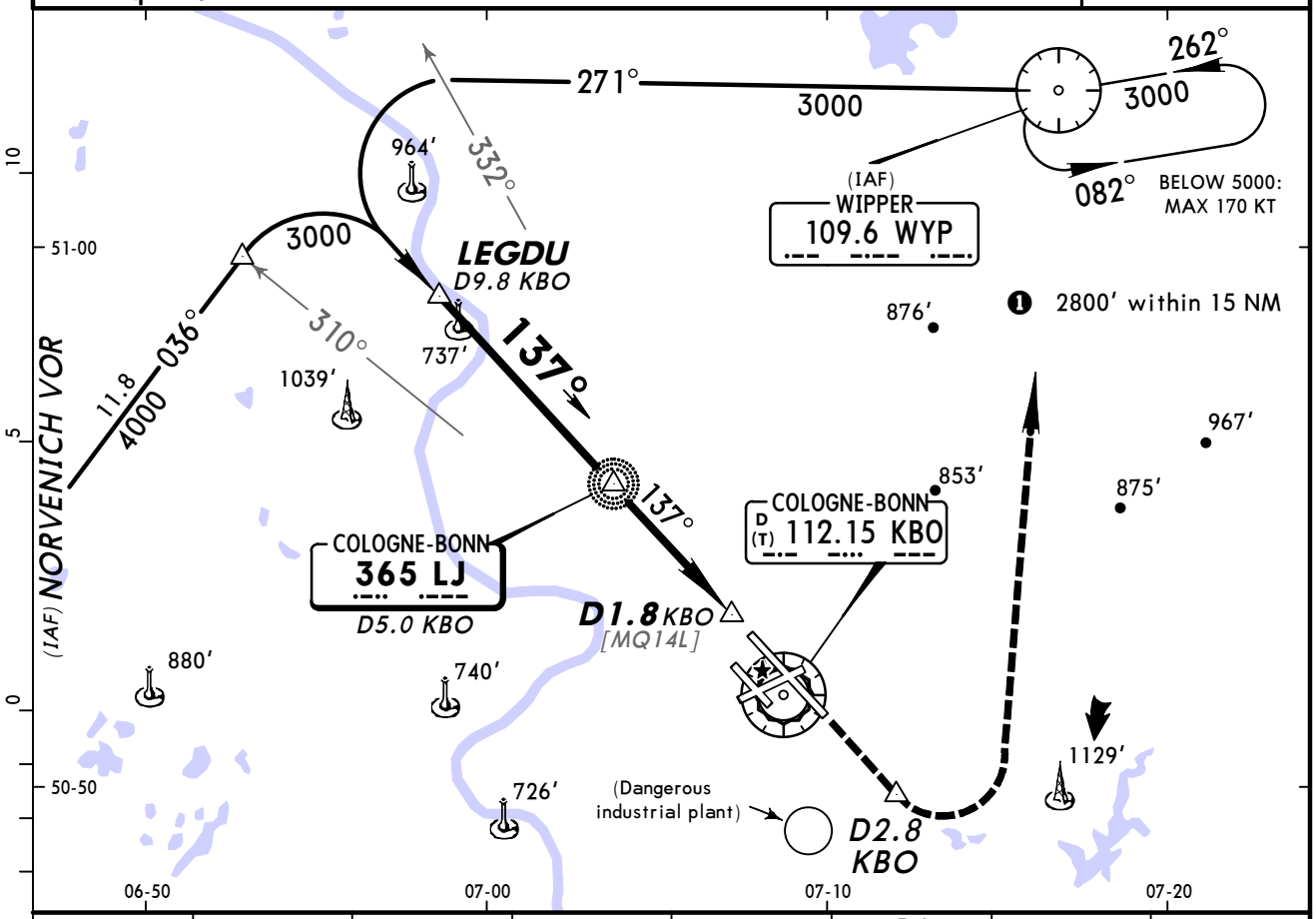
Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
LJ 365	137°	LEGDU 3000′ (2770′)	830′ (600′)	302′ / RWY 230′

MISSED APCH: Climb STRAIGHT AHEAD to 3000′. When passing D2.8 KBO or 2000′, whichever is later, turn LEFT to WYP VOR.

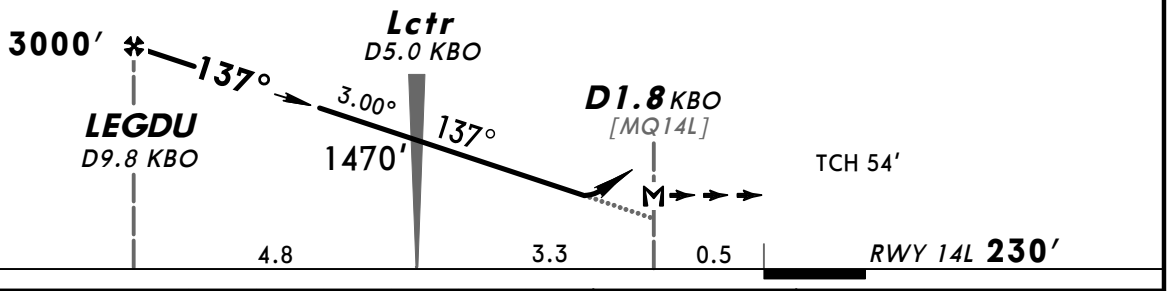
Alt Set: hPa (IN on req) Rwy Elev: 8 hPa Trans level: By ATC Trans alt: 5000′
DME required.



MSA KBO VOR



KBO DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2740′	2420′	2100′	1790′	1470′	1150′	830′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.8 KBO							

ALSF-II
REIL
PAPI

D2.8 KBO | 2000′ whichever later

Standard STRAIGHT-IN LANDING RWY 14L

DA(H) 830′ (600′)

	ALS out
A, B	RVR 1500m
C	RVR 2000m
D	CMV 2400m

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
21 OCT 11 (16-2)

COLOGNE-BONN, GERMANY
NDB Rwy 24

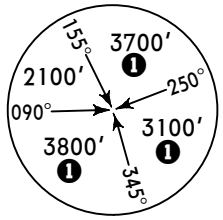
BRIEFING STRIP ™

D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

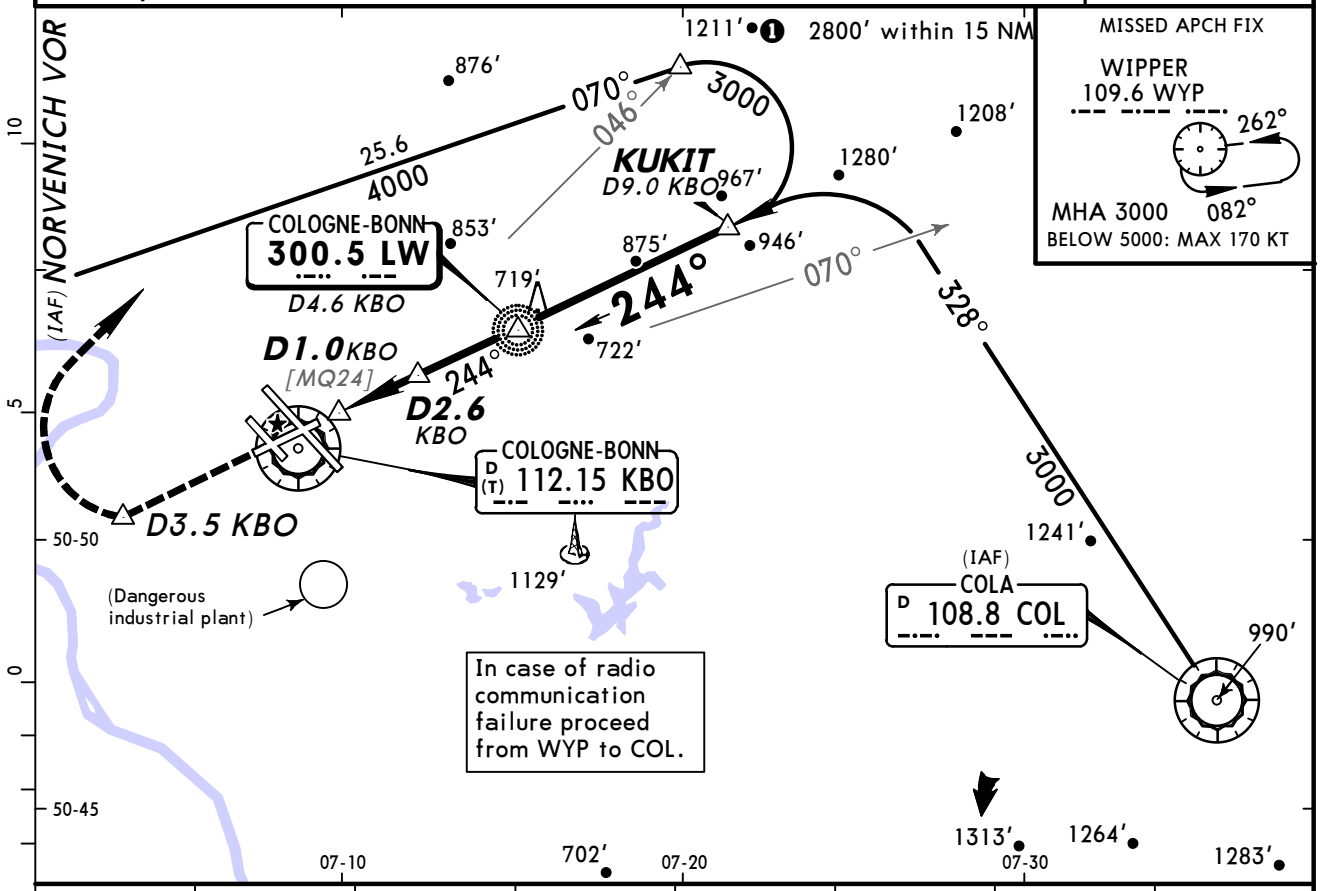
Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
LW 300.5	244°	KUKIT 3000′ (2728′)	870′ (598′)	Apt Elev 302′ / RWY 272′

MISSED APCH: Climb STRAIGHT AHEAD to 5000′. When passing D3.5 KBO or 2000′, whichever is later, turn RIGHT to WYP VOR.

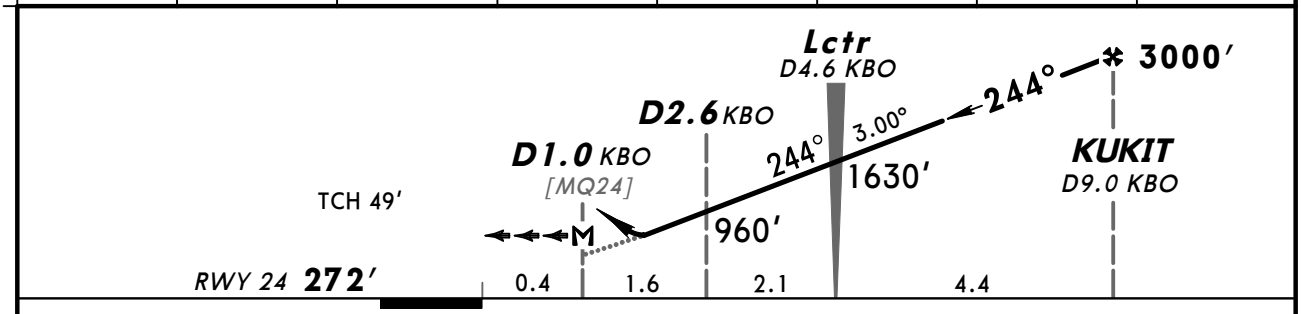
Alt Set: hPa (IN on req) Rwy Elev: 10 hPa Trans level: By ATC Trans alt: 5000′
DME required.



MSA
KBO VOR



KBO DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	1090′	1410′	1730′	2050′	2360′	2680′	3000′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.0 KBO							

HIALS
REIL
PAPI

D3.5 KBO | 2000′ whichever later

Standard STRAIGHT-IN LANDING RWY **24**

DA(H) **870′** (598′)

ALS out

A	1500m 1
B	
C	2000m / 2400m
D	

1 Flight visibility and ground visibility are required.

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN
21 OCT 11 (16-3)

COLOGNE-BONN, GERMANY
NDB Rwy 32R

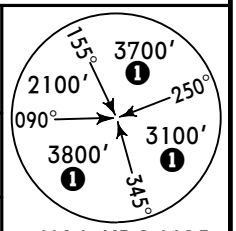
BRIEFING STRIP™

D-ATIS		COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15	132.12	121.05	124.97	121.72

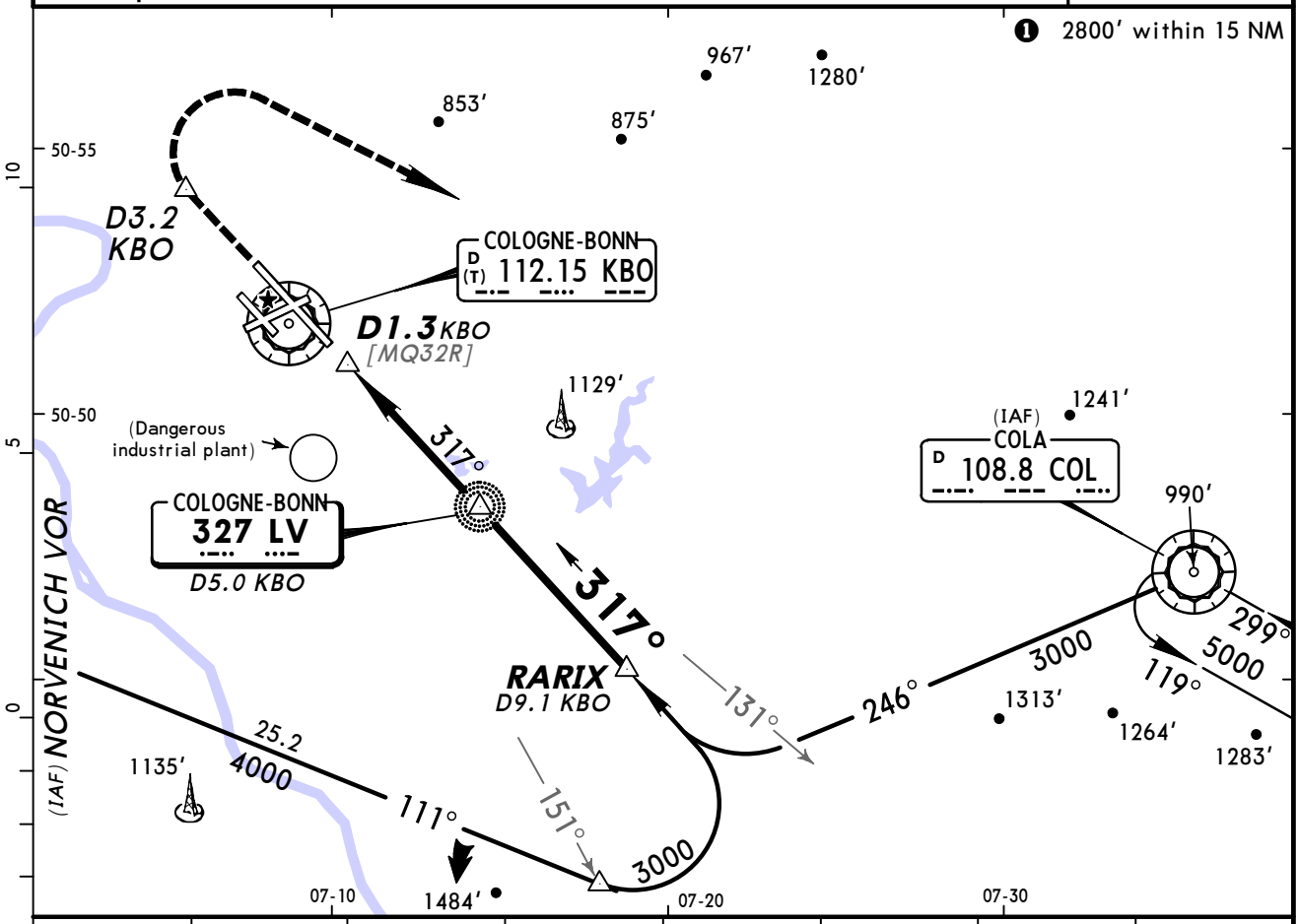
Lctr LV	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
327	317°	RARIX 3000′ (2698′)	780′ (478′)	Apt Elev 302′ / RWY 302′

MISSED APCH: Climb STRAIGHT AHEAD to 5000′. When passing D3.2 KBO or 2000′, whichever is later, turn RIGHT to COL VOR.

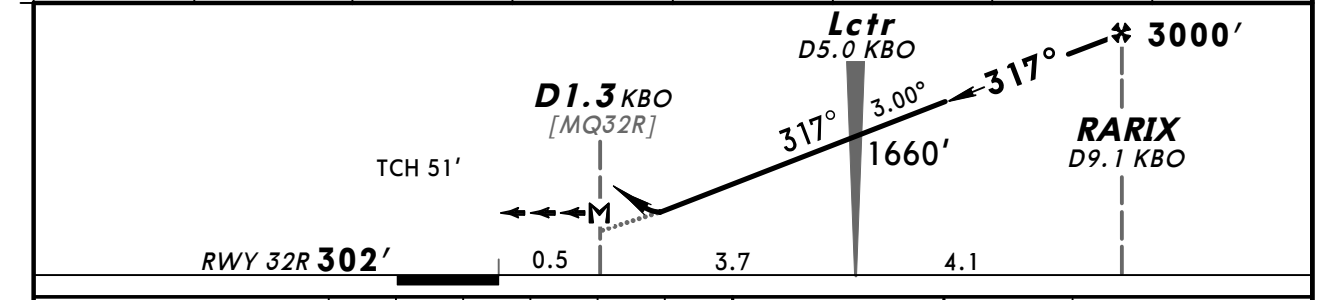
Alt Set: hPa (IN on req) Rwy Elev: 11 hPa Trans level: By ATC Trans alt: 5000′
DME required.



MSA KBO VOR



KBO DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	1030′	1340′	1660′	1980′	2300′	2620′	2940′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.3 KBO							

ALSF-II
REIL
PAPI

D3.2 KBO 2000′ whichever later

Standard STRAIGHT-IN LANDING RWY **32R**

DA(H) **780′** (478′)

ALS out

A	RVR 1500m	
B		
C	RVR 1500m	CMV 2200m
D		

PANS OPS 4

CHANGES: Director frequency.

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EDDK/CGN
COLOGNE-BONN

JEPPESEN COLOGNE-BONN, GERMANY
21 OCT 11 (18-1)
SRE All Rwys

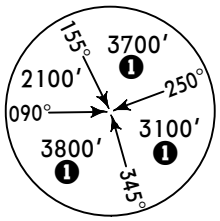
BRIEFING STRIP™

D-ATIS	COLOGNE-BONN Director (APP)	COLOGNE-BONN Tower (R)	Ground
112.15 132.12	121.05	124.97	121.72

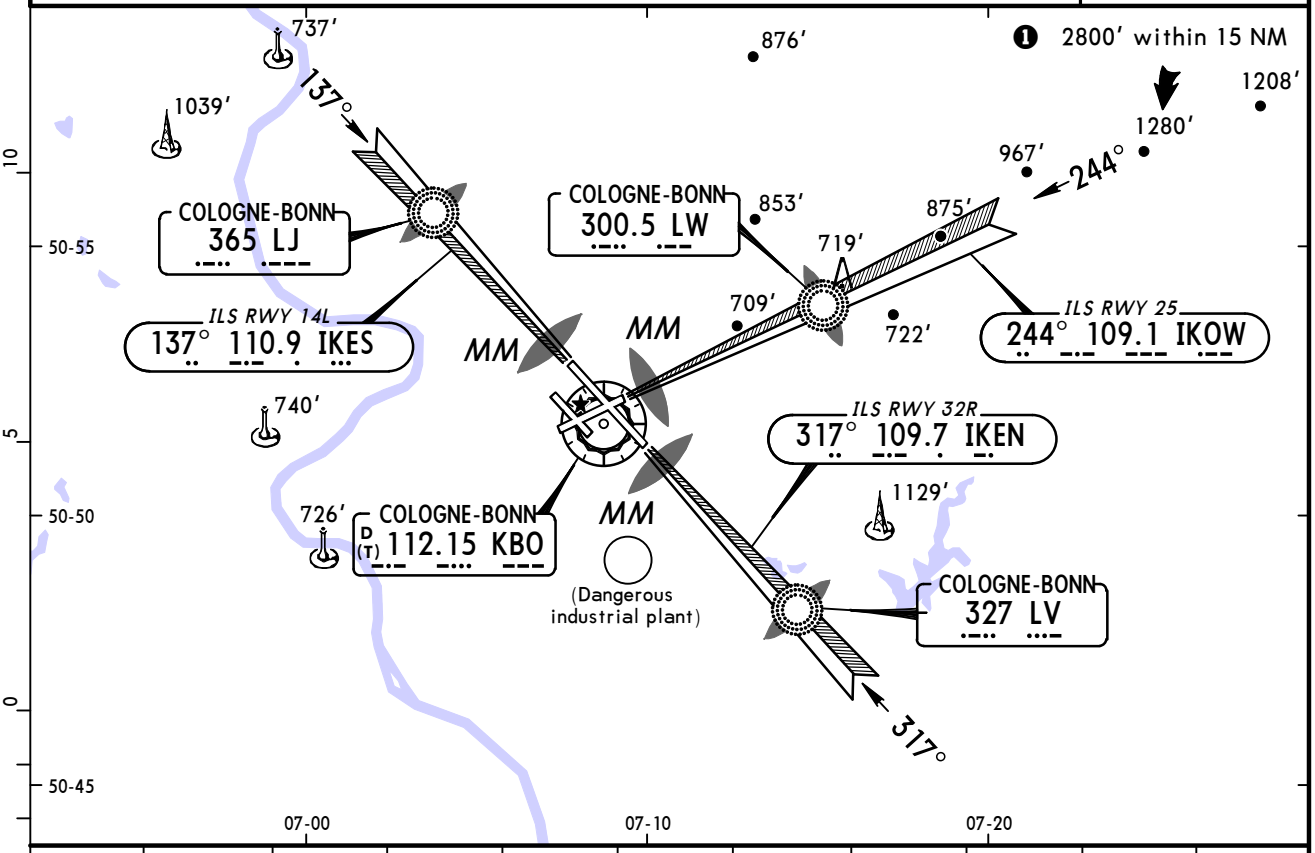
RADAR	Final Apch Crs By ATC	Minimum Alt See table below	MDA(H) Refer to Minimums	Apt Elev 302′ RWY - See below

MISSED APCH: Climb STRAIGHT AHEAD to 3000′.

Alt Set: hPa (IN on req) Apt Elev: 11 hPa Trans level: By ATC Trans alt: 5000′



MSA KBO VOR



RWY 06, 14L/R	RADAR FIX	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3300′	3000′	2700′	2400′	2100′	1800′	1500′	1200′	900′
RWY 24, 32L/R	RADAR FIX	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3400′	3100′	2800′	2500′	2200′	1900′	1600′	1300′	1000′

Minimum Alt/NM	10.0 FAF	5.0
SRE 06	3300′	1600′
SRE 14L	3300′	—
SRE 14R	3300′	—
SRE 24	3400′	1600′
SRE 32L	3400′	—
SRE 32R	3400′	—

RWY	06	14L	14R	24	32L	32R
BASED ON ELEV.	231′	230′	221′	272′	259′	302′

Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	2.81°	348	447	497	596	695	794
MAP at THR							

Lighting-Refer to Airport Chart

3000′

PANS OPS 4

Standard STRAIGHT-IN LANDING

	SRE 06 MDA(H) 690′ (459′)		SRE 14L MDA(H) 830′ (600′)		SRE 14R MDA(H) 750′ (529′)		SRE 24 MDA(H) 960′ (688′)		SRE 32L MDA(H) 780′ (521′)		SRE 32R MDA(H) 780′ (478′)	
		ALS out		ALS out		ALS out		ALS out		ALS out		ALS out
A B	RVR 1600m	CMV 2300m	CMV 2200m	CMV 2900m	CMV 2200m	CMV 2600m	2700m	3400m	RVR 1900m	CMV 2600m	RVR 1700m	CMV 2400m
C D	RVR 1800m	CMV 2500m	CMV 2400m	CMV 3100m	CMV 2400m	CMV 2800m	2900m	3600m	CMV 2100m	CMV 2800m	RVR 1900m	CMV 2600m

CHANGES: Director frequency.

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General Information

Location: Dusseldorf Deu
IATA Code: DUS
Lat/Long: N51° 16.9' E006° 45.4'
Elevation: 147 ft

Airport Use: Public
Magnetic Variation: 0.9°E

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

Sunrise: 0623 Z
Sunset: 1709 Z,

Runway Information

Runway: 05L
Length x Width: 8858 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 116 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 984 ft

Runway: 05R
Length x Width: 9843 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 121 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 985 ft

Runway: 23L
Length x Width: 9843 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 138 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 985 ft

Runway: 23R
Length x Width: 8858 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 124 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 984 ft

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Communication Information

ATIS 123.775
Dusseldorf Tower 118.3
Dusseldorf Tower 37.835 Military
Dusseldorf Ground Control 121.9
Dusseldorf De-Icing Ramp/Taxi Control 135.225
Dusseldorf De-Icing Ramp/Taxi Control 122.775
Dusseldorf De-Icing Ramp/Taxi Control 122.125
Dusseldorf De-Icing Ramp/Taxi Control 121.6
Dusseldorf Clearance Delivery 121.775
Dusseldorf Director (Approach Control Radar) 128.65

1. GENERAL

1.1. ATIS

*D-ATIS 115.15 123.77

1.2. NOISE ABATEMENT PROCEDURES

For additional depiction refer to 10-4.

1.2.1. RUNWAY USAGE

Use of RWYs 05L/23R is restricted to MAX 56 hours per week (7 days period, MON - SUN, 0600-2200LT). APT company has to promulgate a weekly schedule of operating hours in advance to permitting ministry and DFS (ATC). Outside these published hours northern RWYs 05L/23R is to be used as alternative RWYs only.

1.2.2. NIGHT FLYING RESTRICTIONS

Turbine-powered ACFT not licensed according to ICAO Annex 16

Take-offs and landings are not permitted between 1900LT(1850LT off blocks)-0800LT.

Turbine-powered ACFT licensed according to ICAO Annex 16, Volume 1, Chapter 2

Take-offs and landings are not permitted between 1900LT(1850LT off blocks)-0800LT.

Turbine-powered ACFT licensed according to ICAO Annex 16, Volume 1, Chapter 3 not included in the Bonus List of the Federal Ministry of Transport, Building and Housing

Scheduled take-offs and landings are not permitted between 2200LT(2150LT off blocks)-0600LT.

Turbine-powered ACFT licensed according to ICAO Annex 16, Volume 1, Chapter 3 included in the Bonus List of the Ministry of Transport, Building and Housing

- Scheduled take-offs are not permitted between 2200LT (2150LT off blocks)-0600LT.
- For delayed take-offs in scheduled air services or scheduled charter services the Aviation Supervision Office may grant exceptional permission in individual cases until 2300LT(2250LT off blocks), if required to maintain the safety of flight operations or to avoid considerable disturbance to the operation of an air carrier.
- Scheduled landings are not permitted between 2300-0600LT.
- Delayed landings in scheduled air services or scheduled charter services are not permitted between 2330-0600LT.
- Delayed landings of ACFT engaged in scheduled air services or scheduled charter services **and** owned by air carriers who have their local maintenance facilities recognized by the approving authority at Dusseldorf APT are not permitted between 2400-0500LT. If a recognized local main maintenance facility becomes vacant, the approving authority may recognize Dusseldorf APT as the local main maintenance facility at the request of another air carrier.

Propeller-driven ACFT

- Take-offs and landings are not permitted between 2200LT(2150LT off blocks) - 0600LT.
- Excepted are take-offs and landings of propeller-driven ACFT with one of the following noise licenses:
  ICAO Annex 16, Volume I, Chapter 3, 4, 5, 6 or 10.

The following applies to propeller-driven ACFT exceeding 9t MTOM:

- Scheduled take-offs are not permitted between 2200LT (2150LT off blocks)-0600LT.
- For delayed take-offs in scheduled air services or scheduled charter services, the Aviation Supervision Office may grant exceptional permission in individual cases until 2300LT (2250LT off blocks) if required to maintain the safety of flight operations or to avoid considerable disturbance to the operation of an air carrier.
- Scheduled landings are not permitted between 2300LT-0600LT.
- Delayed landings in scheduled air services or scheduled charter services are not permitted between 2330LT-0600LT.

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1. GENERAL

Excluded from the restrictions above are:
- Landings of ACFT provably approaching Dusseldorf APT as alternate aerodrome for meteorological, technical or other safety reasons.
- Take-offs and landings on a mission in disasters or rendering medical assistance as well as in other emergency cases; take-offs, however, only subject to individual permission by the Aviation Supervision Office.
- Flight checks conducted by the DFS (Deutsche Flugsicherung GmbH)

Deviating from the above-mentioned regulations the "Bezirksregierung" Dusseldorf (Aviation Supervision Office at Dusseldorf APT) may grant additional exceptions in justified individual cases, especially if necessary to avoid considerable disturbance of air traffic or in cases of special public interest. If appropriate, applications shall be submitted to:

Luftaufsichtsstelle
Flughafen Dusseldorf
40474 Dusseldorf
Tel: ++49-(0)211-4216364
Fax: ++49-(0)211-4216493.

Clearance for take-offs during closing times issued by ATC do not comprise the necessary exceptional permission of the Aviation Supervision Office at Dusseldorf APT.
Exceptional permission for night landings during the closing times will not generally be granted by ATC via radio telephony. Accordingly, a landing clearance issued by ATC for safety reasons will not necessarily include the decision of the Aviation Supervision Office about the admissibility of a night landing.
In case of a delayed or premature landing (before 0500LT) not approved by the Aviation Supervision Office the pilot shall appear in person at the Aviation Supervision Office immediately after landing in order to justify the admissibility of the night landing.

1.2.3. REVERSE THRUST

Reverse thrust other than idle should not be used between 2200-0600LT except for safety reasons.

1.2.4. RUN-UP TESTS

Run-ups of turbo-powered engines are generally permitted only with the noise suppressor device specified in the airport regulations.

1.3. TAXI PROCEDURES

1.3.1. GENERAL

Apron West MAX wingspan 102 '/31m.
TWY K MAX wingspan 94 '/28.5m.

TWY E only usable if stand V01 not occupied. Follow-me car required.
Use TWY G with ATC permission only.
RWY 05R exit via TWY L not possible.
TWY L available for all ACFT except B777 and A340-600.

On TWYs L and M, ACFT with wingspan up to 198'/60.3m can overtake eachother.
Wingtip clearance is reduced to 39'/12m.

1.3.2. TAXIING ON APRON

ACFT are permitted to taxi only at the absolute minimum engine speed.

Within apron area between TWY T and C parallel taxiing for B747-400/B777/A330/A340 not possible.
Within apron area between TWY Q and R parallel taxiing possible for B747, B777, A330 and A340.

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1. GENERAL

1.4. PARKING INFORMATION

Stands A01 thru A04, A08 thru A10, A12, A13, A15, A16, B01 thru B04, B06, B08 thru B10 and C01 thru C08 are equipped with AGNIS.

On stands C02, C03, V68 and V70 wingtip clearance for B747-400 may be reduced to 16'/5m.

Push-back required from all stands except from V01, V61 thru V74 and V91 thru V96.

2. ARRIVAL

2.1. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

2.2. NOISE ABATEMENT PROCEDURES

ATC clearance for visual or VMC approaches will not be granted to arriving IFR flights. Exceptions may be granted to propeller-driven ACFT up to 5700kg MPW.

2.3. CAT II/III OPERATIONS

RWYs 05R, 23L and 23R approved for CAT II/III operations, special aircrew and ACFT certification required.

3. DEPARTURE

3.1. DE-ICING

3.1.1. GENERAL

De-icing areas are established at:

- DA-West (within the area of parking positions V61 thru V71) for take-off RWY 05L or 05R.
- DA-East (within the area of parking positions V01 thru V08) for take-off RWY 23L or 23R.

De-icing on remote position has to be indicated to "DUSSELDORF Delivery" by use of phraseology:
"Request start-up for remote de-ice". After the de-icing process has been completed contact DUSSELDORF Ground. In complex weather and traffic conditions departure slots for all ACFT (even ACFT which need no anti/de-ice) might be necessary. Adhere to slot is mandatory.

3.1.2. START-UP

CFMU taxi time as necessary will be announced via ATIS as follows:
Taxi time 30 min. Departing ACFT requiring de-icing and with CFMU slot are requested to call for start-up at CTOT minus 35 min in order to be at the RWY at beginning of slot, CTOT minus 5 min.

3.1.3. COMMUNICATIONS

After parking the ACFT on the de-icing area, the pilot will report flight number and ACFT type to DUSSELDORF De-icing Pos.1: **121.6**, Pos.2: **122.12**, Pos.3: **122.77 or** Pos.4: **135.22** for the beginning of de-icing. After the de-icing procedure has been completed, the pilot-in-command shall report "ready to taxi" to Ground.

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3. DEPARTURE

3.1.4. TAXIING

The ACFT will be subsequently guided by a Follow-me car to a vacant de-icing position.
Taxiing maneuvers may be carried out with the absolute minimum number of engine revolutions required only.

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

3.2.1. START-UP

Pilots shall request clearance for starting the engines from DUSSELDORF Delivery. On initial radio contact the parking position concerned shall always be indicated. After starting the engines pilots are instructed to establish contact with DUSSELDORF Ground.

3.2.2. PUSH-BACK

ACFT may leave nose-in positions only by the aid of tow tractors. Reverse thrust or variable pitch propellers shall not be used. To obtain instructions, pilots are requested to contact the driver of the tow tractor. Clearance for push-back by push-back driver only. Push-back shall only be requested if the pilot is able to perform the maneuver immediately. In order to avoid delays, the engines shall be started during push-back. After completed push-back, ″ready to taxi″ shall be reported to aerodrome control.

3.2.3. TAXIING

Permission to taxi from a taxi-out position may only be requested if the pilot is able to perform the manoeuvre immediately.

3.3. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

3.4. OTHER INFORMATION

3.4.1. DATALINK DEPARTURE CLEARANCE (DCL)

DFS (Deutsche Flugsicherung GmbH) is offering to grant start-up and enroute clearances using Datalink. The procedures are described in a separate AIC.

The following temporal parameters apply:

t_i 25 min prior to EOBT for unregulated flights.
30 min prior to CTOT for ATFM regulated flights.

t_t 11 min prior to EOBT for unregulated flights
16 min prior to CTOT for ATFM regulated flights.

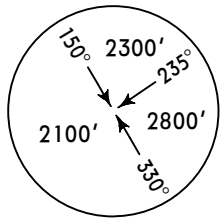
t_0 1 min

t_1 5 min

t_2 1 min

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
115.15 123.77	147′	Trans level: By ATC Trans alt: 5000′

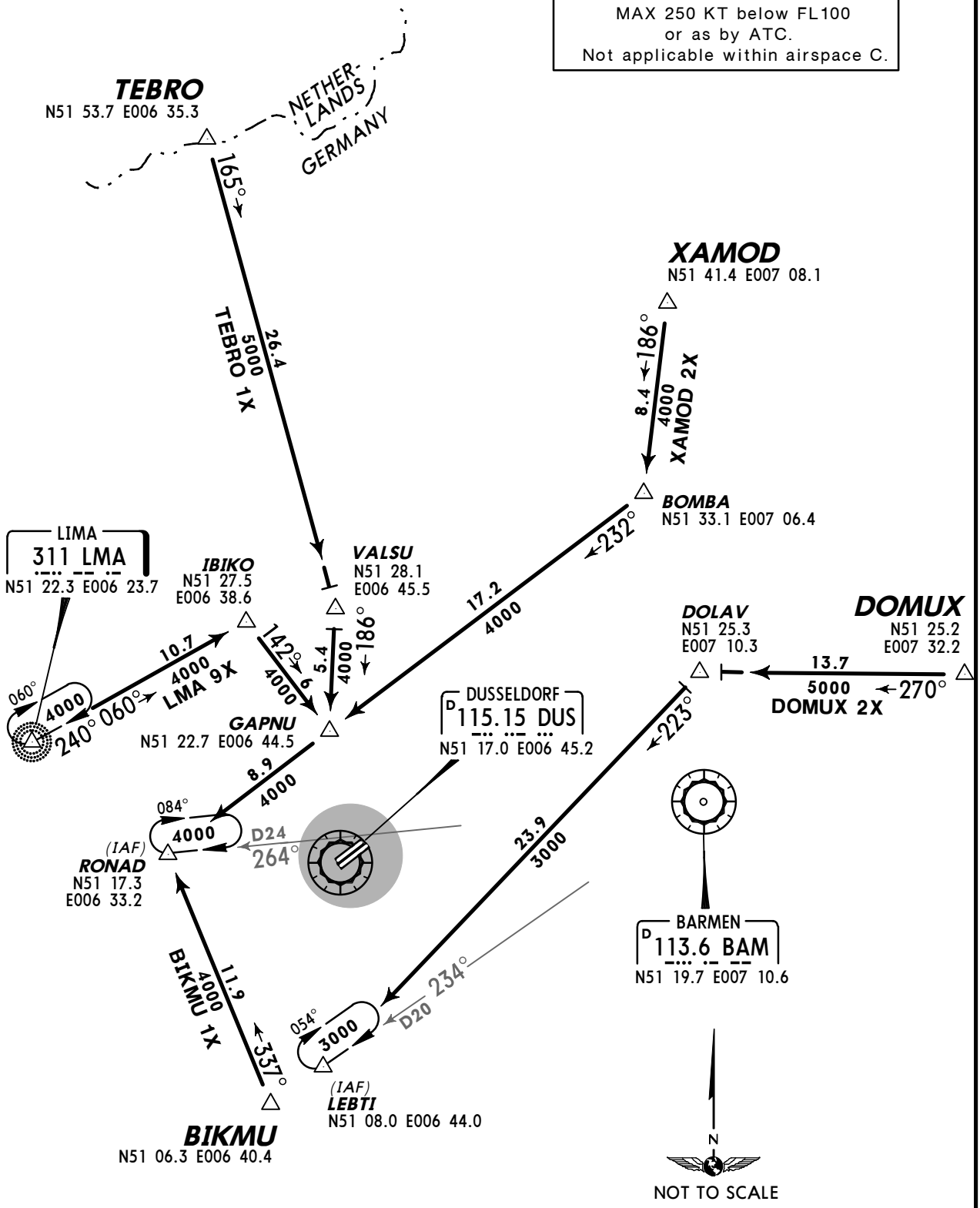


MSA
DUS VOR
applicable over
German territory only

BIKMU ONE X-RAY (BIKMU 1X) *[BIKM1X]*
DOMUX TWO X-RAY (DOMUX 2X) *[DOMU2X]*
LIMA NINE X-RAY (LMA 9X)
TEBRO ONE X-RAY (TEBRO 1X) *[TEBR1X]*
XAMOD TWO X-RAY (XAMOD 2X) *[XAMO2X]*
RWYS 05L/R ARRIVALS

B-RNAV EQUIPMENT NECESSARY

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



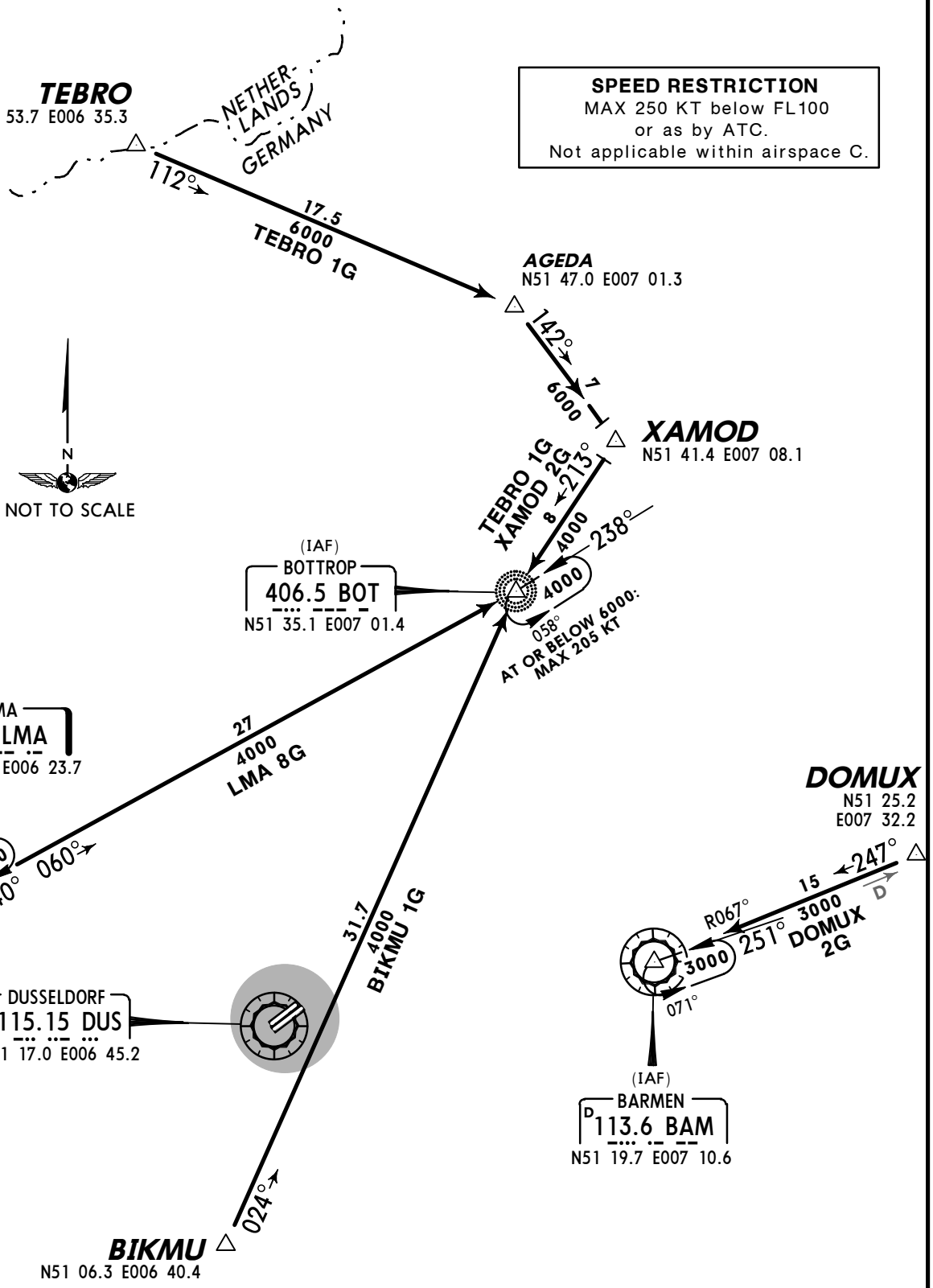
CHANGES: STARs renumbered & replaced.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
115.15 123.77	147′	Trans level: By ATC Trans alt: 5000′

BIKMU ONE GOLF (BIKMU 1G) *[BIKM1G]*
TEBRO ONE GOLF (TEBRO 1G) *[TEBR1G]*
B-RNAV EQUIPMENT NECESSARY

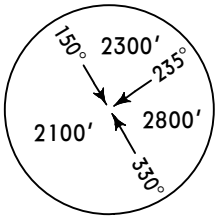
DOMUX TWO GOLF (DOMUX 2G) *[DOMU2G]*
LIMA EIGHT GOLF (LMA 8G)
XAMOD TWO GOLF (XAMOD 2G) *[XAMO2G]*
RWYS 23L/R ARRIVALS



CHANGES: STARs renumbered & replaced.

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*D-ATIS 115.15 123.77	*Apt Elev* 147′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.



MSA
DUS VOR
applicable over
German territory only

TEBRO Ø5 *[TEBØ5]*
XAMOD Ø5 *[XAMØ5]*
RWYS 05L/R
RNAV TRANSITIONS

FROM NORTH
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC

TEBRO
N51 53.7 E006 35.3
At or below
FL170

NETHER-LANDS
GERMANY

5000
TERBO Ø5
165°
7.1

DL512
N51 46.8
E006 38.0

19.3

XAMOD
N51 41.4 E007 08.1
At or below
FL140

186°
8.4
4000
XAMOD Ø5

BOMBA
N51 33.1
E007 06.4

5.2
4000
232°

DL517
N51 30.0
E006 59.7

4

DL518
N51 27.6
E006 54.6

4

DL519
N51 25.2
E006 49.5

4

VALSU
N51 28.1
E006 45.5

5.4
4000
186°

GAPNU
N51 22.7
E006 44.5
TEBRO Ø5
220 KT

4

DL522
N51 20.3
E006 39.4

4000

4.9

4000
FL70 By ATC
052°

3.1

RONAD
N51 17.3
E006 33.2

DUSSELDORF
D 115.15 DUS
N51 17.0 E006 45.2

(FAF RWY 05L)
DIKMI
N51 11.7 E006 33.9
At or above
3000′

4

DL524
N51 15.5
E006 29.2

4

DL525
N51 13.0
E006 24.2

4

DL53Ø
N51 10.6
E006 19.1
220 KT

4
048°

4

DL555
N51 09.1
E006 29.0

5

3000
142°

4

052°
3000

DL55Ø
N51 06.6
E006 24.0
220 KT

(FAF RWY 05R)
NATOS
N51 11.5 E006 34.1
At or above
3000′

N
NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

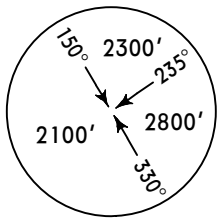
TRANSITION	ROUTING
TEBRO Ø5	TEBRO **(FL170-)** - DL512 - VALSU - GAPNU (K220) - DL530 (K220) - DL550 (K220) - DL555 - DIKMI (05L ❶; **3000′+)**/ NATOS (05R; **3000′+).**
XAMOD Ø5	XAMOD **(FL140-)** - BOMBA - DL530 (K220) - DL550 (K220) - DL555 - DIKMI (05L ❶; **3000′+)**/ NATOS (05R; **3000′+).**

❶ Valid for LOST COMM situation.

CHANGES: RNAV Transision ARKON 05 replaced by TEBRO 05; track update.

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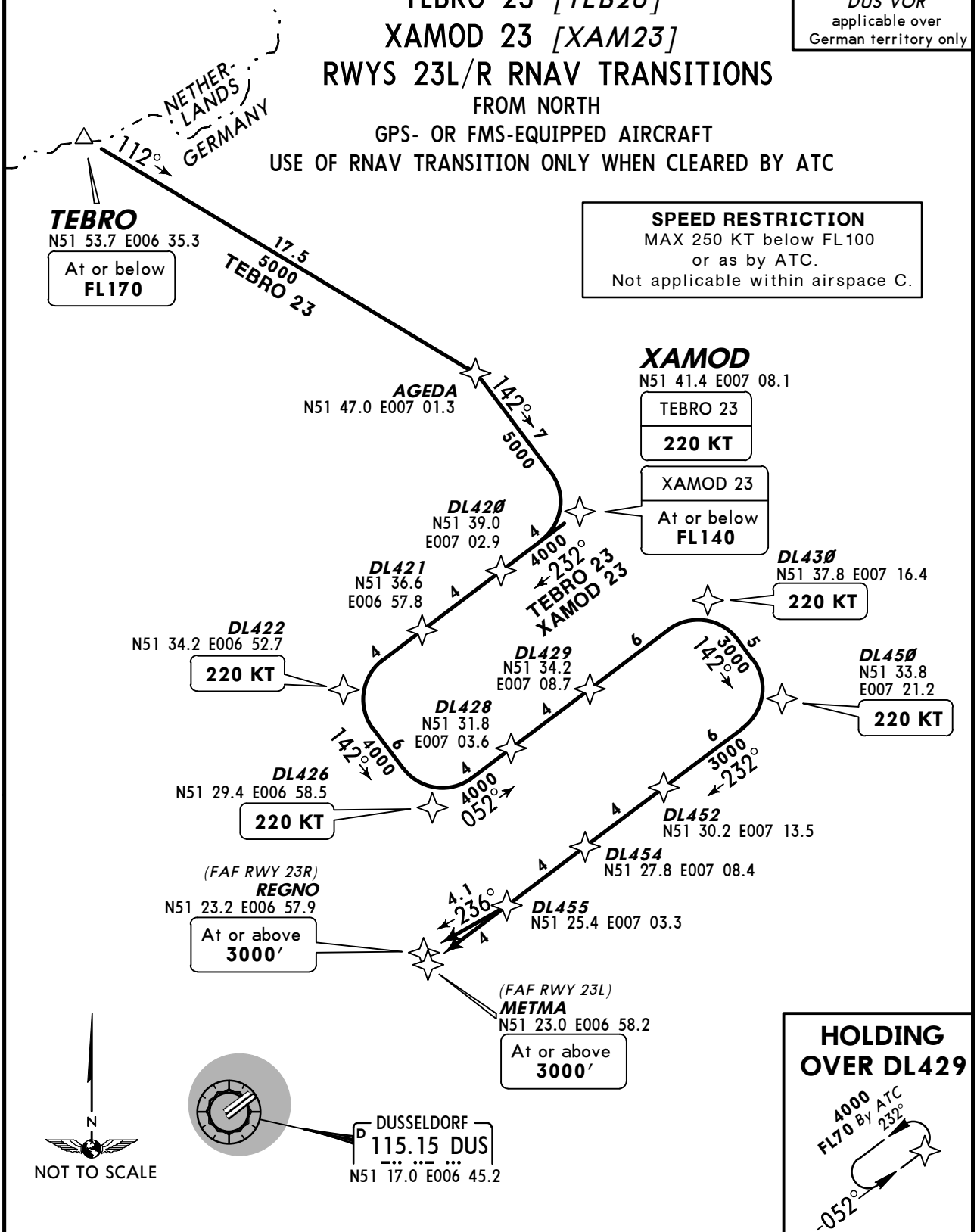
*D-ATIS	Apt Elev	
115.15 123.77	147′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.



MSA
DUS VOR
applicable over
German territory only

TEBRO 23 *[TEB23]*
XAMOD 23 *[XAM23]*
RWYS 23L/R RNAV TRANSITIONS

FROM NORTH
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



HOLDING OVER DL429

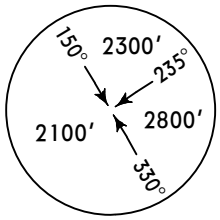
TRANSITION	ROUTING
TEBRO 23	TEBRO **(FL170-)** - AGEDA - XAMOD (K220) - DL422 (K220) - DL426 (K220) - DL430 (K220) - DL450 (K220) - DL455 - METMA (23L; **3000′+)**/ REGNO (23R ❶; **3000′+).**
XAMOD 23	XAMOD **(FL140-)** - DL422 (K220) - DL426 (K220) - DL430 (K220) - DL450 (K220) - DL455 - METMA (23L; **3000′+)**/ REGNO (23R ❶; **3000′+).**

❶ Valid for LOST COMM situation.

CHANGES: RNAV Transision ARKON 23 replaced by TEBRO 23; track update.

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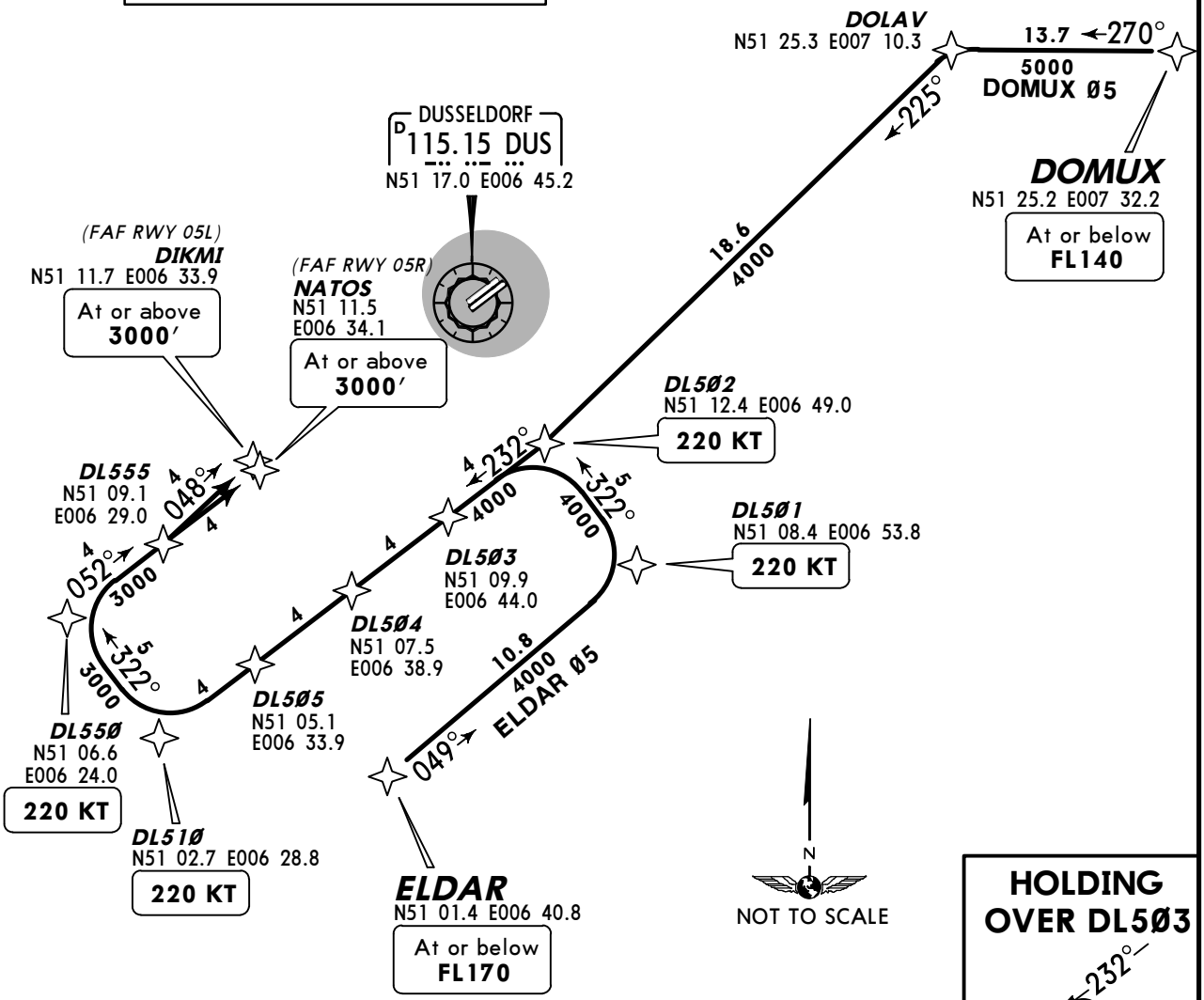
*D-ATIS	Apt Elev	
115.15 123.77	147′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.



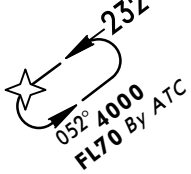
MSA
DUS VOR
applicable over
German territory only

DOMUX Ø5 *[DOMØ5]*
ELDAR Ø5 *[ELDØ5]*
RWYS 05L/R RNAV TRANSITIONS
FROM EAST
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



HOLDING OVER DL5Ø3



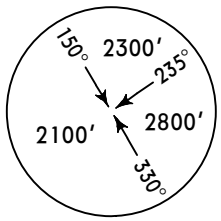
TRANSITION	ROUTING
DOMUX Ø5	DOMUX **(FL140-)** - DOLAV - DL502 (K220) - DL510 (K220) - DL550 (K220) - DIKMI (05L; **3000′+**)/ NATOS (05R ❶ **; 3000′+**).
ELDAR Ø5	ELDAR **(FL170-)** - DL501 (K220) - DL502 (K220) - DL510 (K220) - DL550 (K220) - DIKMI (05L; **3000′+**)/ NATOS (05R ❶ **; 3000′+**).

❶ Valid for LOST COMM situation.

CHANGES: Track update.

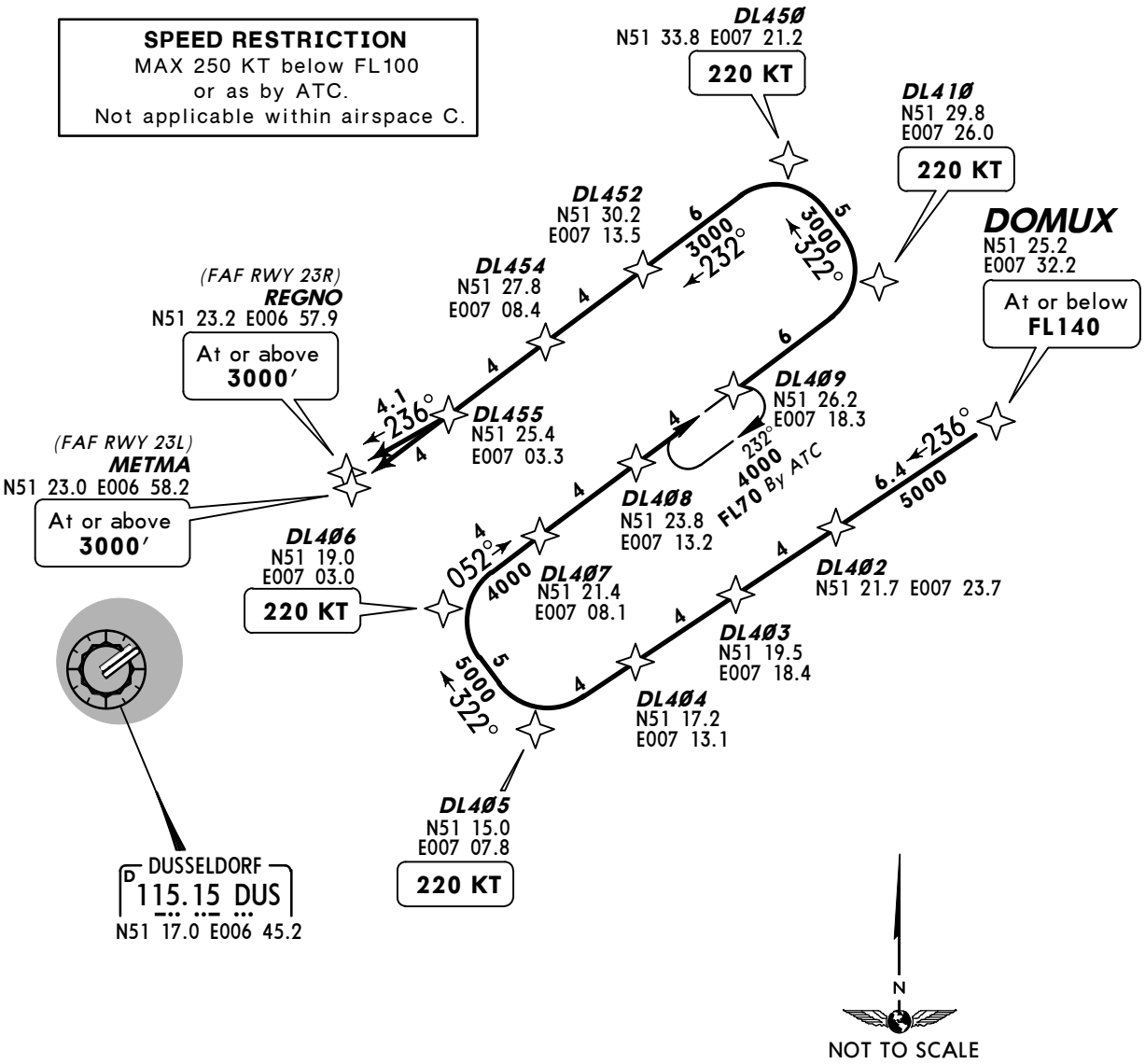
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*D-ATIS 115.15 123.77	*Apt Elev* 147′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.



MSA
DUS VOR
applicable over
German territory only

DOMUX 23 *[DOM23]*
RWYS 23L/R RNAV TRANSITION
FROM EAST
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



ROUTING

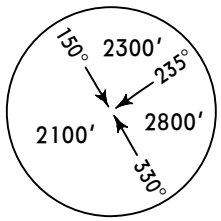
DOMUX **(FL140-)** - DL405 (K220) - DL406 (K220) - DL410 (K220) - DL450 (K220) - METMA (23L ❶; **3000′+)**/ REGNO (23R; **3000′+).**

❶ Valid for LOST COMM situation.

CHANGES: RNAV Transition ELDAR 23 withdrawn; track update.

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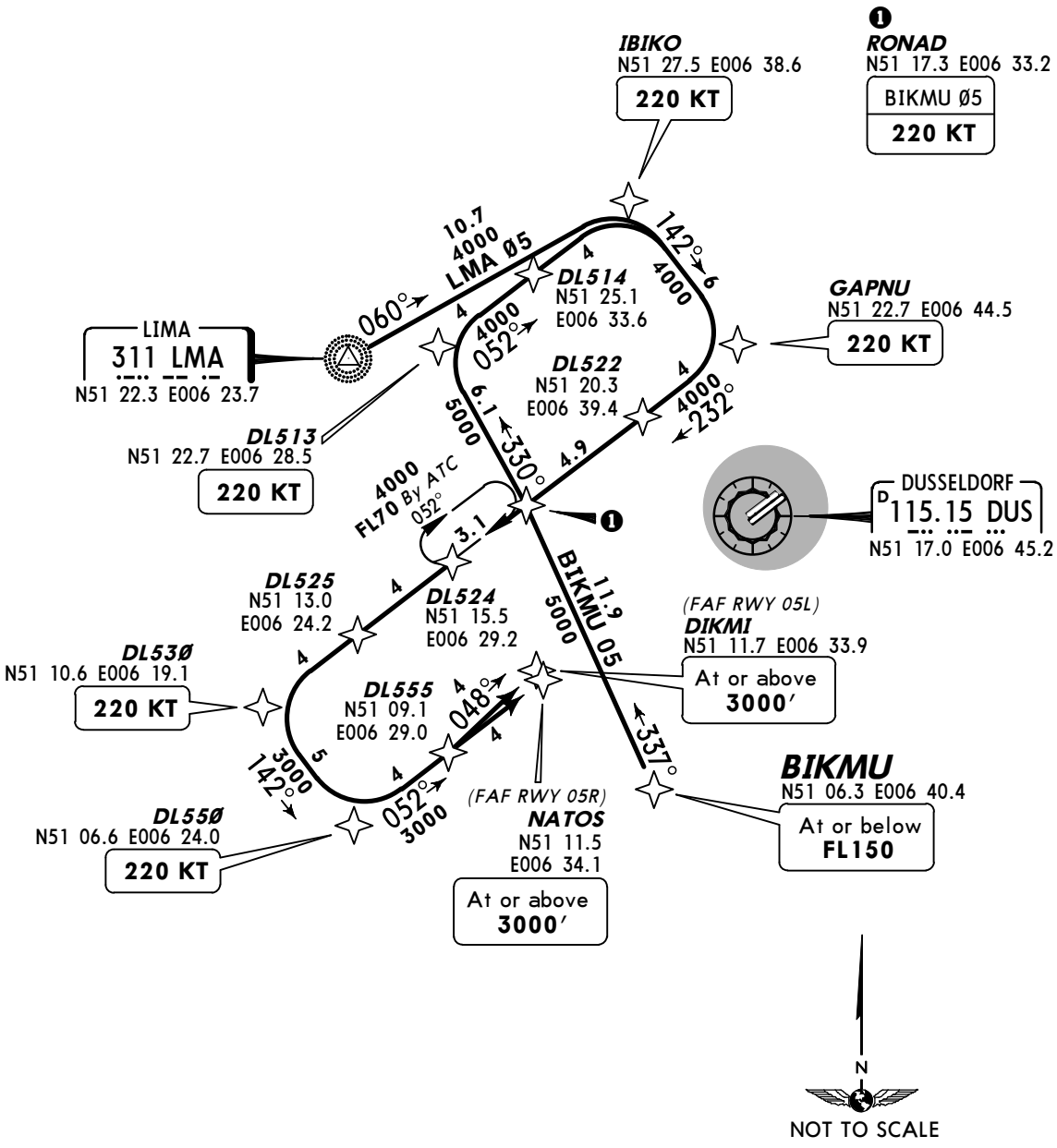
*D-ATIS	*Apt Elev*	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.
115.15 123.77	147′	



MSA
DUS VOR
applicable over
German territory only

BIKMU Ø5 *[BIKØ5]*, LMA Ø5
RWYS 05L/R RNAV TRANSITIONS
FROM WEST
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



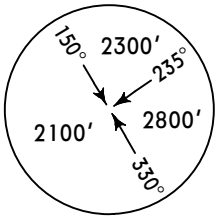
TRANSITION	ROUTING
BIKMU Ø5	BIKMU **(FL150-)** - RONAD (K220) - DL513 (K220) - IBIKO (K220) - GAPNU (K220) - DL530 (K220) - DL550 (K220) - DL555 - DIKMI (05L ❷ **; 3000′+)**/ NATOS (05R; **3000′+).**
LMA Ø5	LMA - IBIKO (K220) - GAPNU (K220) - DL530 (K220) - DL550 (K220) - DL555 - DIKMI (05L ❷**; 3000′+)**/ NATOS (05R; **3000′+).**

❷ Valid for LOST COMM situation.

CHANGES: RNAV Transition KUBIM 05 replaced by BIKMU 05; track update.

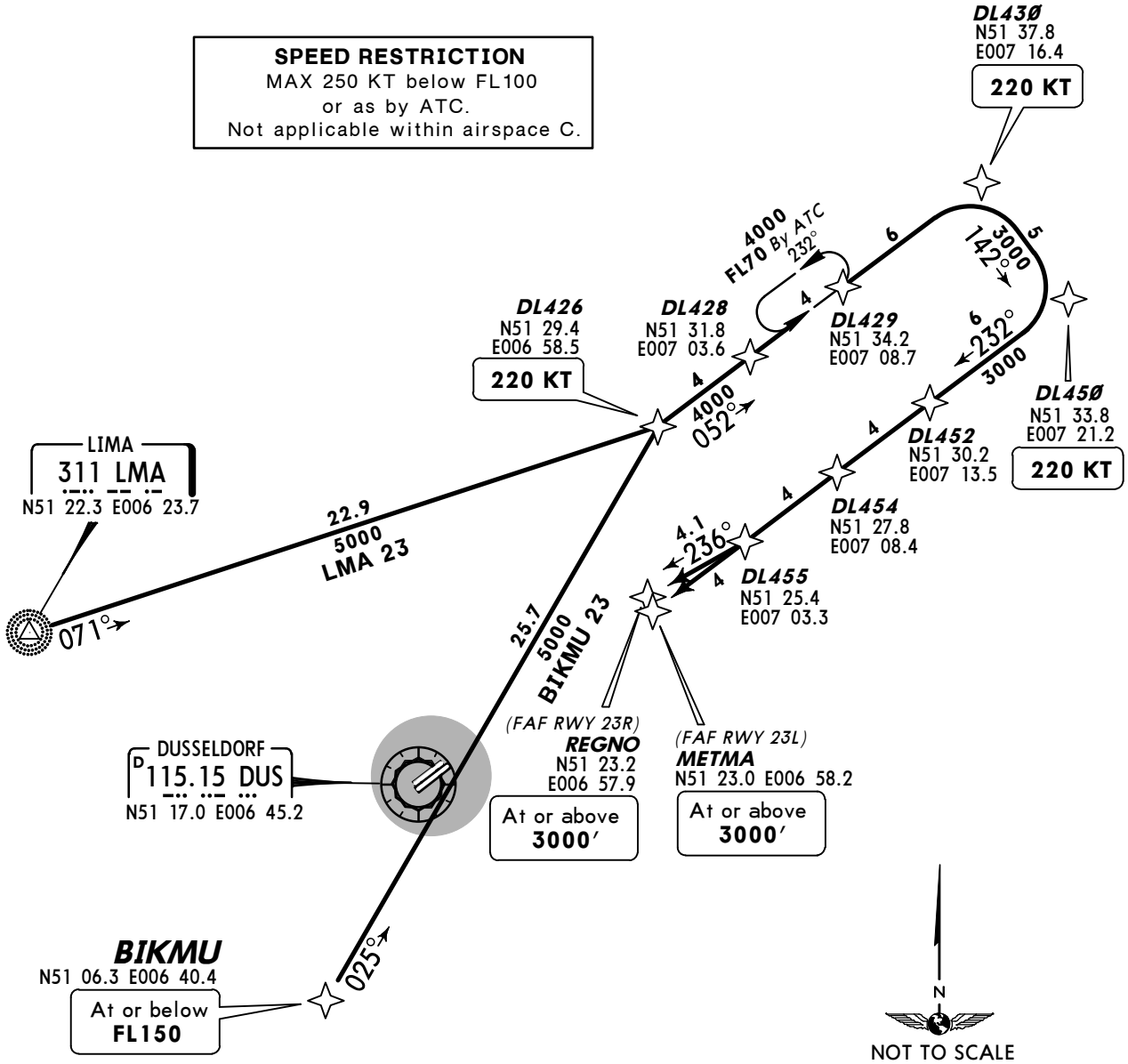
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*D-ATIS 115.15 123.77	*Apt Elev* 147′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.



MSA
DUS VOR
applicable over
German territory only

BIKMU 23 *[BIK23]*, LMA 23
RWYS 23L/R RNAV TRANSITIONS
FROM WEST
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



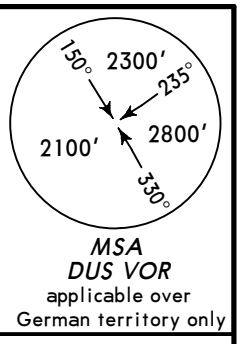
TRANSITION	ROUTING
BIKMU 23	BIKMU **(FL150-)** - DL426 (K220) - DL430 (K220) - DL450 (K220) - DL455 - METMA (23L; **3000′+)**/ REGNO (23R ❶ **; 3000′+).**
LMA 23	LMA - DL426 (K220) - DL430 (K220) - DL450 (K220) - DL455 - METMA (23L; **3000′+)**/ REGNO (23R ❶ **; 3000′+).**

❶ Valid for LOST COMM situation.

CHANGES: RNAV Transition KUBIM 23 replaced by BIKMU 23; track update.

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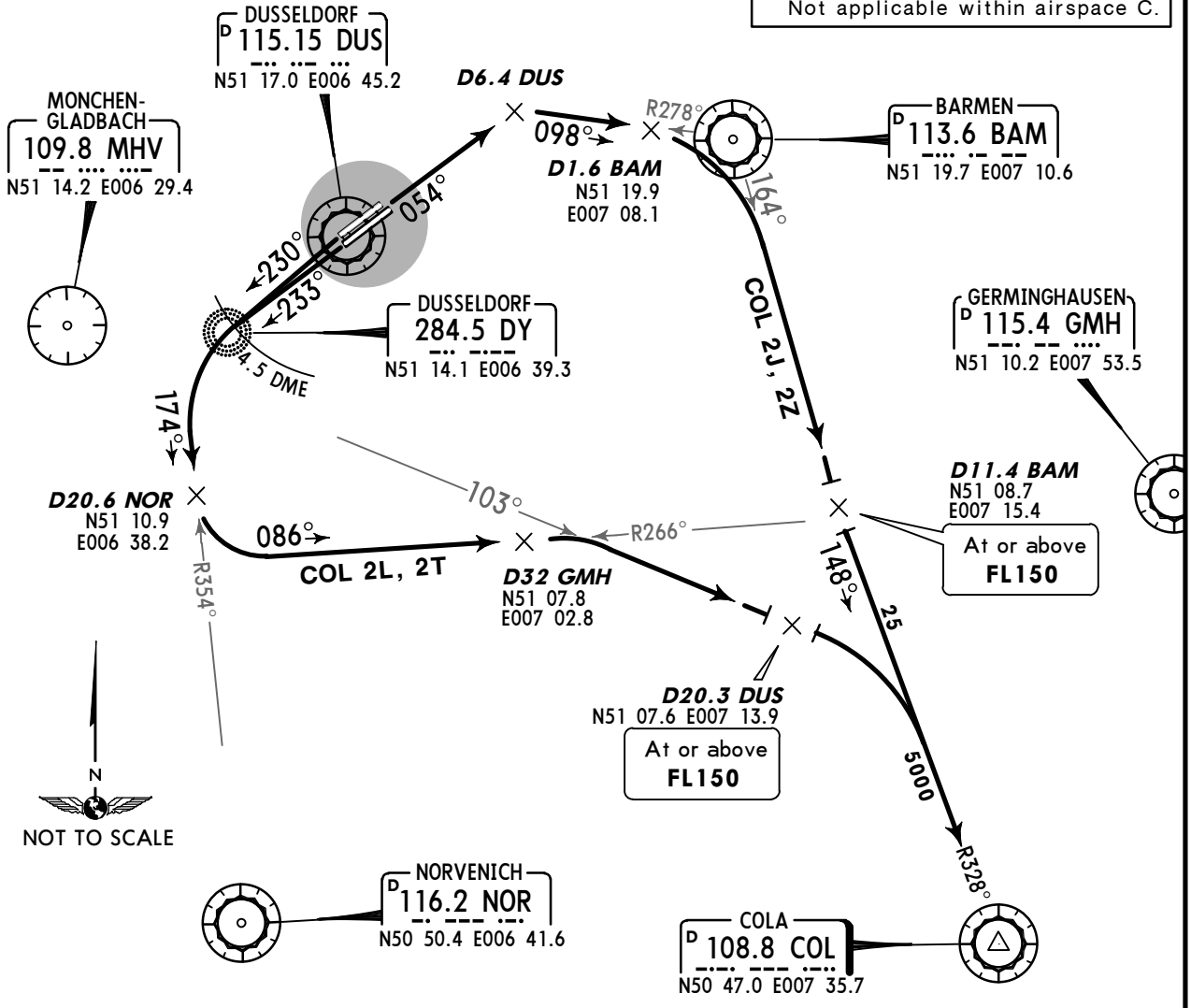
*LANGEN Radar 133.77	*Apt Elev* 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

COLA TWO JULIETT (COL 2J)
COLA TWO LIMA (COL 2L)
COLA TWO TANGO (COL 2T)
COLA TWO ZULU (COL 2Z)
RWYS 05L, 23R/L, 05R DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



COL 2L, 2T

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

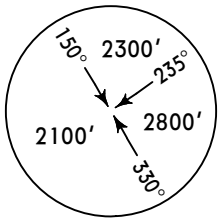
Initial climb clearance **5000′**

SID	RWY	ROUTING
COL 2J	**05L**	Intercept DUS R-054 to D6.4 DUS, turn RIGHT, intercept BAM R-278 inbound to D1.6 BAM, turn RIGHT, intercept BAM R-164 to D11.4 BAM, turn LEFT, intercept COL R-328 inbound to COL.
COL 2Z	**05R**	
COL 2L	**23R**	Intercept 230° bearing (Rwy 23R)/233° bearing (Rwy 23L) towards DY, at DUS 4.5 DME turn LEFT, intercept NOR R-354 inbound to D20.6 NOR, turn LEFT, intercept GMH R-266 inbound to D32 GMH, turn RIGHT, intercept MHV R-103 to D20.3 DUS, turn RIGHT, intercept COL R-328 inbound to COL.
COL 2T	**23L**	

CHANGES: SIDs renumbered; SIDs rwys 05L/R revised.

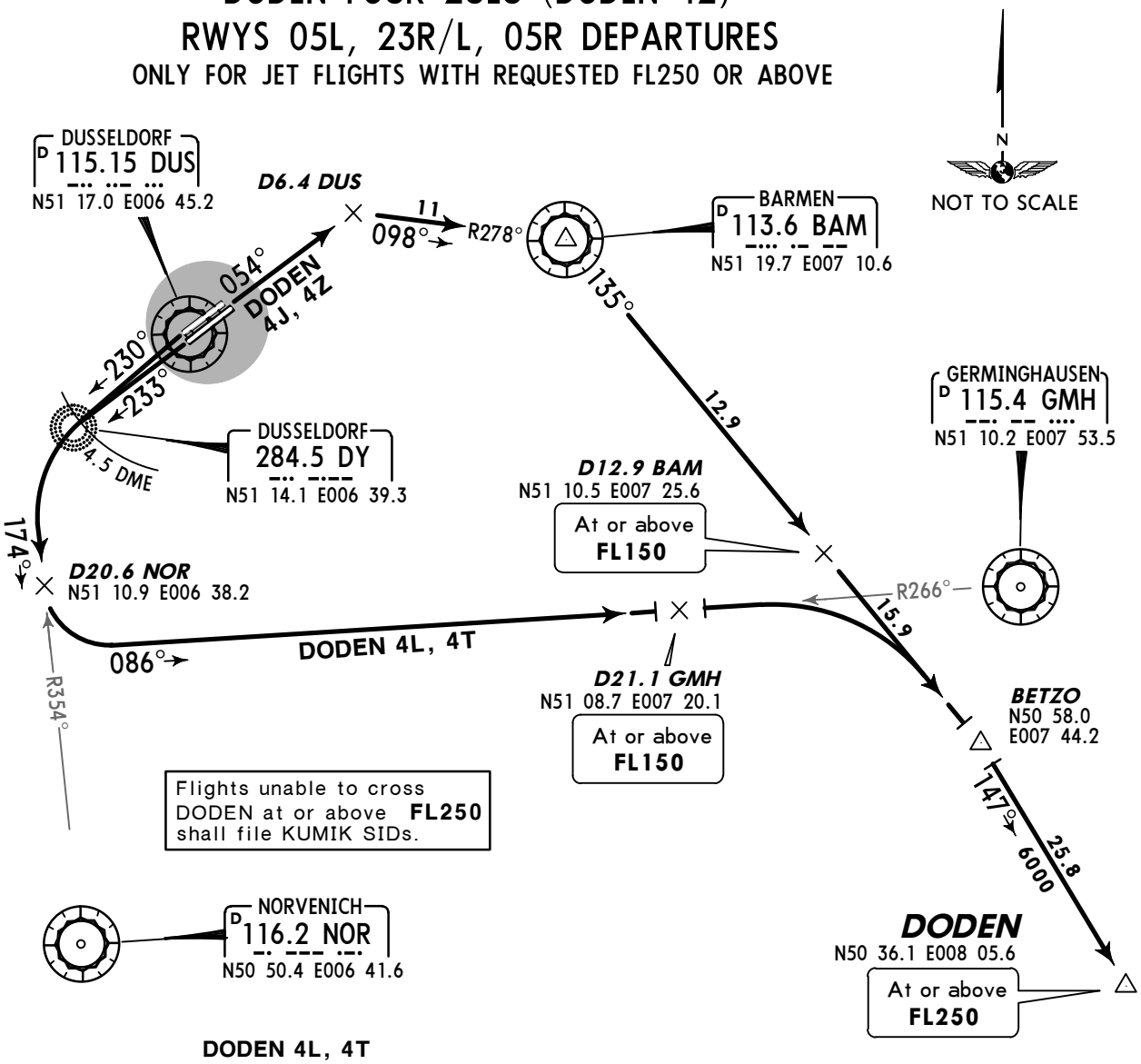
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*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

DODEN FOUR JULIETT (DODEN 4J)
DODEN FOUR LIMA (DODEN 4L)
DODEN FOUR TANGO (DODEN 4T)
DODEN FOUR ZULU (DODEN 4Z)
RWYS 05L, 23R/L, 05R DEPARTURES
ONLY FOR JET FLIGHTS WITH REQUESTED FL250 OR ABOVE



DODEN 4L, 4T

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

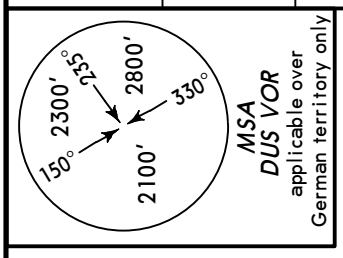
SID	RWY	ROUTING
DODEN 4J	**05L**	Intercept DUS R-054 to D6.4 DUS, turn RIGHT, intercept BAM R-278 inbound to BAM, BAM R-135 via D12.9 BAM ❶ to BETZO, turn RIGHT, 147° track to DODEN.
DODEN 4Z	**05R**	
DODEN 4L	**23R**	Intercept 230° bearing (Rwy 23R)/233° bearing (Rwy 23L) towards DY, at DUS 4.5 DME turn LEFT, intercept NOR R-354 inbound to D20.6 NOR, turn LEFT, intercept GMH R-266 inbound to D21.1 GMH ❷, turn RIGHT, intercept BAM R-135 to BETZO, turn RIGHT, 147° track to DODEN.
DODEN 4T	**23L**	

After D12.9 BAM ❶ /D21.1 GMH ❷ BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



GERMINGHAUSEN SIX LIMA (GMH 6L)
GERMINGHAUSEN SIX TANGO (GMH 6T)
GERMINGHAUSEN SIX YANKEE (GMH 6Y)
GERMINGHAUSEN THREE ZULU (GMH 3Z)
RWYS 23R/L, 05L/R DEPARTURES
ONLY FOR FLIGHTS WITH REQUESTED FL140 OR BELOW

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NOT TO SCALE

BARMEN
D 113.6 BAM
N51 19.7 E007 10.6

GERMINGHAUSEN
D 115.4 GMH
N51 10.2 E007 53.5

DUSSELDORF
D 115.15 DUS
N51 17.0 E006 45.2

DUSSELDORF
284.5 DY
N51 14.1 E006 39.3

NORVENICH
D 116.2 NOR
N50 50.4 E006 41.6

D6.6 BAM
N51 18.9
E007 21.1

D6.4 DUS

D20.6 NOR
N51 10.9 E006 38.2

D21.1 GMH

11 R278°
098°
6.6
096°
113°
6000
R293°
R266°
21.1
6000
GMH 6L, 6T
086°
174°
4.5 DME
R354°
230°
233°
054°
6Y, 3Z
GMH

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

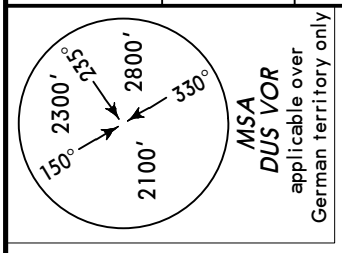
GMH 6L, 6T
These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3000′** due to airspace structure.

Initial climb clearance **5000′**		
SID	**RWY**	**ROUTING**
GMH 6L	**23R**	Intercept 230° bearing (Rwy 23R)/233° bearing (Rwy 23L) towards DY, at DUS 4.5 DME turn LEFT, intercept NOR R-354 inbound to D20.6 NOR, turn LEFT, intercept GMH R-266 inbound to GMH.
GMH 6T	**23L**	
GMH 6Y	**05L**	Intercept DUS R-054 to D6.4 DUS, turn RIGHT, intercept BAM R-278 inbound to BAM, BAM R-096 to D6.6 BAM, turn RIGHT, intercept GMH R-293 inbound to GMH.
GMH 3Z	**05R**	

CHANGES: SIDs renumbered & revised.

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*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over German territory only

KUMIK TWO JULIETT (KUMIK 2J)
KUMIK THREE LIMA (KUMIK 3L)
KUMIK THREE TANGO (KUMIK 3T)
KUMIK TWO ZULU (KUMIK 2Z)
RWYS 05L, 23R/L, 05R DEPARTURES

ONLY FOR FLIGHTS WITH
REQUESTED FL150 OR ABOVE

KUMIK 3L, 3T

These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

BARMEN
D 113.6 BAM
N51 19.7 E007 10.6

D6.6 BAM
N51 18.9
E007 21.1

DEGOM
N51 09.9
E007 40.4

GERMINGHAUSEN
D 115.4 GMH
N51 10.2 E007 53.5

KUMIK
N50 50.2
E008 04.4

D10 GMH
N51 09.5 E007 37.7

D21.1 GMH

D20.6 NOR
N51 10.9 E006 38.2

D6.4 DUS

DUSSELDORF
D 115.15 DUS
N51 17.0 E006 45.2

DUSSELDORF
284.5 DY
N51 14.1 E006 39.3

NOR 116.2

At or above FL150 ❶

At or above FL150

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ If unable to comply advise Delivery on start-up request.

Normally not available for flights above **FL250** via BOMBI, except Prop/Turbo Prop aircraft.

KUMIK 3L, 3T

11 R278° 098° 6.6 096°

129° 5000

11.1 6000

R266° 24.8 142° 6000

086° 174°

230° 235° 054° KUMIK 2J, 2Z

4.5 DME

R354°

N

NOT TO SCALE

Initial climb clearance **5000′**

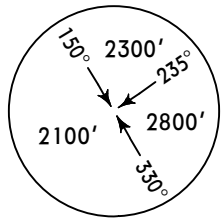
SID	RWY	ROUTING
KUMIK 2J	05L	Intercept DUS R-054 to D6.4 DUS, turn RIGHT, intercept BAM R-278 inbound to BAM, BAM R-096 to D6.6 BAM ❷, turn RIGHT, 129° track to DEGOM, turn RIGHT, 142° track to KUMIK.
KUMIK 2Z	05R	
KUMIK 3L	23R	Intercept 230° bearing (Rwy 23R)/233° bearing (Rwy 23L) towards DY, at DUS 4.5 DME turn LEFT, intercept NOR R-354 inbound to D20.6 NOR, turn LEFT, intercept GMH R-266 inbound to D10 GMH ❸, turn RIGHT, 142° track to KUMIK.
KUMIK 3T	23L	

After D6.6 BAM ❷/ D10 GMH ❸ BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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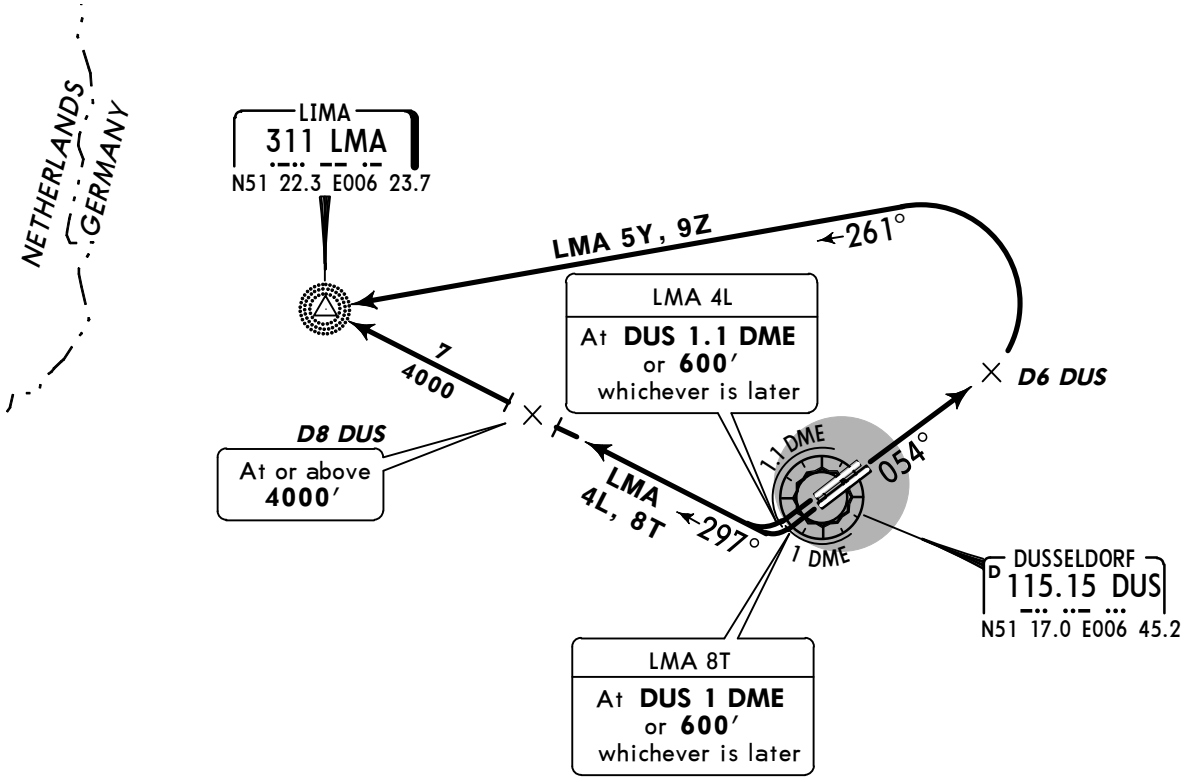
*LANGEN Radar 128.5	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

LIMA FOUR LIMA (LMA 4L)
LIMA EIGHT TANGO (LMA 8T)
LIMA FIVE YANKEE (LMA 5Y)
LIMA NINE ZULU (LMA 9Z)
RWYS 23R/L, 05L/R DEPARTURES
ONLY FOR FLIGHTS TO EDLN

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



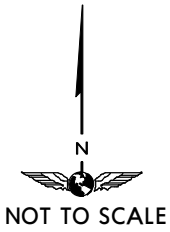
These SIDs require minimum climb gradients of

LMA 4L, 8T
407′ per NM (6.7%) due to airspace structure.

LMA 5Y, 9Z
425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127
407′ per NM	509	679	1018	1357	1696	2036

If unable to comply advise Delivery on start-up request.



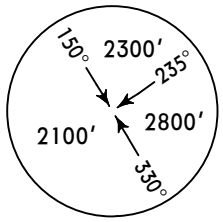
Initial climb clearance **5000′**

SID	RWY	ROUTING
LMA 4L	**23R**	Climb on runway track to DUS 1.1 DME (Rwy 23R)/DUS 1 DME (Rwy 24L) or **600′**, whichever is later, turn RIGHT, intercept 297° bearing to LMA.
LMA 8T	**23L**	
LMA 5Y	**05L**	Intercept DUS R-054 to D6 DUS, turn LEFT, intercept 261° bearing to LMA.
LMA 9Z	**05R**	

CHANGES: SIDs renumbered; SIDs rwys 05L/R revised; communications.

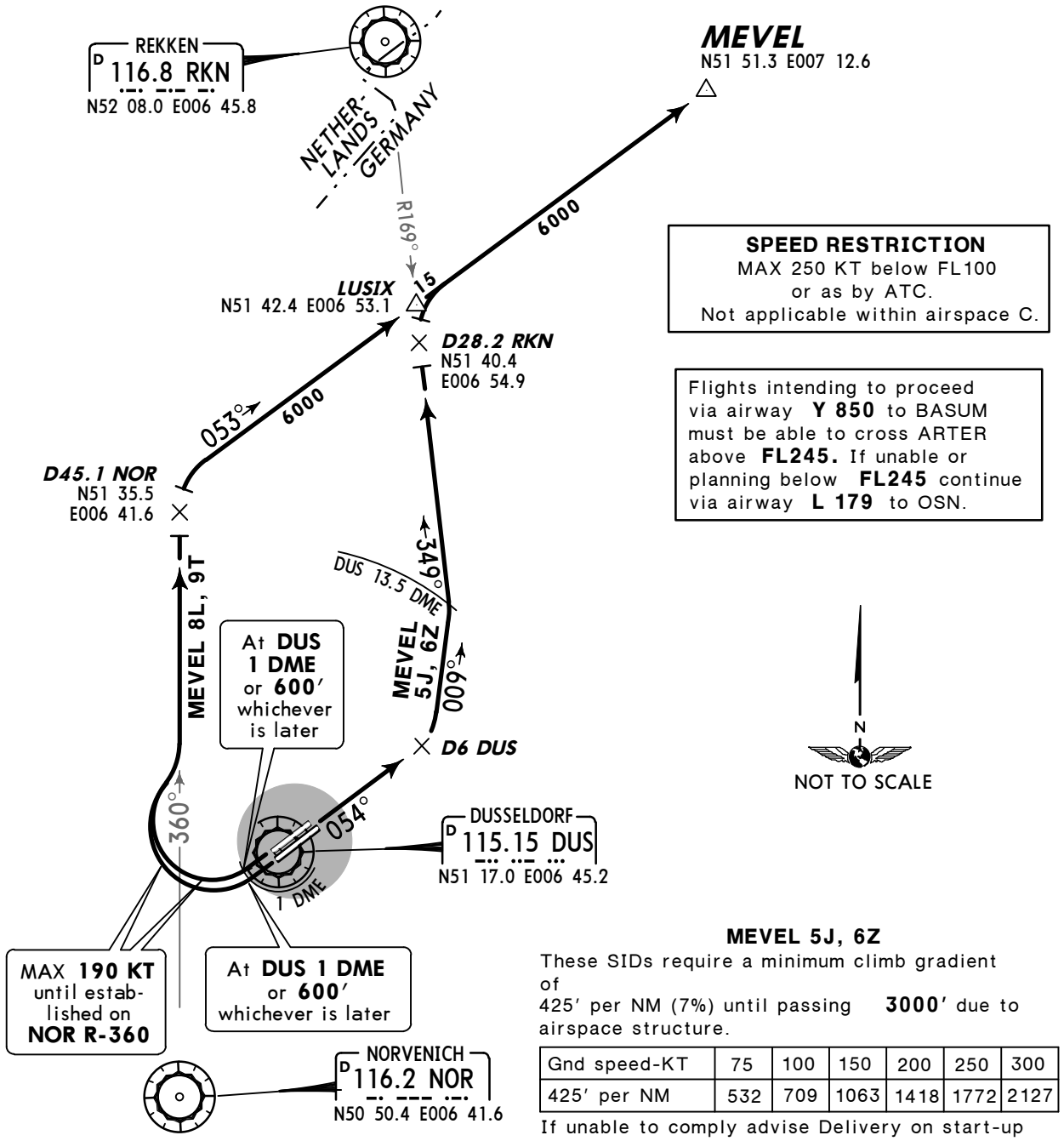
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*LANGEN Radar 128.5	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

MEVEL FIVE JULIETT (MEVEL 5J)
MEVEL EIGHT LIMA (MEVEL 8L)
MEVEL NINE TANGO (MEVEL 9T)
MEVEL SIX ZULU (MEVEL 6Z)
RWYS 05L, 23R/L, 05R DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Flights intending to proceed via airway **Y 850** to BASUM must be able to cross ARTER above **FL245.** If unable or planning below **FL245** continue via airway **L 179** to OSN.

MEVEL 5J, 6Z

These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

Initial climb clearance **5000′**

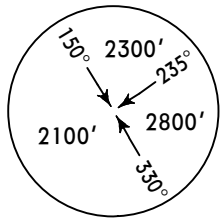
SID	RWY	ROUTING
MEVEL 5J	**05L**	Intercept DUS R-054 to D6 DUS, turn LEFT, 009° track to DUS 13.5 DME, turn LEFT, intercept RKN R-169 inbound to D28.2 RKN ❶, turn RIGHT, 053° track to MEVEL.
MEVEL 6Z	**05R**	
MEVEL 8L	**23R**	Climb on runway track to DUS 1 DME or **600′,** whichever is later, turn RIGHT, intercept NOR R-360 to D45.1 NOR ❷, turn RIGHT, 053° track via LUSIX to MEVEL.
MEVEL 9T	**23L**	

After D28.2 RKN ❶/D45.1 NOR ❷ BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised; communications.

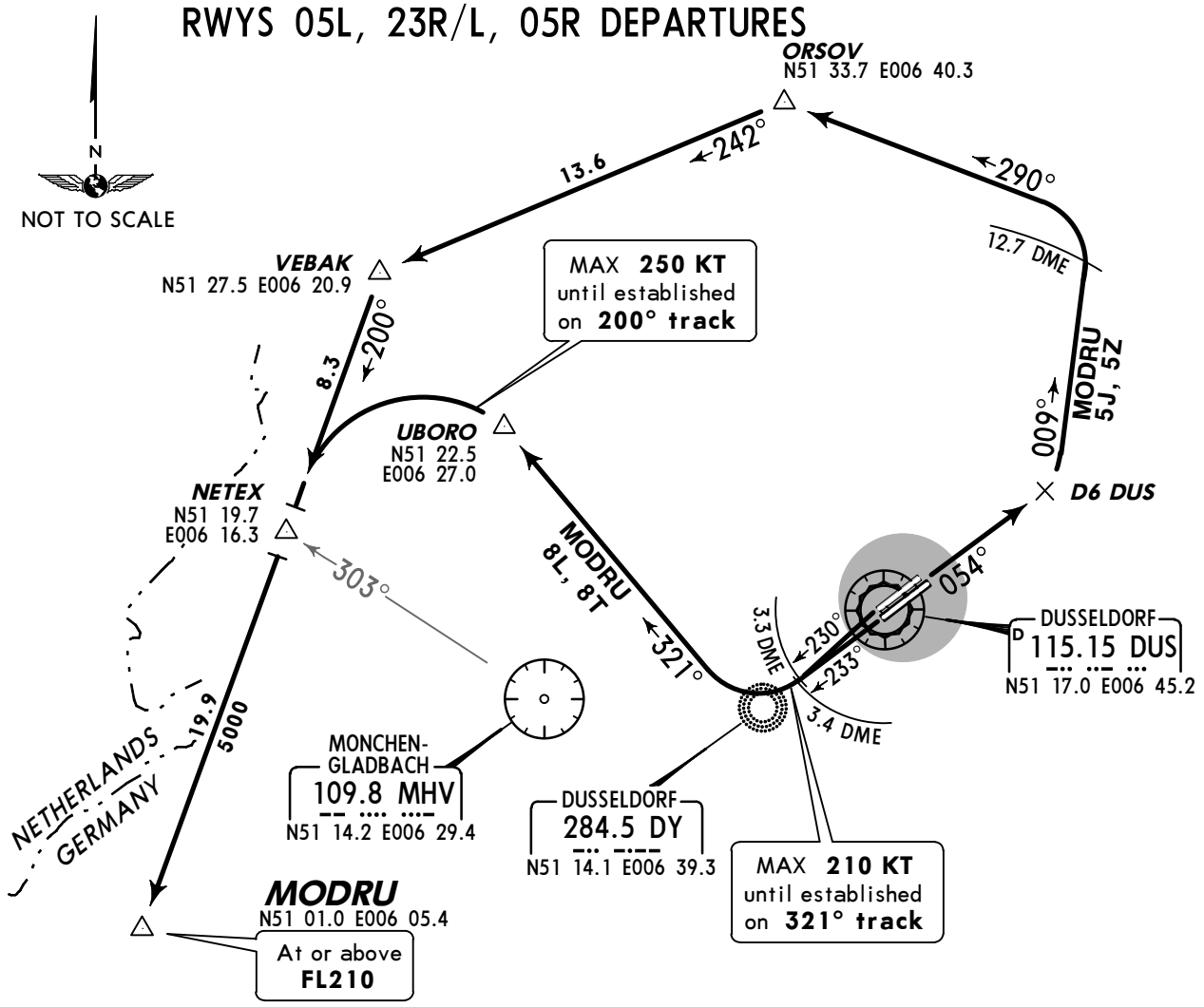
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*LANGEN Radar 128.5	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

MODRU FIVE JULIETT (MODRU 5J)
MODRU EIGHT LIMA (MODRU 8L)
MODRU EIGHT TANGO (MODRU 8T)
MODRU FIVE ZULU (MODRU 5Z)
RWYS 05L, 23R/L, 05R DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Only for flights with requested **FL210** and above. These flights have to be able to cross MODRU at or above **FL210.** If unable to comply advise Delivery on start-up request.

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

Initial climb clearance **5000′**

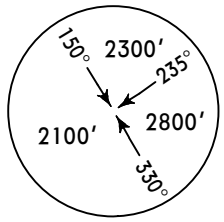
SID	RWY	ROUTING
MODRU 5J	**05L**	Intercept DUS R-054 to D6 DUS, turn LEFT, 009° track to DUS 12.7 DME ❶, turn LEFT, 290° track to ORSOV, turn LEFT, 242° track to VEBAK, turn LEFT, 200° track via NETEX to MODRU.
MODRU 5Z	**05R**	
MODRU 8L	**23R**	Intercept 230° bearing towards DY, at DUS 3.3 DME ❷, turn RIGHT, 321° track to UBORO, turn LEFT, 200° track via NETEX to MODRU.
MODRU 8T	**23L**	Intercept 233° bearing towards DY, at DUS 3.4 DME ❸, turn RIGHT, 321° track to UBORO, turn LEFT, 200° track via NETEX to MODRU.

After DUS 12.7 DME ❶ / DUS 3.3 DME ❷ / DUS 3.4 DME ❸ BRNAV equipment necessary.

CHANGES: SIDs renumbered; SIDs rwys 05L/R revised; communications.

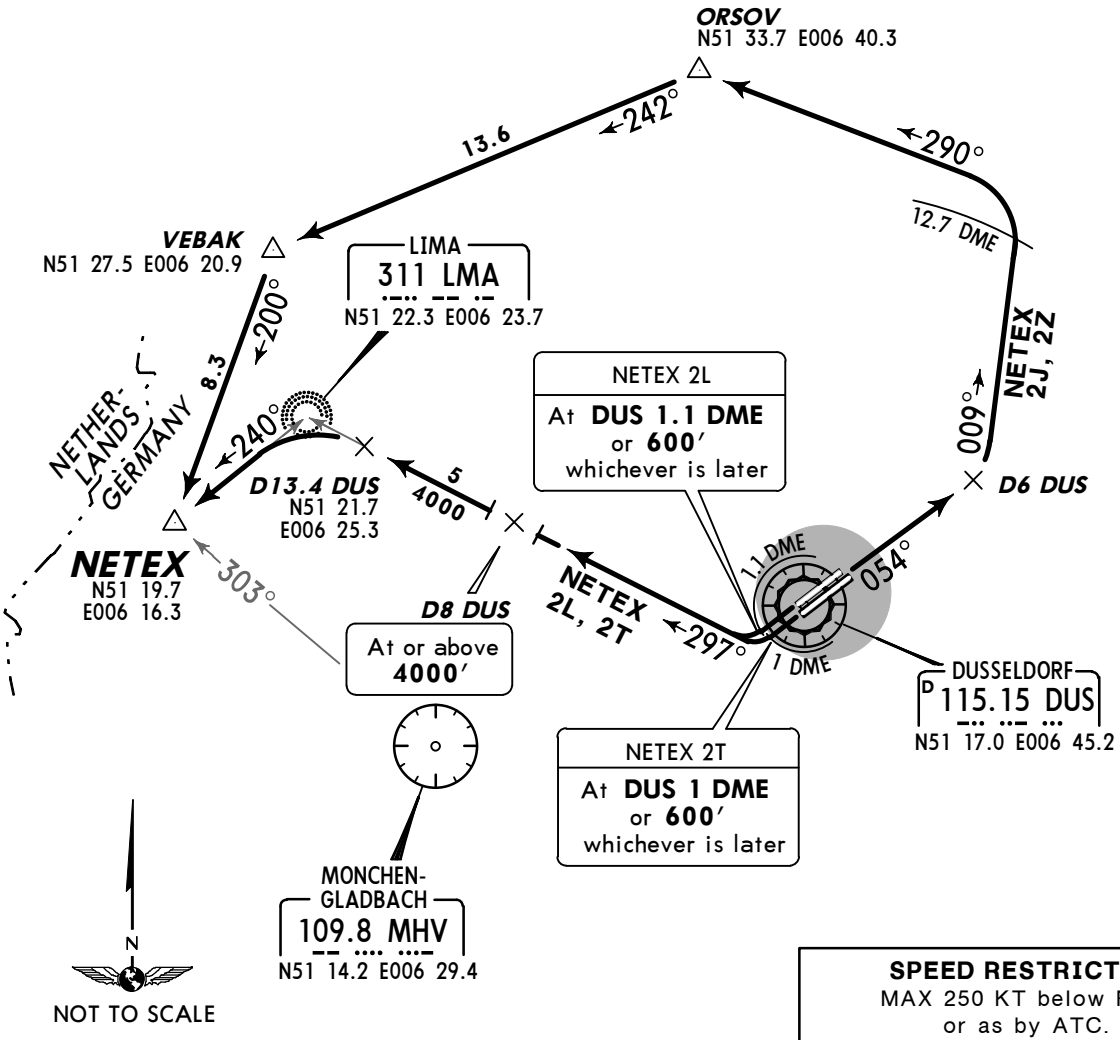
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*LANGEN Radar 128.5	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

NETEX TWO JULIETT (NETEX 2J)
NETEX TWO LIMA (NETEX 2L)
NETEX TWO TANGO (NETEX 2T)
NETEX TWO ZULU (NETEX 2Z)
RWYS 05L, 23R/L, 05R DEPARTURES
FOR FLIGHTS FROM REQUESTED FL100 TO FL200 OR
FOR FLIGHTS VIA AIRWAY Z 282 - DIBIR - AIRWAY L 179 (IF AVAILABLE)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of

NETEX 2J, 2Z
425′ per NM (7%) until passing **3000′** due to airspace structure.

NETEX 2L, 2T
407′ per NM (6.7%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127
407′ per NM	509	679	1018	1357	1696	2036

If unable to comply advise Delivery on start-up request.

Initial climb clearance **5000′**

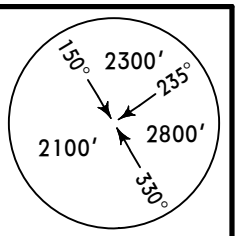
SID	RWY	ROUTING
NETEX 2J	**05L**	Intercept DUS R-054 to D6 DUS, turn LEFT, 009° track to DUS 12.7 DME ❶, turn LEFT, 290° track to ORSOV, turn LEFT, 242° track to VEBAK, turn LEFT, 200° track to NETEX.
NETEX 2Z	**05R**	
NETEX 2L	**23R**	Climb on runway track to DUS 1.1 DME (Rwy 23R)/DUS 1 DME (Rwy 23L) or **600′,** whichever is later, turn RIGHT, intercept 297° bearing towards LMA, at D13.4 DUS turn LEFT, intercept 240° bearing from LMA to NETEX.
NETEX 2T	**23L**	

❶ After DUS 12.7 DME BRNAV equipment necessary.

CHANGES: SIDs renumb; SIDs rwys 05L/R revised; chart reind; communications.

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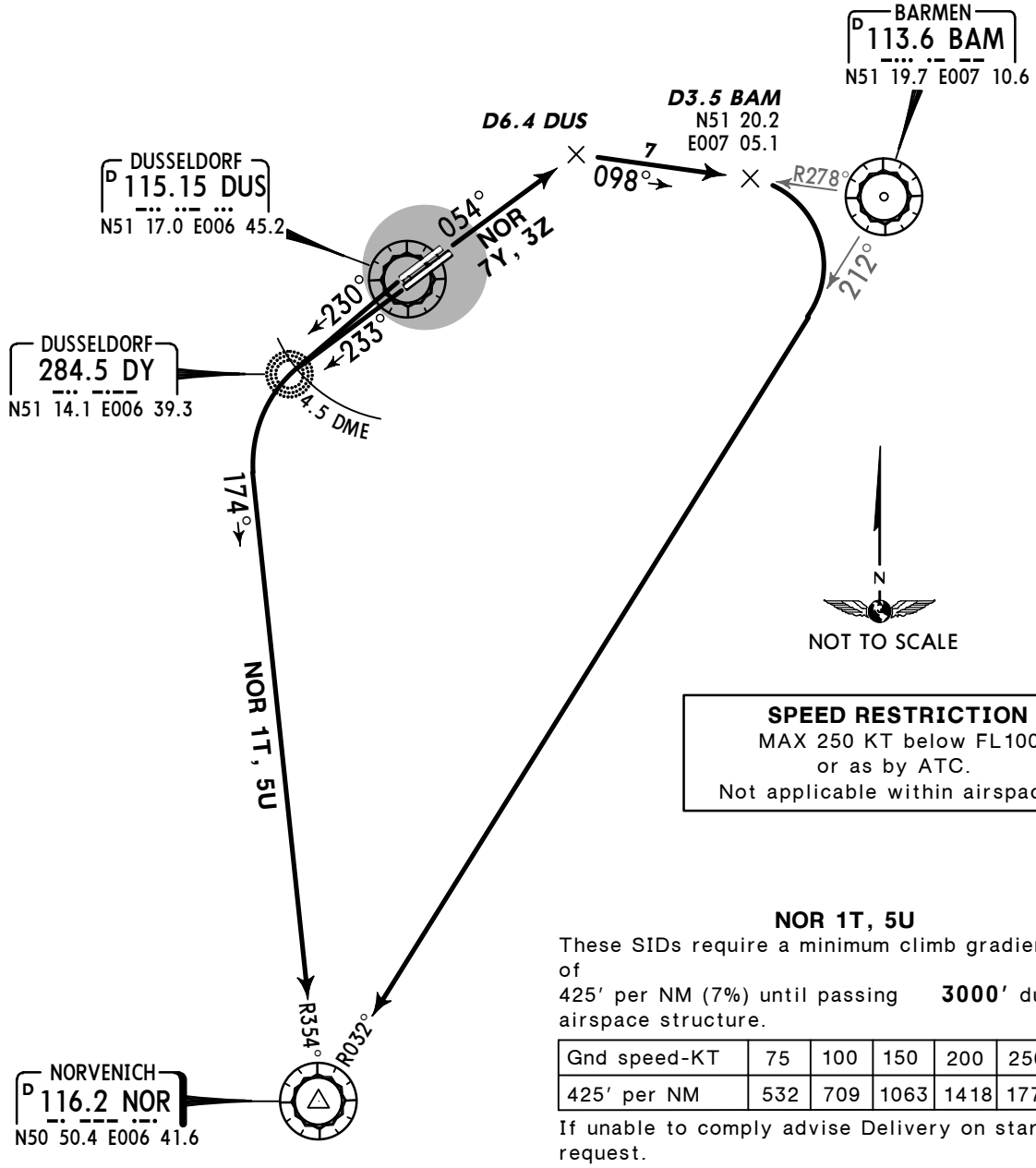
*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

NORVENICH ONE TANGO (NOR 1T)
NORVENICH FIVE UNIFORM (NOR 5U)
NORVENICH SEVEN YANKEE (NOR 7Y)
NORVENICH THREE ZULU (NOR 3Z)
RWYS 23L/R, 05L/R DEPARTURES

FOR FLIGHTS WITH REQUESTED FL90 OR BELOW
FLIGHTS WITH REQUESTED FL100 OR ABOVE SHALL FILE VIA MODRU
ALSO AVAILABLE FOR FLIGHTS VIA AIRWAY Q 760 BETWEEN 0600-0800LT



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NOR 1T, 5U
These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

Initial climb clearance **5000′**

SID	RWY	ROUTING
NOR 1T	23L	Intercept 233° bearing (Rwy 23L)/230° bearing (Rwy 23R) towards DY, at DUS 4.5 DME turn LEFT, intercept NOR R-354 inbound to NOR.
NOR 5U	23R	
NOR 7Y	05L	Intercept DUS R-054 to D6.4 DUS, turn RIGHT, intercept BAM R-278 inbound to D3.5 BAM, turn RIGHT, intercept BAM R-212 to NOR.
NOR 3Z	05R	

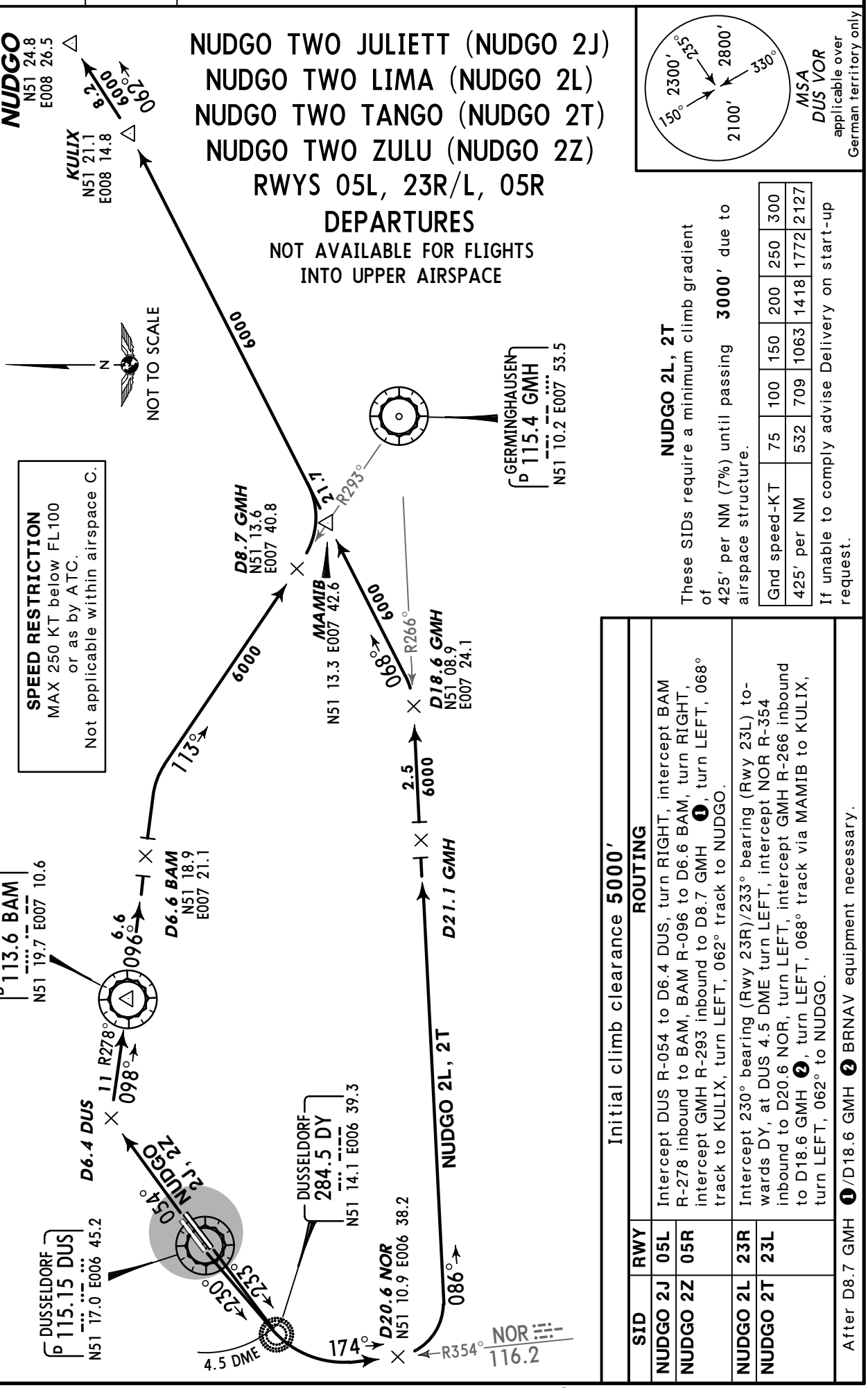
CHANGES: SIDs renumbered; SIDs rwys 05L/R revised; chart reindexed.

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*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

NUDGO TWO JULIETT (NUDGO 2J)
NUDGO TWO LIMA (NUDGO 2L)
NUDGO TWO TANGO (NUDGO 2T)
NUDGO TWO ZULU (NUDGO 2Z)
RWYS 05L, 23R/L, 05R
DEPARTURES

NOT AVAILABLE FOR FLIGHTS INTO UPPER AIRSPACE



NUDGO 2L, 2T

These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

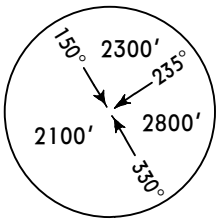
Initial climb clearance **5000′**

SID	RWY	ROUTING
NUDGO 2J	05L	Intercept DUS R-054 to D6.4 DUS, turn RIGHT, intercept BAM R-278 inbound to BAM, BAM R-096 to D6.6 BAM, turn RIGHT, intercept GMH R-293 inbound to D8.7 GMH ❶, turn LEFT, 068° track to KULIX, turn LEFT, 062° track to NUDGO.
NUDGO 2Z	05R	
NUDGO 2L	23R	Intercept 230° bearing (Rwy 23R)/233° bearing (Rwy 23L) towards DY, at DUS 4.5 DME turn LEFT, intercept NOR R-354 inbound to D20.6 NOR, turn LEFT, intercept GMH R-266 inbound to D18.6 GMH ❷, turn LEFT, 068° track via MAMIB to KULIX, turn LEFT, 062° to NUDGO.
NUDGO 2T	23L	

After D8.7 GMH ❶/D18.6 GMH ❷ BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised; chart reindexed.

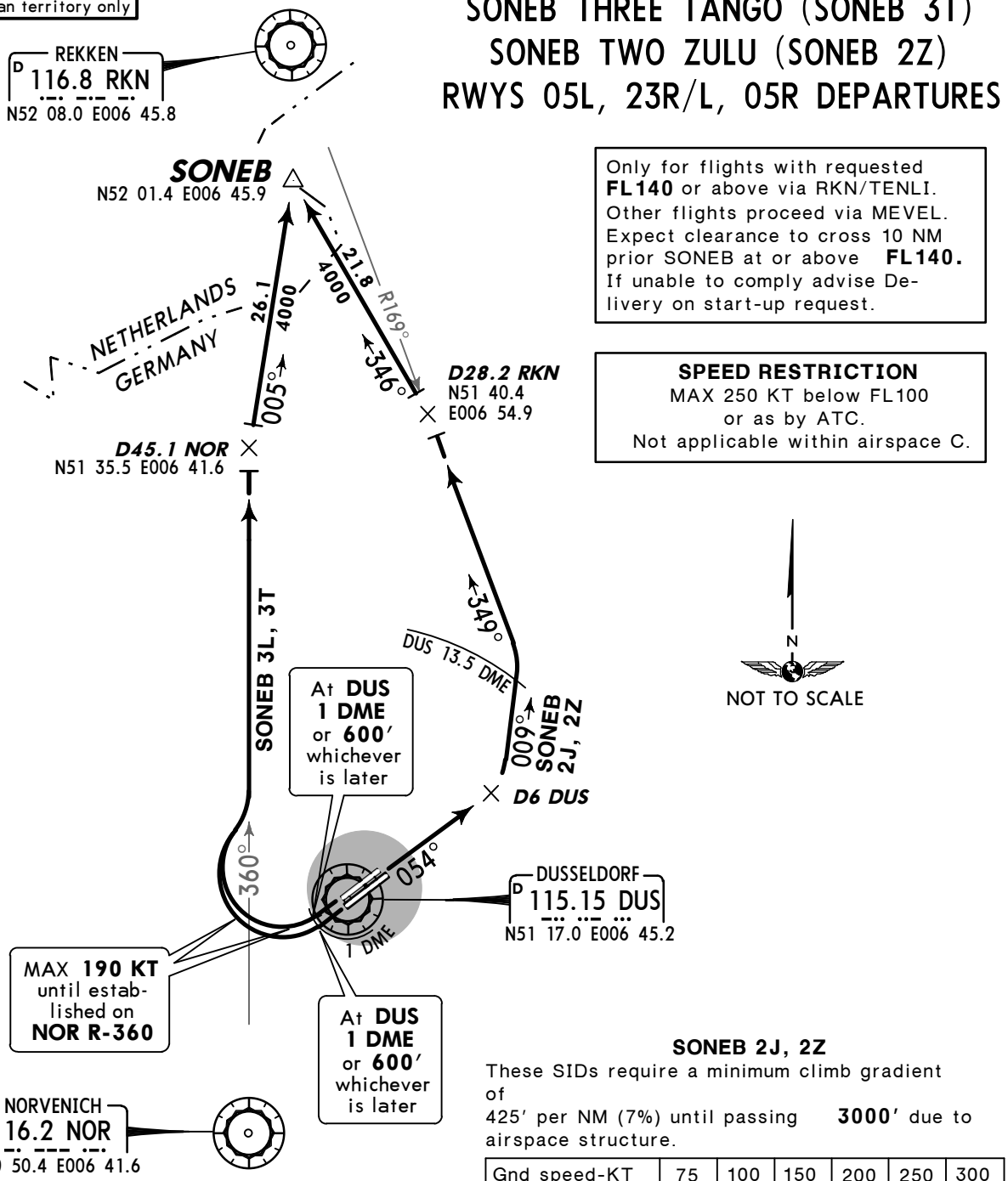
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MSA
DUS VOR
applicable over
German territory only

*LANGEN Radar 128.5	Apt Elev 147'	Trans level: By ATC Trans alt: 5000' 1. Remain on Tower frequency until passing 2000', then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

SONEB TWO JULIETT (SONEB 2J)
SONEB THREE LIMA (SONEB 3L)
SONEB THREE TANGO (SONEB 3T)
SONEB TWO ZULU (SONEB 2Z)
RWYS 05L, 23R/L, 05R DEPARTURES



Only for flights with requested **FL140** or above via RKN/TENLI. Other flights proceed via MEVEL. Expect clearance to cross 10 NM prior SONEB at or above **FL140.** If unable to comply advise Delivery on start-up request.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NOT TO SCALE

SONEB 2J, 2Z

These SIDs require a minimum climb gradient of
425' per NM (7%) until passing **3000'** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425' per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

Initial climb clearance **5000'**

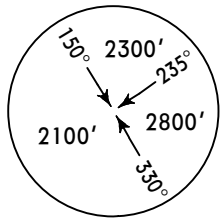
SID	RWY	ROUTING
SONEB 2J	**05L**	Intercept DUS R-054 to D6 DUS turn LEFT, 009° track to DUS 13.5 DME, turn LEFT, intercept RKN R-169 inbound to D28.2 RKN ❶, turn LEFT, 346° track to SONEB.
SONEB 2Z	**05R**	
SONEB 3L	**23R**	Climb on runway track to DUS 1 DME or **600',** whichever is later, turn RIGHT, intercept NOR R-360 to D45.1 NOR ❷, turn RIGHT, 005° track to SONEB.
SONEB 3T	**23L**	

After D28.2 RKN ❶/D45.1 NOR ❷ BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised; chart reindexed; communications.

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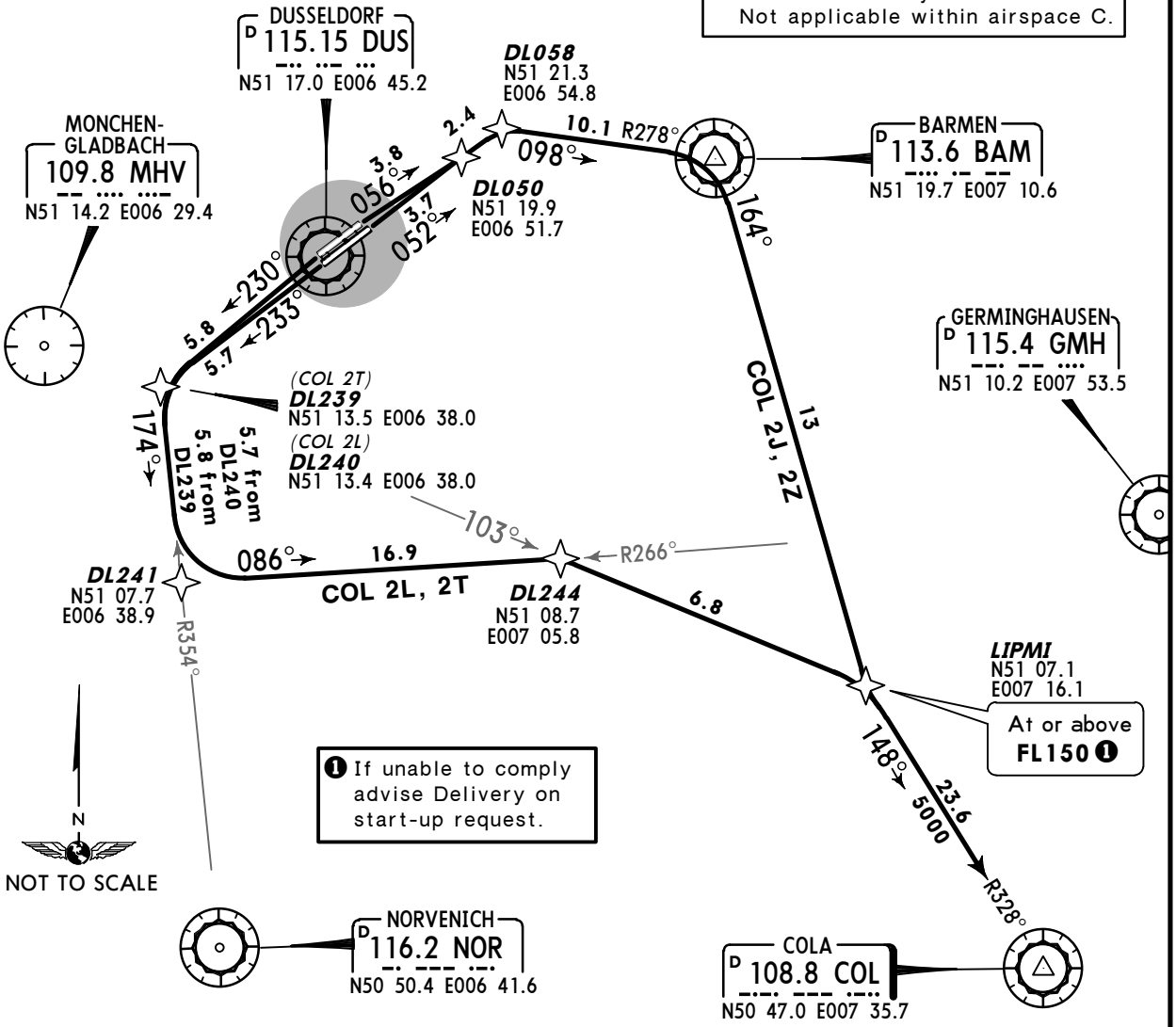
*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

COLA TWO JULIETT (COL 2J)
COLA TWO LIMA (COL 2L)
COLA TWO TANGO (COL 2T)
COLA TWO ZULU (COL 2Z)
RWYS 05L, 23R/L, 05R
RNAV DEPARTURES (OVERLAY 10-3)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



COL 2L, 2T
These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

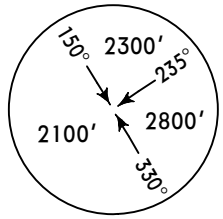
Initial climb clearance **5000′**

SID	RWY	ROUTING
COL 2J	**05L**	**(600′+)** - DL050 - DL058 - BAM - LIPMI **(FL150+)** - COL.
COL 2L	**23R**	**(600′+)** - DL240 - DL241 - DL244 - LIPMI **(FL150+)** - COL.
COL 2T	**23L**	**(600′+)** - DL239 - DL241 - DL244 - LIPMI **(FL150+)** - COL.
COL 2Z	**05R**	**(600′+)** - DL050 - DL058 - BAM - LIPMI **(FL150+)** - COL.

CHANGES: RNAV SIDs renumbered & revised; chart reindexed.

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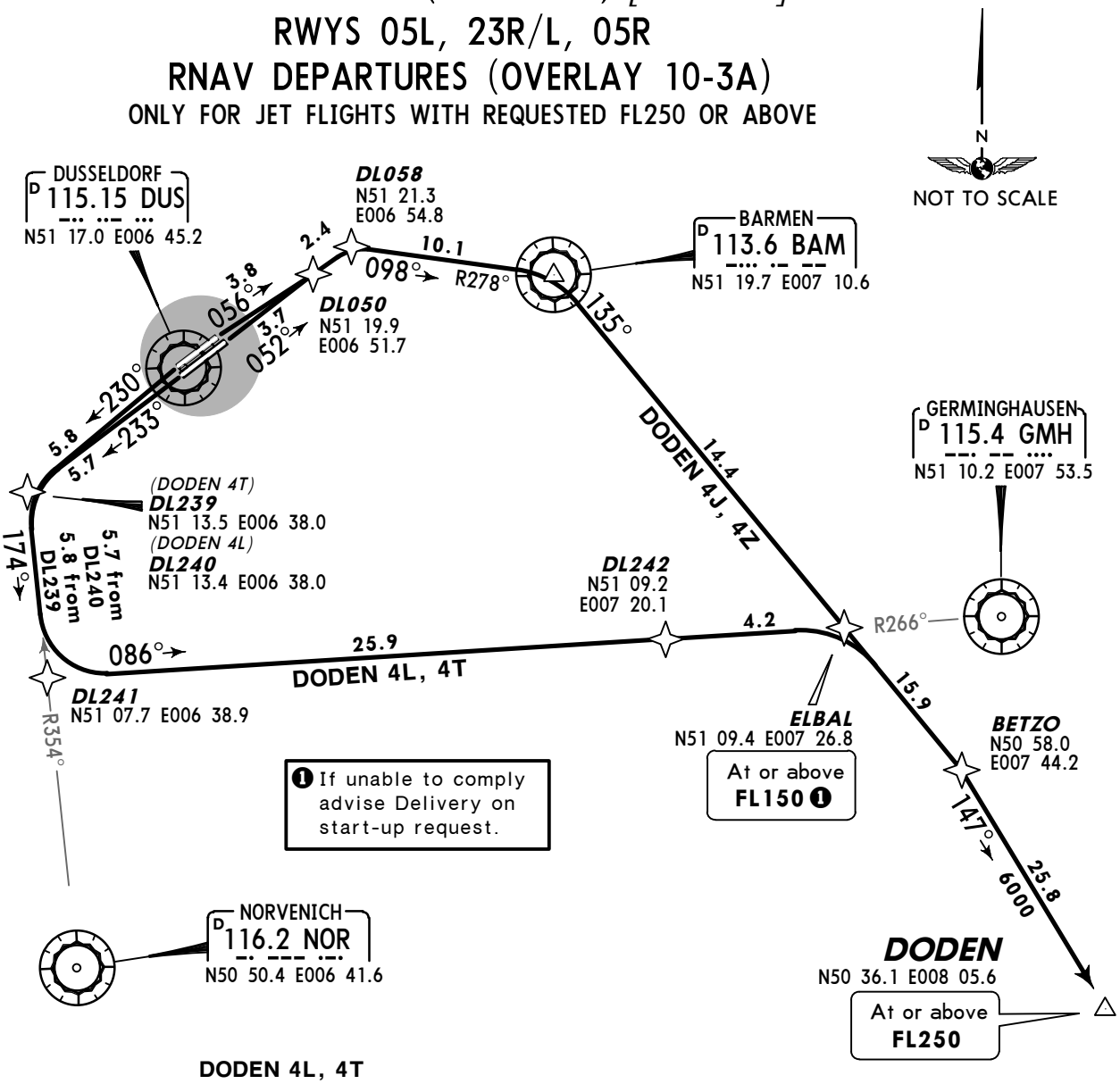
*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

DODEN FOUR JULIETT (DODEN 4J) *[DODE4J]*
DODEN FOUR LIMA (DODEN 4L) *[DODE4L]*
DODEN FOUR TANGO (DODEN 4T) *[DODE4T]*
DODEN FOUR ZULU (DODEN 4Z) *[DODE4Z]*
RWYS 05L, 23R/L, 05R
RNAV DEPARTURES (OVERLAY 10-3A)

ONLY FOR JET FLIGHTS WITH REQUESTED FL250 OR ABOVE



DODEN 4L, 4T

These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

Flights unable to cross DODEN at or above **FL250** shall file KUMIK RNAV SIDs.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

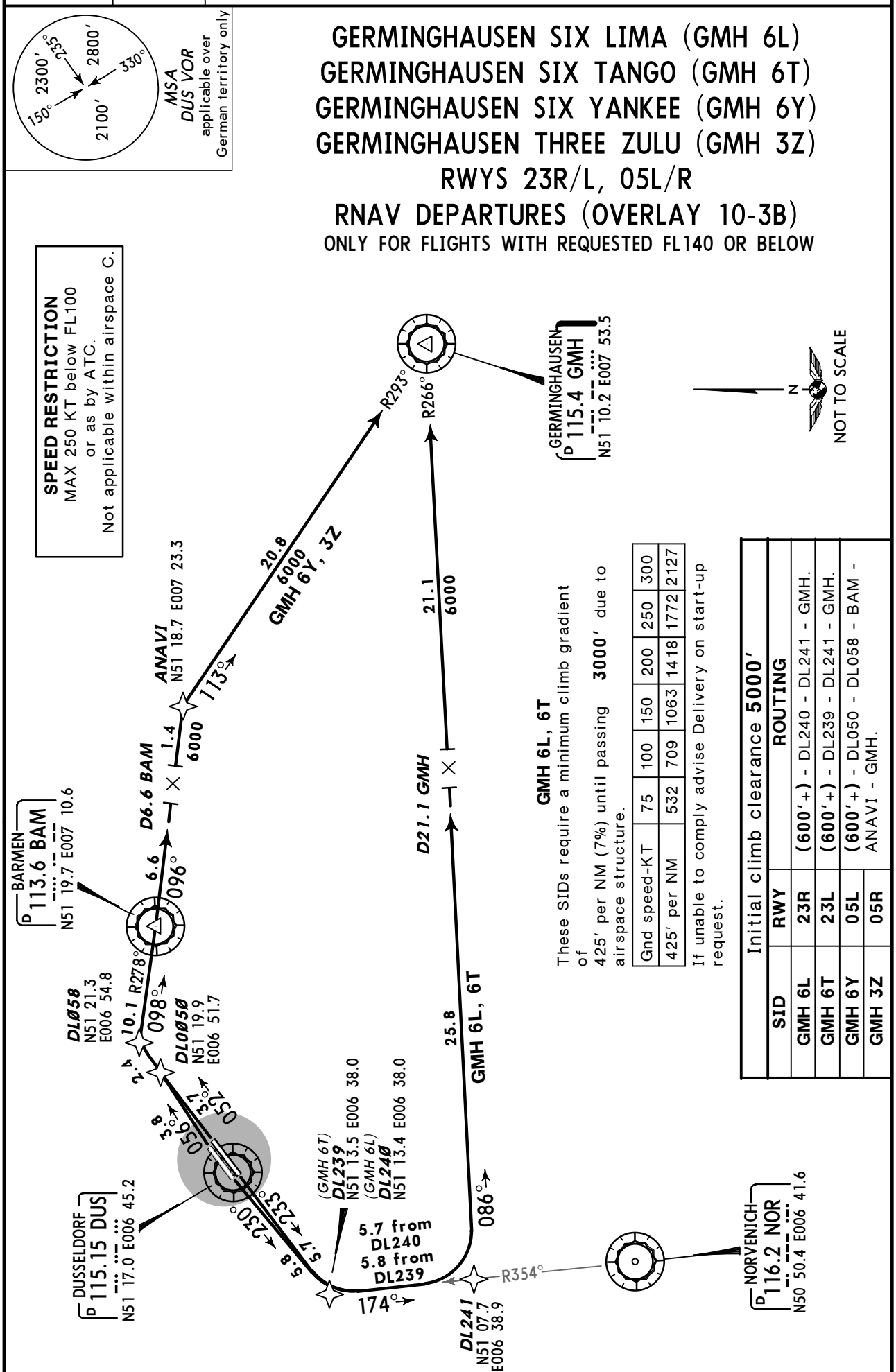
SID	RWY	ROUTING
DODEN 4J	**05L**	**(600′+)** - DL050 - DL058 - BAM - ELBAL **(FL150+) -** BETZO - DODEN **(FL250+).**
DODEN 4Z	**05R**	
DODEN 4L	**23R**	**(600′+)** - DL240 - DL241 - DL242 - ELBAL **(FL150+) -** BETZO - DODEN **(FL250+).**
DODEN 4T	**23L**	**(600′+)** - DL239 - DL241 - DL242 - ELBAL **(FL150+) -** BETZO - DODEN **(FL250+).**

CHANGES: RNAV SIDs renumbered & revised; chart reindexed.

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*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

GERMINGHAUSEN SIX LIMA (GMH 6L)
GERMINGHAUSEN SIX TANGO (GMH 6T)
GERMINGHAUSEN SIX YANKEE (GMH 6Y)
GERMINGHAUSEN THREE ZULU (GMH 3Z)
RWYS 23R/L, 05L/R
RNAV DEPARTURES (OVERLAY 10-3B)
ONLY FOR FLIGHTS WITH REQUESTED FL140 OR BELOW



GMH 6L, 6T

These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

Initial climb clearance **5000′**		
SID	**RWY**	**ROUTING**
GMH 6L	**23R**	**(600′+)** - DL240 - DL241 - GMH.
GMH 6T	**23L**	**(600′+)** - DL239 - DL241 - GMH.
GMH 6Y	**05L**	**(600′+)** - DL050 - DL058 - BAM - ANAVI - GMH.
GMH 3Z	**05R**	

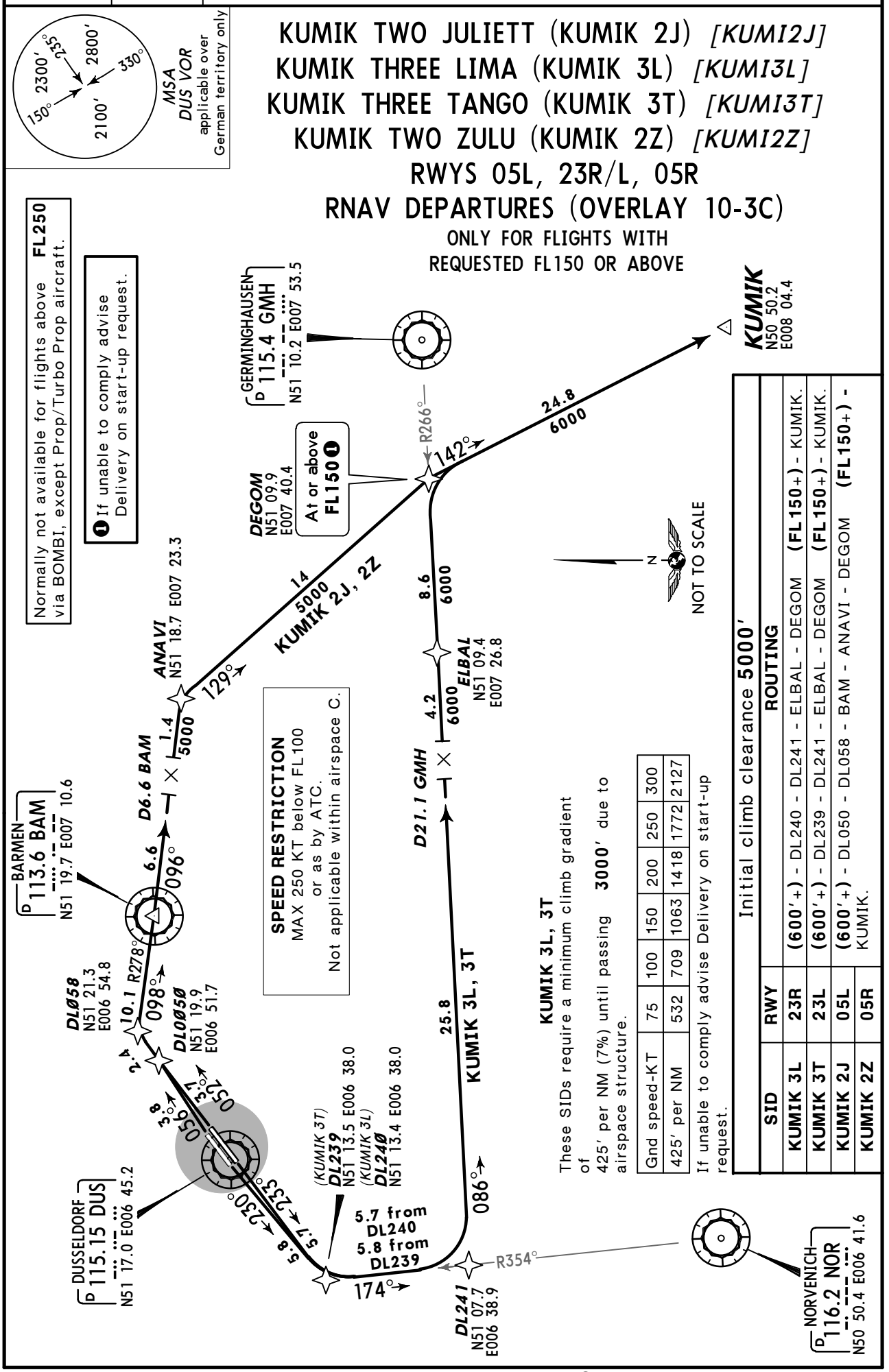
CHANGES: RNAV SIDs renumbered & revised; chart reindexed.

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*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

KUMIK TWO JULIETT (KUMIK 2J) *[KUMI2J]*
KUMIK THREE LIMA (KUMIK 3L) *[KUMI3L]*
KUMIK THREE TANGO (KUMIK 3T) *[KUMI3T]*
KUMIK TWO ZULU (KUMIK 2Z) *[KUMI2Z]*
RWYS 05L, 23R/L, 05R
RNAV DEPARTURES (OVERLAY 10-3C)

ONLY FOR FLIGHTS WITH
REQUESTED FL150 OR ABOVE



KUMIK 3L, 3T

These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

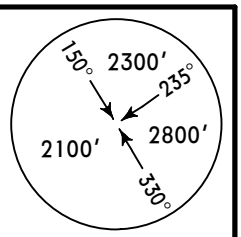
If unable to comply advise Delivery on start-up request.

Initial climb clearance **5000′**

SID	RWY	ROUTING
KUMIK 3L	23R	(600′+) - DL240 - DL241 - ELBAL - DEGOM **(FL150+)** - KUMIK.
KUMIK 3T	23L	(600′+) - DL239 - DL241 - ELBAL - DEGOM **(FL150+)** - KUMIK.
KUMIK 2J	05L	(600′+) - DL050 - DL058 - BAM - ANAVI - DEGOM **(FL150+)** - KUMIK.
KUMIK 2Z	05R	

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*LANGEN Radar 128.5	*Apt Elev* 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

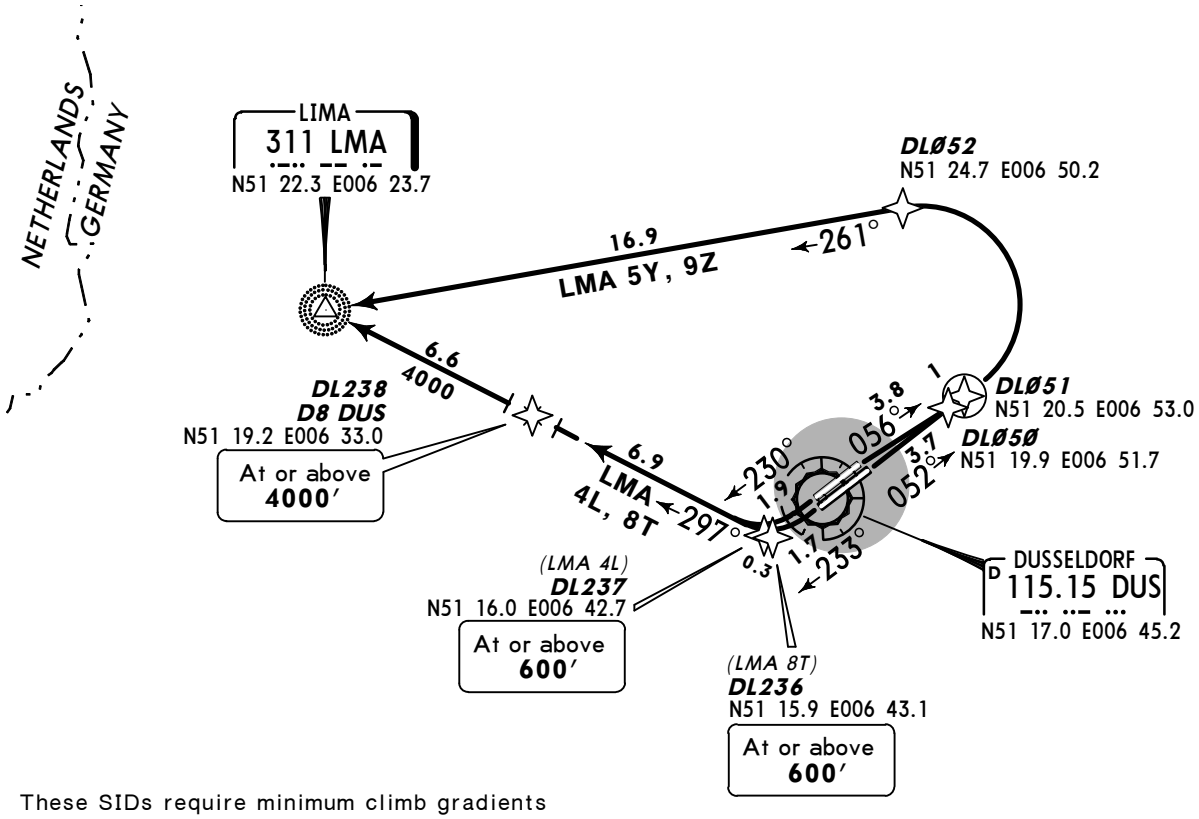


MSA
DUS VOR
applicable over
German territory only

LIMA FOUR LIMA (LMA 4L)
LIMA EIGHT TANGO (LMA 8T)
LIMA FIVE YANKEE (LMA 5Y)
LIMA NINE ZULU (LMA 9Z)
RWYS 23R/L, 05L/R
RNAV DEPARTURES (OVERLAY 10-3D)

ONLY FOR FLIGHTS TO EDLN

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

LMA 4L, 8T
407′ per NM (6.7%) due to airspace structure.

LMA 5Y, 9Z
425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
407′ per NM	509	679	1018	1357	1696	2036
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.



NOT TO SCALE

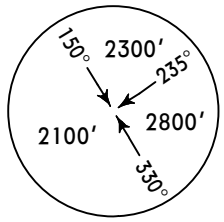
Initial climb clearance **5000′**

SID	RWY	ROUTING
LMA 4L	**23R**	DL237 **(600′+)** - DL238 **(4000′+)** - LMA.
LMA 8T	**23L**	DL236 **(600′+)** - DL238 **(4000′+)** - LMA.
LMA 5Y	**05L**	**(600′+)** - DL050 - DL051 - DL052 - LMA.
LMA 9Z	**05R**	

CHANGES: RNAV SIDs renumbered & revised; chart reindexed; communications.

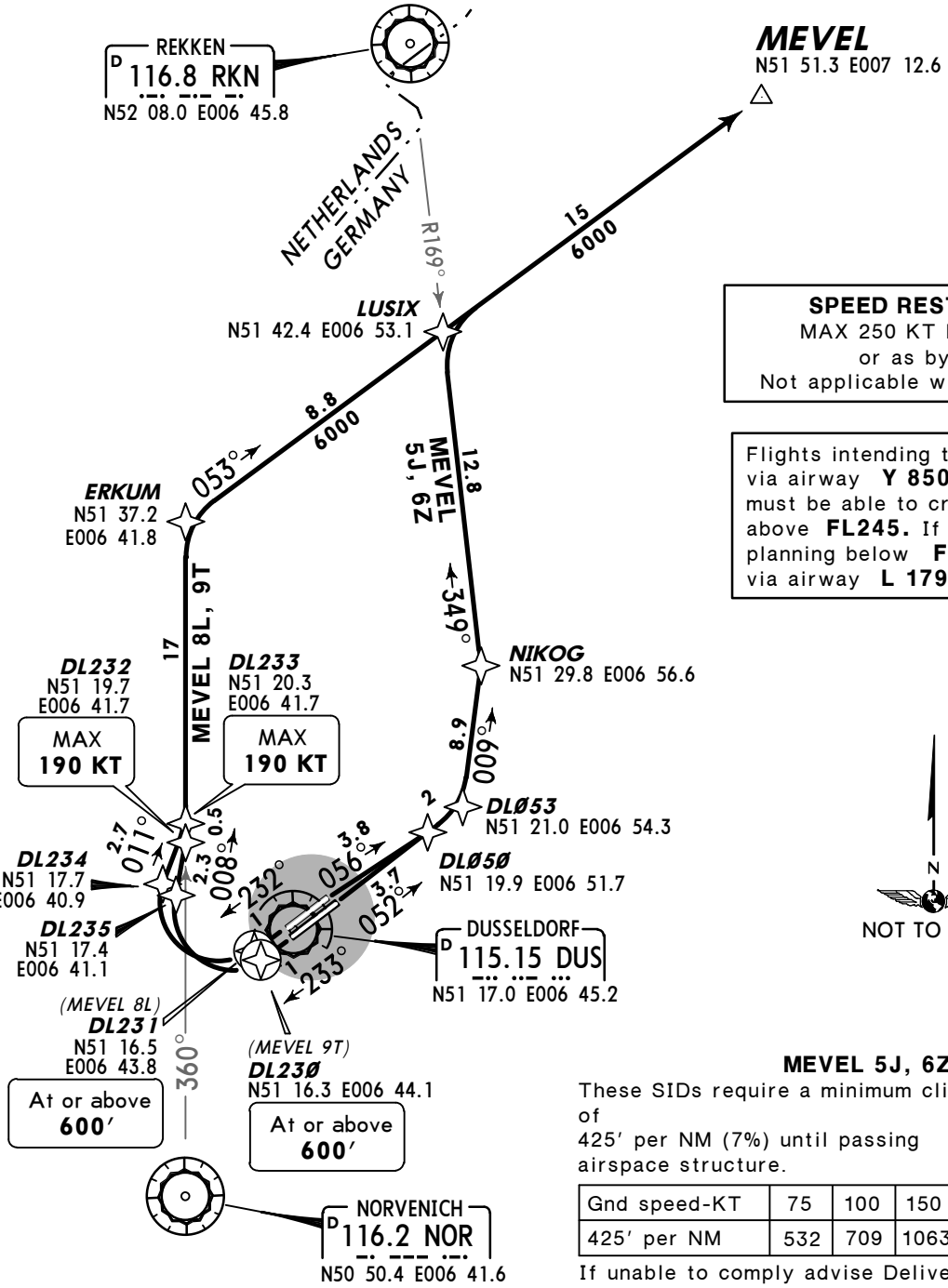
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*LANGEN Radar 128.5	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



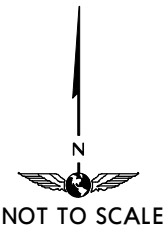
MSA
DUS VOR
applicable over German territory only

MEVEL FIVE JULIETT (MEVEL 5J) *[MEVE5J]*
MEVEL EIGHT LIMA (MEVEL 8L) *[MEVE8L]*
MEVEL NINE TANGO (MEVEL 9T) *[MEVE9T]*
MEVEL SIX ZULU (MEVEL 6Z) *[MEVE6Z]*
RWYS 05L, 23R/L, 05R
RNAV DEPARTURES (OVERLAY 10-3E)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Flights intending to proceed via airway **Y 850** to BASUM must be able to cross ARTER above **FL245.** If unable or planning below **FL245** continue via airway **L 179** to OSN.



MEVEL 5J, 6Z

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

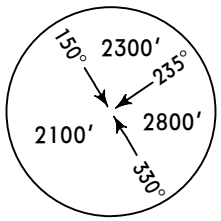
Initial climb clearance **5000′**

SID	RWY	ROUTING
MEVEL 5J	**05L**	**(600′+)** - DL050 - DL053 - NIKOG - LUSIX - MEVEL.
MEVEL 8L	**23R**	DL231 **(600′+)** - DL234 - DL233 (K190-) - ERKUM - LUSIX - MEVEL.
MEVEL 9T	**23L**	DL230 **(600′+)** - DL235 - DL232 (K190-) - ERKUM - LUSIX - MEVEL.
MEVEL 6Z	**05R**	**(600′+)** - DL050 - DL053 - NIKOG - LUSIX - MEVEL.

CHANGES: RNAV SIDs renumbered & revised; chart reindexed; communications.

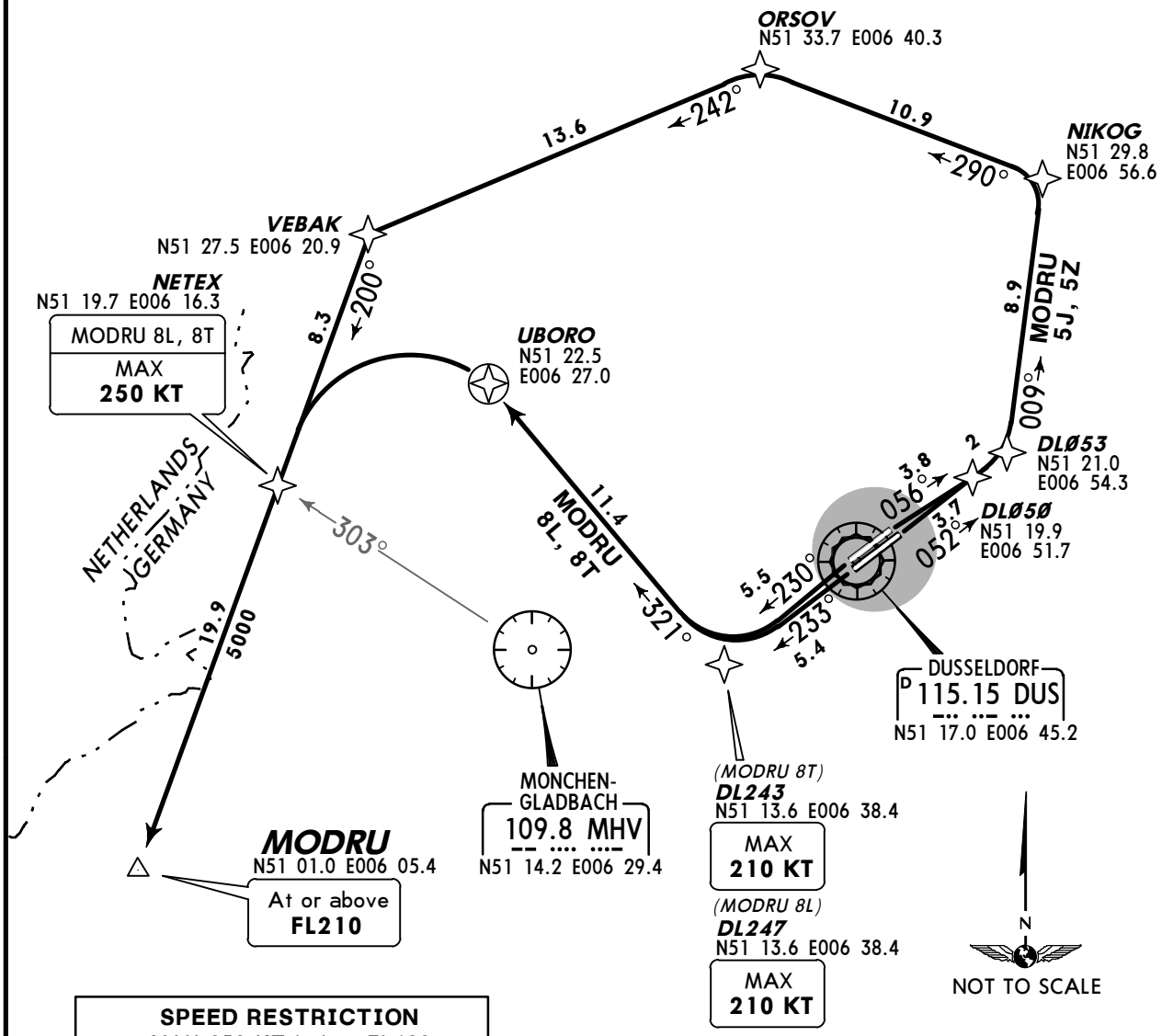
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*LANGEN Radar 128.5	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

MODRU FIVE JULIETT (MODRU 5J) *[MODR5J]*
MODRU EIGHT LIMA (MODRU 8L) *[MODR8L]*
MODRU EIGHT TANGO (MODRU 8T) *[MODR8T]*
MODRU FIVE ZULU (MODRU 5Z) *[MODR5Z]*
RWYS 05L, 23R/L, 05R
RNAV DEPARTURES (OVERLAY 10-3F)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Only for flights with requested **FL210** and above. These flights have to be able to cross MODRU at or above **FL210.** If unable to comply advise Delivery on start-up request.

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

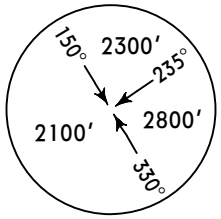
Initial climb clearance **5000′**

SID	RWY	ROUTING
MODRU 5J	**05L**	**(600′+)** - DL050 - DL053 - NIKOG - ORSOV - VEBAK - NETEX - MODRU **(FL210+).**
MODRU 5Z	**05R**	
MODRU 8L	**23R**	**(600′+)** - DL247 (K210-) - UBORO - NETEX (K250-) - MODRU **(FL210+).**
MODRU 8T	**23L**	**(600′+)** - DL243 (K210-) - UBORO - NETEX (K250-) - MODRU **(FL210+).**

CHANGES: RNAV SIDs renumbered & revised; chart reindexed; communications.

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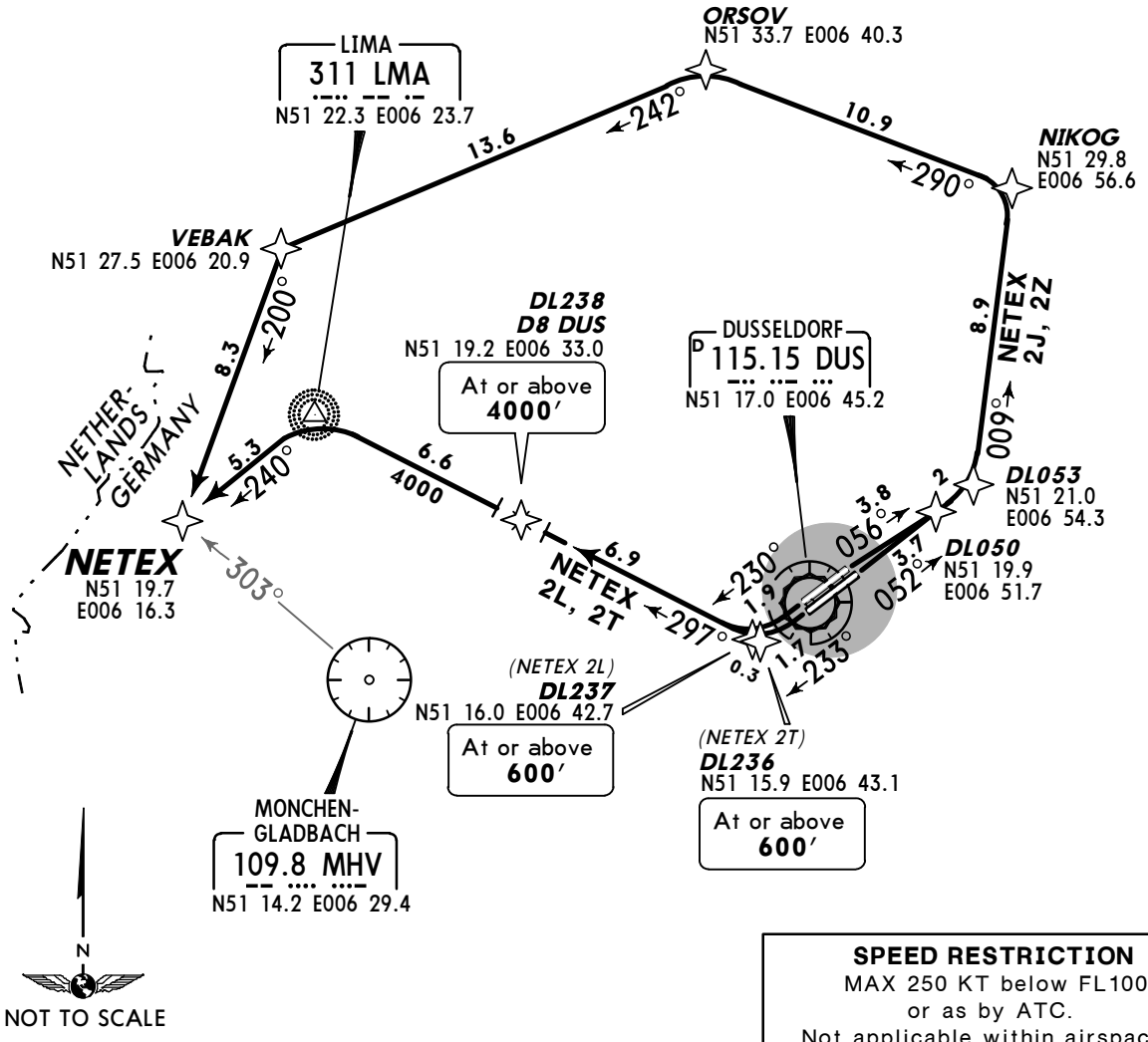
*LANGEN Radar 128.5	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

NETEX TWO JULIETT (NETEX 2J) *[NETE2J]*
NETEX TWO LIMA (NETEX 2L) *[NETE2L]*
NETEX TWO TANGO (NETEX 2T) *[NETE2T]*
NETEX TWO ZULU (NETEX 2Z) *[NETE2Z]*
RWYS 05L, 23R/L, 05R
RNAV DEPARTURES (OVERLAY 10-3G)

FOR FLIGHTS FROM REQUESTED FL100 TO FL200 OR
FOR FLIGHTS VIA AIRWAY Z 282 - DIBIR - AIRWAY L 179 (IF AVAILABLE)



NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of

NETEX 2J, 2Z
425′ per NM (7%) until passing **3000′** due to airspace structure.

NETEX 2L, 2T
407′ per NM (6.7%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127
407′ per NM	509	679	1018	1357	1696	2036

If unable to comply advise Delivery on start-up request.

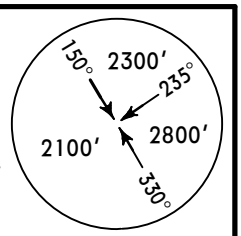
Initial climb clearance **5000′**

SID	RWY	ROUTING
NETEX 2J	**05L**	**(600′+)** - DL050 - DL053 - NIKOG - ORSOV - VEBAK - NETEX.
NETEX 2L	**23R**	DL237 **(600′+)** - DL238 **(4000′+)** - LMA - NETEX.
NETEX 2T	**23L**	DL236 **(600′+)** - DL238 **(4000′+)** - LMA - NETEX.
NETEX 2Z	**05R**	**(600′+)** - DL050 - DL053 - NIKOG - ORSOV - VEBAK - NETEX.

CHANGES: RNAV SIDs renumbered & revised; chart reindexed; communications.

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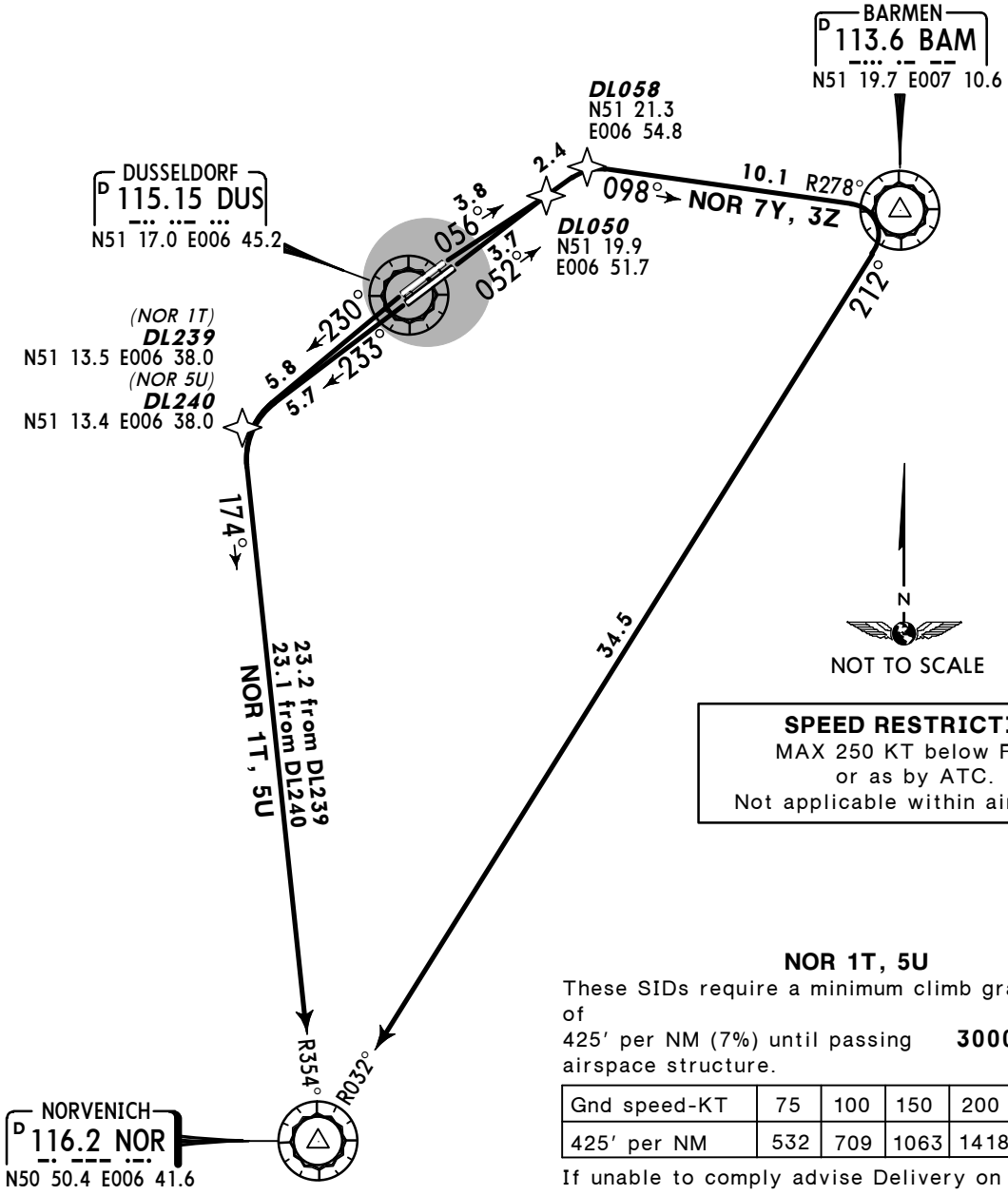
*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

NORVENICH ONE TANGO (NOR 1T)
NORVENICH FIVE UNIFORM (NOR 5U)
NORVENICH SEVEN YANKEE (NOR 7Y)
NORVENICH THREE ZULU (NOR 3Z)
RWYS 23L/R, 05L/R
RNAV DEPARTURES (OVERLAY 10-3H)

FOR FLIGHTS WITH REQUESTED FL90 OR BELOW
FLIGHTS WITH REQUESTED FL100 OR ABOVE SHALL FILE VIA MODRU
ALSO AVAILABLE FOR FLIGHTS VIA AIRWAY Q 760 BETWEEN 0600-0800LT



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NOR 1T, 5U
These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

Initial climb clearance **5000′**

SID	RWY	ROUTING
NOR 1T	**23L**	**(600′+)** - DL239 - NOR.
NOR 5U	**23R**	**(600′+)** - DL240 - NOR.
NOR 7Y	**05L**	**(600′+)** - DL050 - DL058 - BAM - NOR.
NOR 3Z	**05R**	

CHANGES: RNAV SIDs renumbered & rebised; chart reindexed.

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*LANGEN Radar 133.77	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

NUDGO TWO JULIETT (NUDGO 2J) *[NUDG2J]*
NUDGO TWO LIMA (NUDGO 2L) *[NUDG2L]*
NUDGO TWO TANGO (NUDGO 2T) *[NUDG2T]*
NUDGO TWO ZULU (NUDGO 2Z) *[NUDG2Z]*
RWYS 05L, 23R/L, 05R
RNAV DEPARTURES (OVERLAY 10-3J)

NOT AVAILABLE FOR FLIGHTS
INTO UPPER AIRSPACE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NUDGO
N51 24.8 E008 26.5

KULIX
N51 21.1 E008 14.8

MAMIB
N51 13.3 E007 42.6

ANAVI
N51 18.7 E007 23.3

ELBAL
N51 09.4 E007 26.8

D6.6 BAM

D21.1 GMH

BARMEN
113.6 BAM
N51 19.7 E007 10.6

GERMINGHAUSEN
115.4 GMH
N51 10.2 E007 53.5

NORVENICH
116.2 NOR
N50 50.4 E006 41.6

DUSSELDORF
115.15 DUS
N51 17.0 E006 45.2

DLØ58
N51 21.3
E006 54.8

DLØ5Ø
N51 19.9
E006 51.7

(NUDGO 2T)
DL239
N51 13.5 E006 38.0
(NUDGO 2L)
DL24Ø
N51 13.4 E006 38.0

DL241
N51 07.7
E006 38.9

NUDGO 2J, 2Z

NUDGO 2L, 2T

NUDGO 2L, 2T
These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

NOT TO SCALE

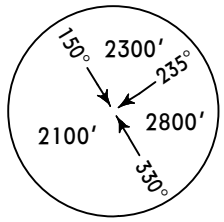
Initial climb clearance **5000′**

SID	RWY	ROUTING
NUDGO 2J	05L	(600′+) - DL050 - DL058 - BAM - ANAVI - MAMIB - KULIX - NUDGO.
NUDGO 2L	23R	(600′+) - DL240 - DL241 - ELBAL - MAMIB - KULIX - NUDGO.
NUDGO 2T	23L	(600′+) - DL239 - DL241 - ELBAL - MAMIB - KULIX - NUDGO.
NUDGO 2Z	05R	(600′+) - DL050 - DL058 - BAM - ANAVI - MAMIB - KULIX - NUDGO.

MSA
DUS VOR
applicable over German territory only

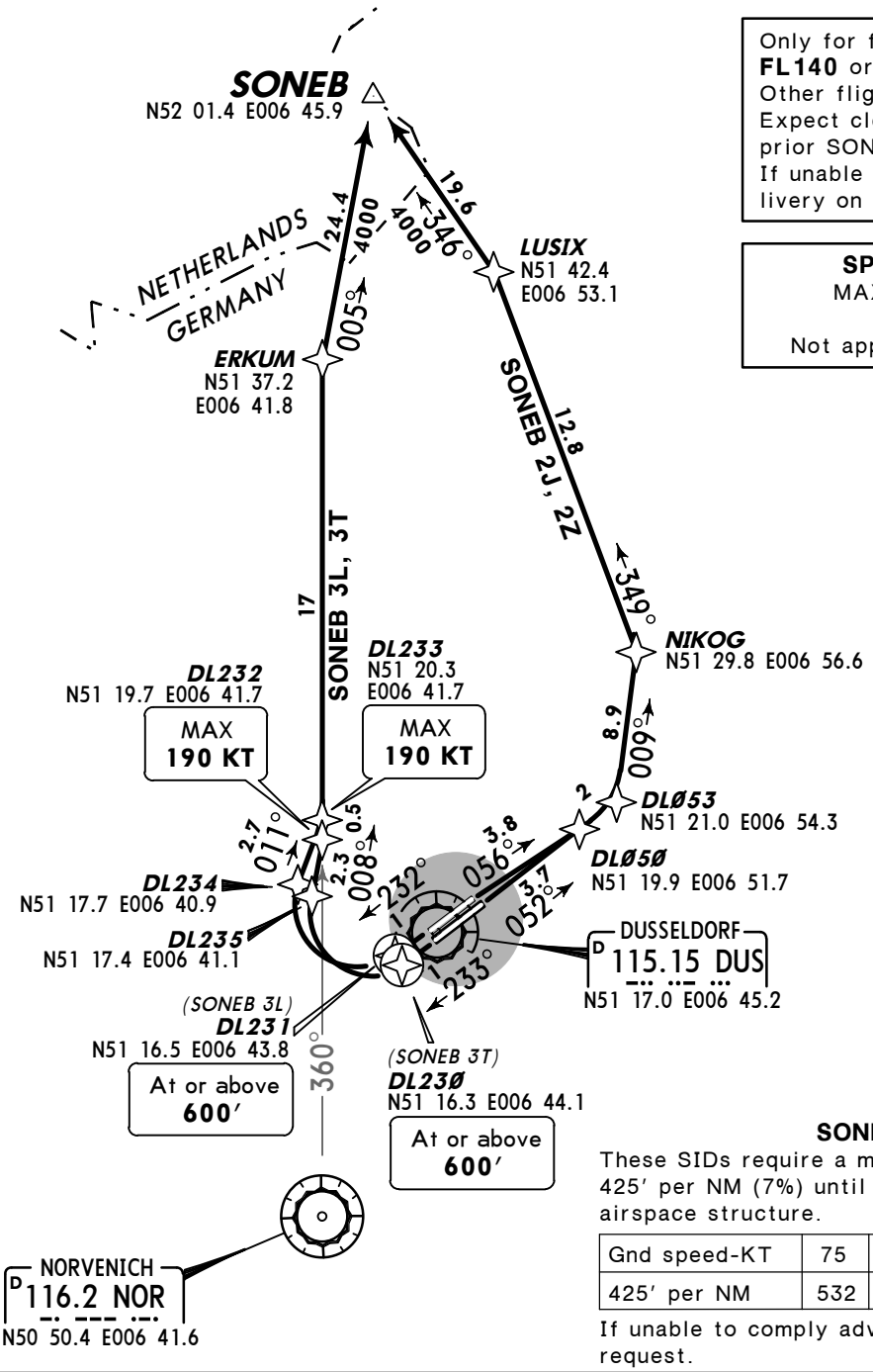
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*LANGEN Radar 128.5	Apt Elev 147′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency until passing 2000′, then contact LANGEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MSA
DUS VOR
applicable over
German territory only

SONEB TWO JULIETT (SONEB 2J) *[SONE2J]*
SONEB THREE LIMA (SONEB 3L) *[SONE3L]*
SONEB THREE TANGO (SONEB 3T) *[SONE3T]*
SONEB TWO ZULU (SONEB 2Z) *[SONE2Z]*
RWYS 05L, 23R/L, 05R
RNAV DEPARTURES (OVERLAY 10-3K)



Only for flights with requested **FL140** or above via RKN/TENLI. Other flights proceed via MEVEL. Expect clearance to cross 10 NM prior SONEB at or above **FL140.** If unable to comply advise Delivery on start-up request.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

SONEB 2J, 2Z
These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Delivery on start-up request.

Initial climb clearance **5000′**

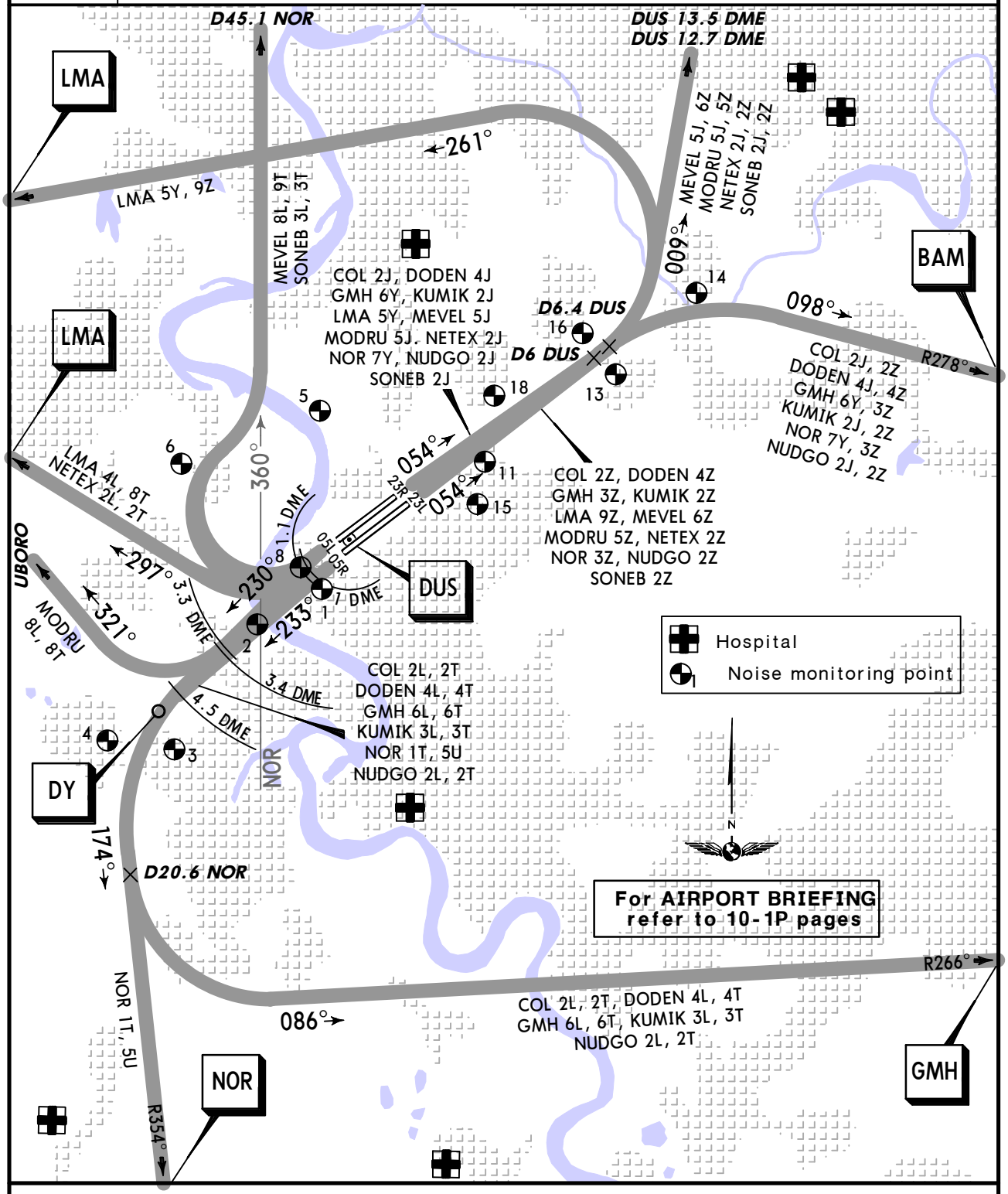
SID	RWY	ROUTING
SONEB 2J	05L	**(600′+)** - DL050 - DL053 - NIKOG - LUSIX - SONEB.
SONEB 3L	23R	DL231 **(600′+)** - DL234 - DL233 (K190-) - ERKUM - SONEB.
SONEB 3T	23L	DL230 **(600′+)** - DL235 - DL232 (K190-) - ERKUM - SONEB.
SONEB 2Z	05R	**(600′+)** - DL050 - DL053 - NIKOG - LUSIX - SONEB.

CHANGES: RNAV SIDs renumbered & revised; communications.

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Apt Elev
147'

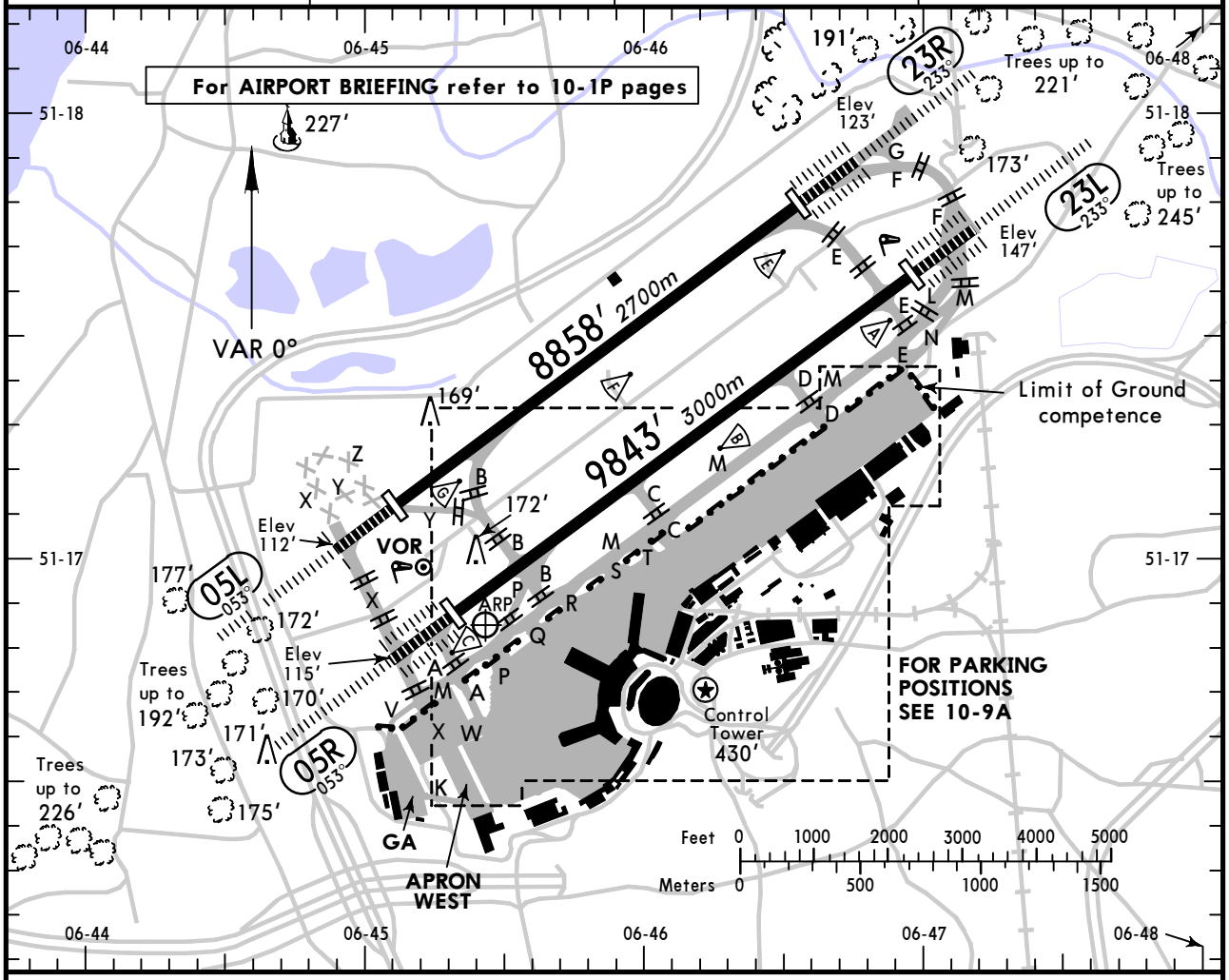
NOISE ABATEMENT



CHANGES: SIDs renumbered & revised; NAPSI SIDs withdrawn.

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*D-ATIS	*DUSSELDORF Delivery	*Ground	Tower
115.15 123.77	121.77	121.9	118.3



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
05L	HIRL❶ CL❷ HIALS SFL PAPI-L(3.0°) REIL RVR	7874′ *2400m*	6923′ *2110m*	❸❹	148′ *45m*
23R	HIRL❶ CL❷ ALSF-II TDZ PAPI-L(3.0°) REIL RVR		6659′ *2030m*		

❶ spacing 60m ❷ spacing 15m
❸ TAKE-OFF RUN AVAILABLE
RWY 05L: From rwy head 7874′ (2400m)
twy Y int 6775′ (2065m)
twy B int 5643′ (1720m)
RWY 23R: From rwy head 7874′ (2400m)
twy E int 6765′ (2062m)
(PPR only) 8530′ (2600m) with paved strip in front of rwy
❹ Additional 984′/300m available as stopway.

RWY					
05R	HIRL CL*(15m)* ALSF-II TDZ PAPI-L(3.0°) REIL RVR	8858′ *2700m*	7844′ *2391m*	❺❻	148′ *45m*
23L			7632′ *2326m*		

❺ TAKE-OFF RUN AVAILABLE
RWY 05R: From rwy head 8858′ (2700m)
twy A int 8120′ (2475m)
twy B int 6663′ (2031m)
RWY 23L: From rwy head 8858′ (2700m)
twy M int 8678′ (2645m)
twy L int 8202′ (2500m)
twy E int 7333′ (2235m)
❻ Additional 984′/300m available as stopway.

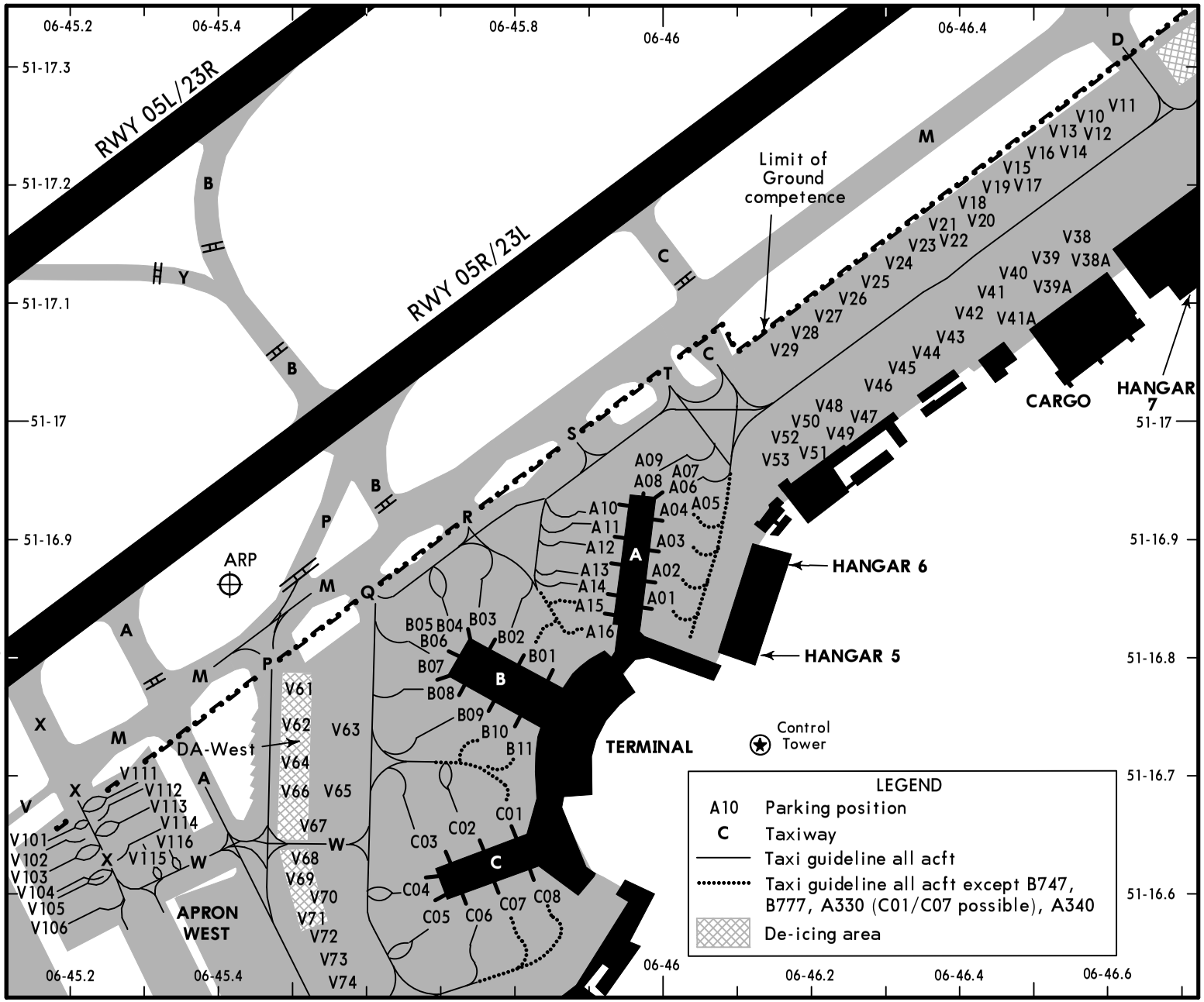
Standard TAKE-OFF ❶

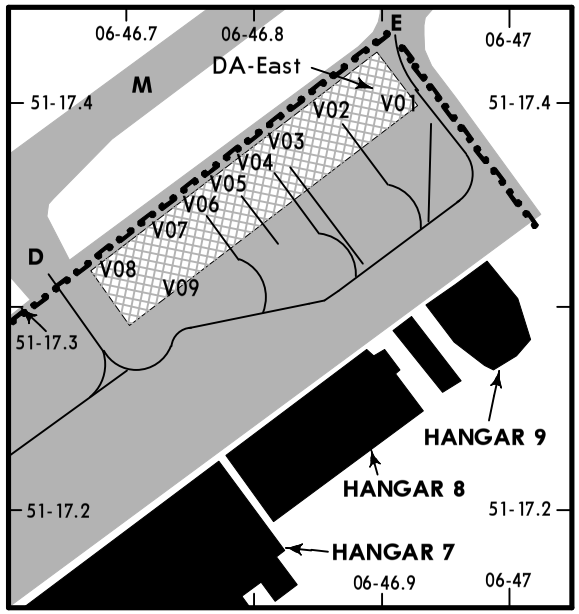
	LVP must be in Force: Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

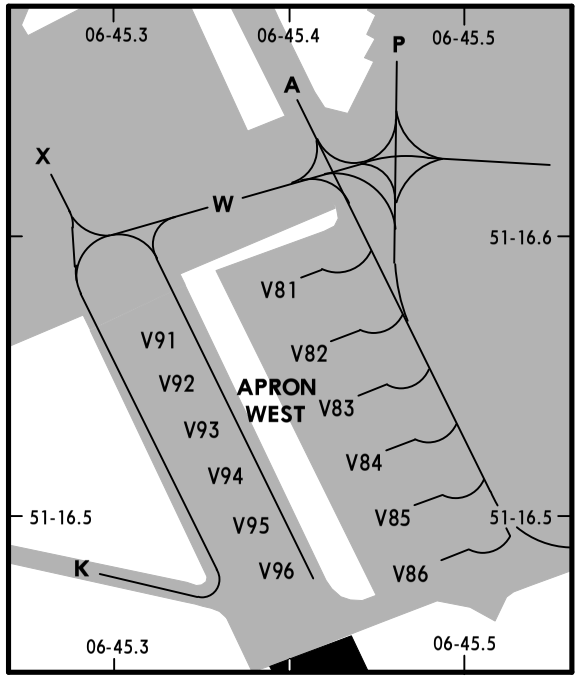
❶ Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: Apron. Usable length.

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CHANGES: Apron. Stands.

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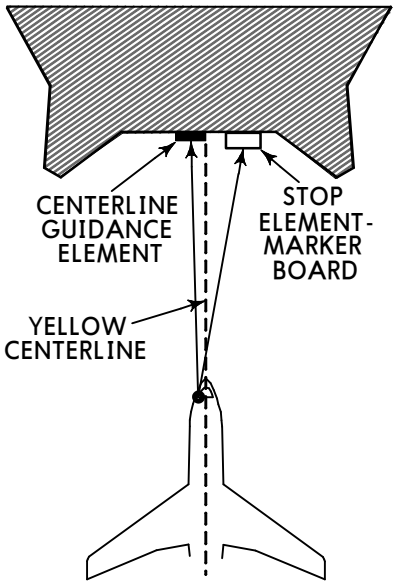
INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
A01, A02	N51 16.9 E006 46.1	V28	N51 17.2 E006 46.2
A03 thru A08	N51 17.0 E006 46.1	V29	N51 17.1 E006 46.2
A09	N51 16.9 E006 46.1	V38 thru V39A	N51 17.2 E006 46.6
A10 thru A12	N51 17.0 E006 46.0	V40	N51 17.2 E006 46.5
A13 thru A16	N51 16.9 E006 46.0	V41 thru V43	N51 17.1 E006 46.5
B01, B02	N51 16.9 E006 45.9	V44 thru V46	N51 17.1 E006 46.4
B03 thru B06	N51 16.9 E006 45.8	V47 thru V52	N51 17.1 E006 46.3
B07	N51 16.9 E006 45.7	V53	N51 17.0 E006 46.2
B08, B09	N51 16.8 E006 45.8	V61 thru V66	N51 16.8 E006 45.6
B10, B11	N51 16.8 E006 45.9	V67 thru V71	N51 16.7 E006 45.6
C01	N51 16.7 E006 45.9	V72, V73	N51 16.6 E006 45.6
C02	N51 16.7 E006 45.8	V74	N51 16.6 E006 45.4
C03, C04	N51 16.7 E006 45.7	V81	N51 16.7 E006 45.4
C05	N51 16.6 E006 45.8	V82 thru V86	N51 16.6 E006 45.5
C06	N51 16.7 E006 45.8	V91 thru V95	N51 16.6 E006 45.4
C07, C08	N51 16.7 E006 45.9	V96	N51 16.5 E006 45.5
V01	N51 17.5 E006 47.0	V101 thru 104	N51 16.7 E006 45.2
V02 thru V04	N51 17.5 E006 46.9	V105	N51 16.7 E006 45.3
V05 thru V09	N51 17.4 E006 46.8	V106	N51 16.6 E006 45.3
V10, V11	N51 17.4 E006 46.7	V111, V112	N51 16.8 E006 45.4
V12 thru V16	N51 17.3 E006 46.6	V113 thru 116	N51 16.7 E006 45.4
V17 thru V20	N51 17.3 E006 46.5		
V21	N51 17.3 E006 46.4		
V22 thru V24	N51 17.2 E006 46.4		
V25 thru V27	N51 17.2 E006 46.3		

CHANGES: Stands V101 thru 116 added.

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NOSE-IN PARKING PROCEDURES



GENERAL

The visual guidance system for nose-in parking positions AGNIS (Aircraft Guidance for Nose-In Stands) consists of the following elements:

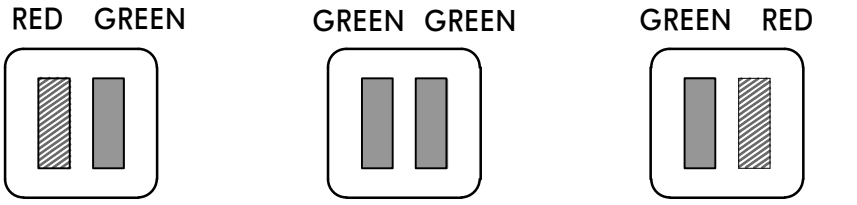
1. CENTERLINE GUIDANCE ELEMENT
2. YELLOW CENTERLINE
3. STOP ELEMENT - MARKER BOARD

CAUTION

The system is aligned with the LEFT hand pilot's seat only. In case of AGNIS failure, nose-in positioning will be guided by marshaller.

CENTERLINE GUIDANCE ELEMENT

Approach the parking position along the yellow centerline so that both vertical slots in the Centerline Guidance Element show GREEN. Adjustments to the left or right shall always be made towards the GREEN.



LEFT of centerline. Turn towards GREEN. (RIGHT)

Aircraft on centerline.

RIGHT of centerline. Turn towards GREEN. (LEFT)

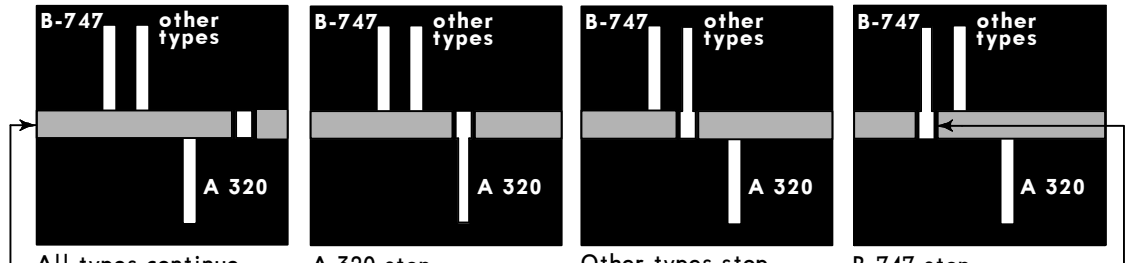
STOP ELEMENT - MARKER BOARD

The aircraft is stopped at the correct position by means of the Stop Element. When the tubular light, visible through the horizontal slot in the marker board, registers in line with the appropriate vertical reference mark, the aircraft has reached the correct stopping position.

CAUTION

Be sure to select the correct vertical reference mark corresponding to your type of aircraft. Marker board layouts are different for the various nose-in parking positions.

TYPICAL EXAMPLE OF STOP ELEMENT - MARKER BOARD



All types continue taxiing.

SIGHTING SLOT

A 320 stop. Other types and B-747 continue taxiing.

Other types stop. B-747 continue taxiing.

B-747 stop.

LIGHT TUBE

CHANGES: None.

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DUSSELDORF, GERMANY

DUSSELDORF

STRAIGHT-IN RWY		A	B	C	D
05L	ILS	**316′**(200′)	**316′**(200′)	**331′**(215′)	**341′**(225′)
		R550m	**R550m**	**R600m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**500′**(384′)	**500′**(384′)	**500′**(384′)	**500′**(384′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**480′**(364′)	**480′**(364′)	**480′**(364′)	**480′**(364′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**600′**(484′)	**600′**(484′)	**600′**(484′)	**600′**(484′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**680′**(564′)	**680′**(564′)	**680′**(564′)	**680′**(564′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRA	**680′**(564′)	**680′**(564′)	**680′**(564′)	**680′**(564′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
05R	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**221′**(100′)	**221′**(100′)	**221′**(100′)	**221′**(100′)
		RA105′R300m	**RA105′R300m**	**RA105′R300m**	**RA105′R300m**
	ILS	**321′**(200′)	**321′**(200′)	**321′**(200′)	**321′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**500′**(379′)	**570′**(449′)	**570′**(449′)	**570′**(449′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**540′**(419′)	**540′**(419′)	**540′**(419′)	**540′**(419′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**680′**(559′)	**680′**(559′)	**680′**(559′)	**680′**(559′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**650′**(529′)	**680′**(559′)	**680′**(559′)	**680′**(559′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRA	**680′**(559′)	**680′**(559′)	**680′**(559′)	**680′**(559′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

CHANGES: Minimums.

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DUSSELDORF, GERMANY

DUSSELDORF

STRAIGHT-IN RWY		A	B	C	D
23L	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**238′**(100′)	**238′**(100′)	**238′**(100′)	**238′**(100′)
		RA92′R300m	**RA92′R300m**	**RA92′R300m**	**RA92′R300m**
	ILS	**338′**(200′)	**338′**(200′)	**338′**(200′)	**338′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**520′**(382′)	**520′**(382′)	**520′**(382′)	**520′**(382′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**600′**(462′)	**600′**(462′)	**600′**(462′)	**600′**(462′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV)	**610′**(472′)	**680′**(542′)	**680′**(542′)	**680′**(542′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR	**700′**(562′)	**700′**(562′)	**700′**(562′)	**700′**(562′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRA	**680′**(542′)	**680′**(542′)	**680′**(542′)	**680′**(542′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
23R	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**224′**(100′)	**224′**(100′)	**224′**(100′)	**224′**(100′)
		RA101′R300m	**RA101′R300m**	**RA101′R300m**	**RA101′R300m**
	ILS	**324′**(200′)	**331′**(207′)	**354′**(230′)	**364′**(240′)❶
		R550m	**R600m**	**R600m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**510′**(386′)	**510′**(386′)	**510′**(386′)	**510′**(386′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**620′**(496′)	**620′**(496′)	**620′**(496′)	**620′**(496′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV)	**640′**(516′)	**640′**(516′)	**640′**(516′)	**640′**(516′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR	**700′**(576′)	**700′**(576′)	**700′**(576′)	**700′**(576′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRA	**680′**(556′)	**680′**(556′)	**680′**(556′)	**680′**(556′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

❶ LACFT: DA(H) 367′ (243′).

TAKE-OFF RWY 05L, 05R, 23L, 23R

	Approved Operators HIRL, CL & mult. RVR req	LVP must be in Force: RL, CL & mult. RVR req	LVP must be in Force: RL & CL	LVP must be in Force: RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: Minimums.

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EDDL/DUS
DUSSELDORF

JEPPESEN
7 MAY 10 (11-1)

DUSSELDORF, GERMANY
ILS or LOC Rwy 05L

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

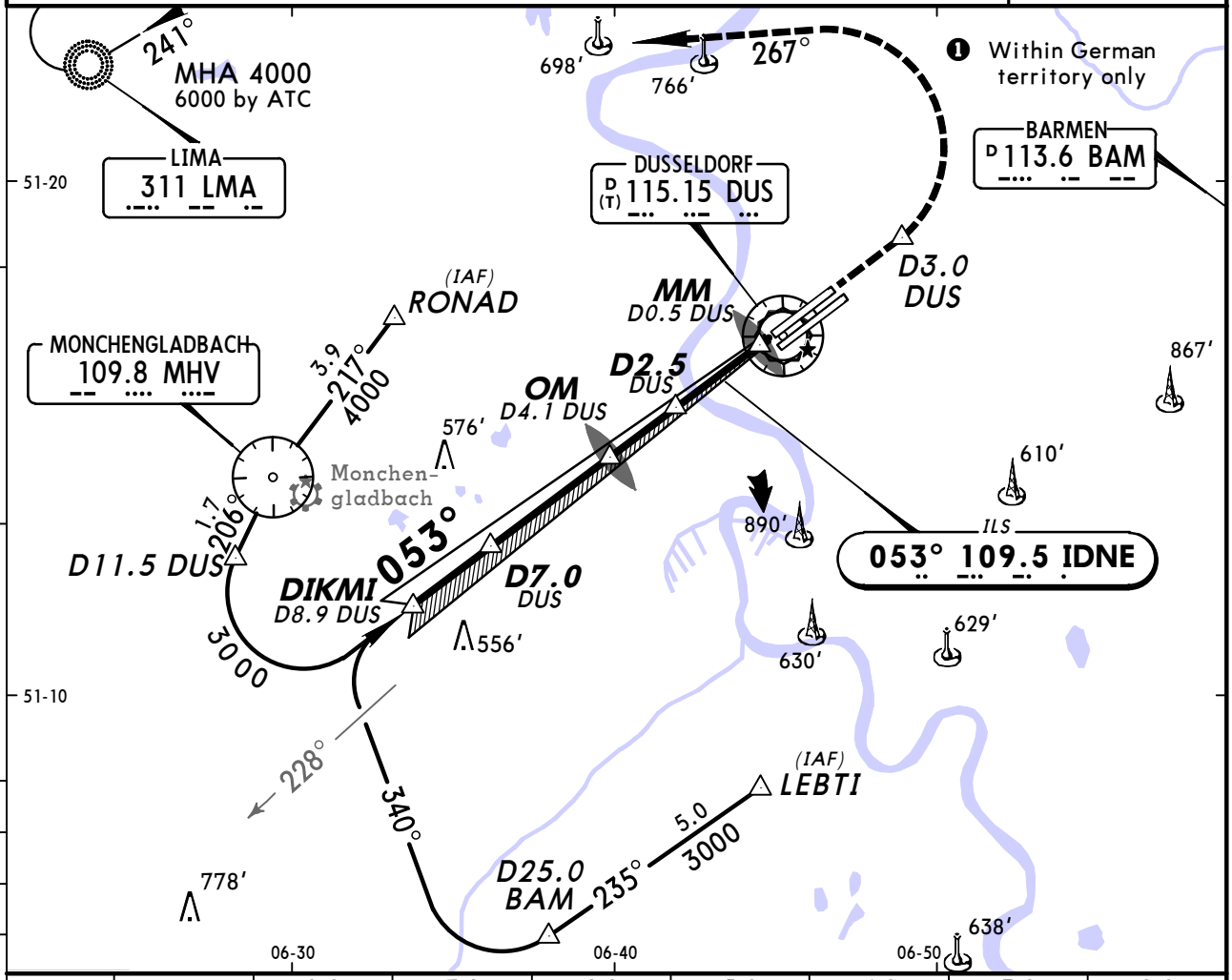
BRIEFING STRIP™

LOC	Final	GS	ILS	Apt Elev 147′
IDNE	Apch Crs	OM	DA(H)	
109.5	053°	1480′ (1364′)	Refer to Minimums	RWY 116′

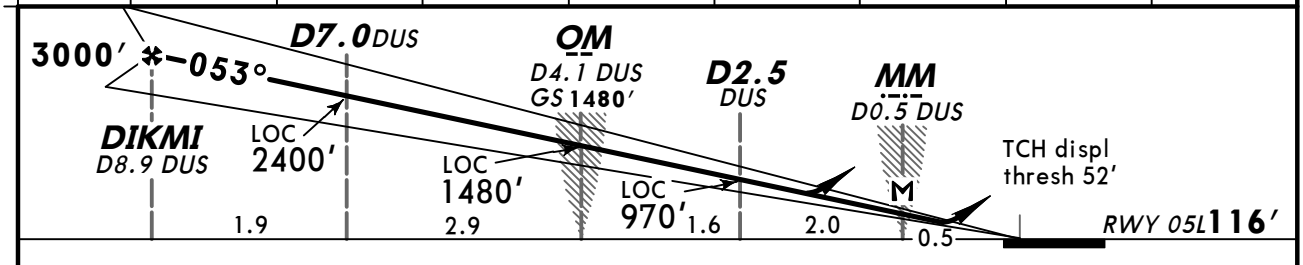
MISSED APCH: Climb STRAIGHT AHEAD to D3.0 DUS, then turn LEFT on track 267° to LMA NDB climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
LOC: **DME REQUIRED.**

150° 2300′ 235° 2800′ 330° 2100′ ❶
MSA DUS VOR



LOC (GS out)	DUS DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	2720′	2400′	2080′	1760′	1450′	1130′	810′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D0.5 DUS						

HIALS
REIL
PAPI

D3.0 DUS

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **05L**

	ILS			LOC (GS out)	
	DA(H) AB: 316′(200′) C: 331′(215′) D: 341′(225′)			DA(H) 500′(384′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1100m	RVR 1500m
B					
C					RVR 1800m
D					

CHANGES: Communications. Procedure. Minimums.

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EDDL/DUS
DUSSELDORF

JEPPESEN 7 MAY 10 (11-2)

DUSSELDORF, GERMANY
ILS or LOC or NDB Rwy 05R

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

BRIEFING STRIP ™

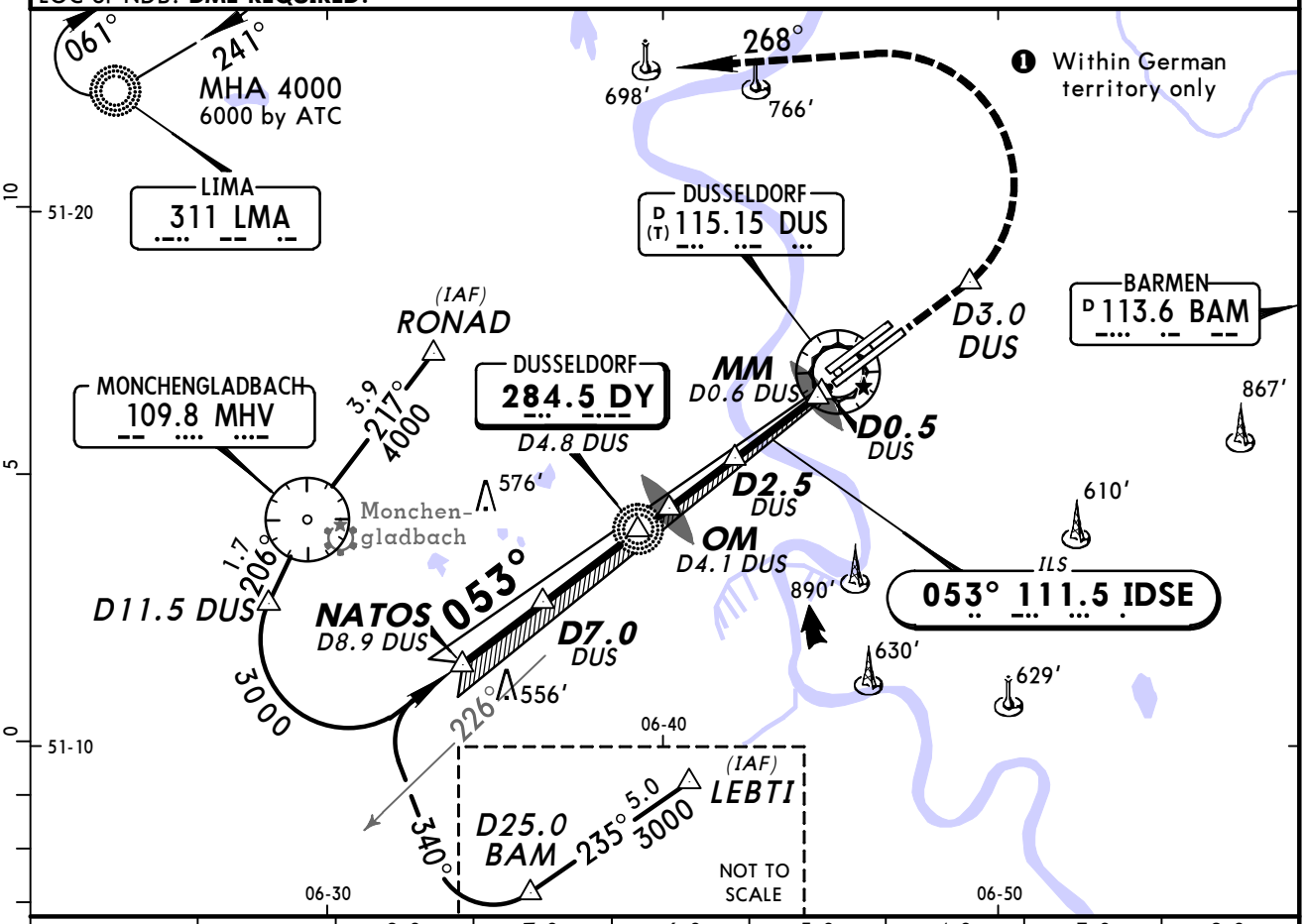
LOC IDSE 111.5	Final Apch Crs 053°	GS OM 1480′ (1359′)	ILS DA(H) 321′ (200′)	Apt Elev 147′
NDB DY 284.5		Minimum Alt NATOS 3000′ (2879′)	NDB DA(H) Refer to Minimums	RWY 121′

MISSED APCH: Climb STRAIGHT AHEAD to D3.0 DUS, then turn LEFT on track 268° to LMA NDB climbing to 4000′.

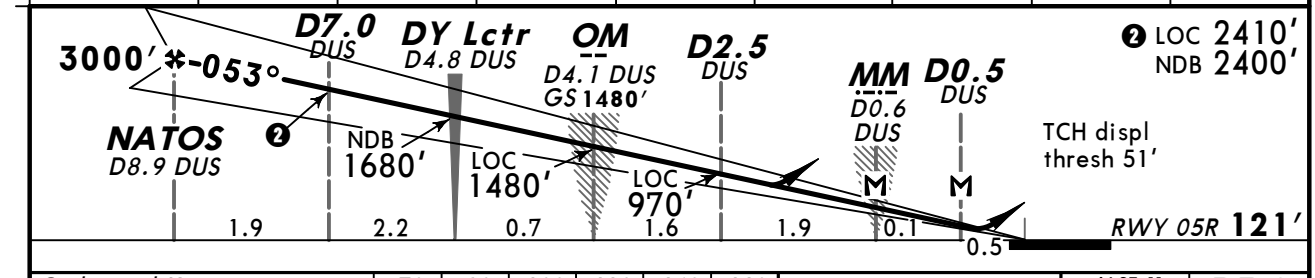
MSA DUS VOR: 150° 2300′, 235° 2800′, 330° 2100′, 150° ❶

Alt Set: hPa (IN on req) | Rwy Elev: 4 hPa | Trans level: By ATC | Trans alt: 5000′

LOC or NDB: **DME REQUIRED.**



	DUS DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0
LOC (GS out)	ALTITUDE	2720′	2410′	2090′	1770′	1450′	1130′	810′
NDB	ALTITUDE	2720′	2400′	2080′	1760′	1440′	1130′	810′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC or NDB Desc Angle 3.00°	377	484	538	646	753	861
LOC: MAP at MM/D0.6 DUS						

NDB: MAP at D0.5 DUS

ALSF-II, REIL, PAPI

D3.0 DUS

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **05R**

	ILS DA(H) 321′ (200′)			LOC (GS out) DA(H) A: 500′ (379′) BCD: 570′ (449′)		NDB DA(H) A: 650′ (529′) BCD: 680′ (559′)	
	FULL	Limited	ALS out		ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1000m	RVR 1500m	RVR 1500m	
B							
C				RVR 1400m	CMV 2100m	RVR 1800m	CMV 2400m
D							

CHANGES: Communications. Minimums.

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EDDL/DUS
DUSSELDORF

JEPPESEN
7 MAY 10 (11-2A)

DUSSELDORF, GERMANY
CAT II ILS Rwy 05R

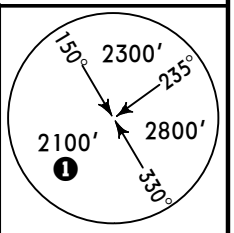
*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

BRIEFING STRIP ™

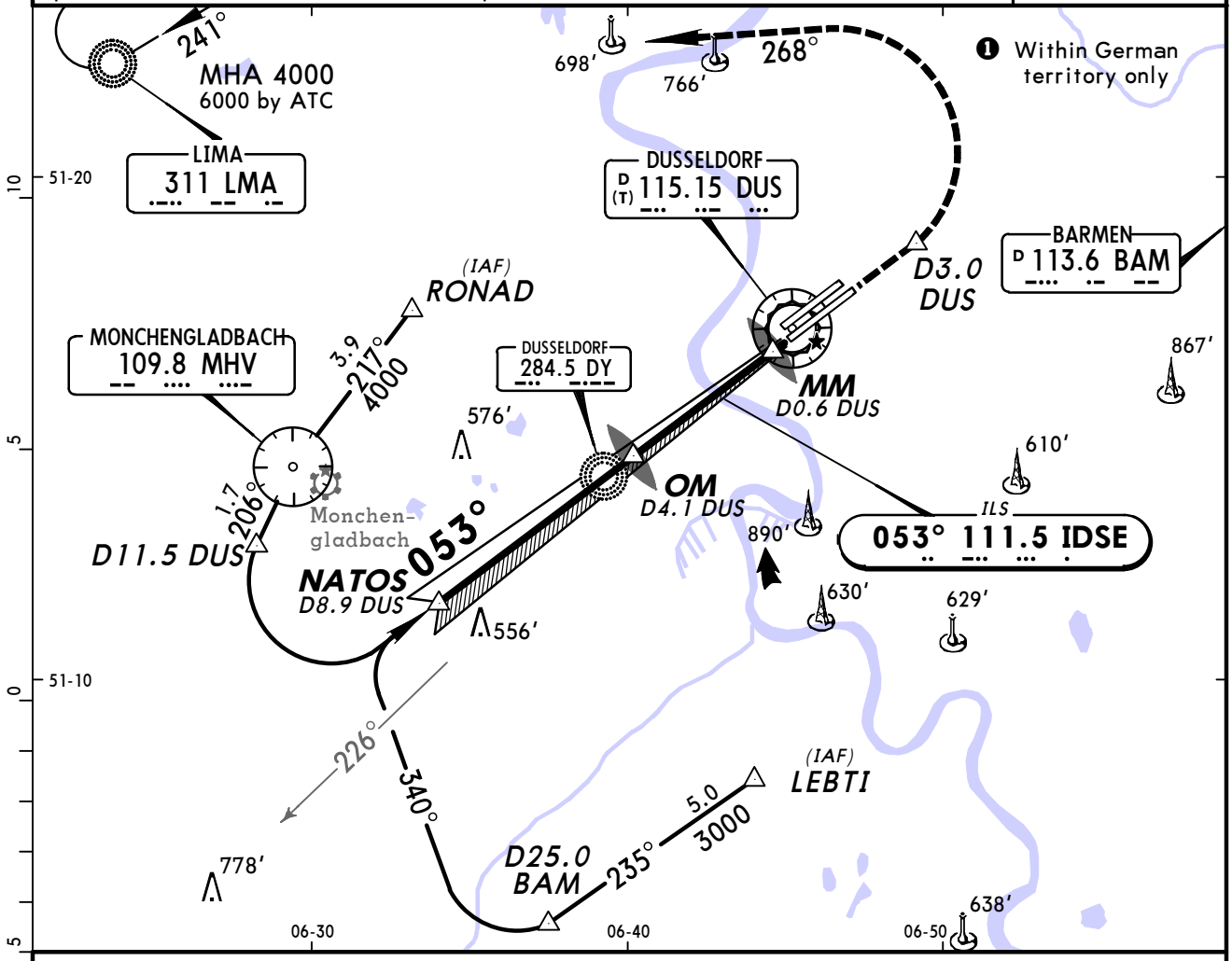
LOC IDSE	Final Apch Crs	GS OM	CAT II ILS RA 105′ DA(H)	Apt Elev 147′ RWY 121′
111.5	053°	1480′ (1359′)	221′ (100′)	

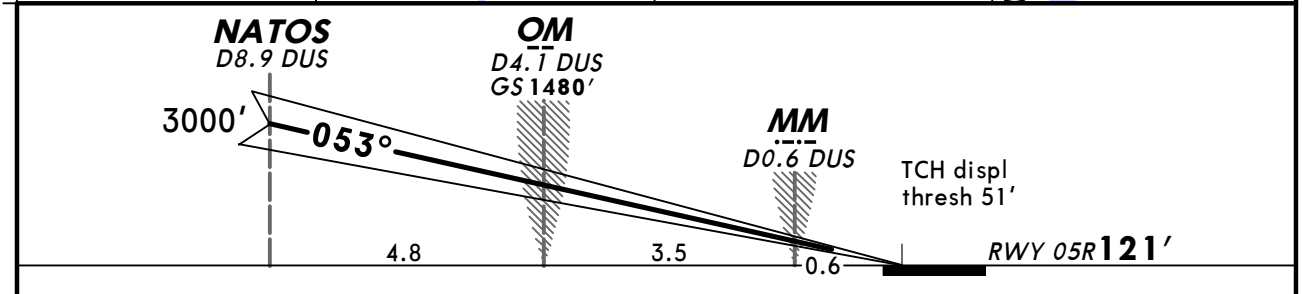
MISSED APCH: Climb STRAIGHT AHEAD to D3.0 DUS, then turn LEFT on track 268° to LMA NDB climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.



MSA DUS VOR





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

ALSF-II
REIL
PAPI

D3.0
DUS

Standard

STRAIGHT-IN LANDING RWY **05R**
CAT II ILS
ABCD
RA 105′
DA(H) **221′** (100′)

RVR 300m 1

PANS OPS 4

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

CHANGES: Communications.

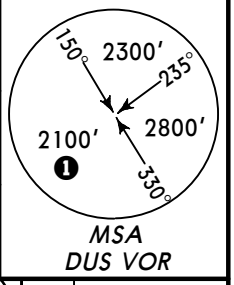
© JEPPESEN, 2000, 2010. ALL RIGHTS RESERVED.

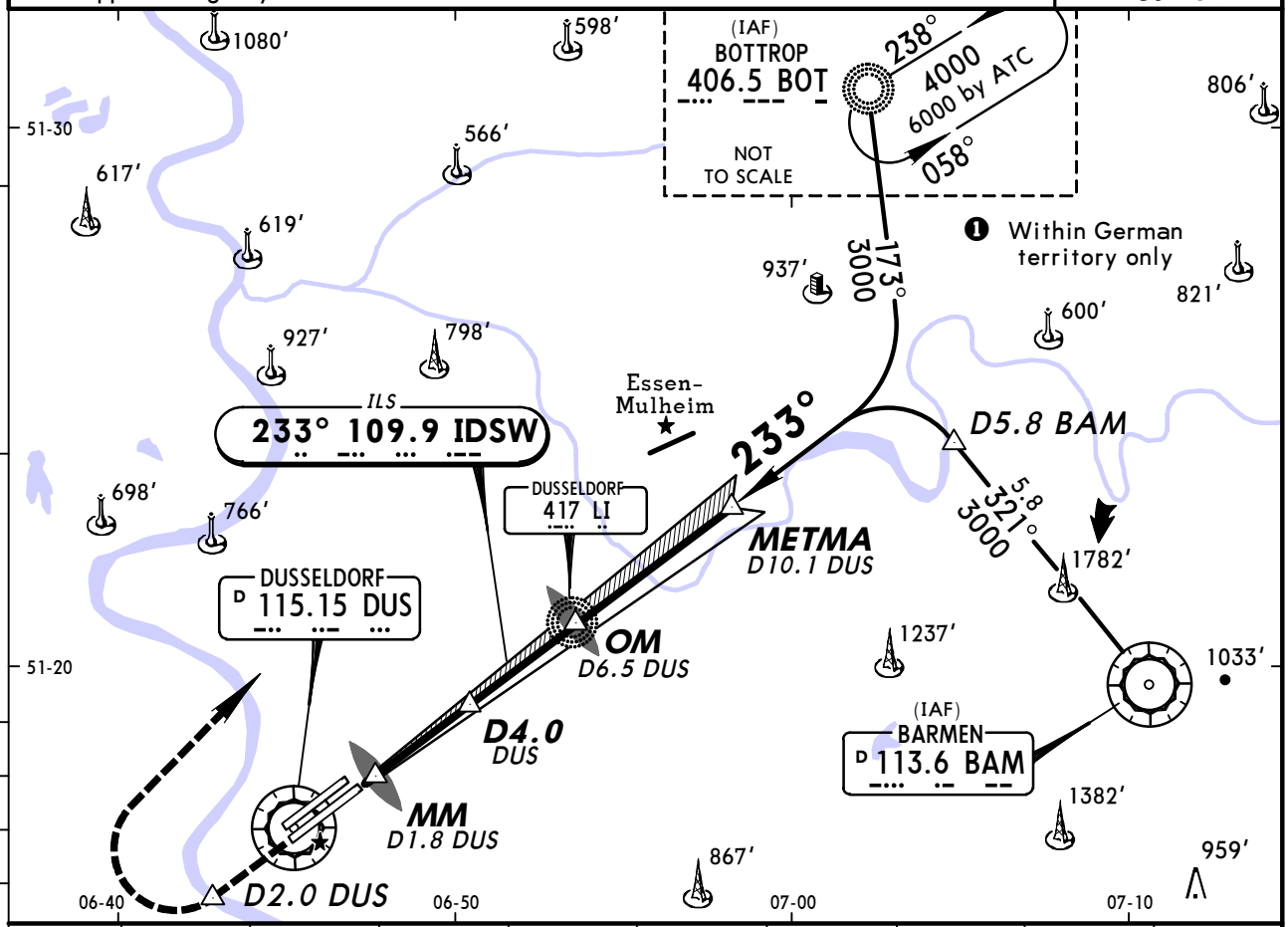
*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

LOC IDSW 109.9	Final Apch Crs 233°	GS OM 1850′ (1712′)	ILS DA(H) 338′ (200′)	Apt Elev 147′ RWY 138′

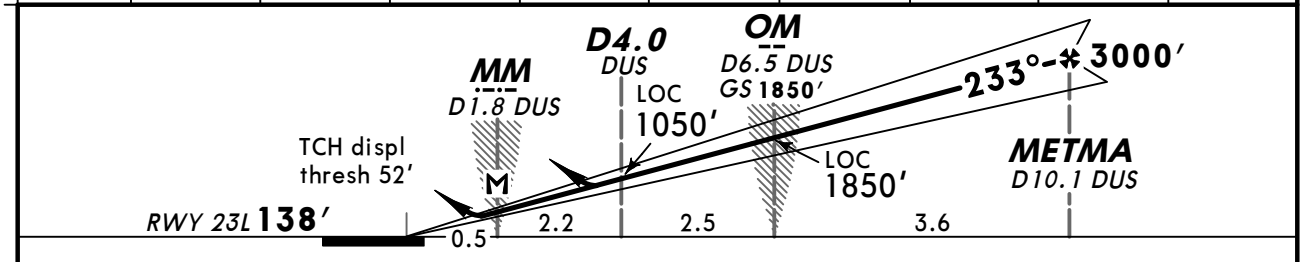
MISSED APCH: Climb STRAIGHT AHEAD to D2.0 DUS, then turn RIGHT to BOT NDB climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′
1. LOC: **DME REQUIRED.** 2. Do not mistake ESSEN-MULHEIM 9.0 NM NE of DUSSELDORF when approaching rwy 23L.





LOC (GS out)	DUS DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
	ALTITUDE	740′	1050′	1370′	1690′	2010′	2330′	2650′	2960′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.8 DUS						

ALSF-II
REIL
PAPI

D2.0
DUS

Standard STRAIGHT-IN LANDING RWY **23L**

	ILS DA(H) 338′ (200′)			LOC (GS out) DA(H) 520′ (382′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1100m	RVR 1500m
B					
C					RVR 1800m
D					

PANS OPS 4

CHANGES: Communications. Minimums.

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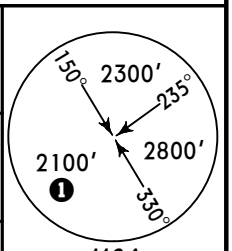
*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

LOC	Final	GS	CAT II ILS	
IDSW	Apch Crs	OM	RA 92′	Apt Elev 147′
109.9	233°	1850′ (1712′)	DA(H) 238′ (100′)	RWY 138′

MISSED APCH: Climb STRAIGHT AHEAD to D2.0 DUS, then turn RIGHT to BOT NDB climbing to 4000′.

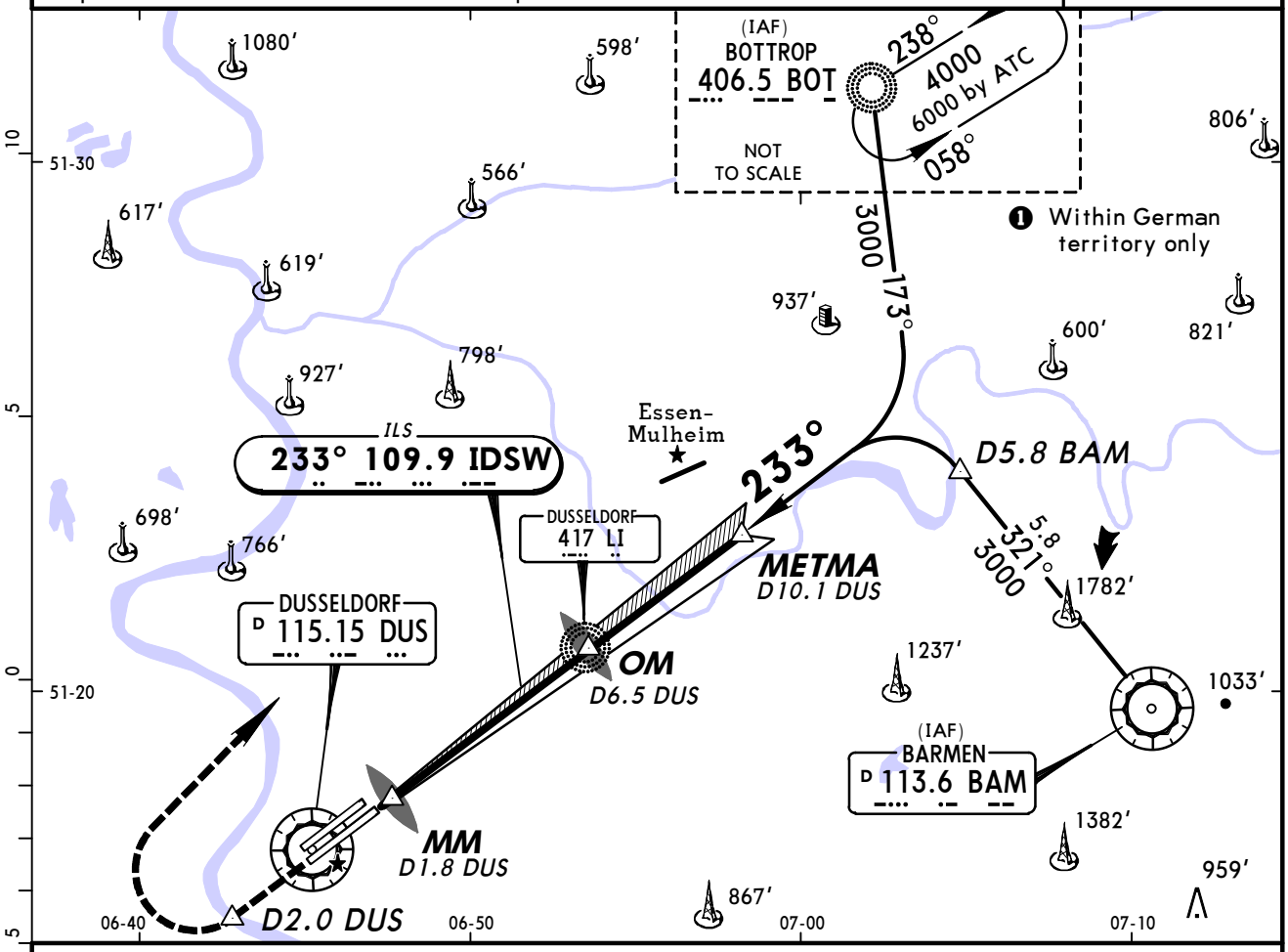
Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′

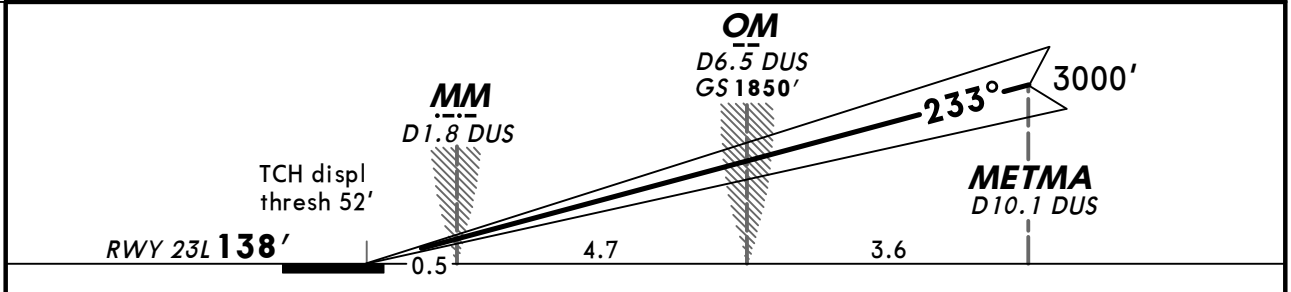
1. Do not mistake ESSEN-MULHEIM 9.0 NM NE of DUSSELDORF when approaching rwy 23L.
2. Special Aircrew & Acft Certification Required.



MSA
DUS VOR

BRIEFING STRIP ™





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

ALSF-II
REIL
PAPI

D2.0
DUS

Standard

STRAIGHT-IN LANDING RWY **23L**
CAT II ILS
ABCD
RA 92′
DA(H) **238′** (100′)

RVR 300m 1

PANS OPS 4

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

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EDDL/DUS
DUSSELDORF

JEPPESEN 18 JUN 10 (11-4) Eff 1 Jul

DUSSELDORF, GERMANY
ILS or LOC Rwy 23R

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

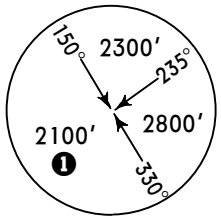
BRIEFING STRIP™

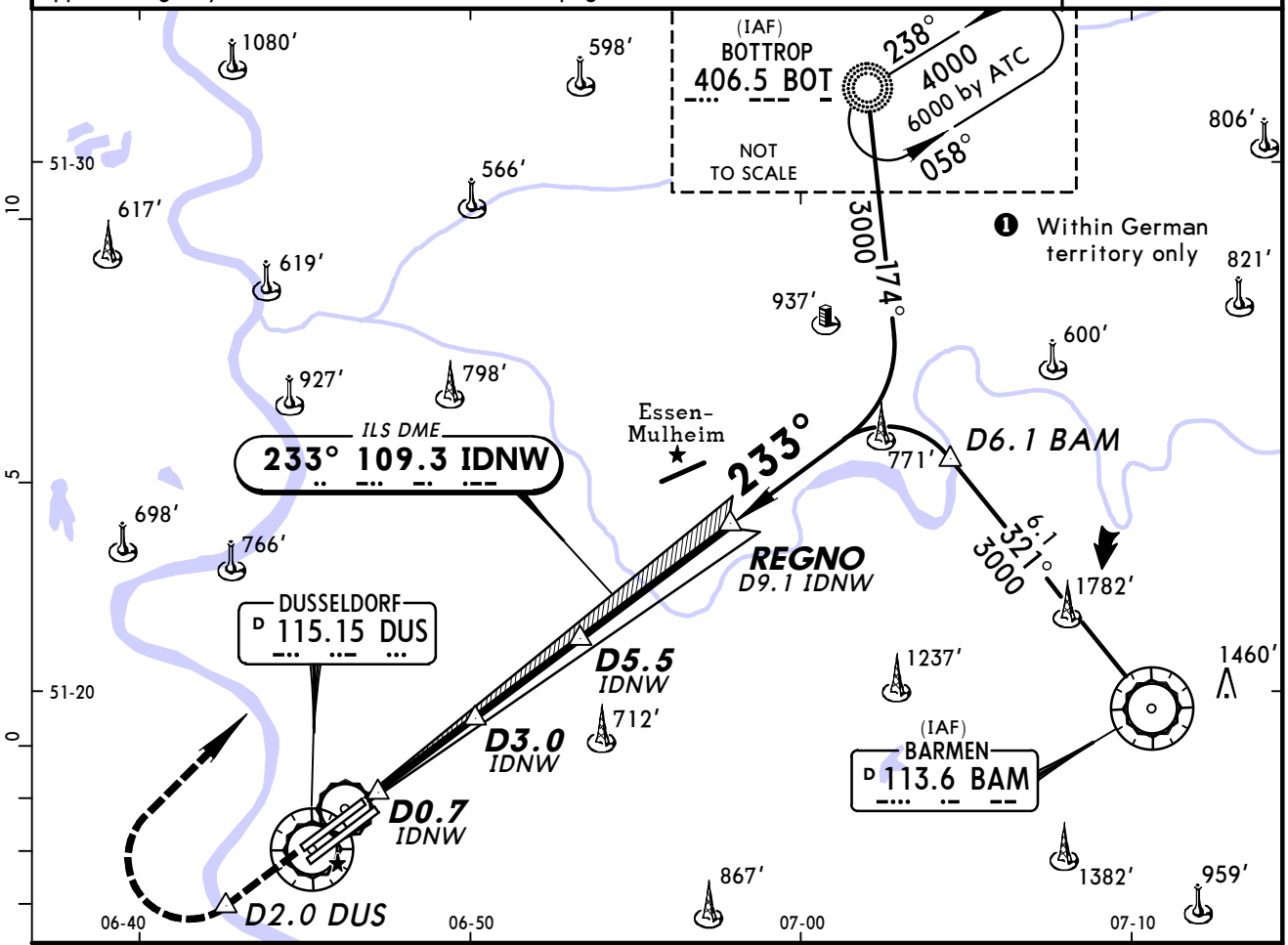
LOC IDNW	Final Apch Crs	GS	ILS DA(H)	Apt Elev / RWY
109.3	233°	D5.5 IDNW 1870′ (1746′)	Refer to Minimums	Apt Elev 147′ RWY 124′

MISSED APCH: Climb STRAIGHT AHEAD to D2.0 DUS, then turn RIGHT to BOT NDB climbing to 4000′.

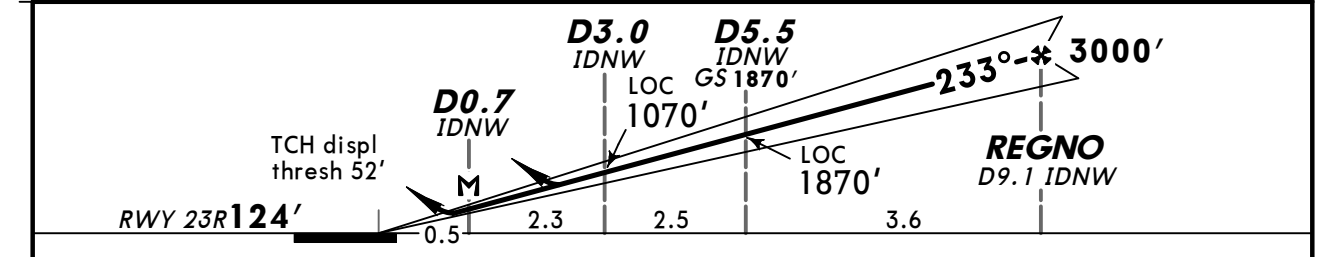
Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′

1. **DME required.** 2. Do not mistake ESSEN-MULHEIM 9.0 NM NE of DUSSELDORF when approaching rwy 23R. 3. LACFT: See ATC State pages.





LOC (GS out)	IDNW DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	750′	1070′	1390′	1710′	2030′	2350′	2660′	2980′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at D0.7 IDNW						

ALSF-II
REIL
PAPI

D2.0 DUS

Standard STRAIGHT-IN LANDING RWY **23R**

ILS 1		LOC (GS out)	
DA(H)	A: 324′(200′) C: 354′(230′) B: 331′(207′) D: 364′(240′)	DA(H)	510′(386′)

PANS OPS 4

	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1100m	RVR 1500m
B					
C					RVR 1800m
D					

1 LACFT: DA(H) 367′ (243′), ALS out RVR 1300m.

CHANGES: ILS DME added.

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EDDL/DUS
DUSSELDORF

JEPPESEN
18 JUN 10
Eff 1 Jul
11-4A

DUSSELDORF, GERMANY
CAT II ILS Rwy 23R

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

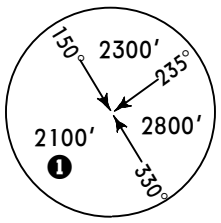
LOC	Final	GS	CAT II ILS	
IDNW	Apch Crs	D5.5 IDNW	RA 101′	Apt Elev 147′
109.3	233°	1870′ (1746′)	DA(H) 224′ (100′)	RWY 124′

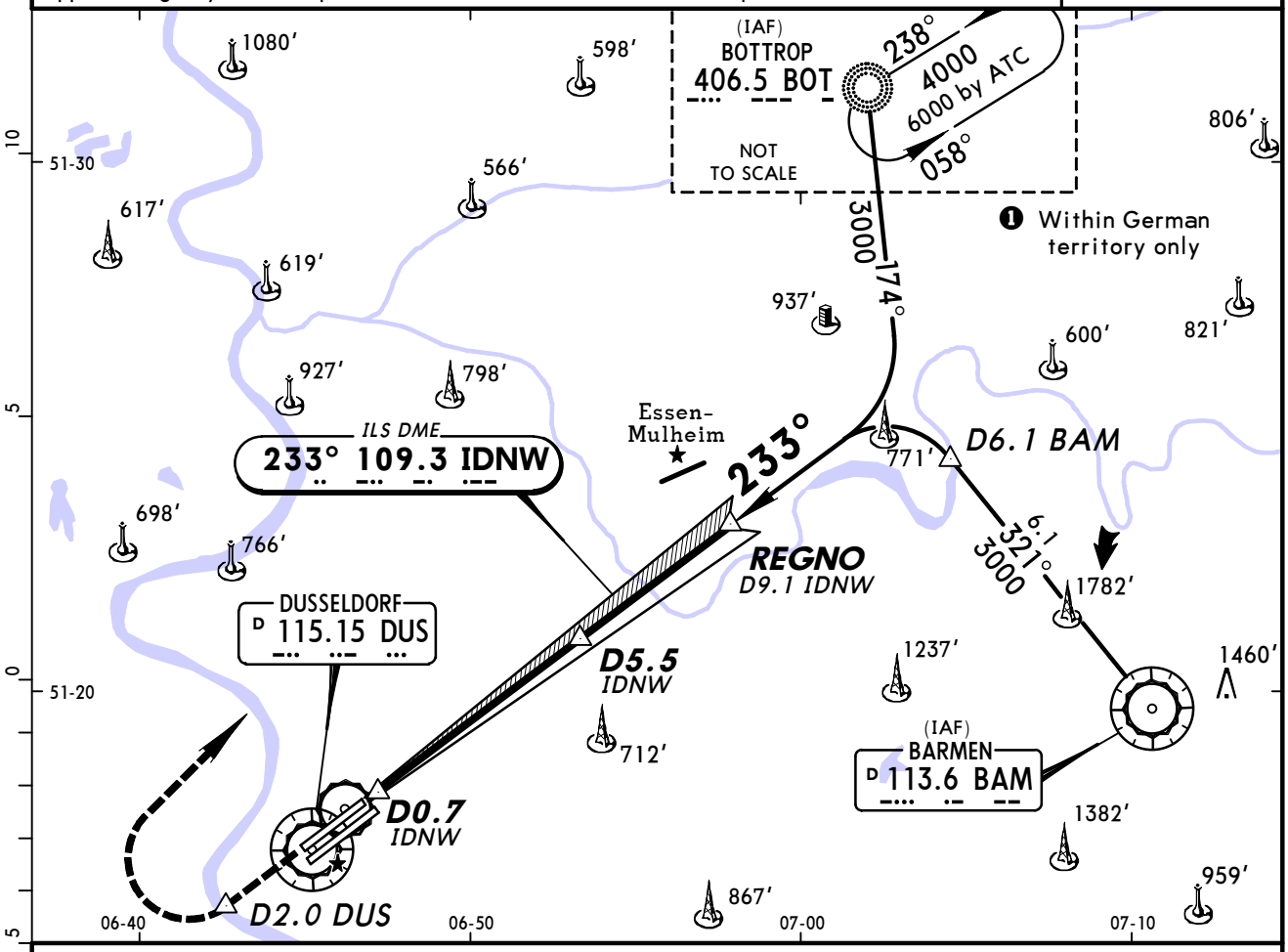
BRIEFING STRIP ™

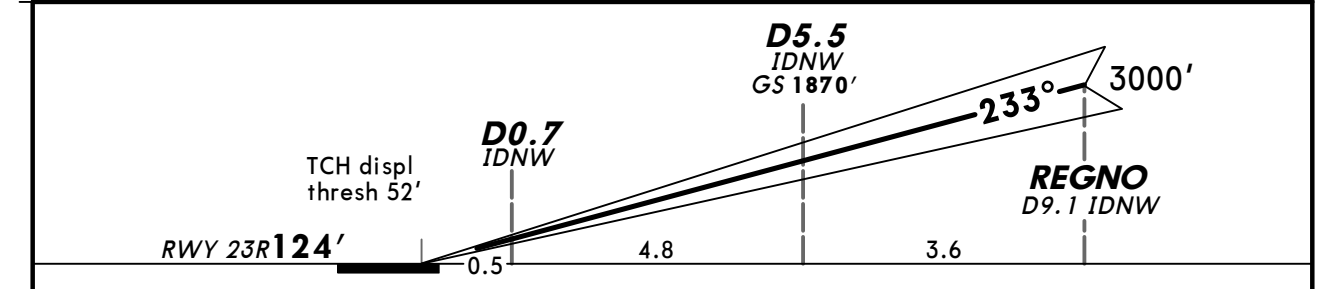
MISSED APCH: Climb STRAIGHT AHEAD to D2.0 DUS, then turn RIGHT to BOT NDB climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′

1. **DME required.** 2. Do not mistake ESSEN-MULHEIM 9.0 NM NE of DUSSELDORF when approaching rwy 23R. 3. Speciel Aircrew & Acft Certification Required.







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

ALSF-II
REIL
PAPI

D2.0
DUS

Standard

STRAIGHT-IN LANDING RWY **23R**
CAT II ILS
ABCD
RA 101′
DA(H) **224′** (100′)

RVR 300m 1

PANS OPS 4

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

CHANGES: ILS DME added.

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EDDL/DUS
DUSSELDORF

JEPPESEN
7 MAY 10 (12-1)

DUSSELDORF, GERMANY
RNAV (GPS) Rwy 05L

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

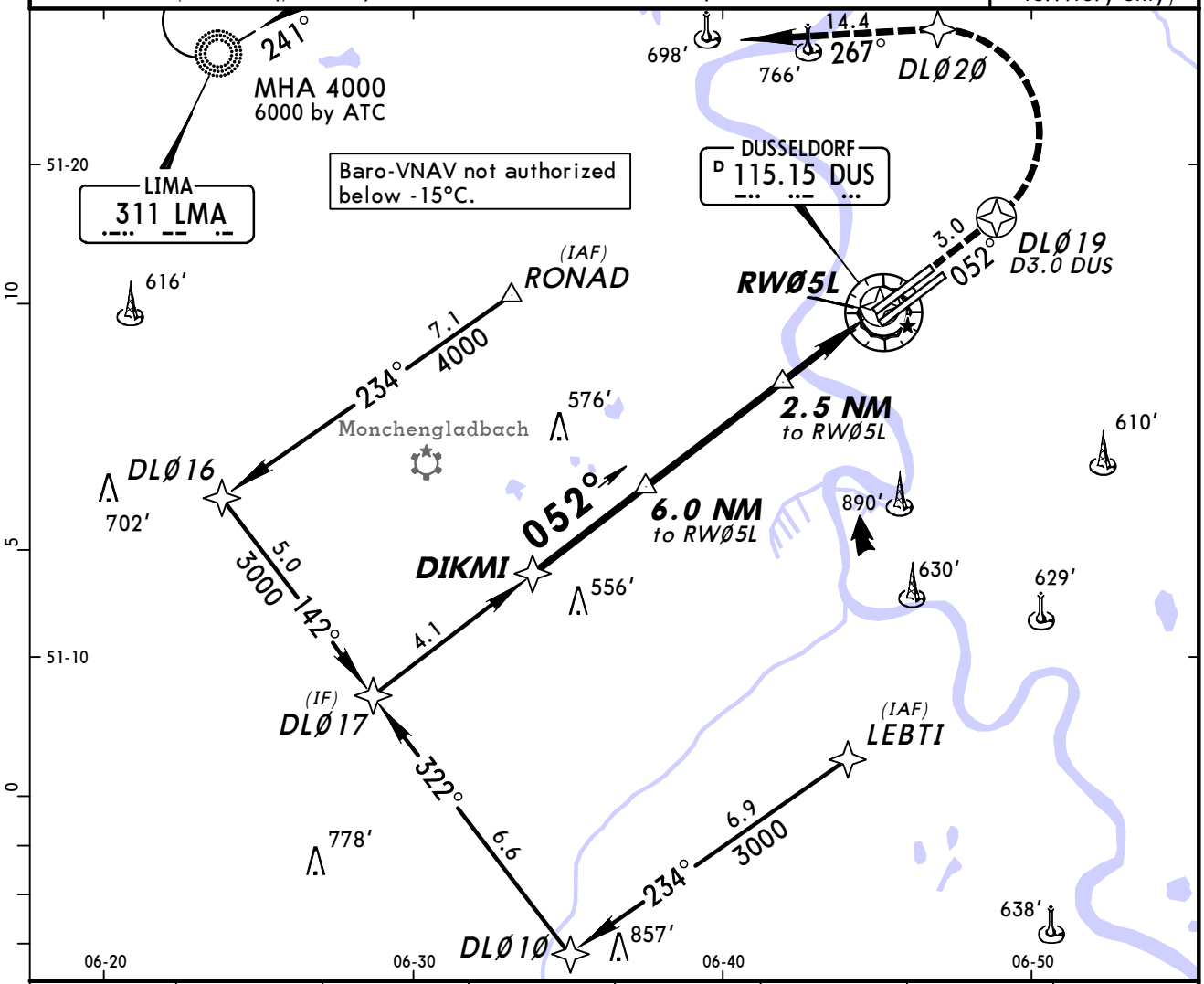
BRIEFING STRIP

RNAV	Final Apch Crs	Minimum Alt DIKMI	LNAV/VNAV DA(H)	Apt Elev / RWY
	052°	3000′ (2884′)	480′ (364′)	Apt Elev 147′ / RWY 116′

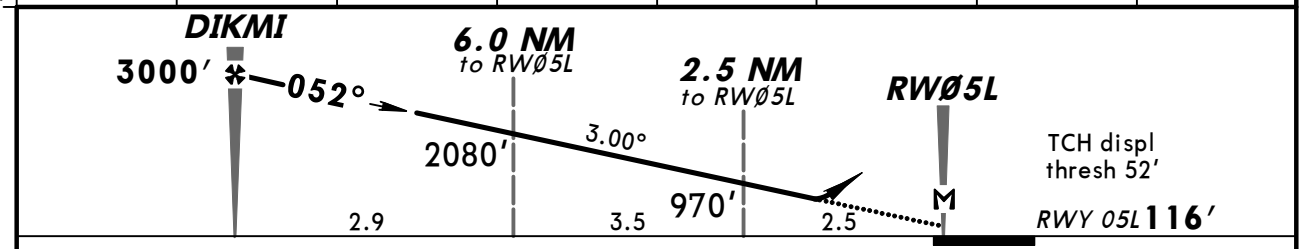
MISSED APCH: Climb on 052° to DLØ19, then turn LEFT via DLØ2Ø onto 267° to LMA NDB climbing to 4000′. **NON-RNAV:** Climb STRAIGHT AHEAD to D3.0 DUS, then turn LEFT onto 267° to LMA NDB climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′

2800′
MSA Airport
(Within German territory only)



DIST to RWØ5L	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2720′	2400′	2080′	1760′	1450′	1130′	810′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ5L							

HIALS
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **05L**

	LNAV/VNAV DA(H) 480′ (364′)		LNAV DA(H) 600′ (484′)	
		ALS out		ALS out
A	RVR 1000m	RVR 1500m	RVR 1500m	
B				
C		RVR 1700m	RVR 1500m	CMV 2300m
D				

CHANGES: Communications. Minimums.

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EDDL/DUS
DUSSELDORF

JEPPESEN
7 MAY 10 (12-2)

DUSSELDORF, GERMANY
RNAV (GPS) Rwy 05R

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

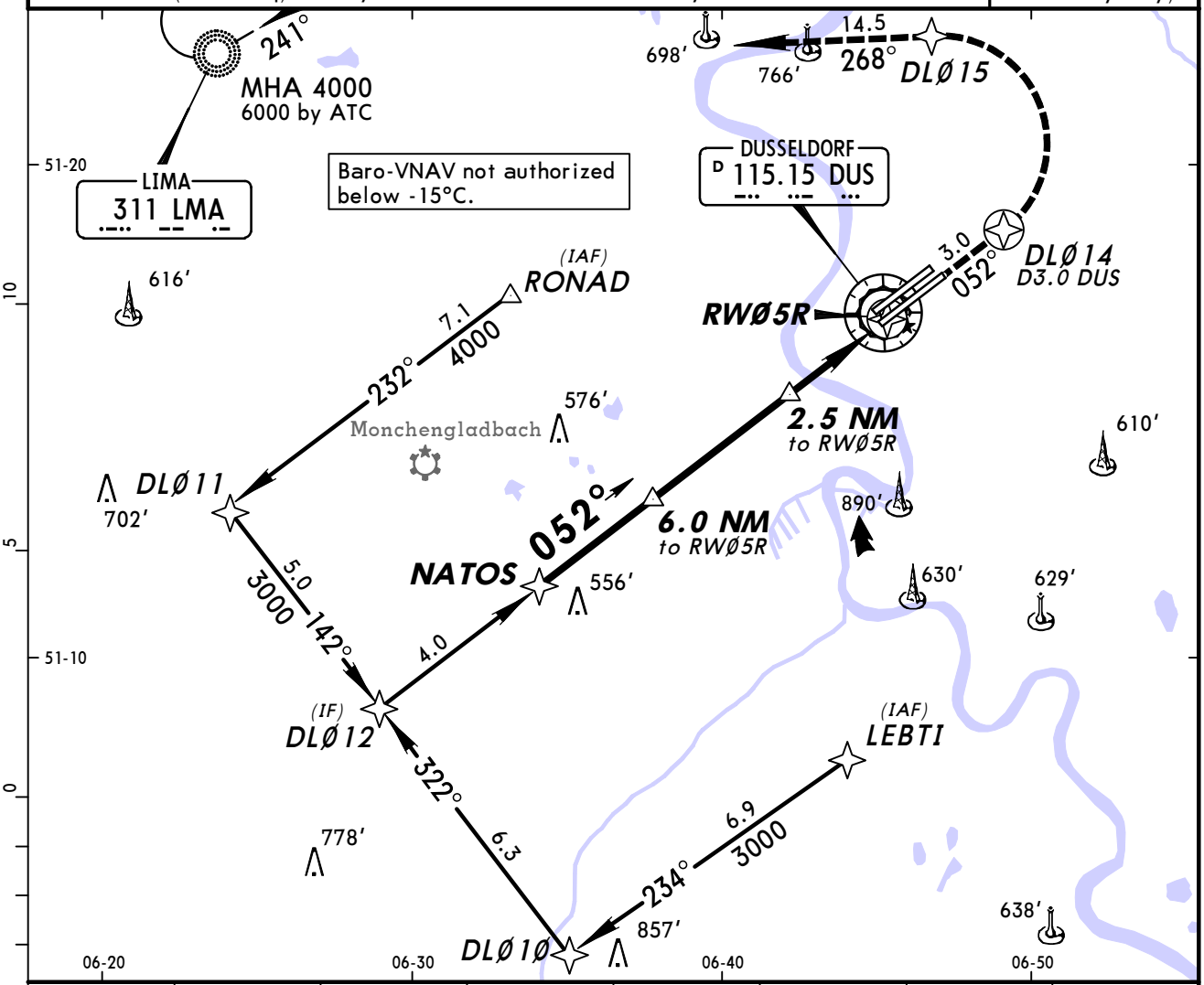
BRIEFING STRIP

RNAV	Final Apch Crs	Minimum Alt NATOS	LNAV/VNAV DA(H)	Apt Elev / RWY
	052°	3000′ (2879′)	540′ (419′)	Apt Elev 147′ / RWY 121′

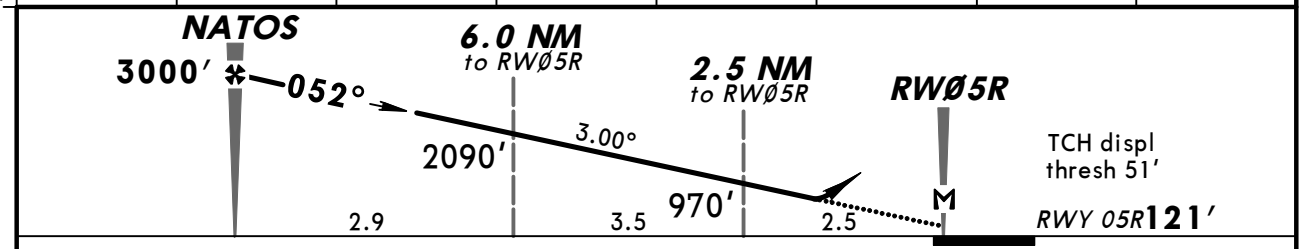
MISSED APCH: Climb on 052° to DLØ14, then turn LEFT via DLØ15 onto 268° to LMA NDB climbing to 4000′. **NON-RNAV:** Climb STRAIGHT AHEAD to D3.0 DUS, then turn LEFT onto 268° to LMA NDB climbing to 4000′.

2800′
MSA Airport (Within German territory only)

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′



DIST to RWØ5R	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2720′	2410′	2090′	1770′	1450′	1130′	810′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RWØ5R						

ALSF-II
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **05R**

	LNAV/VNAV DA(H) 540′ (419′)		LNAV DA(H) 680′ (559′)	
		ALS out		ALS out
A	RVR 1200m	RVR 1500m	RVR 1500m	
B				
C		RVR 1900m	RVR 1800m	CMV 2400m
D				

CHANGES: Communications. Minimums.

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EDDL/DUS
DUSSELDORF

JEPPESEN
7 MAY 10 (12-3)

DUSSELDORF, GERMANY
RNAV (GPS) Rwy 23L

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

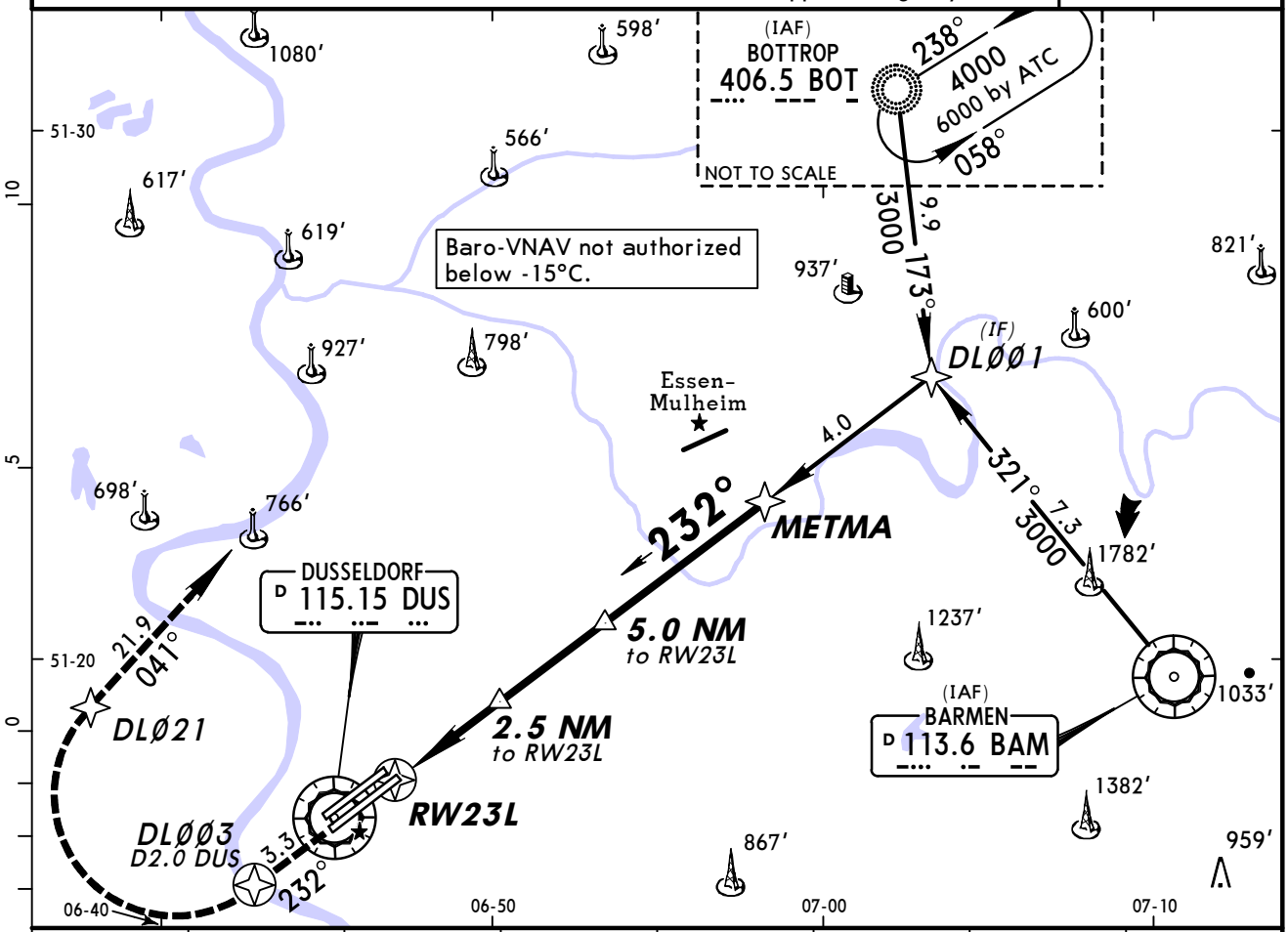
RNAV	Final Apch Crs	Minimum Alt METMA	LNAV/VNAV DA(H)	Apt Elev 147′ RWY 138′
	232°	3000′(2862′)	600′(462′)	

MISSED APCH: Climb on 232° to DLØØ3, then turn RIGHT via DLØ21 onto 041° to BOT NDB climbing to 4000′.
NON-RNAV: Climb STRAIGHT AHEAD to D2.0 DUS, then turn RIGHT to BOT NDB climbing to 4000′.

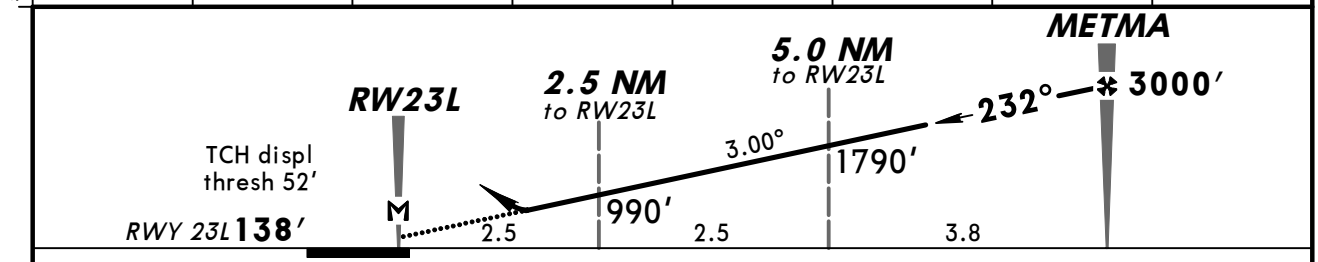
Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′
Do not mistake ESSEN-MULHEIM 9.0 NM NE of DUSSELDORF when approaching rwy 23L.

2800′
MSA Airport
(Within German territory only)

BRIEFING STRIP ™



DIST to RW23L	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	830′	1150′	1470′	1790′	2110′	2420′	2740′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW23L							

ALSF-II
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **23L**

	LNAV/VNAV DA(H) 600′(462′)		LNAV DA(H) A:610′(472′) BCD:680′(542′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1500m	CMV 2200m	RVR 1800m	CMV 2400m
D				

PANS OPS 4

CHANGES: Communications. Minimums.

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EDDL/DUS
DUSSELDORF

JEPPESEN
7 MAY 10 (12-4)

DUSSELDORF, GERMANY
RNAV (GPS) Rwy 23R

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

BRIEFING STRIP

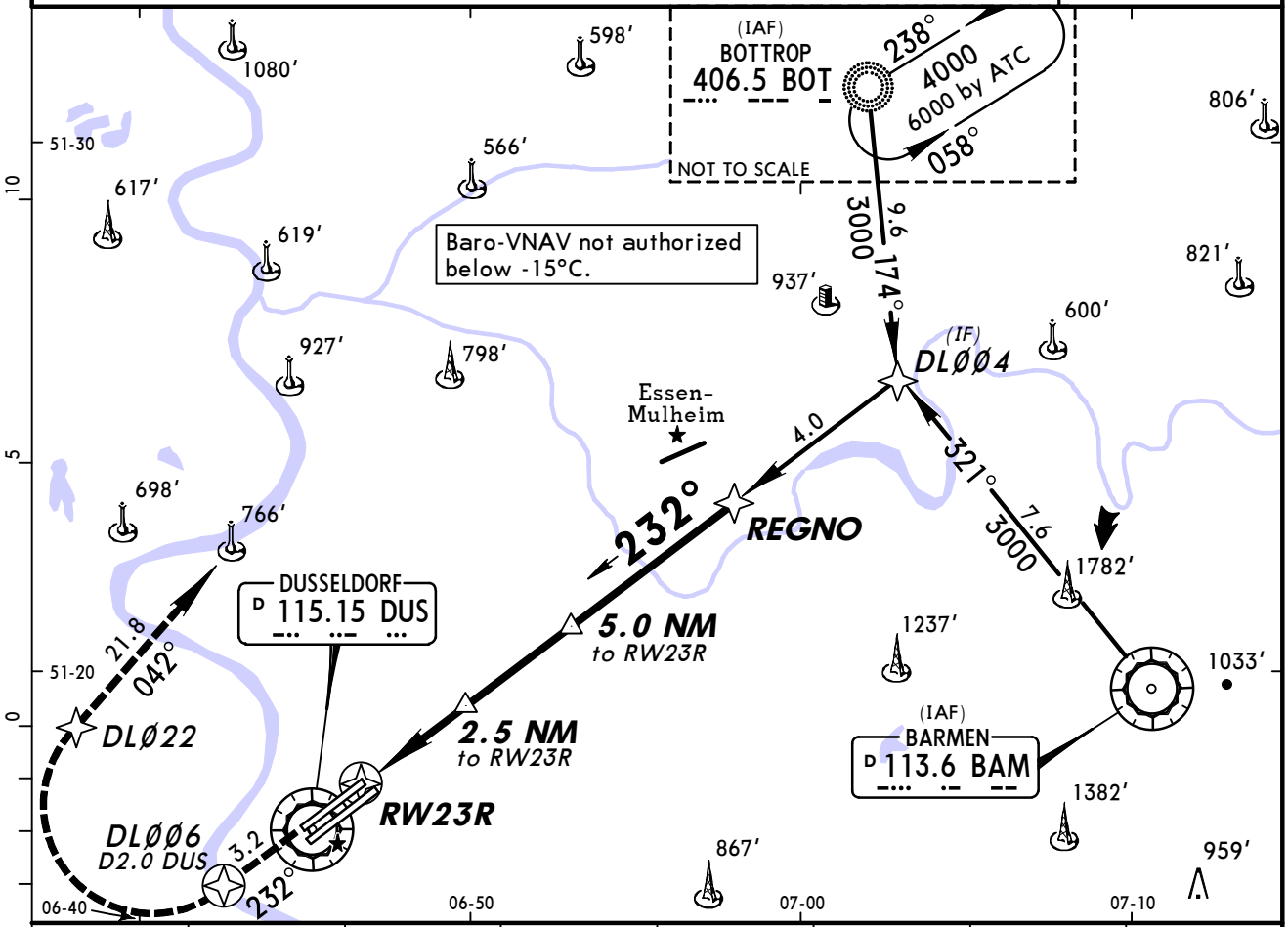
RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	232°	REGNO 3000′ (2876′)	620′ (496′)	Apt Elev 147′ RWY 124′

MISSED APCH: Climb on 232° to DLØØ6, then turn RIGHT via DLØ22 onto 042° to BOT NDB climbing to 4000′.

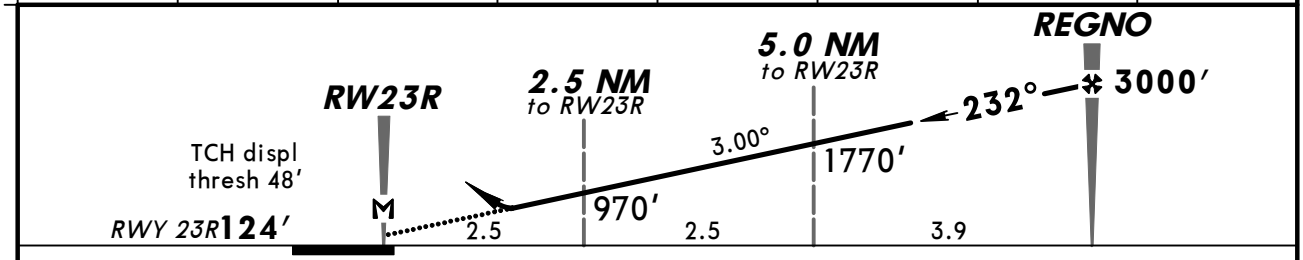
NON-RNAV: Climb STRAIGHT AHEAD to D2.0 DUS, then turn RIGHT to BOT NDB climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′
Do not mistake ESSEN-MULHEIM 9.0 NM NE of DUSSELDORF when approaching rwy 23R.

2800′
MSA Airport
(Within German territory only)



DIST to RW23R	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	810′	1130′	1450′	1770′	2090′	2410′	2730′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW23R							

ALSF-II
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **23R**

PANS OPS 4

	LNAV/VNAV DA(H) 620′ (496′)		LNAV DA(H) 640′ (516′)	
	ALS out		ALS out	
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1500m	CMV 2300m	RVR 1600m	CMV 2400m
D				

CHANGES: Communications. Minimums.

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*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

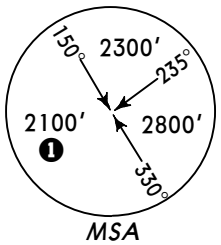
BRIEFING STRIP

VOR DUS	Final Apch Crs	Minimum Alt D10.1 DUS	DA(H)	Apt Elev / RWY
115.15	234°	3000′ (2862′)	700′ (562′)	Apt Elev 147′ / RWY 138′

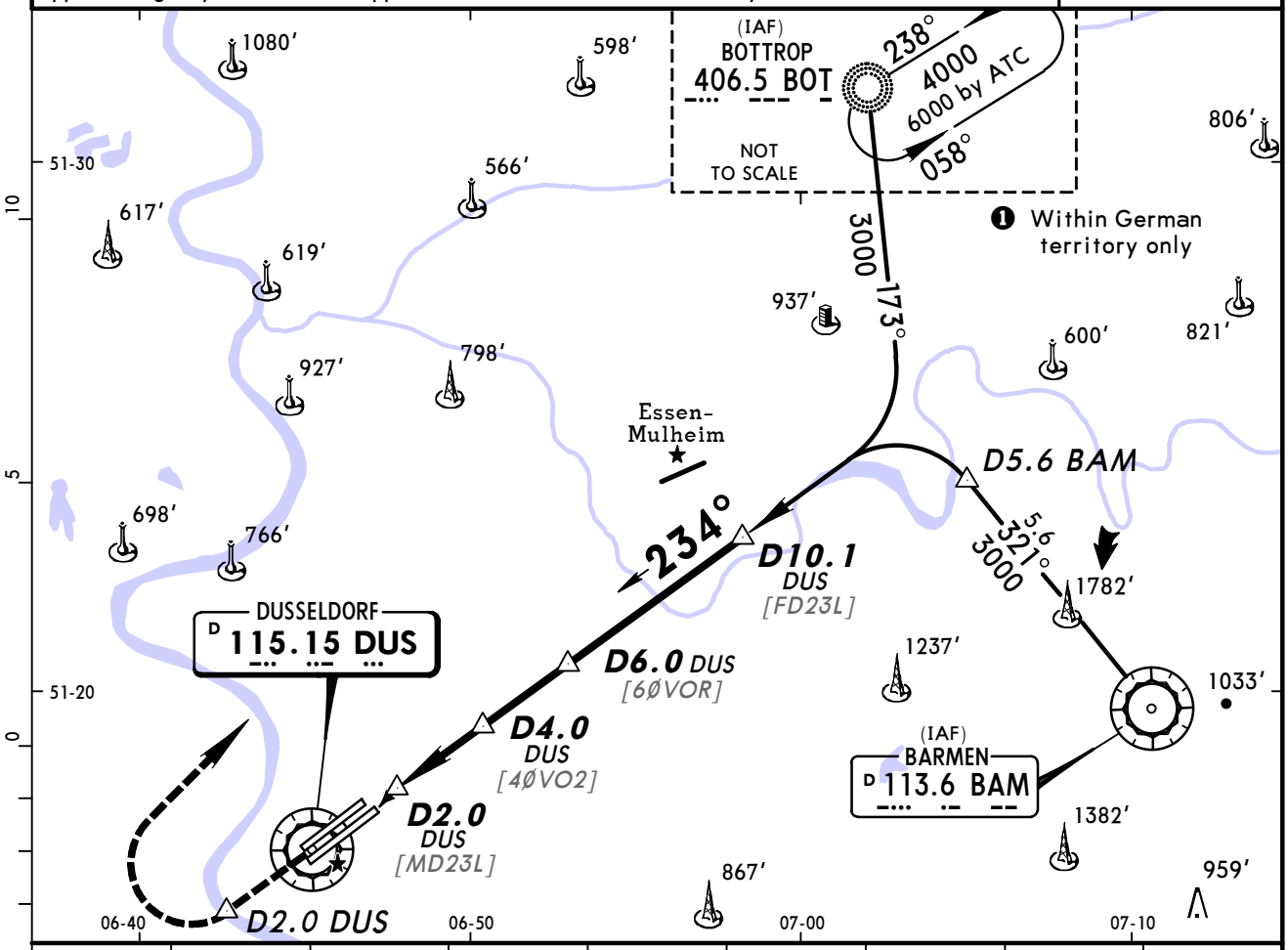
MISSED APCH: Climb STRAIGHT AHEAD to D2.0 DUS, then turn RIGHT to BOT NDB climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′

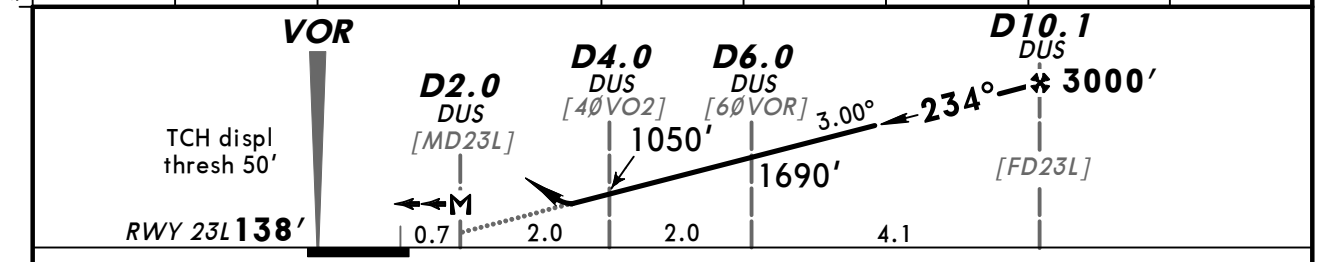
1. **DME REQUIRED.** 2. Do not mistake ESSEN-MULHEIM 9.0 NM NE of DUSSELDORF when approaching rwy 23L. 3. Final approach track offset 1° from runway centerline.



MSA
DUS VOR



DUS DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	730′	1050′	1370′	1690′	2010′	2330′	2640′	2960′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D2.0 DUS							

ALSF-II
REIL
PAPI

D2.0 DUS

Standard STRAIGHT-IN LANDING RWY **23L**

DA(H) **700′** (562′)

ALS out

PANS OPS 4

A	RVR 1500m	
B		
C	RVR 1900m	CMV 2400m
D		

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EDDL/DUS
DUSSELDORF

JEPPESEN
7 MAY 10 (13-2)

DUSSELDORF, GERMANY
VOR Rwy 23R

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

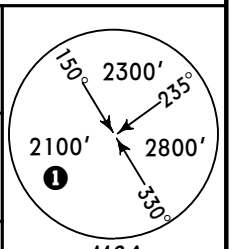
BRIEFING STRIP

VOR DUS	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
115.15	231°	D10.0 DUS 3000′ (2876′)	700′ (576′)	Apt Elev 147′ RWY 124′

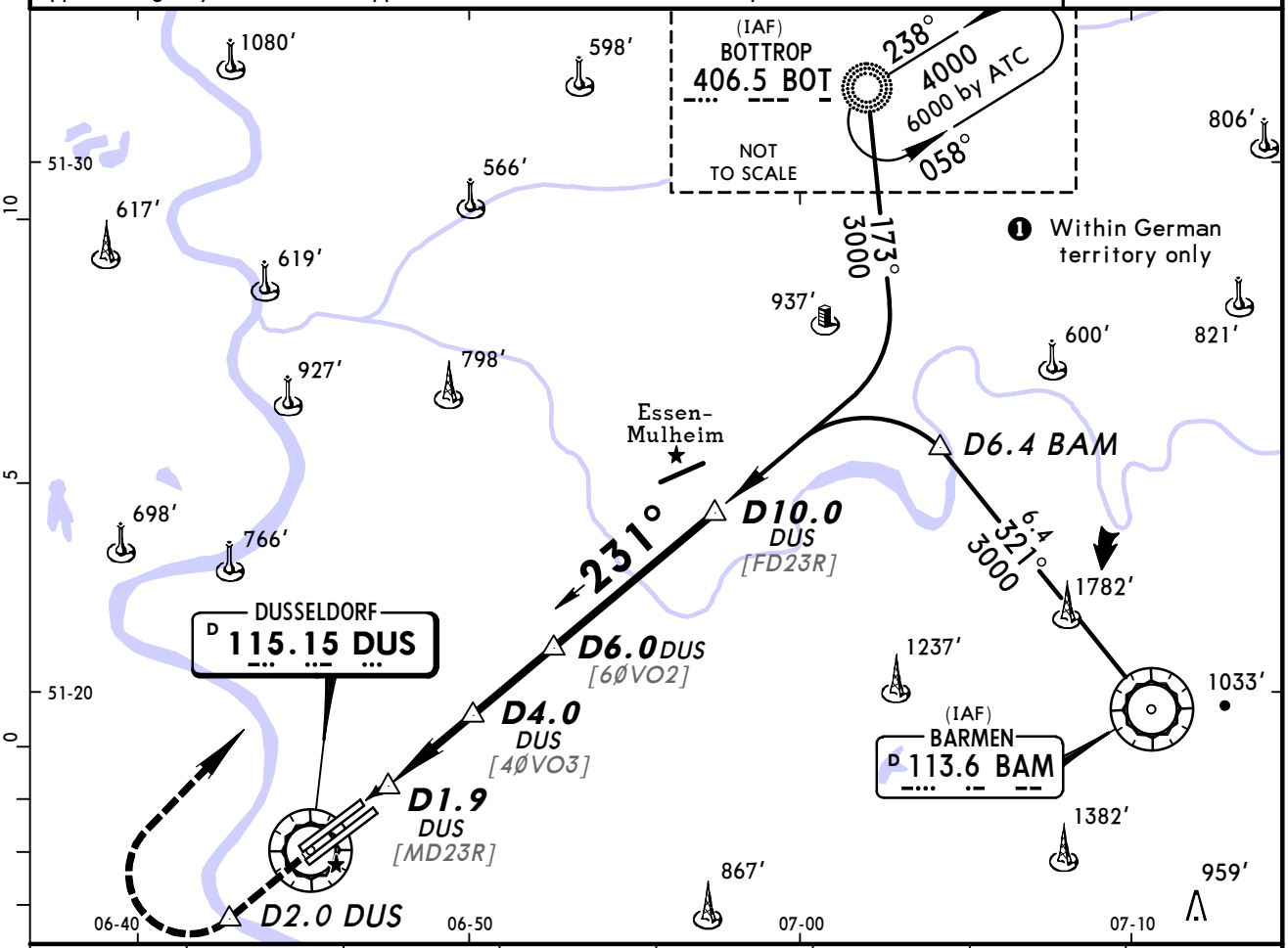
MISSED APCH: Climb STRAIGHT AHEAD to D2.0 DUS, then turn RIGHT to BOT NDB climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′

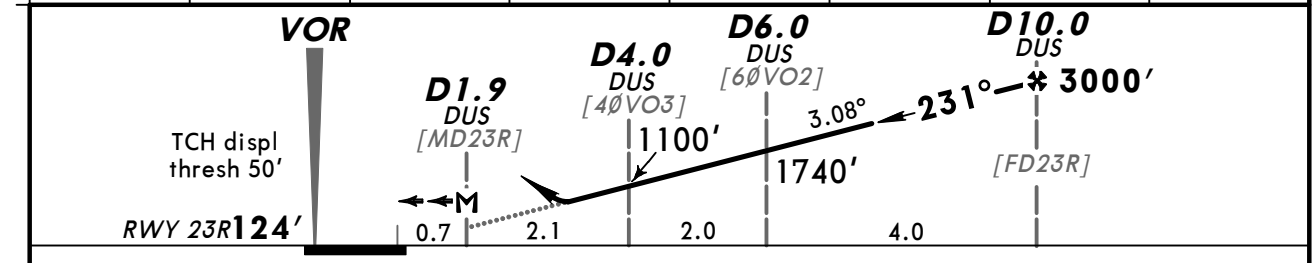
1. **DME REQUIRED.** 2. Do not mistake ESSEN-MULHEIM 9.0 NM NE of DUSSELDORF when approaching rwy 23R. 3. Final approach track offset 2° from runway centerline.



MSA
DUS VOR



DUS DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	780′	1100′	1420′	1740′	2060′	2380′	2690′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.08°	381	490	545	654	763	872
MAP at D1.9 DUS							

ALSF-II
REIL
PAPI

D2.0 DUS

Standard STRAIGHT-IN LANDING RWY **23R**

DA(H) **700′** (576′)

ALS out

PANS OPS 4

A	RVR 1500m	
B		
C	RVR 1900m	CMV 2400m
D		

CHANGES: Communications.

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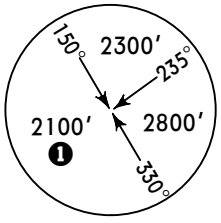
BRIEFING STRIP™

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

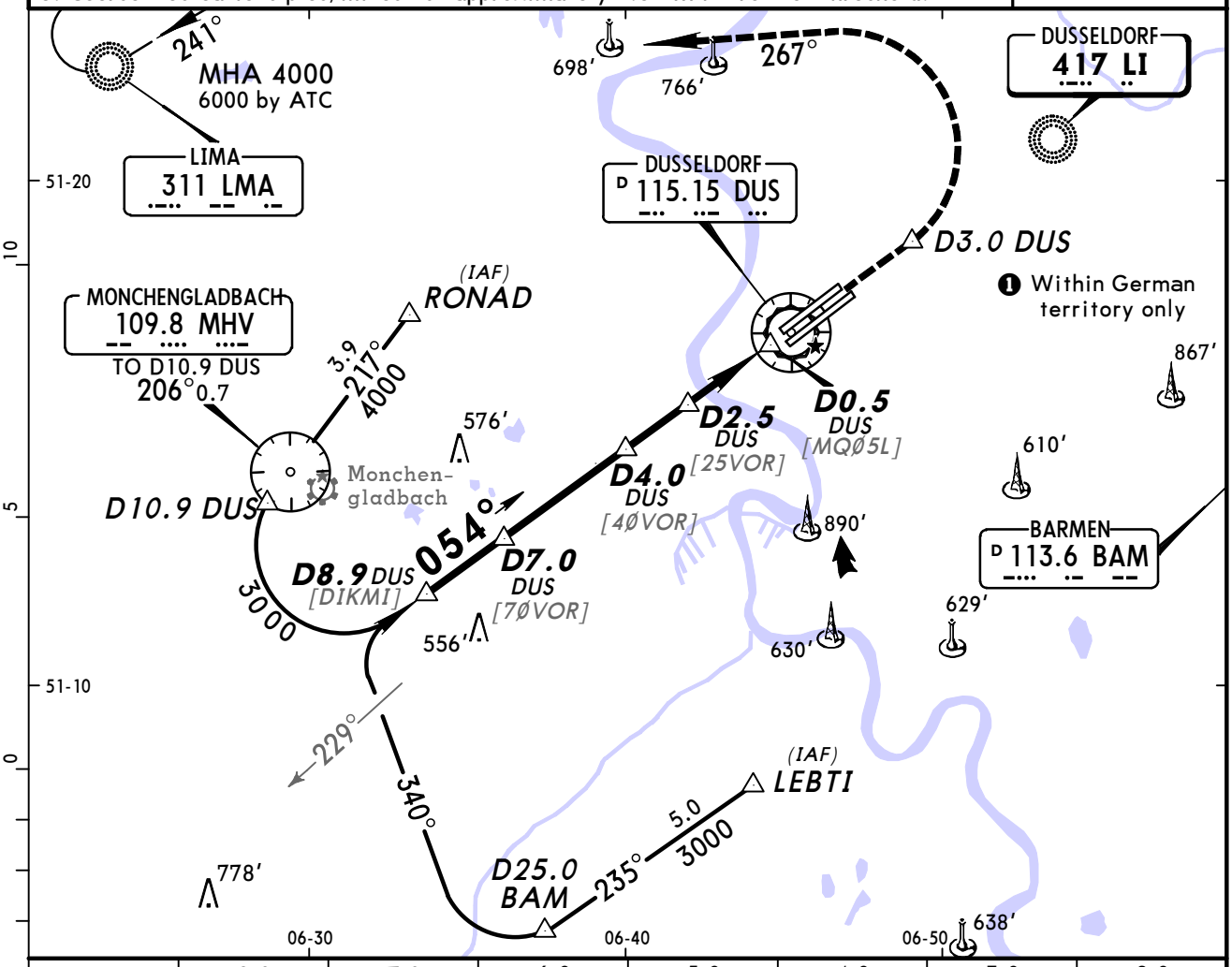
Lctr	Final	Minimum Alt	DA(H)	Apt Elev 147′
LI	Apch Crs	D8.9 DUS	680′ (564′)	RWY 116′
417	054°	3000′ (2884′)		

MISSED APCH: Climb STRAIGHT AHEAD to D3.0 DUS, then turn LEFT on track 267° to LMA NDB climbing to 4000′.

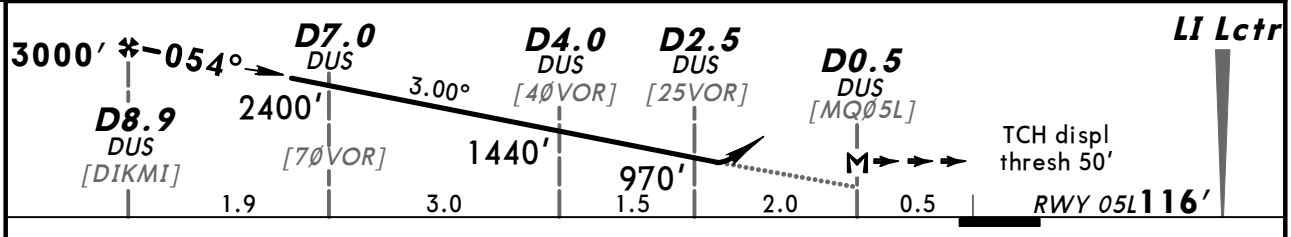
Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
1. **DME REQUIRED.** 2. Final approach track offset 1° from runway centerline.
3. Course fluctuations plus/minus 10° approximately 1.5 NM in front of threshold.



MSA DUS VOR



DUS DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2720′	2400′	2080′	1760′	1440′	1130′	810′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.5 DUS							

HIALS
REIL
PAPI

D3.0 DUS

Standard STRAIGHT-IN LANDING RWY **05L**

DA(H) **680′** (564′)

ALS out

PANS OPS 4

A	RVR 1500m	
B		
C	RVR 1900m	CMV 2400m
D		

CHANGES: Communications. Procedure.

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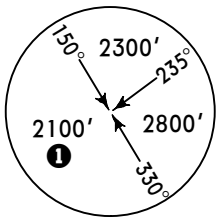
BRIEFING STRIP TM

*D-ATIS	LANGEN Radar (APP)	*DUSSELDORF Director (APP)	DUSSELDORF Tower	*Ground
115.15 123.77	133.77 128.5	128.65	118.3	121.9

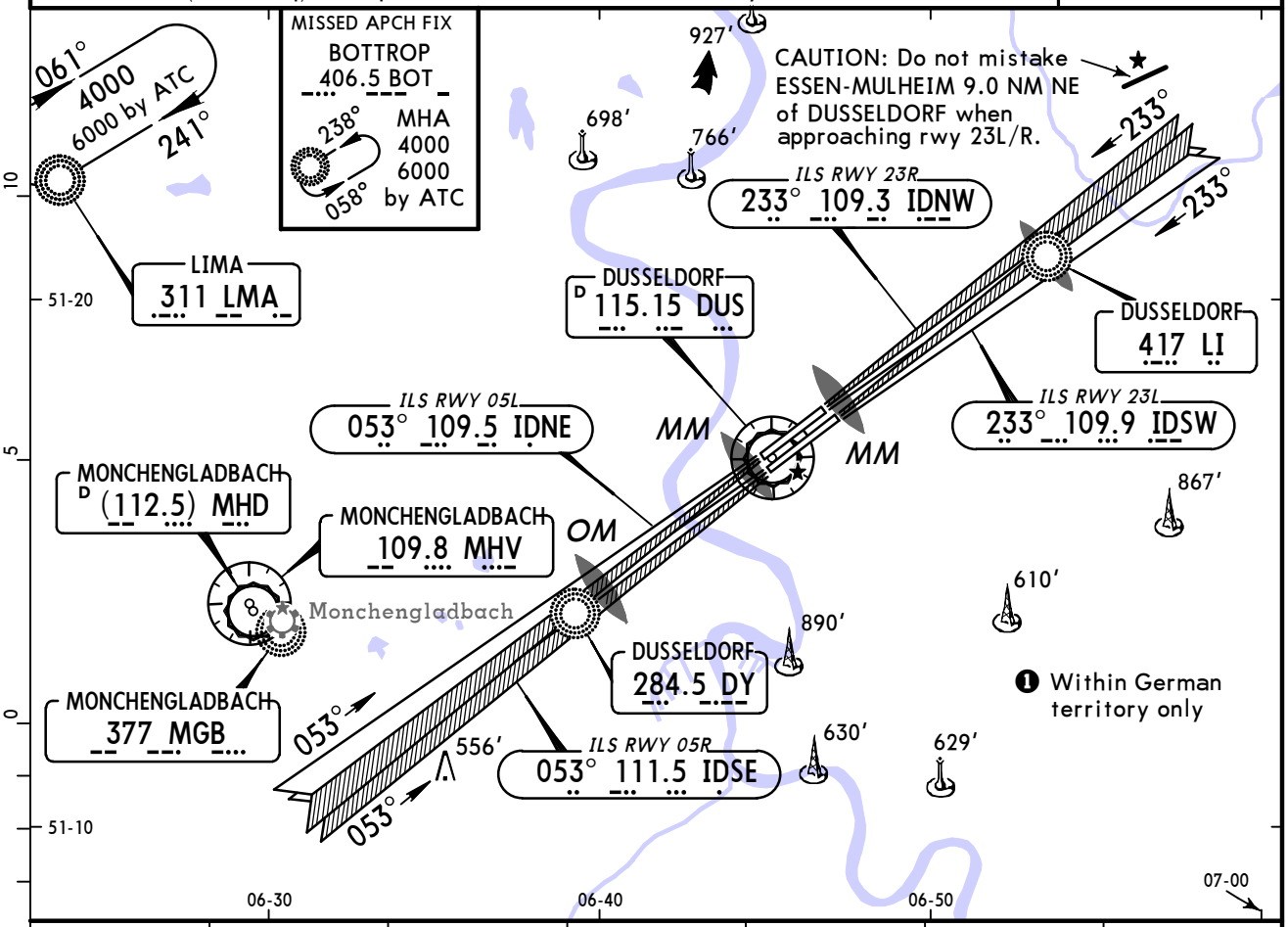
RADAR	Final Apch Crs By ATC	Minimum Alt See table below	MDA(H) Refer to Minimums	Apt Elev 147′ RWY - See below

MISSED APCH: Climb STRAIGHT AHEAD to 4000′.

Alt Set: hPa (IN on req) Apt Elev: 5 hPa Trans level: By ATC Trans alt: 5000′



MSA DUS VOR



RADAR FIX	10.0	8.0	6.0	4.0	3.0	2.0
ALTITUDE	3200′	2600′	2000′	1400′	1100′	800′

Minimum Alt/NM	10.0 FAF	4.0
SRA 05L	3200′	—
SRA 05R	3200′	—
SRA 23L	3200′	1200′
SRA 23R	3200′	1200′

RWY	05L	05R	23L	23R
BASED ON ELEV.	116′	121′	138′	124′

Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 2.83°	348	447	497	596	695	794
MAP at THR						

Lighting-Refer to Airport Chart

4000′

Standard STRAIGHT-IN LANDING

	SRA 05L MDA(H) 680′ (564′)		SRA 05R MDA(H) 680′ (559′)		SRA 23L MDA(H) 680′ (542′)		SRA 23R MDA(H) 680′ (556′)	
		ALS out		ALS out		ALS out		ALS out
A B	CMV 2100m	CMV 2800m	RVR 2000m	CMV 2700m	RVR 2000m	CMV 2700m	RVR 2000m	CMV 2700m
C D	CMV 2300m	CMV 3000m	CMV 2200m	CMV 2900m	CMV 2200m	CMV 2900m	CMV 2200m	CMV 2900m

PANS OPS 4

CHANGES: Communications. Recommended altitudes.

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General Information

Location: Munich Deu
IATA Code: MUC
Lat/Long: N48° 21.2' E011° 47.2'
Elevation: 1487 ft

Airport Use: Public
Magnetic Variation: 2.4°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0559 Z
Sunset: 1652 Z,

Runway Information

Runway: 08L
Length x Width: 13123 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 1467 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 08R
Length x Width: 13123 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 1486 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 26L
Length x Width: 13123 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 1470 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 26R
Length x Width: 13123 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 1449 ft
Lighting: Edge, ALS, Centerline, TDZ

Communication Information

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ATIS 123.125
Munich Tower 120.5
Munich Tower 118.7
Munich Tower 119.4
Munich Tower 35.555 Military
Munich Ground Control 121.975
Munich Ground Control 121.825
Munich Apron 3 Ramp/Taxi Control 121.925
Munich Apron 2 Ramp/Taxi Control 121.7
Munich Apron 1 Ramp/Taxi Control 121.775
De-Icing South DA2 Ramp/Taxi Control 121.6
De-Icing South DA1 Ramp/Taxi Control 121.875
De-Icing North/South DA3 Ramp/Taxi Control 135.225
De-Icing North DA2 Ramp/Taxi Control 121.9
De-Icing North DA1 Ramp/Taxi Control 121.65
De-Icing Coordinator Ramp/Taxi Control 130.6
Munich Clearance Delivery 121.725
Munich Clearance Delivery 37.835
Munich Radar South Approach Control 127.95 TCA
Munich Radar North Approach Control 123.9 TCA
Munich Radar Approach Control 131.225 TCA
Munich Radar Approach Control 128.25 TCA
Munich Radar Approach Control 126.45
Munich Radar Approach Control 33.88 TCA
Munich Radar Approach Control 26.275 TCA Military
Munich Radar Approach Control 25.9 Military
Munich Director South Approach Control 132.3
Munich Director South Approach Control 25.955
Munich Director North Approach Control 118.825 TCA
Munich Arrival South Approach Control 120.775 TCA
Munich Arrival North Approach Control 128.025 TCA

1. GENERAL

1.1. ATIS

*D-ATIS 123.12

1.2. NOISE ABATEMENT PROCEDURES

For additional depiction refer to 10-4 chart.

1.2.1. GENERAL

Pilots shall reduce noise disturbance caused by aircraft engines to an unavoidable minimum at MUNICH APT and its vicinity. This applies in particular to the times of night flying restrictions.

1.2.2. NIGHT FLYING RESTRICTIONS

From 2200-0600LT, flight operations are subject to the following restrictions for noise abatement reasons:
Restrictions regarding operating times:
Night flights are only permitted with the following provisions and with ACFT not exceeding the noise limits as stipulated by Annex 16 Section 3 of the ICAO Convention:

1.2.2.1. In commercial scheduled air service and charter service **s**

a) up to 28 scheduled flight movements in the period from
- 2200-2330LT for take-offs and landings and
- from 0500-0600LT for landings only.

Intercontinental flights shall have priority; in exceptional cases and if there is a particular traffic-related interest, such flights may be planned up to 2400LT.

b) Delayed landings and take-offs in the period from 2200-2400LT, provided the scheduled time of arrival or departure at or from MUNICH APT is planned before 2200LT or in the case of flight movements stated in paragraph 1.2.2.1., 1.2.2.2. and 1.2.2.3. before 2330LT and provided the arrival or departure is before 2400LT.
Early landings in the period from 0500-0600LT, provided the scheduled arrival time is planned after 0600LT.

c) Flights by airlines whose ACFT are mainly maintained at MUNICH APT in the period from 2200-2330LT for all landings and for scheduled take-offs of flights in intercontinental traffic and from 0500-0600LT for take-offs for ferry flights (empty flights) and for landings in intercontinental traffic.
In exceptional cases and if there is a particular traffic-related interest, flights in intercontinental traffic may be planned up to 2400LT.

1.2.2.2. Scheduled take-offs or landings of ACFT that do not generate on average an individual noise level exceeding 75 dB(A) at any single noise measuring point in the vicinity of MUNICH APT, in the period from 2200-2330LT and from 0500-0600LT.
This regulation shall also apply with lower priority to passenger flights by airlines with ACFT with a maximum take-off weight of more than 12t, provided such flights are carried out regularly and are reported to the APT Coordinator of the Federal Republic of Germany the day before to the following address:
Flughafenkoordinator der Bundesrepublik Deutschland
FAC 2 - TERMINAL 2 BEREICH E, HBK 37
60549 Frankfurt/Main
Tel. (069) 690-53081, -5 23 41, -3 20 51, -5 23 31, -2 95 01, -4 56 01, -5 23 51
Telefax: (069) 69 05 08 11, SITA: FRAZTXH, AFTN: EDDFYHYX

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1. GENERAL

1.2.2.3. Flights that are performed for services pursuant to para 4 No. 1 a PostG (Postal Act) dated 22nd December 1997 (Official Federal Gazette I, page 3294) or are carried out as surveying flights for the calibration of navigational aids from 2200-0600LT.

Exceptions:
Above stated restrictions regarding operating times do not apply to:
- Flights for providing assistance in emergencies and disasters and for executing police duties,
- Landings for meteorolgical, technical and other flight safety reasons,
- Flights that have been approved in justified exceptional cases by the "Bayerisches Staatsministerium fuer Wirtschaft, Verkehr und Technologie" or upon its instruction - by the Luftaufsicht at MUNICH APT, in substantiated individual cases to avoid serious disruptions to air traffic or in cases of special public interest.

Modified Bonus List:
Beginning with the summer flight plan 2002, take-offs and landings in the period from 2200-0600LT are only allowed with ACFT that are listed in the actual bonus list of the "Bundesministerium fuer Verkehr, Bau- und Wohnungswesen".
This list has been extended by the authorizing agency to include the ACFT types B737-600/700/800. Flights according to paragraphs 1.2.2.1 b) and 1.2.2.2. are exempt from this regulation. The authorizing agency reserves the Right to modify the list beginning in the year 2004.

1.2.3. RUN-UP TESTS

Validity of the engine test hangar regulations remains unaffected.
- Engine test runs for maintenance reasons are only permitted in the engine test hangar.
- The operating period of the engine test hangar is H24.
- In order to ensure compliance with the existing noise abatement conditions, facility restrictions may be imposed, if necessary.

Use of the engine test hangar shall always be announced via phone ext. 21131 to the FMG traffic centre, comprising the following data:
ACFT identification, period of use, expected time for towing and planned change of position.
ACFT shall not taxi under their own power into or out of the engine test hangar.

1.3. LOW VISIBILITY PROCEDURES (LVP) DURING CAT II/III OPERATIONS

1.3.1. GENERAL

Whenever operation of CAT II/III LVP is announced, taxiing is restricted to TWYs with operating centerline lights for all ACFT.
TWY centerline lights within the ILS sensitive area from RWY 08R/26L towards TWY T and from RWY 08L/26R towards TWY M are colour-coded (yellow-green).
After landing pilots are requested to report vacating the colour-coded centerline lights to indicate that the ACFT has vacated the ILS sensitive area.

1.3.2. STOP BARS

Stop bars are installed at CAT II/III holding positions, TWY intersections, junctions and sections. Taxiing across stop bars is strictly prohibited when they are switched on. Clearances of any kind do not cover permission for taxiing across an operating stop bar.

1.3.3. GUIDANCE WITHIN AREA OF APRON CONTROL RESPONSIBILITY

Within area of Apron Control responsibility ACFT may be guided by means of segmented green TWY centerline lights, even if all-weather operations CAT II/III are not active. Unless otherwise instructed, taxiing is permitted for ACFT only on TWYs with operating centerline lights.
Taxi guidance lines to the parking positions are yellow-lighted.
Taxiing across operating red stop bars is not permitted.

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1. GENERAL

1.4. SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM

1.4.1. OPERATION OF MODE S TRANSPONDERS WHEN ACFT IS ON THE GROUND

ACFT operators shall ensure that Mode S transponders are able to operate when the ACFT is on the ground.
Pilots shall select AUTO mode and assigned Mode A code.
If AUTO mode is not available, select ON (e.g. XPDR) and assigned Mode A code under the following conditions:
- from the request for push-back or taxi, whichever is earlier,
- after landing, continuously until the ACFT is fully parked on stand,
- when fully parked on stand, select STBY.

Whenever the ACFT is capable of reporting ACFT ident (i.e. callsign used in flight), the ACFT ident should also be entered from the request for push-back or taxi, whichever is earlier (through the FMS or the transponder control panel). ACFT crew shall use the format for entry of the ACFT ident as defined in item 7 of the ICAO flight plan (e.g. AFR6380, SAS589, BAW68PG).

To ensure that the performance of systems based on SSR frequencies (including airborne TCAS units and SSR radars) is not comprised; TCAS should be selected when approaching the holding point. It shall be deselected after vacating the RWY.
For ACFT taxiing without flight plan, Mode A code 2000 shall be selected.

1.5. TAXI PROCEDURES

On the aprons ACFT must taxi on or along yellow, blue or orange taxiing guide lines.

TWY D3 orange and blue MAX wingspan 170'/52m.
TWYs W1, O1, O3 orange and blue MAX wingspan 118'/36m.

1.6. PARKING INFORMATION

Visual Docking Guidance System available at stands 101, 102, 103, 104, 105, 107A, 107B, 108, 109B, 110, 111A, 111B, 112, 113A, 113B, 113X, 115A, 115B, 116, 117B, 118, 119, 120, 121, 131-135, 141-144, 151-155, 161-165, 201-224, 231-234, 243-256 and 305-317.

1.7. OTHER INFORMATION

RWYs 08L/26R and 08R/26L grooved.
TDZ 08L/26R and 08R/26L slippery when wet.

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2. ARRIVAL

2.1. SPEED RESTRICTIONS

MAX 250 KT below FL 100 or as by ATC. Not applicable within airspace C.

2.2. NOISE ABATEMENT PROCEDURES

2.2.1. REVERSE THRUST

When landing, reverse thrust other than idle thrust shall only be used to an extent necessary for safety reasons.

2.3. CAT II/III OPERATIONS

RWYs 08L, 08R, 26L and 26R are approved for CAT II/III operations, special aircrew and ACFT certification required.

2.4. RWY OPERATIONS

2.4.1. INDEPENDENT PARALLEL APPROACHES ON RWYs 08L/08R AND 26L/26R

Following the conditions and procedures described below, independent parallel approaches may be conducted for approaches on the parallel RWY system in all meteorological conditions:

a) One approach radar system (ASR) is in operation.

b) Both parallel ILS systems are in operation; or
one of the two ILS systems is in operation while the localizer of the other is in operation.

c) Radar separation of at least 3 NM, and/or 1000' vertical separation is maintained until both ACFT are stabilized on the localizer course within 25 NM.

d) For radar vectoring to the Instrument Landing System (ILS), a course is allocated, showing an angle of not more than 30° to the localizer course.

e) After a change of frequency to aerodrome control, the air-traffic controller at the aerodrome will take over the supervision of approaches with ASR until touchdown or until the pilot-in-command reports "aerodrome in sight".

f) If the air-traffic controller ascertains deviations in one of the approaching ACFTs course which reduce the lateral separation, not only will the deviating ACFT be requested to perform an evasive maneuver, but also the ACFT on the parallel approach, even if the latter is flying on the correct final approach.

If the conditions under a) or b) no longer apply, radar and/or vertical separation will be provided immediatly.

2.4.2. AVOIDANCE OF AN UNINTENDED CROSSING OF THE FINAL APPROACH COURSE WITH PARALLEL RWYs WHEN RADIO CONTACT IS TEMPORARILY IMPOSSIBLE

If an ACFT is on a radar vector which leads it to final approach course at an angle of 50° or less, or if ACFT has been cleared to a waypoint located on the final approach course, the pilot shall turn inbound to the final approach of the previously announced RWY and shall adhere to the cleared altitude/flight level, unless the pilot has been instructed by ATC clearance to cross final approach course.

2.4.3. AIR TRAFFIC HANDLING

2.4.3.1. USE OF RWYs

For arriving ACFT via ROKIL/LANDU, RWY 08L/26R will basically assigned.
For arriving ACFT via NAPSA/BETOS, RWY 08R/26L will basically assigned.
Pilots, whose flight is supposed to be positioned at the stand-groups 700/800/900 and hangar 1, 3, 4 should duly advise Approach Control. If traffic permits, these flights will be guided to RWY 08R/26L to avoid taxi delay on the ground.
When RWY vacated, contact Ground.

2.4.3.2. FREQUENCY CHANGE

While being transferred from MUNICH Arrival to MUNICH Director, initial call shall be restricted to CALL SIGN only, in order to avoid frequency congestion.

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2. ARRIVAL

2.4.3.3. HIRO HIGH INTENSITY RUNWAY OPERATIONS

To achieve the highest possible rate/hour for arrivals and departures, RWY occupancy times are to be reduced to a minimum.
RWYs shall be vacated via high speed turn-offs.

Whenever RWY conditions permit, the following or earlier high-speed turn-offs shall be used:

RWY	Acft	Turn off intersection	Dist from THR ft/m
08L	heavy medium (JET) medium (PROP) / light	A10 A8 A5	7415' / 2260m 5610' / 1710m 4167' / 1270m
08R	heavy medium (JET + PROP) / light	B10 B7	7218' / 2200m 5184' / 1580m
26L	heavy medium (JET) medium (PROP) / light	B6 B8 B11	7283' / 2220m 5446' / 1660m 3806' / 1160m
26R	heavy medium (JET + PROP) / light	A6 A9	7218' / 2200m 5184' / 1580m

Plan earlier high-speed turn-offs only if vacating RWY via these exits is assured.
Do not vacate via TWY A7 and/or B9 unless advised by MUNICH Tower!

In the interest of noise abatement, from 2200-0600LT arriving ACFT should leave the RWY during idle thrust via the high-speed turn-offs stated above or later.
It is recommended to name the respective high-speed turn-off during the approach briefing (cockpit).

2.5. TAXI PROCEDURES

ACFT shall establish radio contact with MUNICH Apron prior leaving area of ATC competency and taxi independently as instructed by MUNICH Apron to the position assigned.

Taxiing ACFT should not deviate from centerline marking and lighting, except when advised by the control unit.

2.6. OTHER INFORMATION

2.6.1. FUEL SAVING AND NOISE REDUCING ILS APPROACH PROCEDURES (CONTINOUS DESCENT APPROACH - CDA)

2.6.1.1. GENERAL

For the purpose of fuel-saving and noise abatement during approach the following approach procedure is announced. It may be requested by the pilot or offered by the controller. It can be conducted only in connection with an ILS approach.

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2. ARRIVAL

2.6.1.2. PROCEDURE

ACFT will be guided by the approach control unit by means of radar vectoring and will be cleared for a continuous descent to the intermediate approach altitude in such a way that after reaching this intermediate approach altitude on the localizer course, about 1 NM will be left for intercepting the glide path in level flight. This intermediate approach segment will serve to reduce speed.
Intermediate approach altitude: 5000'. It is assumed that the continuous descent will be performed at a rate of 300 ft/NM (descent angle approx 3°), down to the cleared altitude.

If, for specific reasons (e.g. separation, airspace structure, obstacles), altitudes above the intermediate approach altitude have to be initially assigned, these restrictions will be lifted early enough to allow a continuous descent at a rate of 300 ft/NM.

Details about the distance from touchdown will be transmitted to the pilot together with the clearance for descent and usually at 20, 15 and 10 NM from touchdown. This should enable the pilot to correct the rate of descent as required.

In case of traffic situations allowing no CDA (e.g. approaches of ACFT with different performance data), pilots will be informed by the notice NO CDA POSSIBLE. In this case, approaches must be conducted according to the previous procedures.

2.6.1.3. NOISE ABATEMENT

On approaches in accordance with the CDA, pilots are also expected to use the approach techniques recommended for noise abatement in the vicinity of APTs (see AIR TRAFFIC CONTROL page GERMANY-1).

2.6.2. AIR TRAFFIC HANDLING

2.6.2.1. PROCEDURE

Arriving ACFT will be guided to final by radar vectoring or RNAV guidance (transitions/waypoints).

2.6.2.2. CLEARANCE LIMIT

With no further clearance issued, pilots have to consider the following clearance limits of the respective Standard Arrival Routes: ROKIL (via WLD), LANDU (via DIMGA and DINOG), NAPSA (via SBG) or BETOS (via DISUN).

2.6.2.3. HOLDING PROCEDURE

Expect holding overhead ROKIL/LANDU/TILGO and NAPSA according to the arrival route. RNAV-equipped ACFT are expected to enter published RNAV-holdings.

2.6.2.4. COMM FAILURE PROCEDURE

Only in the case of communication failure have pilots to proceed to the respective Initial Approach Fix MUN/MIQ, to hold overhead and execute a standard instrument approach following the published procedures.
Pilots already cleared for a RNAV-transition should follow the transition and execute a standard instrument approach to the respective RWY.

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3. DEPARTURE

3.1. DE-ICING

3.1.1. GENERAL

Special areas are assigned for the de-icing of ACFT.
De-icing notification to the de-icing coordinator is mandatory at least 15 minutes prior to off-block on frequency 130.6 or via telephone (APT phone 181 - 65 66; external phone 089 - 977 - 65 66).
ATC will arrange the de-icing sequence and assign the respective de-icing area.
During the de-icing treatment the assigned ATC frequency has to be monitored.
With start-up request, Delivery shall be informed about the need of an engine run-up after de-icing in accordance with departure preparations.
The actual TSAT should be taken into account during de-icing procedures.
The deicing times shall not be taken into consideration when determining the TOBT. They will be considered when calculating the TSAT on the basis of the application for de-icing.
De-icing must, therefore, be applied for as early as possible.

3.1.2. COMMERCIAL JET ACFT

The de-icing on the areas listed below is performed with ACFT engines running.
The following facilities are also available for ATR 42/72 with operative propeller braking.

MUNICH De-icing:	NORTH DA 1 (Rwy 08L/26R)	**121.65**
	NORTH DA 2 (Rwy 08L/26R)	**121.9**
	NORTH DA 3 (Rwy 08L/26R)	**131.45**
	SOUTH DA 1 (Rwy 08R/26L)	**121.87**
	SOUTH DA 2 (Rwy 08R/26L)	**121.6**
	SOUTH DA 3 (Rwy 08R/26L)	**135.22**

3.1.3. COMMERCIAL PROPELLER-DRIVEN ACFT

Propeller-driven ACFT (except ATR 42/72) are de-iced on Aprons 1, 2, 3, 6, 7, 8 and 9 at their respective parking position. De-icing is performed with engines switched off. Information on possible delay shall be obtained from Delivery before starting the de-icing procedure.

3.1.4. GENERAL AVIATION ACFT

On Apron 10 a de-icing area is assigned to General Aviation ACFT.
De-icing is performed with engines switched-off.

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

3.2.1. START-UP

3.2.1.1. DEFINITIONS

TOBT: Target Off-Block Time
The time which is binding and announced by the airline company/handling agent, at which the entire ground handling will be finished, the ACFT doors shut, the passenger gangways pushed back from the ACFT, the start-up clearance received and at which the push-back/taxi clearance can be given.
TOBT is a reference time used for all ground handling processes except for ACFT push-back and de-icing. This time is used for coordination purposes, since it is the most available time.

TSAT: Target Start-Up Approval Time
Calculated time at which start-up clearance can be expected at the latest. The TSAT includes all relevant parameters such as CTOT, variable taxiing time etc.

SEPL: Sequence planner
IT system for calculating the TOBT and TSAT.

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MGT: Minimum Ground Time
The Minimum Ground Time is a minimum Turn-Round time for ACFT depending on the airline, type of ACFT and destination.

RMT: Remaining Time
The Remaining Time is the period between TSAT and the targetted take-off time.

3.2.1.2. AUTOMATIC TARGET OFF-BLOCK TIME (TOBT)

For ACFT not subject to a direct turn-round flight, the TOBT will be generated as of the time "Actual Off-Block from the directly preceding position".
Important dependencies for the primary generated TOBT:

(Estimated Inblock Time (EIBT) + Minimum Ground Time (MGT) smaller or equal than EOBT) (EIBT + Minimum Ground Time (MGT) more or equal than EOBT)
(TOBT + Remaining Time (RMT) smaller or equal than CTOT)

In case of changing the ACFT, the original TOBT will remain unchanged. If the TOBT is not automatically generated for a flight, it must be entered by the TOBT responsible person.

3.2.1.3. PERSON RESPONSIBLE FOR TOBT

The handling agent, the airline company (for flights without a handling agent) or the Pilot-in-Command (for General Aviation Flights without a handling agent) is responsible for the correctness of and adherence to the TOBT.

3.2.1.4. TOBT CORRECTION/DELETION

If the TOBT cannot be adhered to, it must be corrected by the TOBT responsible person. Until the Target Start-Up Approval Time (TSAT) has been issued, the TOBT can be corrected as often as desired. After the TSAT has been issued, the TOBT may be corrected up to a maximum of three times. TOBT must then be deleted and filed anew. If TOBT is changed to an earlier time, the new TOBT must be 5 minutes later than the actual time.

As the TOBT is triggering additional processes at the APT, TOBT adaptations shall be done as soon as possible. If a flight is to be withdrawn from the TOBT and/or TSAT calculation, the TOBT shall be cancelled. To set this process in motion again, the TOBT shall be filed anew. It is still mandatory to send a delay message to the IFPS if the EOBT deviates by 15 minutes or more.

3.2.1.5. TOBT DIALOGUE

The TOBT dialogue will take place using the following channels:
- Dialogue sequence planner (SEPL)
- Internal system of the airline/handling agent (via interface)
- HTML masks
- Internet dialogue WEASEL
- FMG traffic operation center following enquiry via phone +49 89 975 21135

For General Aviation flights:
Phone +49 89 975 21498 (MON - SUN 0530 - 2220 LT)
Outside opening times by calling the FMG traffic operation center:
Phone + 49 89 975 21135

3.2.1.6. TARGET START-UP APPROVAL TIME (TSAT)

TSAT will be calculated 40 minutes prior to TOBT. TSAT is the time at which the ACFT may expect the start-up and enroute clearance, at the latest. Changes to the TOBT do not affect the TSAT in general, as long as the newly calculated TOBT does not come after the calculated TSAT. The TSAT confirmation message is accomplished via the TOBT reporting path. The TOBT responsible person must ensure the correct transmission of the TSAT to the pilot.

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3. DEPARTURE

3.2.1.7. PROCESS

The "Pre-Departure Sequence" will be determined in accordance with TSAT. On reaching the TOBT, the ACFT must be ready for start-up and/or apron de-icing.
The pilot can request start-up and enroute clearance 5 minutes or less before the TOBT. Depending on the TSAT as well as on the actual operational traffic situation, Delivery will grant start-up and enroute clearance. Shifting to an earlier TOBT of more than 5 minutes shall be done by the TOBT responsible person. The approval for push-back/taxi shall be requested not later than 5 minutes after start-up approval has been issued. Otherwise, the TOBT will be deleted and must be entered again. For datalink departure clearance (DCL), the published procedures and the time parameters continue to apply.
The TSAT is transmitted ("Start-up approved according to TSAT - hh:mm - ") using CLD (departure clearance uplink message - issuance of start-up approval and enroute clearance by Delivery).
The push-back/taxi request shall be made at TSAT +/- 5 minutes.

3.2.1.8. REMOTE HOLDING

Remote Holding can be applied for via the TOBT reporting channels.

3.2.2. PUSH-BACK & TAXIING

To obtain push-back instructions from a nose-in position, pilots must request permission from MUNICH Apron.
In order to avoid delays in taxiing, pilots are instructed to start engines during push-back.
After completion of push-back "ready to taxi" shall be reported to MUNICH Apron.
To obtain instructions for taxiing from a taxi-out position, pilots must request taxi clearance from MUNICH Apron reporting "ready to taxi".
On initial radio contact with MUNICH Apron, pilots shall report position and RWY assigned.
Permission for push-back or taxiing from a position may only be requested if the pilot can perform the maneuver immediately.

3.3. SPEED RESTRICTIONS

MAX 250 KT below FL 100 or as by ATC. Not applicable within airspace C.

3.4. NOISE ABATEMENT PROCEDURES

Between 2200-0600LT departures of ACFT with wake turbulence category "H" from RWY 26L via MUN shall use a departure route with designator "W" only.

3.5. RWY OPERATIONS

3.5.1. USE OF RWYS

Departing ACFT into N and NE directions have to expect RWY 08L/26R.
Departing ACFT into NW directions have to expect RWY 08L or 26L.
Departing ACFT into SW, S and SE directions have to expect RWY 08R/26L.

3.5.2. FREQUENCY CHANGE

While being transferred from Ground to Tower, initial call shall be omitted and Tower frequency shall be monitored to be ready for further clearances at all times.
After departure, pilots shall change to the pre-selected departure frequency only when advised by Tower.

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3. DEPARTURE

3.5.3. HIGH INTENSITY RWY OPERATIONS

Pilots should ensure that they are able to follow the clearance to the take-off position or the take-off clearance without delay to keep RWY occupation times as short as possible.
Use CAT II/III holding position only during low visibility operation (CAT II/III) or when instructed by Tower. Otherwise taxi forward to CAT I holding position.
Cockpit checks should be completed prior to line-up and any checks requiring completition on the RWY should be kept to a minimum.
ATC instructions to be ready for immediate departure ("be ready for/expect immediate departure") will be issued if an immediate realization of the succeeding take-off clearance is possible, occupying the RWY as short as possible.
Pilots unable to perform, shall inform ATC accordingly without delay.

Pilots shall prepare for the following take-off runs available:

RWY	ACFT	TWY intersection	TORA ft/m
08L	heavy + medium (JET) light (JET) + turboprop light (JET) + turboprop	A1 / A2 A4 A6	13,123' / 4000m 9252' / 2820m 7218' / 2200m
08R	heavy + medium (JET) heavy + medium (JET) light (JET) + turboprop light (JET) + turboprop	B1 / B2 B3 B4 B6	13,123' / 4000m 12,467' / 3800m 9318' / 2840m 7283' / 2220m
26L	heavy + medium (JET) heavy + medium (JET) light (JET) + turboprop light (JET) + turboprop	B14 / B15 B13 B12 B10	13,123' / 4000m 12,467' / 3800m 9252' / 2820m 7218' / 2200m
26R	heavy + medium (JET) heavy + medium (JET) light (JET) + turboprop light (JET) + turboprop	A14 / A15 A13 A12 A10	13,123' / 4000m 12,467' / 3800m 9121' / 2780m 7415' / 2260m

The pilot may ask for shortened take-off runs.

3.6. OTHER INFORMATION

3.6.1. DATALINK DEPARTURE CLEARANCE (DCL)

DFS (Deutsche Flugsicherung GmbH) is offering to grant start-up and route clearance using Datalink. The procedures for this are described in an AIC.
Deviations from this and depending on the traffic and weather situation, the route clearance can be transmitted via Datalink in advance after receiving a RCD, while start-up clearance will be granted on the frequency listed in the CLD as the occasion arises.
Pilots shall maintain listening watch on this frequency and shall refrain from asking questions about the start-up clearance.

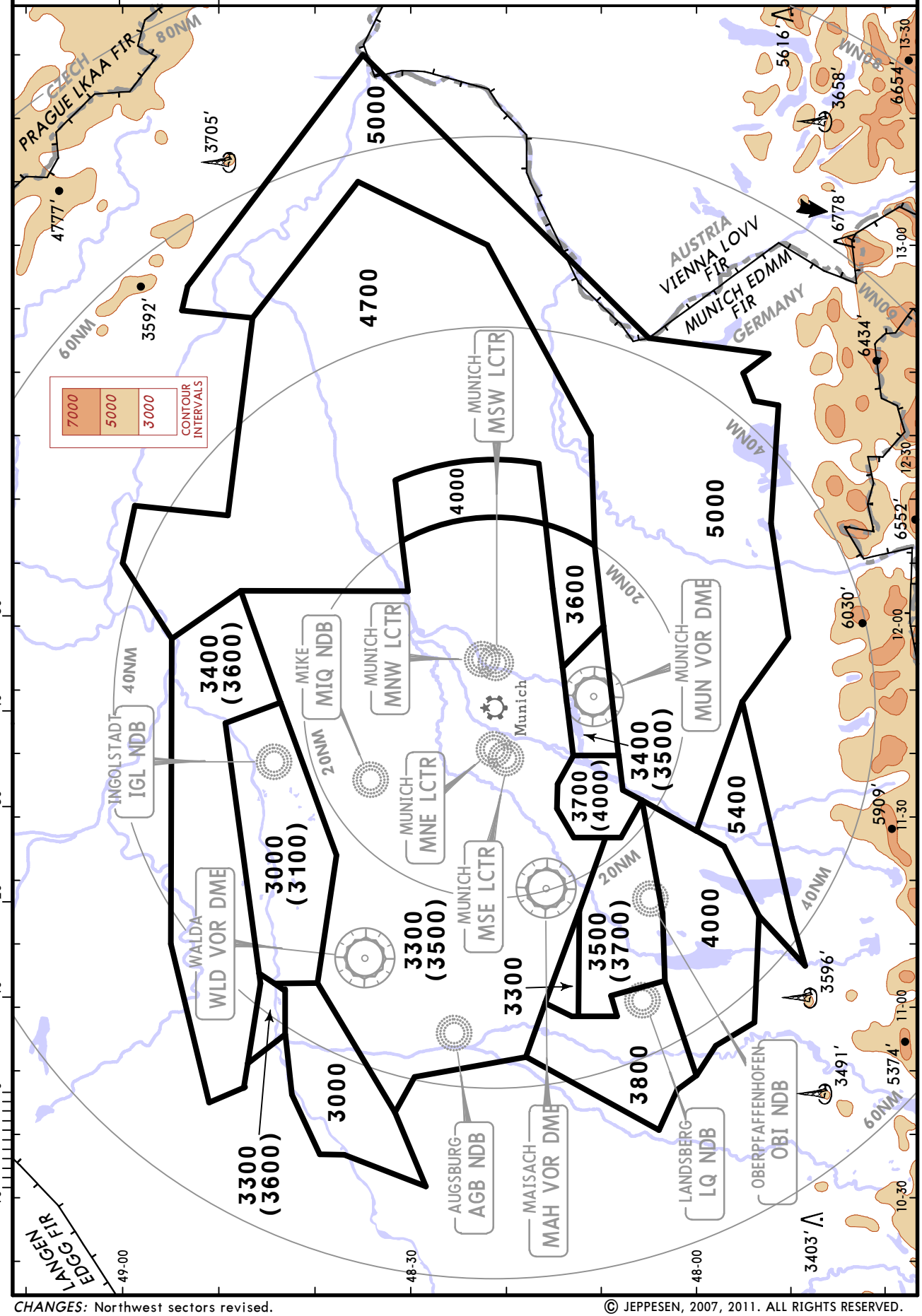
The following time parameters apply:

t_i 25 min prior to EOBT for unregulated flights.
30 min prior CTOT for ATFM regulated flights
t_t 11 min prior to EOBT for unregulated flights.
16 min prior to CTOT for ATFM regulated flights.
t_0 1 min
t_1 5 min
t_2 1 min

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MUNICH Radar (APP)	Apt Elev
123.9 127.95 128.25 *131.22	1487′

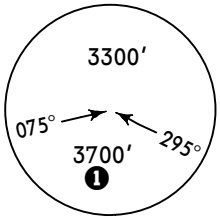
Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000′ above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500′). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only.
Altitudes in brackets apply for the period from AIRAC date in November until AIRAC date in March in order to meet required obstacle clearance at cold temperatures.



CHANGES: Northwest sectors revised.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ Usage of STAR to the clearance limit is mandatory when reaching the first point of a STAR.
123.12	1487′	



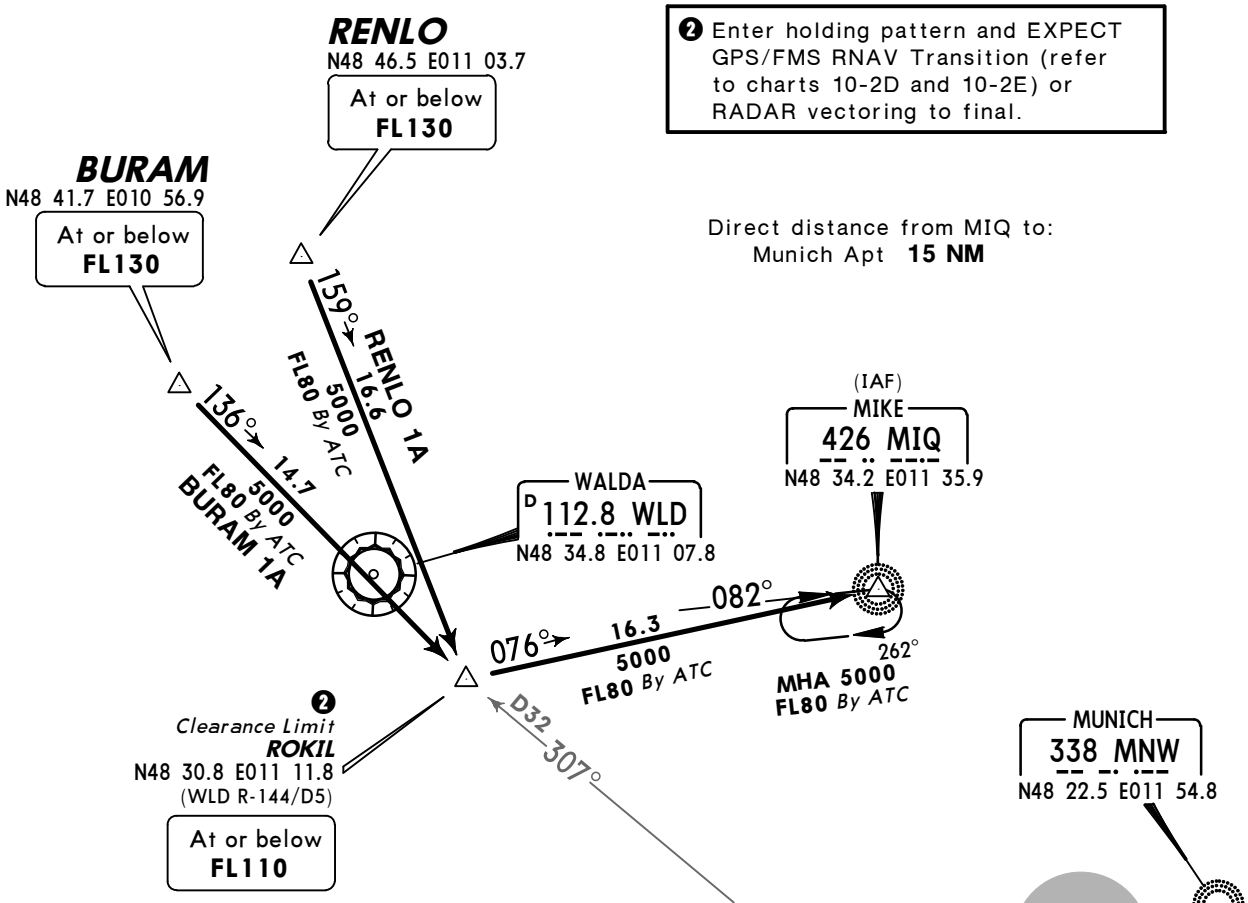
❶ 3300′ within 10 NM

BURAM ONE ALFA (BURAM 1A) *[BURA1A]*
RENLO ONE ALFA (RENLO 1A) *[RENL1A]*
RWYS 08, 26 ARRIVALS
BRNAV EQUIPMENT NECESSARY

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
Maintain last cleared FL to the IAF.
Descend in holding pattern to FL80
for standard instrument approach.

❷ Enter holding pattern and EXPECT GPS/FMS RNAV Transition (refer to charts 10-2D and 10-2E) or RADAR vectoring to final.



Direct distance from MIQ to:
Munich Apt **15 NM**



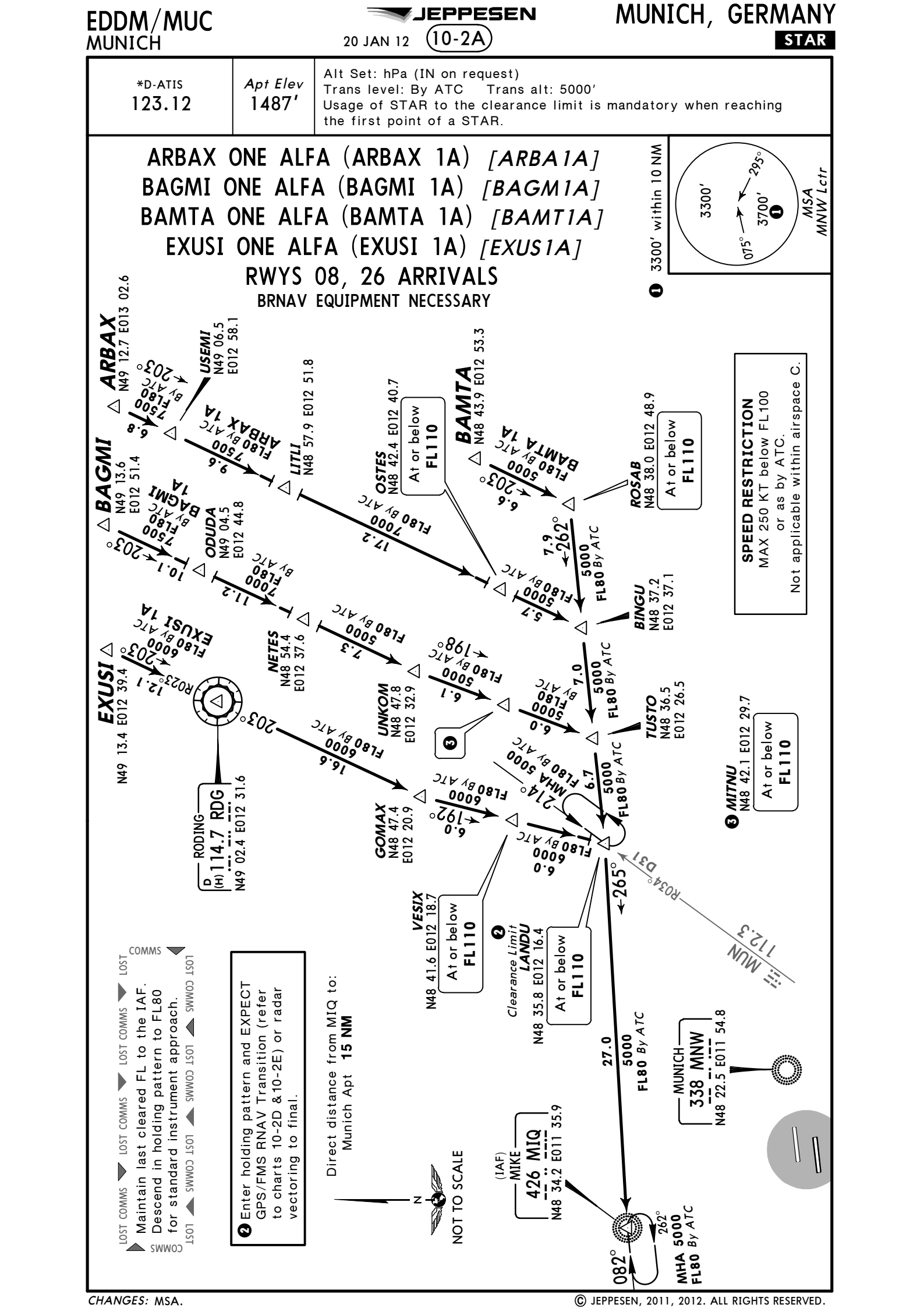




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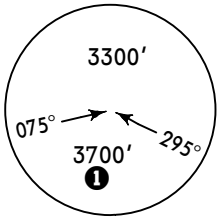
*D-ATIS	Apt Elev	
123.12	1487′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ Usage of STAR to the clearance limit is mandatory when reaching the first point of a STAR.

ARBAX ONE ALFA (ARBAX 1A) *[ARBA1A]*
BAGMI ONE ALFA (BAGMI 1A) *[BAGM1A]*
BAMTA ONE ALFA (BAMTA 1A) *[BAMT1A]*
EXUSI ONE ALFA (EXUSI 1A) *[EXUS1A]*
RWYS 08, 26 ARRIVALS
BRNAV EQUIPMENT NECESSARY



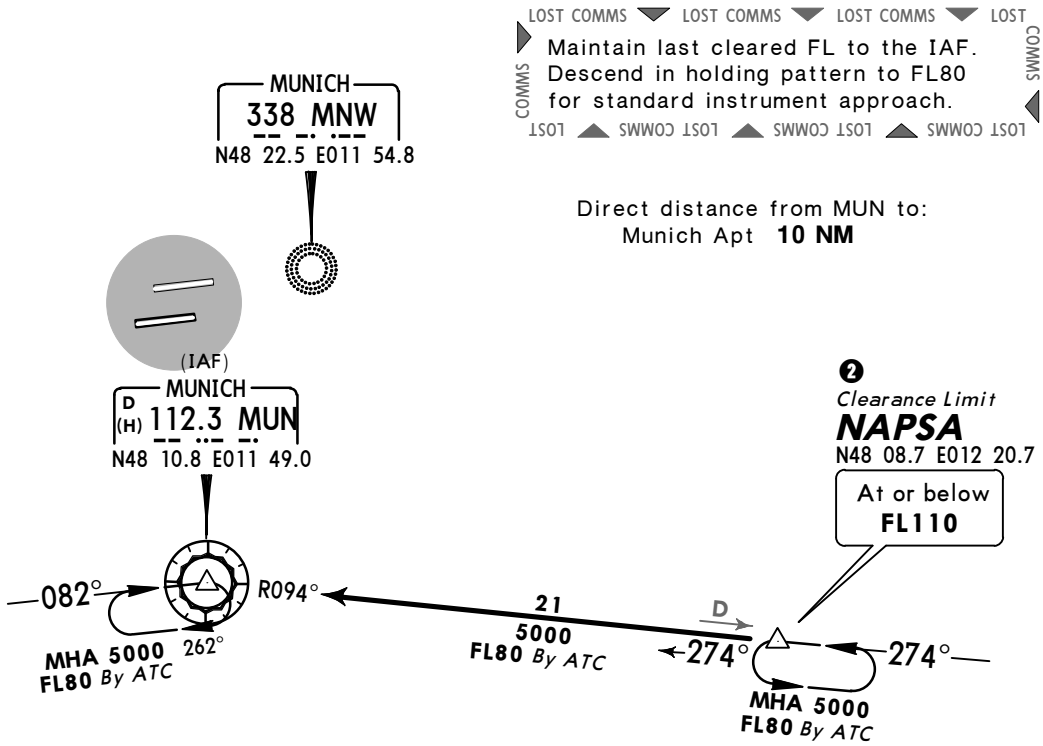
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*D-ATIS	Apt Elev	
123.12	1487′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ Usage of STAR to the clearance limit is mandatory when reaching the first point of a STAR.



❶ 3300′ within 10 NM

NAPSA ONE ALFA (NAPSA 1A) *[NAPS1A]*
RWYS 08, 26 ARRIVAL



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



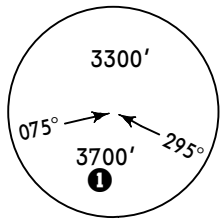
NOT TO SCALE

❷ Enter holding pattern and EXPECT GPS/FMS RNAV Transition (refer to charts 10-2F and 10-2G) or RADAR vectoring to final.

CHANGES: MSA.

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*D-ATIS	Apt Elev	
123.12	1487′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ Usage of STAR to the clearance limit is mandatory when reaching the first point of a STAR.



❶ 3300′ within 10 NM

IRBIR TWO ALFA (IRBIR 2A) *[IRBI2A]*
KOGOL ONE ALFA (KOGOL 1A) *[KOGO1A]*
MERSI ONE ALFA (MERSI 1A) *[MERS1A]*
OBAGA TWO ALFA (OBAGA 2A) *[OBAG2A]*
OSDER ONE ALFA (OSDER 1A) *[OSDE1A]*
RWYS 08, 26 ARRIVALS
BRNAV EQUIPMENT NECESSARY

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
Maintain last cleared FL to the IAF.
Descend in holding pattern to FL80 for standard instrument approach.

MUNICH
338 MNW
N48 22.5 E011 54.8

(IAF)

MUNICH
D (H) 112.3 MUN
N48 10.8 E011 49.0

❷ Enter holding pattern and EXPECT GPS/FMS RNAV Transition (refer to charts 10-2H and 10-2J) or RADAR vectoring to final.

❷ *Clearance Limit*
BETOS
N48 04.1 E011 21.0
At or below **FL110**

MHA 5000
FL80 By ATC
082°
R248°
262°
19.9
5000
FL80 By ATC
068°
D

MERSI
N47 58.9 E011 02.6
065° MERSI 1A 13.4
5000
FL80 By ATC

15.8
5000
FL80 By ATC

001° 10.9
5000
FL80 By ATC

ANDEC
N47 53.2 E011 20.1
At or below **FL130**

DISUN
N47 51.8 E011 06.3
At or below **FL120**

N
NOT TO SCALE

9.7
6000
FL80 By ATC
018°

KOGOL 1A
16.1
9000
348°

036° 13.8
6500
FL80 By ATC
OSDER 1A

NINUR
N47 44.2
E011 15.0

Direct distance from MUN to:
Munich Apt **10 NM**

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

OSDER
N47 41.0 E010 53.5

IRBIR 2A
11.8
8500
028°

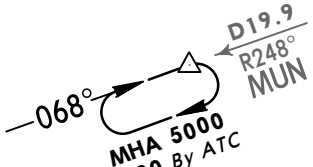
10000
OBAGA 2A
11.3
358°

KOGOL
N47 37.3 E011 24.0

IRBIR
N47 34.0 E011 06.2

OBAGA
N47 32.8 E011 15.1

HOLDING OVER BETOS



CHANGES: MSA.

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*D-ATIS	Apt Elev	
123.12	1487′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ Usage of STAR to the clearance limit is mandatory when reaching the first point of a STAR.

ABGAS ONE ALFA (ABGAS 1A) *[ABGA1A]* ❷
PELOG ONE ALFA (PELOG 1A) *[PELO1A]* ❸
RIDAR ONE ALFA (RIDAR 1A) *[RIDA1A]*
RWYS 08, 26 ARRIVALS
BRNAV EQUIPMENT NECESSARY

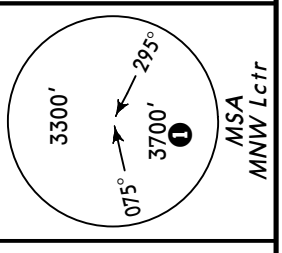
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Direct distance from MIQ to:
Munich Apt **15 NM**

❷ Available:
- daily from 2330-0800LT,
- FRI 1700LT to MON 0800LT,
- HOL.

❸ Only for flights via airway T-107.

❶ 3300′ within 10 NM



MUNICH
338 MNW
N48 22.5 E011 54.8

(IAF)
MIKE
426 MIQ
N48 34.2 E011 35.9

MUNICH
D (H) 112.3 MUN
N48 10.8 E011 49.0

MAISACH
D (H) 115.2 MAH
N48 15.8 E011 18.7

WALDA
D 112.8 WLD
N48 34.8 E011 07.8

RIDAR
N48 35.3 E010 48.2

LELTA
N48 29.6
E010 57.3

Clearance Limit
ROKIL
N48 30.8 E011 11.8
(WLD R-144/D5)

LURER
N48 27.8
E010 36.1

ABGAS
N48 35.6
E010 23.5

PELOG
N48 13.7 E009 40.5

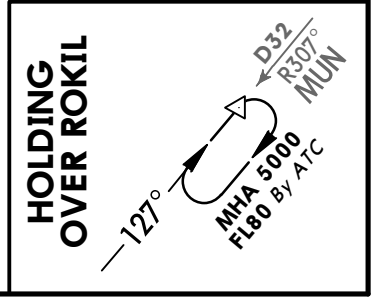
082° 16.3 5000 FL80 By ATC
MHA 5000 FL80 By ATC
262°
076°
D32 307°
At or below FL110
RIDAR 1A
131° 8.4 5000 FL80 By ATC
At or below FL130
14.3 5000 FL80 By ATC
080°
D31 R291°
ABGAS 1A ❷
5000 FL80 By ATC
131° 11.5
111° By ATC
MHA 5000 FL80 By ATC
39.6 5000 FL80 By ATC
PELOG 1A ❸
067°

LOST COMMS ▶ LOST COMMS ▶ LOST COMMS ▶ LOST COMMS ▼
◀ COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST

Maintain last cleared FL to the IAF.
Descend in holding pattern to FL80
for standard instrument approach.

❹ Enter holding pattern and EXPECT GPS/FMS RNAV Transition (refer to charts 10-2D and 10-2E) or RADAR vectoring to final.

HOLDING OVER ROKIL



NOT TO SCALE

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*D-ATIS	MUNICH Director	Apt Elev
123.12	118.82	1487′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. Maintain transition track beyond end point if no succeeding instruction (RADAR vector) is received.
2. On initial contact with MUNICH Director state callsign only.

LANDU Ø8 *[LANØ8]*
ROKIL Ø8 *[ROKØ8]*
RWY 08L RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS ONLY
WHEN CLEARED BY ATC
FROM NORTH

TRANSITION	ROUTING
LANDU Ø8	LANDU - DM428 - DM423 (FL80+) - DM420.
ROKIL Ø8	ROKIL - DM412 - DM427 - DM423 (FL80+) - DM420.

Direct distance from DM420 to:
Munich Apt **25 NM**

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Clearance Limit
LANDU
N48 35.8
E012 16.4

Clearance Limit
ROKIL
N48 30.8
E011 11.8

MHA 5000
FL80 By ATC

MHA 5000
FL80 By ATC

LANDU Ø8
ROKIL Ø8

214°
193°
171°
261°
127°
081°
R034° D31
D32 R307°

7.1
6
8
6.6
4.1
4.1
4.1
4.1
4.1
7.7
6.8
12.2
20.5

DM429 N48 29.6 E012 22.7
DM428 N48 29.0 E012 13.8
DM427 N48 28.1 E012 01.8
DM412 N48 34.6 E012 00.7
DM426 N48 27.6 E011 55.7
DM425 N48 27.2 E011 49.6
DM424 N48 26.7 E011 43.5
DM423 N48 26.2 E011 37.4
DM422 N48 25.7 E011 31.3
DM421 N48 24.8 E011 19.9
DM420 N48 24.0 E011 09.7
DM411 N48 32.3 E011 30.1
DM430 N48 18.9 E011 10.7
DM431 N48 19.8 E011 20.8
DM432 N48 21.1 E011 37.1
(FAF) MAGAT N48 20.5 E011 29.8

At or above FL80

Maintain track and EXPECT RADAR vectoring to final approach.

MIKE
426 MIQ
N48 34.2 E011 35.9

MUNICH
338 MNW
N48 22.5 E011 54.8

MUNICH
(D)(H) 112.3 MUN
N48 10.8 E011 49.0

NOT TO SCALE

LOST COMMS ▼ LOST COMMS ▼ LOST

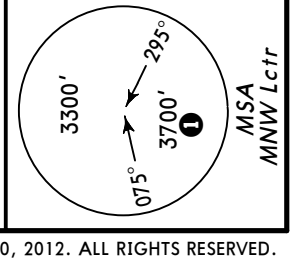
Before reaching DM425
Continue transition until DM425, turn RIGHT to MIQ, alignment turn, follow standard instrument approach. MAX 220 KT.

Beyond DM425
Continue transition until DM420, turn RIGHT to MIQ, alignment turn, follow standard instrument approach. MAX 220 KT.

Beyond DM420
Turn LEFT to DM430, turn LEFT to MAGAT, follow ILS approach to RWY 08L.

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

❶ 3300′ within 10 NM



CHANGES: MSA.

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*D-ATIS	MUNICH Director	Apt Elev
123.12	118.82	1487′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. Maintain transition track beyond end point if no succeeding instruction (RADAR vector) is received.
2. On initial contact with MUNICH Director state callsign only.

LANDU 26 *[LAN26]*
ROKIL 26 *[ROK26]*
RWY 26R RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS ONLY
WHEN CLEARED BY ATC
FROM NORTH

NOT TO SCALE

TRANSITION	ROUTING
LANDU 26	LANDU - DM411 - DM422 - DM425 (FL80+) - DM429.
ROKIL 26	ROKIL - DM421 - DM425 (FL80+) - DM429.

Direct distance from DM429 to Munich Apt **25 NM**

Clearance Limit **LANDU** N48 35.8 E012 16.4

MHA 5000 FL80 By ATC

214°

261°

R034° D31

10.5 LANDU 26

DM412 N48 34.6 E012 00.7

20.5

MIKE **426 MIQ** N48 34.2 E011 35.9

DM411 N48 32.3 E011 30.1

6.6

171°

DM422 N48 25.7 E011 31.3

7.7

DM421 N48 24.8 E011 19.9

6.8

081°

By ATC

DM420 N48 24.0 E011 09.7

Clearance Limit **ROKIL** N48 30.8 E011 11.8

D32 R307°

8

136° ROKIL 26

127°

MHA 5000 FL80 By ATC

DM425 N48 27.2 E011 49.6

At or above **FL80**

4.1 4.1 4.1 4.1 4.1

DM423 N48 26.2 E011 37.4

DM424 N48 26.7 E011 43.5

DM426 N48 27.6 E011 55.7

DM427 N48 28.1 E012 01.8

8

DM428 N48 29.0 E012 13.8

6

DM429 N48 29.6 E012 22.7

Maintain track and EXPECT RADAR vectoring to final approach.

DM439 N48 24.5 E012 23.5

DM438 N48 23.9 E012 14.6

(FAF) **GUDEG** N48 23.2 E012 05.6

DM437 N48 22.7 E011 58.2

MUNICH **338 MNW** N48 22.5 E011 54.8

MUNICH **112.3 MUN** N48 10.8 E011 49.0

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

LOST COMMS ▼ LOST COMMS ▼ LOST

Before reaching DM424
Continue transition until DM424, turn LEFT to MIQ, alignment turn, follow standard instrument approach. MAX 220 KT.

Beyond DM424
Continue transition until DM429, turn LEFT to MIQ, alignment turn, follow standard instrument approach. MAX 220 KT.

Beyond DM429
Turn RIGHT to DM439, turn RIGHT to GUDEG, follow ILS approach to RWY 26R.

❶ 3300′ within 10 NM

3300′
3700′ ❶
075° 295°

MSA
MNW Lctr

CHANGES: MSA.

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*D-ATIS	MUNICH Director	Apt Elev
123.12	132.3	1487′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. Maintain transition track beyond end point if no succeeding instruction (RADAR vector) is received.
2. On initial contact with MUNICH Director state callsign only.

NAPSA Ø8 *[NAPØ8]*
RWY 08R
RNAV TRANSITION

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS ONLY
WHEN CLEARED BY ATC
FROM SOUTHEAST

MSA
MNW Lctr
3300′
3700′
075°
295°

MHA 5000
FL80
By ATC

NAPSA
N48 08.7 E012 20.7
Clearance Limit
R094° D21
274°
332°
9.7
NAPSA Ø8

DM459
N48 18.1
E012 24.5
261°
6.8
By ATC

DM458
N48 17.4
E012 14.4
7.2

DM457
N48 16.6
E012 03.7
4.1

DM456
N48 16.2
E011 57.6
4.1

DM455
N48 15.7
E011 51.6
4.1

DM454
N48 15.2
E011 45.5
4.1

DM453
N48 14.8 E011 39.4
At or above FL80
4.1

DM452
N48 14.3
E011 33.3
8.5

DM451
N48 13.3
E011 20.7
6

DM450
N48 12.6
E011 11.8

DM442
N48 19.7
E011 36.1

(FAF)
BEGEN
N48 19.2
E011 28.9

DM441
N48 18.4
E011 19.8

DM440
N48 17.7
E011 10.9

3300′
within 10 NM

MUNICH
338 MNW
N48 22.5 E011 54.8

MUNICH
D (H) 112.3 MUN
N48 10.8 E011 49.0

LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS

Before reaching DM455
Continue transition until DM455, turn LEFT to MUN, alignment turn, follow standard instrument approach. MAX 220 KT.

Beyond DM455
Continue transition until DM450, turn LEFT to MUN, alignment turn, follow standard instrument approach. MAX 220 KT.

Beyond DM450
Turn RIGHT to DM440, turn RIGHT to BEGEN, follow ILS approach to RWY 08R.

Maintain track and EXPECT RADAR vectoring to final approach.

Direct distance from DM450 to:
Munich Apt **25 NM**

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

N
NOT TO SCALE

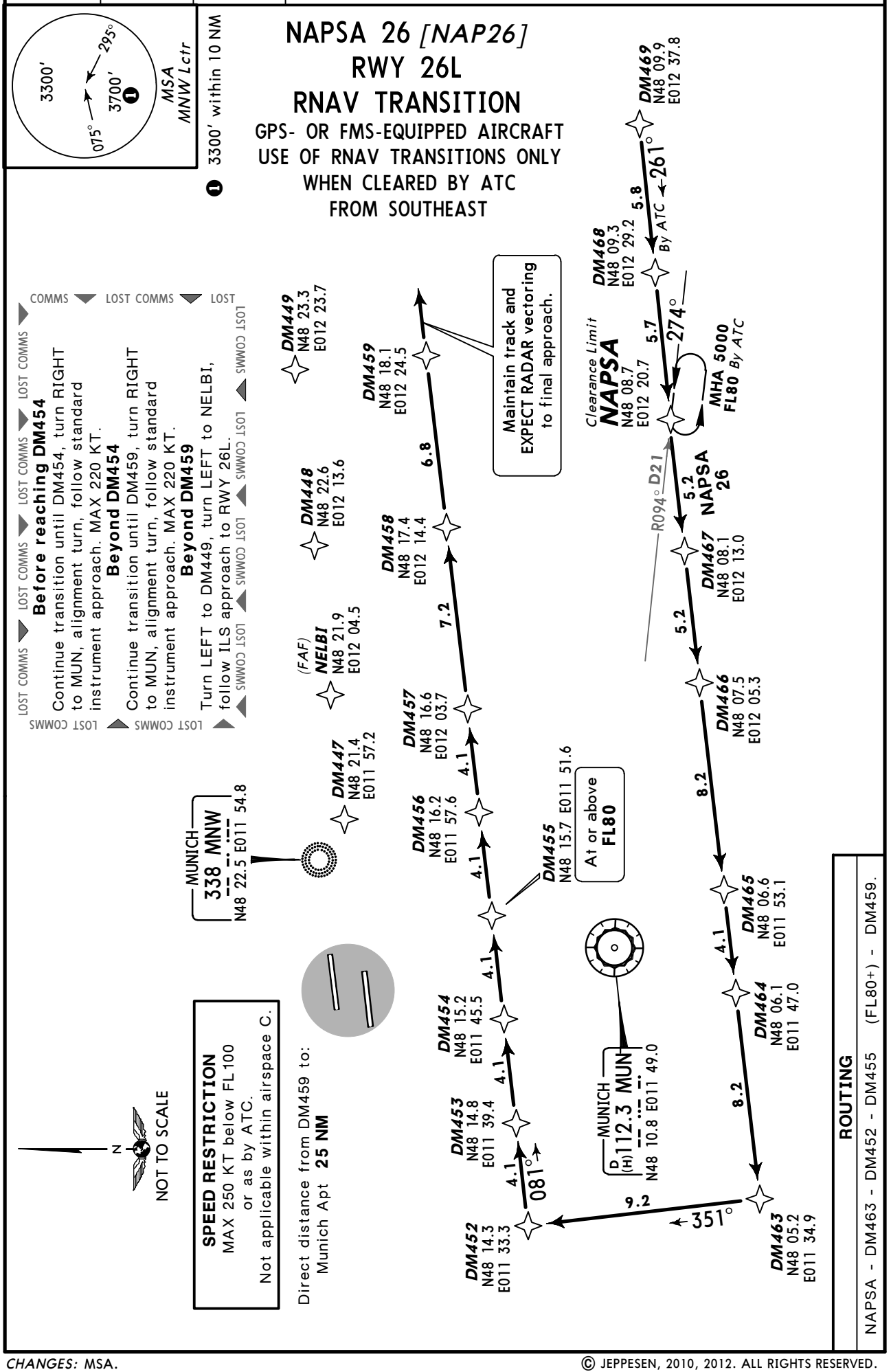
ROUTING
NAPSA - DM458 - DM453 (FL80+) - DM450.

CHANGES: MSA.

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*D-ATIS	MUNICH Director	Apt Elev
123.12	132.3	1487′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. Maintain transition track beyond end point if no succeeding instruction (RADAR vector) is received.
2. On initial contact with MUNICH Director state callsign only.

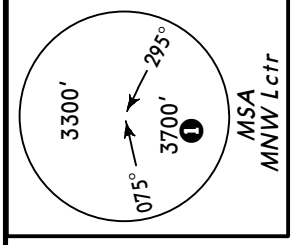


CHANGES: MSA.

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*D-ATIS	MUNICH Director	Apt Elev
123.12	132.3	1487′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. Maintain transition track beyond end point if no succeeding instruction (RADAR vector) is received.
2. On initial contact with MUNICH Director state callsign only.



❶ 3300′ within 10 NM

BETOS Ø8 *[BETØ8]*
RWY 08R RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC
FROM SOUTHWEST

ROUTING
BETOS - DM472 - DM476 - DM457 - DM453 (FL80+) - DM450.

Direct distance from DM450 to:
Munich Apt **25 NM**

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

LOST COMMS ◥ LOST COMMS ◥ LOST COMMS ◥ LOST COMMS
Before reaching DM455
Continue transition until DM455, turn LEFT to MUN, alignment turn, follow standard instrument approach. MAX 220 KT.
Beyond DM455
Continue transition until DM450, turn LEFT to MUN, alignment turn, follow standard instrument approach. MAX 220 KT.
Beyond DM450
Turn RIGHT to DM440, turn RIGHT to BEGEN, follow ILS approach to RWY 08R.
◢ LOST COMMS ◢ LOST COMMS ◢ LOST COMMS ◢ LOST COMMS

MUNICH 338 MNW N48 22.5 E011 54.8
MUNICH (D)(H)112.3 MUN N48 10.8 E011 49.0
DM440 N48 17.7 E011 10.9
DM441 N48 18.4 E011 19.8
DM442 N48 19.7 E011 36.1
(FAF) BEGEN N48 19.2 E011 28.9
DM450 N48 12.6 E011 11.8
DM451 N48 13.3 E011 20.7
DM452 N48 14.3 E011 33.3
DM453 N48 14.8 E011 39.4
DM454 N48 15.2 E011 45.5
DM455 N48 15.7 E011 51.6
DM456 N48 16.2 E011 57.6
DM457 N48 16.6 E012 03.7
DM470 N48 05.3 E011 04.0
DM471 N48 06.0 E011 13.1
DM472 N48 07.2 E011 27.5
DM473 N48 07.8 E011 34.5
DM474 N48 08.7 E011 46.6
DM475 N48 09.2 E011 52.7
DM476 N48 10.1 E012 04.8
Clearance Limit BETOS N48 04.1 E011 21.0
At or above FL80
Maintain track and EXPECT RADAR vectoring to final approach.
MHA 5000 FL80 By ATC
By ATC
6.6 351° 4.1 261° 4.1 4.1 4.1 4.1 8.2 8.2 4.7 8.5 6 6.1 9.8 5.4 R248° 052° BETOS Ø8 D20 068° 081°
N
NOT TO SCALE

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*D-ATIS	MUNICH Director	Apt Elev
123.12	132.3	1487′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. Maintain transition track beyond end point if no succeeding instruction (RADAR vector) is received.
2. On initial contact with MUNICH Director state callsign only.

BETOS 26 *[BET26]*
RWY 26L RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS ONLY
WHEN CLEARED BY ATC
FROM SOUTHWEST

ROUTING
BETOS - DM452 - DM455 (FL80+) - DM459.

Direct distance from DM459 to:
Munich Apt **25 NM**

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Maintain track and EXPECT RADAR vectoring to final approach.

At or above **FL80**

Before reaching DM454
Continue transition until DM454, turn RIGHT to MUN, alignment turn, follow standard instrument approach. MAX 220 KT.

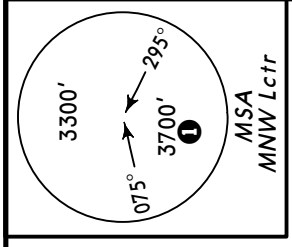
Beyond DM454
Continue transition until DM459, turn RIGHT to MUN, alignment turn, follow standard instrument approach. MAX 220 KT.

Beyond DM459
Turn LEFT to DM449, turn LEFT to NELBI, follow ILS approach to RWY 26L.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

*D-ATIS	Apt Elev
123.12	1487′

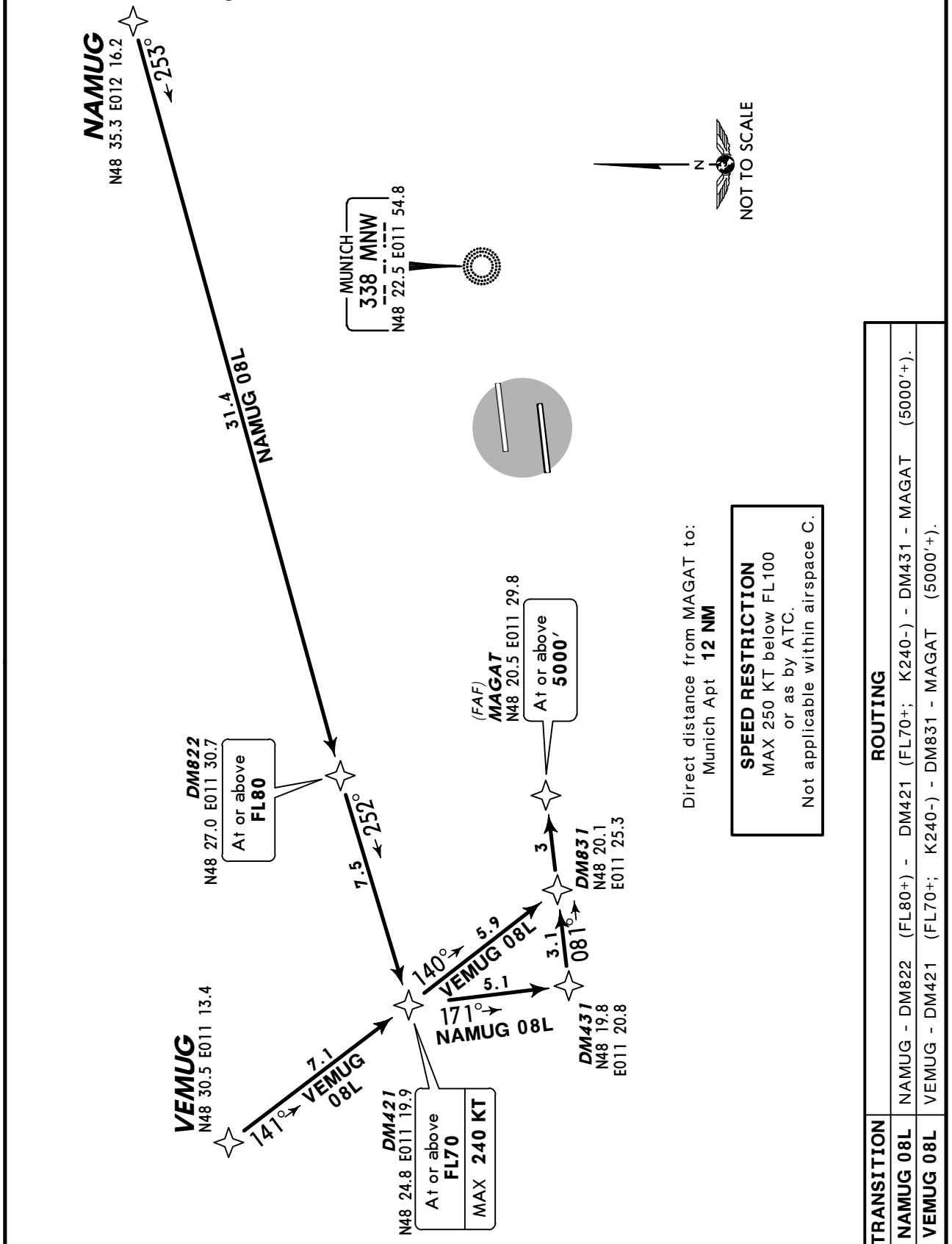
Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



1 3300′ within 10 NM

NAMUG 08L *[NAØ8L]*, VEMUG 08L *[VEØ8L]*
RWY 08L RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
FLY THE TRANSITIONS AS CONTINUOUS DESCENT APPROACH (CDA)
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC
FROM NORTH



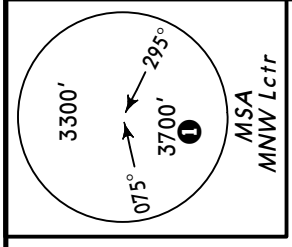
TRANSITION	ROUTING
NAMUG 08L	NAMUG - DM822 (FL80+) - DM421 (FL70+; K240-) - DM431 - MAGAT (5000′+).
VEMUG 08L	VEMUG - DM421 (FL70+; K240-) - DM831 - MAGAT (5000′+).

CHANGES: MSA.

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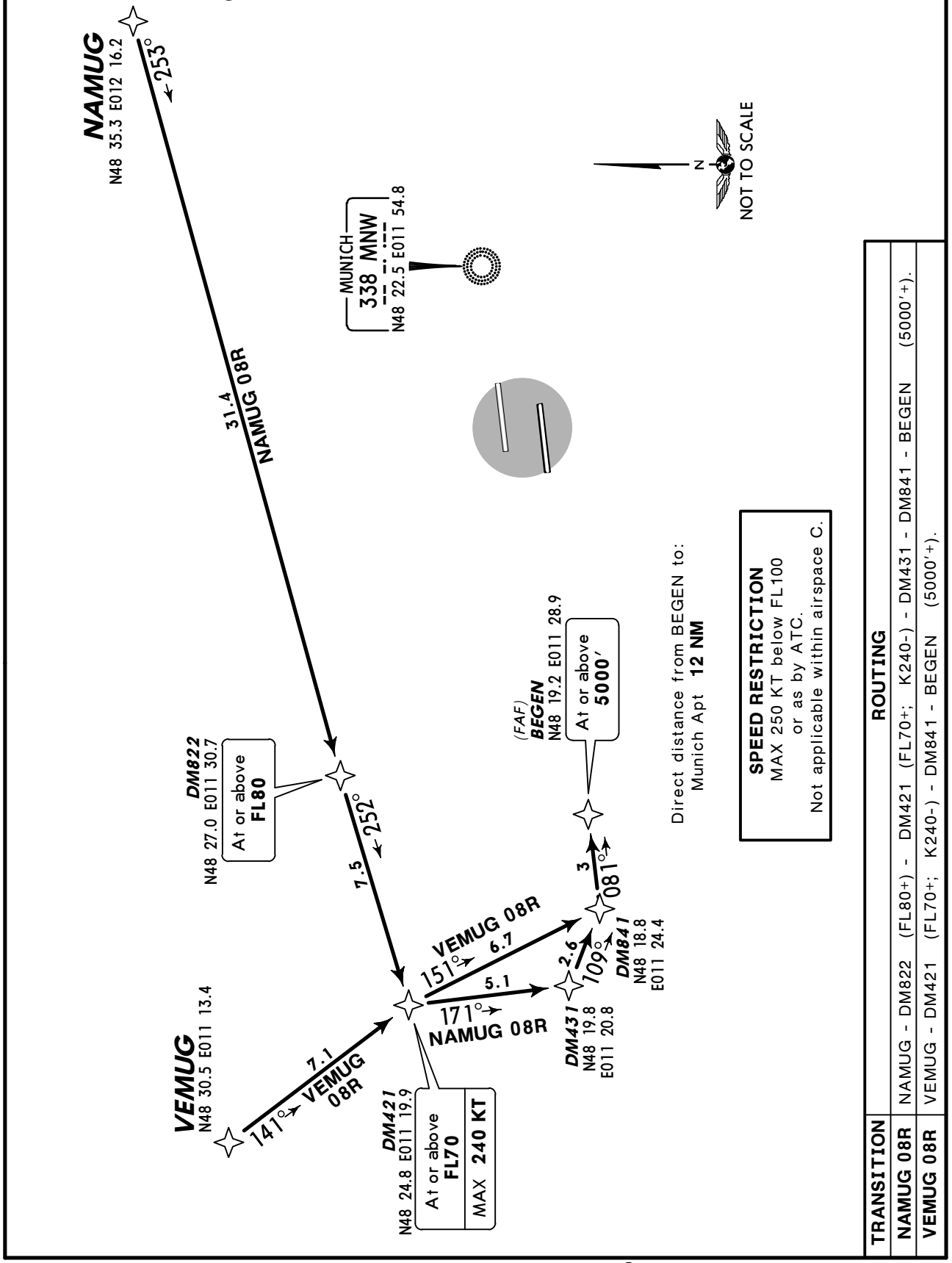
*D-ATIS	Apt Elev
123.12	1487′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



1 3300′ within 10 NM

NAMUG 08R *[NAØ8R]*, VEMUG 08R *[VEØ8R]*
RWY 08R RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
FLY THE TRANSITIONS AS CONTINUOUS DESCENT APPROACH (CDA)
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC
FROM NORTH



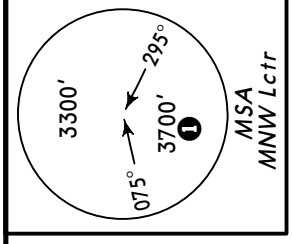
TRANSITION	ROUTING
NAMUG 08R	NAMUG - DM822 (FL80+) - DM421 (FL70+; K240-) - DM431 - DM841 - BEGEN (5000′+).
VEMUG 08R	VEMUG - DM421 (FL70+; K240-) - DM841 - BEGEN (5000′+).

CHANGES: MSA.

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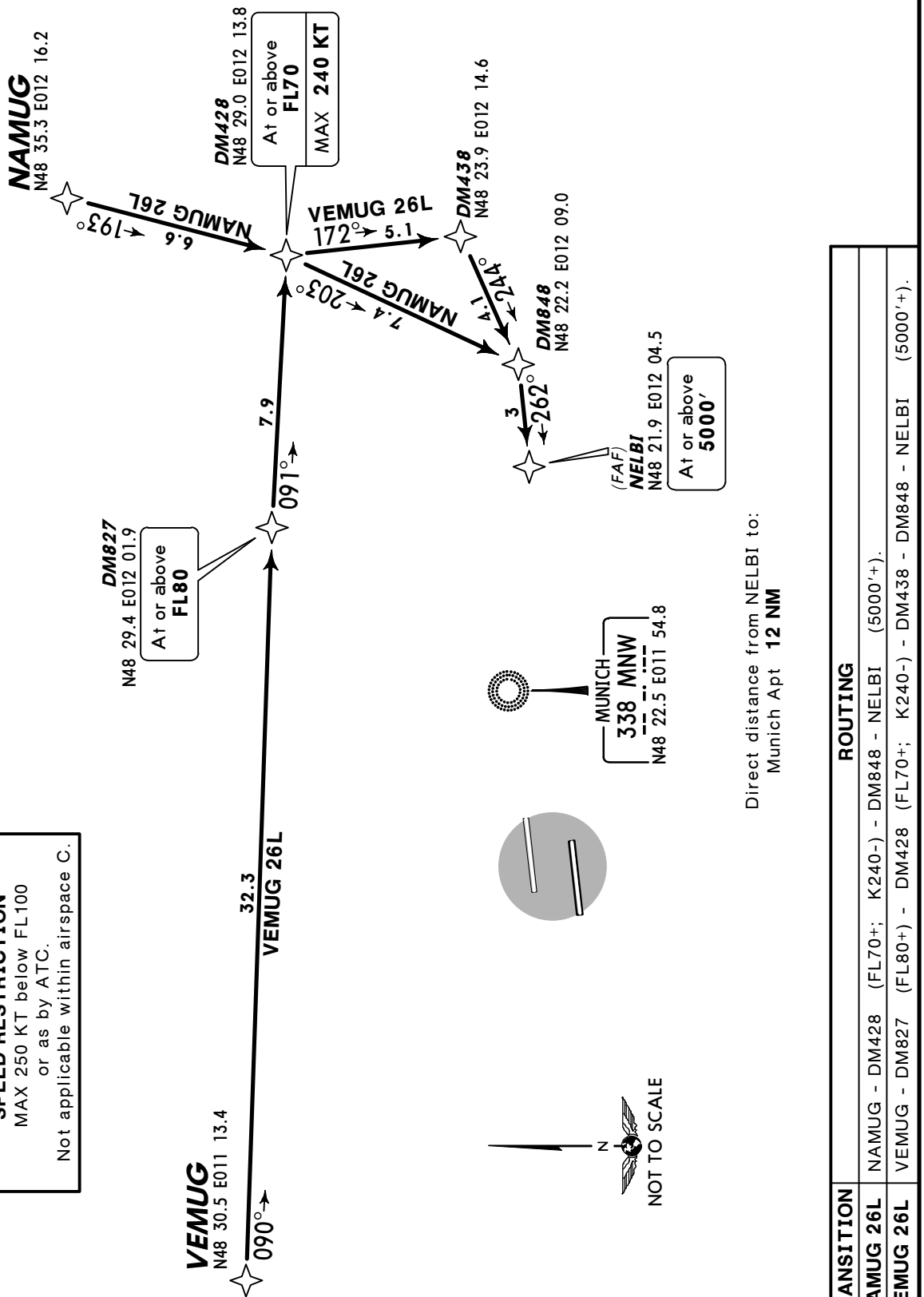
*D-ATIS	Apt Elev
123.12	1487′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



1 3300′ within 10 NM

NAMUG 26L *[NA26L]*, VEMUG 26L *[VE26L]*
RWY 26L RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
FLY THE TRANSITIONS AS CONTINUOUS DESCENT APPROACH (CDA)
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC
FROM NORTH



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

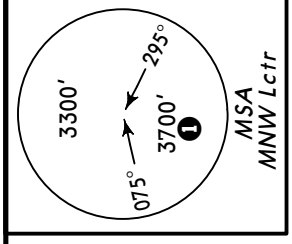
TRANSITION	ROUTING
NAMUG 26L	NAMUG - DM428 (FL70+; K240-) - DM848 - NELBI (5000′+).
VEMUG 26L	VEMUG - DM827 (FL80+) - DM428 (FL70+; K240-) - DM438 - DM848 - NELBI (5000′+).

CHANGES: MSA.

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*D-ATIS	Apt Elev
123.12	1487′

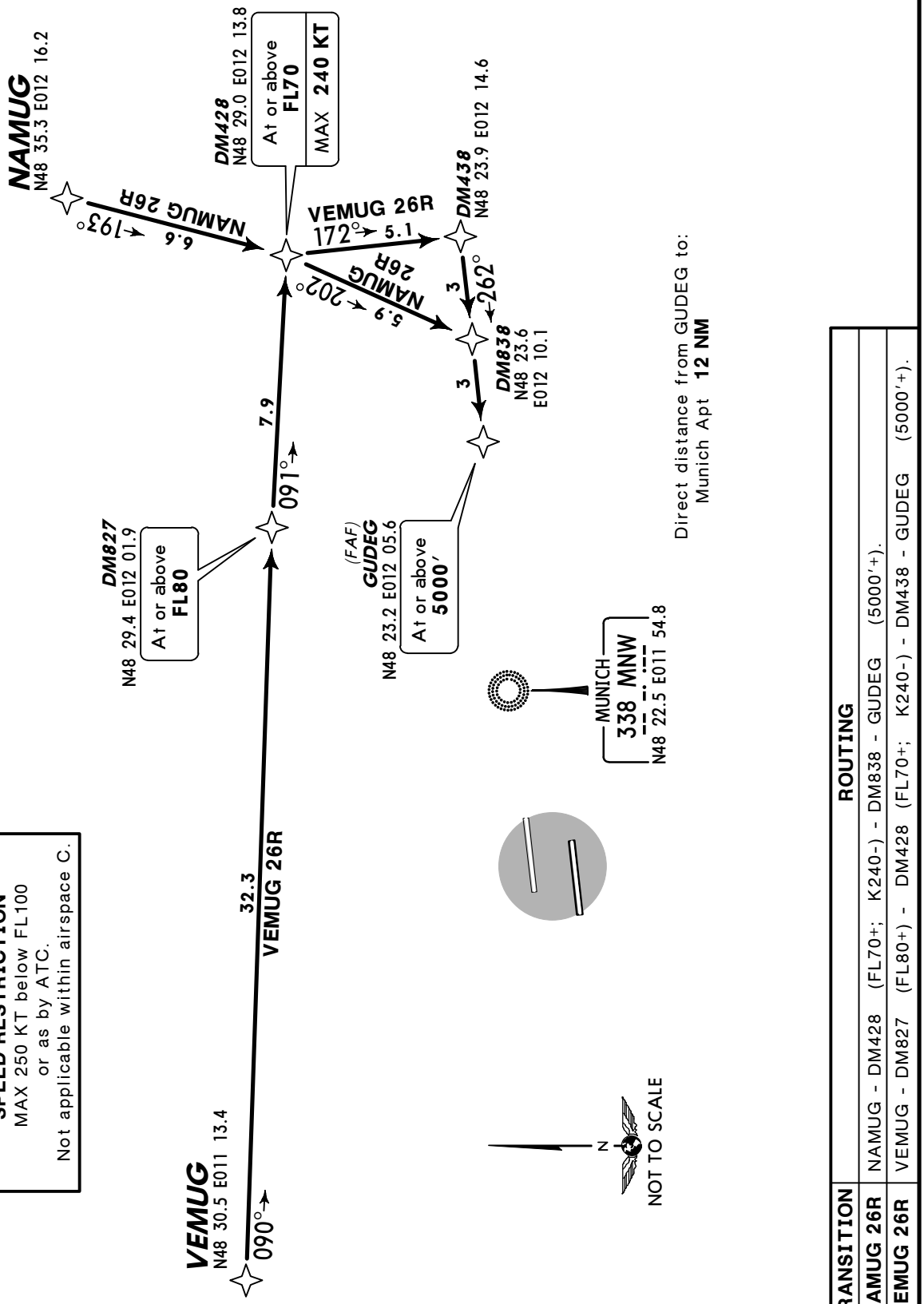
Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



1 3300′ within 10 NM

NAMUG 26R *[NA26R]*, VEMUG 26R *[VE26R]*
RWY 26R RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
FLY THE TRANSITIONS AS CONTINUOUS DESCENT APPROACH (CDA)
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC
FROM NORTH



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

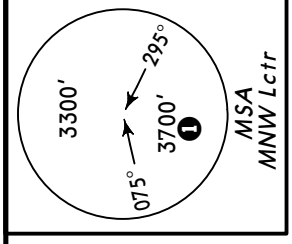
TRANSITION	ROUTING
NAMUG 26R	NAMUG - DM428 (FL70+; K240-) - DM838 - GUDEG (5000′+).
VEMUG 26R	VEMUG - DM827 (FL80+) - DM428 (FL70+; K240-) - DM438 - GUDEG (5000′+).

CHANGES: MSA.

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*D-ATIS	Apt Elev
123.12	1487′

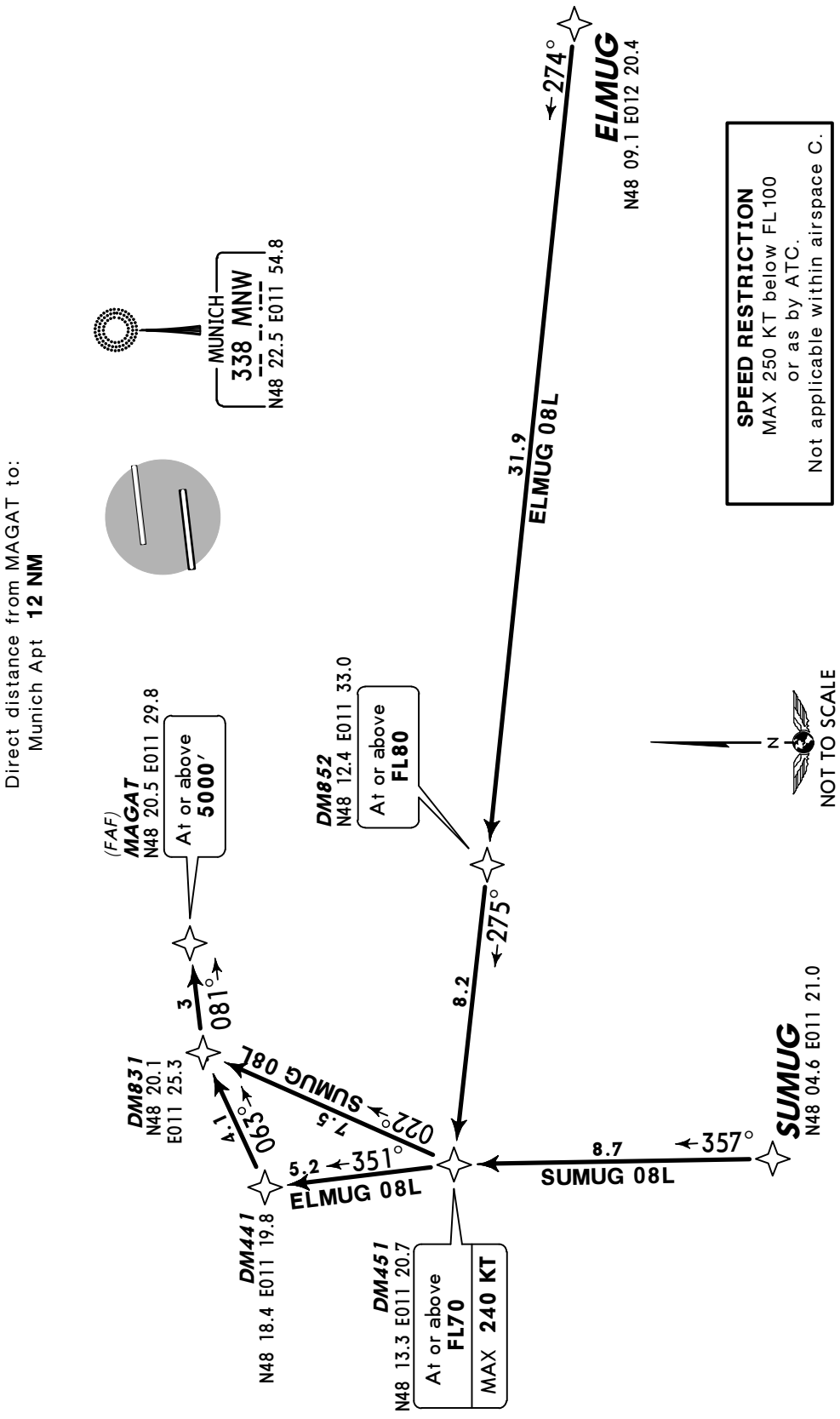
Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



1 3300′ within 10 NM

ELMUG 08L *[ELØ8L]*, SUMUG 08L *[SUØ8L]*
RWY 08L RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
FLY THE TRANSITIONS AS CONTINUOUS DESCENT APPROACH (CDA)
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC
FROM SOUTH



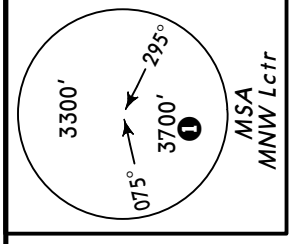
TRANSITION	ROUTING
ELMUG 08L	ELMUG - DM852 (FL80+) - DM451 (FL70+; K240-) - DM441 - DM831 - MAGAT (5000′+).
SUMUG 08L	SUMUG - DM451 (FL70+; K240-) - DM831 - MAGAT (5000′+).

CHANGES: MSA.

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*D-ATIS	Apt Elev
123.12	1487′

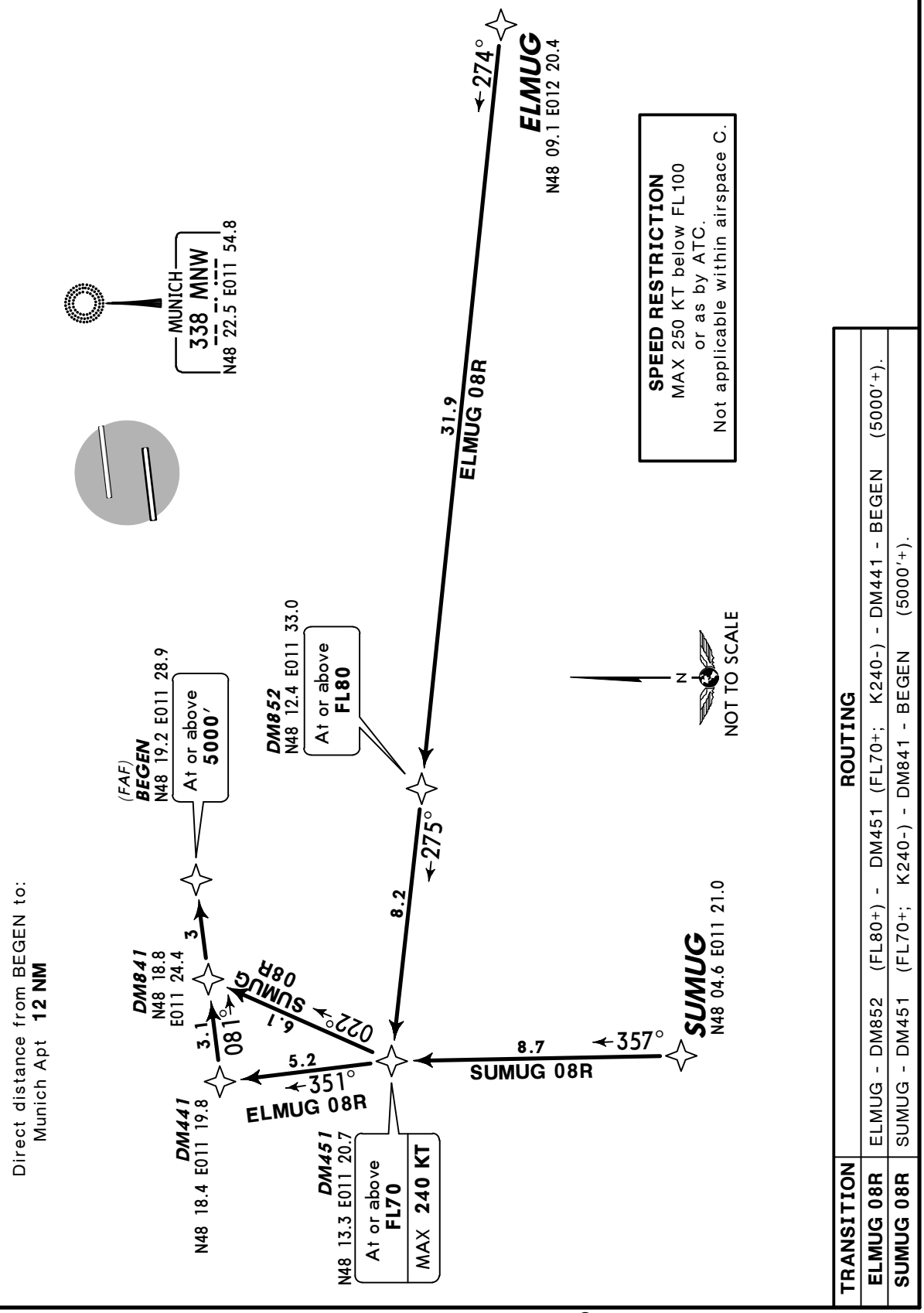
Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



1 3300′ within 10 NM

ELMUG 08R *[ELØ8R]*, SUMUG 08R *[SUØ8R]*
RWY 08R RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
FLY THE TRANSITIONS AS CONTINUOUS DESCENT APPROACH (CDA)
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC
FROM SOUTH



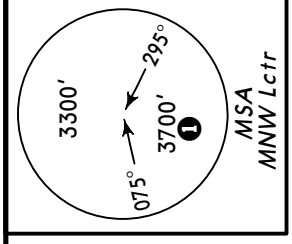
TRANSITION	ROUTING
ELMUG 08R	ELMUG - DM852 (FL80+) - DM451 (FL70+; K240-) - DM441 - BEGEN (5000′+).
SUMUG 08R	SUMUG - DM451 (FL70+; K240-) - DM841 - BEGEN (5000′+).

CHANGES: MSA.

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*D-ATIS	Apt Elev
123.12	1487′

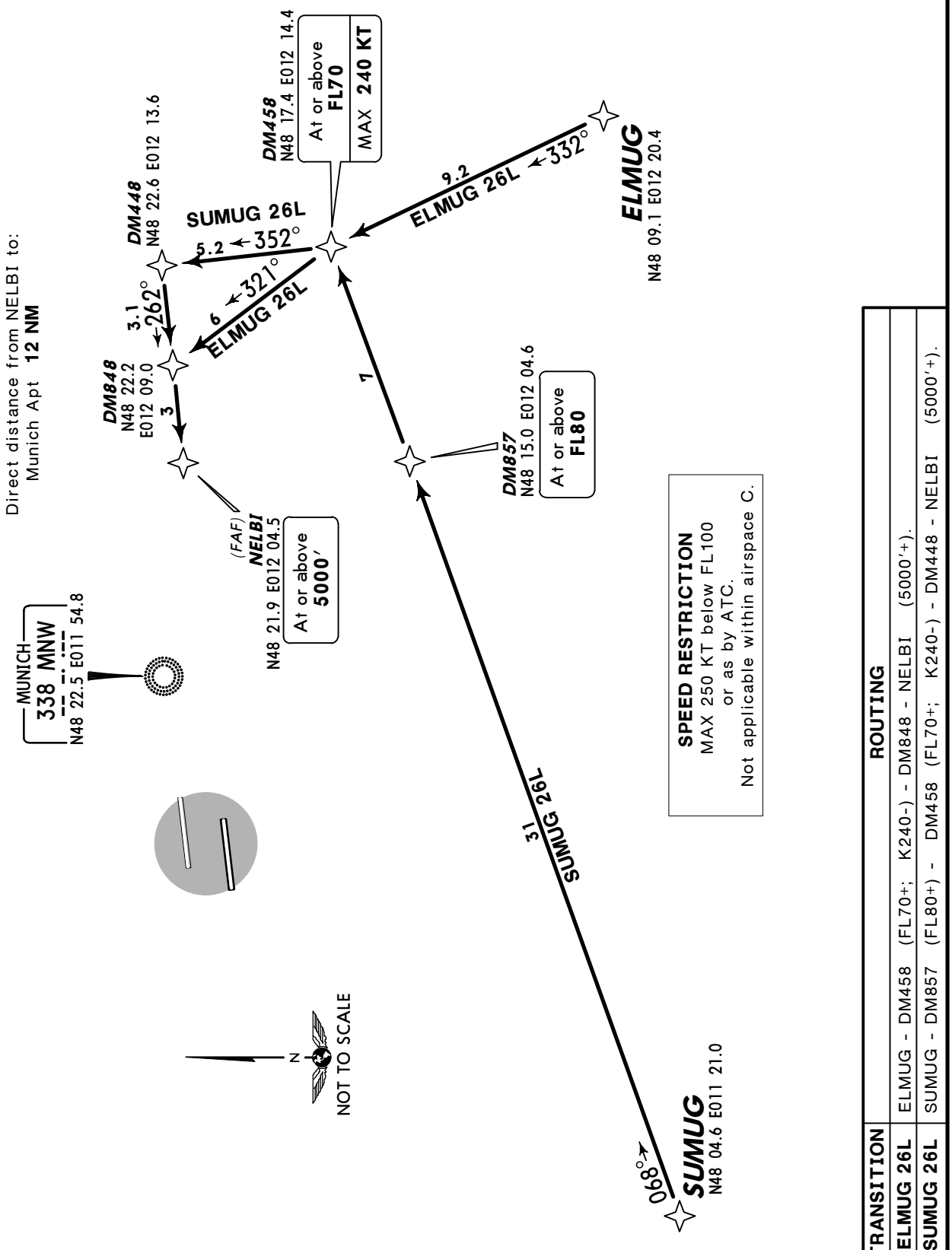
Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



1 3300′ within 10 NM

ELMUG 26L *[EL26L]*, SUMUG 26L *[SU26L]*
RWY 26L RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
FLY THE TRANSITIONS AS CONTINUOUS DESCENT APPROACH (CDA)
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC
FROM SOUTH



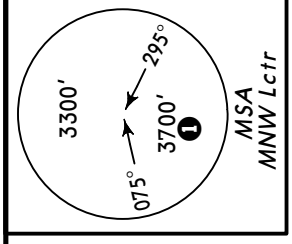
TRANSITION	ROUTING
ELMUG 26L	ELMUG - DM458 (FL70+; K240-) - DM848 - NELBI (5000′+).
SUMUG 26L	SUMUG - DM857 (FL80+) - DM458 (FL70+; K240-) - DM448 - NELBI (5000′+).

CHANGES: MSA.

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*D-ATIS	Apt Elev
123.12	1487′

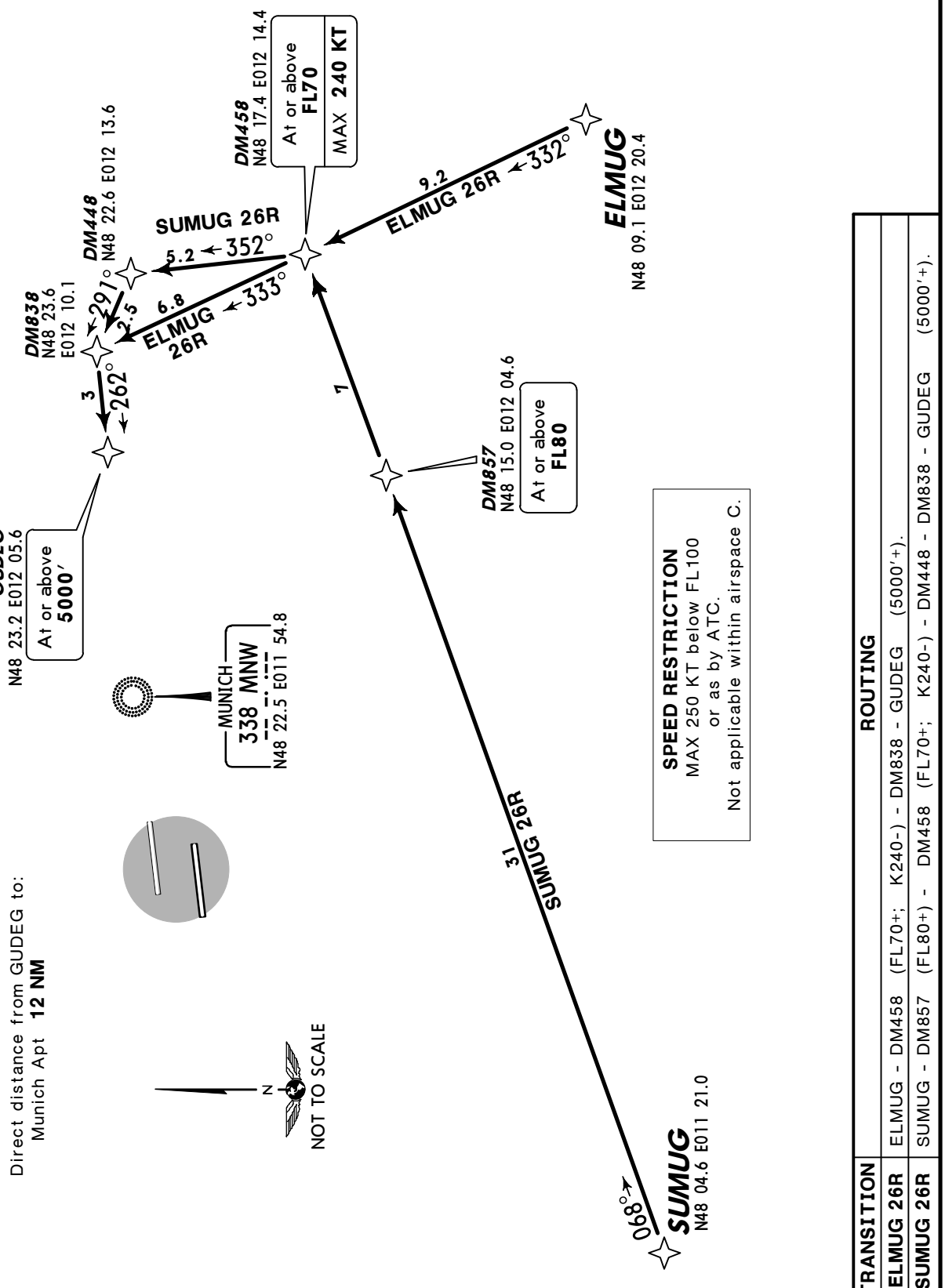
Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
When cleared for "transition and profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



❶ 3300′ within 10 NM

ELMUG 26R *[EL26R]*, SUMUG 26R *[SU26R]*
RWY 26R RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
FLY THE TRANSITIONS AS CONTINUOUS DESCENT APPROACH (CDA)
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC
FROM SOUTH



TRANSITION	ROUTING
ELMUG 26R	ELMUG - DM458 (FL70+; K240-) - DM838 - GUDEG (5000′+).
SUMUG 26R	SUMUG - DM857 (FL80+) - DM458 (FL70+; K240-) - DM448 - DM838 - GUDEG (5000′+).

CHANGES: MSA.

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RNAV SID DESIGNATION	REFER TO CHART
ANKER 8E, 7Q	10-3B
ANKER 8N, 6S	10-3C
EVIVA 2E, 2Q	10-3D
EVIVA 3N, 2S	10-3E
INPUD 1E, 1Q	10-3F
INPUD 1N, 1S	10-3G

SID DESIGNATION	REFER TO CHART
ALGOI 1E, 1Q	10-3H
ALGOI 1N, 1S	10-3J
EGG 5E, 3Q	10-3K
EGG 4N, 5S, 5W	10-3L
GIVMI 4E, 4Q	10-3M
GIVMI 5S, 5W	10-3N
KPT 2E, 2Q	10-3N1
KPT 1P, 1T	10-3N2
KPT 1N, 1S	10-3N3
MEBEK 3E, 2Q	10-3N4
MEBEK 1N, 2S, 2W	10-3N5
MERSI 2E, 2Q	10-3N6
MERSI 3N, 3S	10-3N7
MIQ 7E, 7Q	10-3P
MIQ 8N, 7S	10-3Q
OBAXA 3E, 3Q	10-3Q1
OBAXA 3N, 4S	10-3Q2
RIDAR 5E, 5Q	10-3Q3
RIDAR 5N, 5S	10-3Q4
ROTAX 2E, 2Q	10-3Q5
ROTAX 1N, 1S, 1W	10-3Q6
TULSI 1E, 9Q	10-3Q7
TULSI 9N, 4S, 1W	10-3Q8
TURBU 5E, 6Q	10-3Q9
TURBU 4N, 5S, 5W	10-3Q10
VAVOR 2E, 2Q	10-3S
VAVOR 1N, 1S, 1W	10-3T

FOR RNAV SID (OVERLAY) DESIGNATION REFER TO PAGE 10-3A

CHANGES: SID KPT 1T established.

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RNAV SID DESIGNATION	REFER TO CHART
ALGOI 1E, 1Q	10-3T1
ALGOI 1N, 1S	10-3T2
EGG 5E, 3Q	10-3T3
EGG 4N, 5S, 5W	10-3T4
GIVMI 4E, 4Q	10-3T5
GIVMI 5S, 5W	10-3T6
KPT 2E, 2Q	10-3T7
KPT 1P, 1T	10-3T8
KPT 1N, 1S	10-3T9
MEBEK 3E, 2Q	10-3U
MEBEK 1N, 2S, 2W	10-3V
MERSI 2E, 2Q	10-3V1
MERSI 3N, 3S	10-3V2
OBAXA 3E, 3Q	10-3V3
OBAXA 3N, 4S	10-3V4
RIDAR 5E, 5Q	10-3V5
RIDAR 5N, 5S	10-3V6
ROTAX 2E, 2Q	10-3V7
ROTAX 1N, 1S, 1W	10-3V8
TULSI 1E, 9Q	10-3W
TULSI 9N, 4S, 1W	10-3X
TURBU 5E, 6Q	10-3X1
TURBU 4N, 5S, 5W	10-3X2
VAVOR 2E, 2Q	10-3X3
VAVOR 1N, 1S, 1W	10-3X4

CHANGES: RNAV SID KPT 1T established.

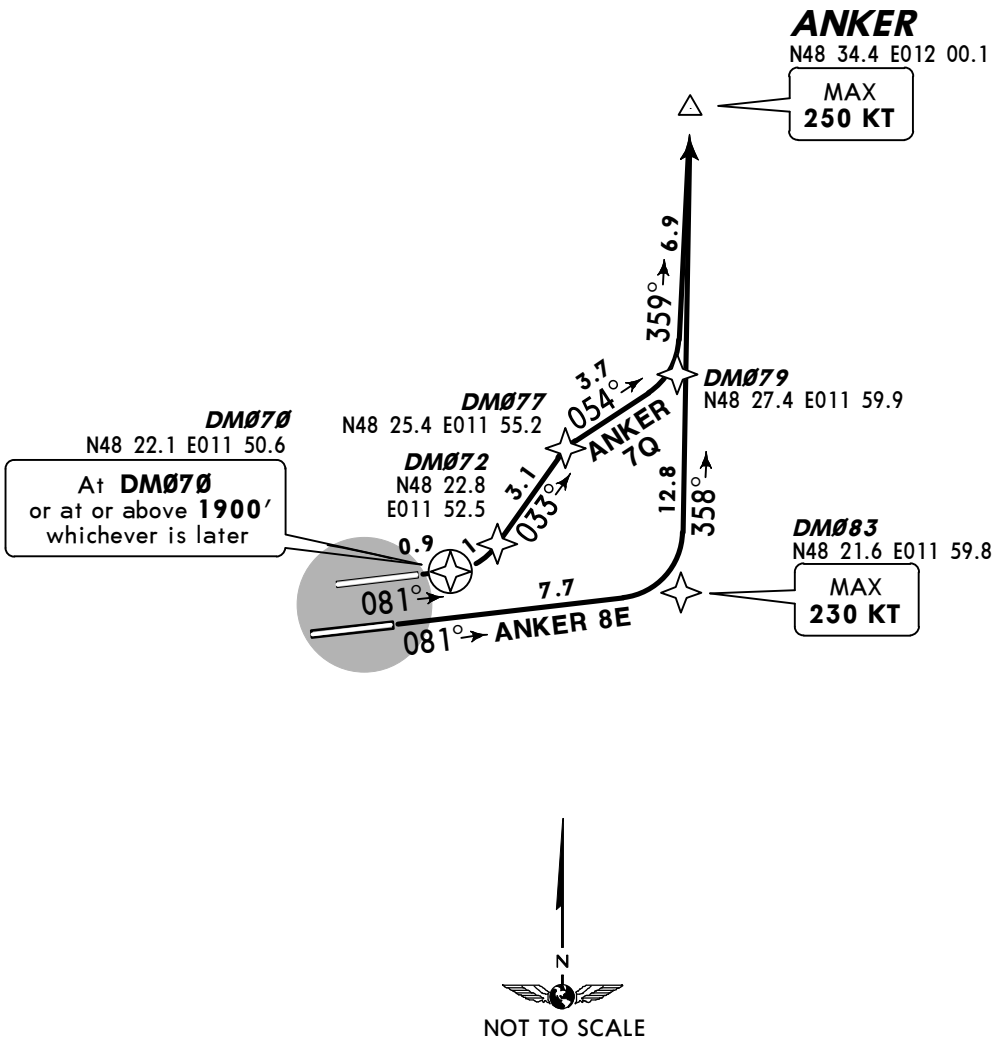
© JEPPESEN, 2003, 2011. ALL RIGHTS RESERVED.

MUNICH Radar	*Apt Elev*	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ANKER EIGHT ECHO (ANKER 8E) *[ANKE8E]*
ANKER SEVEN QUEBEC (ANKER 7Q) *[ANKE7Q]*
RWYS 08R/L RNAV DEPARTURES
RNAV (GPS)

3700′
MSA
ARP

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
ANKER 8E	**08R**	**(1900′+) -** DM083 (K230-) - ANKER (K250-).
ANKER 7Q	**08L**	**(1900′+) -** DM070 **(1900′+) -** DM072 - DM077 - DM079 - ANKER (K250-).

CHANGES: RNAV SID renumbered & revised.

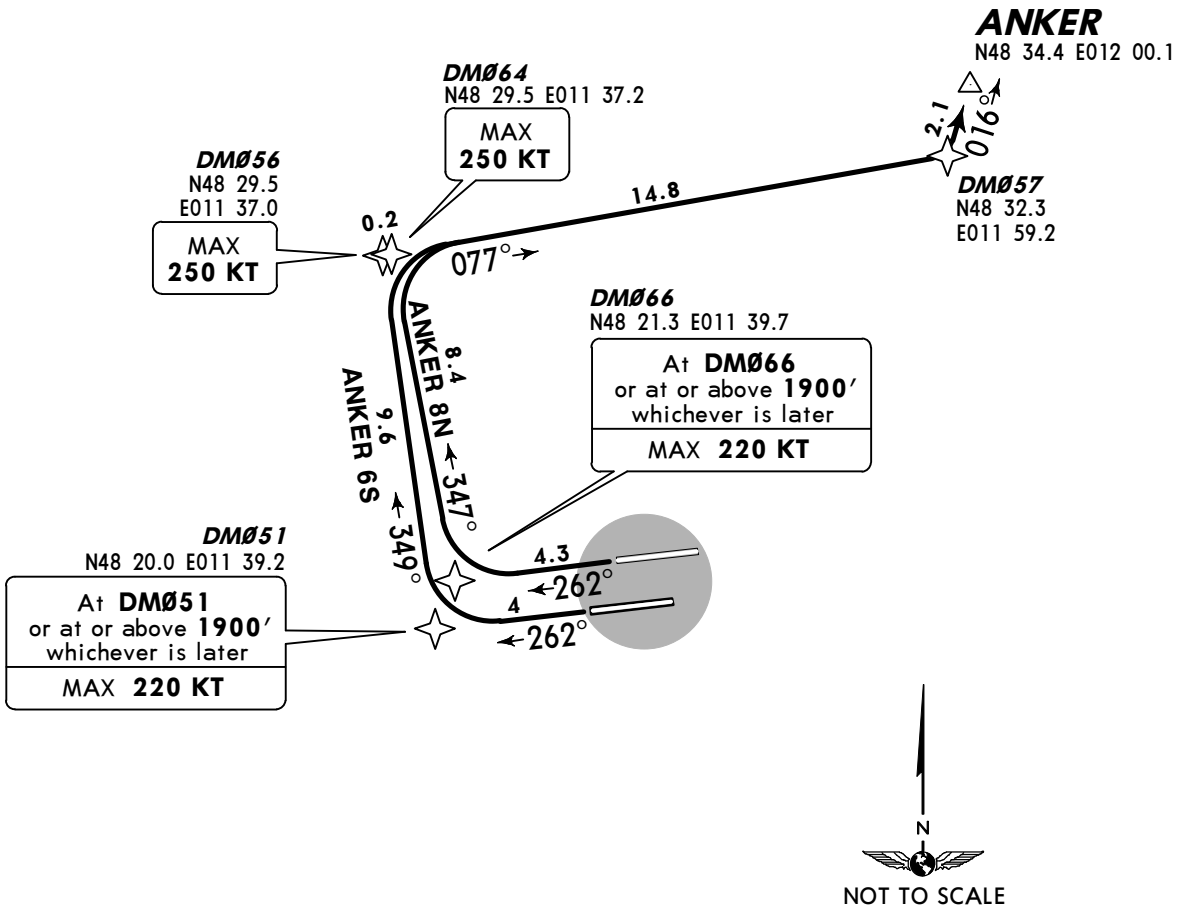
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MUNICH Radar 123.9	*Apt Elev* 1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ANKER EIGHT NOVEMBER (ANKER 8N) *[ANKE8N]*
ANKER SIX SIERRA (ANKER 6S) *[ANKE6S]*
RWYS 26R/L RNAV DEPARTURES
RNAV (GPS)

3700′
MSA
ARP

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
ANKER 8N	**26R**	**(1900′+) -** DM066 **(1900′+;** K220-) - DM064 (K250-) - DM057 - ANKER.
ANKER 6S	**26L**	**(1900′+) -** DM051 **(1900′+;** K220-) - DM056 (K250-) - DM057 - ANKER.

CHANGES: None.

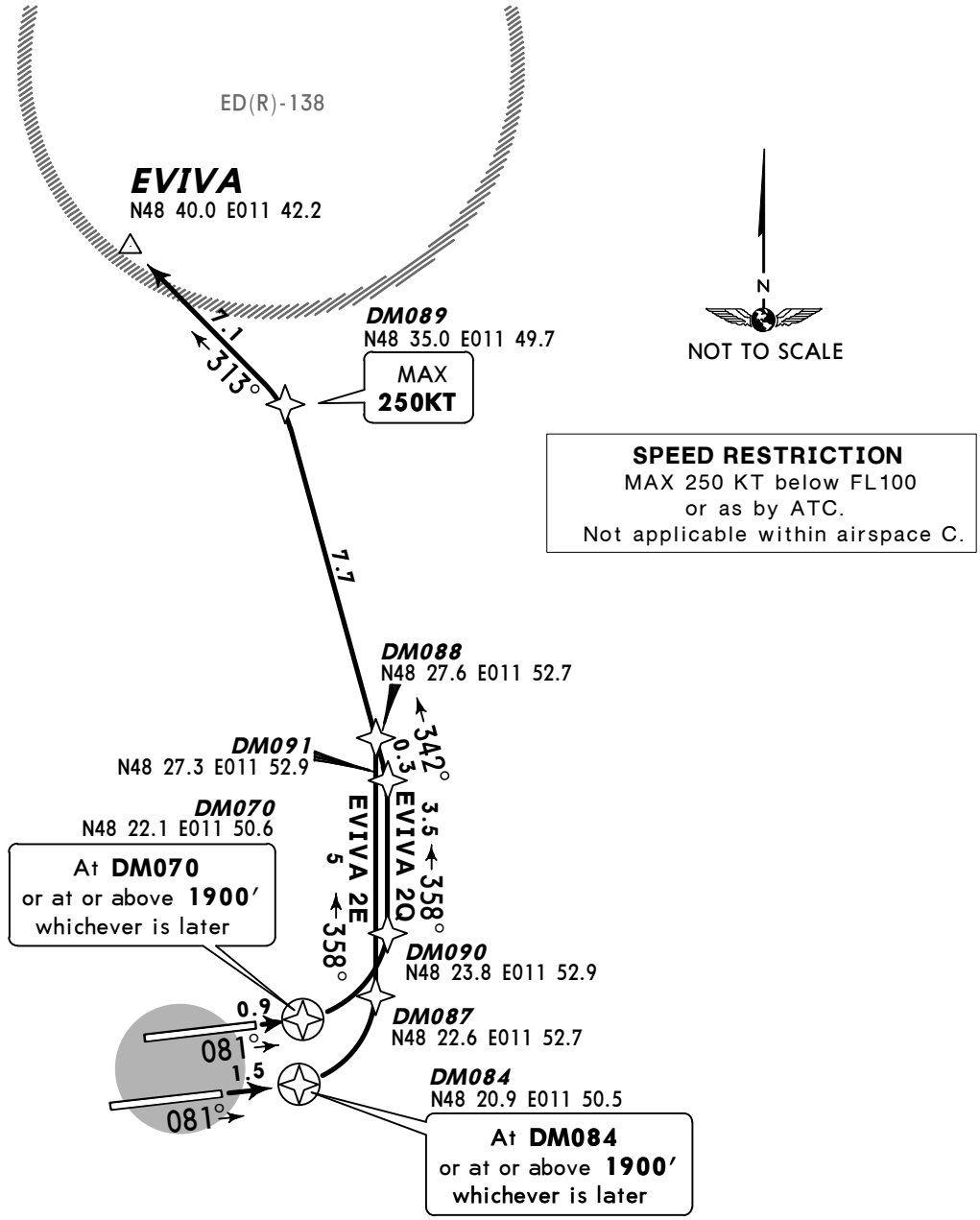
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MUNICH Radar	*Apt Elev*	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

EVIVA TWO ECHO (EVIVA 2E) *[EVIV2E]*
EVIVA TWO QUEBEC (EVIVA 2Q) *[EVIV2Q]*
RWYS 08R/L RNAV DEPARTURES

RNAV (GPS)
NOT AVAILABLE FOR JET ACFT
DURING ACTIVITY OF ED(R)-138 EXPECT ALTERNATE CLEARANCE BY ATC

3700′
MSA
ARP



Initial climb clearance **FL70**

SID	RWY	ROUTING
EVIVA 2E	08R	(1900′+) - DM084 (1900′+) DM087 - DM088 - DM089 (K250-) - EVIVA.
EVIVA 2Q	08L	(1900′+) - DM070 (1900′+) DM090 - DM091 - DM089 (K250-) - EVIVA.

CHANGES: RNAV SIDs completely revised & transferred.

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MUNICH Radar	*Apt Elev*	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

EVIVA THREE NOVEMBER (EVIVA 3N) *[EVIV3N]*
EVIVA TWO SIERRA (EVIVA 2S) *[EVIV2S]*
RWYS 26R/L RNAV DEPARTURES

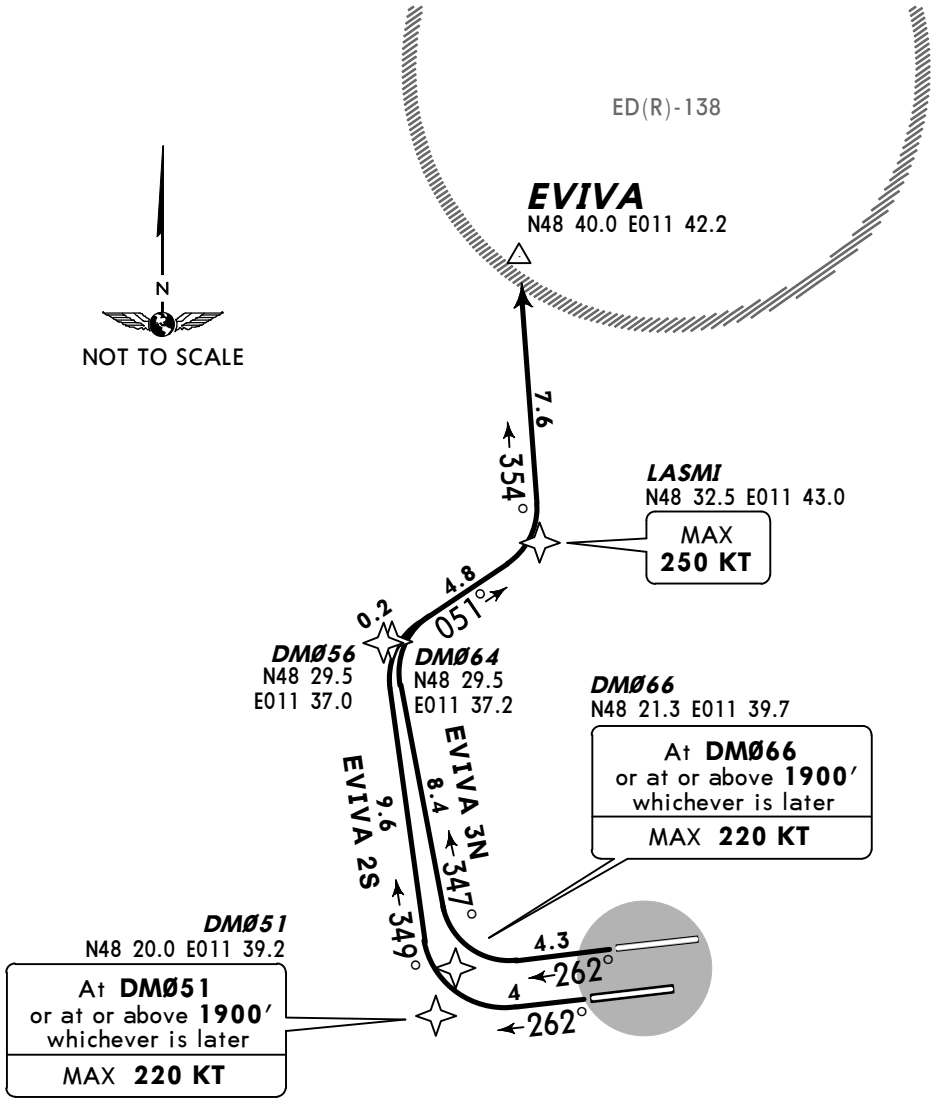
RNAV (GPS)

NOT AVAILABLE FOR JET ACFT

DURING ACTIVITY OF ED(R)-138 EXPECT ALTERNATE CLEARANCE BY ATC

3700′
MSA
ARP

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
EVIVA 3N	**26R**	**(1900′+) -** DM066 **(1900′+;** K220-) - DM064 - LASMI (K250-) - EVIVA.
EVIVA 2S	**26L**	**(1900′+) -** DM051 **(1900′+;** K220-) - DM056 - LASMI (K250-) - EVIVA.

CHANGES: Chart reindexed.

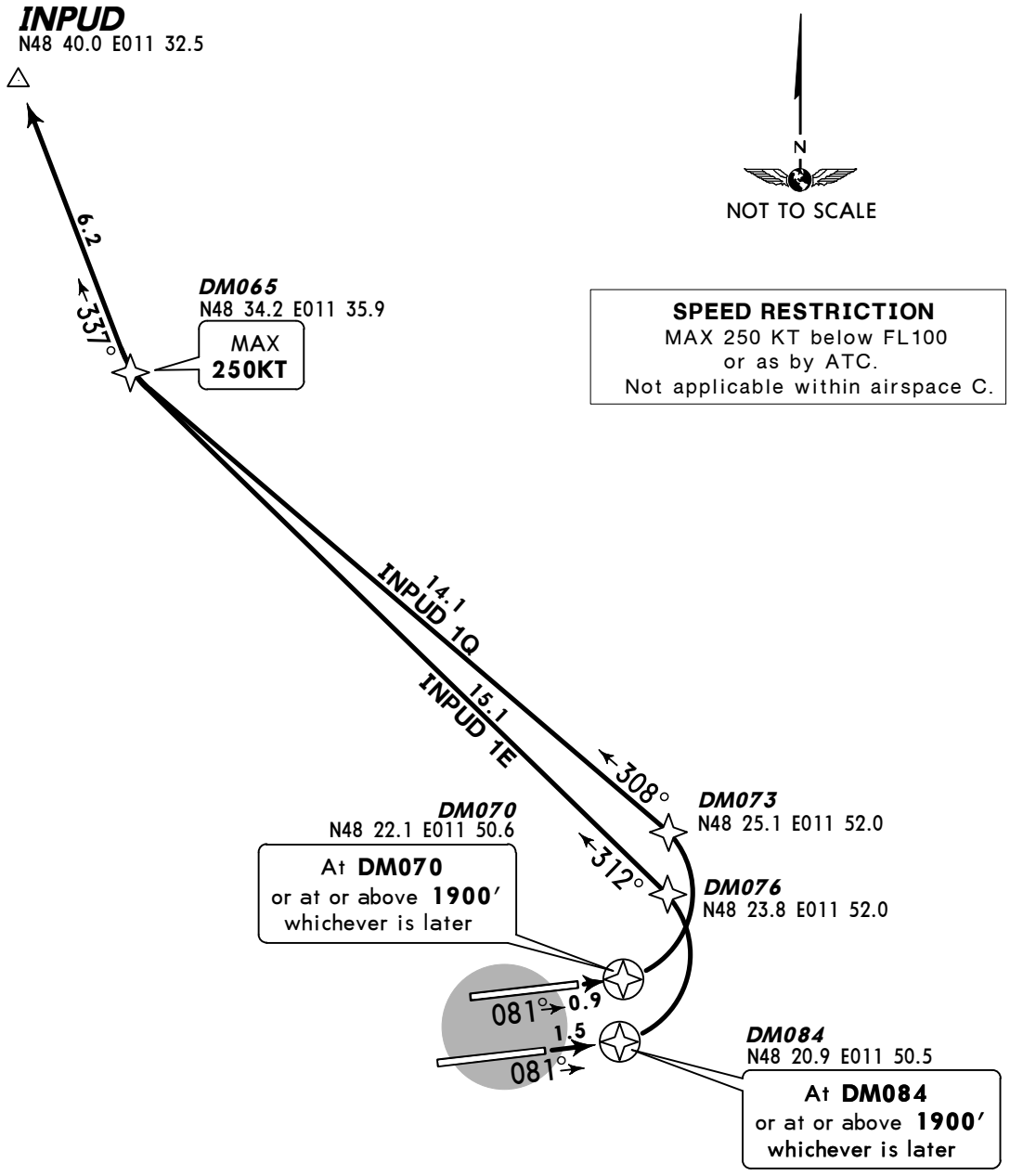
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MUNICH Radar	*Apt Elev*	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

INPUD ONE ECHO (INPUD 1E)*[INPU1E]*
INPUD ONE QUEBEC (INPUD 1Q)*[INPU1Q]*
RWYS 08R/L DEPARTURES

RNAV (GPS)
JET ACFT ONLY
(CLIMB PROFILE RESTRICTION WITHIN Y 102)
MANDATORY FOR FLIGHTS VIA SULUS CONTINUING VIA (U)L 604/T 852
MANDATORY FOR FLIGHTS VIA LASGA CONTINUING VIA (U)M 726/T 202

3700′
MSA
ARP



Initial climb clearance **FL70**

SID	RWY	ROUTING
INPUD 1E	**08R**	**(1900′+)** - DM084 **(1900′+)**- DM076 - DM065 (K250-) - INPUD.
INPUD 1Q	**08L**	**(1900′+)** - DM070 **(1900′+)**- DM073 - DM065 (K250-) - INPUD.

CHANGES: RNAV SIDs established; SIDs withdrawn.

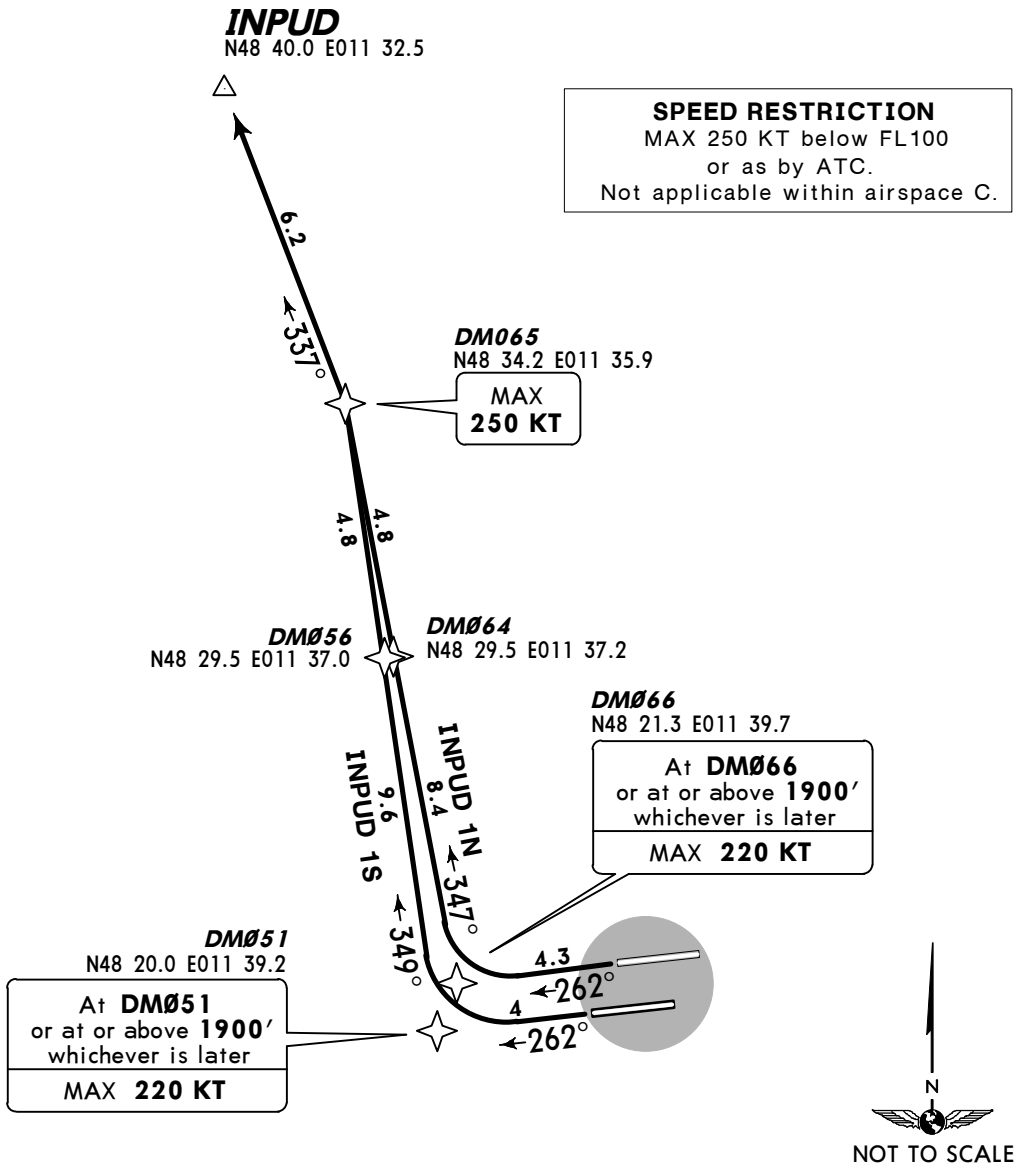
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MUNICH Radar	*Apt Elev*	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

INPUD ONE NOVEMBER (INPUD 1N) *[INPU1N]*
INPUD ONE SIERRA (INPUD 1S) *[INPU1S]*
RWYS 26R/L DEPARTURES

RNAV (GPS)
JET ACFT ONLY
(CLIMB PROFILE RESTRICTION WITHIN Y 102)
MANDATORY FOR FLIGHTS VIA SULUS CONTINUING VIA (U)L 604/T 852
MANDATORY FOR FLIGHTS VIA LASGA CONTINUING VIA (U)M 726/T 202

3700′
MSA
ARP



Initial climb clearance **FL70**

SID	RWY	ROUTING
INPUD 1N	**26R**	**(1900′+)** - DM066 (**1900′+**; K220-) - DM065 (K250-) - INPUD.
INPUD 1S	**26L**	**(1900′+)** - DM051 (**1900′+**; K220-) - DM065 (K250-) - INPUD.

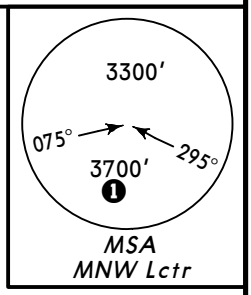
CHANGES: RNAV SIDs established; SIDs withdrawn.

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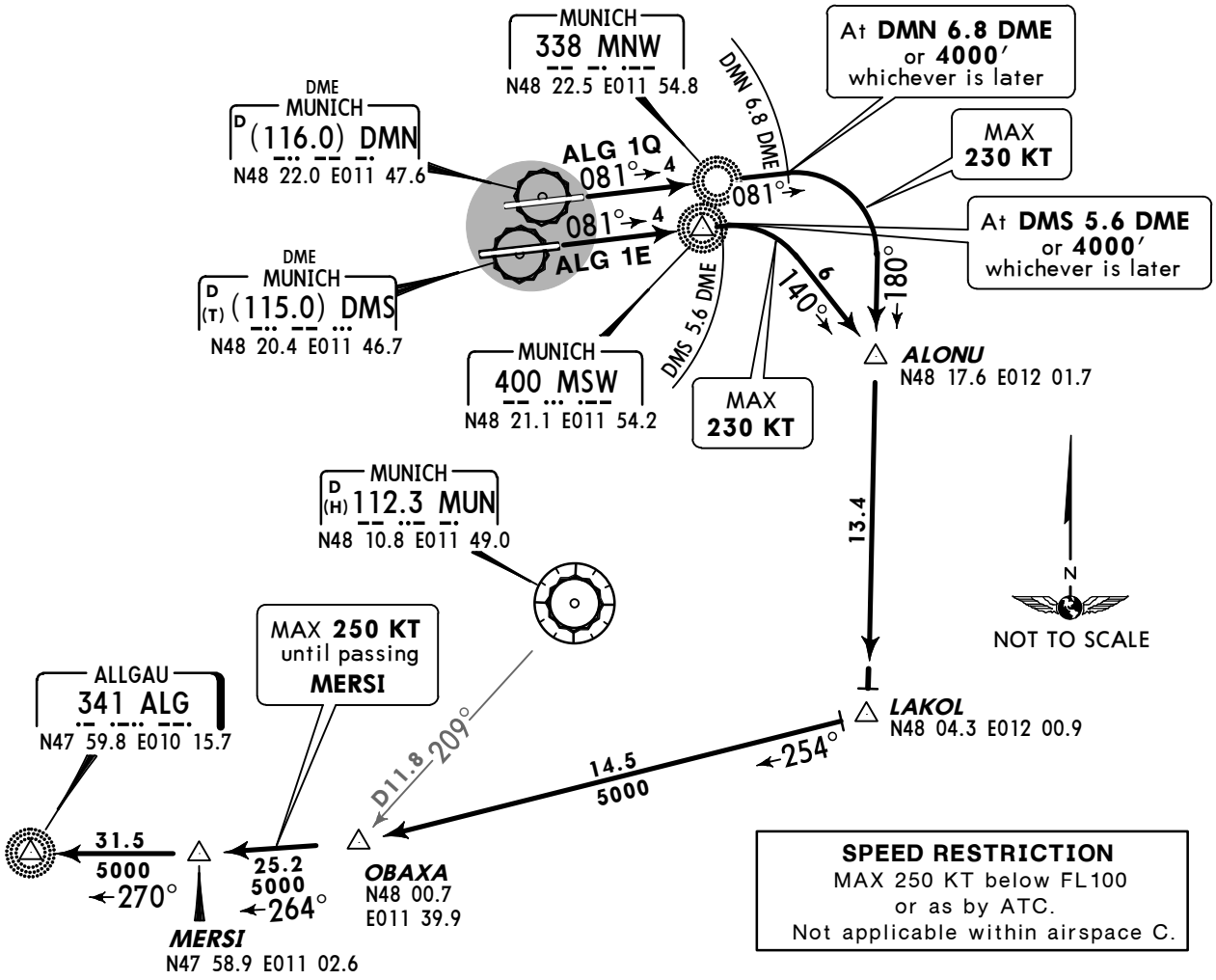
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ALGOI ONE ECHO (ALG 1E)
ALGOI ONE QUEBEC (ALG 1Q)
RWYS 08R/L DEPARTURES

JET ACFT ONLY
AVAILABLE FOR FLIGHTS DESTINATION EDJA AT OR BELOW FL90
MANDATORY FOR TRAFFIC PROCEEDING VIA MILKA
AT OR ABOVE REQUESTED FL245 DURING FOLLOWING TIMES
DAILY 2330-0800LT
FRI 1700LT TO MON 0800LT
HOL
OUTSIDE THESE TIMES FILE SID MERSI - AIRWAY Y 110



❶ 3300′ within 10 NM



Initial climb clearance **FL70**

SID	RWY	ROUTING
ALG 1E	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME 4000′, whichever is later, turn RIGHT, 140° track to ALONU, turn RIGHT, 180° track to LAKOL, turn RIGHT, 254° track to OBAXA, turn RIGHT, 264° track to MERSI, turn RIGHT, 270° track to ALG. ❷ or
ALG 1Q	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME 4000′, whichever is later, turn RIGHT, 180° track to LAKOL, turn turn RIGHT, 254° track to OBAXA, turn RIGHT, 264° track to MERSI, turn RIGHT, 270° track to ALG. ❸ or

❷ After DMS 5.6 DME BRNAV equipment necessary.
❸ After DMN 6.8 DME BRNAV equipment necessary.

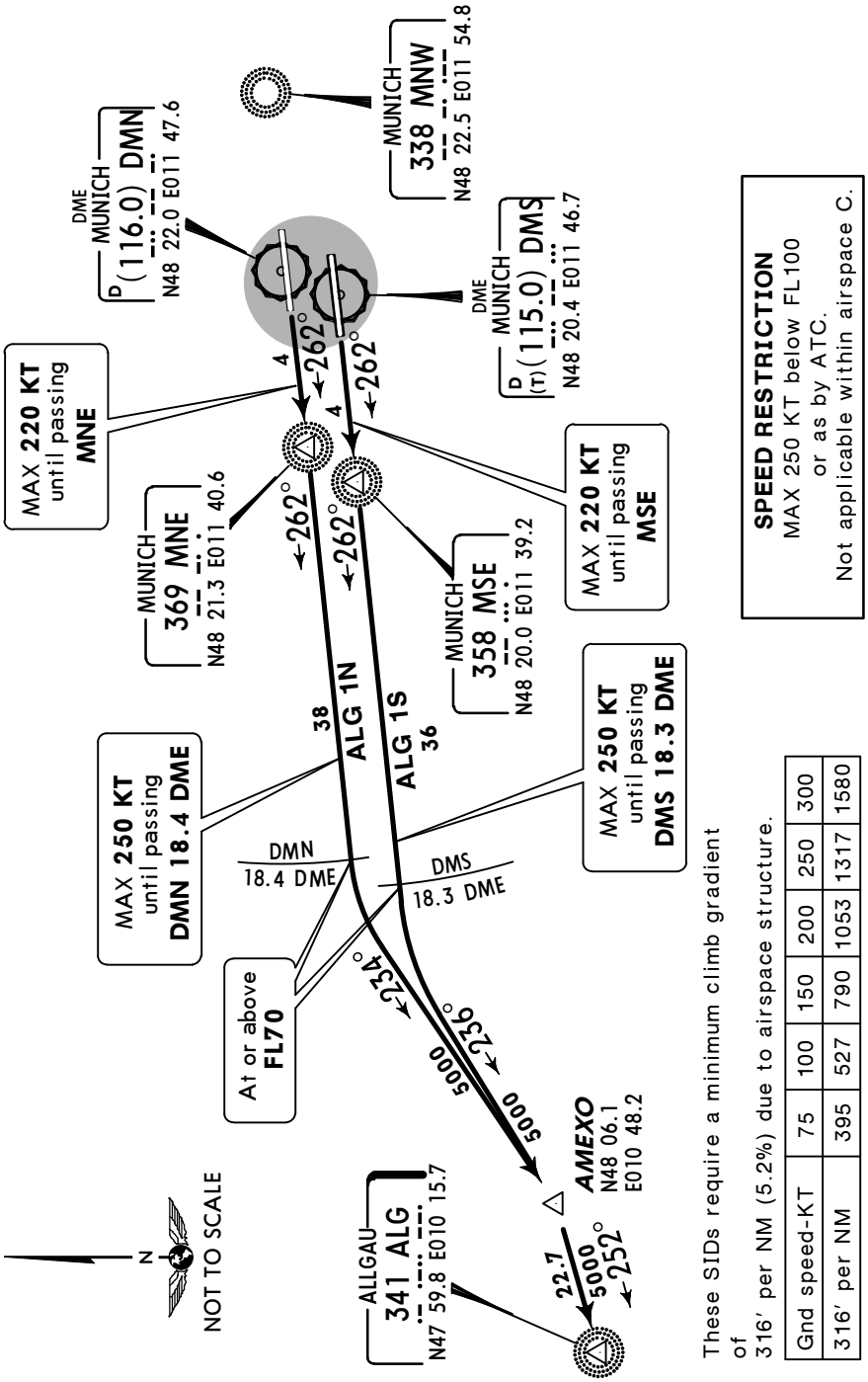
CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ALGOI ONE NOVEMBER (ALG 1N)
ALGOI ONE SIERRA (ALG 1S)
RWYS 26R/L DEPARTURES

JET ACFT ONLY
AVAILABLE FOR FLIGHTS DESTINATION EDJA AT OR BELOW FL90
MANDATORY FOR TRAFFIC PROCEEDING VIA MILKA
AT OR ABOVE REQUESTED FL245 DURING FOLLOWING TIMES
DAILY 2330-0800LT
FRI 1700LT TO MON 0800LT
HOL
OUTSIDE THESE TIMES FILE SID MERSI - AIRWAY Y 110

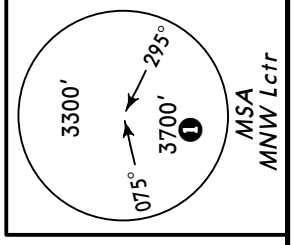


SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require a minimum climb gradient of 316′ per NM (5.2%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise ATC.



❶ 3300′ within 10 NM

Initial climb clearance **FL70**

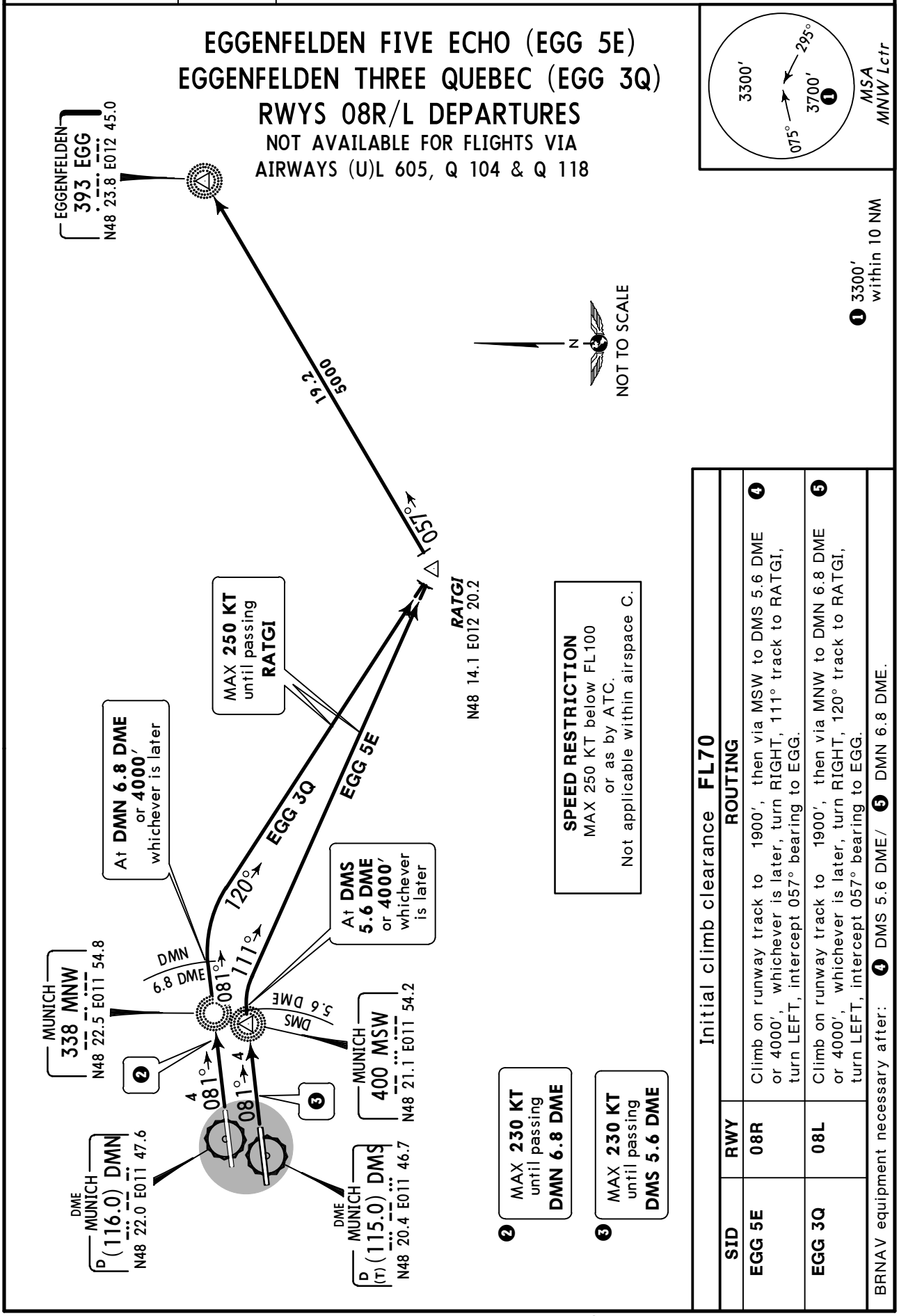
SID	RWY	ROUTING
ALG 1N	26R	Climb on runway track to 1900′, intercept 262° bearing via MNE to DMN 18.4 DME ❷, turn LEFT, 234° track to AMEXO, turn RIGHT, 252° track to ALG.
ALG 1S	26L	Climb on runway track to 1900′, intercept 262° bearing via MSE to DMS 18.3 DME ❸, turn LEFT, 236° track to AMEXO, turn RIGHT, 252° track to ALG.

❷ After DMN 18.4 DME BRNAV equipment necessary.
❸ After DMS 18.3 DME BRNAV equipment necessary.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

EGGENFELDEN FIVE ECHO (EGG 5E)
EGGENFELDEN THREE QUEBEC (EGG 3Q)
RWYS 08R/L DEPARTURES
NOT AVAILABLE FOR FLIGHTS VIA AIRWAYS (U)L 605, Q 104 & Q 118



Initial climb clearance **FL70**

SID	RWY	ROUTING
EGG 5E	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME or 4000′, whichever is later, turn RIGHT, 111° track to RATGI, turn LEFT, intercept 057° bearing to EGG. ❹
EGG 3Q	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME or 4000′, whichever is later, turn RIGHT, 120° track to RATGI, turn LEFT, intercept 057° bearing to EGG. ❺

BRNAV equipment necessary after: ❹ DMS 5.6 DME/ ❺ DMN 6.8 DME.

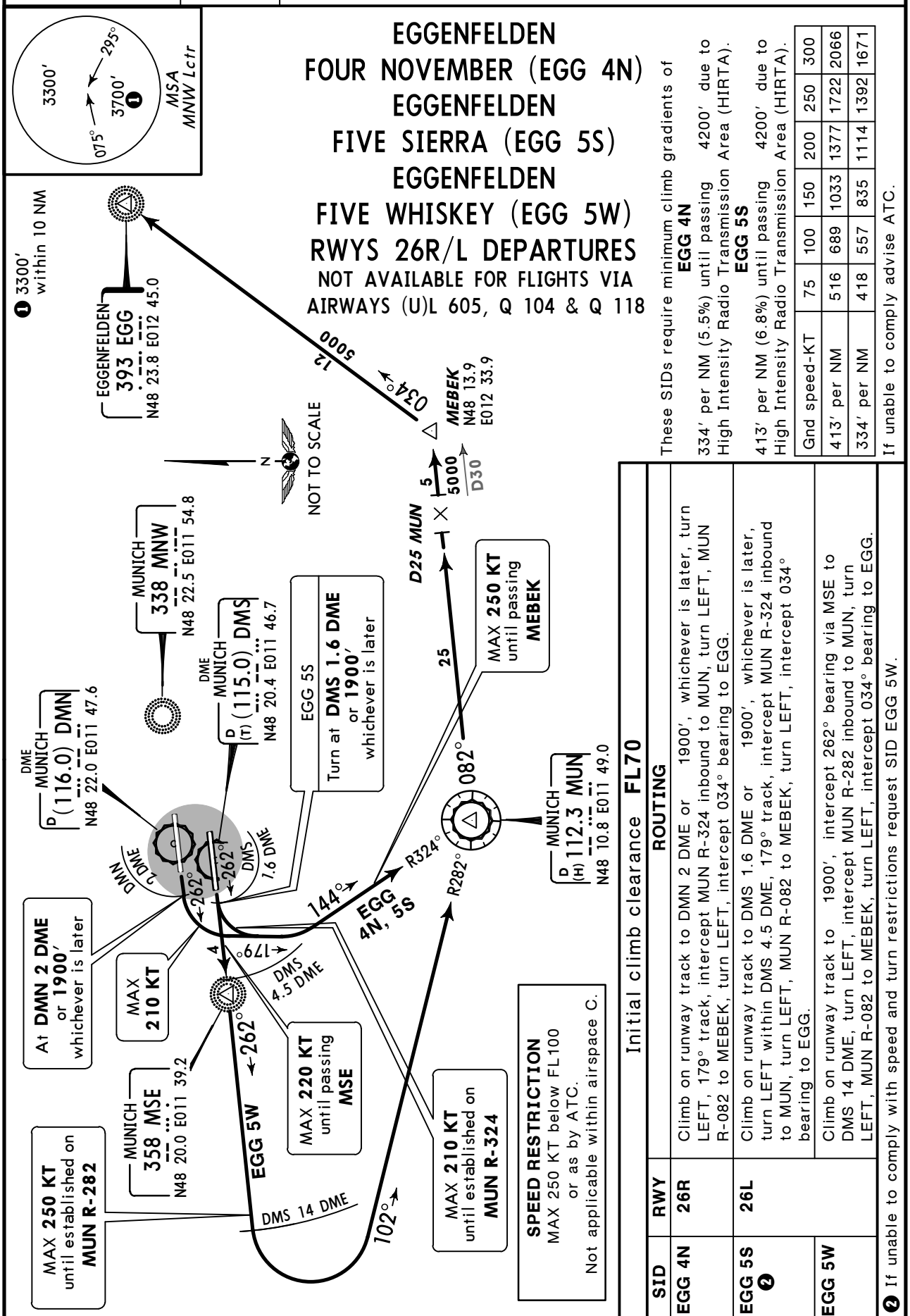
CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

EGGENFELDEN FOUR NOVEMBER (EGG 4N) EGGENFELDEN FIVE SIERRA (EGG 5S) EGGENFELDEN FIVE WHISKEY (EGG 5W) RWYS 26R/L DEPARTURES

NOT AVAILABLE FOR FLIGHTS VIA AIRWAYS (U)L 605, Q 104 & Q 118



These SIDs require minimum climb gradients of
EGG 4N
334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).
EGG 5S
413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
EGG 4N	26R	Climb on runway track to DMN 2 DME or 1900′, whichever is later, turn LEFT, 179° track, intercept MUN R-324 inbound to MUN, turn LEFT, MUN R-082 to MEBEK, turn LEFT, intercept 034° bearing to EGG.
EGG 5S ❷	26L	Climb on runway track to DMS 1.6 DME or 1900′, whichever is later, turn LEFT within DMS 4.5 DME, 179° track, intercept MUN R-324 inbound to MUN, turn LEFT, MUN R-082 to MEBEK, turn LEFT, intercept 034° bearing to EGG.
EGG 5W		Climb on runway track to 1900′, intercept 262° bearing via MSE to DMS 14 DME, turn LEFT, intercept MUN R-282 inbound to MUN, turn LEFT, MUN R-082 to MEBEK, turn LEFT, intercept 034° bearing to EGG.

❷ If unable to comply with speed and turn restrictions request SID EGG 5W.

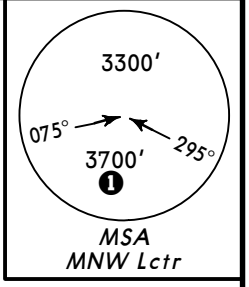
CHANGES: MSA.

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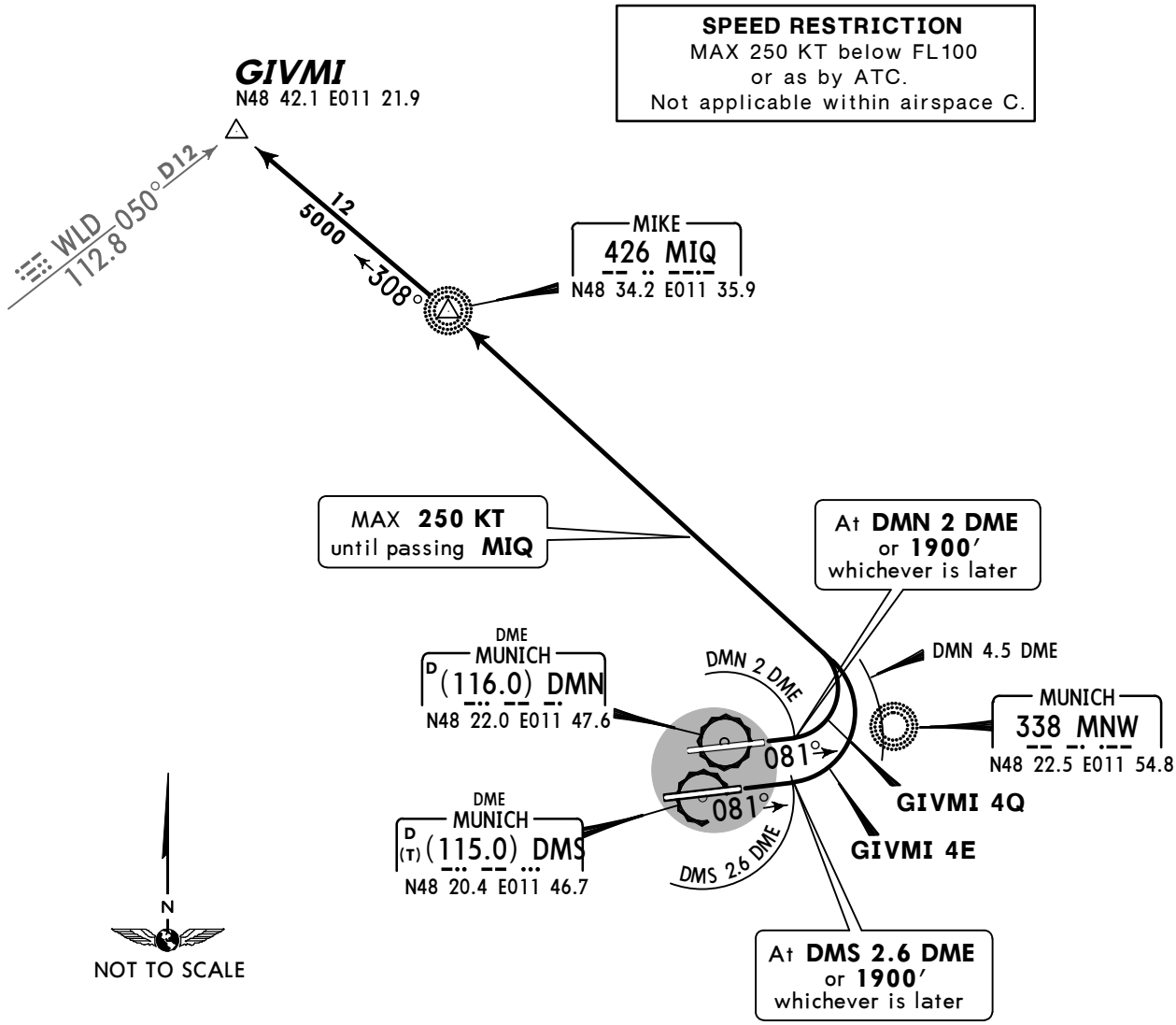
MUNICH Radar	*Apt Elev*	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

GIVMI FOUR ECHO (GIVMI 4E)
GIVMI FOUR QUEBEC (GIVMI 4Q)
RWYS 08R/L DEPARTURES

JET ACFT ONLY (EXCEPT FLIGHTS ACCORDING REMARKS OF AIRWAY T 161)
MANDATORY FOR FLIGHTS
VIA AIRWAY Y 101 - INBED - AIRWAYS (U)L 610
(CLIMB PROFILE RESTRICTION WITHIN AIRWAY Y 101)
OR VIA AIRWAY Y 101 - ERNAS - AIRWAY T 161



1 3300′ within 10 NM



Initial climb clearance **FL70**

SID	RWY	ROUTING
GIVMI 4E	**08R**	Climb on runway track to DMS 2.6 DME or 1900′, whichever is later, turn LEFT to MIQ, 308° bearing to GIVMI.
GIVMI 4Q	**08L**	Climb on runway track to DMN 2 DME or 1900′, whichever is later, turn LEFT within DMN 4.5 DME to MIQ, 308° bearing to GIVMI.

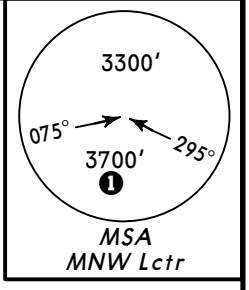
CHANGES: MSA.

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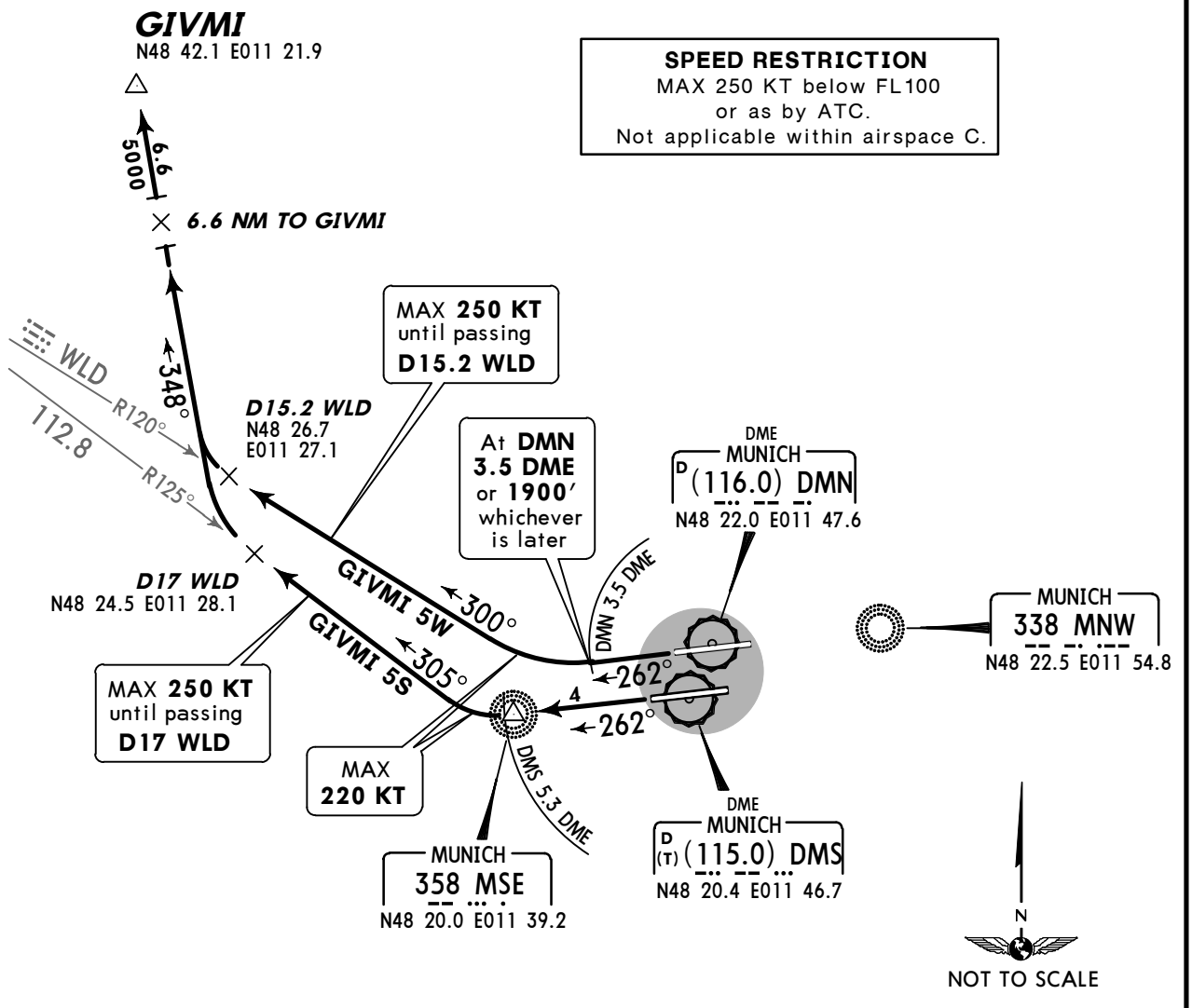
MUNICH Radar	*Apt Elev*	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

GIVMI FIVE SIERRA (GIVMI 5S)
GIVMI FIVE WHISKEY (GIVMI 5W)
RWYS 26L/R DEPARTURES

JET ACFT ONLY (EXCEPT FLIGHTS ACCORDING REMARKS OF AIRWAY T 161)
MANDATORY FOR FLIGHTS
VIA AIRWAY Y 101 - INBED - AIRWAYS (U)L 610
(CLIMB PROFILE RESTRICTION WITHIN AIRWAY Y 101)
OR VIA AIRWAY Y 101 - ERNAS - AIRWAY T 161



❶ 3300′ within 10 NM



Initial climb clearance **FL70**

SID	RWY	ROUTING
GIVMI 5S	**26L**	Climb on runway track to 1900′, then via MSE to DMS 5.3 DME, turn RIGHT, intercept WLD R-125 inbound to D17 WLD ❷, turn RIGHT, 348° track to GIVMI.
GIVMI 5W	**26R**	Climb on runway track to DMN 3.5 DME or 1900′, whichever is later, turn RIGHT, intercept WLD R-120 inbound to D15.2 WLD ❸, turn RIGHT, 348° track to GIVMI.

❷ After D17 WLD BRNAV equipment necessary.
❸ After D15.2 WLD BRNAV equipment necessary.

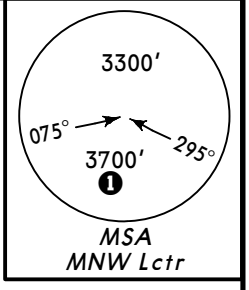
CHANGES: MSA.

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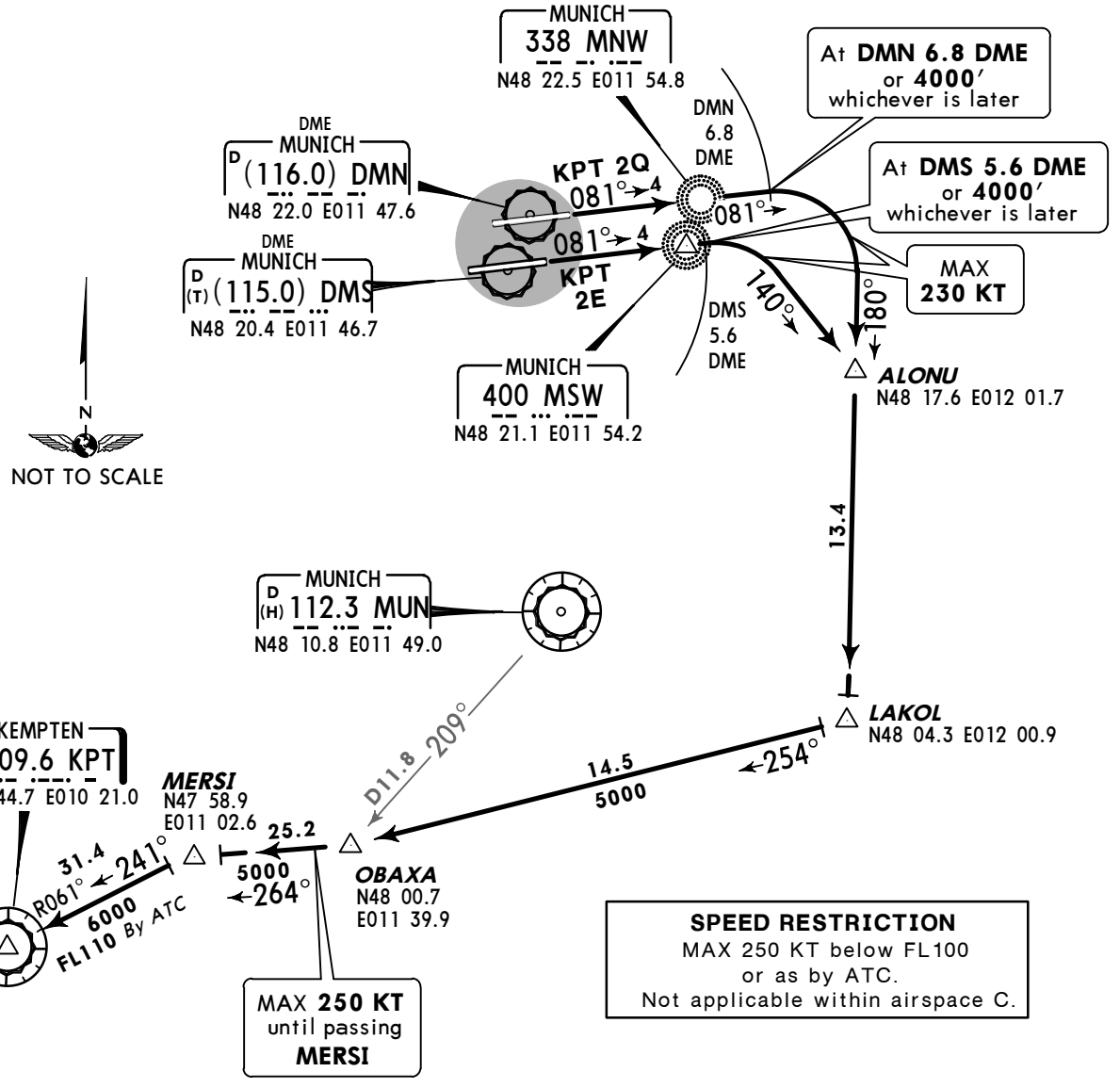
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

KEMPTEN TWO ECHO (KPT 2E)
KEMPTEN TWO QUEBEC (KPT 2Q)
RWYS 08R/L DEPARTURES

MANDATORY FOR JET ACFT TO DESTINATIONS EDNY, LSZH & LIM*
NOT AVAILABLE FOR TRAFFIC VIA KPT - AIRWAYS Y-740/Z-999
EXCEPT FOR DESTINATION LIM*



❶ 3300′ within 10 NM



Initial climb clearance **FL70**

SID	RWY	ROUTING
KPT 2E	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME ❷ or 4000′, whichever is later, turn RIGHT, 140° track to ALONU, turn RIGHT, 180° track to LAKOL, turn RIGHT, 254° track to OBAXA, turn RIGHT, 264° track to MERSI, turn LEFT, intercept KPT R-061 inbound to KPT.
KPT 2Q	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME ❸ or 4000′, whichever is later, turn RIGHT, 180° track to LAKOL, turn RIGHT, 254° track to OBAXA, turn RIGHT, 264° track to MERSI, turn LEFT, intercept KPT R-061 inbound to KPT.

❷ After DMS 5.6 DME BRNAV equipment necessary.
❸ After DMN 6.8 DME BRNAV equipment necessary.

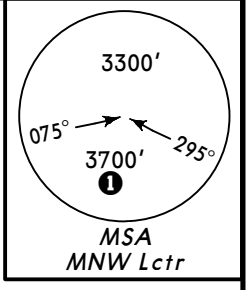
CHANGES: MSA.

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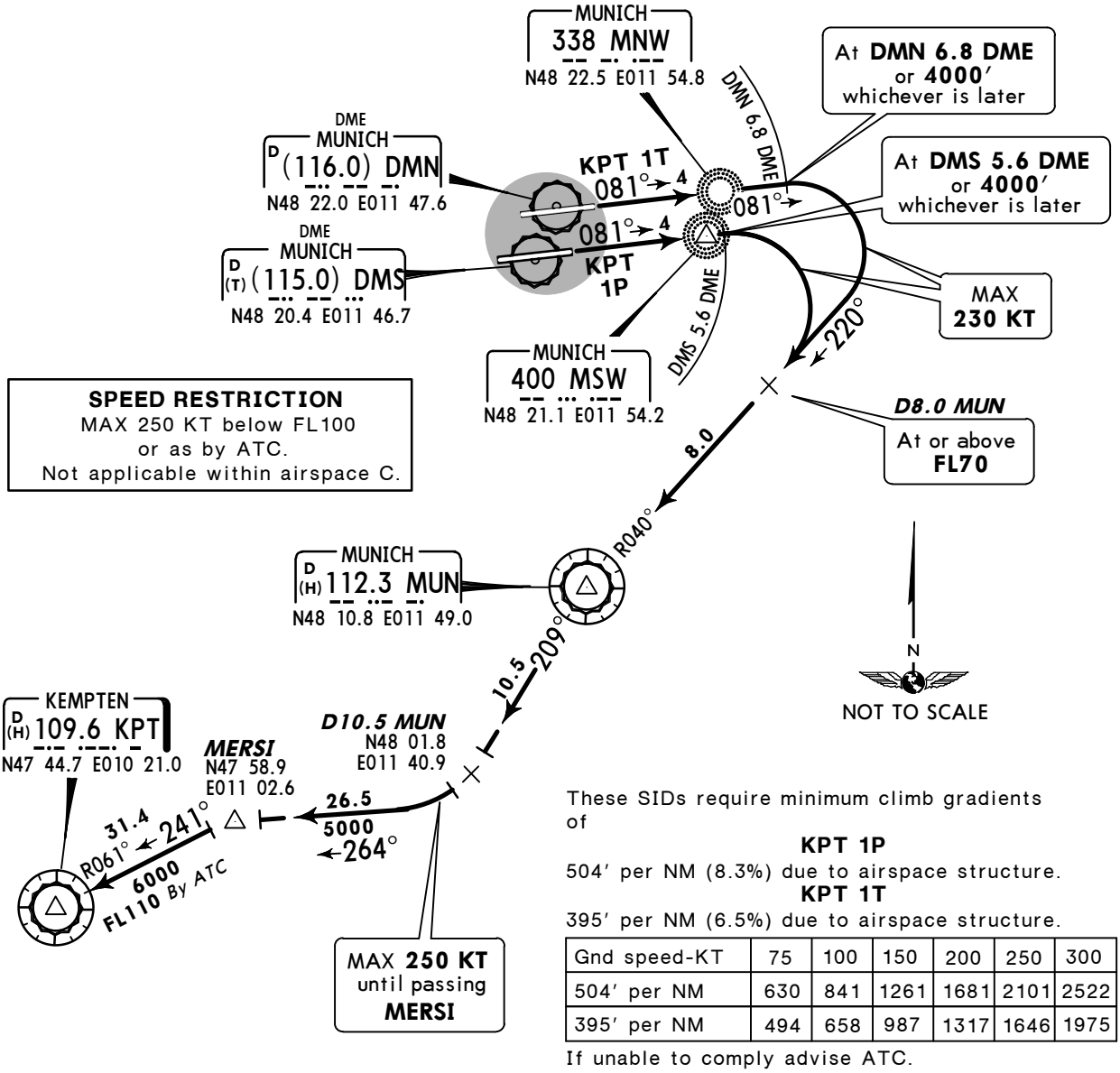
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

KEMPTEN ONE PAPA (KPT 1P)
KEMPTEN ONE TANGO (KPT 1T)
RWYS 08R/L DEPARTURES

ONLY AVAILABLE FOR NON-JET ACFT
NOT AVAILABLE FOR TRAFFIC VIA KPT - AIRWAYS Y-740/Z-999 EXCEPT FOR DESTINATION LIM*



❶ 3300′ within 10 NM



These SIDs require minimum climb gradients of

KPT 1P

504′ per NM (8.3%) due to airspace structure.

KPT 1T

395′ per NM (6.5%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522
395′ per NM	494	658	987	1317	1646	1975

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
KPT 1P	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME or 4000′, whichever is later, turn RIGHT, intercept MUN R-040 inbound to MUN, turn LEFT, MUN R-209 to D10.5 MUN ❷, turn RIGHT, 264° track to MERSI, turn LEFT, intercept KPT R-061 inbound to KPT.
KPT 1T	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME or 4000′, whichever is later, turn RIGHT, intercept MUN R-040 inbound to MUN, turn LEFT, MUN R-209 to D10.5 MUN ❷, turn RIGHT, 264° track to MERSI, turn LEFT, intercept KPT R-061 inbound to KPT.

❷ After D10.5 MUN BRNAV equipment necessary.

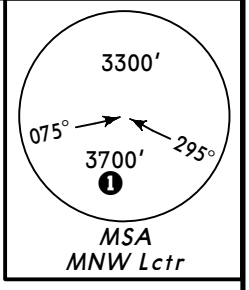
CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

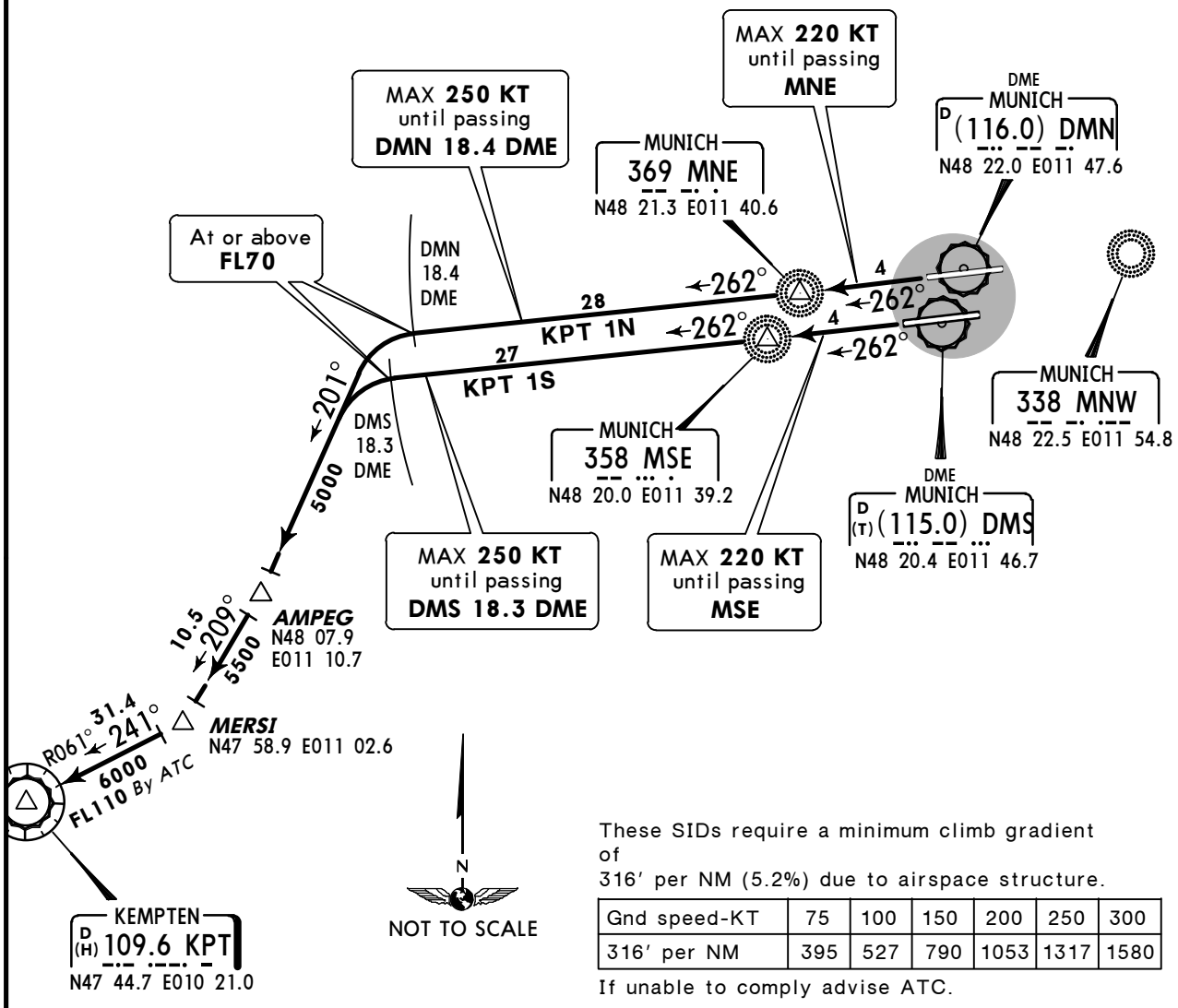
KEMPTEN ONE NOVEMBER (KPT 1N)
KEMPTEN ONE SIERRA (KPT 1S)
RWYS 26R/L DEPARTURES

MANDATORY FOR JET ACFT TO DESTINATIONS EDNY, LSZH & LIM*
NOT AVAILABLE FOR TRAFFIC VIA KPT - AIRWAYS Y-740/Z-999
EXCEPT FOR DESTINATION LIM*



❶ 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require a minimum climb gradient of
316′ per NM (5.2%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
KPT 1N	**26R**	Climb on runway track to 1900′, intercept 262° bearing via MNE to DMN 18.4 DME ❷, turn LEFT, 201° track to AMPEG, turn RIGHT, 209° track to MERSI, turn RIGHT, intercept KPT R-061 inbound to KPT.
KPT 1S	**26L**	Climb on runway track to 1900′, intercept 262° bearing via MSE to DMS 18.3 DME ❸, turn LEFT, 201° track to AMPEG, turn RIGHT, 209° track to MERSI, turn RIGHT, intercept KPT R-061 inbound to KPT.

❷ After DMN 18.4 DME BRNAV equipment necessary.
❸ After DMS 18.3 DME BRNAV equipment necessary.

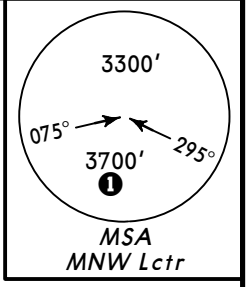
CHANGES: MSA.

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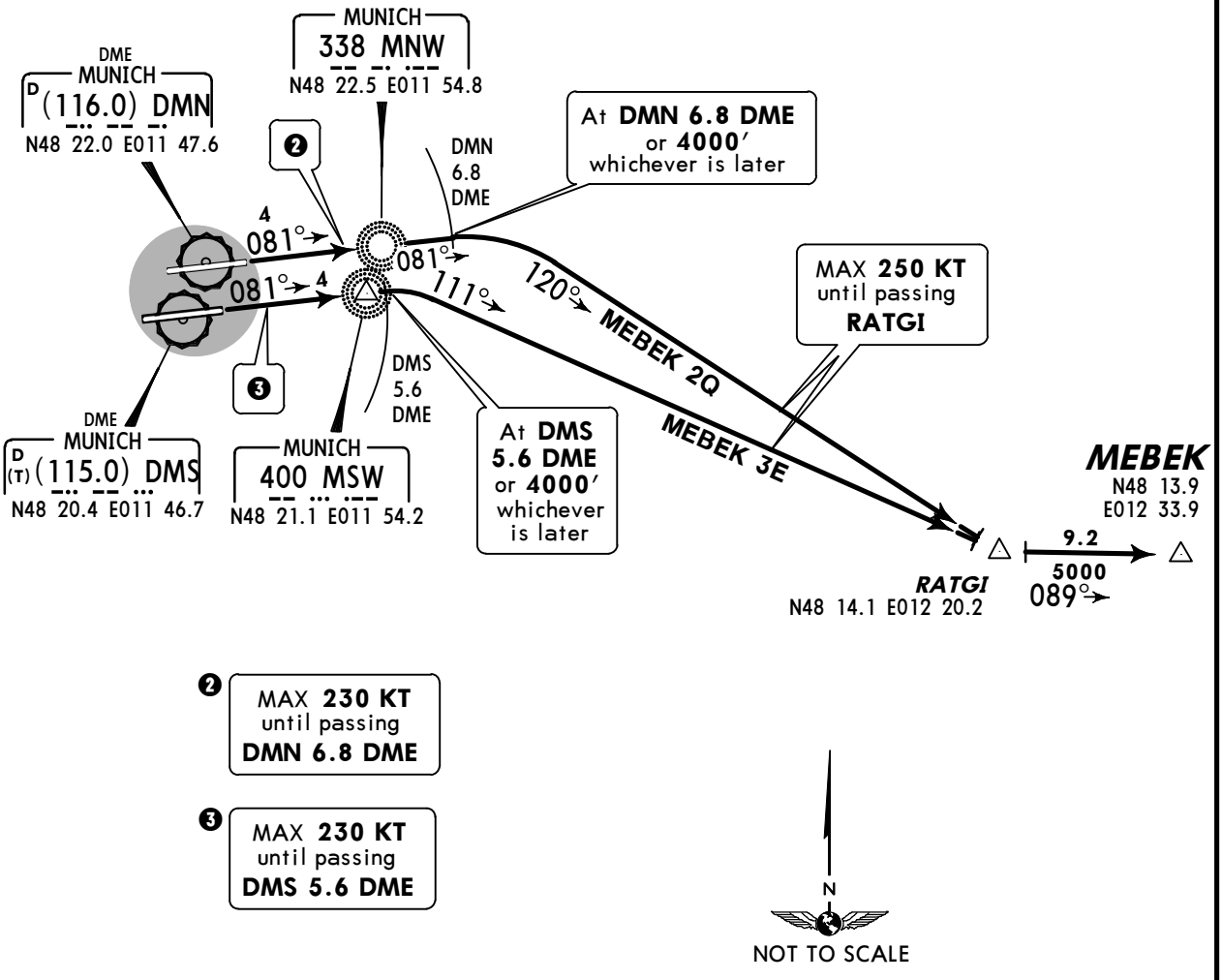
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

MEBEK THREE ECHO (MEBEK 3E)
MEBEK TWO QUEBEC (MEBEK 2Q)
RWYS 08R/L DEPARTURES
NOT AVAILABLE FOR FLIGHTS VIA EGG

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



❶ 3300′ within 10 NM



❷ MAX **230 KT** until passing **DMN 6.8 DME**

❸ MAX **230 KT** until passing **DMS 5.6 DME**

N

NOT TO SCALE

Initial climb clearance **FL70**

SID	RWY	ROUTING
MEBEK 3E	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME ❹ or 4000′, whichever is later, turn RIGHT, 111° track to RATGI, turn LEFT, 089° track to MEBEK.
MEBEK 2Q	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME ❺ or 4000′, whichever is later, turn RIGHT, 120° track to RATGI, turn LEFT, 089° track to MEBEK.

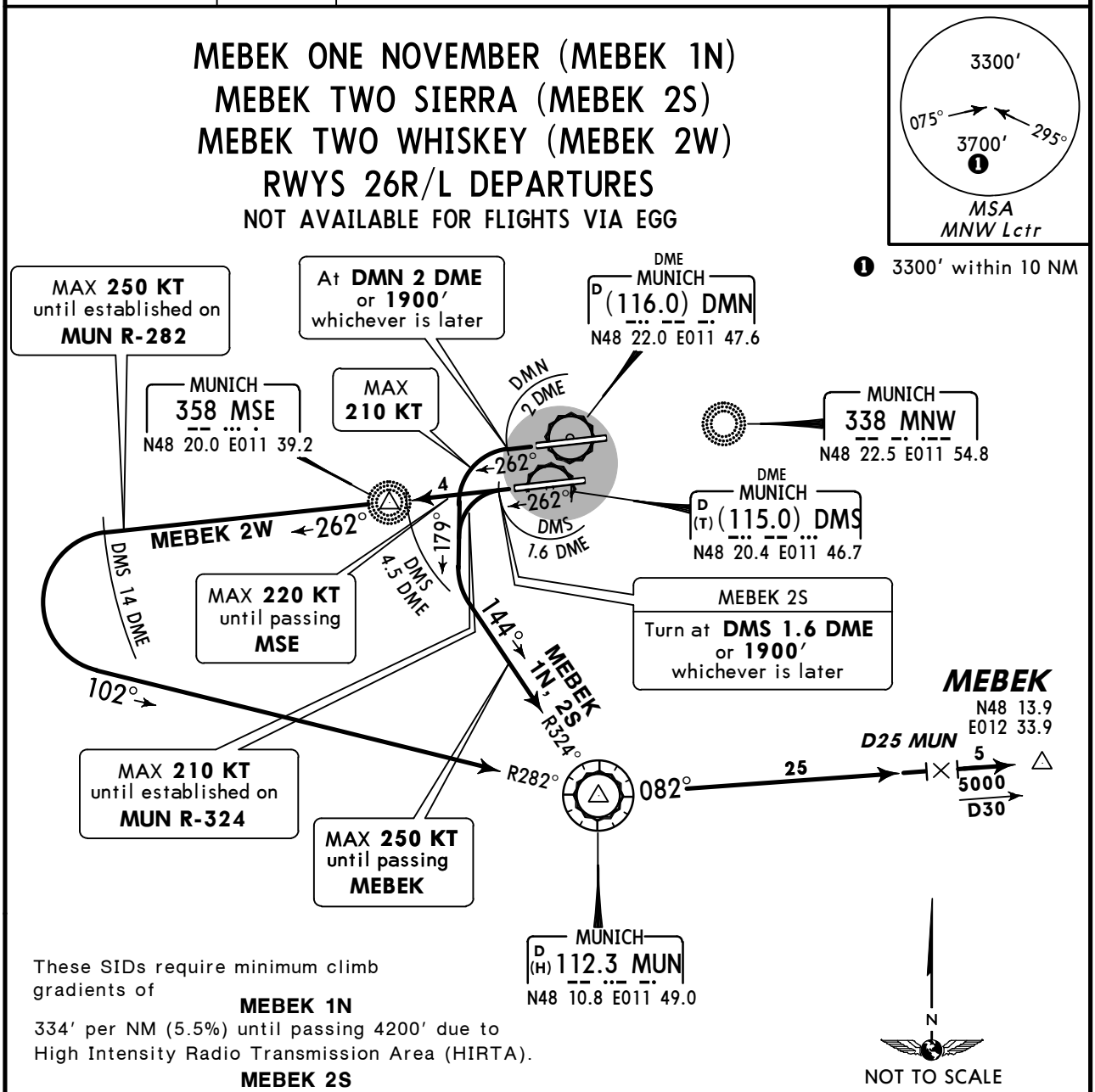
❹ After DMS 5.6 DME BRNAV equipment necessary.
❺ After DMN 6.8 DME BRNAV equipment necessary.

CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

MEBEK ONE NOVEMBER (MEBEK 1N)
MEBEK TWO SIERRA (MEBEK 2S)
MEBEK TWO WHISKEY (MEBEK 2W)
RWYS 26R/L DEPARTURES
NOT AVAILABLE FOR FLIGHTS VIA EGG



These SIDs require minimum climb gradients of

MEBEK 1N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

MEBEK 2S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

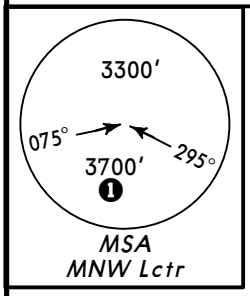
SID	RWY	ROUTING
MEBEK 1N	**26R**	Climb on runway track to DMN 2 DME or 1900′, whichever is later, turn LEFT, 179° track, intercept MUN R-324 inbound to MUN, turn LEFT, MUN R-082 to MEBEK.
MEBEK 2S ❷	**26L**	Climb on runway track to DMS 1.6 DME or 1900°, whichever is later, turn LEFT within DMS 4.5 DME, 179° track, intercept MUN R-324 inbound to MUN, turn LEFT, MUN R-082 to MEBEK.
MEBEK 2W		Climb on runway track to 1900′, intercept 262° bearing via MSE to DMS 14 DME, turn LEFT, intercept MUN R-282 inbound to MUN, turn LEFT, MUN R-082 to MEBEK.

❷ If unable to comply with speed and turn restrictions request SID MEBEK 2W.

CHANGES: MSA.

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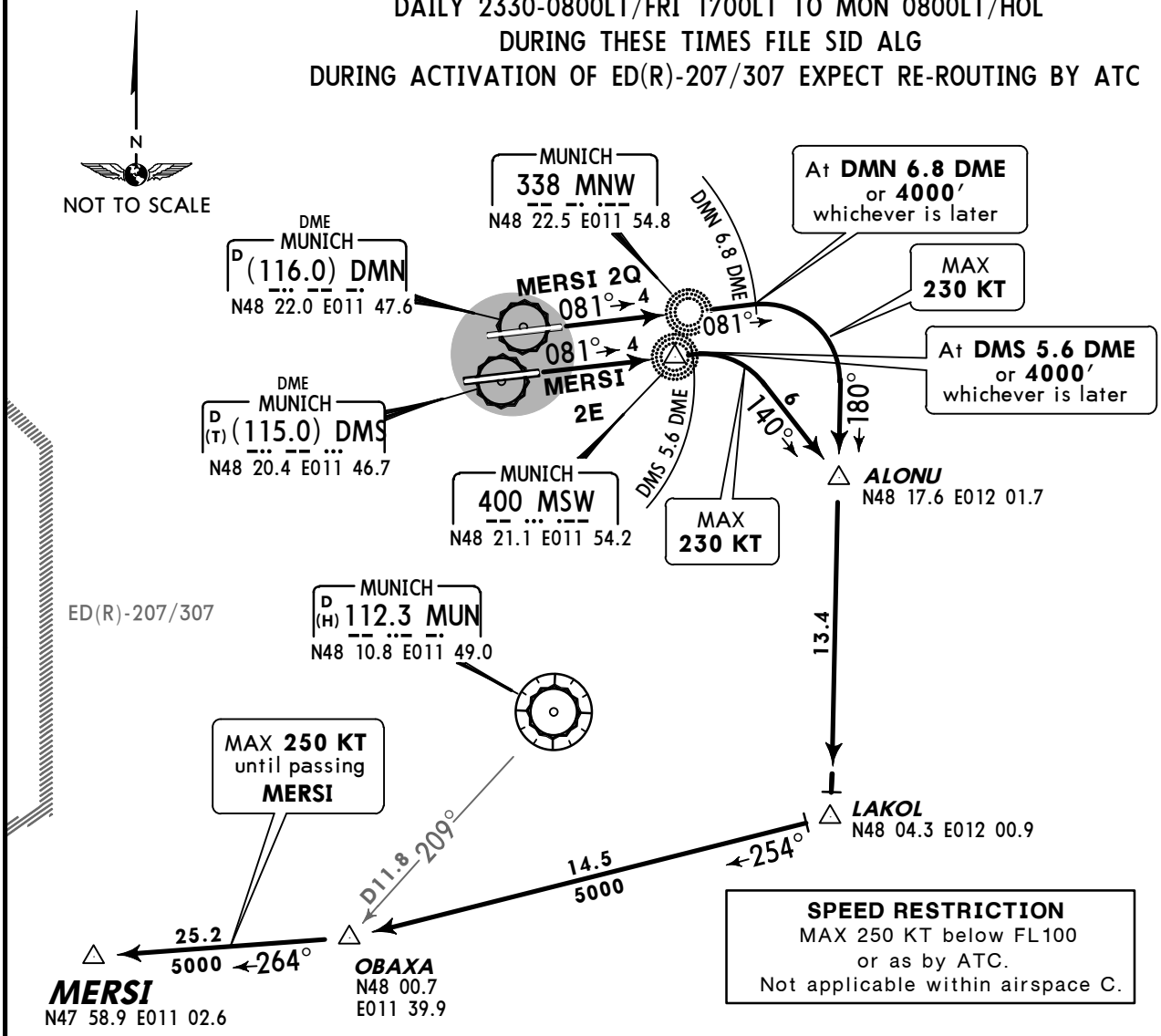
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.



❶ 3300′ within 10 NM

MERSI TWO ECHO (MERSI 2E)
MERSI TWO QUEBEC (MERSI 2Q)
RWYS 08R/L DEPARTURES

JET ACFT ONLY
NOT AVAILABLE FOR FLIGHTS DESTINATION LSZH AND LIM*
THESE FLIGHTS SHALL FILE KPT SIDS
NOT AVAILABLE FOR TRAFFIC PROCEEDING VIA MILKA
AT OR ABOVE REQUESTED FL245 DURING FOLLOWING TIMES:
DAILY 2330-0800LT/FRI 1700LT TO MON 0800LT/HOL
DURING THESE TIMES FILE SID ALG
DURING ACTIVATION OF ED(R)-207/307 EXPECT RE-ROUTING BY ATC



Initial climb clearance **FL70**

SID	RWY	ROUTING	
MERSI 2E	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME 4000′, whichever is later, turn RIGHT, 140° track to ALONU, turn RIGHT, 180° track to LAKOL, turn RIGHT, 254° track to OBAXA, turn RIGHT, 264° track to MERSI.	❷ or
MERSI 2Q	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME 4000′, whichever is later, turn RIGHT, 180° track to LAKOL, turn RIGHT, 254° track to OBAXA, turn RIGHT, 264° track to MERSI.	❸ or

❷ After DMS 5.6 DME BRNAV equipment necessary.
❸ After DMN 6.8 DME BRNAV equipment necessary.

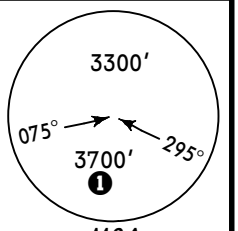
CHANGES: MSA.

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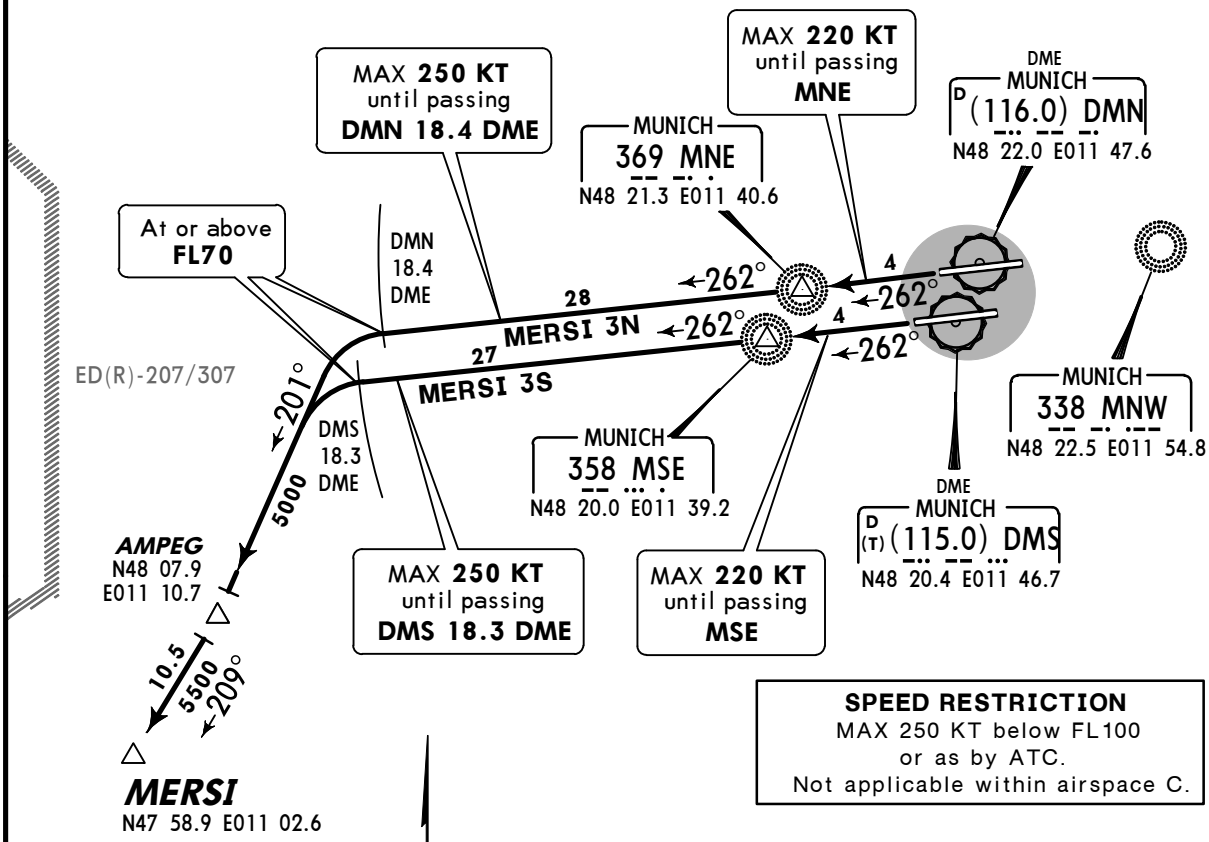
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

MERSI THREE NOVEMBER (MERSI 3N)
MERSI THREE SIERRA (MERSI 3S)
RWYS 26R/L DEPARTURES

JET ACFT ONLY
NOT AVAILABLE FOR FLIGHTS DESTINATION LSZH AND LIM*
THESE FLIGHTS SHALL FILE KPT SIDS
NOT AVAILABLE FOR TRAFFIC PROCEEDING VIA MILKA
AT OR ABOVE REQUESTED FL245 DURING FOLLOWING TIMES:
DAILY 2330-0800LT/FRI 1700LT TO MON 0800LT/HOL
DURING THESE TIMES FILE SID ALG
DURING ACTIVATION OF ED(R)-207/307 EXPECT RE-ROUTING BY ATC



❶ 3300′ within 10 NM



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require a minimum climb gradient of
316′ per NM (5.2%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
MERSI 3N	**26R**	Climb on runway track to 1900′, intercept 262° bearing via MNE to DMN 18.4 DME ❷, turn LEFT, 201° track to AMPEG, turn RIGHT, 209° track to MERSI.
MERSI 3S	**26L**	Climb on runway track to 1900′, intercept 262° bearing via MSE to DMS 18.3 DME ❸, turn LEFT, 201° track to AMPEG, turn RIGHT, 209° track to MERSI.

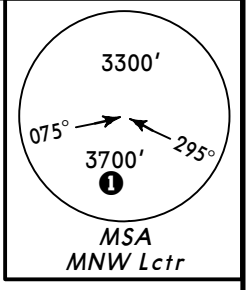
❷ After DMN 18.4 DME BRNAV equipment necessary.
❸ After DMS 18.3 DME BRNAV equipment necessary.

CHANGES: MSA.

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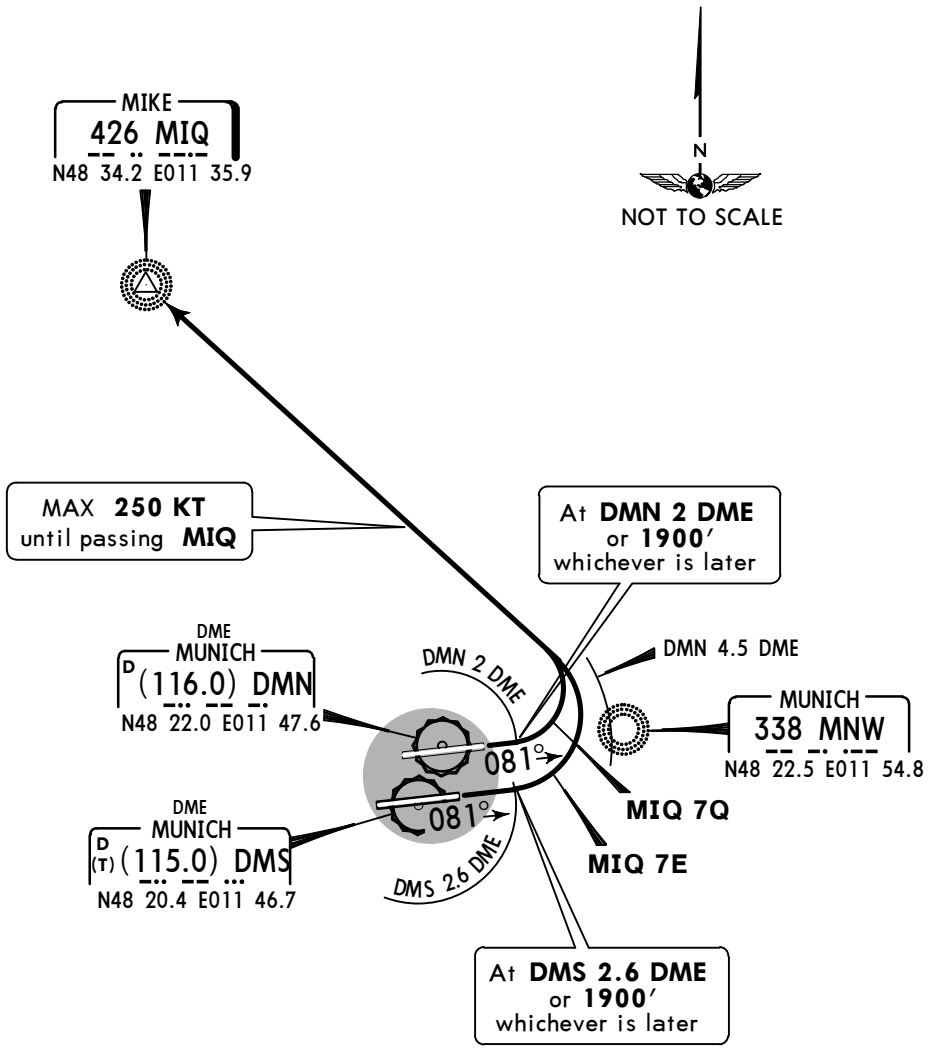
MUNICH Radar	*Apt Elev*	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

MIKE SEVEN ECHO (MIQ 7E)
MIKE SEVEN QUEBEC (MIQ 7Q)
RWYS 08R/L DEPARTURES
BY ATC
ONLY FOR NON-RNAV EQUIPPED ACFT



1 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

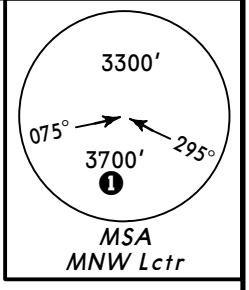
SID	RWY	ROUTING
MIQ 7E	**08R**	Climb on runway track to DMS 2.6 DME or 1900′, whichever is later, turn LEFT to MIQ.
MIQ 7Q	**08L**	Climb on runway track to DMN 2 DME or 1900′, whichever is later, turn LEFT within DMN 4.5 DME to MIQ.

CHANGES: MSA.

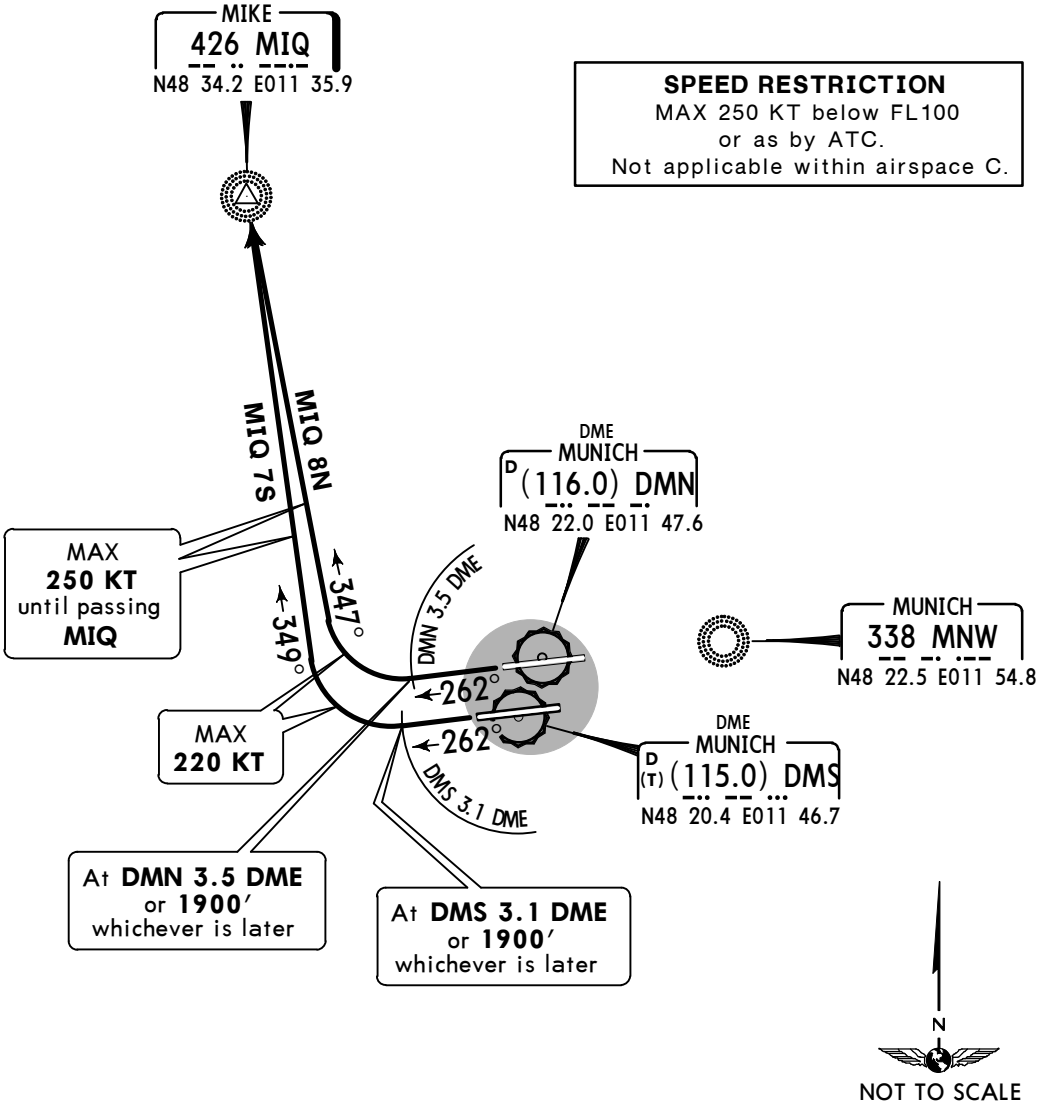
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MUNICH Radar	*Apt Elev*	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

MIKE EIGHT NOVEMBER (MIQ 8N)
MIKE SEVEN SIERRA (MIQ 7S)
RWYS 26R/L DEPARTURES
BY ATC
ONLY FOR NON-RNAV EQUIPPED ACFT



1 3300′ within 10 NM



Initial climb clearance **FL70**

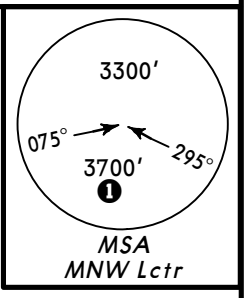
SID	RWY	ROUTING
MIQ 8N	**26R**	Climb on runway track to DMN 3.5 DME or 1900′, whichever is later, turn RIGHT, intercept 347° bearing to MIQ.
MIQ 7S	**26L**	Climb on runway track to DMS 3.1 DME or 1900′, whichever is later, turn RIGHT, intercept 349° bearing to MIQ.

CHANGES: MSA.

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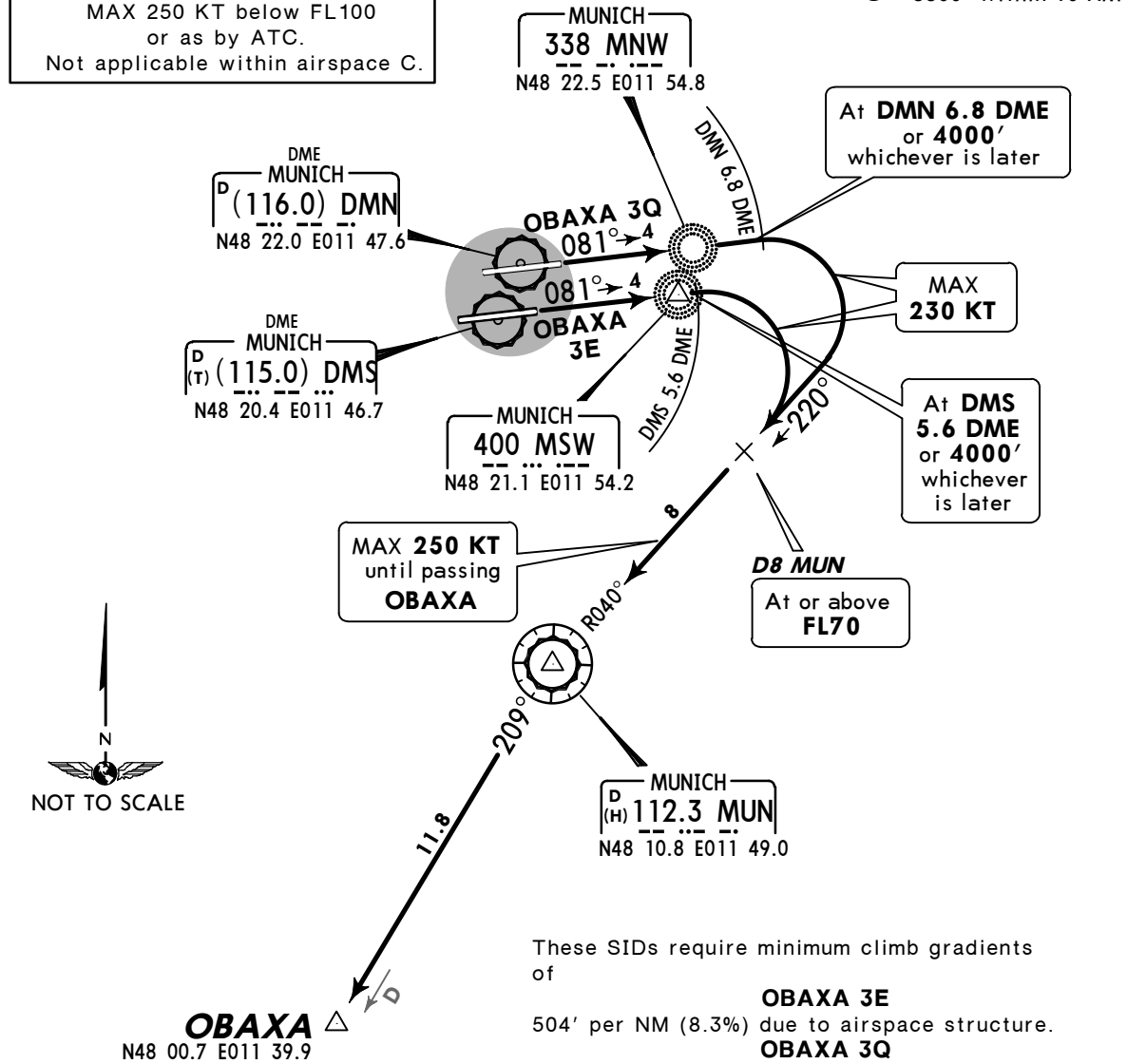
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

OBAXA THREE ECHO (OBAXA 3E)
OBAXA THREE QUEBEC (OBAXA 3Q)
RWYS 08R/L DEPARTURES
ONLY AVAILABLE FOR NON-JET ACFT



1 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

OBAXA 3E

504′ per NM (8.3%) due to airspace structure.

OBAXA 3Q

395′ per NM (6.5%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522
395′ per NM	494	658	987	1317	1646	1975

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
OBAXA 3E	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME or 4000′, whichever is later, turn RIGHT, intercept MUN R-040 inbound to MUN, turn LEFT, MUN R-209 to OBAXA.
OBAXA 3Q	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME or 4000′, whichever is later, turn RIGHT, intercept MUN R-040 inbound to MUN, turn LEFT, MUN R-209 to OBAXA.

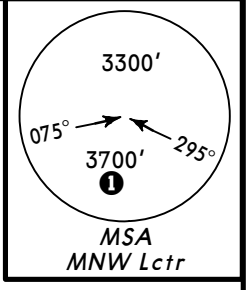
CHANGES: MSA.

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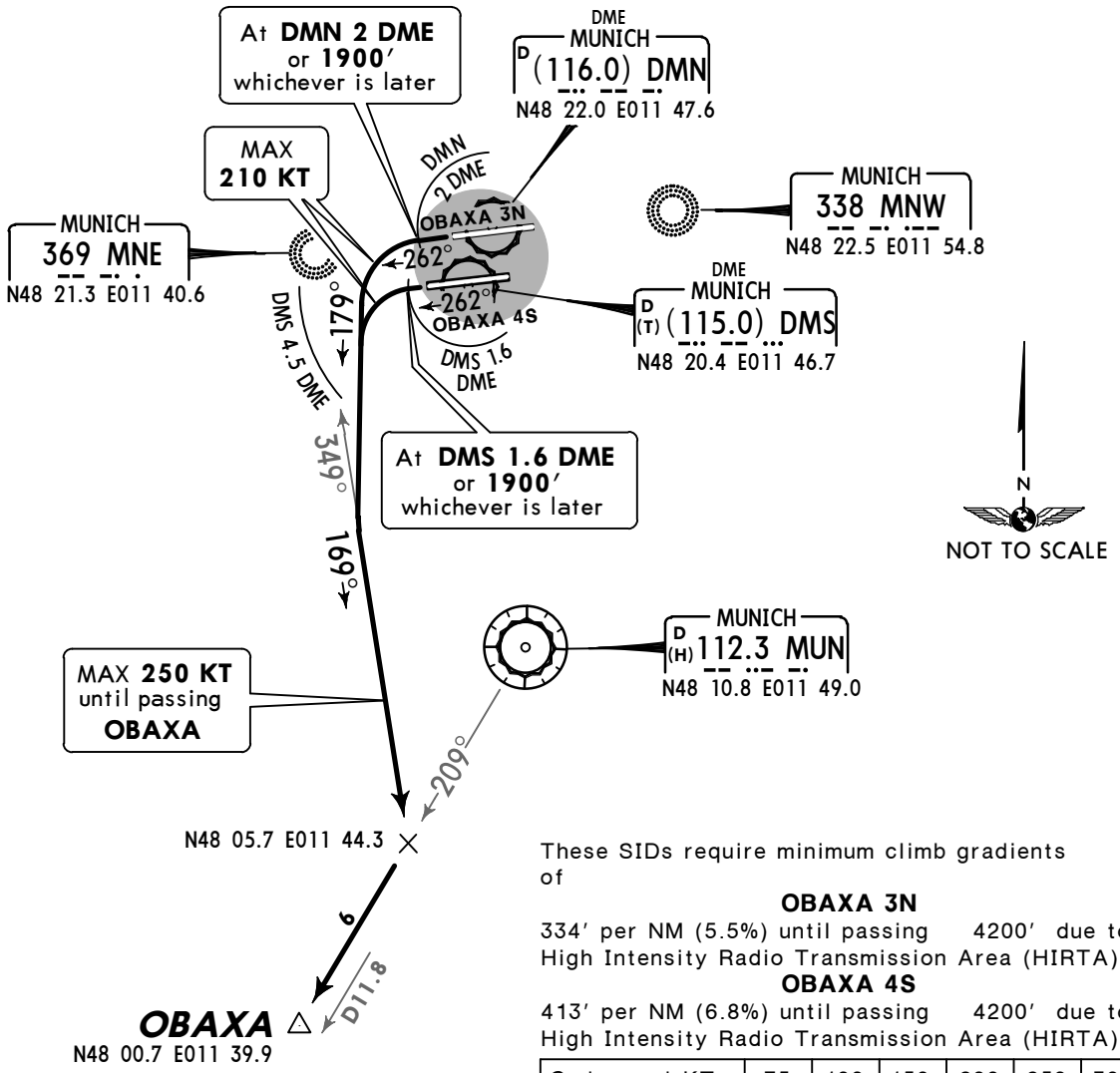
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

OBAXA THREE NOVEMBER (OBAXA 3N)
OBAXA FOUR SIERRA (OBAXA 4S)
RWYS 26R/L DEPARTURES
ONLY AVAILABLE FOR NON-JET ACFT

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



1 3300′ within 10 NM



These SIDs require minimum climb gradients of

OBAXA 3N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

OBAXA 4S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

Initial climb clearance **FL70**

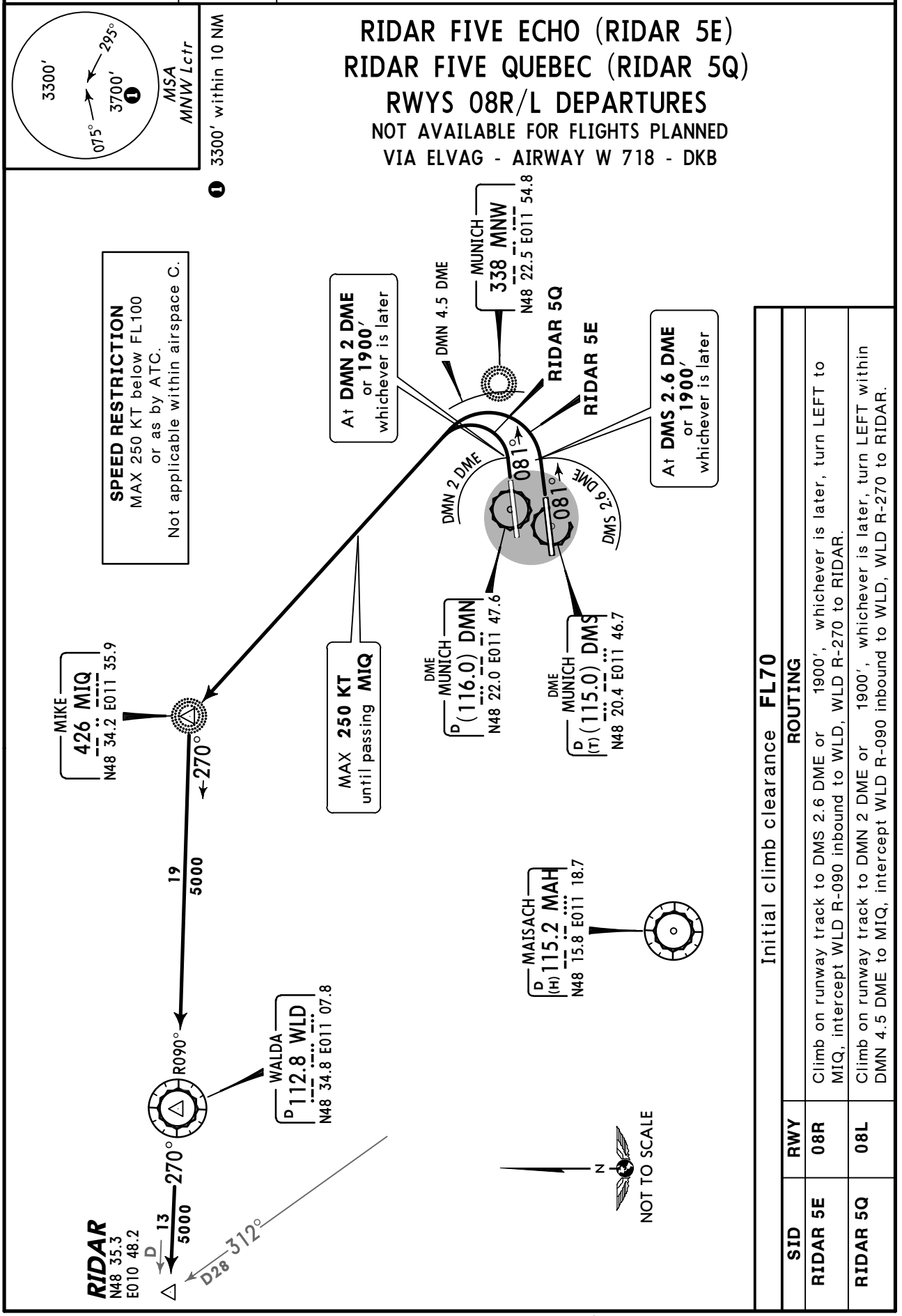
SID	RWY	ROUTING
OBAXA 3N	**26R**	Climb on runway track to DMN 2 DME or 1900′, whichever is later, turn LEFT, 179° track, intercept 169° bearing from MNE, intercept MUN R-209 to OBAXA.
OBAXA 4S	**26L**	Climb on runway track to DMS 1.6 DME or 1900′, whichever is later, turn LEFT within DMS 4.5 DME, 179° track, intercept 169° bearing from MNE, intercept MUN R-209 to OBAXA.

CHANGES: MSA.

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MUNICH Radar	Apt Elev	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

RIDAR FIVE ECHO (RIDAR 5E)
RIDAR FIVE QUEBEC (RIDAR 5Q)
RWYS 08R/L DEPARTURES
NOT AVAILABLE FOR FLIGHTS PLANNED
VIA ELVAG - AIRWAY W 718 - DKB



Initial climb clearance **FL70**

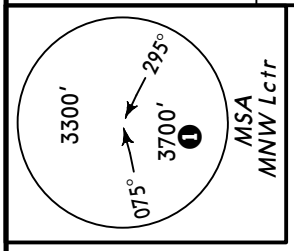
SID	RWY	ROUTING
RIDAR 5E	08R	Climb on runway track to DMS 2.6 DME or 1900′, whichever is later, turn LEFT to MIQ, intercept WLD R-090 inbound to WLD, WLD R-270 to RIDAR.
RIDAR 5Q	08L	Climb on runway track to DMN 2 DME or 1900′, whichever is later, turn LEFT within DMN 4.5 DME to MIQ, intercept WLD R-090 inbound to WLD, WLD R-270 to RIDAR.

CHANGES: MSA.

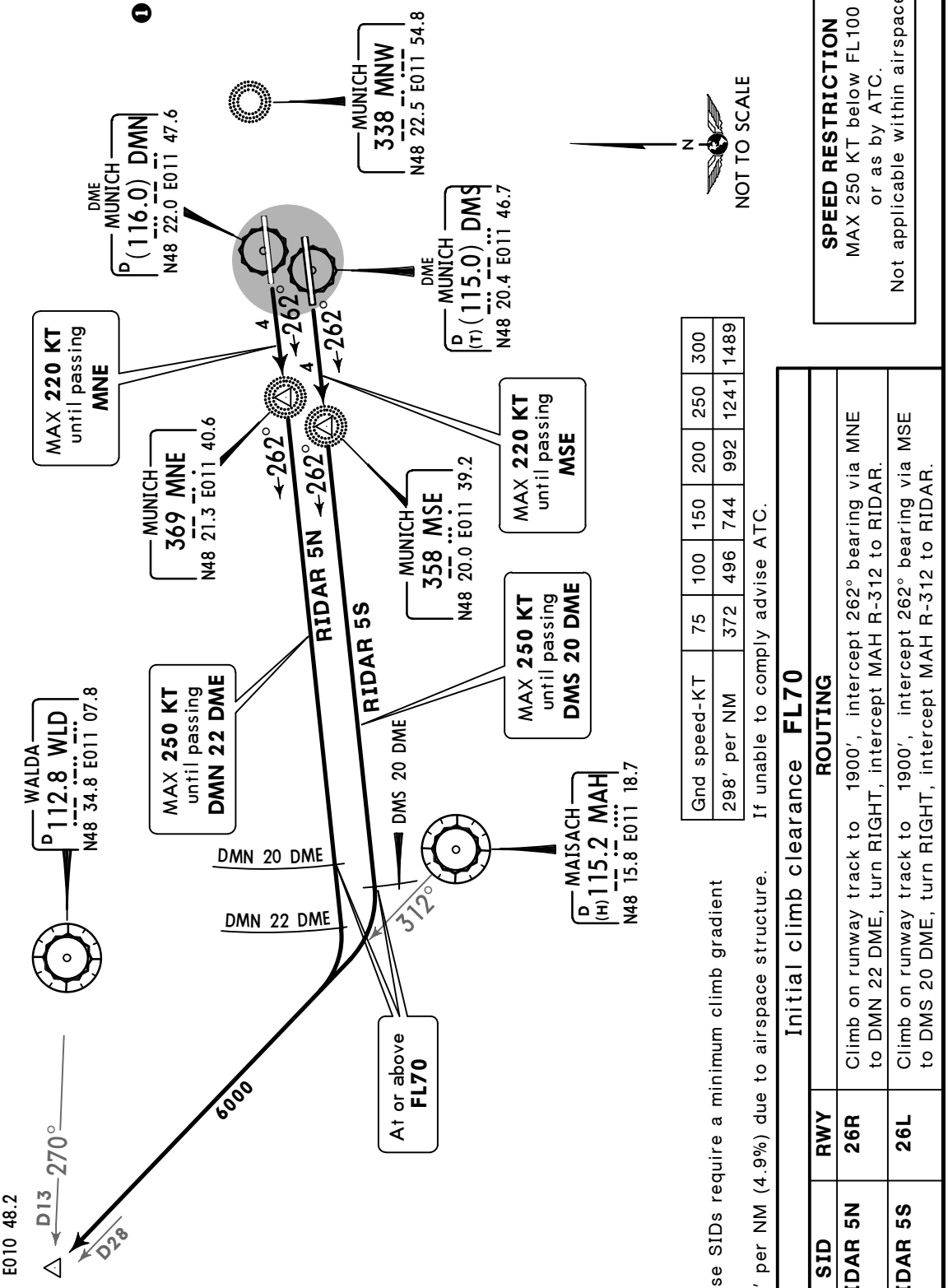
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MUNICH Radar 123.9	*Apt Elev* 1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

RIDAR FIVE NOVEMBER (RIDAR 5N)
RIDAR FIVE SIERRA (RIDAR 5S)
RWYS 26R/L DEPARTURES
NOT AVAILABLE FOR FLIGHTS PLANNED
VIA ELVAG - AIRWAY W 718 - DKB



❶ 3300′ within 10 NM



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Gnd speed-KT	75	100	150	200	250	300
298′ per NM	372	496	744	992	1241	1489

If unable to comply advise ATC.

These SIDs require a minimum climb gradient of 298′ per NM (4.9%) due to airspace structure.

Initial climb clearance FL70

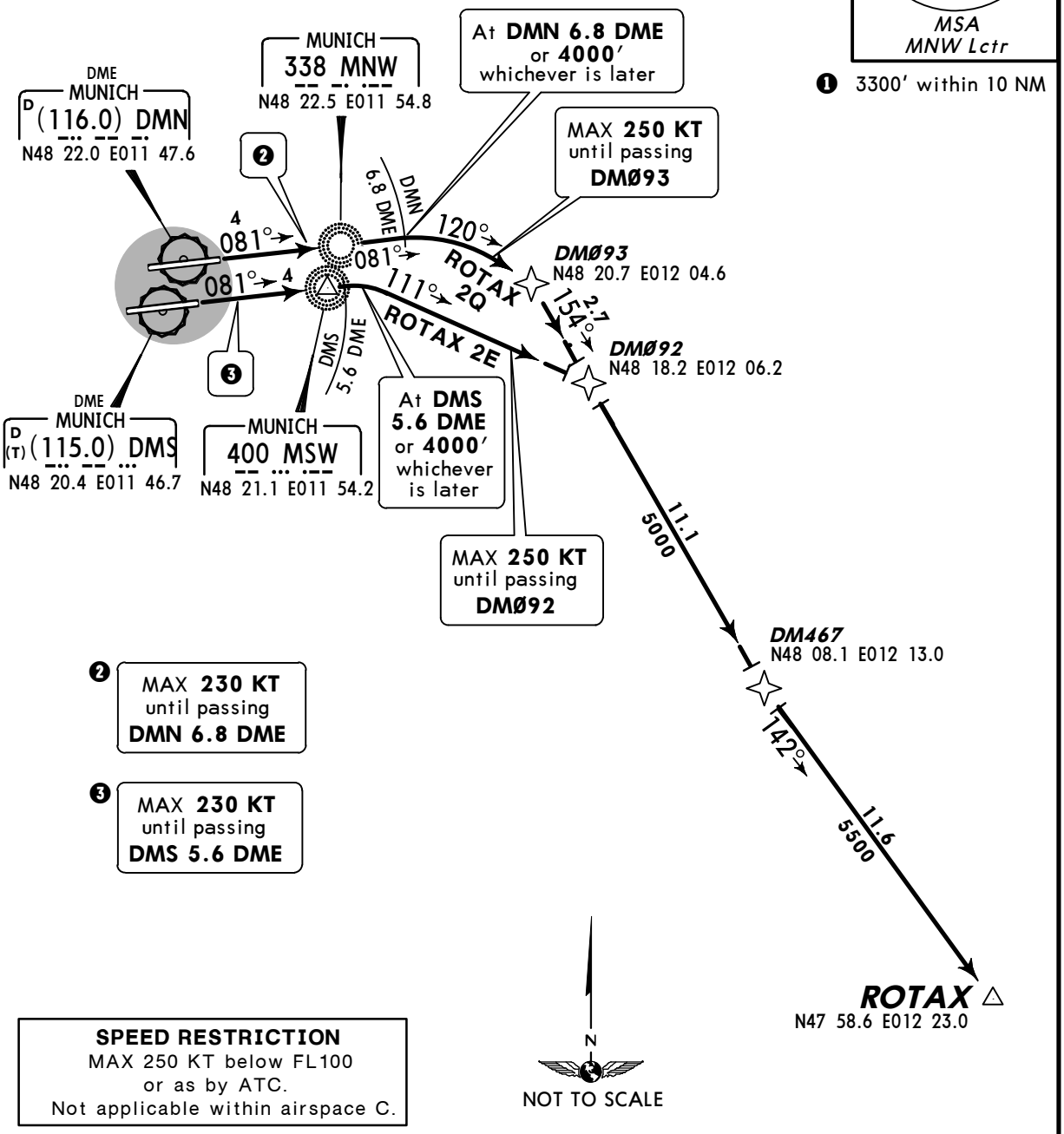
SID	RWY	ROUTING
RIDAR 5N	26R	Climb on runway track to 1900′, intercept 262° bearing via MNE to DMN 22 DME, turn RIGHT, intercept MAH R-312 to RIDAR.
RIDAR 5S	26L	Climb on runway track to 1900′, intercept 262° bearing via MSE to DMS 20 DME, turn RIGHT, intercept MAH R-312 to RIDAR.

CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ROTAX TWO ECHO (ROTAX 2E)
ROTAX TWO QUEBEC (ROTAX 2Q)
RWYS 08R/L DEPARTURES



Initial climb clearance **FL70**

SID	RWY	ROUTING	
ROTAX 2E	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME 4000′, whichever is later, turn RIGHT, 111° track to DM092, turn RIGHT, 154° track to DM467, turn LEFT, 142° track to ROTAX.	❹ or
ROTAX 2Q	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME 4000′, whichever is later, turn RIGHT, 120° track to DM093, turn RIGHT, 154° track to DM467, turn LEFT, 142° track to ROTAX.	❺ or

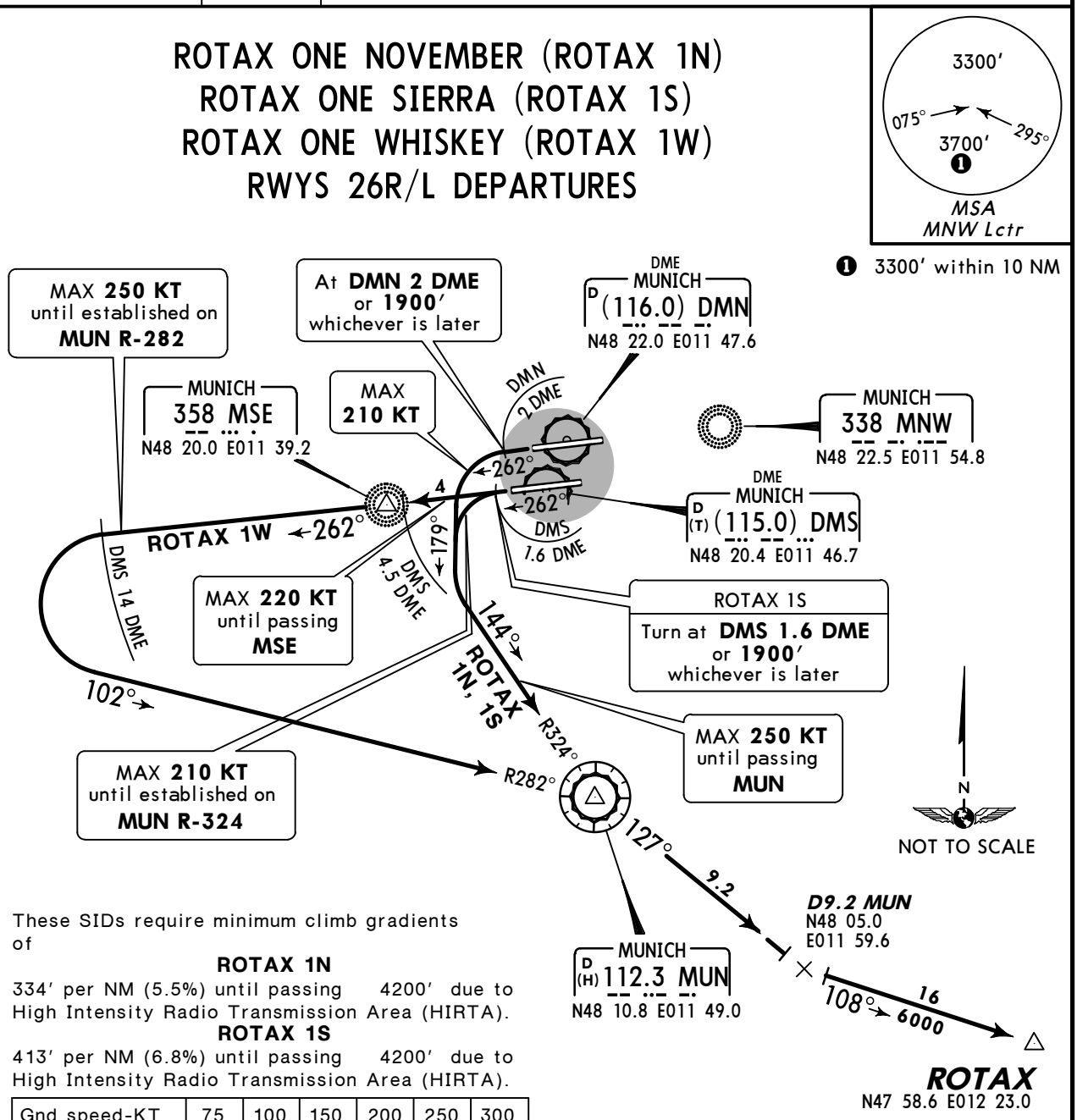
❹ After DMS 5.6 DME BRNAV equipment necessary.
❺ After DMN 6.8 DME BRNAV equipment necessary.

CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ROTAX ONE NOVEMBER (ROTAX 1N)
ROTAX ONE SIERRA (ROTAX 1S)
ROTAX ONE WHISKEY (ROTAX 1W)
RWYS 26R/L DEPARTURES



These SIDs require minimum climb gradients of

ROTAX 1N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

ROTAX 1S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
ROTAX 1N	**26R**	Climb on runway track to DMN 2 DME or 1900′, whichever is later, turn LEFT, 179° track, intercept MUN R-324 inbound to MUN, turn LEFT, MUN R-127 to D9.2 MUN ❸, turn LEFT, 108° track to ROTAX.
ROTAX 1S ❷	**26L**	Climb on runway track to DMS 1.6 DME or 1900′, whichever is later, turn LEFT within DMS 4.5 DME, 179° track, intercept MUN R-324 inbound to MUN, turn LEFT, MUN R-127 to D9.2 MUN ❸, turn LEFT, 108° track to ROTAX.
ROTAX 1W		Climb on runway track to 1900′, intercept 262° bearing via MSE to DMS 14 DME, turn LEFT, intercept MUN R-282 inbound to MUN, turn RIGHT, MUN R-127 to D9.2 MUN ❸, turn LEFT, 108° track to ROTAX.

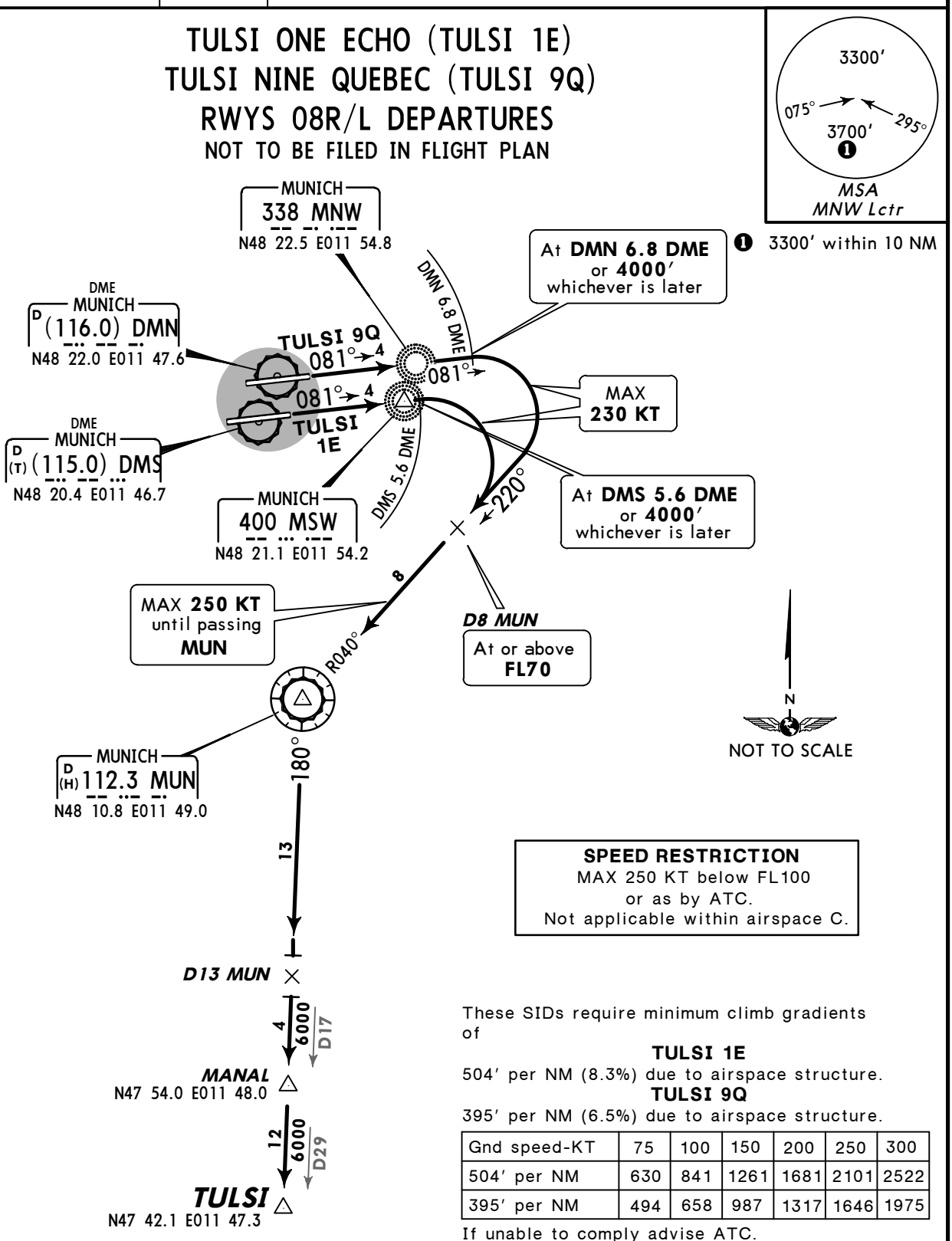
❷ If unable to comply with speed and turn restrictions request SID ROTAX 1W.
❸ After D9.2 MUN BRNAV equipment necessary.

CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

TULSI ONE ECHO (TULSI 1E)
TULSI NINE QUEBEC (TULSI 9Q)
RWYS 08R/L DEPARTURES
NOT TO BE FILED IN FLIGHT PLAN



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of

TULSI 1E

504′ per NM (8.3%) due to airspace structure.

TULSI 9Q

395′ per NM (6.5%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522
395′ per NM	494	658	987	1317	1646	1975

If unable to comply advise ATC.

Initial climb clearance **FL70**

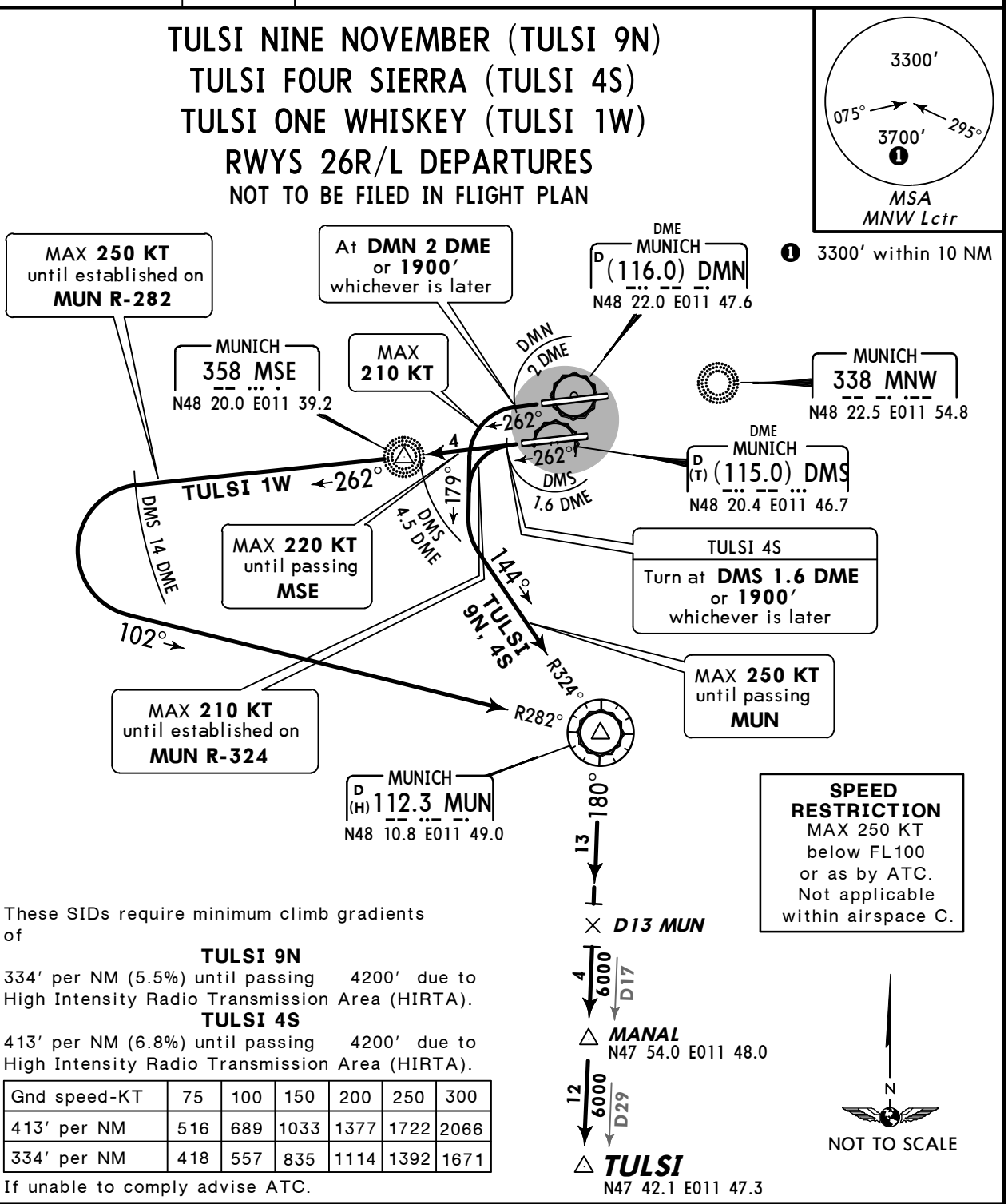
SID	RWY	ROUTING
TULSI 1E	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME or 4000′, whichever is later, turn RIGHT, intercept MUN R-040 inbound to MUN, turn LEFT, MUN R-180 via MANAL to TULSI.
TULSI 9Q	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME or 4000′, whichever is later, turn RIGHT, intercept MUN R-040 inbound to MUN, turn LEFT, MUN R-180 via MANAL to TULSI.

CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

TULSI NINE NOVEMBER (TULSI 9N)
TULSI FOUR SIERRA (TULSI 4S)
TULSI ONE WHISKEY (TULSI 1W)
RWYS 26R/L DEPARTURES
NOT TO BE FILED IN FLIGHT PLAN



These SIDs require minimum climb gradients of

TULSI 9N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

TULSI 4S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
TULSI 9N	**26R**	Climb on runway track to DMN 2 DME or 1900′, whichever is later, turn LEFT, 179° track, intercept MUN R-324 inbound to MUN, turn RIGHT, MUN R-180 via MANAL to TULSI.
TULSI 4S ❷	**26L**	Climb on runway track to DMS 1.6 DME or 1900′, whichever is later, turn LEFT within DMS 4.5 DME, 179° track, intercept MUN R-324 inbound to MUN, turn RIGHT, MUN R-180 via MANAL to TULSI.
TULSI 1W		Climb on runway track to 1900′, intercept 262° bearing via MSE to DMS 14 DME, turn LEFT, intercept MUN R-282 inbound to MUN, turn RIGHT, MUN R-180 via MANAL to TULSI.

❷ If unable to comply with speed and turn restrictions request SID TULSI 1W.

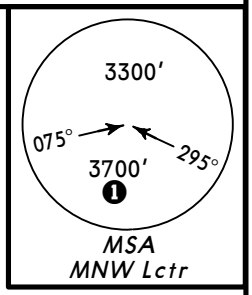
CHANGES: MSA.

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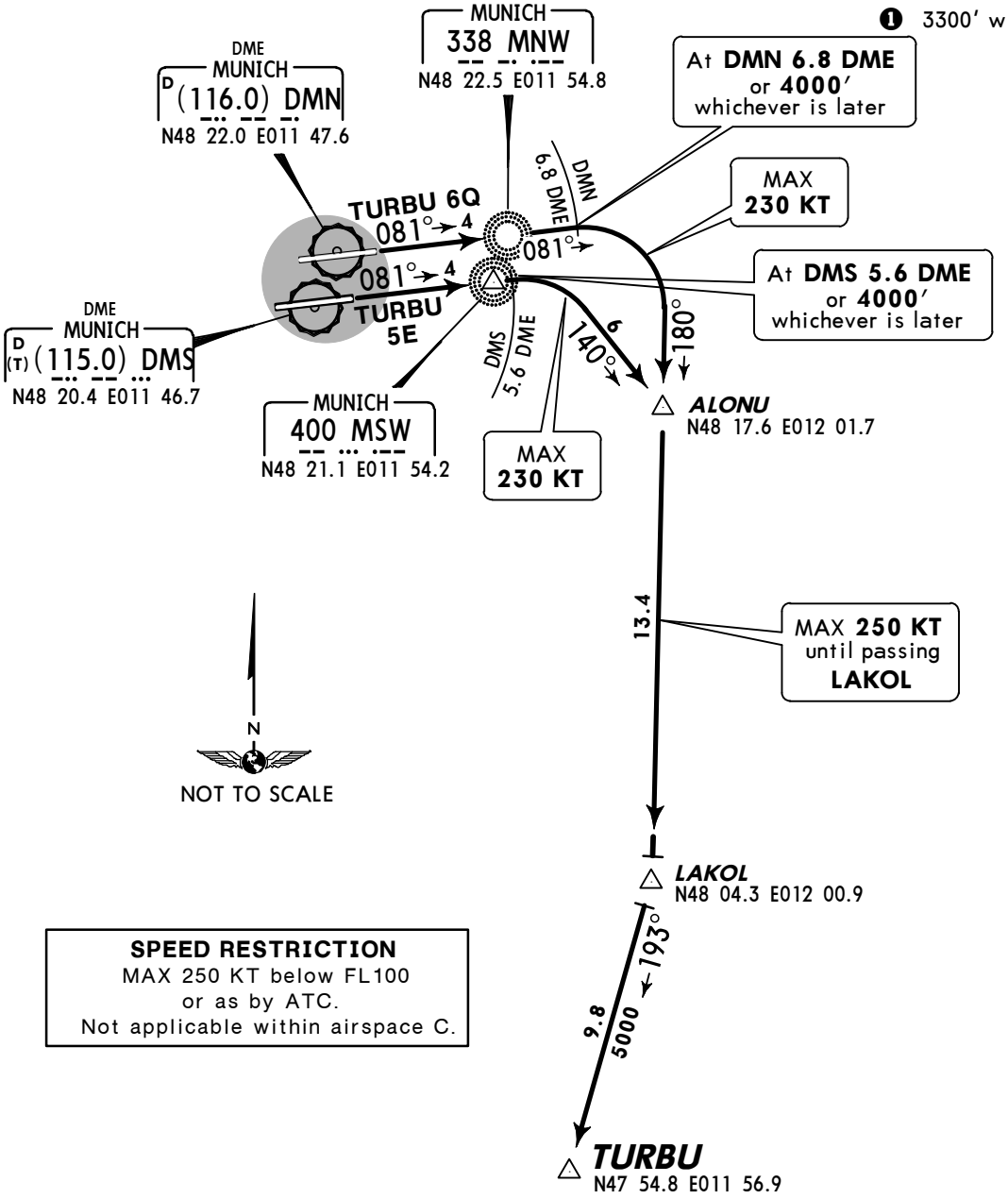
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

TURBU FIVE ECHO (TURBU 5E)
TURBU SIX QUEBEC (TURBU 6Q)
RWYS 08R/L DEPARTURES

ONLY AVAILABLE FOR JET ACFT
NON-JET ACFT SHALL FILE OBAXA OR ROTAX SIDS INSTEAD



❶ 3300′ within 10 NM



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING	
TURBU 5E	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME 4000′, whichever is later, turn RIGHT, 140° track to ALONU, turn RIGHT, 180° track to LAKOL, turn RIGHT, 193° track to TURBU.	❷ or
TURBU 6Q	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME 4000′, whichever is later, turn RIGHT, 180° track to LAKOL, turn RIGHT, 193° track to TURBU.	❸ or

❷ After DMS 5.6 DME BRNAV equipment necessary.
❸ After DMN 6.8 DME BRNAV equipment necessary.

CHANGES: MSA.

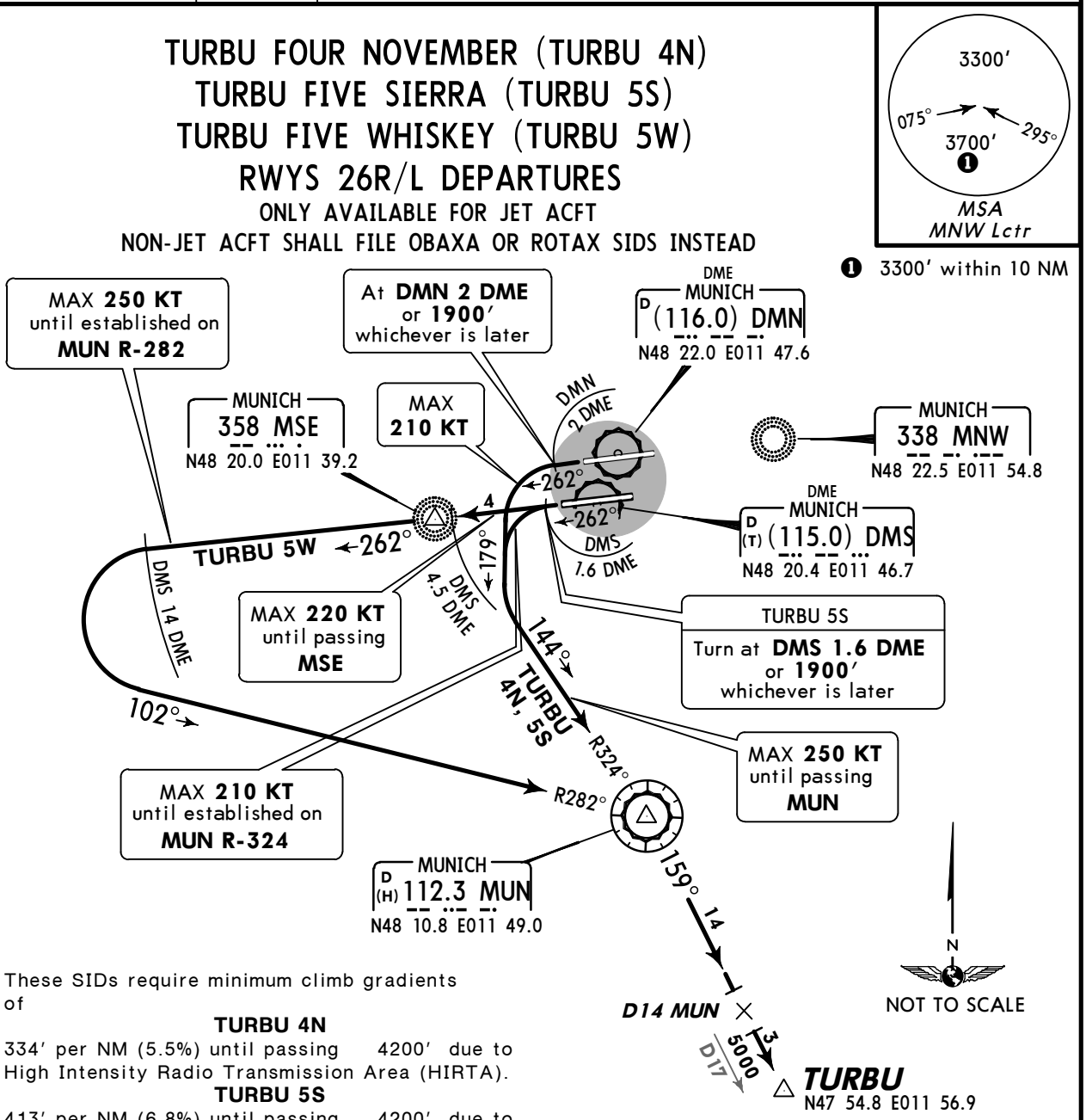
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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

TURBU FOUR NOVEMBER (TURBU 4N)
TURBU FIVE SIERRA (TURBU 5S)
TURBU FIVE WHISKEY (TURBU 5W)
RWYS 26R/L DEPARTURES

ONLY AVAILABLE FOR JET ACFT

NON-JET ACFT SHALL FILE OBAXA OR ROTAX SIDS INSTEAD



These SIDs require minimum climb gradients of

TURBU 4N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

TURBU 5S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
TURBU 4N	**26R**	Climb on runway track to DMN 2 DME or 1900′, whichever is later, turn LEFT, 179° track, intercept MUN R-324 inbound to MUN, turn RIGHT, MUN R-159 to TURBU.
TURBU 5S ❷	**26L**	Climb on runway track to DMS 1.6 DME or 1900′, whichever is later, turn LEFT within DMS 4.5 DME, 179° track, intercept MUN R-324 inbound to MUN, turn RIGHT, MUN R-159 to TURBU.
TURBU 5W		Climb on runway track to 1900′, intercept 262° bearing via MSE to DMS 14 DME, turn LEFT, intercept MUN R-282 inbound to MUN, turn RIGHT, MUN R-159 to TURBU.

❷ If unable to comply with speed and turn restrictions request SID TURBU 5W.

CHANGES: MSA.

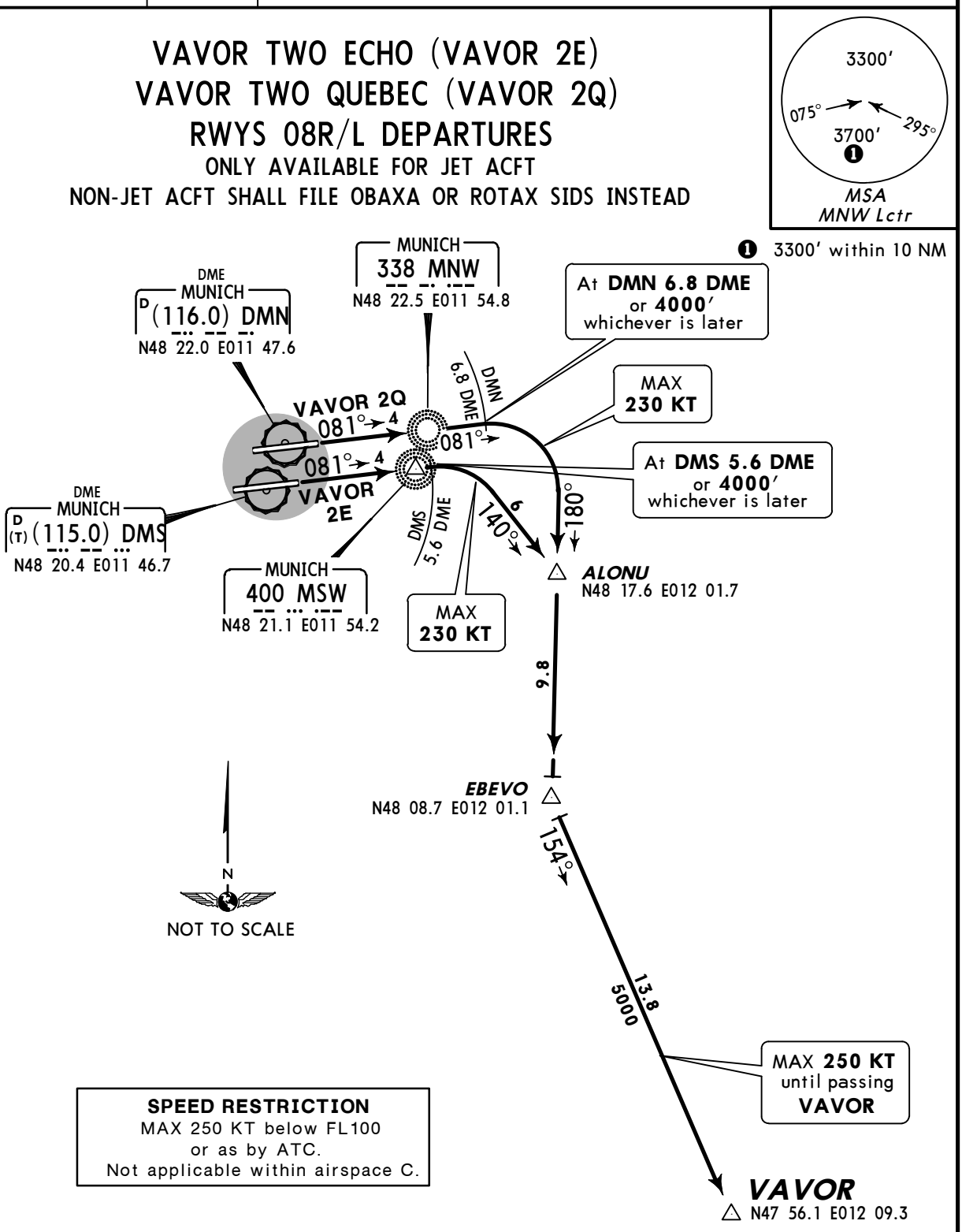
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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

VAVOR TWO ECHO (VAVOR 2E)
VAVOR TWO QUEBEC (VAVOR 2Q)
RWYS 08R/L DEPARTURES

ONLY AVAILABLE FOR JET ACFT

NON-JET ACFT SHALL FILE OBAXA OR ROTAX SIDS INSTEAD



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
VAVOR 2E	**08R**	Climb on runway track to 1900′, then via MSW to DMS 5.6 DME 4000′, whichever is later, turn RIGHT, 140° track to ALONU, turn RIGHT, 180° track to EBEVO, turn LEFT, 154° track to VAVOR. ❷ or
VAVOR 2Q	**08L**	Climb on runway track to 1900′, then via MNW to DMN 6.8 DME 4000′, whichever is later, turn RIGHT, 180° track to EBEVO, turn LEFT, 154° track to VAVOR. ❸ or

BRNAV equipment necessary after: ❷ DMS 5.6 DME/ ❸ DMN 6.8 DME.

CHANGES: MSA.

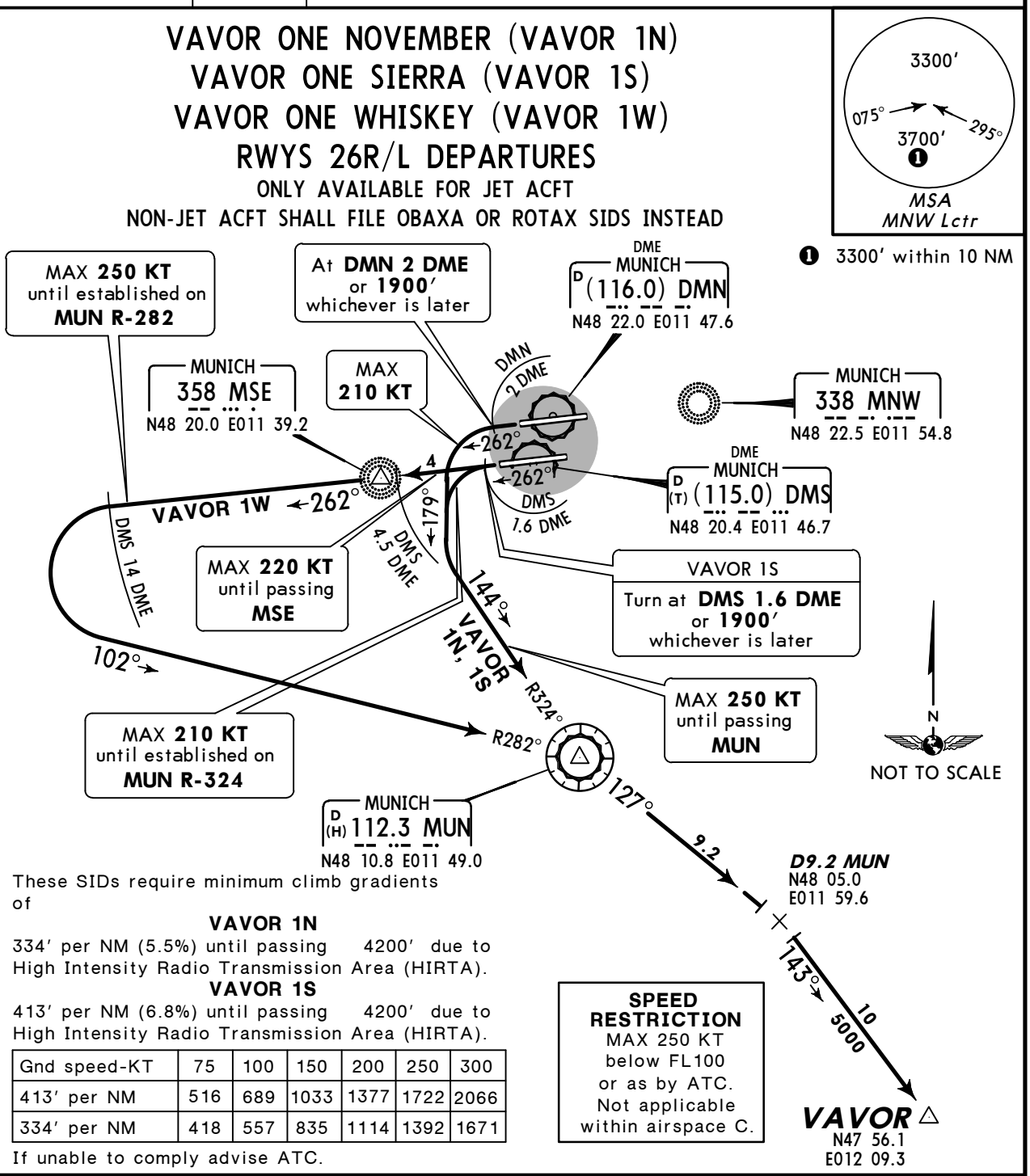
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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

VAVOR ONE NOVEMBER (VAVOR 1N)
VAVOR ONE SIERRA (VAVOR 1S)
VAVOR ONE WHISKEY (VAVOR 1W)
RWYS 26R/L DEPARTURES

ONLY AVAILABLE FOR JET ACFT

NON-JET ACFT SHALL FILE OBAXA OR ROTAX SIDS INSTEAD



These SIDs require minimum climb gradients of

VAVOR 1N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

VAVOR 1S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
VAVOR 1N	**26R**	Climb on runway track to DMN 2 DME or 1900′, whichever is later, turn LEFT, 179° track, intercept MUN R-324 inbound to MUN, turn LEFT, MUN R-127 to D9.2 MUN ❸, turn RIGHT, 143° track to VAVOR.
VAVOR 1S ❷	**26L**	Climb on runway track to DMS 1.6 DME or 1900′, whichever is later, turn LEFT within DMS 4.5 DME, 179° track, intercept MUN R-324 inbound to MUN, turn LEFT, MUN R-127 to D9.2 MUN ❸, turn RIGHT, 143° track to VAVOR.
VAVOR 1W		Climb on runway track to 1900′, intercept 262° bearing via MSE to DMS 14 DME, turn LEFT, intercept MUN R-282 inbound to MUN, turn RIGHT, MUN R-127 to D9.2 MUN ❸, turn RIGHT, 143° track to VAVOR.

❷ If unable to comply with speed and turn restrictions request SID VAVOR 1W.
❸ After passing D9.2 MUN BRNAV equipment necessary.

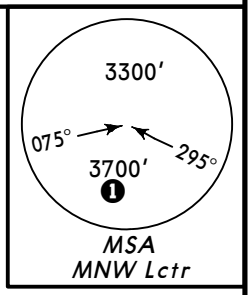
CHANGES: MSA.

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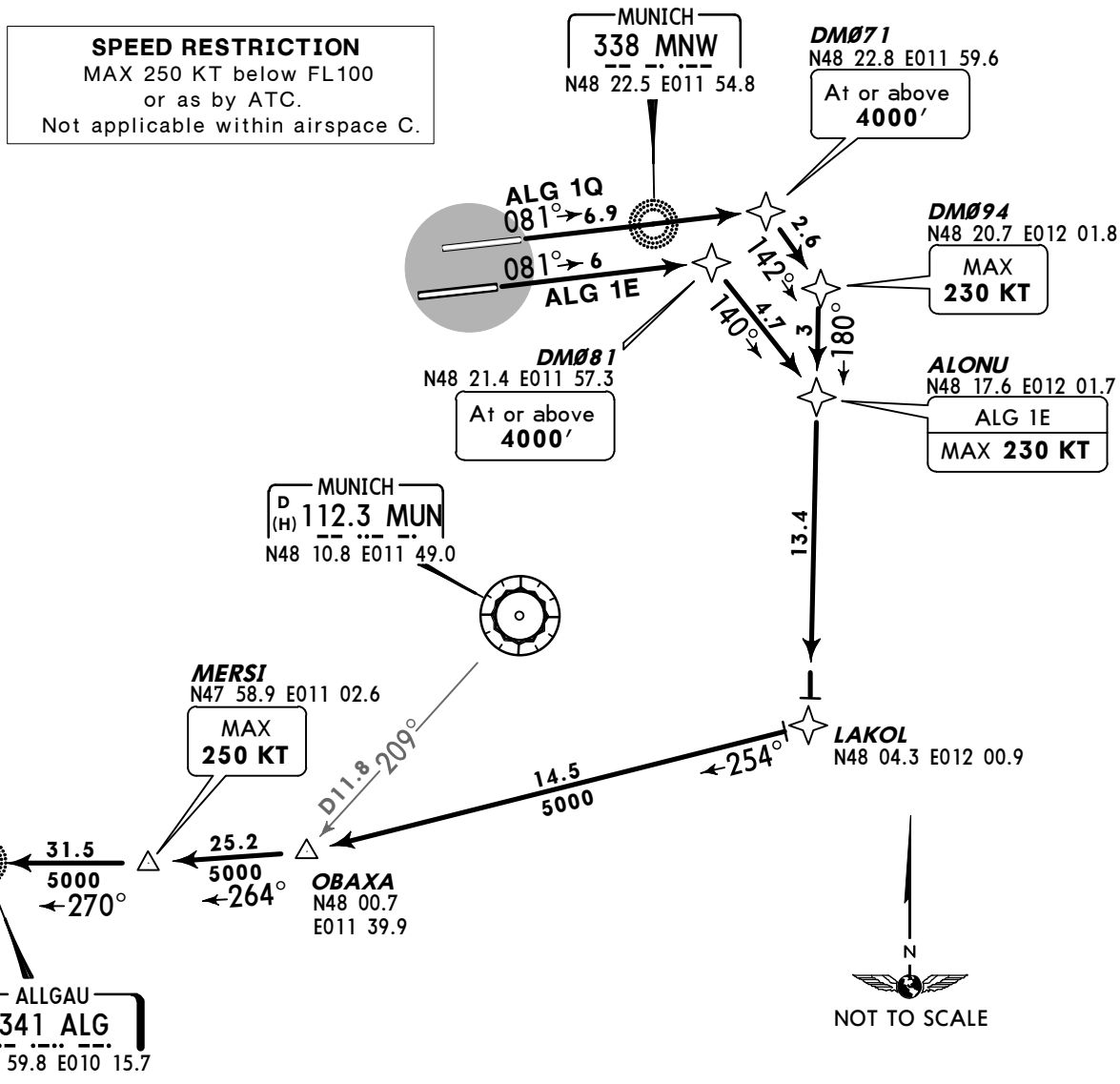
MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.
127.95	1487′	

ALGOI ONE ECHO (ALG 1E)
ALGOI ONE QUEBEC (ALG 1Q)
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3H)

JET ACFT ONLY
AVAILABLE FOR FLIGHTS DESTINATION EDJA AT OR BELOW FL90
MANDATORY FOR TRAFFIC PROCEEDING VIA MILKA
AT OR ABOVE REQUESTED FL245 DURING FOLLOWING TIMES
DAILY 2330-0800LT
FRI 1700LT TO MON 0800LT
HOL
OUTSIDE THESE TIMES FILE SID MERSI - AIRWAY Y 110



1 3300′ within 10 NM



Initial climb clearance **FL70**

SID	RWY	ROUTING
ALG 1E	**08R**	(1900′+) - DM081 (4000′+) - ALONU (K230-) - LAKOL - OBAXA - MERSI (K250-) - ALG.
ALG 1Q	**08L**	(1900′+) - DM071 (4000′+) - DM094 (K230-) - LAKOL - OBAXA - MERSI (K250-) - ALG.

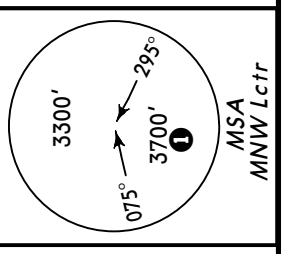
CHANGES: MSA.

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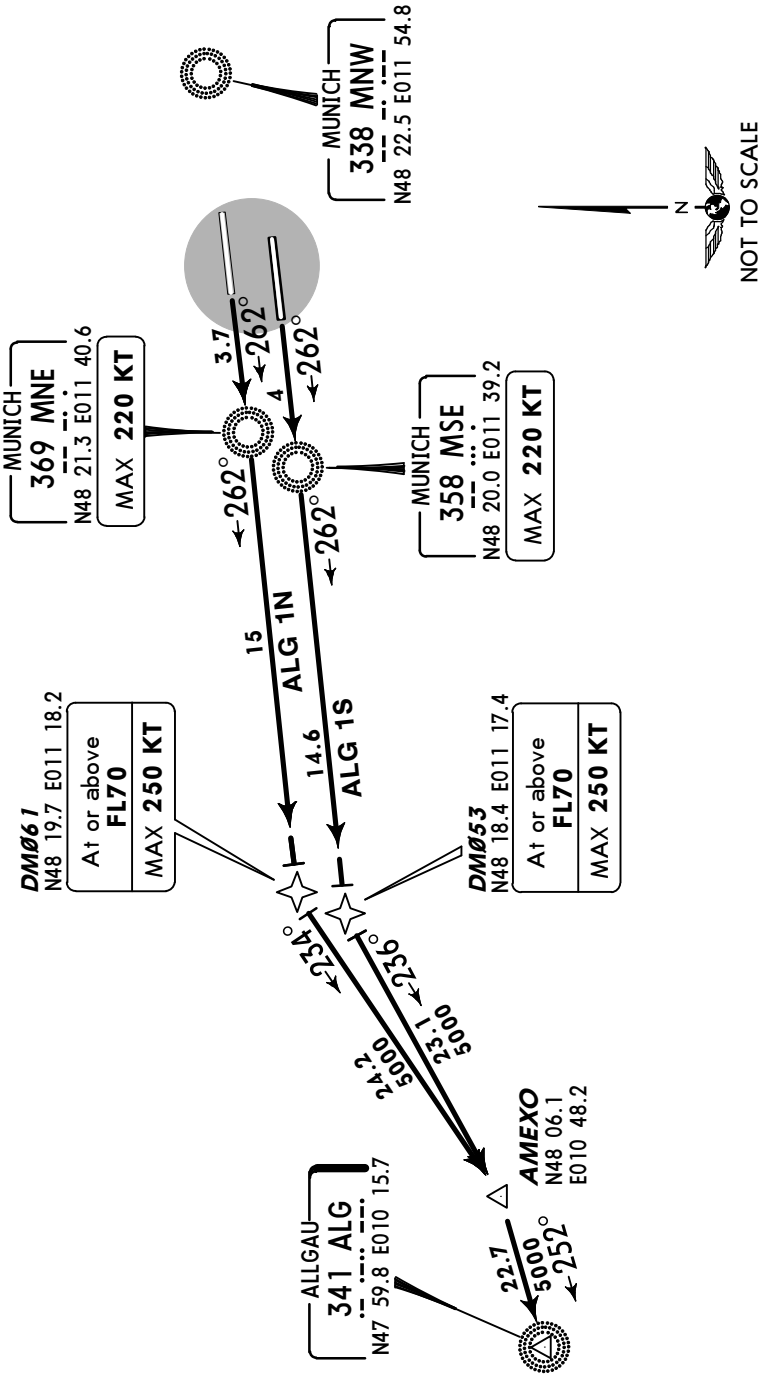
MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.
127.95	1487′	

ALGOI ONE NOVEMBER (ALG 1N)
ALGOI ONE SIERRA (ALG 1S)
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3J)

JET ACFT ONLY
AVAILABLE FOR FLIGHTS DESTINATION EDJA AT OR BELOW FL90
MANDATORY FOR TRAFFIC PROCEEDING VIA MILKA
AT OR ABOVE REQUESTED FL245 DURING FOLLOWING TIMES
DAILY 2330-0800LT
FRI 1700LT TO MON 0800LT
HOL
OUTSIDE THESE TIMES FILE SID MERSI - AIRWAY Y 110



❶ 3300′ within 10 NM



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require a minimum climb gradient of 316′ per NM (5.2%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise ATC.

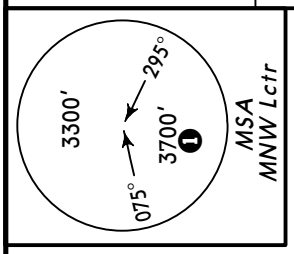
Initial climb clearance **FL70**

SID	RWY	ROUTING
ALG 1N	26R	(1900′+) - MNE (K220-) - DM061 (FL70+; K250-) - AMEXO - ALG.
ALG 1S	26L	(1900′+) - MSE (K220-) - DM053 (FL70+; K250-) - AMEXO - ALG.

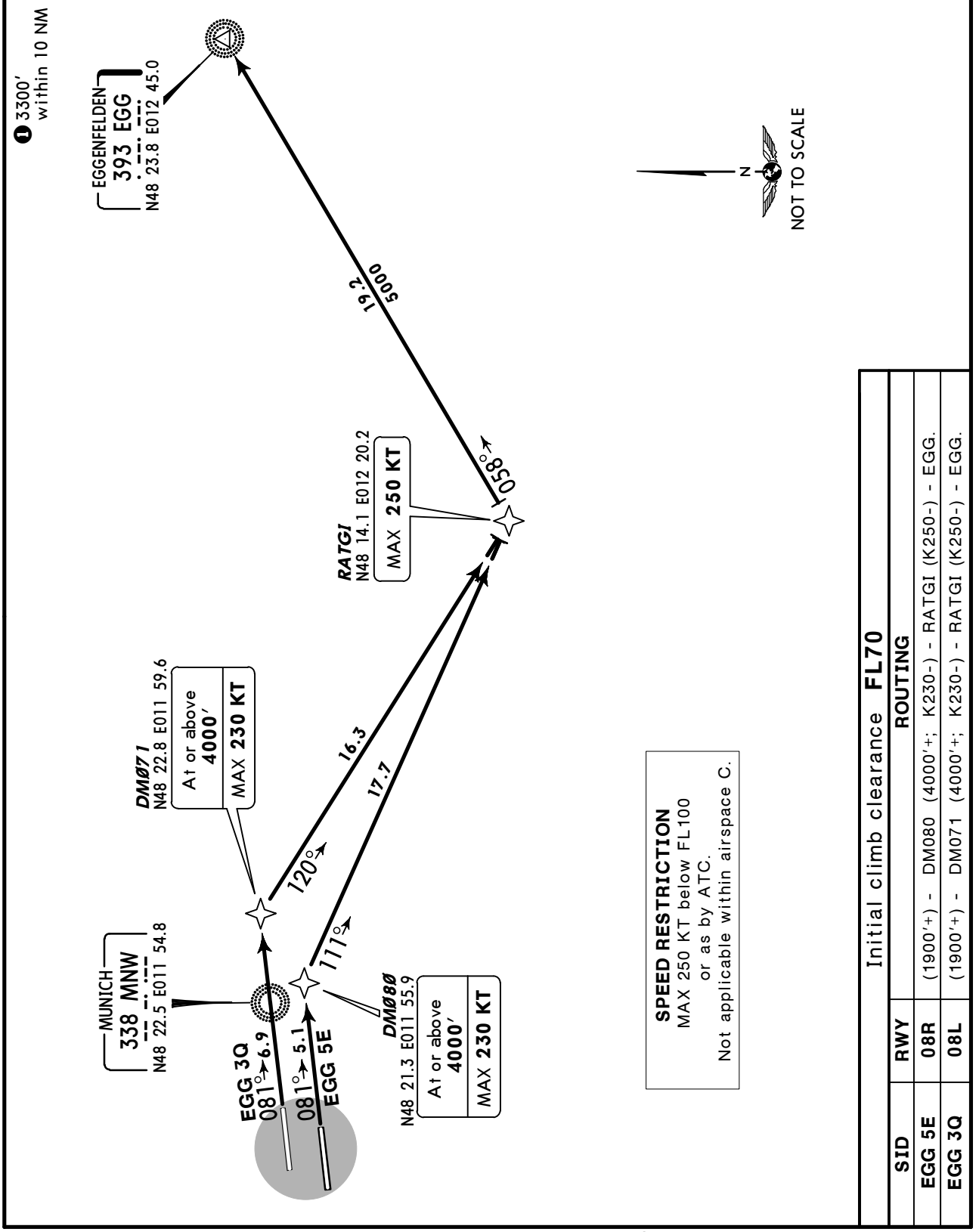
CHANGES: MSA.

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MUNICH Radar	Apt Elev	Trans level: By ATC Trans alt: 5000′
127.95	1487′	1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.



EGGENFELDEN FIVE ECHO (EGG 5E)
EGGENFELDEN THREE QUEBEC (EGG 3Q)
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3K)
NOT AVAILABLE FOR FLIGHTS VIA AIRWAYS (U)L 605, Q 104 & Q 118



Initial climb clearance **FL70**

SID	RWY	ROUTING
EGG 5E	08R	(1900′+) - DM080 (4000′+; K230-) - RATGI (K250-) - EGG.
EGG 3Q	08L	(1900′+) - DM071 (4000′+; K230-) - RATGI (K250-) - EGG.

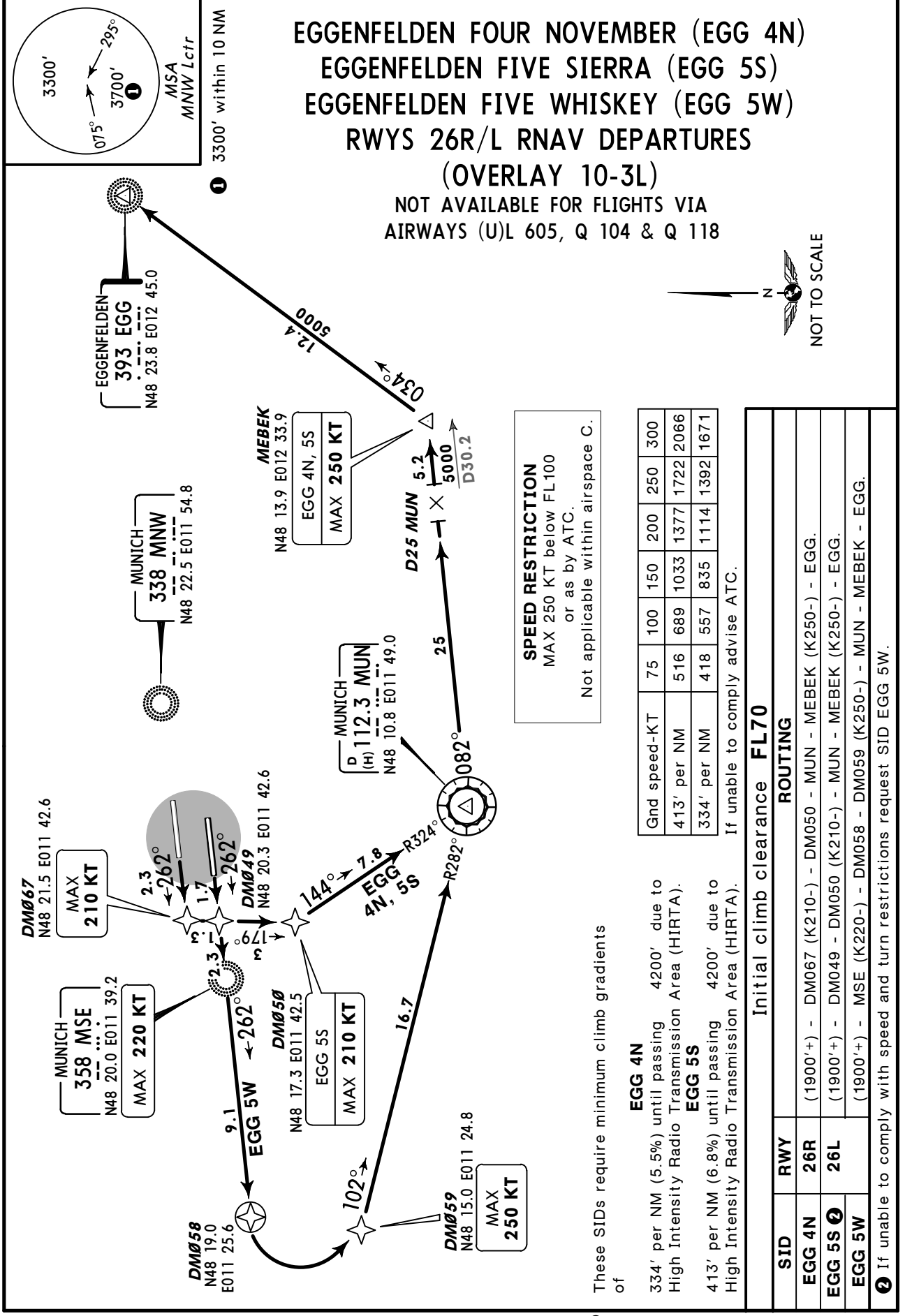
CHANGES: MSA.

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MUNICH Radar	Apt Elev	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

EGGENFELDEN FOUR NOVEMBER (EGG 4N)
EGGENFELDEN FIVE SIERRA (EGG 5S)
EGGENFELDEN FIVE WHISKEY (EGG 5W)
RWYS 26R/L RNAV DEPARTURES
(OVERLAY 10-3L)

NOT AVAILABLE FOR FLIGHTS VIA
AIRWAYS (U)L 605, Q 104 & Q 118



Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

These SIDs require minimum climb gradients of

EGG 4N
334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

EGG 5S
413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Initial climb clearance **FL70**

SID	RWY	ROUTING
EGG 4N	26R	(1900′+) - DM067 (K210-) - DM050 - MUN - MEBEK (K250-) - EGG.
EGG 5S ❷	26L	(1900′+) - DM049 - DM050 (K210-) - MUN - MEBEK (K250-) - EGG.
EGG 5W		(1900′+) - MSE (K220-) - DM058 - DM059 (K250-) - MUN - MEBEK - EGG.

❷ If unable to comply with speed and turn restrictions request SID EGG 5W.

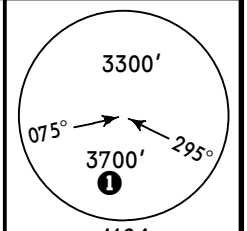
CHANGES: MSA.

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MUNICH Radar 123.9	*Apt Elev* 1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

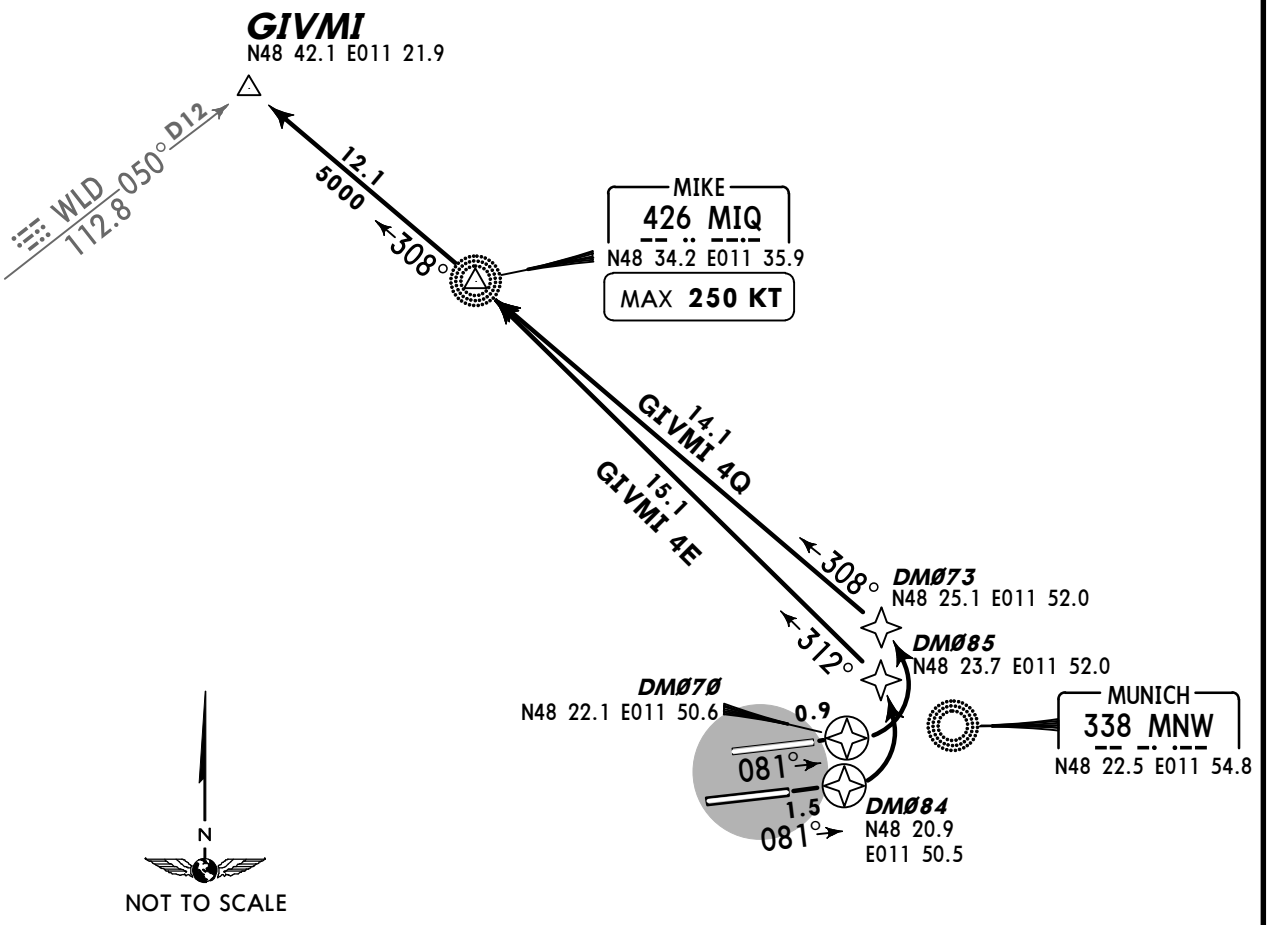
GIVMI FOUR ECHO (GIVMI 4E) *[GIVM4E]*
GIVMI FOUR QUEBEC (GIVMI 4Q) *[GIVM4Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3M)

JET ACFT ONLY (EXCEPT FLIGHTS ACCORDING
REMARKS OF AIRWAY T 161)
MANDATORY FOR FLIGHTS
VIA AIRWAY Y 101 - INBED - AIRWAYS (U)L 610
(CLIMB PROFILE RESTRICTION WITHIN AIRWAY Y 101)
OR VIA AIRWAY Y 101 - ERNAS - AIRWAY T 161



1 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
GIVMI 4E	**08R**	(1900′+) - DM084 - DM085 - MIQ (K250-) - GIVMI.
GIVMI 4Q	**08L**	(1900′+) - DM070 - DM073 - MIQ (K250-) - GIVMI.

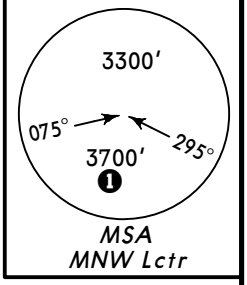
CHANGES: MSA.

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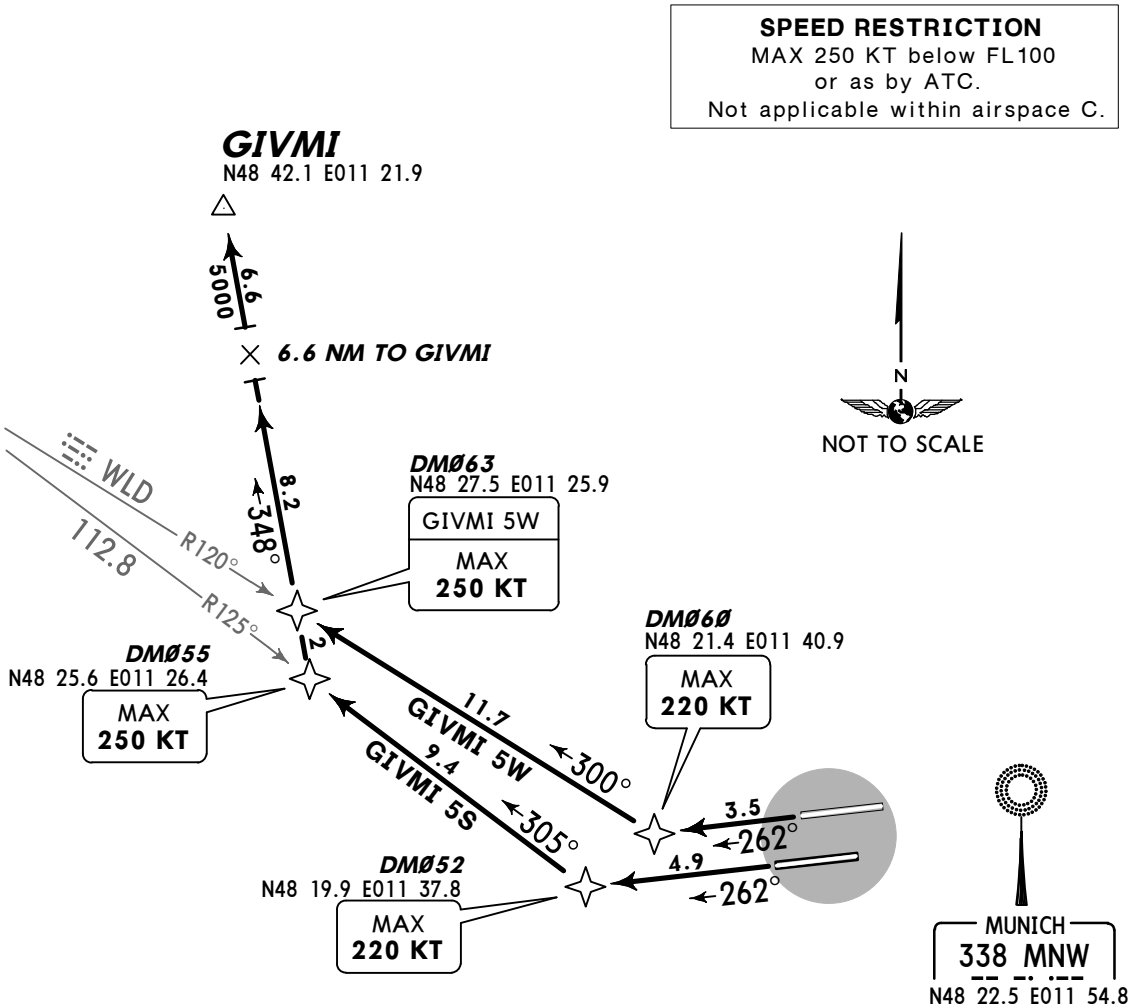
MUNICH Radar	*Apt Elev*	
123.9	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

GIVMI FIVE SIERRA (GIVMI 5S) *[GIVM5S]*
GIVMI FIVE WHISKEY (GIVMI 5W) *[GIVM5W]*
RWYS 26L/R RNAV DEPARTURES (OVERLAY 10-3N)

JET ACFT ONLY (EXCEPT FLIGHTS ACCORDING
REMARKS OF AIRWAY T 161)
MANDATORY FOR FLIGHTS
VIA AIRWAY Y 101 - INBED - AIRWAYS (U)L 610
(CLIMB PROFILE RESTRICTION WITHIN AIRWAY Y 101)
OR VIA AIRWAY Y 101 - ERNAS - AIRWAY T 161



❶ 3300′ within 10 NM



Initial climb clearance **FL70**

SID	RWY	ROUTING
GIVMI 5S	**26L**	(1900′+) - DM052 (K220-) - DM055 (K250-) - GIVMI.
GIVMI 5W	**26R**	(1900′+) - DM060 (K220-) - DM063 (K250-) - GIVMI.

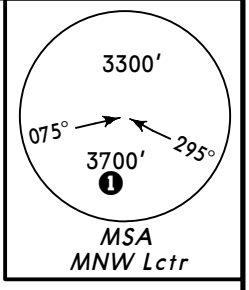
CHANGES: MSA.

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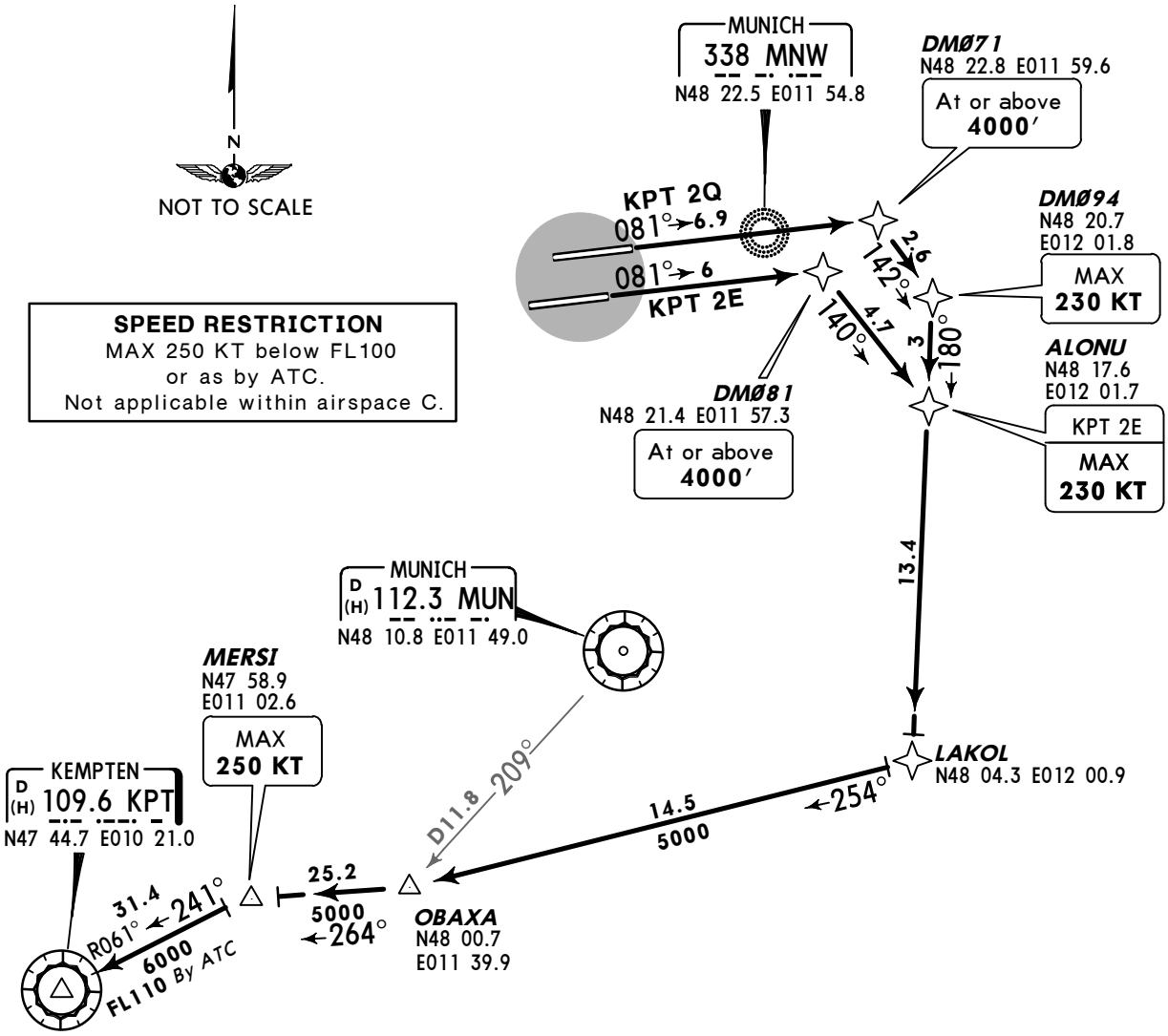
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

KEMPTEN TWO ECHO (KPT 2E)
KEMPTEN TWO QUEBEC (KPT 2Q)
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3N1)

MANDATORY FOR JET ACFT TO DESTINATIONS EDNY, LSZH & LIM*
NOT AVAILABLE FOR TRAFFIC VIA KPT - AIRWAYS Y-740/Z-999
EXCEPT FOR DESTINATION LIM*



1 3300′ within 10 NM



Initial climb clearance **FL70**

SID	RWY	ROUTING
KPT 2E	**08R**	(1900′+) - DM081 (4000′+) - ALONU (K230-) - LAKOL - OBAXA - MERSI (K250-) - KPT.
KPT 2Q	**08L**	(1900′+) - DM071 (4000′+) - DM094 (K230-) - LAKOL - OBAXA - MERSI (K250-) - KPT.

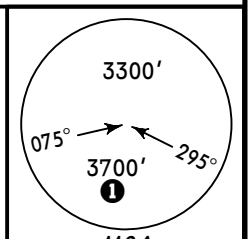
CHANGES: MSA.

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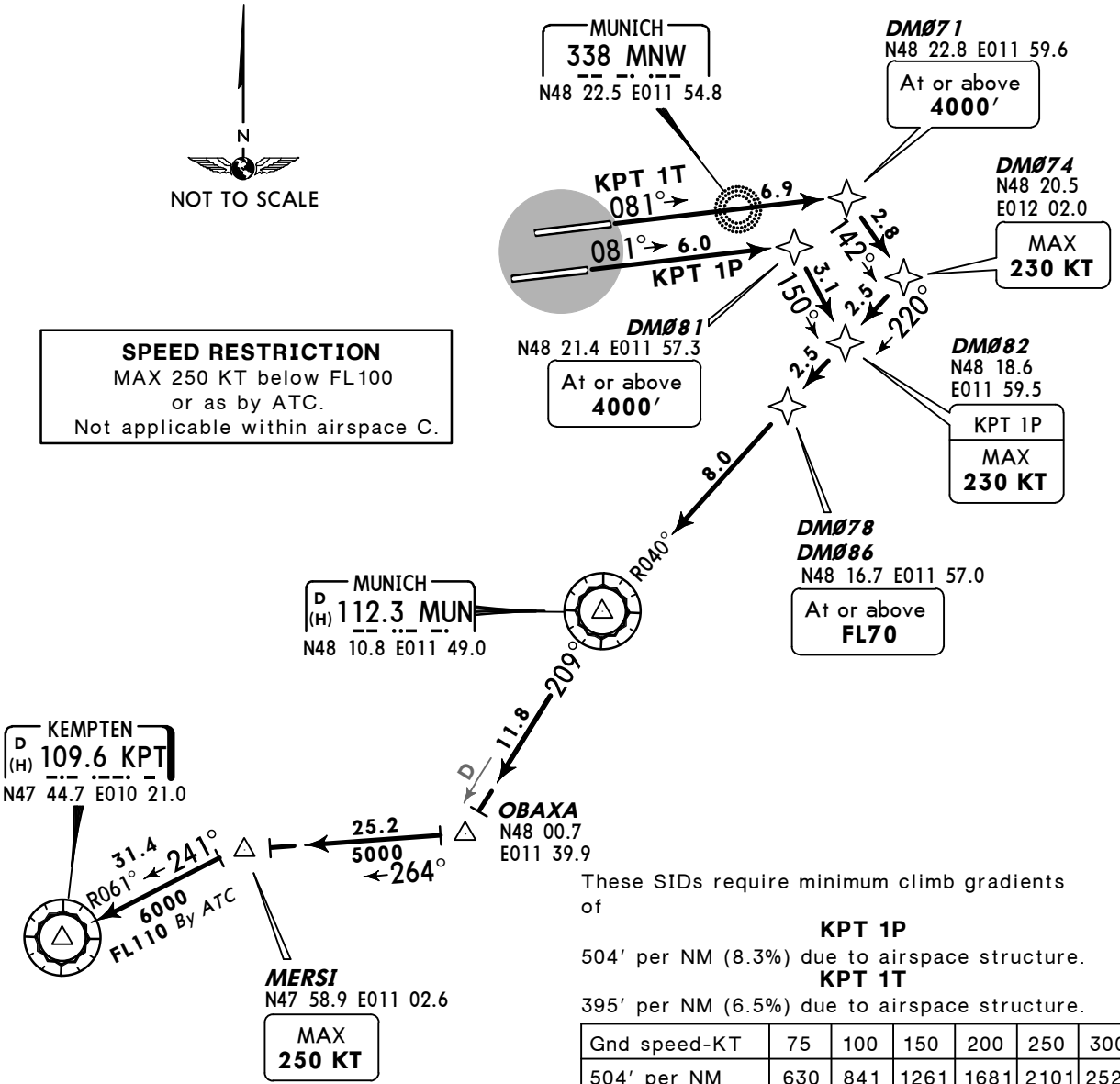
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

KEMPTEN ONE PAPA (KPT 1P)
KEMPTEN ONE TANGO (KPT 1T)
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3N2)

ONLY AVAILABLE FOR NON-JET ACFT
NOT AVAILABLE FOR TRAFFIC VIA KPT - AIRWAYS Y-740/Z-999
EXCEPT FOR DESTINATION LIM*



1 3300′ within 10 NM



These SIDs require minimum climb gradients of

KPT 1P

504′ per NM (8.3%) due to airspace structure.

KPT 1T

395′ per NM (6.5%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522
395′ per NM	494	658	987	1317	1646	1975

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
KPT 1P	**08R**	(1900′+) - DM081 (4000′+) - DM082 (K230-) - DM086 (FL70+) - MUN - OBAXA - MERSI (K250-) - KPT.
KPT 1T	**08L**	(1900′+) - DM071 (4000′+) - DM074 (K230-) - DM078 (FL70+) - MUN - OBAXA - MERSI (K250-) - KPT.

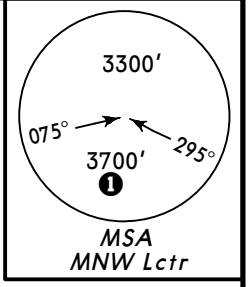
CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.
127.95	1487′	

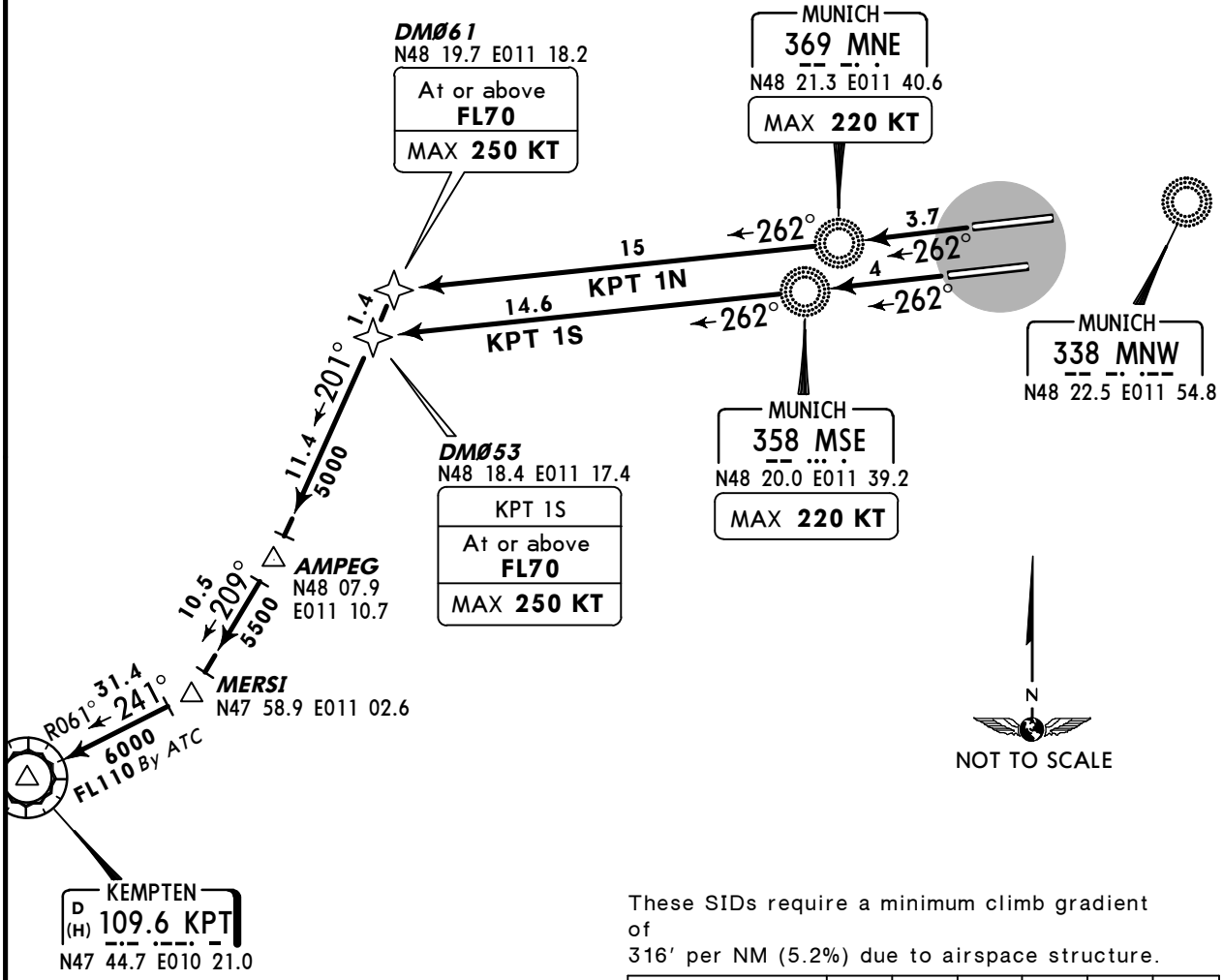
KEMPTEN ONE NOVEMBER (KPT 1N)
KEMPTEN ONE SIERRA (KPT 1S)
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3N3)

MANDATORY FOR JET ACFT TO DESTINATIONS EDNY, LSZH & LIM*
NOT AVAILABLE FOR TRAFFIC VIA KPT - AIRWAYS Y-740/Z-999
EXCEPT FOR DESTINATION LIM*



1 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require a minimum climb gradient of
316′ per NM (5.2%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
KPT 1N	26R	(1900′+) - MNE (K220-) - DM061 (FL70+; K250-) - AMPEG - MERSI - KPT.
KPT 1S	26L	(1900′+) - MSE (K220-) - DM053 (FL70+; K250-) - AMPEG - MERSI - KPT.

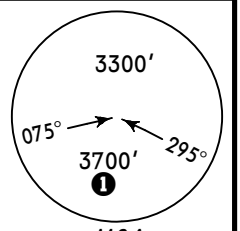
CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

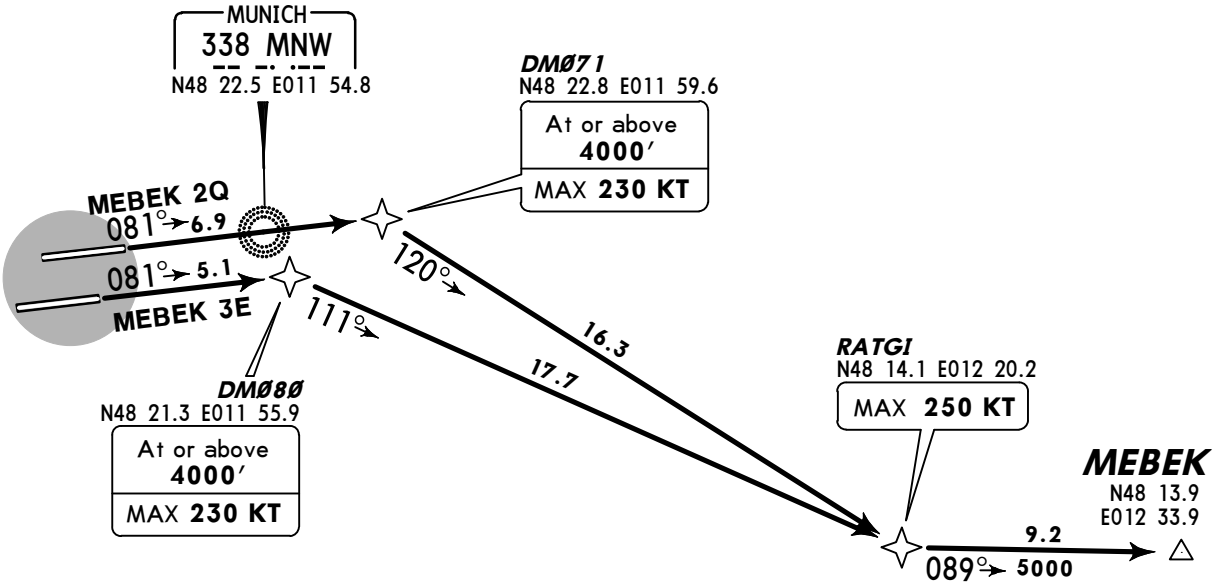
MEBEK THREE ECHO (MEBEK 3E) *[MEBE3E]*
MEBEK TWO QUEBEC (MEBEK 2Q) *[MEBE2Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3N4)

NOT AVAILABLE FOR FLIGHTS VIA EGG



1 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





Initial climb clearance **FL70**

SID	RWY	ROUTING
MEBEK 3E	**08R**	(1900′+) - DM080 (4000′+; K230-) - RATGI (K250-) - MEBEK.
MEBEK 2Q	**08L**	(1900′+) - DM071 (4000′+; K230-) - RATGI (K250-) - MEBEK.

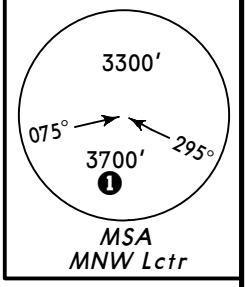
CHANGES: MSA.

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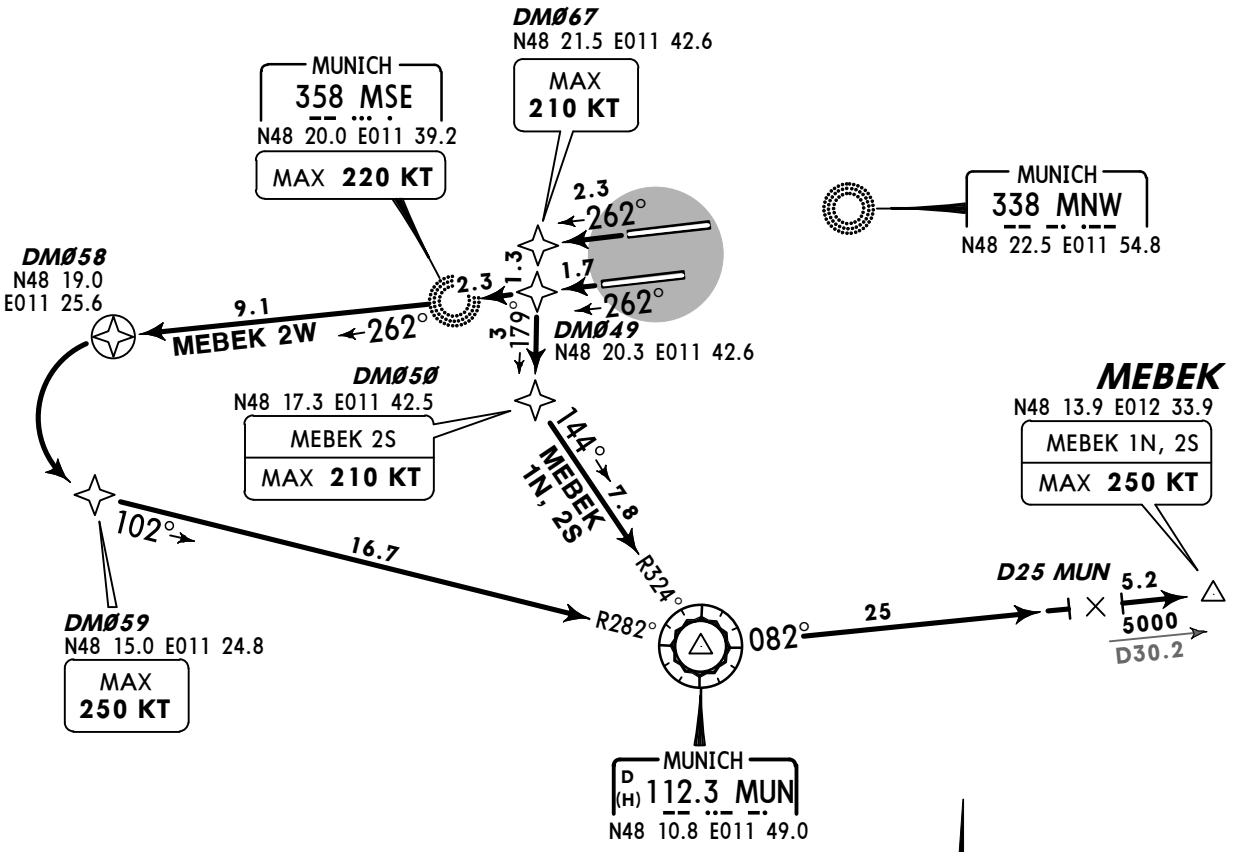
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

MEBEK ONE NOVEMBER (MEBEK 1N) *[MEBE1N]*
MEBEK TWO SIERRA (MEBEK 2S) *[MEBE2S]*
MEBEK TWO WHISKEY (MEBEK 2W) *[MEBE2W]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3N5)

NOT AVAILABLE FOR FLIGHTS VIA EGG



❶ 3300′ within 10 NM



These SIDs require minimum climb gradients of

MEBEK 1N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

MEBEK 2S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
MEBEK 1N	**26R**	(1900′+) - DM067 (K210-) - DM050 - MUN - MEBEK (K250-).
MEBEK 2S ❷	**26L**	(1900′+) - DM049 - DM050 (K210-) - MUN - MEBEK (K250-).
MEBEK 2W		(1900′+) - MSE (K220-) - DM058 - DM059 (K250-) - MUN - MEBEK.

❷ If unable to comply with speed and turn restrictions request SID MEBEK 2W.

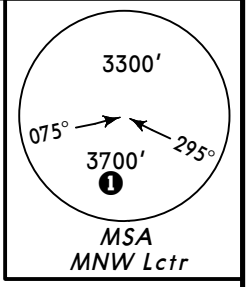
CHANGES: MSA.

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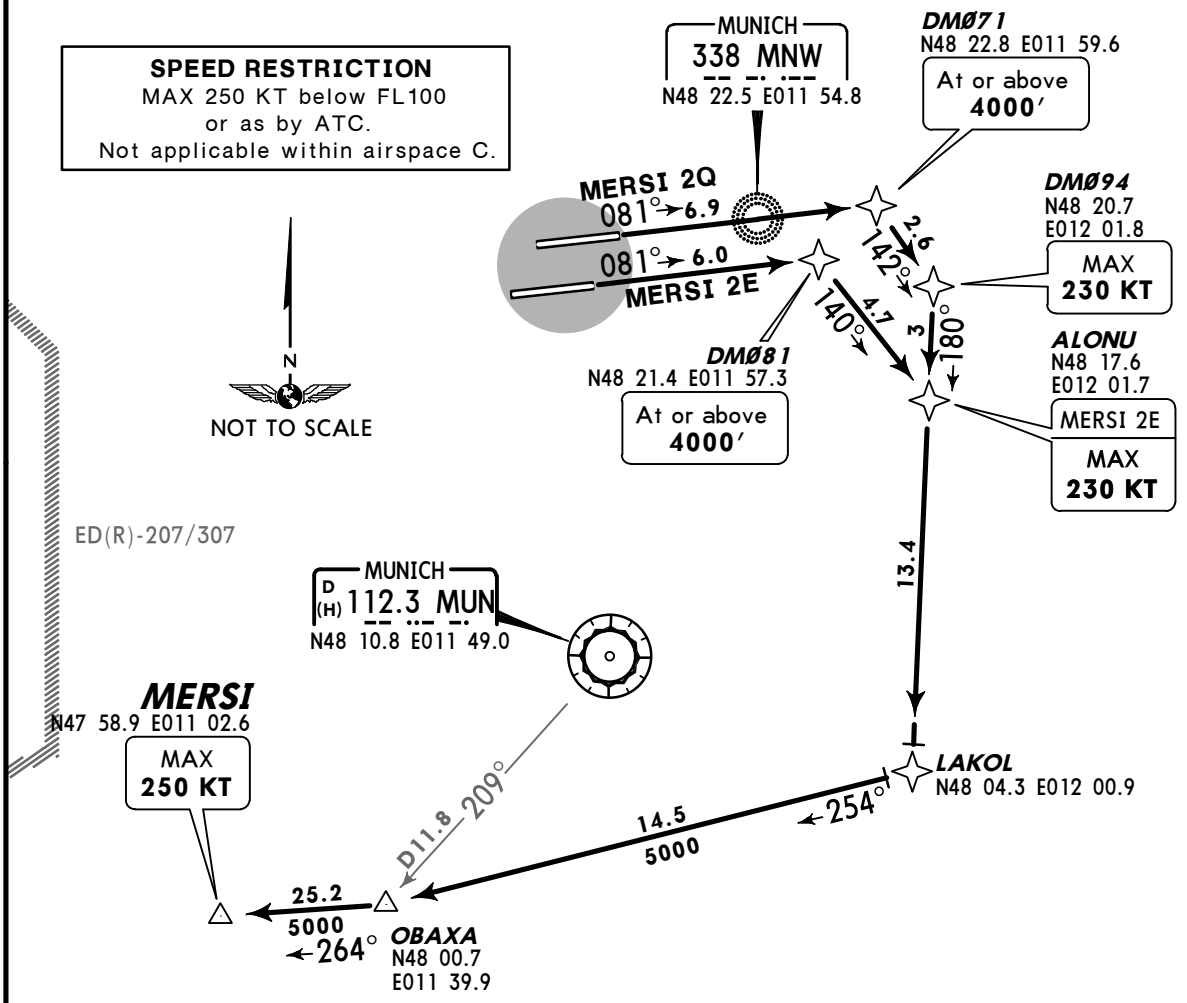
MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.
127.95	1487′	

MERSI TWO ECHO (MERSI 2E) *[MERS2E]*
MERSI TWO QUEBEC (MERSI 2Q) *[MERS2Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3N6)

JET ACFT ONLY
NOT AVAILABLE FOR FLIGHTS DESTINATION LSZH AND LIM*
THESE FLIGHTS SHALL FILE KPT SIDS
NOT AVAILABLE FOR TRAFFIC PROCEEDING VIA MILKA
AT OR ABOVE REQUESTED FL245 DURING FOLLOWING TIMES:
DAILY 2330-0800LT/FRI 1700LT TO MON 0800LT/HOL
DURING THESE TIMES FILE SID ALG
DURING ACTIVATION OF ED(R)-207/307 EXPECT RE-ROUTING BY ATC



1 3300′ within 10 NM



Initial climb clearance **FL70**

SID	RWY	ROUTING
MERSI 2E	**08R**	(1900′+) - DM081 (4000′+) - ALONU (K230-) - LAKOL - OBAXA - MERSI (K250-).
MERSI 2Q	**08L**	(1900′+) - DM071 (4000′+) - DM094 (K230-) - LAKOL - OBAXA - MERSI (K250-).

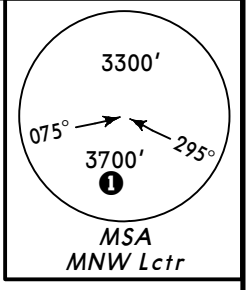
CHANGES: MSA.

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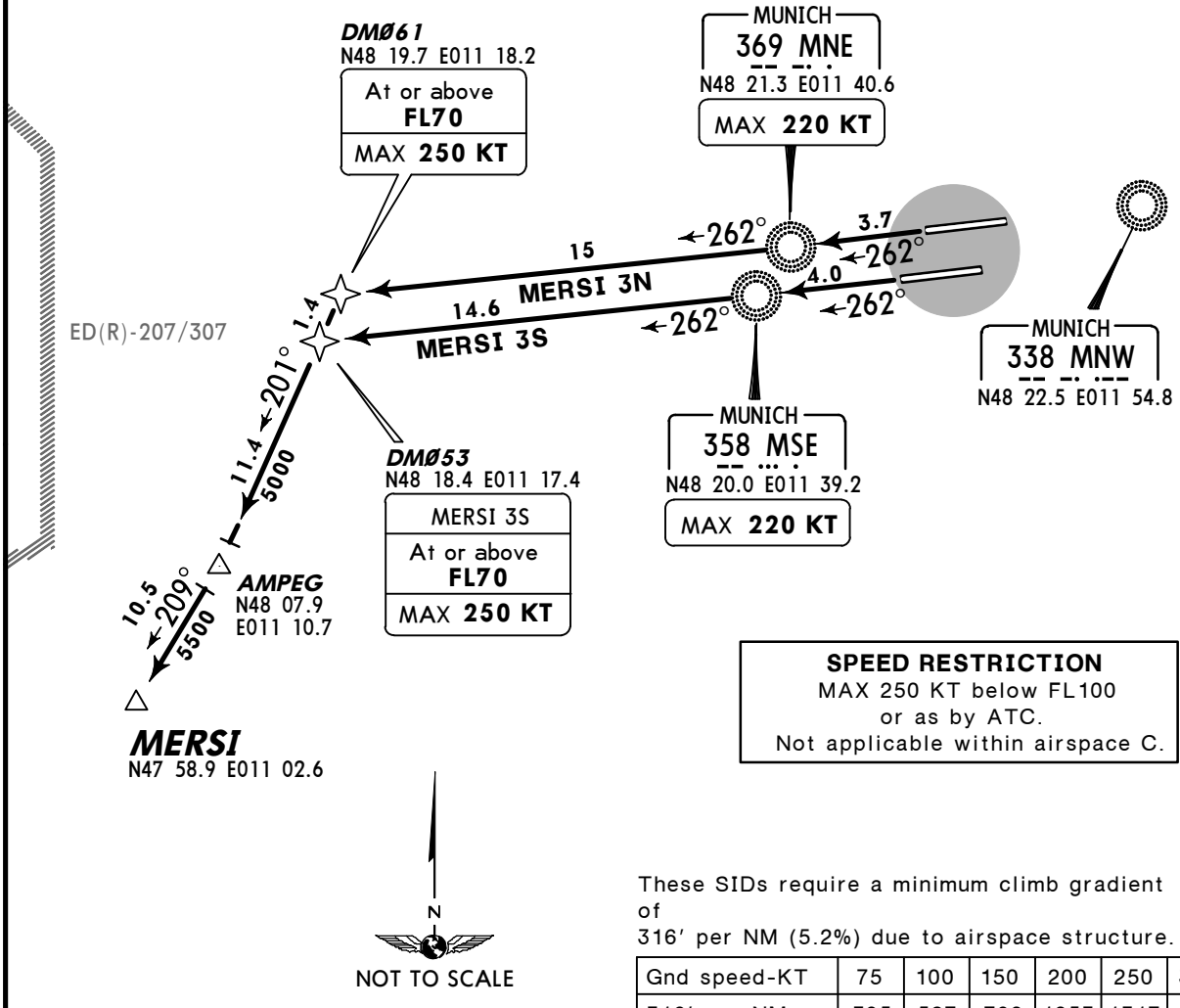
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

MERSI THREE NOVEMBER (MERSI 3N)*[MERS3N]*
MERSI THREE SIERRA (MERSI 3S)*[MERS3S]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3N7)

JET ACFT ONLY
NOT AVAILABLE FOR FLIGHTS DESTINATION LSZH AND LIM*
THESE FLIGHTS SHALL FILE KPT SIDS
NOT AVAILABLE FOR TRAFFIC PROCEEDING VIA MILKA
AT OR ABOVE REQUESTED FL245 DURING FOLLOWING TIMES:
DAILY 2330-0800LT/FRI 1700LT TO MON 0800LT/HOL
DURING THESE TIMES FILE SID ALG
DURING ACTIVATION OF ED(R)-207/307 EXPECT RE-ROUTING BY ATC



1 3300′ within 10 NM



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require a minimum climb gradient of
316′ per NM (5.2%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
316′ per NM	395	527	790	1053	1317	1580

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
MERSI 3N	**26R**	(1900′+) - MNE (K220-) - DM061 (FL70+; K250-) - AMPEG - MERSI.
MERSI 3S	**26L**	(1900′+) - MSE (K220-) - DM053 (FL70+; K250-) - AMPEG - MERSI.

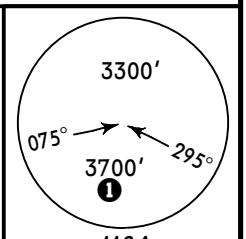
CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.
127.95	1487′	

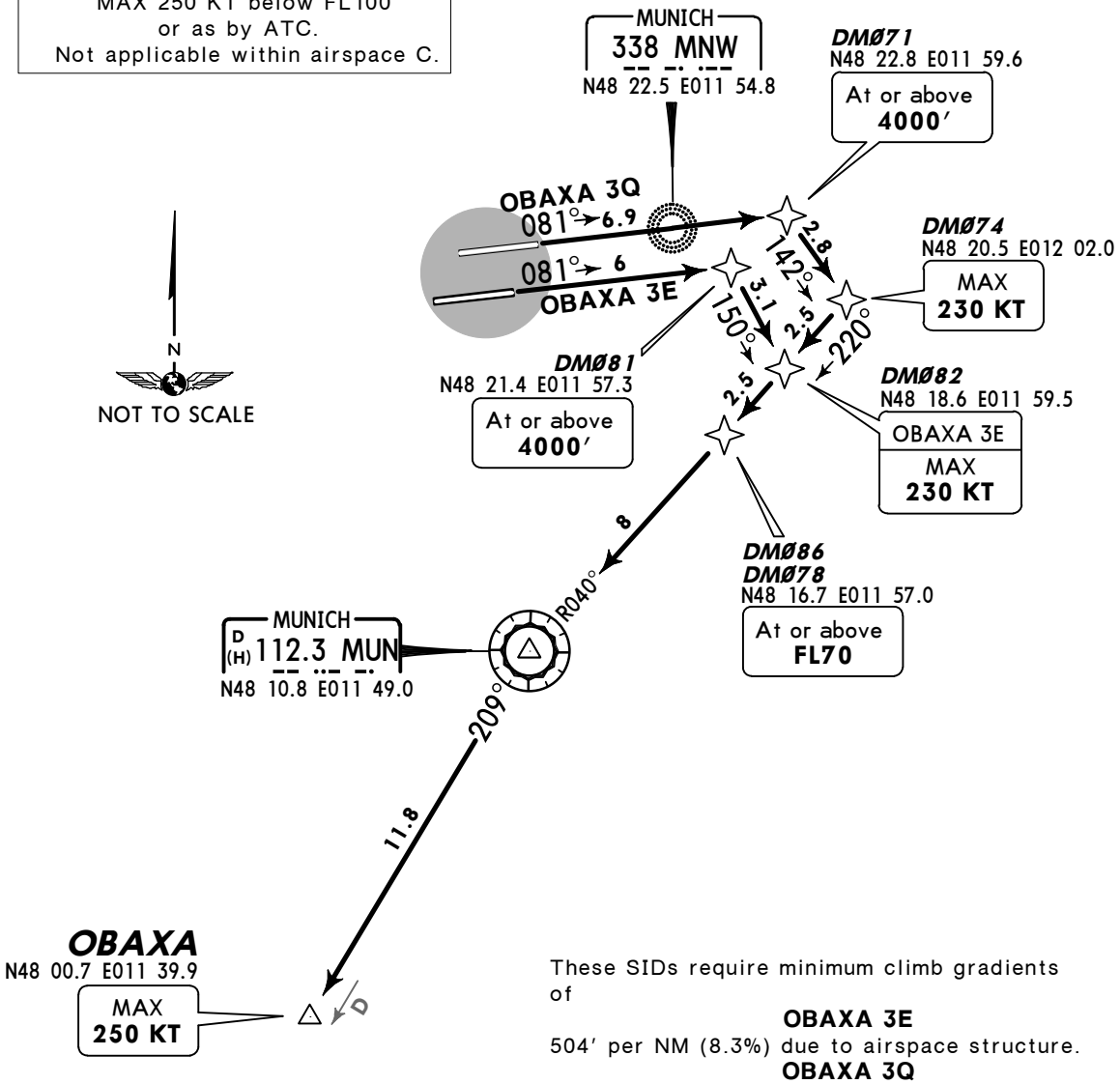
OBAXA THREE ECHO (OBAXA 3E) *[OBAX3E]*
OBAXA THREE QUEBEC (OBAXA 3Q) *[OBAX3Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3Q1)

ONLY AVAILABLE FOR NON-JET ACFT



❶ 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

OBAXA 3E

504′ per NM (8.3%) due to airspace structure.

OBAXA 3Q

395′ per NM (6.5%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522
395′ per NM	494	658	987	1317	1646	1975

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
OBAXA 3E	**08R**	(1900′+) - DM081 (4000′+) - DM082 (K230-) - DM086 (FL70+) - MUN - OBAXA (K250-).
OBAXA 3Q	**08L**	(1900′+) - DM071 (4000′+) - DM074 (K230-) - DM078 (FL70+) - MUN - OBAXA (K250-).

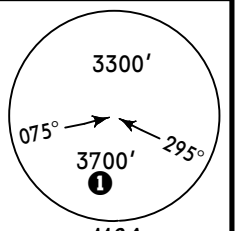
CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.
127.95	1487′	

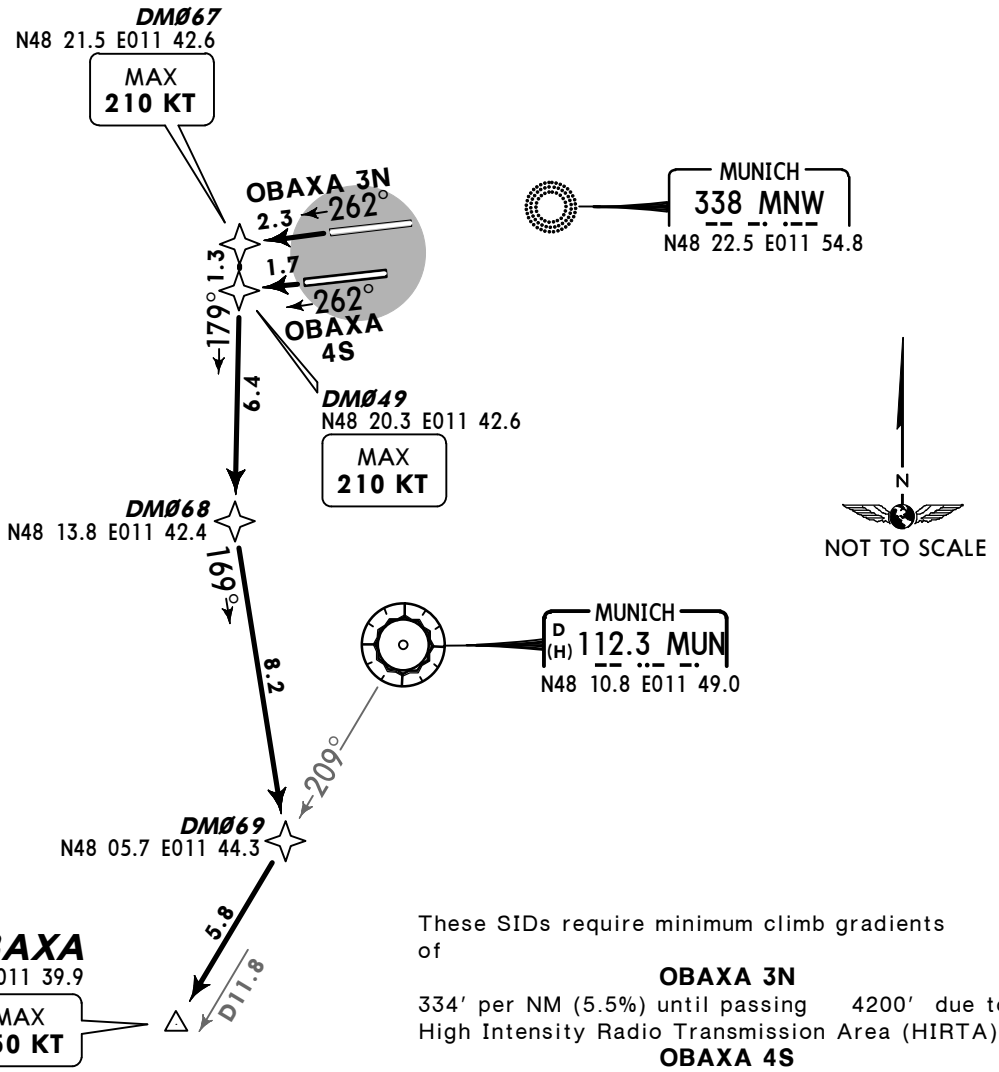
OBAXA THREE NOVEMBER (OBAXA 3N) *[OBAX3N]*
OBAXA FOUR SIERRA (OBAXA 4S) *[OBAX4S]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3Q2)

ONLY AVAILABLE FOR NON-JET ACFT



❶ 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

OBAXA 3N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

OBAXA 4S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

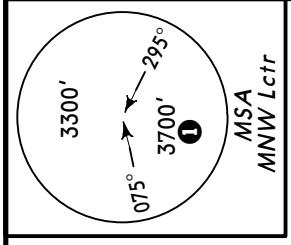
Initial climb clearance **FL70**

SID	RWY	ROUTING
OBAXA 3N	**26R**	(1900′+) - DM067 (K210-) - DM068 - DM069 - OBAXA (K250-).
OBAXA 4S	**26L**	(1900′+) - DM049 (K210-) - DM068 - DM069 - OBAXA (K250-).

CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
123.9	1487′	1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.



❶ 3300′ within 10 NM

RIDAR FIVE ECHO (RIDAR 5E) *[RIDA5E]*
RIDAR FIVE QUEBEC (RIDAR 5Q) *[RIDA5Q]*
RWYS 08R/L RNAV DEPARTURES
(OVERLAY 10-3Q3)

NOT AVAILABLE FOR FLIGHTS PLANNED
VIA ELVAG - AIRWAY W 718 - DKB

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

MUNICH
338 MNW
N48 22.5 E011 54.8

DMØ73
N48 25.1 E011 52.0

DMØ85
N48 23.7 E011 52.0

DMØ84
N48 20.9
E011 50.5

DMØ7Ø
N48 22.1 E011 50.6

308°
312°
0.9
1.5
081°
081°
14.1
RIDAR 5Q
15.1
RIDAR 5E

MIKE
426 MIQ
N48 34.2 E011 35.9

MAX 250 KT

270°
18.7
5000

MAISACH
D (H) 115.2 MAH
N48 15.8 E011 18.7

R090°

WALDA
D 112.8 WLD
N48 34.8 E011 07.8

270°
13
5000
D

D28 312°

RIDAR
N48 35.3
E010 48.2

N
NOT TO SCALE

Initial climb clearance **FL70**

SID	RWY	ROUTING
RIDAR 5E	08R	(1900′+) - DM084 - DM085 - MIQ (K250-) - WLD - RIDAR.
RIDAR 5Q	08L	(1900′+) - DM070 - DM073 - MIQ (K250-) - WLD - RIDAR.

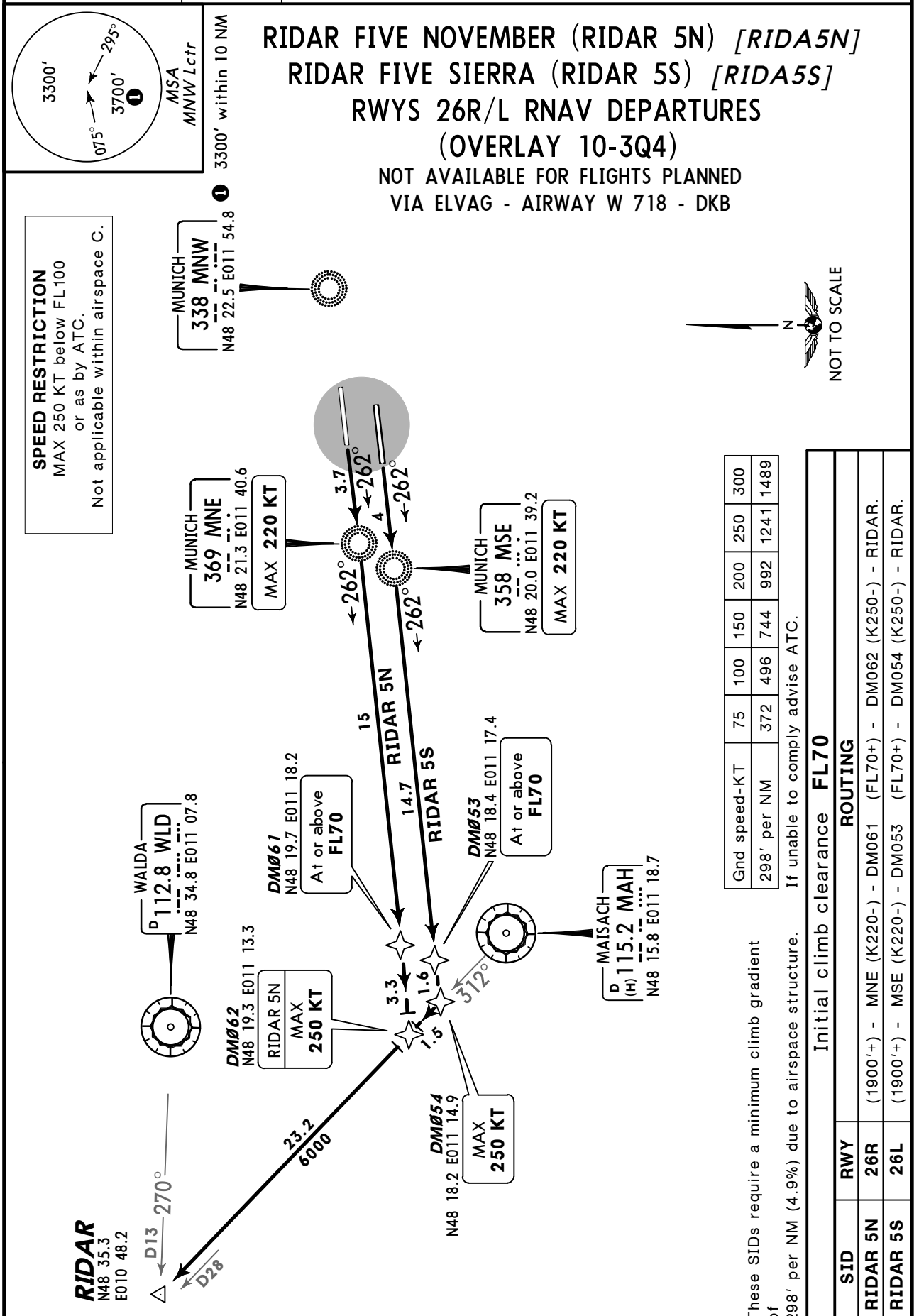
CHANGES: MSA.

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MUNICH Radar 123.9	*Apt Elev* 1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

RIDAR FIVE NOVEMBER (RIDAR 5N) *[RIDA5N]*
RIDAR FIVE SIERRA (RIDAR 5S) *[RIDA5S]*
RWYS 26R/L RNAV DEPARTURES
(OVERLAY 10-3Q4)

NOT AVAILABLE FOR FLIGHTS PLANNED
VIA ELVAG - AIRWAY W 718 - DKB



Gnd speed-KT	75	100	150	200	250	300
298′ per NM	372	496	744	992	1241	1489

These SIDs require a minimum climb gradient of 298′ per NM (4.9%) due to airspace structure.

If unable to comply advise ATC.

Initial climb clearance **FL70**

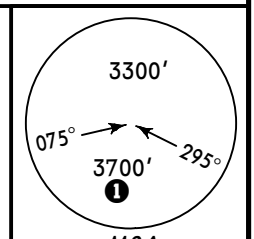
SID	RWY	ROUTING
RIDAR 5N	26R	(1900′+) - MNE (K220-) - DM061 (FL70+) - DM062 (K250-) - RIDAR.
RIDAR 5S	26L	(1900′+) - MSE (K220-) - DM053 (FL70+) - DM054 (K250-) - RIDAR.

CHANGES: MSA.

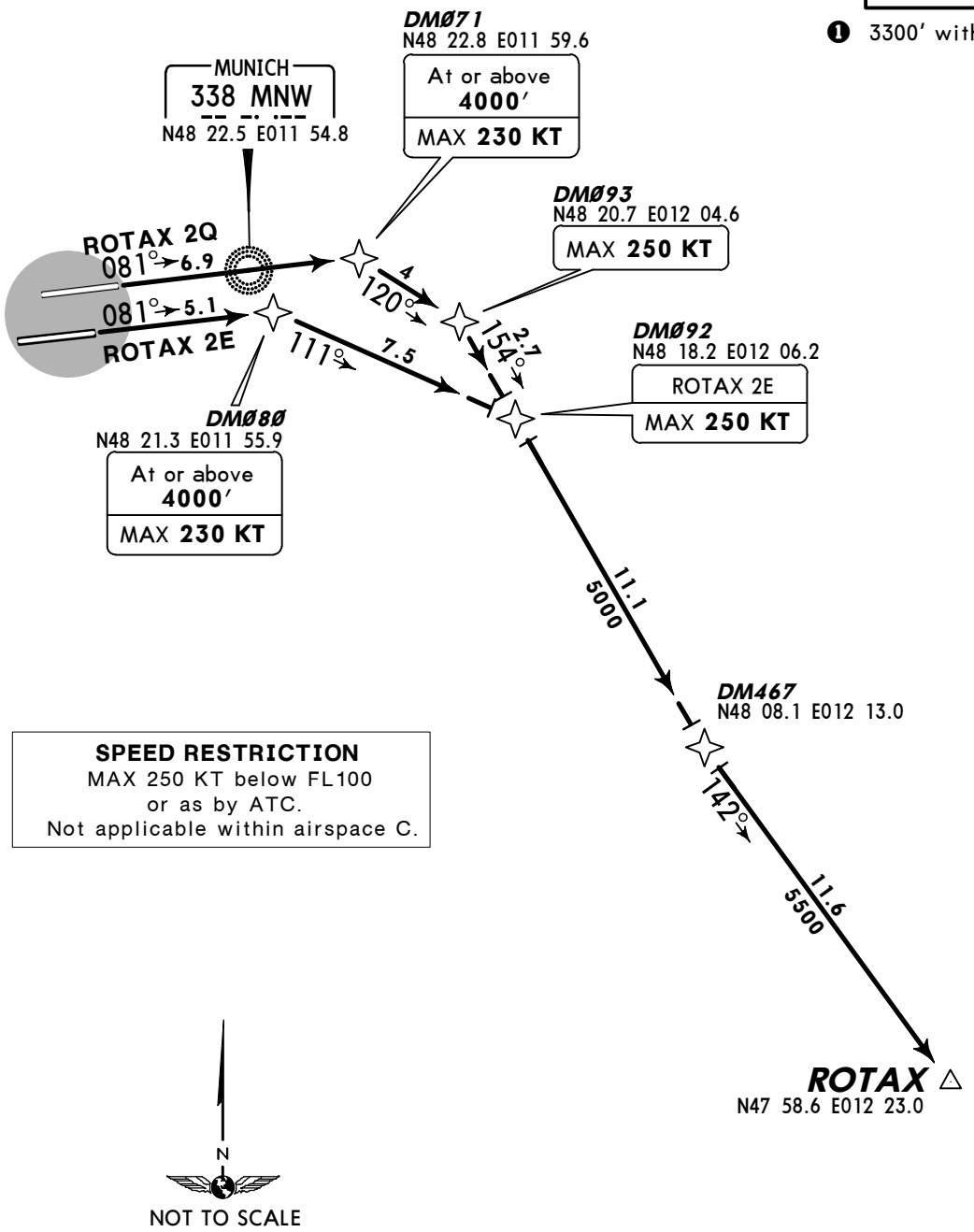
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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ROTAX TWO ECHO (ROTAX 2E) *[ROTA2E]*
ROTAX TWO QUEBEC (ROTAX 2Q) *[ROTA2Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3Q5)



❶ 3300′ within 10 NM



Initial climb clearance **FL70**

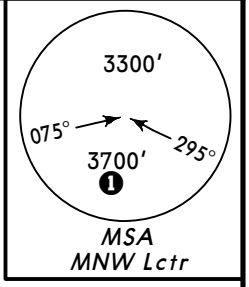
SID	RWY	ROUTING
ROTAX 2E	**08R**	(1900′+) - DM080 (4000′+; K230-) - DM092 (K250-) - DM467 - ROTAX.
ROTAX 2Q	**08L**	(1900′+) - DM071 (4000′+; K230-) - DM093 (K250-) - DM467 - ROTAX.

CHANGES: MSA.

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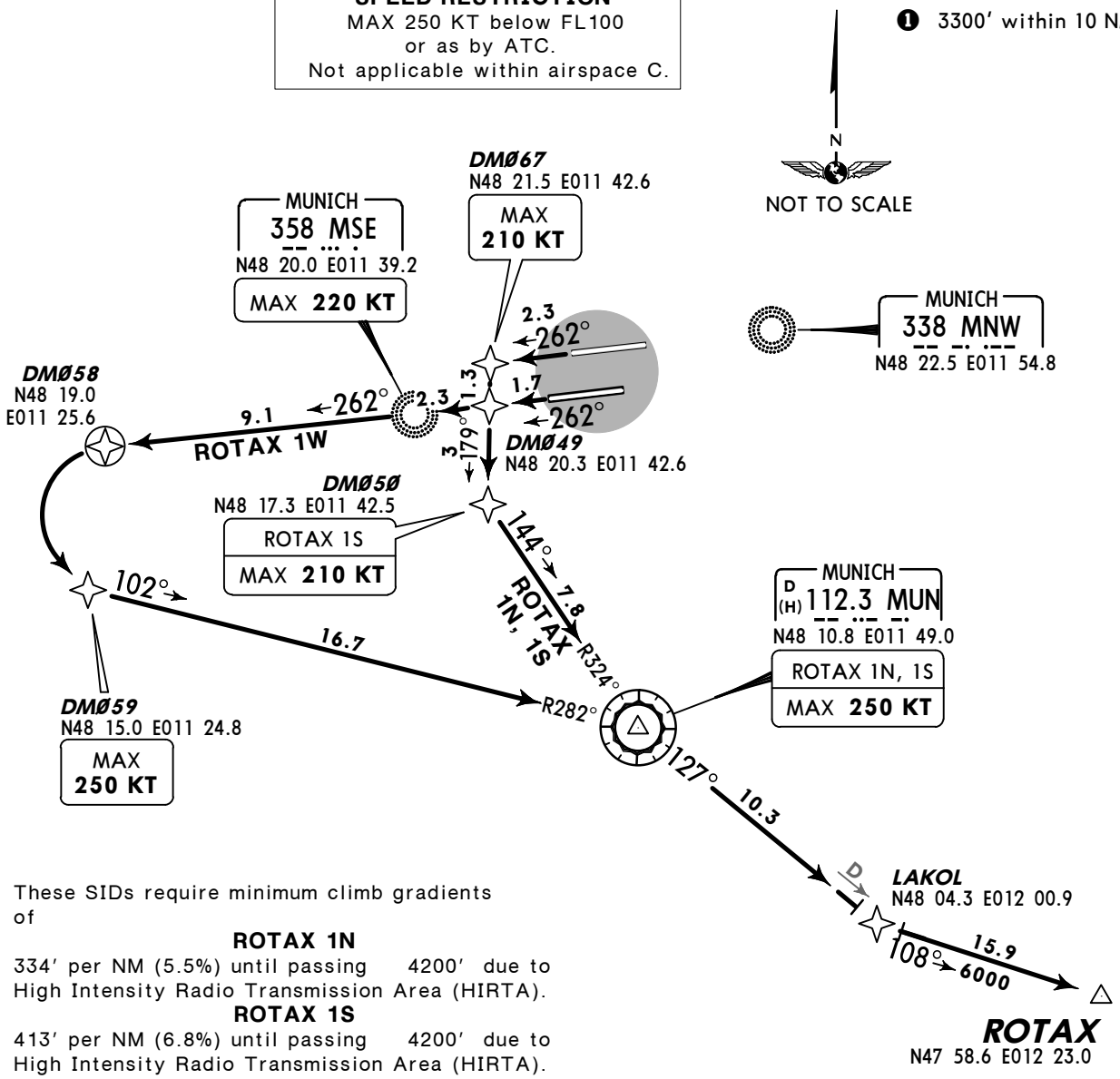
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ROTAX ONE NOVEMBER (ROTAX 1N) *[ROTA1N]*
ROTAX ONE SIERRA (ROTAX 1S) *[ROTA1S]*
ROTAX ONE WHISKEY (ROTAX 1W) *[ROTA1W]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3Q6)



❶ 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

ROTAX 1N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

ROTAX 1S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
ROTAX 1N	**26R**	(1900′+) - DM067 (K210-) - DM050 - MUN (K250-) - LAKOL - ROTAX.
ROTAX 1S❷	**26L**	(1900′+) - DM049 - DM050 (K210-) - MUN (K250-) - LAKOL - ROTAX.
ROTAX 1W		(1900′+) - MSE (K220-) - DM058 - DM059 (K250-) - MUN - LAKOL - ROTAX.

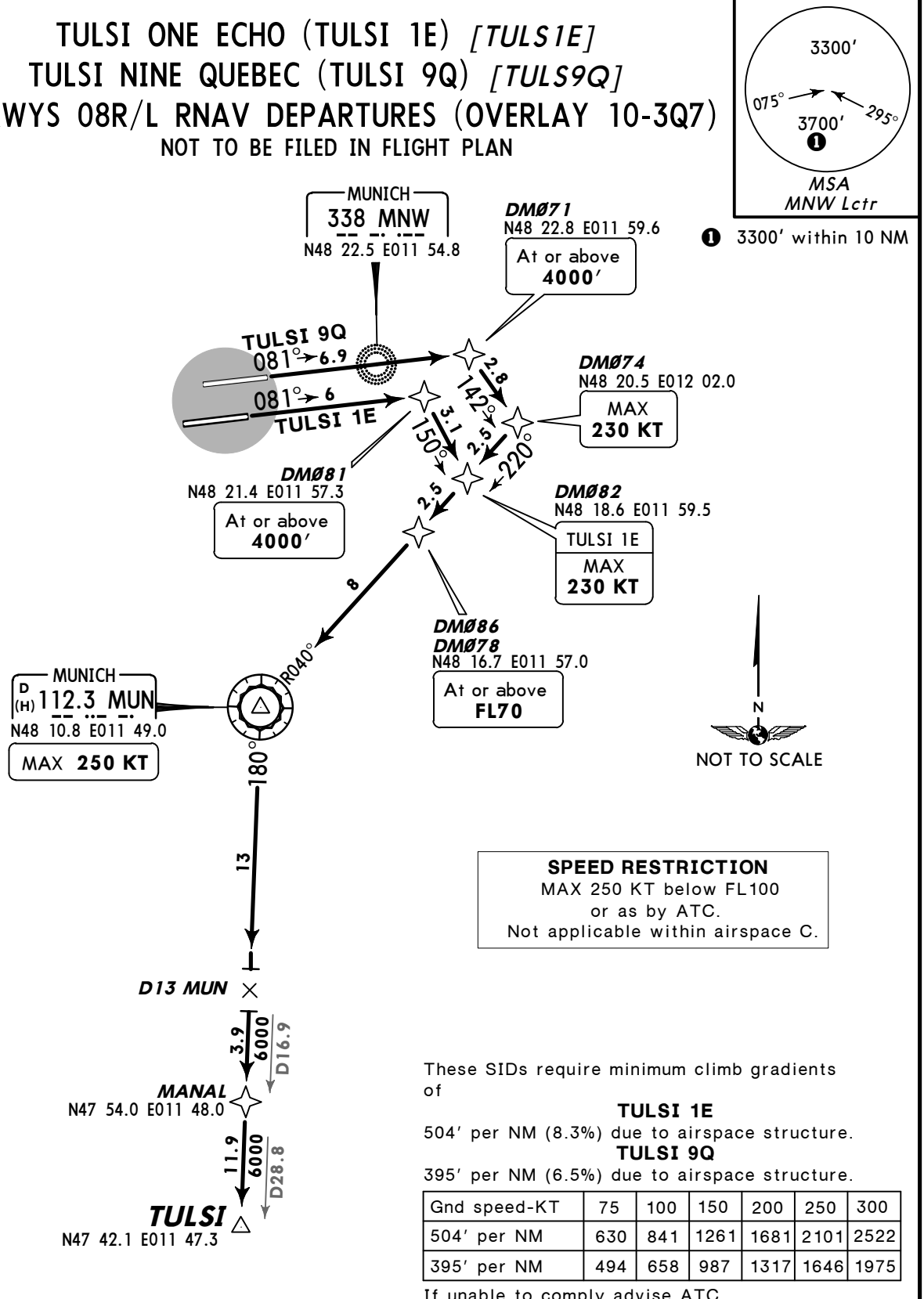
❷ If unable to comply with speed and turn restrictions request SID ROTAX 1W.

CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

TULSI ONE ECHO (TULSI 1E) *[TULS1E]*
TULSI NINE QUEBEC (TULSI 9Q) *[TULS9Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3Q7)
NOT TO BE FILED IN FLIGHT PLAN



These SIDs require minimum climb gradients of

TULSI 1E

504′ per NM (8.3%) due to airspace structure.

TULSI 9Q

395′ per NM (6.5%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522
395′ per NM	494	658	987	1317	1646	1975

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
TULSI 1E	**08R**	(1900′+) - DM081 (4000′+) - DM082 (K230-) - DM086 (FL70+) - MUN (K250-) - MANAL - TULSI.
TULSI 9Q	**08L**	(1900′+) - DM071 (4000′+) - DM074 (K230-) - DM078 (FL70+) - MUN (K250-) - MANAL - TULSI.

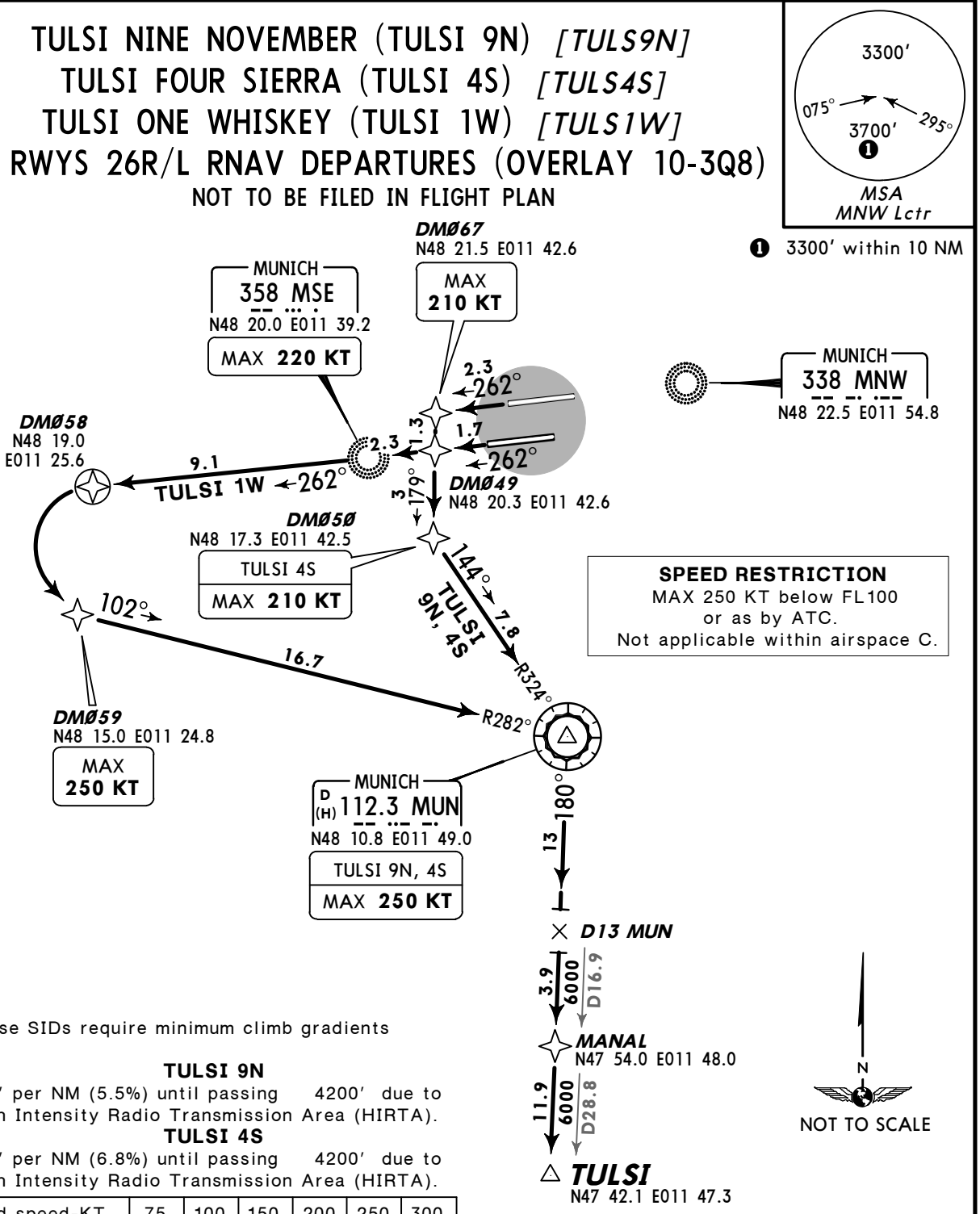
CHANGES: MSA.

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MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.
127.95	1487′	

TULSI NINE NOVEMBER (TULSI 9N) *[TULS9N]*
TULSI FOUR SIERRA (TULSI 4S) *[TULS4S]*
TULSI ONE WHISKEY (TULSI 1W) *[TULS1W]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3Q8)

NOT TO BE FILED IN FLIGHT PLAN



These SIDs require minimum climb gradients of

TULSI 9N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

TULSI 4S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
TULSI 9N	**26R**	(1900′+) - DM067 (K210-) - DM050 - MUN (K250-) - MANAL - TULSI.
TULSI 4S ❷	**26L**	(1900′+) - DM049 - DM050 (K210-) - MUN (K250-) - MANAL - TULSI.
TULSI 1W		(1900′+) - MSE (K220-) - DM058 - DM059 (K250-) - MUN - MANAL - TULSI.

❷ If unable to comply with speed and turn restrictions request SID TULSI 1W.

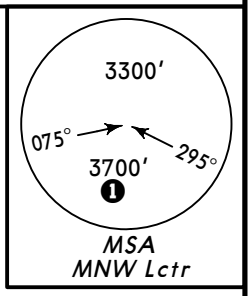
CHANGES: MSA.

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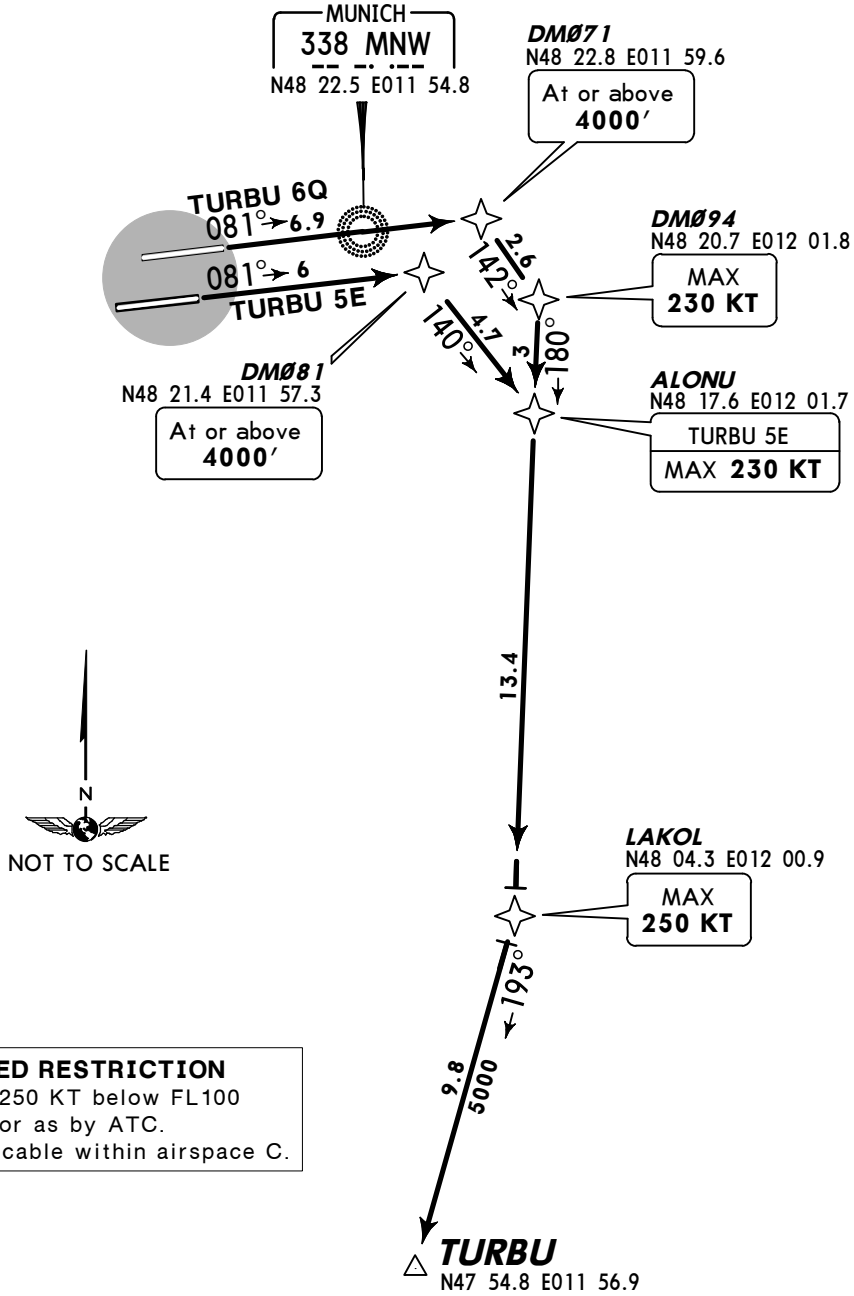
MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.
127.95	1487′	

TURBU FIVE ECHO (TURBU 5E) *[TURB5E]*
TURBU SIX QUEBEC (TURBU 6Q) *[TURB6Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3Q9)

ONLY AVAILABLE FOR JET ACFT
NON-JET ACFT SHALL FILE OBAXA OR ROTAX SIDS INSTEAD



1 3300′ within 10 NM



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
TURBU 5E	**08R**	(1900′+) - DM081 (4000′+) - ALONU (K230-) - LAKOL (K250-) - TURBU.
TURBU 6Q	**08L**	(1900′+) - DM071 (4000′+) - DM094 (K230-) - LAKOL (K250-) - TURBU.

CHANGES: MSA.

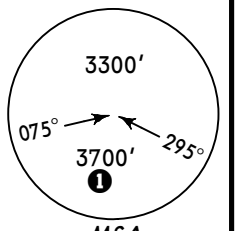
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MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
127.95	1487′	1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

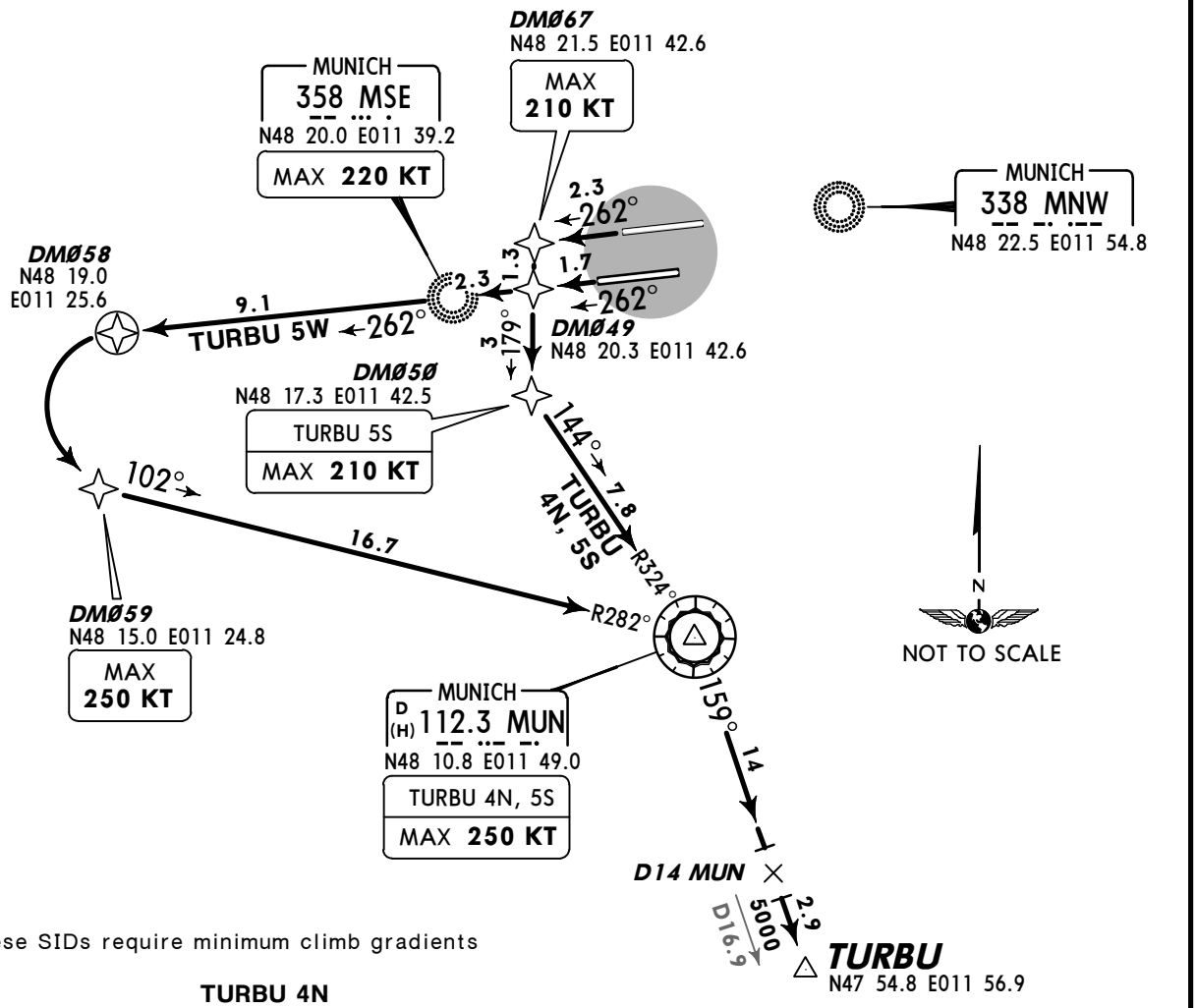
TURBU FOUR NOVEMBER (TURBU 4N) *[TURB4N]*
TURBU FIVE SIERRA (TURBU 5S) *[TURB5S]*
TURBU FIVE WHISKEY (TURBU 5W) *[TURB5W]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3Q10)

ONLY AVAILABLE FOR JET ACFT

NON-JET ACFT SHALL FILE OBAXA OR ROTAX SIDS INSTEAD



❶ 3300′ within 10 NM



These SIDs require minimum climb gradients of

TURBU 4N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

TURBU 5S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
TURBU 4N	**26R**	(1900′+) - DM067 (K210-) - DM050 - MUN (K250-) - TURBU.
TURBU 5S ❷	**26L**	(1900′+) - DM049 - DM050 (K210-) - MUN (K250-) - TURBU.
TURBU 5W		(1900′+) - MSE (K220-) - DM058 - DM059 (K250-) - MUN - TURBU.

❷ If unable to comply with speed and turn restrictions request SID TURBU 5W.

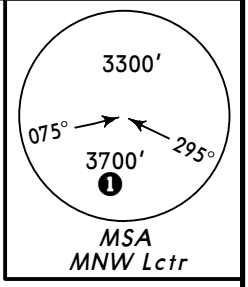
CHANGES: MSA.

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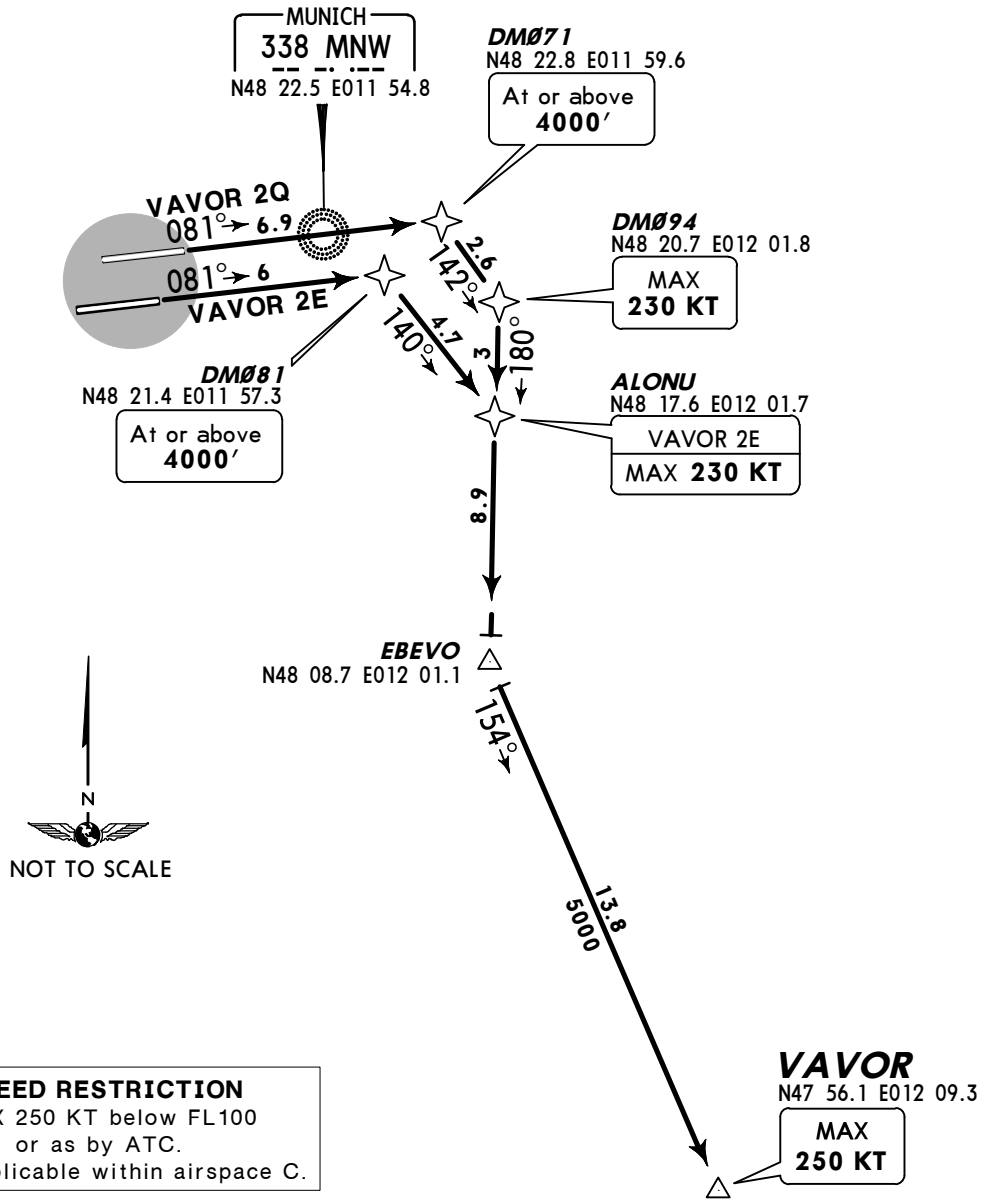
MUNICH Radar	*Apt Elev*	
127.95	1487′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

VAVOR TWO ECHO (VAVOR 2E) *[VAVO2E]*
VAVOR TWO QUEBEC (VAVOR 2Q) *[VAVO2Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3S)

ONLY AVAILABLE FOR JET ACFT
NON-JET ACFT SHALL FILE OBAXA OR ROTAX SIDS INSTEAD



1 3300′ within 10 NM



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
VAVOR 2E	**08R**	(1900′+) - DM081 (4000′+) - ALONU (K230-) - EBEVO - VAVOR (K250-).
VAVOR 2Q	**08L**	(1900′+) - DM071 (4000′+) - DM094 (K230-) - EBEVO - VAVOR (K250-).

CHANGES: MSA.

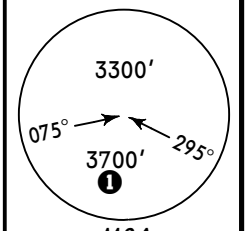
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MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
127.95	1487′	1. Remain on Tower frequency, when advised by ATC contact MUNICH Radar. 2. SIDs are also minimum noise routings (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

VAVOR ONE NOVEMBER (VAVOR 1N) *[VAVO1N]*
VAVOR ONE SIERRA (VAVOR 1S) *[VAVO1S]*
VAVOR ONE WHISKEY (VAVOR 1W) *[VAVO1W]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3T)

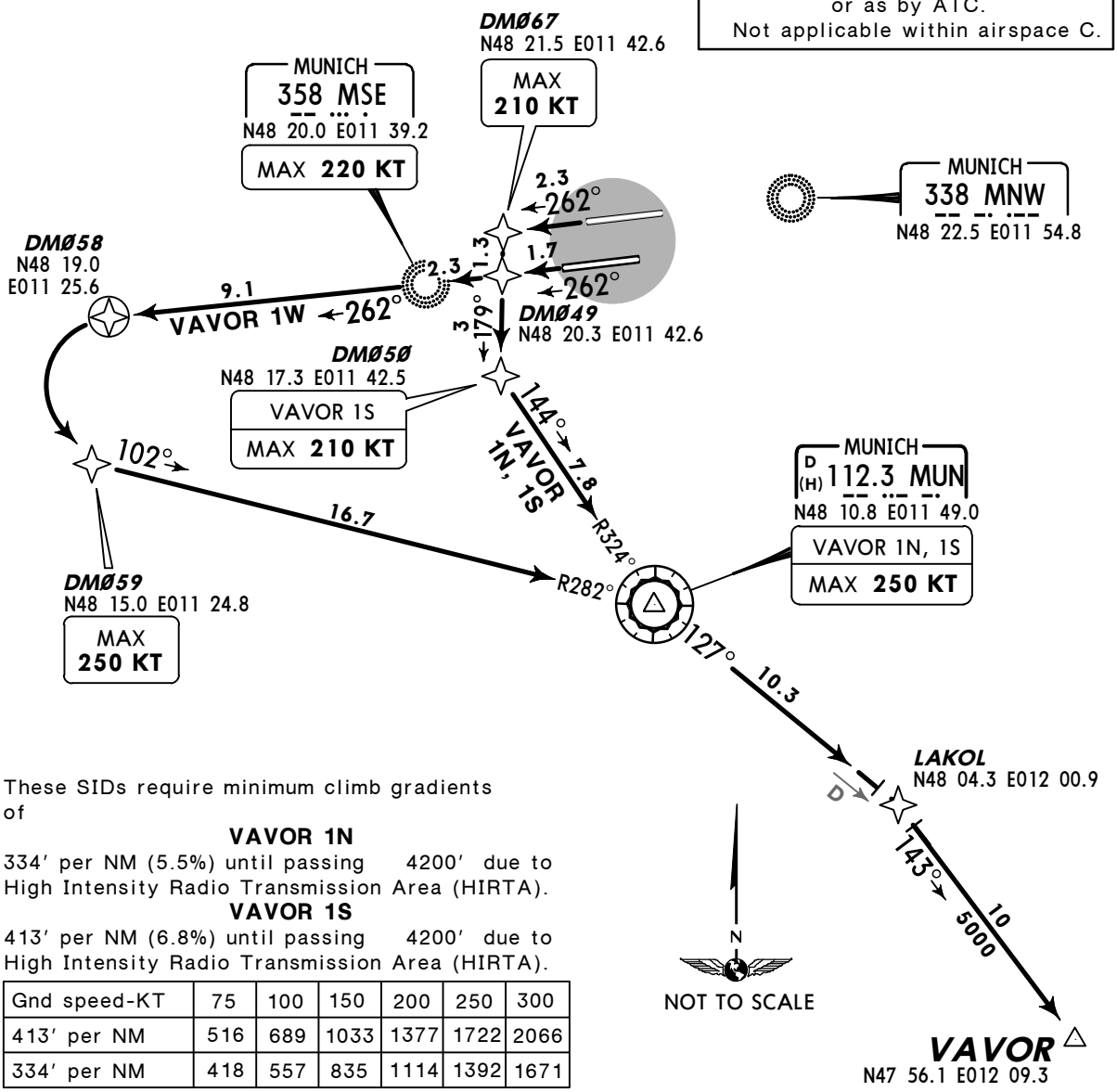
ONLY AVAILABLE FOR JET ACFT

NON-JET ACFT SHALL FILE OBAXA OR ROTAX SIDS INSTEAD



❶ 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

VAVOR 1N

334′ per NM (5.5%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

VAVOR 1S

413′ per NM (6.8%) until passing 4200′ due to High Intensity Radio Transmission Area (HIRTA).

Gnd speed-KT	75	100	150	200	250	300
413′ per NM	516	689	1033	1377	1722	2066
334′ per NM	418	557	835	1114	1392	1671

If unable to comply advise ATC.

Initial climb clearance **FL70**

SID	RWY	ROUTING
VAVOR 1N	**26R**	(1900′+) - DM067 (K210-) - DM050 - MUN (K250-) - LAKOL - VAVOR.
VAVOR 1S ❷	**26L**	(1900′+) - DM049 - DM050 (K210-) - MUN (K250-) - LAKOL - VAVOR.
VAVOR 1W		(1900′+) - MSE (K220-) - DM058 - DM059 (K250-) - MUN - LAKOL - VAVOR.

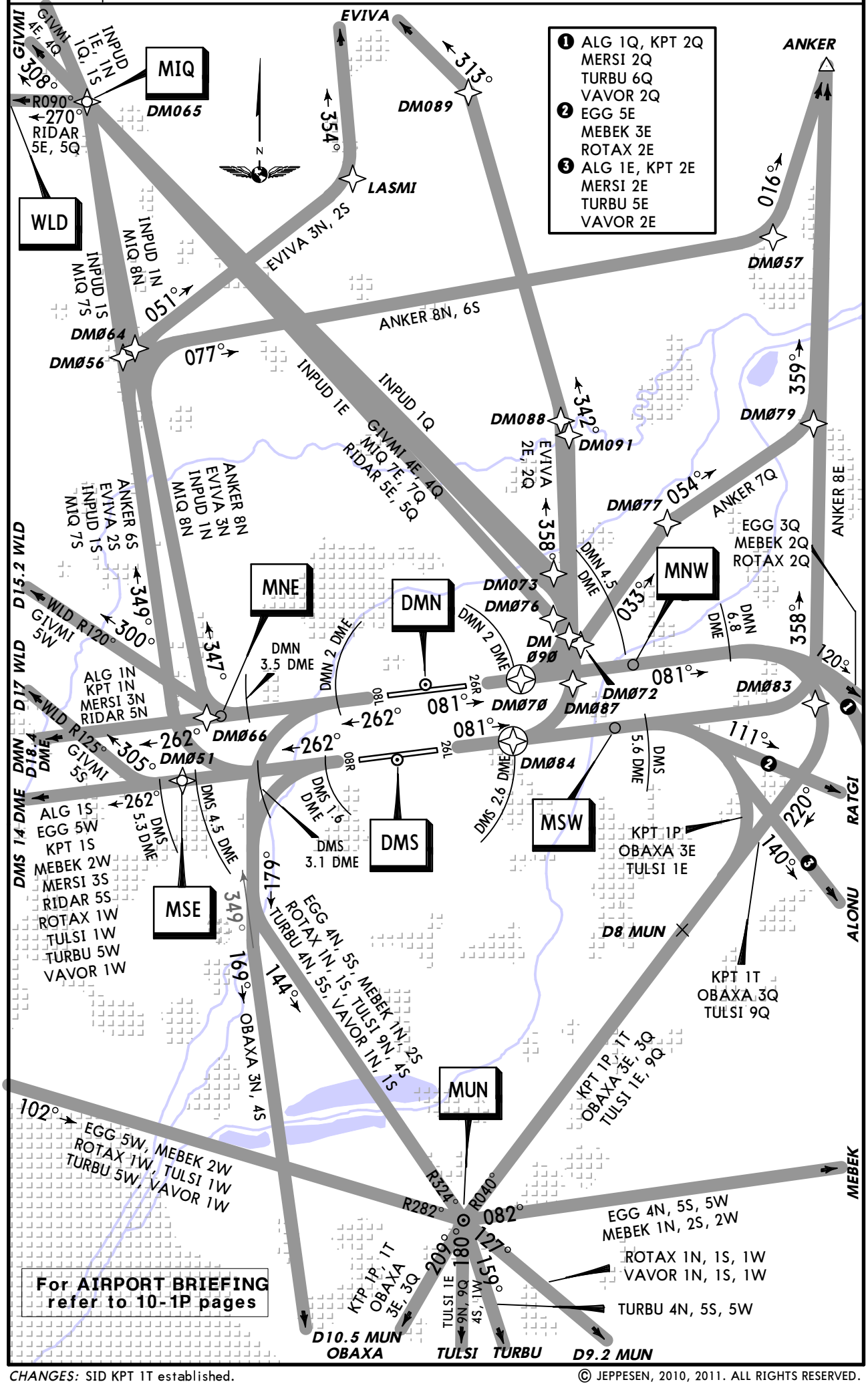
❷ If unable to comply with speed and turn restrictions request SID VAVOR 1W.

CHANGES: MSA.

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Apt Elev
1487'

NOISE ABATEMENT



CHANGES: SID KPT 1T established.

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EDDM/MUC

Apt Elev **1487′**

N48 21.2 E011 47.2

JEPPESEN

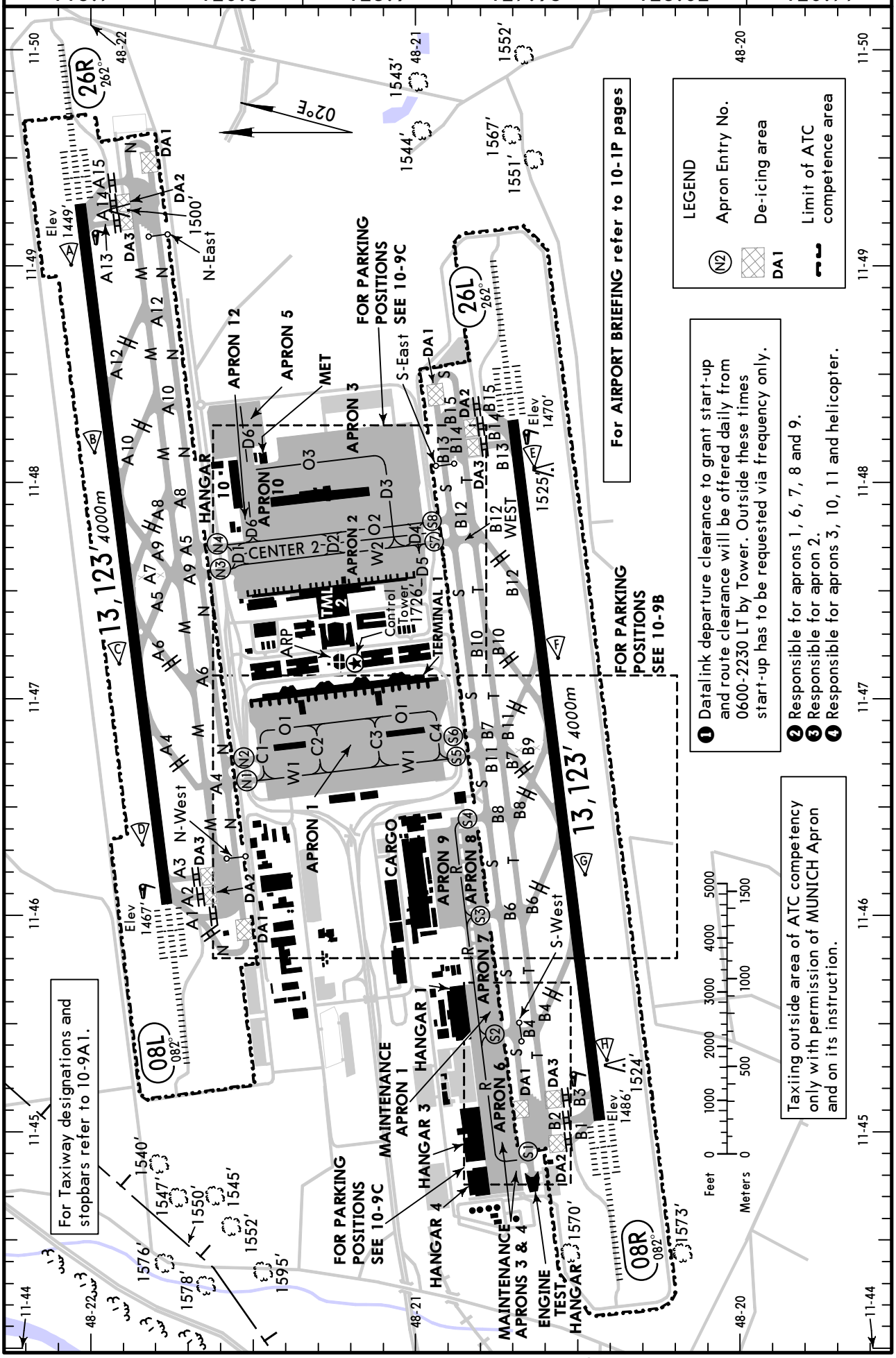
10 FEB 12 (10-9)

MUNICH, GERMANY

MUNICH

*D-ATIS	ACARS:	MUNICH Delivery (Start-up clearance)	MUNICH Ground Rwy 08L/26R	MUNICH Ground Rwy 08R/26L	Apron 1	Apron 2	Apron 3
123.12	DCL ❶	121.72	121.97	121.82	121.77 ❷	121.7 ❸	121.92 ❹

Tower Rwy 08L/26R	Tower Rwy 08R/26L	MUNICH Radar (DEP) North	MUNICH Radar (DEP) South	MUNICH Arrival (DEP) North	MUNICH Arrival (DEP) South
118.7	120.5	123.9	127.95	128.02	120.77



CHANGES: Aprons 5 & 12. ATC competence area.

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ADDITIONAL RUNWAY INFORMATION

RWY			USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
08L	HIRL CL *(15m)* ALSF-II TDZ PAPI-L (3.0°) ❶ RVR			11,969'*3648m*	❸	197' *60m*
26R	HIRL CL *(15m)* ALSF-II TDZ PAPI-L (3.0°) ❷ RVR			12,029'*3666m*		

❶ HST-A5, A8, A10 & A12
❷ HST-A9, A6 & A4
❸ TAKE-OFF RUN AVAILABLE

RWY 08L:

From rwy head	13,123'(4000m)
twy A3 int	12,467'(3800m)
twy A4 int	9252'(2820m)
twy A6 int	7218'(2200m)
twy A7 int	6627'(2020m)

RWY 26R:

From rwy head	13,123'(4000m)
twy A13 int	12,467'(3800m)
twy A12 int	9121'(2780m)
twy A10 int	7415'(2260m)
twy A7 int	5610'(1710m)

08R	HIRL CL *(15m)* ALSF-II TDZ PAPI-L (3.0°) ❹ RVR			12,029'*3666m*	❻	197' *60m*
26L	HIRL CL *(15m)* ALSF-II TDZ PAPI-L (3.0°) ❺ RVR			12,151'*3704m*		

❹ HST-B7, B10 & B12
❺ HST-B11, B8, B6 & B4
❻ TAKE-OFF RUN AVAILABLE

RWY 08R:

From rwy head	13,123' (4000m)
twy B3 int	12,467' (3800m)
twy B4 int	9318' (2840m)
twy B6 int	7283' (2220m)
twy B9 int	5479' (1670m)

RWY 26L:

From rwy head	13,123'(4000m)
twy B13 int	12,467'(3800m)
twy B12 int	9252'(2820m)
twy B10 int	7218'(2200m)
twy B9 int	6627'(2020m)

Standard TAKE-OFF **1**

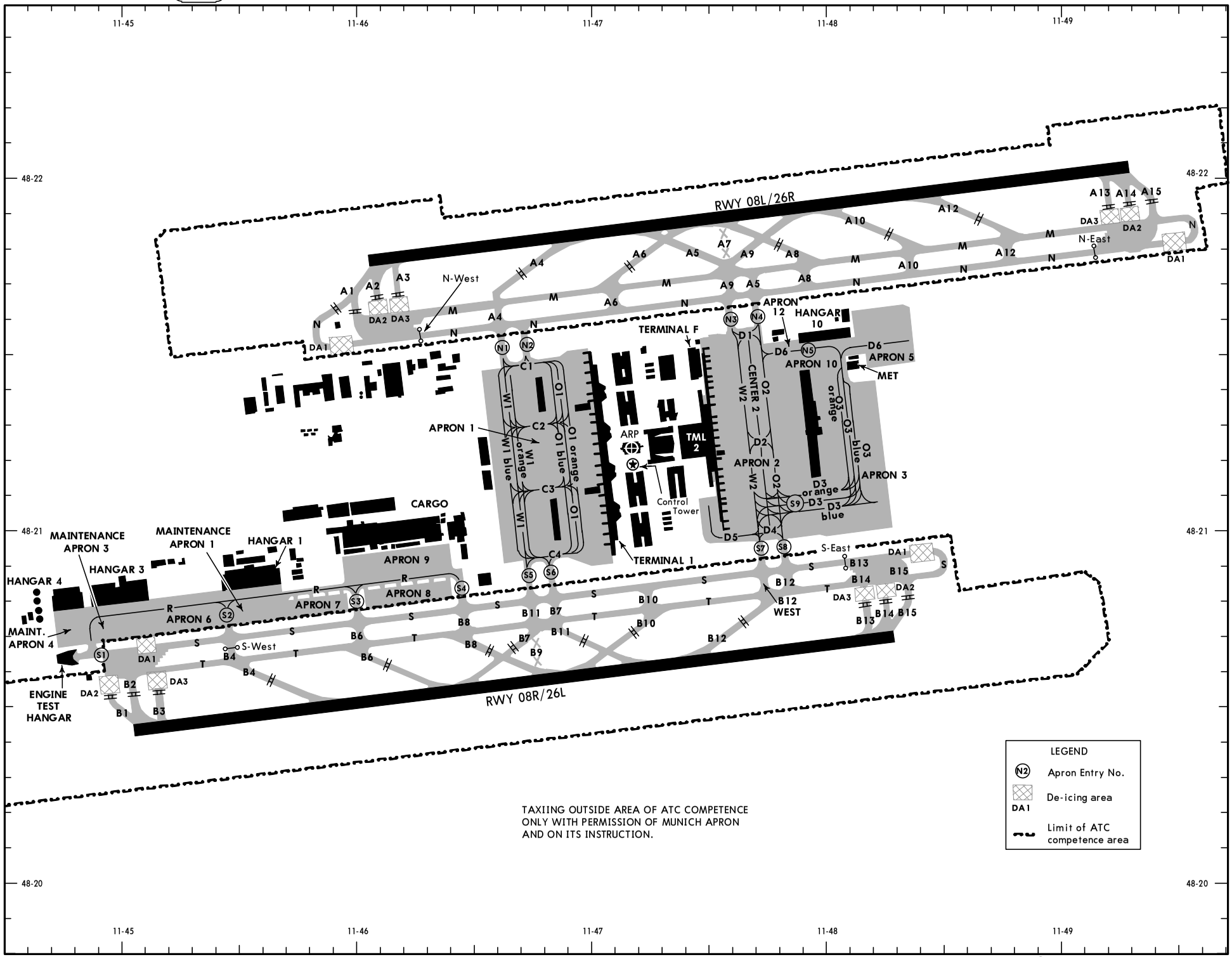
All Rwys
LVP must be in Force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

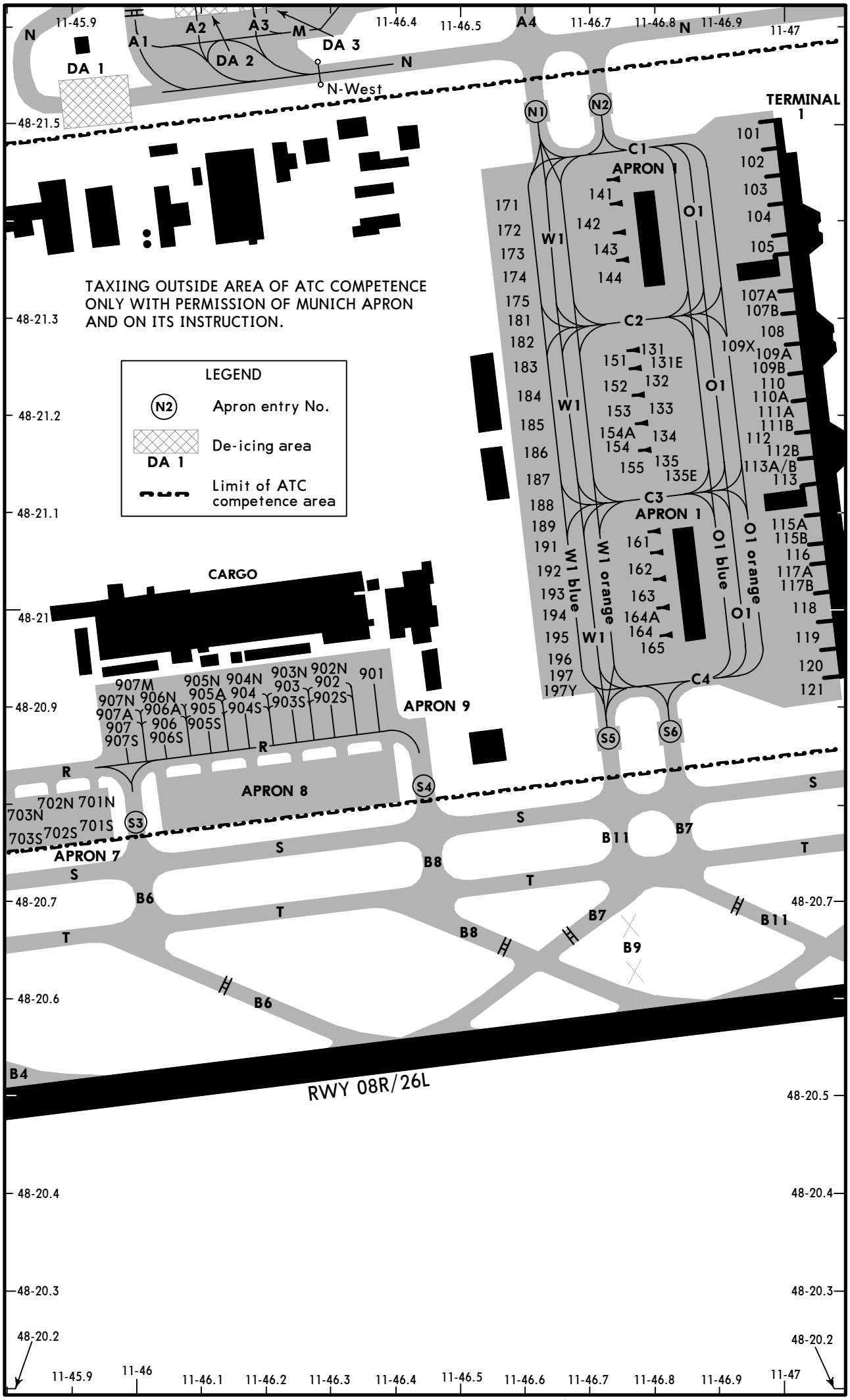
CHANGES: Usable lengths.

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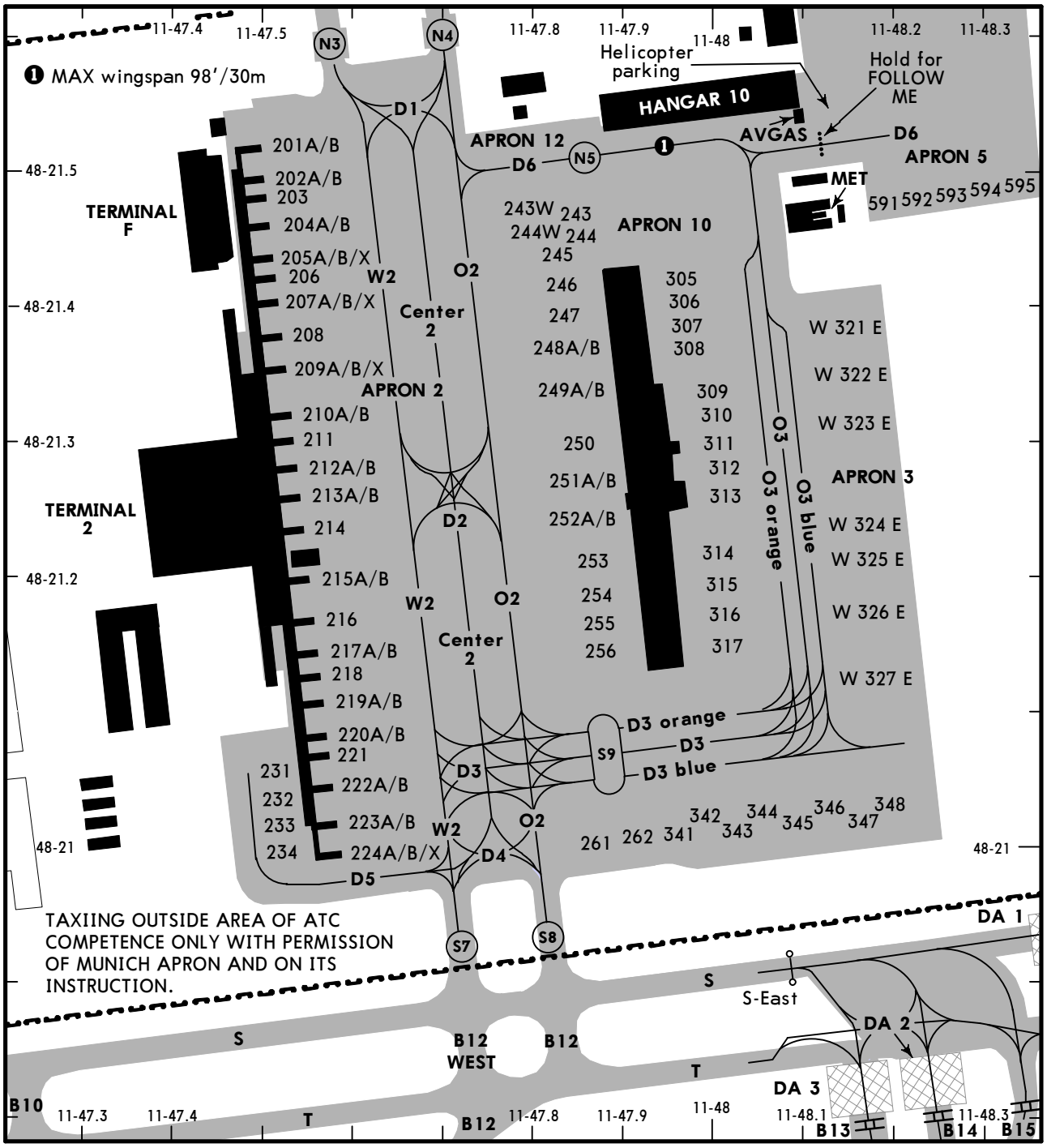
CHANGES: Aprons 5 & 12. ATC competence area.

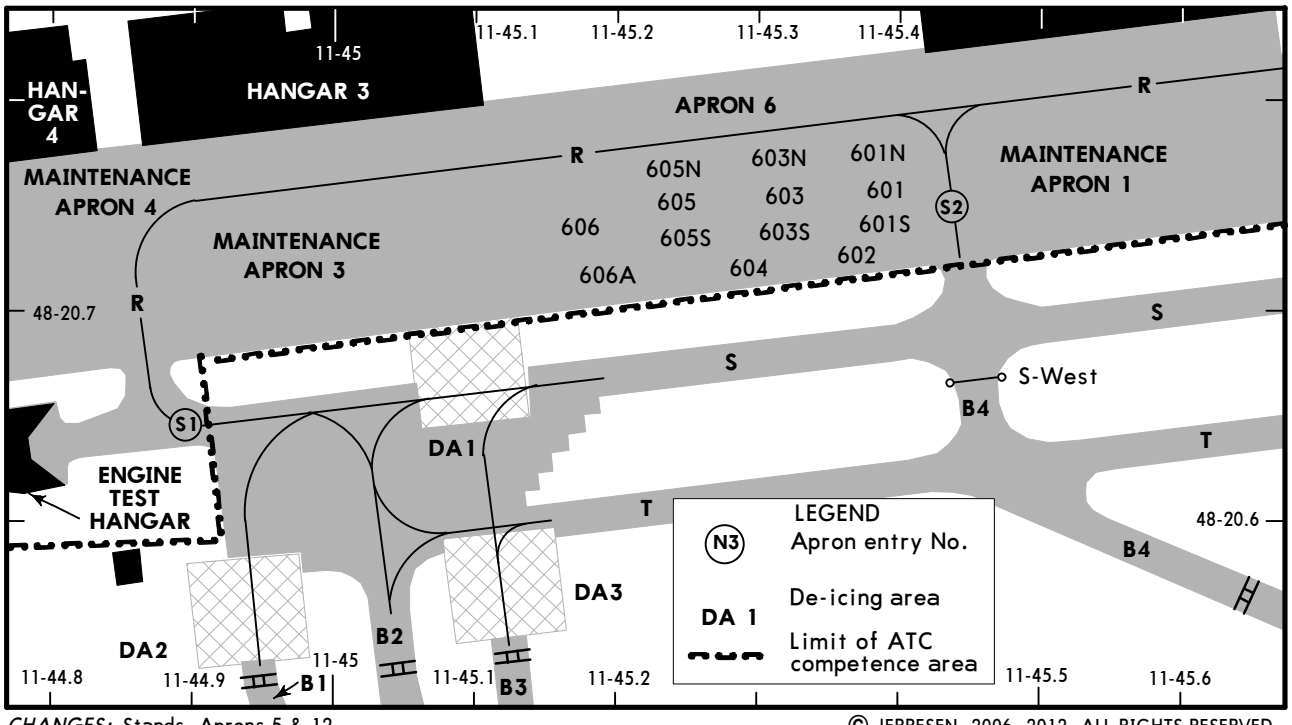
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CHANGES: Stands. Apron 8.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
101, 102	N48 21.5 E011 47.0	251B thru 255	N48 21.2 E011 47.9
103 thru 105	N48 21.4 E011 47.0	256	N48 21.1 E011 47.9
107A thru 109B	N48 21.3 E011 47.0	261, 262	N48 21.0 E011 47.9
110 thru 112	N48 21.2 E011 47.0	305 thru 308	N48 21.4 E011 48.0
113A thru 116	N48 21.1 E011 47.0	309 thru 312	N48 21.3 E011 48.0
117A, 117B	N48 21.0 E011 47.0	313 thru 316	N48 21.2 E011 48.0
118, 119	N48 21.0 E011 47.1	317	N48 21.1 E011 48.0
120	N48 20.9 E011 47.1	321W/E	N48 21.4 E011 48.1
121	N48 21.0 E011 47.1	322W/E, 323W/E	N48 21.3 E011 48.2
131	N48 21.3 E011 46.8	324E thru 326W	N48 21.2 E011 48.2
132 thru 135	N48 21.2 E011 46.8	327W/E	N48 21.1 E011 48.2
141 thru 143	N48 21.4 E011 46.7	341 thru 343	N48 21.0 E011 48.0
144, 151	N48 21.3 E011 46.8	344 thru 346	N48 21.0 E011 48.1
152 thru 155	N48 21.2 E011 46.8	347, 348	N48 21.0 E011 48.2
161	N48 21.1 E011 46.8	591, 592	N48 21.5 E011 48.2
162 thru 165	N48 21.0 E011 46.8	593 thru 595	N48 21.5 E011 48.3
171 thru 173	N48 21.4 E011 46.6	601	N48 20.8 E011 45.4
174 thru 183	N48 21.3 E011 46.6	602 thru 604	N48 20.7 E011 45.3
184 thru 186	N48 21.2 E011 46.6	605, 606	N48 20.7 E011 45.2
187 thru 191	N48 21.1 E011 46.6	701N/S, 702N/S	N48 20.8 E011 45.9
192 thru 196	N48 21.0 E011 46.6	703N/S	N48 20.8 E011 45.8
197	N48 20.9 E011 46.6	901	N48 20.9 E011 46.4
201A thru 203	N48 21.5 E011 47.5	902	N48 20.9 E011 46.3
204A thru 205A	N48 21.5 E011 47.6	903, 904	N48 20.9 E011 46.2
205B thru 209B	N48 21.4 E011 47.6	905, 906	N48 20.9 E011 46.1
210A thru 214	N48 21.3 E011 47.6	907	N48 20.9 E011 46.0
215A thru 217B	N48 21.2 E011 47.6		
218 thru 222B	N48 21.1 E011 47.6		
223A thru 224B	N48 21.0 E011 47.6		
231	N48 21.1 E011 47.5		
232 thru 234	N48 21.0 E011 47.5		
243	N48 21.5 E011 47.8		
244 thru 248A	N48 21.4 E011 47.8		
248B thru 250	N48 21.3 E011 47.8		
251A	N48 21.3 E011 47.9		
251B thru 255	N48 21.2 E011 47.9		

CHANGES: Stands.

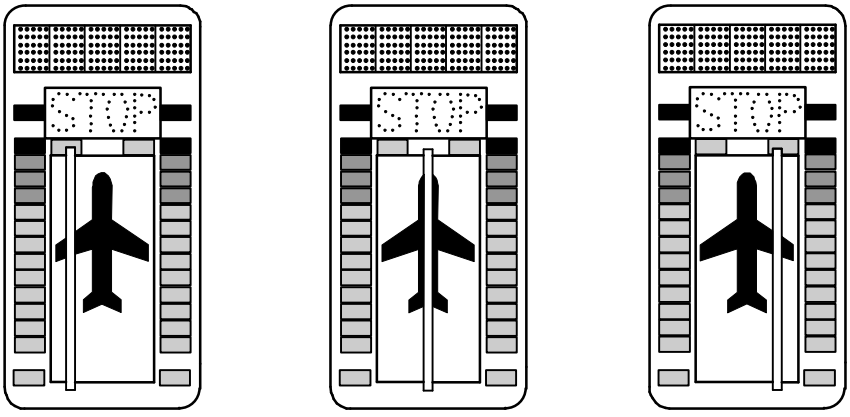
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VISUAL DOCKING GUIDANCE SYSTEM (SAFEGATE)

STANDARD DOCKING PROCEDURE

1. Line-up to center acft symbol with green reference bar.
2. Check correct acft type is flashing on display.
3. Check green bottom lights are flashing.
4. When nosegear passes over first sensor, acft type display and green bottom lights will both change from flashing to steady.
5. Green closing rate lights will move upwards in relation to actual acft speed.
6. At 10'/3m before the STOP position yellow lights will illuminate.
7. Reaching the STOP position, all four red lights will illuminate current with the displayed command "STOP".
8. If correctly positioned "OK" is displayed. Beyond 3'/1m of the nominal STOP position, a warning will be displayed in a flashing mode "TOO FAR".

EMERGENCY STOP: All four red STOP position lights and "STOP" will flash.



TURN LEFT ON CENTERLINE TURN RIGHT

CHANGES: None.

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STRAIGHT-IN RWY		A	B	C	D
08L	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**1567′**(100′)	**1567′**(100′)	**1567′**(100′)	**1567′**(100′)
		RA103′R300m	**RA103′R300m**	**RA103′R300m**	**RA103′R300m**
	ILS	**1667′**(200′)	**1667′**(200′)	**1667′**(200′)	**1667′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1880′**(413′)	**1880′**(413′)	**1880′**(413′)	**1880′**(413′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**1920′**(453′)	**1920′**(453′)	**1920′**(453′)	**1920′**(453′)
	LNAV/VNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**1980′**(513′)	**1980′**(513′)	**1980′**(513′)	**1980′**(513′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**2050′**(583′)	**2050′**(583′)	**2050′**(583′)	**2050′**(583′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
08R	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**1586′**(100′)	**1586′**(100′)	**1586′**(100′)	**1586′**(100′)
		RA101′R300m	**RA101′R300m**	**RA101′R300m**	**RA101′R300m**
	ILS	**1686′**(200′)	**1686′**(200′)	**1686′**(200′)	**1686′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1890′**(404′)	**1890′**(404′)	**1890′**(404′)	**1890′**(404′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**2030′**(544′)	**2030′**(544′)	**2030′**(544′)	**2030′**(544′)
	LNAV/VNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**2030′**(544′)	**2030′**(544′)	**2030′**(544′)	**2030′**(544′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**2050′**(564′)	**2050′**(564′)	**2050′**(564′)	**2050′**(564′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

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MUNICH, GERMANY

MUNICH

STRAIGHT-IN RWY		A	B	C	D
26L	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**1570′**(100′)	**1570′**(100′)	**1570′**(100′)	**1570′**(100′)
		RA106′ R300m	**RA106′ R300m**	**RA106′ R300m**	**RA106′ R300m**
	ILS	**1670′**(200′)	**1670′**(200′)	**1670′**(200′)	**1670′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1890′**(420′)	**1890′**(420′)	**1890′**(420′)	**1890′**(420′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**1920′**(450′)	**1920′**(450′)	**1920′**(450′)	**1920′**(450′)
	LNAV/VNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**1980′**(510′)	**1980′**(510′)	**1980′**(510′)	**1980′**(510′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**2050′**(580′)	**2050′**(580′)	**2050′**(580′)	**2050′**(580′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
26R	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**1549′**(100′)	**1549′**(100′)	**1549′**(100′)	**1549′**(100′)
		RA105′ R300m	**RA105′ R300m**	**RA105′ R300m**	**RA105′ R300m**
	ILS	**1649′**(200′)	**1649′**(200′)	**1649′**(200′)	**1649′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1860′**(411′)	**1860′**(411′)	**1860′**(411′)	**1860′**(411′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**2030′**(581′)	**2030′**(581′)	**2030′**(581′)	**2030′**(581′)
	LNAV/VNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**2030′**(581′)	**2030′**(581′)	**2030′**(581′)	**2030′**(581′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**2050′**(601′)	**2050′**(601′)	**2050′**(601′)	**2050′**(601′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

TAKE-OFF RWY 08L/R, 26L/R

LVP must be in Force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: New page.

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EDDM/MUC
MUNICH

JEPPESEN
20 JAN 12 (11-1)

MUNICH, GERMANY
ILS or LOC Rwy 08L

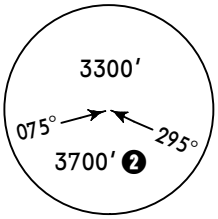
*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	128.02	123.9	118.82	118.7	121.97

BRIEFING STRIP ™

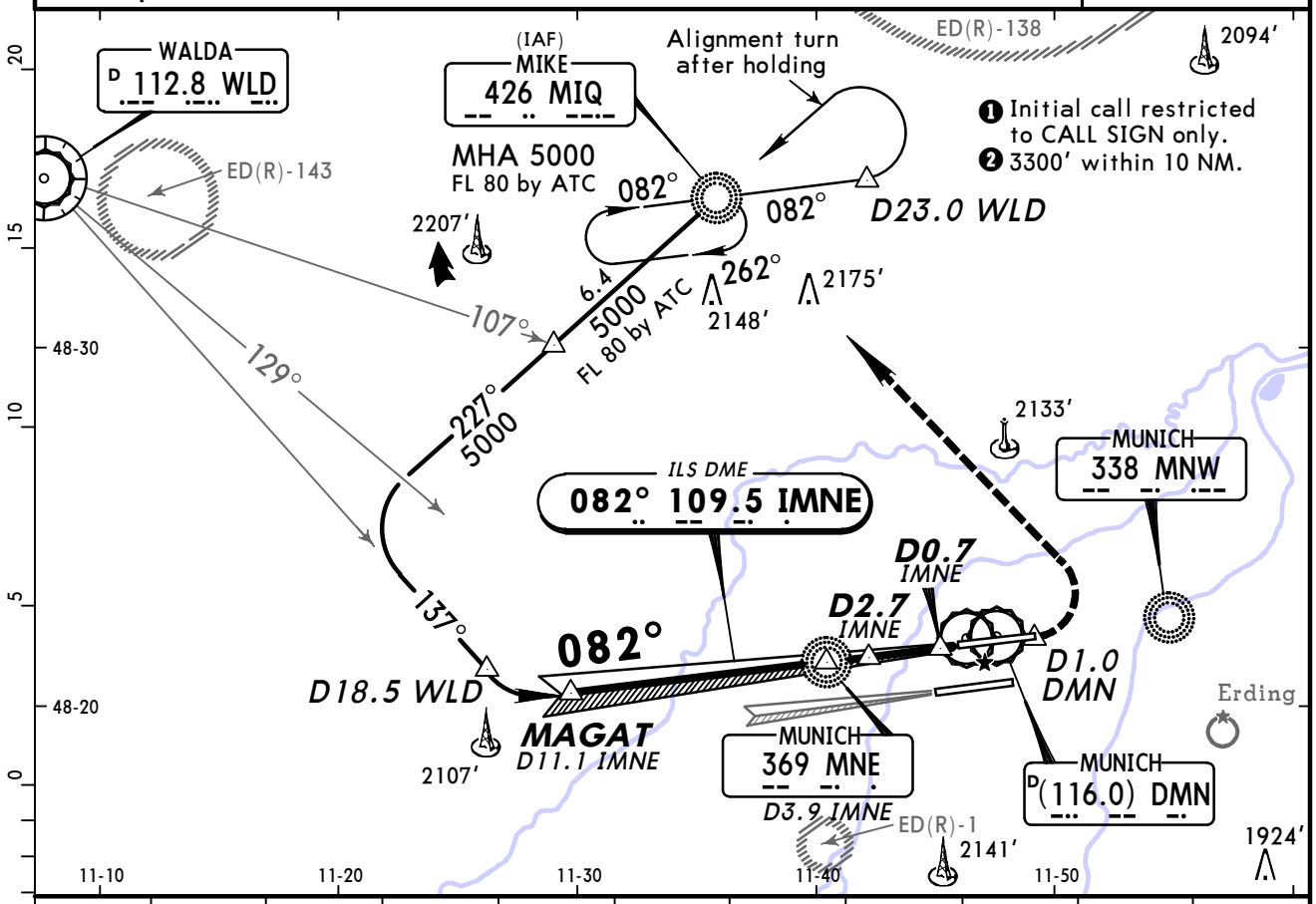
LOC IMNE 109.5	Final Apch Crs 082°	GS MNE Lctr 2700′ (1233′)	ILS DA(H) 1667′ (200′)	Apt Elev 1487′ RWY 1467′

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 East of DMN or 1900′, whichever is later, then turn LEFT to MIQ NDB climbing to 5000′.

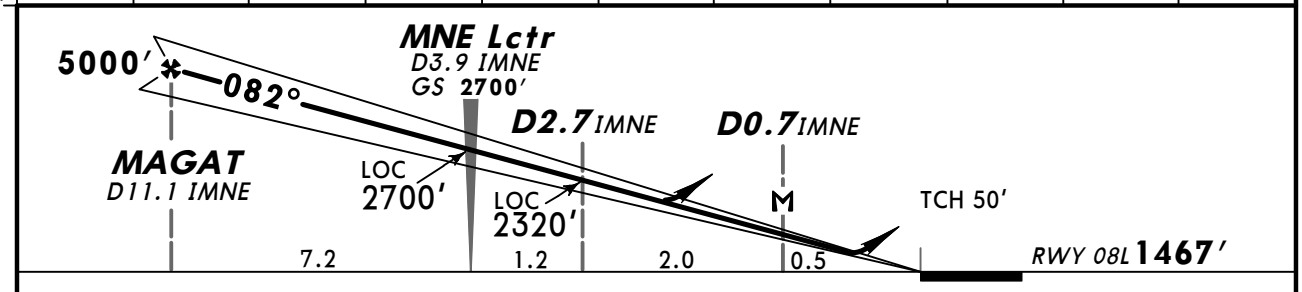
Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′
DME required.



MSA
MNW Lctr



LOC (GS out)	IMNE DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	4960′	4640′	4320′	4010′	3690′	3370′	3050′	2730′	2410′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at D0.7 IMNE						

ALSF-II
PAPI

D1.0 East of DMN whichever is later — **1900′**

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08L**

	ILS DA(H) 1667′ (200′)			LOC (GS out) DA(H) 1880′ (413′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C					RVR 1900m
D					

CHANGES: MSA.

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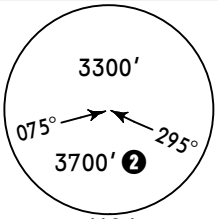
*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	128.02	123.9	118.82	118.7	121.97

BRIEFING STRIP™

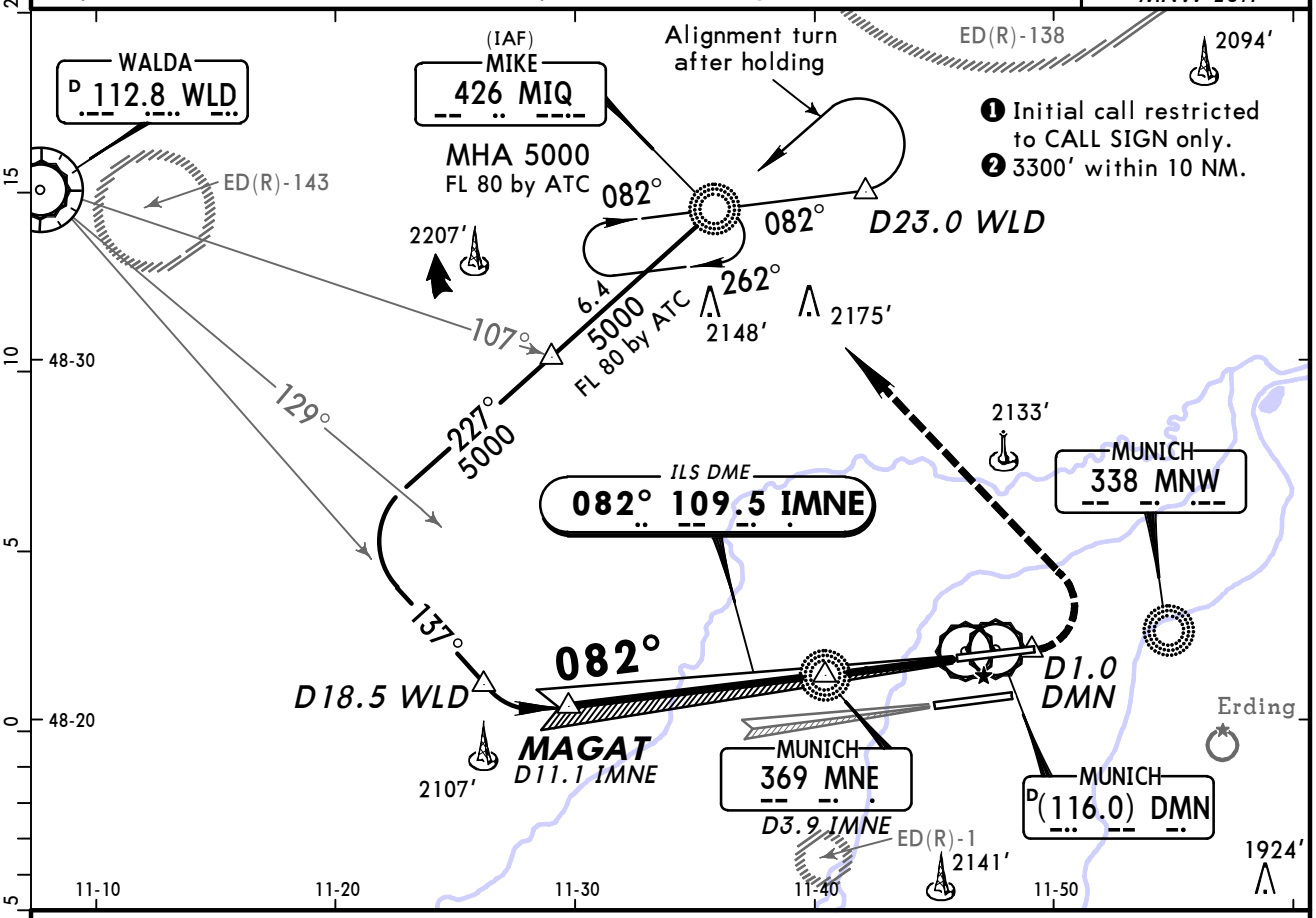
LOC	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev 1487′
IMNE 109.5	082°	MNE Lctr 2700′ (1233′)	Refer to Minimums	RWY 1467′

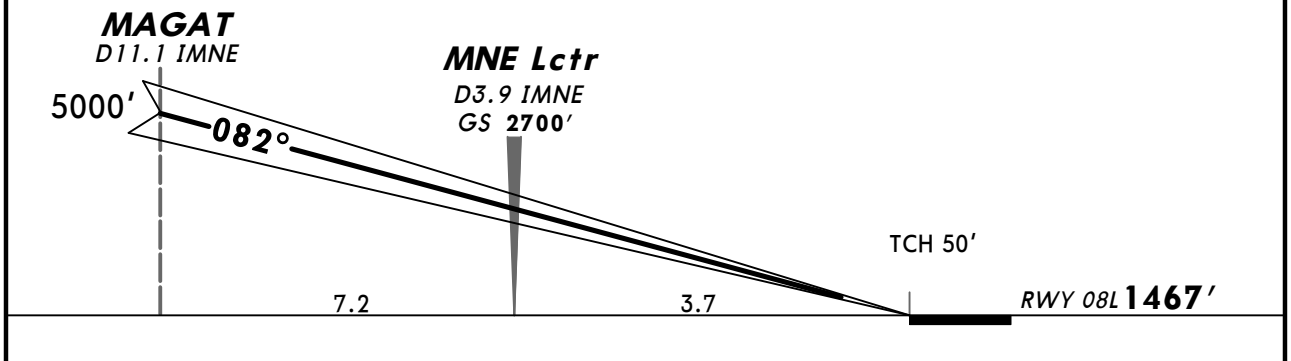
MISSED APCH: Climb STRAIGHT AHEAD to D1.0 East of DMN or 1900′, whichever is later, then turn LEFT to MIQ NDB climbing to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′
1. Special Aircrew & Acft Certification Required. 2. **DME required.**



MSA
MNW Lctr





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
PAPI

D1.0 East of DMN whichever is later 1900′

Standard STRAIGHT-IN LANDING RWY **08L**

CAT IIIA ILS	CAT II ILS ABCD
DH 50′	RA 103′ DA(H) 1567′ (100′)
RVR 200m	RVR 300m ❶

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

PANS OPS 4

CHANGES: MSA. Minimums.

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EDDM/MUC
MUNICH

JEPPESEN
20 JAN 12 (11-2)

MUNICH, GERMANY
ILS or LOC Rwy 08R

*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	120.77	127.95	132.3	120.5	121.82

BRIEFING STRIP™

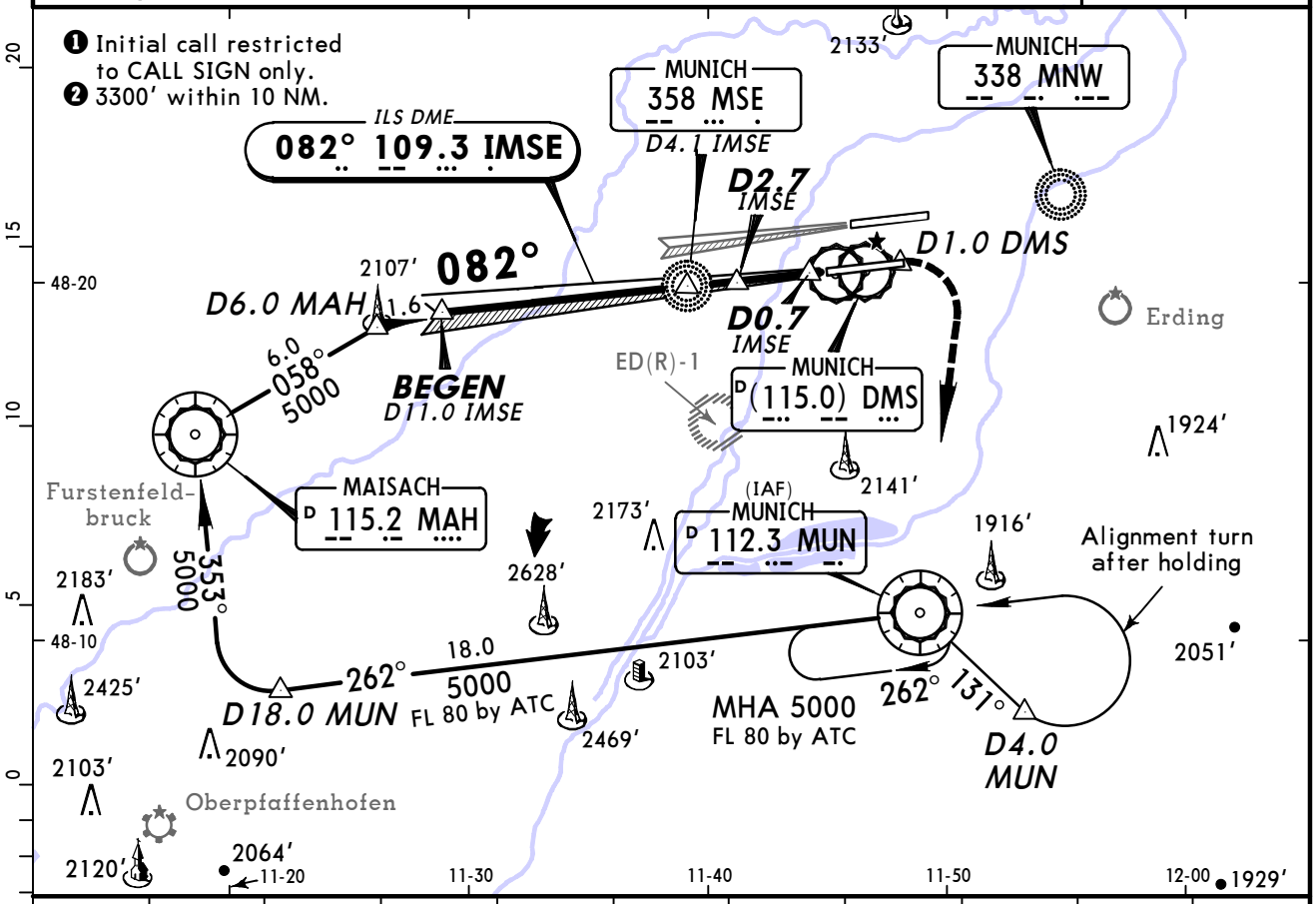
LOC	Final Apch Crs	GS	ILS	Apt Elev 1487′
IMSE		MSE Lctr	DA(H)	RWY 1486′
109.3	082°	2780′ (1294′)	1686′ (200′)	

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 East of DMS or 1900′, whichever is later, then turn RIGHT to MUN VOR climbing to 5000′.

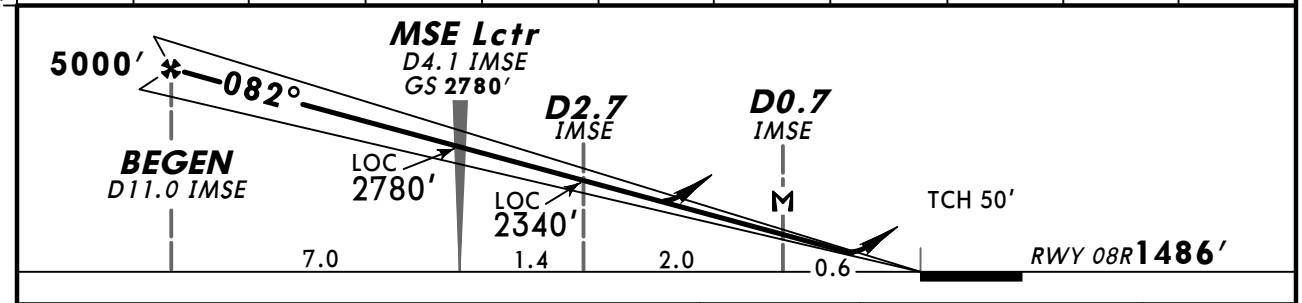
Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′
DME required.

3300′
075° 295°
3700′ ❷
MSA
MNW Lctr

❶ Initial call restricted to CALL SIGN only.
❷ 3300′ within 10 NM.



LOC (GS out)	IMSE DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	4660′	4340′	4020′	3710′	3390′	3070′	2750′	2430′	2110′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at D0.7 IMSE						

ALSF-II
PAPI

D1.0 East of DMS whichever is later 1900′

Standard STRAIGHT-IN LANDING RWY **08R**

	ILS			LOC (GS out)	
	DA(H) 1686′ (200′)			DA(H) 1890′ (404′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C					RVR 1900m
D					

PANS OPS 4

CHANGES: MSA.

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EDDM/MUC
MUNICH

JEPPESEN
20 JAN 12 (11-2A)

MUNICH, GERMANY
CAT II/III ILS Rwy 08R

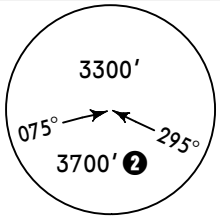
*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	120.77	127.95	132.3	120.5	121.82

BRIEFING STRIP™

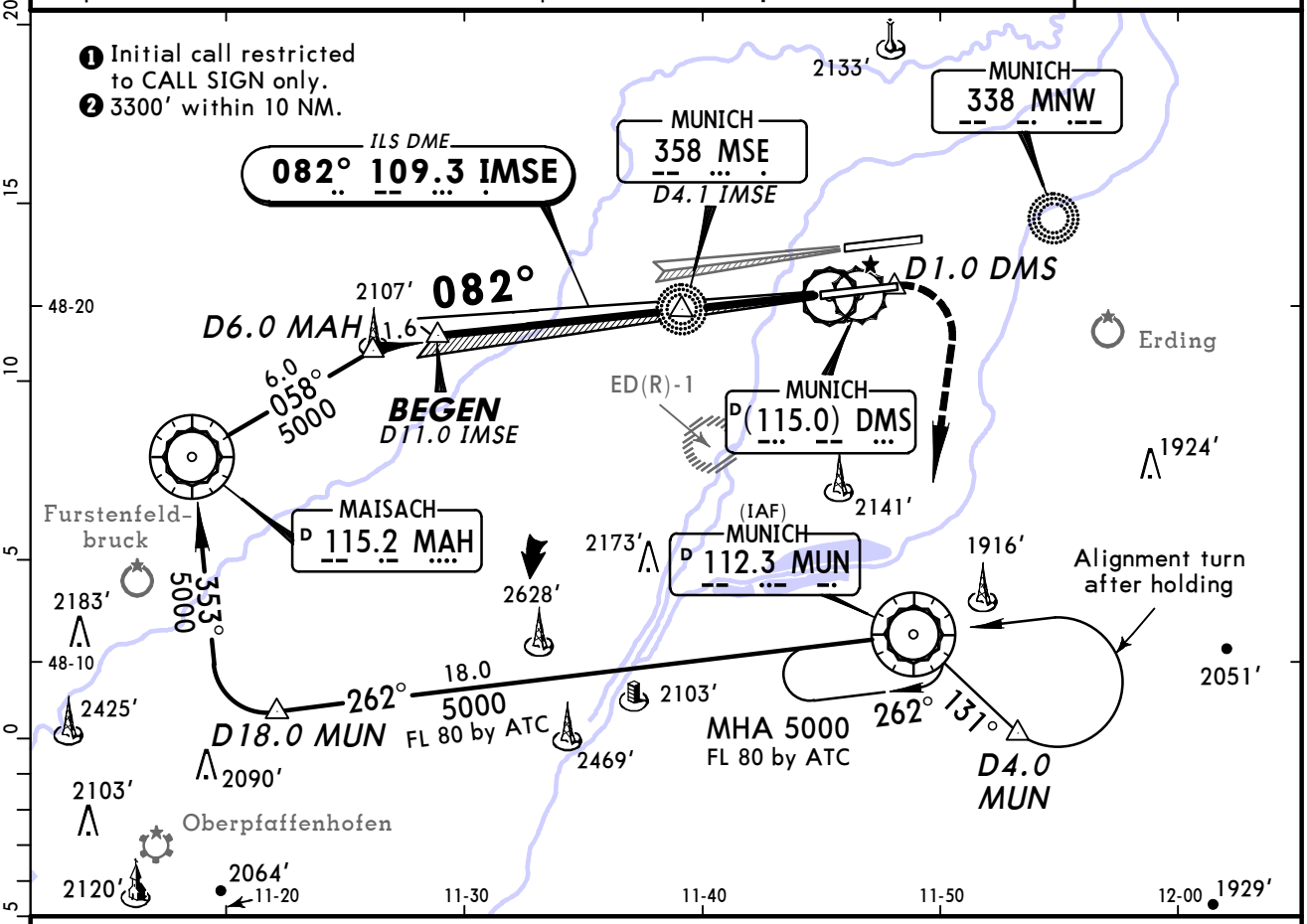
LOC	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev 1487′
IMSE	082°	MSE Lctr	Refer to Minimums	RWY 1486′
109.3		2780′ (1294′)		

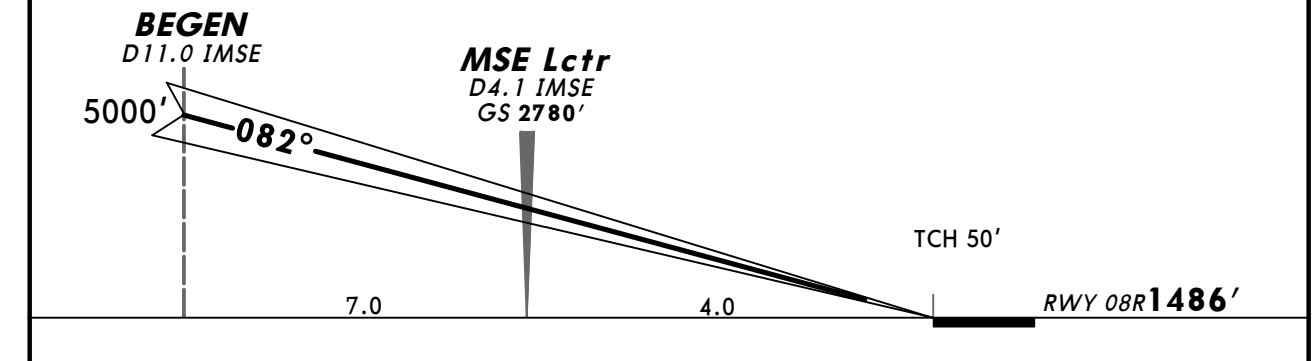
MISSED APCH: Climb STRAIGHT AHEAD to D1.0 East of DMS or 1900′, whichever is later, then turn RIGHT to MUN VOR climbing to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′
1. Special Aircrew & Acft Certification Required. 2. **DME required.**



MSA MNW Lctr





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
PAPI

D1.0 East of DMS
1900′ whichever is later

Standard STRAIGHT-IN LANDING RWY **08R**

CAT IIIA ILS	CAT II ILS ABCD
DH 50′	RA 101′ DA(H) 1586′ (100′)
RVR 200m	RVR 300m ❶

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

PANS OPS 4

CHANGES: MSA. Minimums.

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EDDM/MUC
MUNICH

JEPPESEN
20 JAN 12 (11-3)

MUNICH, GERMANY
ILS or LOC Rwy 26L

*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	120.77	127.95	132.3	120.5	121.82

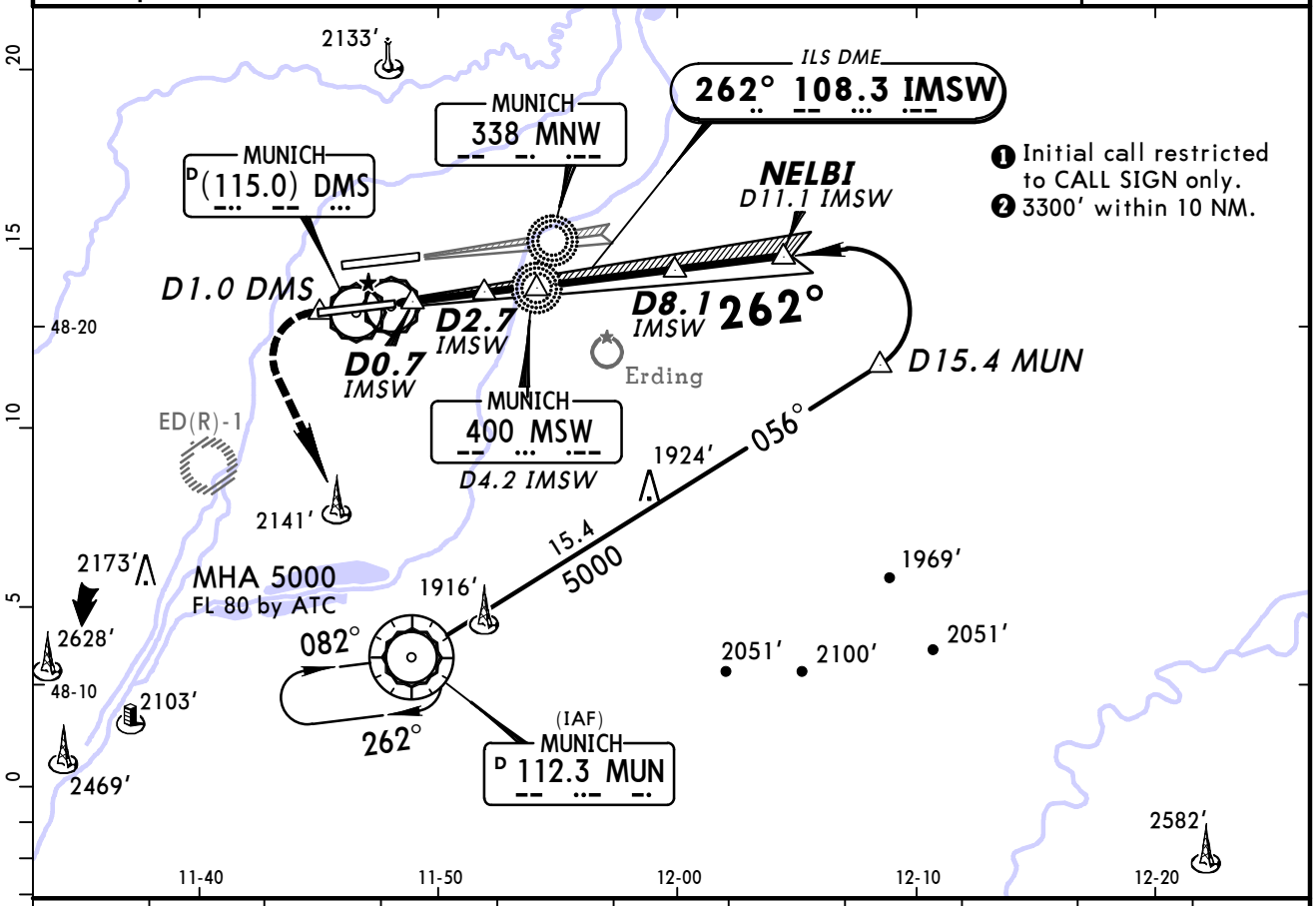
BRIEFING STRIP™

LOC	Final	GS	ILS	Apt Elev 1487′
IMSW	Apch Crs	MSW Lctr	DA(H)	RWY 1470′
108.3	262°	2800′ (1330′)	1670′ (200′)	

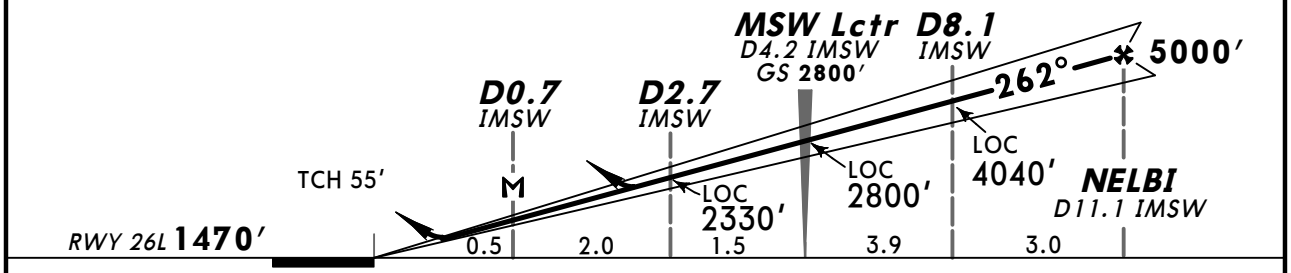
MISSED APCH: Climb STRAIGHT AHEAD to D1.0 West of DMS or 1900′, whichever is later, then turn LEFT to MUN VOR climbing to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′
DME required.

3300′
075° 295°
3700′ ❷
MSA
MNW Lctr



LOC (GS out)	IMSW DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
	ALTITUDE	2100′	2420′	2740′	3060′	3380′	3700′	4010′	4330′	4650′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at D0.7 IMSW						

ALSF-II
PAPI

D1.0 West of DMS whichever is later 1900′

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26L**

	ILS			LOC (GS out)	
	DA(H) 1670′ (200′)			DA(H) 1890′ (420′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C					RVR 1900m
D					

CHANGES: MSA.

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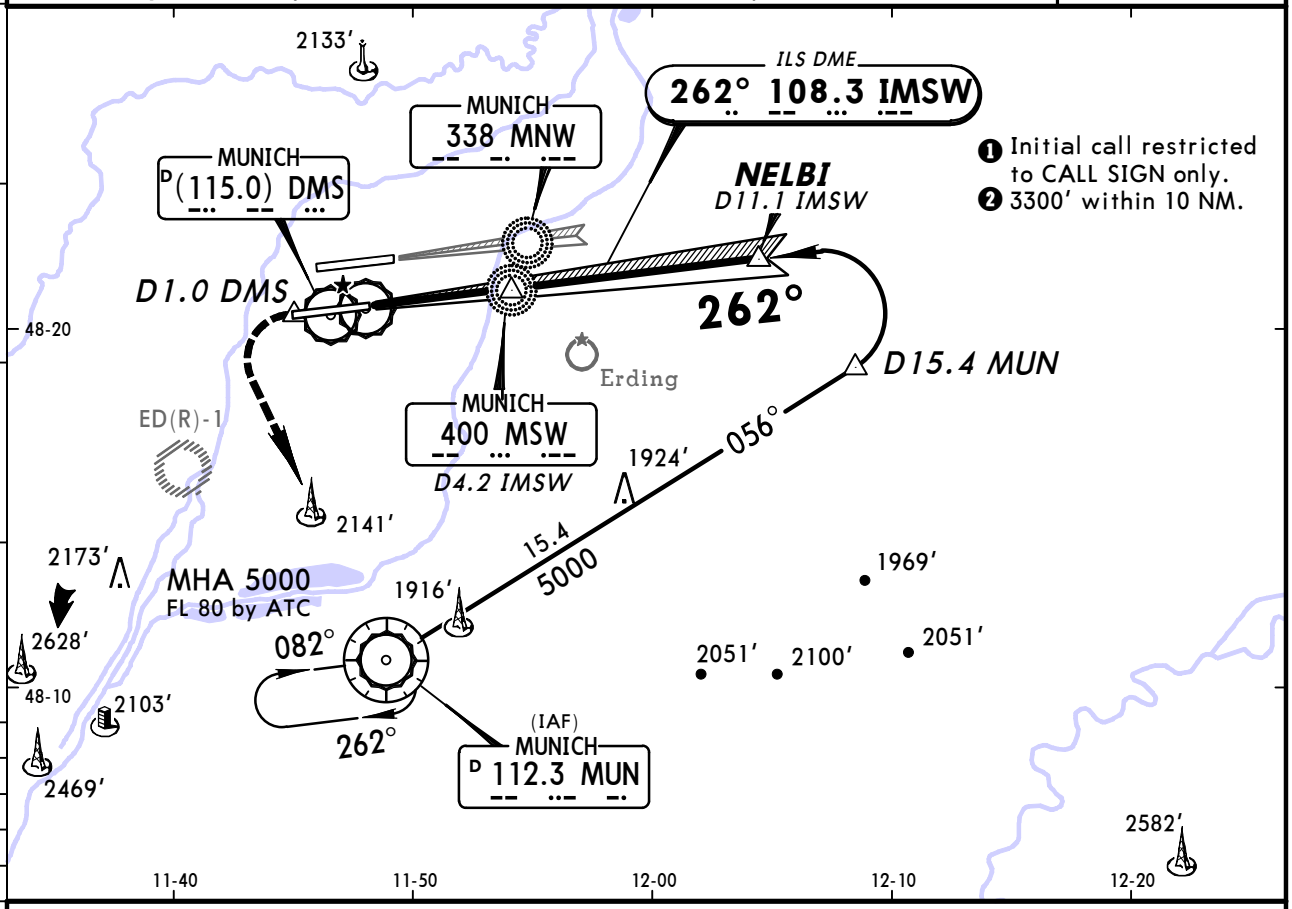
*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	120.77	127.95	132.3	120.5	121.82

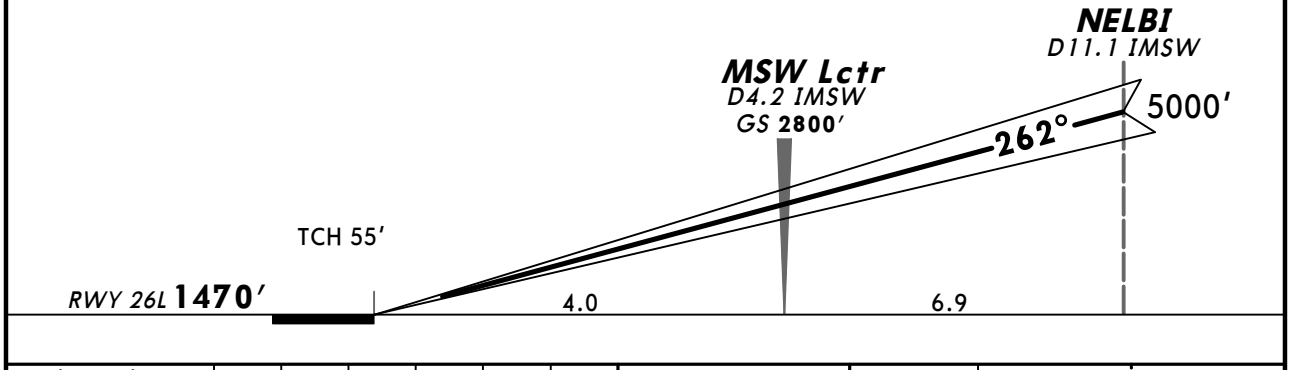
LOC IMSW	Final Apch Crs	GS MSW Lctr	CAT II & IIIA ILS	Apt Elev / RWY
108.3	262°	2800′ (1330′)	Refer to Minimums	1487′ / 1470′

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 West of DMS or 1900′, whichever is later, then turn LEFT to MUN VOR climbing to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′
1. DME required. 2. Special Aircrew & Acft Certification Required.

3300′
075° 295°
3700′ ❷
MSA
MNW Lctr





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II
PAPI

D1.0 West of DMS ▲ 1900′ ▲ whichever is later

Standard STRAIGHT-IN LANDING RWY **26L**

CAT IIIA ILS	CAT II ILS ABCD
DH 50′	RA 106′ DA(H) 1570′ (100′)
RVR 200m	RVR 300m ❶

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

PANS OPS 4

CHANGES: MSA. Minimums.

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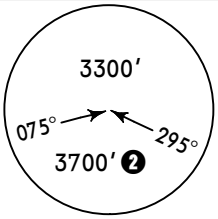
BRIEFING STRIP ™

*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	128.02	123.9	118.82	118.7	121.97

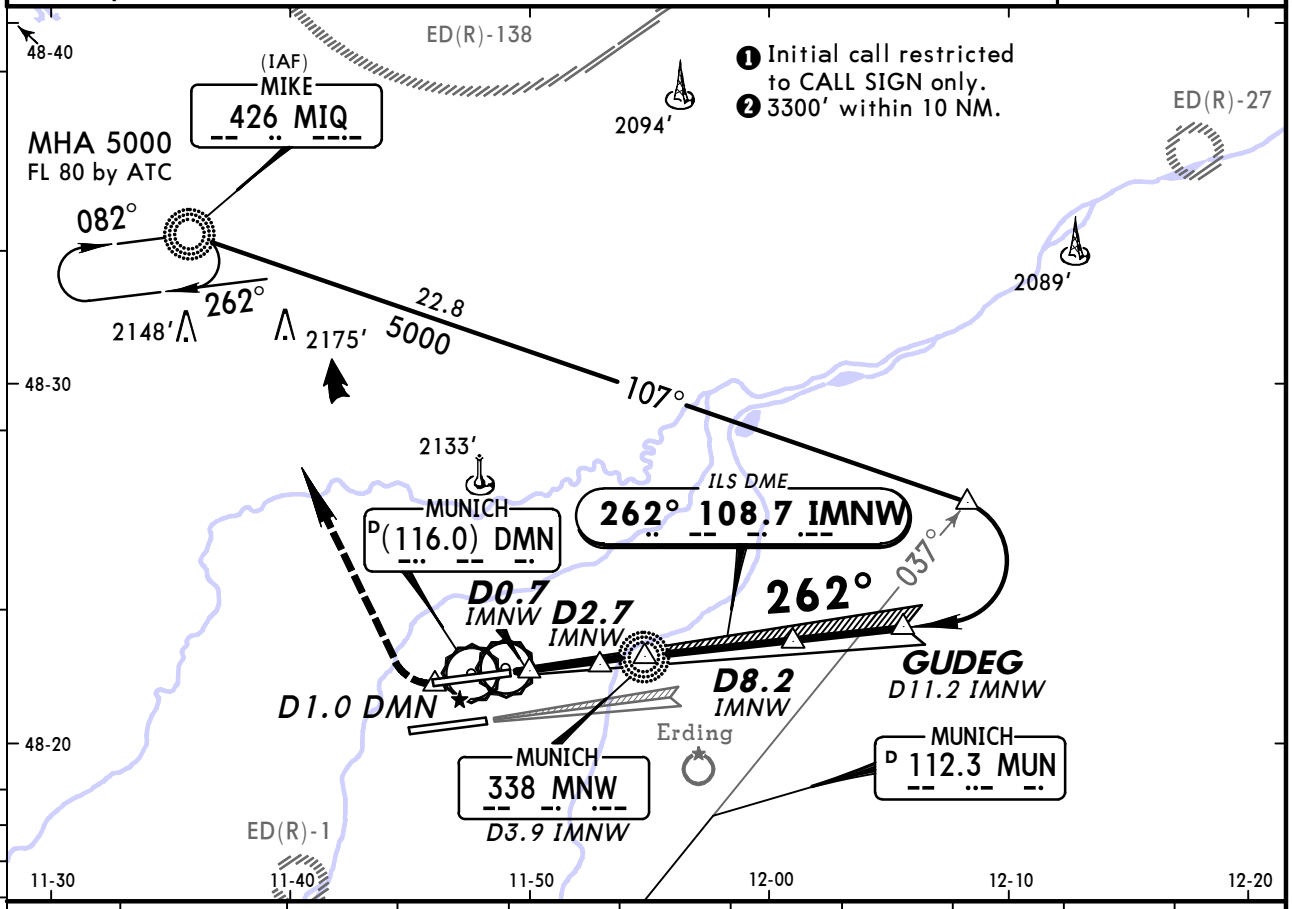
LOC	Final Apch Crs	GS	ILS	Apt Elev 1487′
IMNW		MNW Lctr	DA(H)	RWY 1449′
108.7	262°	2690′ (1241′)	1649′ (200′)	

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 West of DMN or 1900′, whichever is later, then turn RIGHT to MIQ NDB climbing to 5000′.

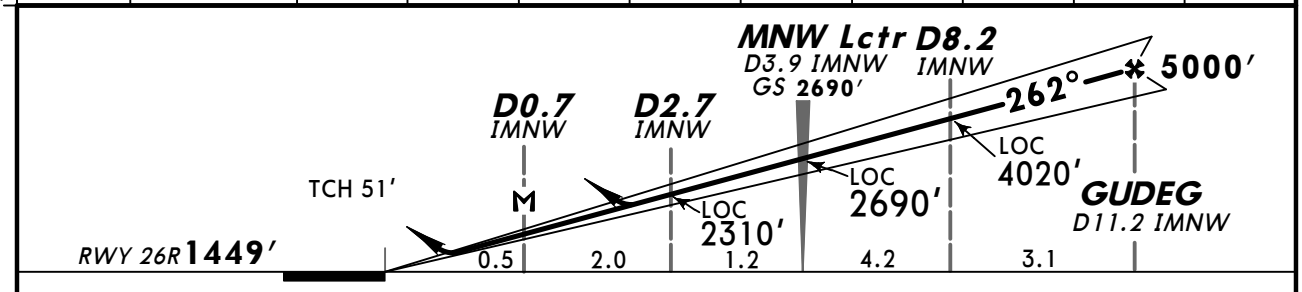
Alt Set: hPa (IN on req) Rwy Elev: 52 hPa Trans level: By ATC Trans alt: 5000′
DME required.



MSA
MNW Lctr



LOC (GS out)	IMNW DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
	ALTITUDE	2080′	2400′	2710′	3030′	3350′	3670′	3990′	4310′	4630′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at D0.7 IMNW						

ALSF-II
PAPI

D1.0 West of DMN whichever is later 1900′

Standard STRAIGHT-IN LANDING RWY **26R**

	ILS			LOC (GS out)	
	DA(H) 1649′ (200′)			DA(H) 1860′ (411′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C					RVR 1900m
D					

PANS OPS 4

CHANGES: MSA.

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EDDM/MUC
MUNICH

JEPPESEN
20 JAN 12 (11-4A)

MUNICH, GERMANY
CAT II/III ILS Rwy 26R

*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	128.02	123.9	118.82	118.7	121.97

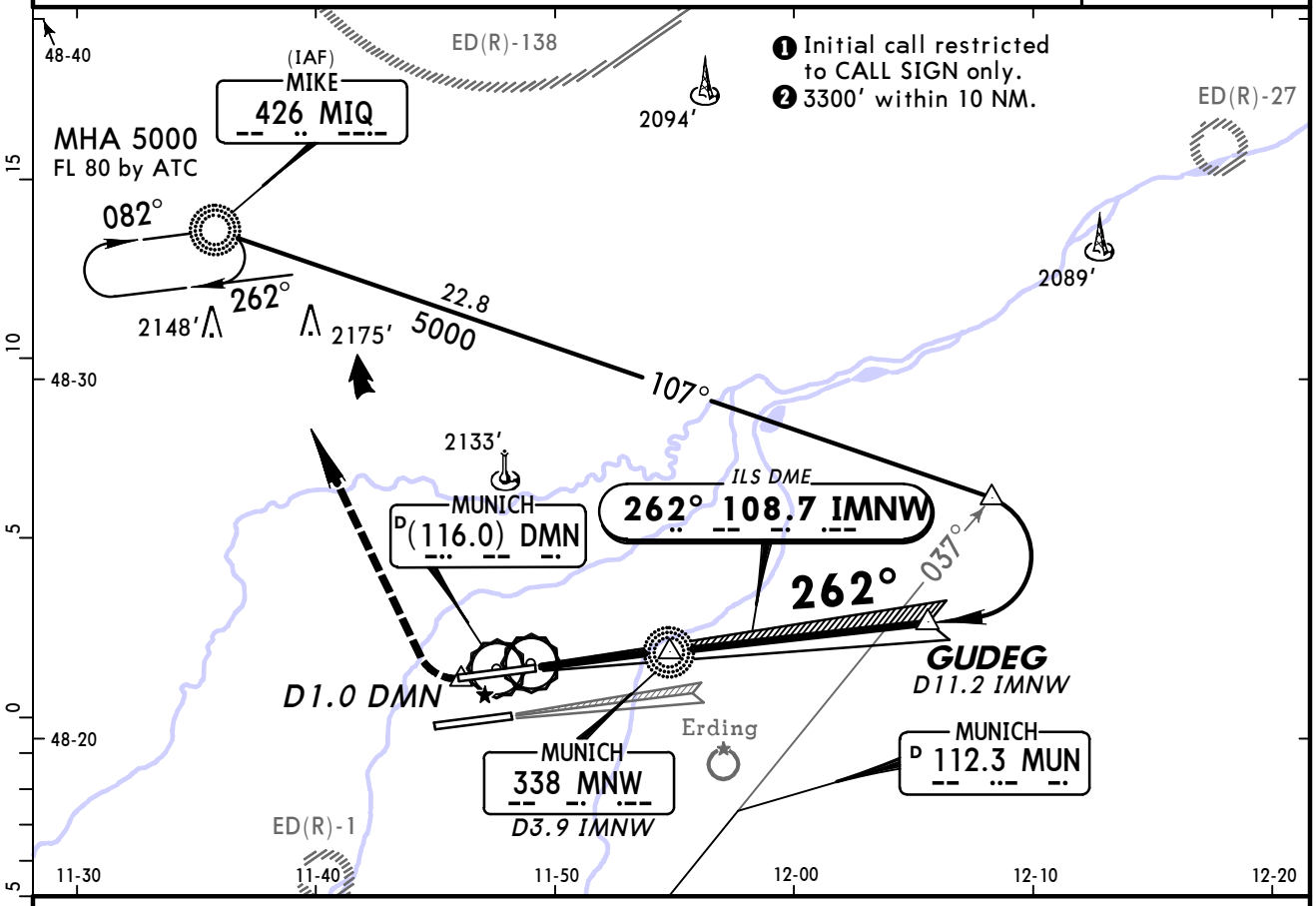
LOC	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev 1487′
IMNW	262°	MNW Lctr	Refer to Minimums	RWY 1449′
108.7		2690′ (1241′)		

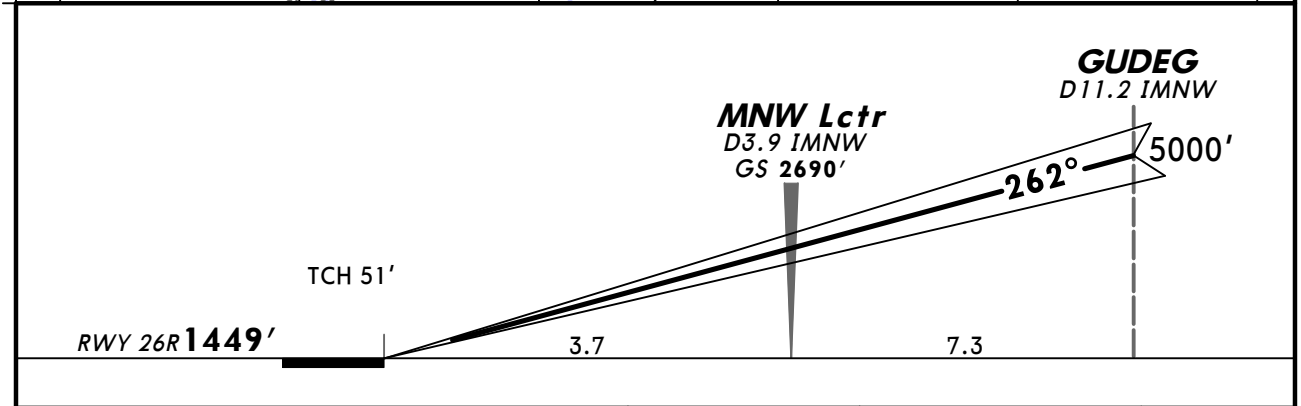
MISSED APCH: Climb STRAIGHT AHEAD to D1.0 West of DMN or 1900′, whichever is later, then turn RIGHT to MIQ NDB climbing to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 52 hPa Trans level: By ATC Trans alt: 5000′
1. DME required. 2. Special Aircrew & Acft Certification Required.

3300′
075° 295°
3700′ ❷
MSA
MNW Lctr

BRIEFING STRIP ™





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
PAPI

D1.0 West of DMN
1900′ whichever is later

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26R**

CAT IIIA ILS	CAT II ILS ABCD
DH 50′	RA 105′ DA(H) 1549′ (100′)
RVR 200m	RVR 300m ❶

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

CHANGES: MSA. Minimums.

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BRIEFING STRIP™

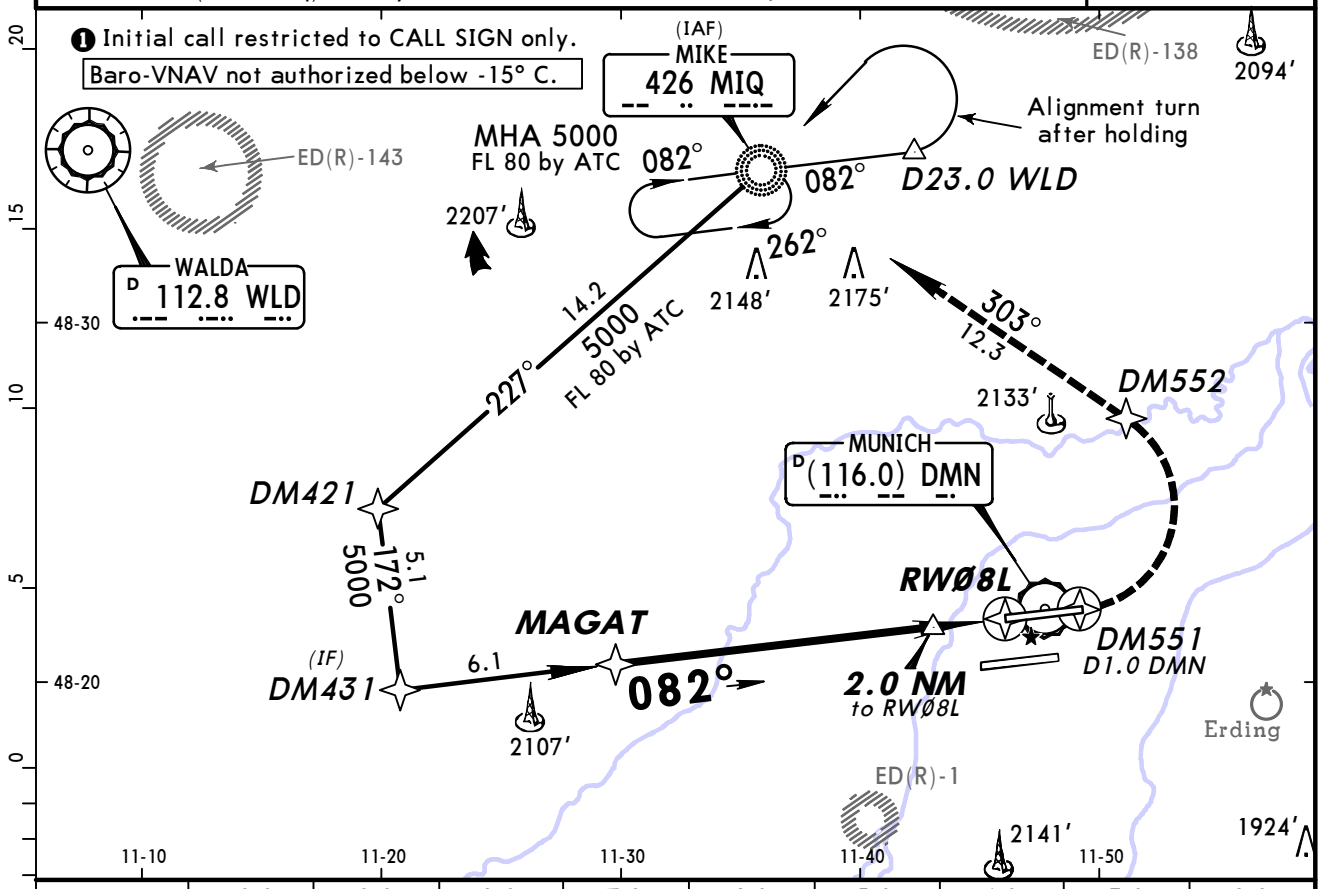
*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	128.02	123.9	118.82	118.7	121.97

RNAV	Final Apch Crs	Minimum Alt MAGAT	LNAV/VNAV DA(H)	Apt Elev 1487′ RWY 1467′
	082°	5000′ (3533′)	1920′ (453′)	

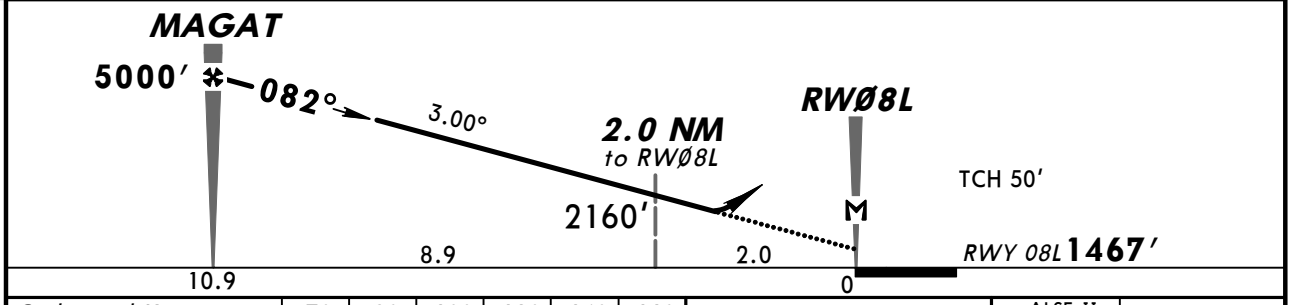
MISSED APCH: RNAV: Climb on 082° to DM551 or 1900′, whichever is later, then turn LEFT via DM552 onto 303° to NDB climbing to 5000′.
NON-RNAV: Climb STRAIGHT AHEAD to D1.0 East of DMN or 1900′, whichever is later, then turn LEFT to NDB climbing to 5000′.

3700′
MSA
ARP

Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′



Dist to RWØ8L	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	4710′	4390′	4070′	3750′	3430′	3110′	2800′	2480′	2160′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ8L							

ALSF-II
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08L**

	LNAV/VNAV DA(H) 1920′ (453′)		LNAV DA(H) 1980′ (513′)	
		ALS out		ALS out
A	RVR 1400m	RVR 1500m	RVR 1500m	
B				
C		CMV 2100m	RVR 1600m	CMV 2400m
D				

CHANGES: None.

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*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	120.77	127.95	132.3	120.5	121.82

BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt BEGEN	LNAV/VNAV DA(H)	Apt Elev 1487′ RWY 1486′
	082°	5000′ (3514′)	2030′ (544′)	

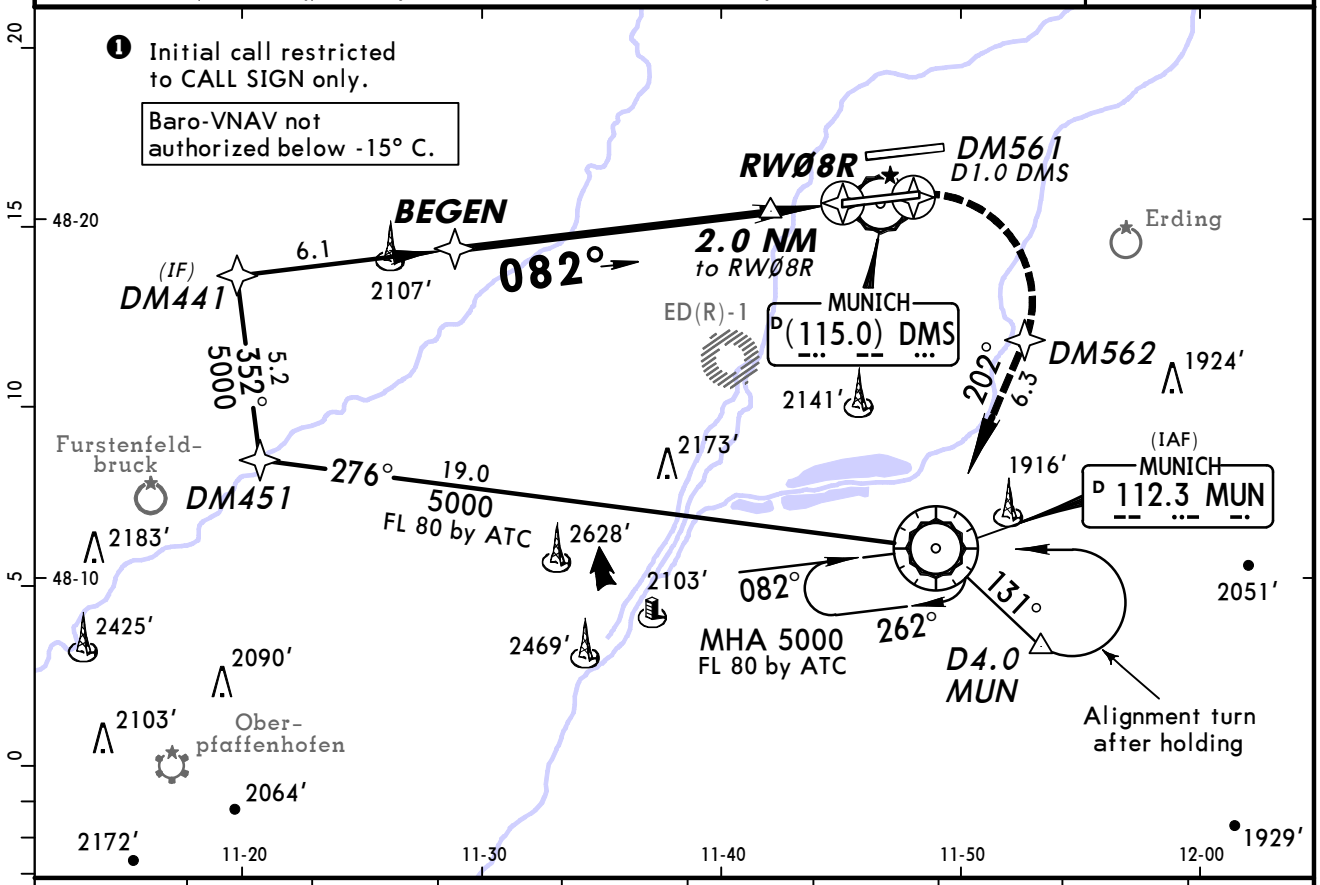
MISSED APCH: RNAV: Climb on 082° to DM561 or 1900′, whichever is later, then turn RIGHT via DM562 onto 202° to VOR climbing to 5000′.
NON-RNAV: Climb STRAIGHT AHEAD to D1.0 East of DMS or 1900′, whichever is later, then turn RIGHT to VOR climbing to 5000′.

3700′
MSA
ARP

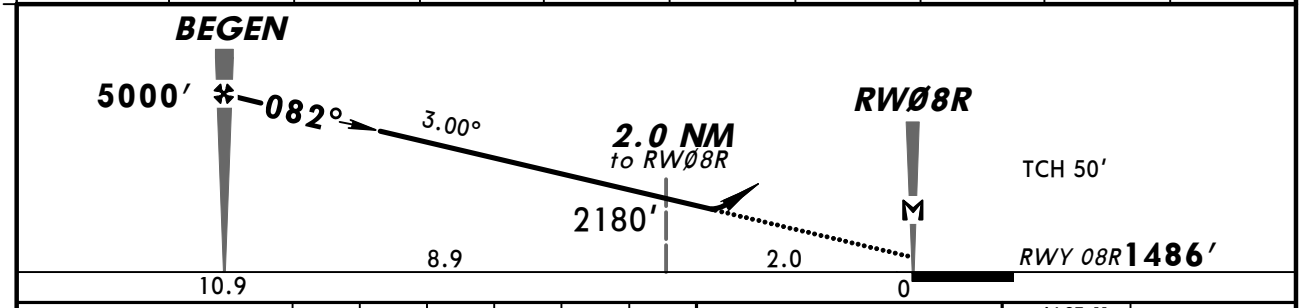
Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′

❶ Initial call restricted to CALL SIGN only.

Baro-VNAV not authorized below -15° C.



Dist to RWØ8R	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	4720′	4410′	4090′	3770′	3450′	3130′	2810′	2500′	2180′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ8R							

ALSF-II
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08R**

	LNAV/VNAV DA(H) 2030′ (544′)		LNAV DA(H) 2030′ (544′)	
		ALS out		ALS out
A B	RVR 1500m		RVR 1500m	
C D	RVR 1800m	CMV 2400m	RVR 1800m	CMV 2400m

CHANGES: Director frequency.

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EDDM/MUC
MUNICH

JEPPESEN
22 JAN 10 (12-3)

MUNICH, GERMANY
RNAV (GPS) Rwy 26L

*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	120.77	127.95	132.3	120.5	121.82

BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 1487′
	262°	NELBI 5000′ (3530′)	1920′ (450′)	RWY 1470′

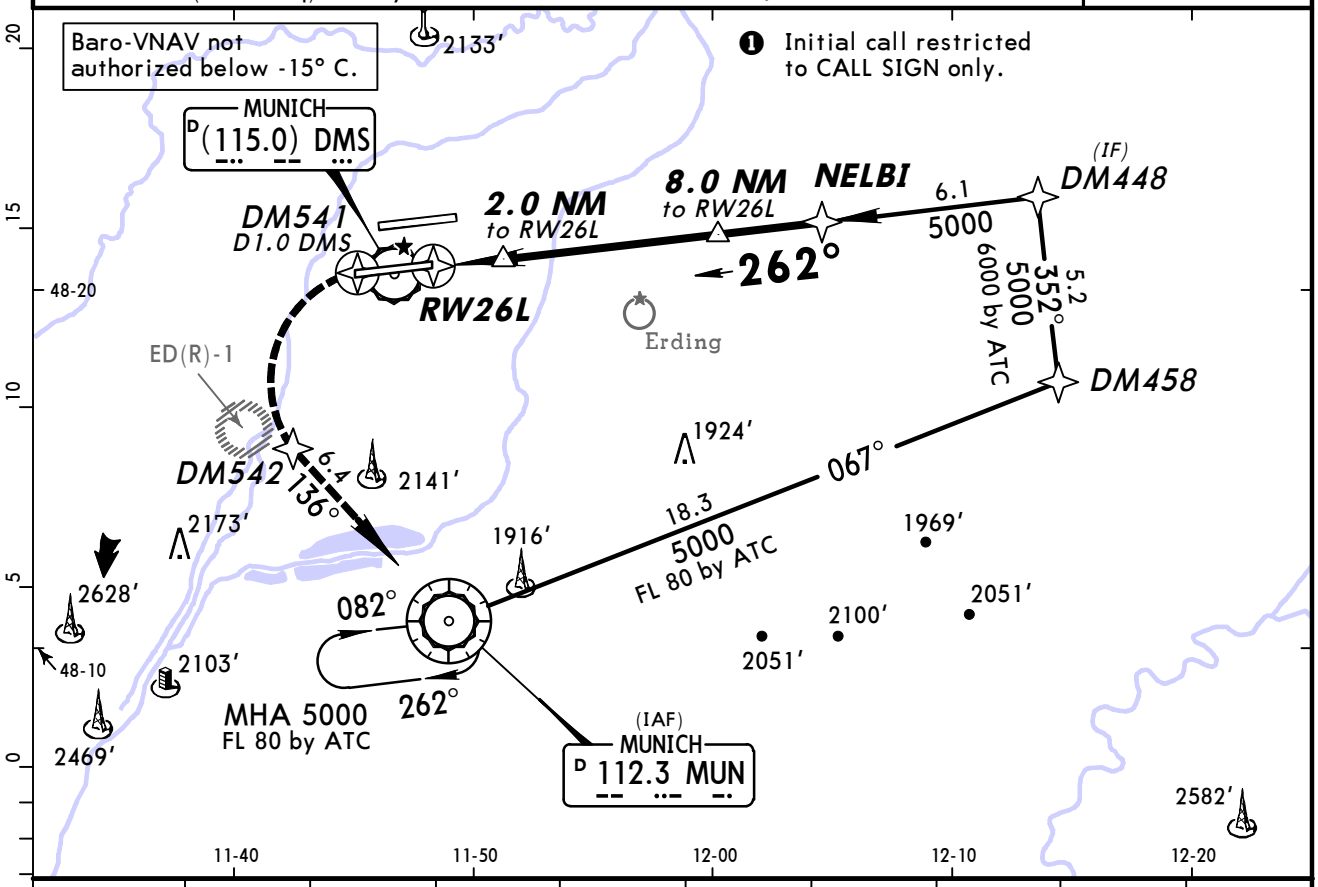
MISSED APCH: RNAV: Climb on 262° to DM541 or 1900′, whichever is later, then turn LEFT via DM542 onto 136° to VOR climbing to 5000′.
NON-RNAV: Climb STRAIGHT AHEAD to D1.0 West of DMS or 1900′, whichever is later, then turn LEFT to VOR climbing to 5000′.

3700′
MSA
ARP

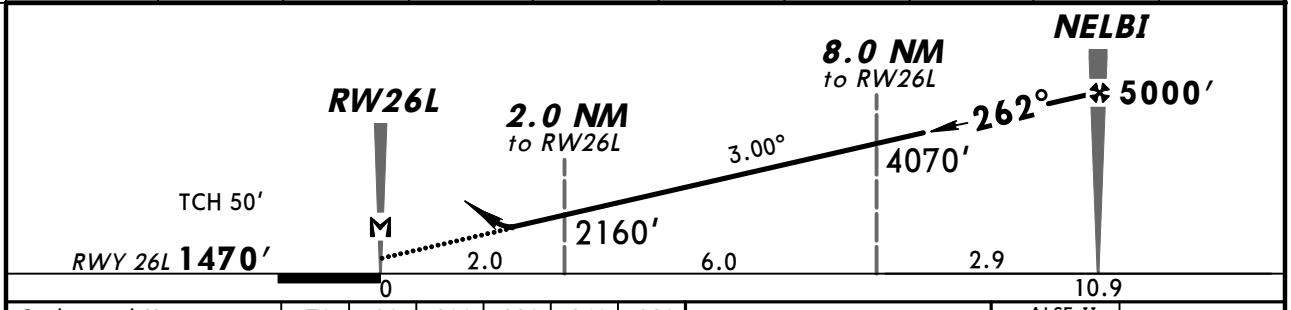
Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′

Baro-VNAV not authorized below -15° C.

❶ Initial call restricted to CALL SIGN only.



Dist to RW26L	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	2160′	2480′	2800′	3120′	3440′	3750′	4070′	4390′	4710′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW26L							

ALSF-II
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26L**

	LNAV/VNAV DA(H) 1920′ (450′)		LNAV DA(H) 1980′ (510′)	
		ALS out		ALS out
A	RVR 1400m	RVR 1500m	RVR 1500m	
B				
C		CMV 2100m	RVR 1600m	CMV 2400m
D				

CHANGES: Director frequency.

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EDDM/MUC
MUNICH

JEPPESEN
22 JAN 10 (12-4)

MUNICH, GERMANY
RNAV (GPS) Rwy 26R

BRIEFING STRIP™

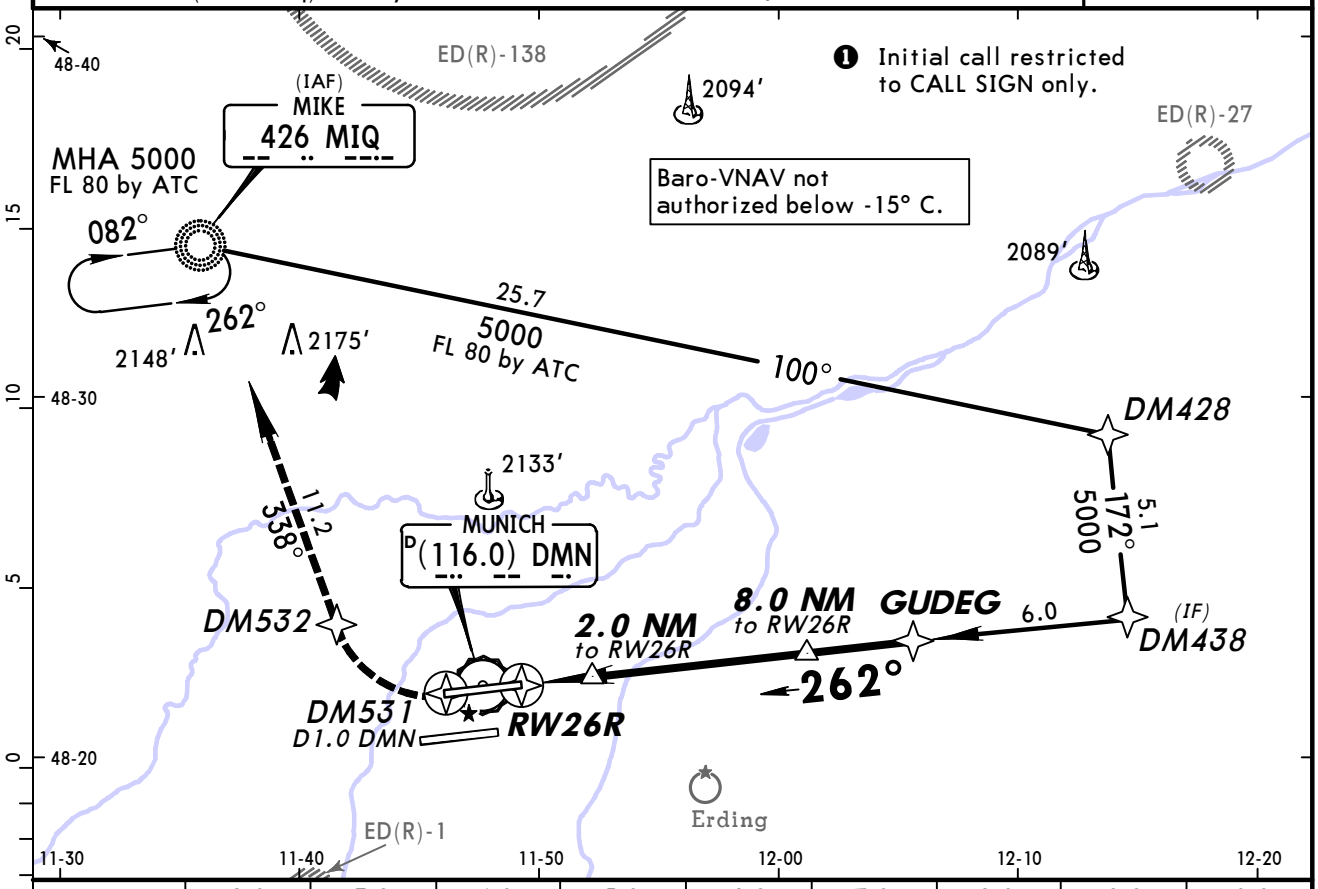
*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	128.02	123.9	118.82	118.7	121.97

RNAV	Final Apch Crs	Minimum Alt GUDEG	LNAV/VNAV DA(H)	Apt Elev 1487′ RWY 1449′
	262°	5000′ (3551′)	2030′ (581′)	

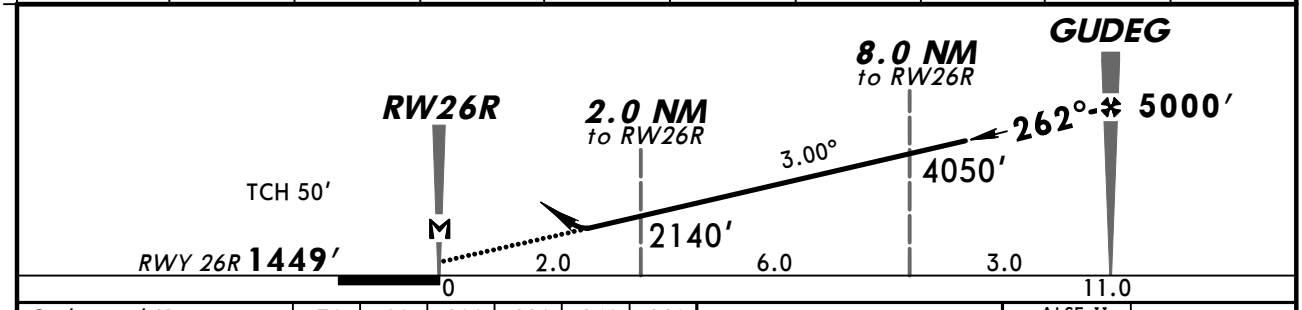
MISSED APCH: RNAV: Climb on 262° to DM531 or 1900′, whichever is later, then turn RIGHT via DM532 onto 338° to NDB climbing to 5000′.
NON-RNAV: Climb STRAIGHT AHEAD to D1.0 West of DMN or 1900′, whichever is later, then turn RIGHT to NDB climbing to 5000′.

3700′
MSA
ARP

Alt Set: hPa (IN on req) Rwy Elev: 52 hPa Trans level: By ATC Trans alt: 5000′



Dist to RW26R	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	2140′	2460′	2780′	3100′	3410′	3730′	4050′	4370′	4690′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW26R							

ALSF-II
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26R**

	LNAV/VNAV DA(H) 2030′ (581′)		LNAV DA(H) 2030′ (581′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 2000m	CMV 2400m	RVR 2000m	CMV 2400m
D				

CHANGES: None.

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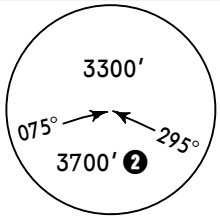
BRIEFING STRIP™

*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	128.02	123.9	118.82	118.7	121.97

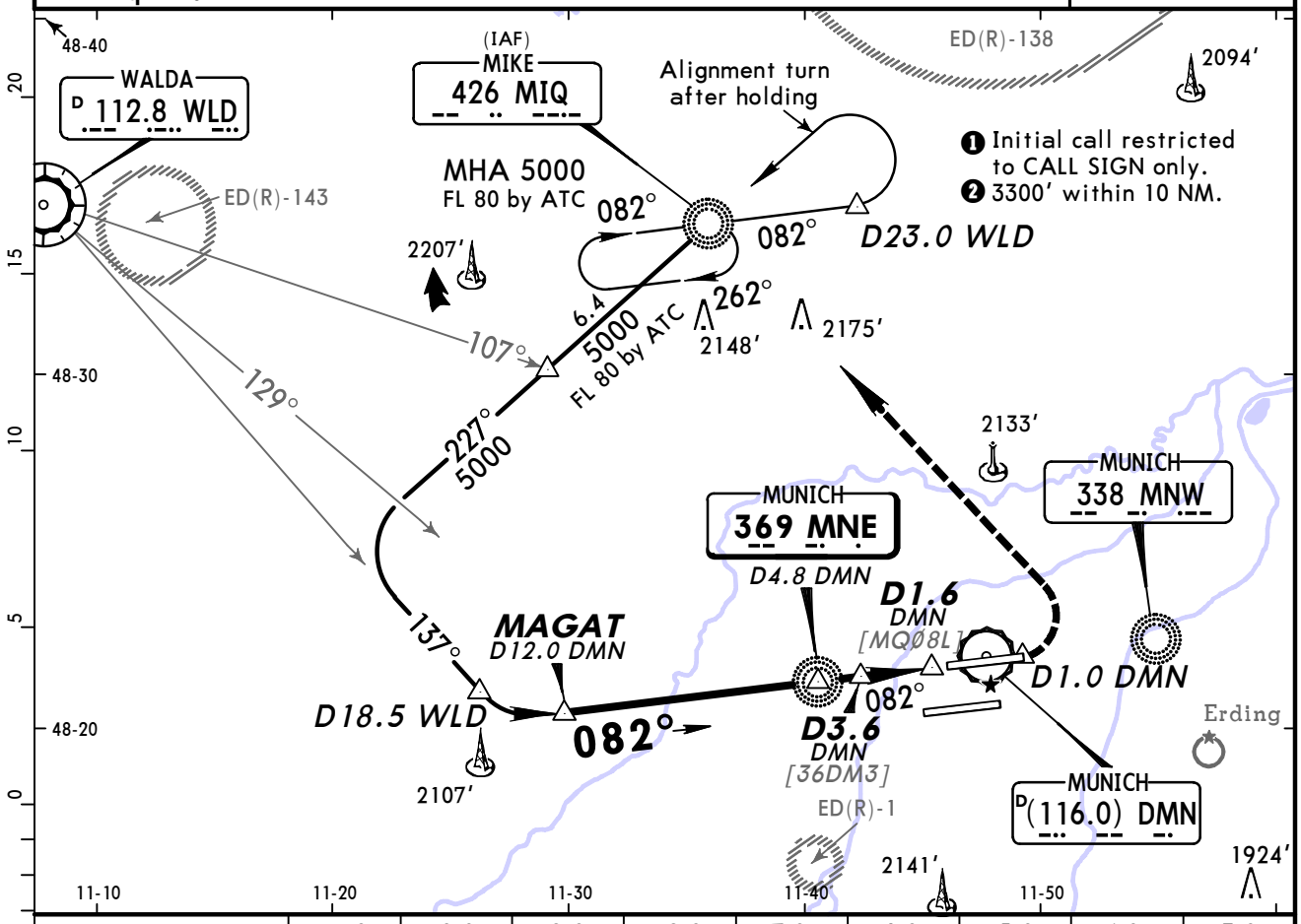
Lctr	Final	Minimum Alt	DA(H)	Apt Elev 1487′
MNE	Apch Crs	MAGAT	2050′ (583′)	RWY 1467′
369	082°	5000′ (3533′)		

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 East of DMN or 1900′, whichever is later, then turn LEFT to MIQ NDB climbing to 5000′.

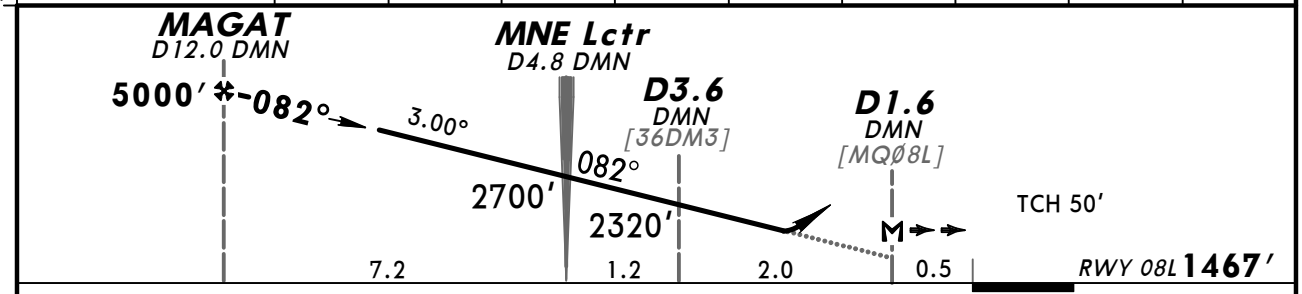
Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′
DME required.



MSA MNW Lctr



DMN DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	4670′	4360′	4040′	3720′	3400′	3080′	2760′	2450′	2130′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.6 DMN						

ALSF-II
PAPI

D1.0 East of DMN whichever is later 1900′

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08L**

DA(H) **2050′** (583′)

	ALS out
A	RVR 1500m
B	
C	RVR 2000m / CMV 2400m
D	

CHANGES: MSA.

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*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	120.77	127.95	132.3	120.5	121.82

BRIEFING STRIP ™

Lctr MSE	Final Apch Crs	Minimum Alt BEGEN	DA(H)	Apt Elev 1487′ RWY 1486′
358	082°	5000′ (3514′)	2050′ (564′)	

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 East of DMS or 1900′, whichever is later, then turn RIGHT to MUN VOR climbing to 5000′.

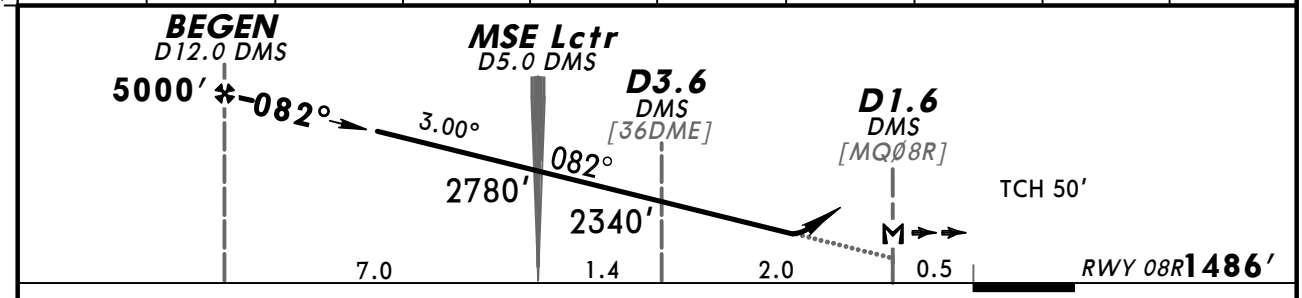
Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′
DME required.

3300′
075° 295°
3700′ ❷
MSA MNW Lctr

❶ Initial call restricted to CALL SIGN only.
❷ 3300′ within 10 NM.

MUNICH 338 MNW
MUNICH 358 MSE
D5.0 DMS
D1.6 DMS
D3.6 DMS [MQØ8R]
[36DME]
D1.0 DMS
2133′
2107′
D6.0 MAH
1.6
082°
082°
6.0
058°
5000
BEGEN
D12.0 DMS
ED(R)-1
MUNICH (115.0) DMS
2141′
1924′
Erding
48-20
MAISACH 115.2 MAH
Furstenfeld-bruck
353°
5000
2183′
48-10
2628′
(IAF)
2173′
MUNICH 112.3 MUN
1916′
Alignment turn after holding
2051′
18.0
262°
5000
FL 80 by ATC
2103′
2425′
D18.0 MUN
2090′
2469′
MHA 5000
FL 80 by ATC
262°
131°
D4.0 MUN
2103′
Oberpfaffenhofen
2120′
2064′
11-20
11-30
11-40
11-50
12-00
1929′

DMS DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	4690′	4370′	4060′	3740′	3420′	3100′	2780′	2460′	2150′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.6 DMS						

ALSF-II
PAPI

D1.0 East of DMS whichever is later 1900′

Standard STRAIGHT-IN LANDING RWY **08R**

DA(H) **2050′** (564′)

ALS out

PANS OPS 4

A, B	RVR 1500m	
C, D	RVR 1900m	CMV 2400m

CHANGES: MSA.

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EDDM/MUC
MUNICH

JEPPESEN
20 JAN 12 (16-3)

MUNICH, GERMANY
NDB Rwy 26L

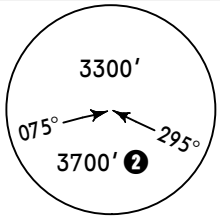
*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	120.77	127.95	132.3	120.5	121.82

BRIEFING STRIP ™

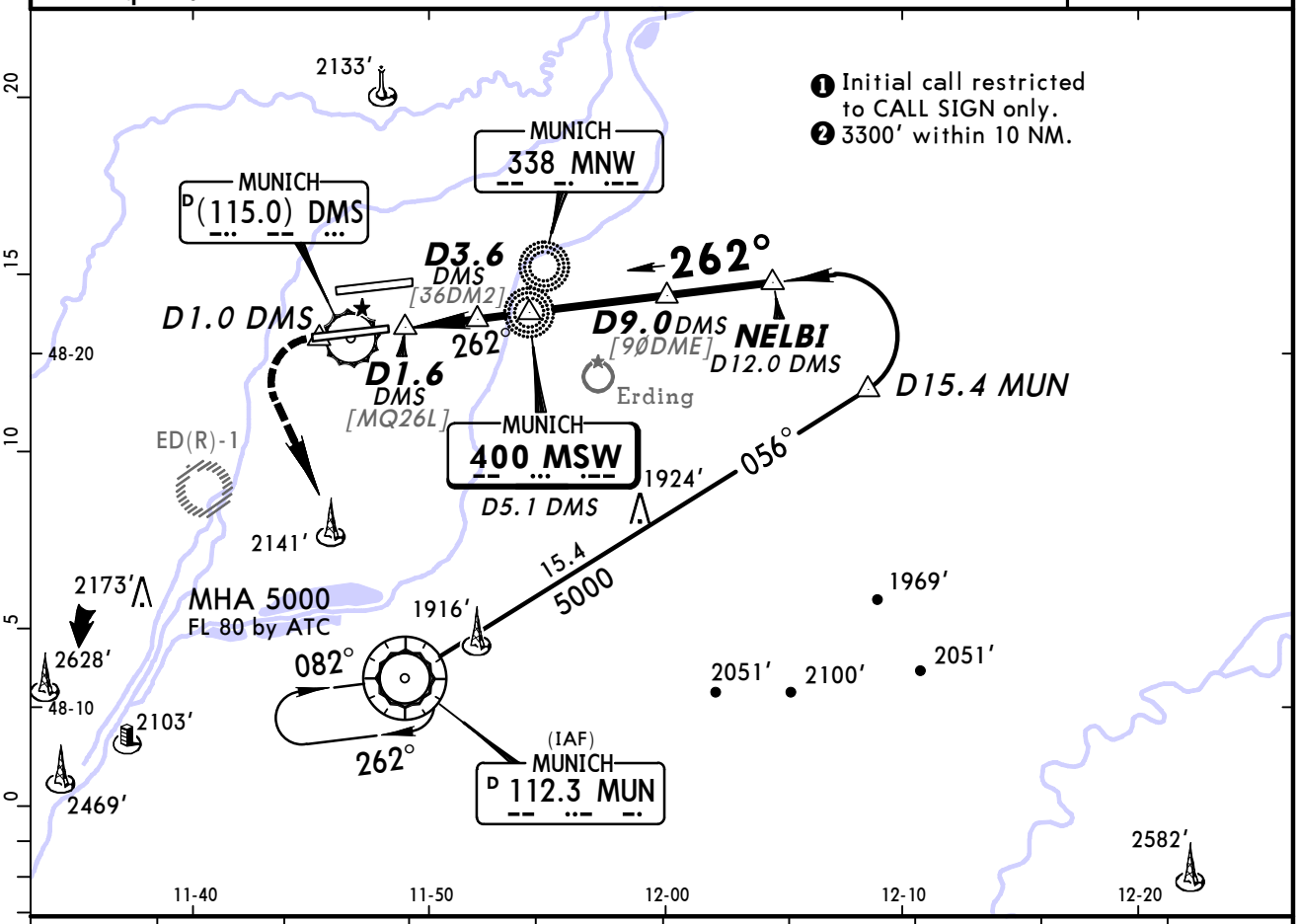
Lctr MSW	Final Apch Crs	Minimum Alt NELBI	DA(H)	Apt Elev 1487′ RWY 1470′
400	262°	5000′ (3530′)	2050′ (580′)	

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 West of DMS or 1900′, whichever is later, then turn LEFT to MUN VOR climbing to 5000′.

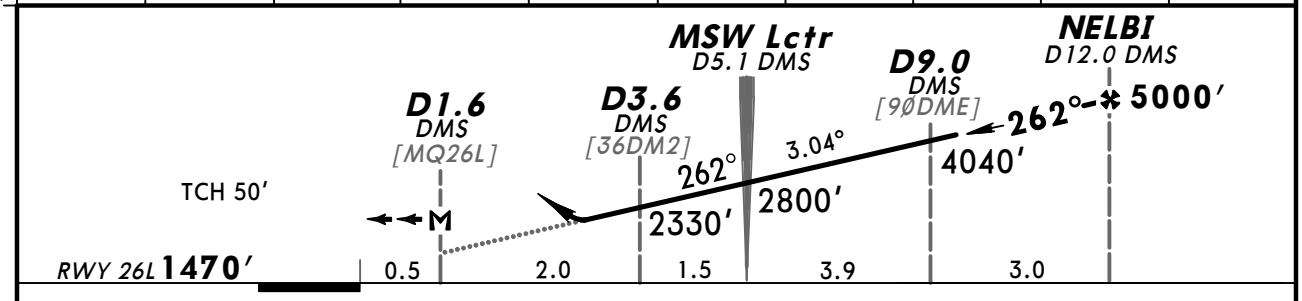
Alt Set: hPa (IN on req) Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 5000′
DME required.



MSA MNW Lctr



DMS DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
ALTITUDE	2130′	2450′	2770′	3090′	3400′	3720′	4040′	4360′	4680′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.04°	376	484	538	645	753	861
MAP at D1.6 DMS						

ALSF-II
PAPI

D1.0 West of DMS — 1900′ whichever is later

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26L**

DA(H) **2050′** (580′)

		ALS out
A	RVR 1500m	
B		
C	RVR 1900m	CMV 2400m
D		

CHANGES: MSA.

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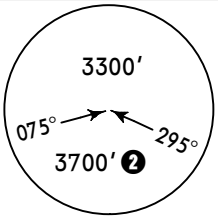
*D-ATIS	MUNICH Arrival (APP)	MUNICH Radar (APP)	MUNICH Director ❶	MUNICH Tower	Ground
123.12	128.02	123.9	118.82	118.7	121.97

BRIEFING STRIP™

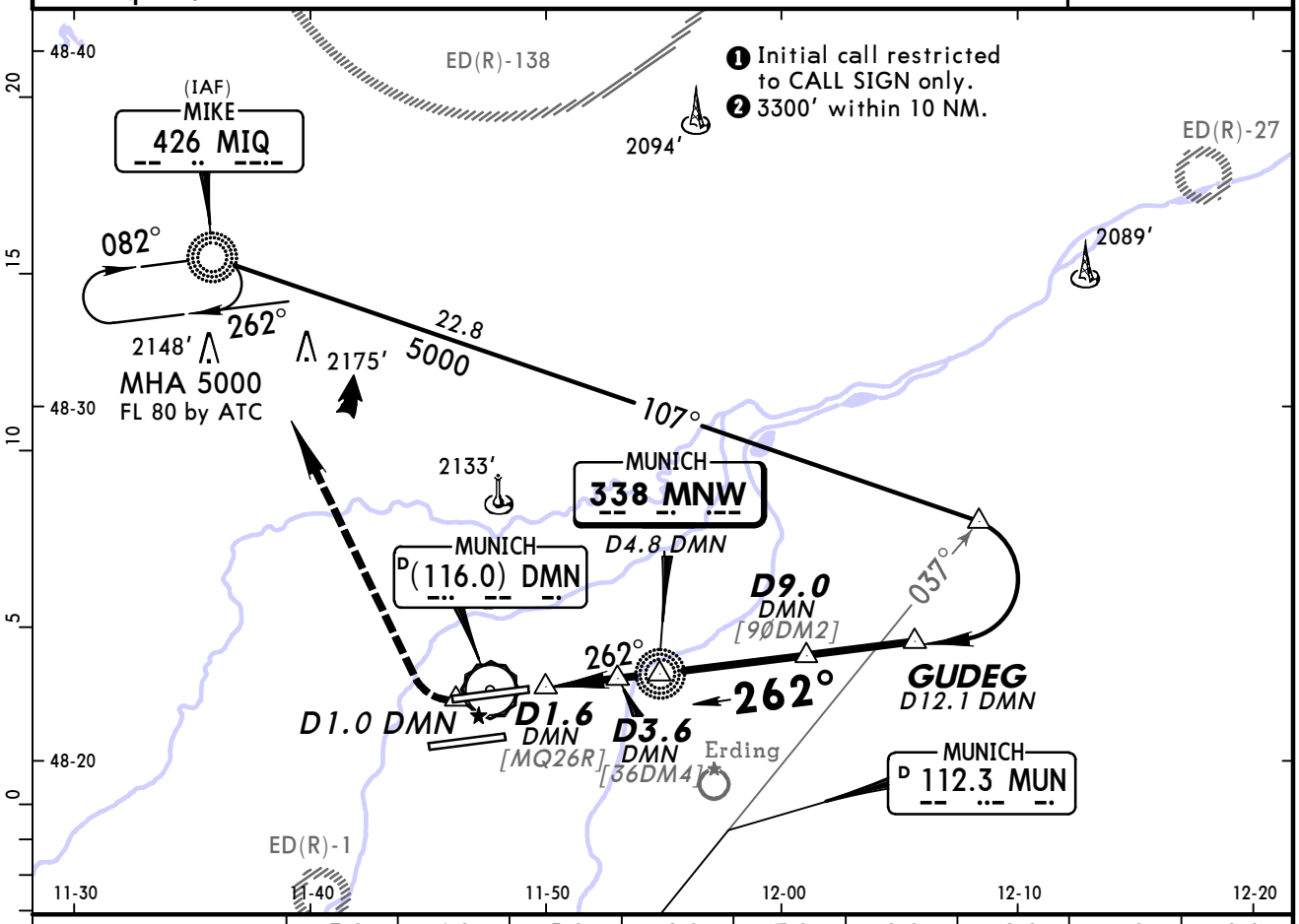
Lctr MNW 338	Final Apch Crs 262°	Minimum Alt GUDEG 5000′ (3551′)	DA(H) 2050′ (601′)	Apt Elev 1487′ RWY 1449′

MISSED APCH: Climb STRAIGHT AHEAD to D1.0 West of DMN or 1900′, whichever is later, then turn RIGHT to MIQ NDB climbing to 5000′.

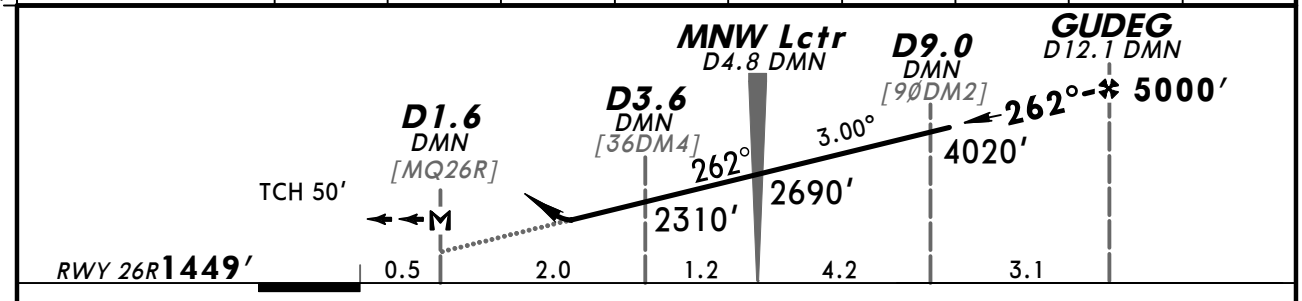
Alt Set: hPa (IN on req) Rwy Elev: 52 hPa Trans level: By ATC Trans alt: 5000′
DME required.



MSA MNW Lctr



DMN DME	3.0	4.0	5.0	6.0	7.0	8.0	10.0	11.0	12.0
ALTITUDE	2110′	2430′	2750′	3060′	3380′	3700′	4340′	4660′	4970′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.6 DMN						

ALSF-II
PAPI

D1.0 West of DMN
1900′ whichever is later

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26R**

DA(H) **2050′** (601′)

ALS out

A	RVR 1500m	
B		
C	CMV 2100m	CMV 2400m
D		

CHANGES: MSA.

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General Information

Location: Nurnberg Deu
IATA Code: NUE
Lat/Long: N49° 29.9' E011° 04.7'
Elevation: 1046 ft

Airport Use: Public
Magnetic Variation: 2.2°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0603 Z
Sunset: 1654 Z,

Runway Information

Runway: 10
Length x Width: 8858 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 1022 ft
Lighting: Edge, ALS, REIL

Runway: 28
Length x Width: 8858 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 1046 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Communication Information

ATIS 123.075
Nurnberg Tower 118.3
Nurnberg Tower 37.835 Military
Nurnberg Ground Control 118.1
Munich Radar Approach Control 129.525
Nurnberg Director (Approach Control Radar) 119.475

1. GENERAL

1.1. ATIS

*D-ATIS 123.07

1.2. NOISE ABATEMENT PROCEDURES

For additional depiction refer to 10-4 chart.

1.2.1. LOCAL FLYING RESTRICTIONS

Take-offs and landings are not permitted for

- jet ACFT without noise certification according to ICAO Annex 16, Volume 1, Part II, Chapter 3 between 2100-0700LT except in case of delays in scheduled or non-scheduled air services up to 2200LT.
- jet ACFT with noise certification according to ICAO Annex 16, Volume 1, Part II, Chapter 3 and prop ACFT between 2200-0600LT except in case of delays in scheduled or non-scheduled air services, training and exercise flights in accordance with valid air-transport regulations, necessary to obtain, prolong or renew an airman's licence for night flying up to 2300LT.
- alternate flights between 2200-0600LT, not planned to and/or from Nurnberg, to be performed at Nurnberg AIRPORT only because of night flying restrictions applying at other APTs or because of flight restrictions in specific airspace.

EXCEPTIONS:

- ACFT on missions in disasters or rendering medical assistance.
- Jet ACFT with noise certification according to ICAO Annex 16, Volume 1, Part II, Chapter 3, included in the respective valid Bonus List published by the Ministry of Transport, Building and Urban Development for departing as well as for landing aeroplanes.
- Prop ACFT with noise certification according to ICAO Annex 16, Volume 1, Part II, Chapter 3, 5, 6 or 10.
- Landing of ACFT approaching Nurnberg AIRPORT as alternate APT for meteorological, technical or other safety reasons.

Deviating from the above regulations, the 'Bayerische Staatsministerium fuer Wirtschaft, Infrastruktur, Verkehr und Technologie ' or upon its instruction the 'Luftaufsicht ' may grant exceptions in justified individual cases, especially if necessary to avoid considerable disturbance of air traffic or in cases of special public interest.

1.2.2. RUN-UP TESTS

Engine test runs are only permitted in the sequence determined by the supervisor on duty of the FNG (0911/937 1220) and/or DFS Aerodrome Control. Engine tests are generally not permitted H24 on Sundays, legal holidays nor on workdays between 2200-0600LT.
Exceptions may be granted by the acting supervisor of the FNG in justified cases.

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1. GENERAL

1.3. LOW VISIBILITY PROCEDURES DURING CAT II/III OPERATIONS

As soon as the use of CAT II/III all-weather operations has been disseminated via ATIS, RWYs which are equipped with centerline lighting will have it switched on. From this time on, taxiing for all ACFT is permitted only on TWYs with centerline lighting switched on or according to separate instructions from ATC.
TWY centerline lighting is colour-coded (yellow/green) on TWYs E and F between the RWY centerline and leaving the ILS protection area.
ACFT which have landed shall leave the RWY via TWY E and/or F and, unrequested, shall report leaving the colour-coded section of the TWY in order to make known that the ACFT has left the ILS protection area.

The CAT II/III taxi holding position on TWYs A, B, F and J are equipped with lighted stop bars.
If these are switched on, it may not be taxied over under any circumstances.
Clearances of any kind do not permit taxiing over a stop bar which is switched on.

Exception: If stop bars can no longer be operated, guidance to the RWY will be ensured by a Follow-me car.

1.4. TAXI PROCEDURES

On the aprons, ACFT are permitted to taxi only at the indispensible minimum engine speed.

Taxilane H and S1 MAX wingspan 69 '/21m under own power; larger ACFT will be guided by Follow-me car.

TWY J between Taxilane N2 and TWY F, Taxilanes N1 and N2 MAX wingspan 157'/48m under own power; larger ACFT will be guided by Follow-me car.

TWY J between Taxilanes S2 and N2 and Taxilane S2 MAX wingspan 95 '/29m under own power; larger ACFT will be guided by Follow-me car.

Taxilane N3 MAX wingspan 39 '/12m.

1.5. PARKING INFORMATION

On stands 1 thru 16, 88 and 89 push-back required.
Markings for special parking (facing South) have been applied between stands 81/82, 83/84 and 85/86. Insofar as these are used, taxiing will take-place using a Follow-me car via Taxilane N2. Taxiing off from these special positions will be done, using push-back procedure exclusively.

1.6. OTHER INFORMATION

1.6.1. USE OF TWY F FOR TAKE-OFF AND LANDING

1.6.1.1. GENERAL

After prior clearance from ATC, TWY F may be used for take-off and landing. If unable, inform ATC immediately.

1.6.1.2. FIXED-WING ACFT

TWY F is usable for ACFT up to 2000 kg MPW for take-off in direction 28 and landing in direction 10. LDA is 1969 '/600m.
The area available is depicted by markings on the TWY.

1.6.1.3. HELICOPTERS

Helicopters may use TWY F with an available length of 3281 '/1000m for take-off and landing in direction 10 and 28.
The area available is depicted by markings on the TWY.

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2. ARRIVAL

2.1. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

2.2. NOISE ABATEMENT PROCEDURES

2.2.1. REVERSE THRUST

When landing, reverse thrust other than idle thrust shall not be used between 2200-0600LT except for safety reasons.

2.3. CAT II/III OPERATIONS

RWY 28 approved for CAT II/III operations, special aircrew and ACFT certification required.

2.4. OTHER INFORMATION

2.4.1. FUEL SAVING AND NOISE REDUCING ILS APPROACH PROCEDURES (CONTINUOUS DESCENT APPROACH - CDA)

2.4.1.1. GENERAL

For the purpose of fuel-saving and noise abatement during approach the following approach procedure is announced. It may be requested by the pilot or offered by the controller. It can be performed only in connection with an ILS approach.

2.4.1.2. PROCEDURE

ACFT will be guided by the approach control unit by means of radar vectoring and will be cleared for a continuous descent to the intermediate approach altitude in such a way that after reaching this intermediate approach altitude on the localizer course, about 1 NM will be left for intercepting the glide path in level flight. This intermediate approach segment will serve to reduce speed.
Intermediate approach altitude: 4000'.
It is assumed that the continuous descent will be performed at a rate of 300 ft/NM (descent angle approx 3°), down to the cleared altitude.

If, for specific reasons (e.g. separation, airspace structure, obstacles), altitudes above the intermediate approach altitude have to be assigned first, these restrictions will be lifted early enough to allow a continuous descent at a rate of 300 ft/NM.

Details about the distance from touchdown will be transmitted to the pilot together with the clearance for descent and usually at 20, 15 and 10 NM from touchdown. This should enable the pilot to correct the rate of descent as required.

In case of traffic situations allowing no CDA (e.g. approaches of ACFT with different performance data), pilots will be informed by the notice NO CDA POSSIBLE. In this case, approaches must be conducted according to the previous procedures.

2.4.1.3. NOISE ABATEMENT

On approaches in accordance with the CDA, pilots are also expected to use the approach techniques recommended for noise abatement in the vicinity of APTs (see AIR TRAFFIC CONTROL page GERMANY-1).

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3. DEPARTURE

3.1. DE-ICING

3.1.1. General

De-icing will take place on all parking positions of the main aprons as well as on parts of the GA apron. The supervisor on duty of FNG shall be informed of the request for de-icing via phone 0911 - 937 1583 not later than 25 min prior to the requested start of the de-icing procedure.

3.1.2. Reporting for De-icing

Crew shall report for de-icing as early as possible to the
- Head loader/ramp agent
- Operations of the handling agent via his company frequency.

The request for de-icing will be passed on by the above units to the coordination unit supervisor on duty. He will determine the de-icing sequence, taking into account well-known priorities such as: STS (e. g. ambulance), Slot, EOBT, etc.

3.1.3. Reporting: "Ready for De-icing"

In principle the head loader/ramp agent will report to the supervisor on duty as soon as the termination of the handling process is imminent, but after all the servicing equipment has been removed, at the latest. The ACFT will be notified of this by the head loader/ramp agent and will be requested to change to the frequency of NURNBERG De-icing **121.8** and to wait to be contacted by the person working in the basket on the de-icing of the respective ACFT.

Any queries regarding the sequence or estimated de-icing time cannot be answered on this frequency since the person located in the basket will not have the information. If necessary, the crew can obtain this information from the respective company frequency of the handling agent concerned.

AirPart:	**130.85**
DLH:	**131.92**
GA:	**131.42**

3.1.4. De-icing Proceedings

After receiving instructions to de-ice, the de-icing vehicle will drive to the ACFT. The person located in the basket, will report to crew on the de-icing frequency NURNBERG De-icing **121.8** giving the ACFT registration letters with the number of the de-icing ACFT.

At this point, the details required for de-icing can be discussed directly between crew and the person located in the basket.

De-icing procedures will not begin until crew give clearance to do so.

After de-icing has been terminated, the person located in the basket will report again to crew and will inform them of the de-icing code. This concludes the de-icing process.

3.2. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

3.3. PUSH-BACK PROCEDURES

ACFT may leave nose-in stands by using the push-back procedure, only.
Use of reverse thrust is prohibited.
Push-back procedures require prior clearance from NURNBERG Ground.

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3. DEPARTURE

3.4. OTHER INFORMATION

3.4.1. DATALINK DEPARTURE CLEARANCE (DCL)

DFS (Deutsche Flugsicherung GmbH) is offering to grant start-up and enroute clearances using Datalink.

The following temporal parameters apply:

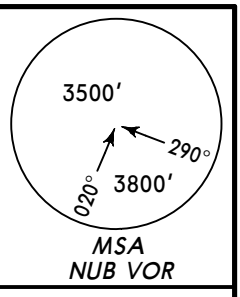
t_i 25 min prior to EOBT for unregulated flights.
30 min prior to CTOT for ATFM regulated flights.

t_t 11 min prior to EOBT for unregulated flights
16 min prior to CTOT for ATFM regulated flights.

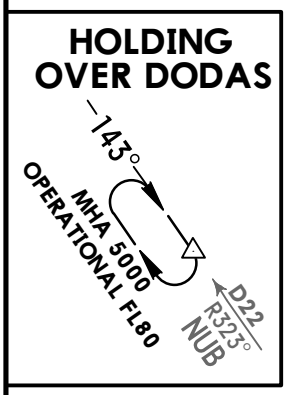
t_1 5 min

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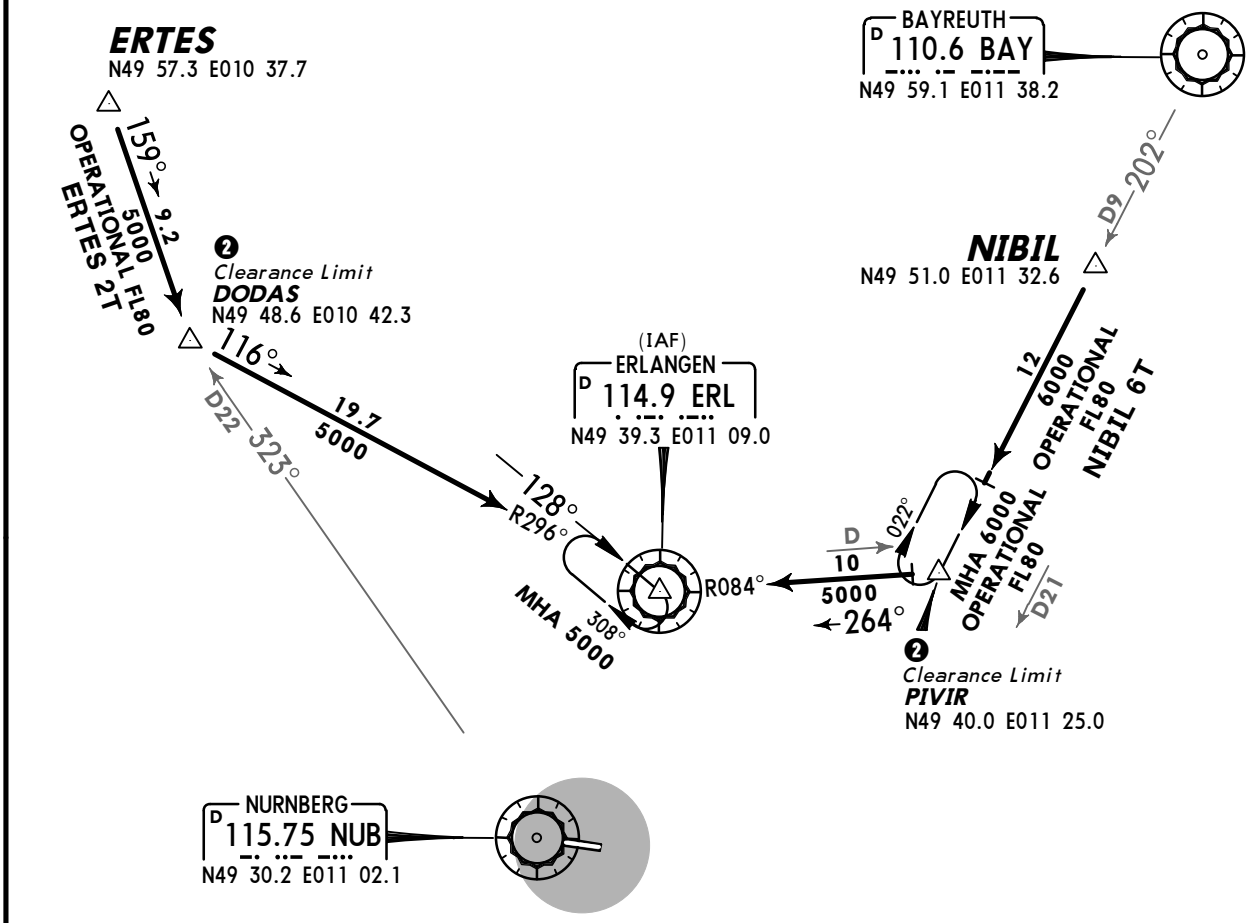
*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
123.07	1046′	Trans level: By ATC Trans alt: 5000′



ERTES TWO TANGO (ERTES 2T) *[ERTE2T]* ❶
NIBIL SIX TANGO (NIBIL 6T) *[NIBI6T]*
RWYS 10, 28 ARRIVALS
FROM NORTH







Direct distance from ERL to:
Nurnberg Apt **10 NM**

❶ BRNAV equipment necessary.

❷ When reaching clearance limit enter holding.
EXPECT GPS/FMS RNAV TRANSITION (charts 10-2B to 10-2E) or radar vectoring to final.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼
Maintain last cleared FL to the IAF.
Descent in holding to 5000′ for standard instrument approach.
▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲

CHANGES: STAR NIBIL 5T renumbered 6T.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
123.07	1046′	Trans level: By ATC Trans alt: 5000′

AKINI FOUR TANGO (AKINI 4T) *[AKIN4T]* ❶
DINKELSBUHL FIVE TANGO (DKB 5T)
ROTEN FOUR TANGO (ROTEN 4T) *[ROTE4T]*
RWYS 10, 28 ARRIVALS
BRNAV EQUIPMENT NECESSARY
FROM SOUTH

AKINI
N48 45.0
E012 07.5

310°
35.1
5000
OPERATIONAL FL80
❶AKINI 4T

ED(R)-144
ED(R)-210B
ED(R)-138
ED(R)-144

❷Clearance Limit
DOSIS
N49 14.3 E011 24.4

6.4
339°
5000
OPERATIONAL
FL80

UNKUL
N49 08.2
E011 27.6

7.4
5000
OPERATIONAL
FL80
257°

335°
MHA 5000
OPERATIONAL
FL80

R155° D19

(IAF)
UPALA
N49 12.9 E011 13.3

NURNBERG
115.75 NUB
N49 30.2 E011 02.1

27.4
5000
OPERATIONAL FL80

D21 R247°

105°

❷Clearance Limit
LETKU
N49 20.9 E010 33.2

MHA 5000
OPERATIONAL FL80

17.5
5000
OPERATIONAL FL80
DKB 5T

090°

043°

20.2
5000 FL80
OPERATIONAL
ROTEN 4T

070°

ROTEN
N49 14.6
E010 03.9

DINKELSBUHL
117.8 DKB
N49 08.6 E010 14.3

NOT TO SCALE

❶During times of activity of ED(R)-138, ED(R)-144 or ED(R)-210B expect rerouting by ATC.
❷When reaching clearance limit enter holding.
EXPECT GPS/FMS RNAV TRANSITION (charts 10-2B to 10-2E) or radar vectoring to final.

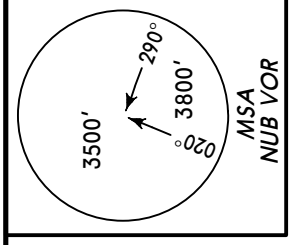
LOST COMMS
LOST COMMS ▶ LOST COMMS ▶ LOST COMMS ▶ LOST COMMS
Maintain last cleared FL to the IAF.
Descent in holding to 5000′ for standard instrument approach.
◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS ◀ LOST COMMS

MSA
NUB VOR
3500′
290°
020°
3800′

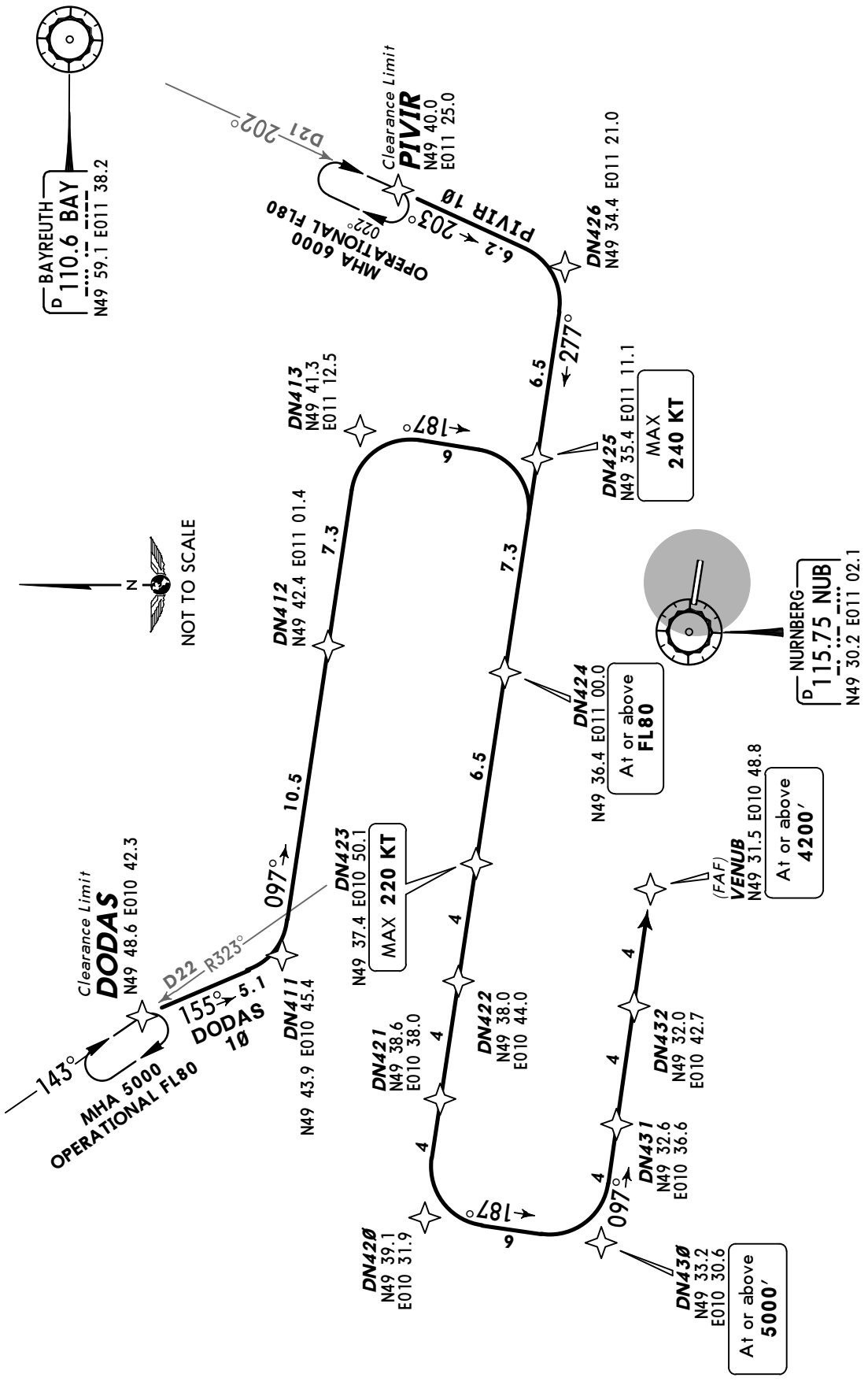
CHANGES: STAR DKB 4T renumbered 5T.

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*D-ATIS	Apt Elev	
123.07	1046′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition expect vectors to final.



DODAS 1Ø *[DOD1Ø]*, PIVIR 1Ø *[PIV1Ø]*
RWY 10 RNAV TRANSITIONS
FROM NORTH
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC

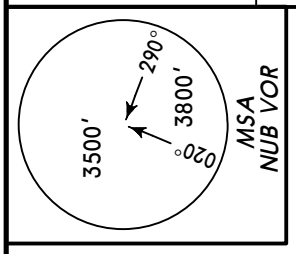


TRANSITION	ROUTING
DODAS 1Ø	DODAS - DN411 - DN413 - DN425 (K240-) - DN424 **(FL80+)** - DN423 (K220-) - DN420 - DN430 **(5000′+)** - VENUB **(4200′+).**
PIVIR 1Ø	PIVIR - DN426 - DN425 (K240-) - DN424 **(FL80+)** - DN423 (K220-) - DN420 - DN430 **(5000′+)** - VENUB **(4200′+).**

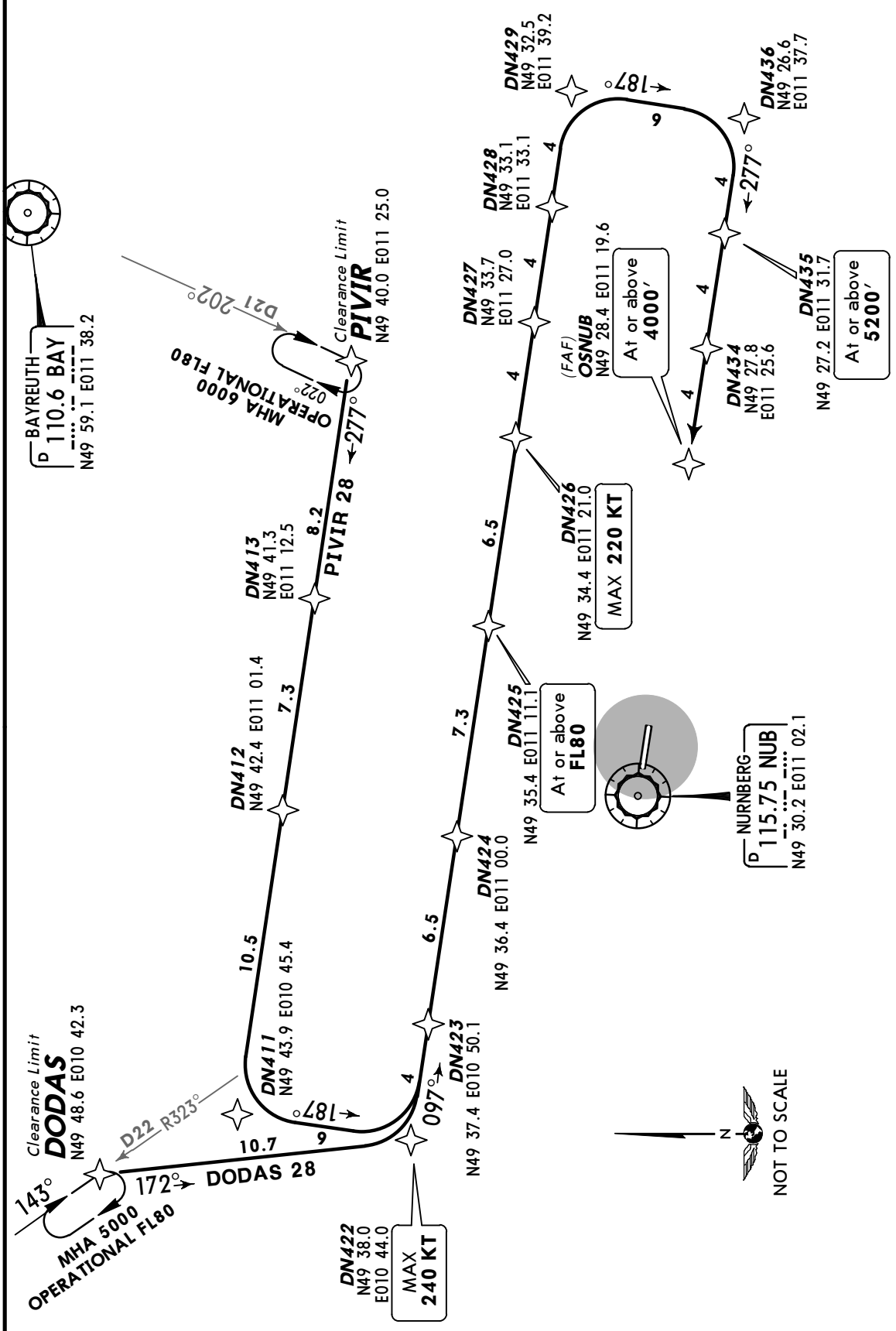
CHANGES: RNAV transition PESIP 10 replaced by PIVIR 10.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition expect vectors to final.
123.07	1046′	



DODAS 28 *[DOD28]*, PIVIR 28 *[PIV28]*
RWY 28 RNAV TRANSITIONS
FROM NORTH
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC

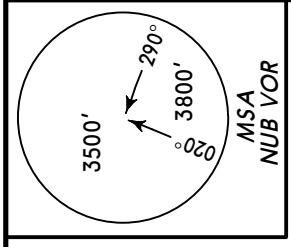


TRANSITION	ROUTING
DODAS 28	DODAS - DN422 (K240-) - DN425 **(FL80+)** - DN426 (K220-) - DN429 - DN436 - DN435 **(5200′+)** - OSNUB **(4000′+).**
PIVIR 28	PIVIR - DN411 - DN422 (K240-) - DN425 **(FL80+)** - DN426 (K220-) - DN429 - DN436 - DN435 **(5200′+)** - OSNUB **(4000′+).**

CHANGES: RNAV transition PESIP 28 replaced by PIVIR 28.

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*D-ATIS	Apt Elev	
123.07	1046′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition expect vectors to final.

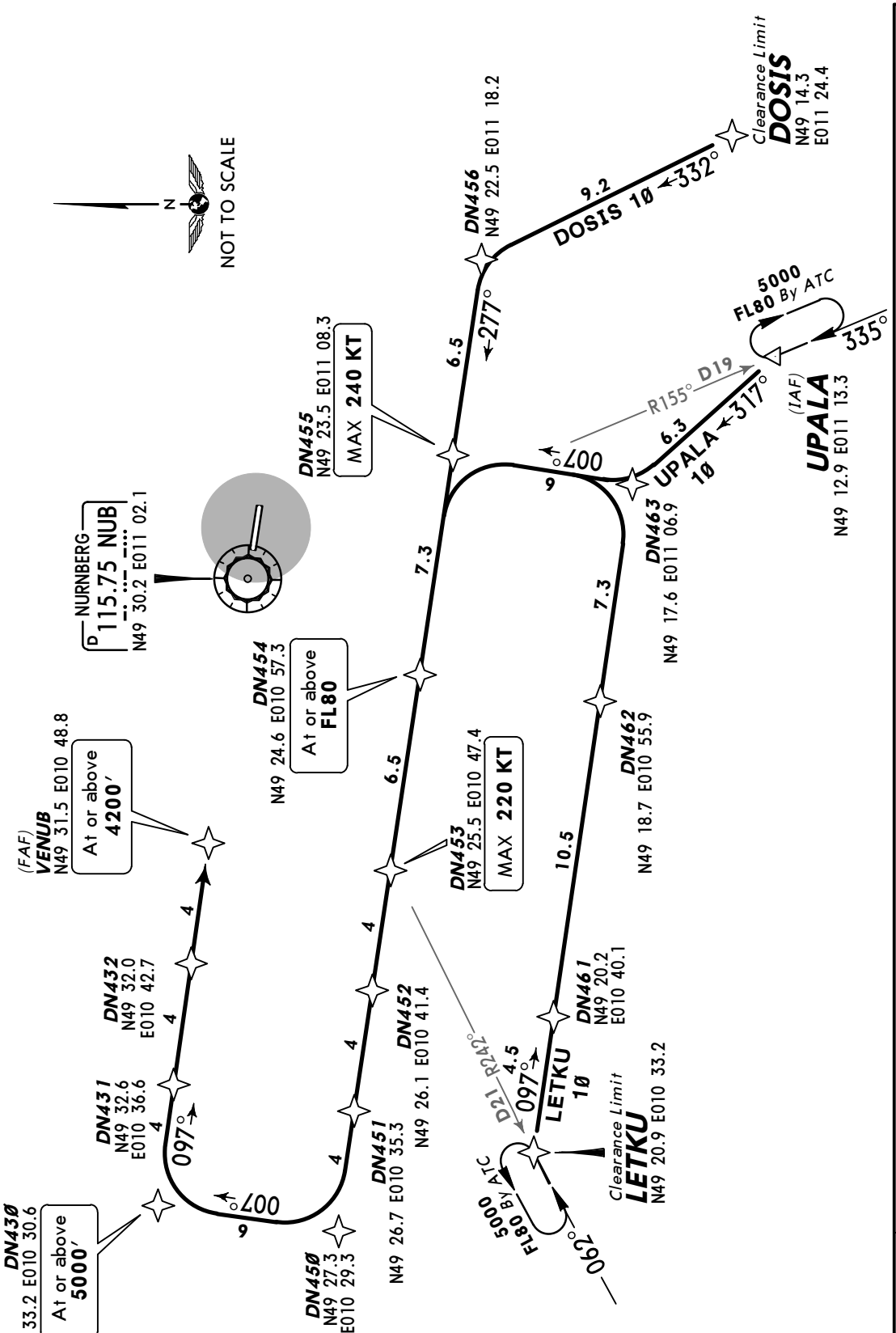


DOSIS 1Ø *[DOS1Ø]*, LETKU 1Ø *[LET1Ø]*
UPALA 1Ø *[UPA1Ø]*
RWY 10 RNAV TRANSITIONS

FROM SOUTH

GPS- OR FMS-EQUIPPED AIRCRAFT

USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC

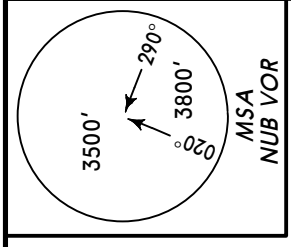


TRANSITION	ROUTING
DOSIS 1Ø	DOSIS - DN456 - DN455 (K240-) - DN454 (FL80+) - DN453 (K220-) - DN450 - DN430 (5000′+) - VENUB (4200′+).
LETKU 1Ø	LETKU - DN463 - DN455 (K240-) - DN454 (FL80+) - DN453 (K220-) - DN450 - DN430 (5000′+) - VENUB (4200′+).
UPALA 1Ø	UPALA - DN463 - DN455 (K240-) - DN454 (FL80+) - DN453 (K220-) - DN450 - DN430 (5000′+) - VENUB (4200′+).

CHANGES: Transition ALB 10 replaced by UPALA 10; holding over LETKU; MSA.

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*D-ATIS	Apt Elev	
123.07	1046′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition expect vectors to final.

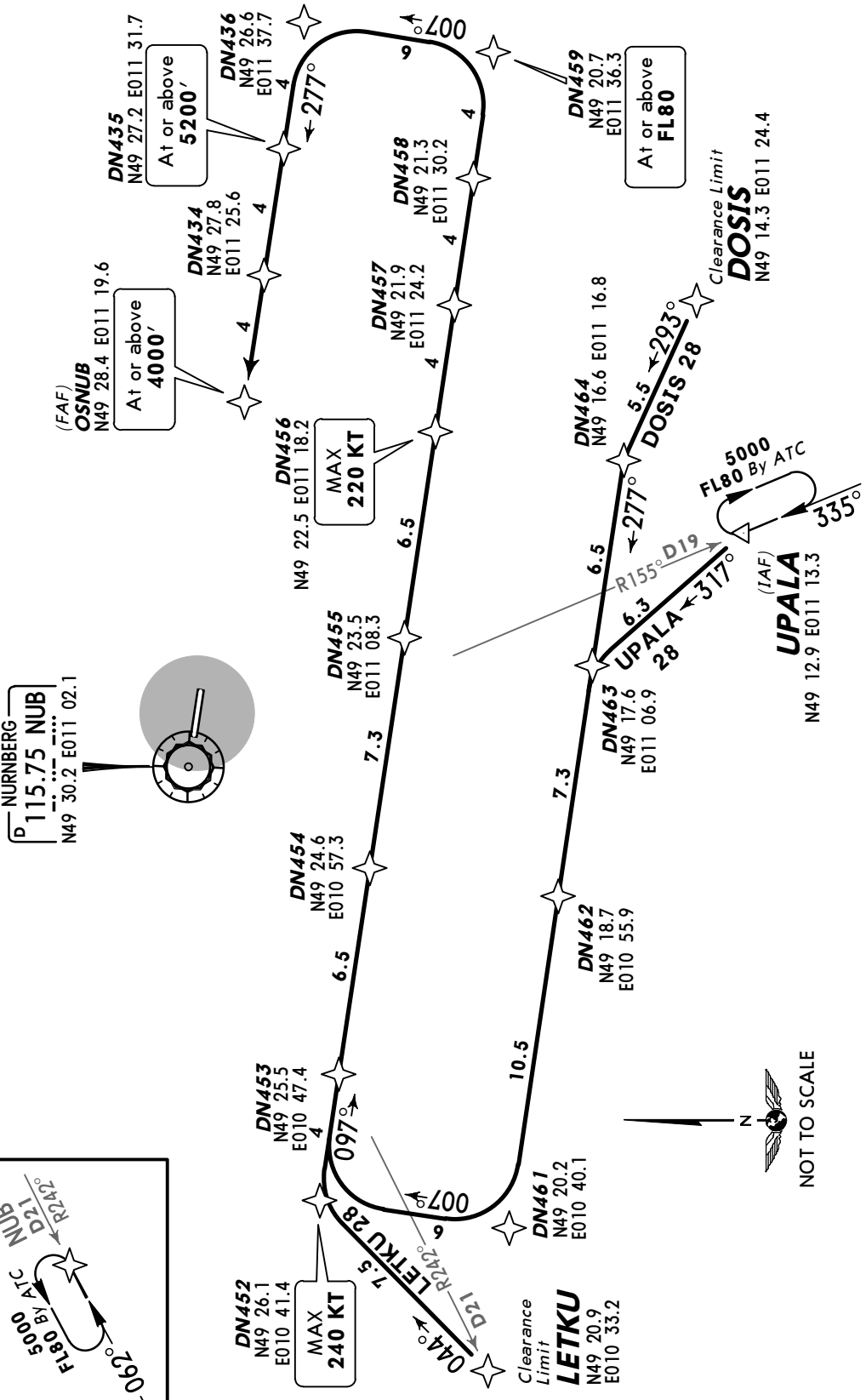


DOSIS 28 *[DOS28]*, LETKU 28 *[LET28]*
UPALA 28 *[UPA28]*
RWY 28 RNAV TRANSITIONS

FROM SOUTH

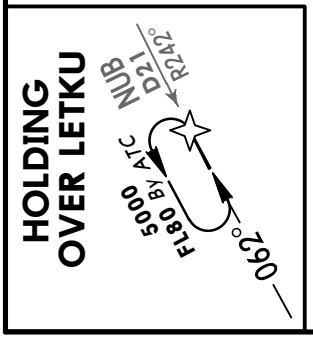
GPS- OR FMS-EQUIPPED AIRCRAFT

USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



TRANSITION	ROUTING
DOSIS 28	DOSIS - DN464 - DN461 - DN452 (K240-) - DN456 (K220-) - DN459 **(FL80+)** - DN436 - DN435 **(5200′+)** - OSNUB **(4000′+).**
LETKU 28	LETKU - DN452 (K240-) - DN456 (K220-) - DN459 **(FL80+)** - DN436 - DN435 **(5200′+)** - OSNUB **(4000′+).**
UPALA 28	UPALA - DN463 - DN461 - DN452 (K240-) - DN456 (K220-) - DN459 **(FL80+)** - DN436 - DN435 **(5200′+)** - OSNUB **(4000′+).**

HOLDING OVER LETKU



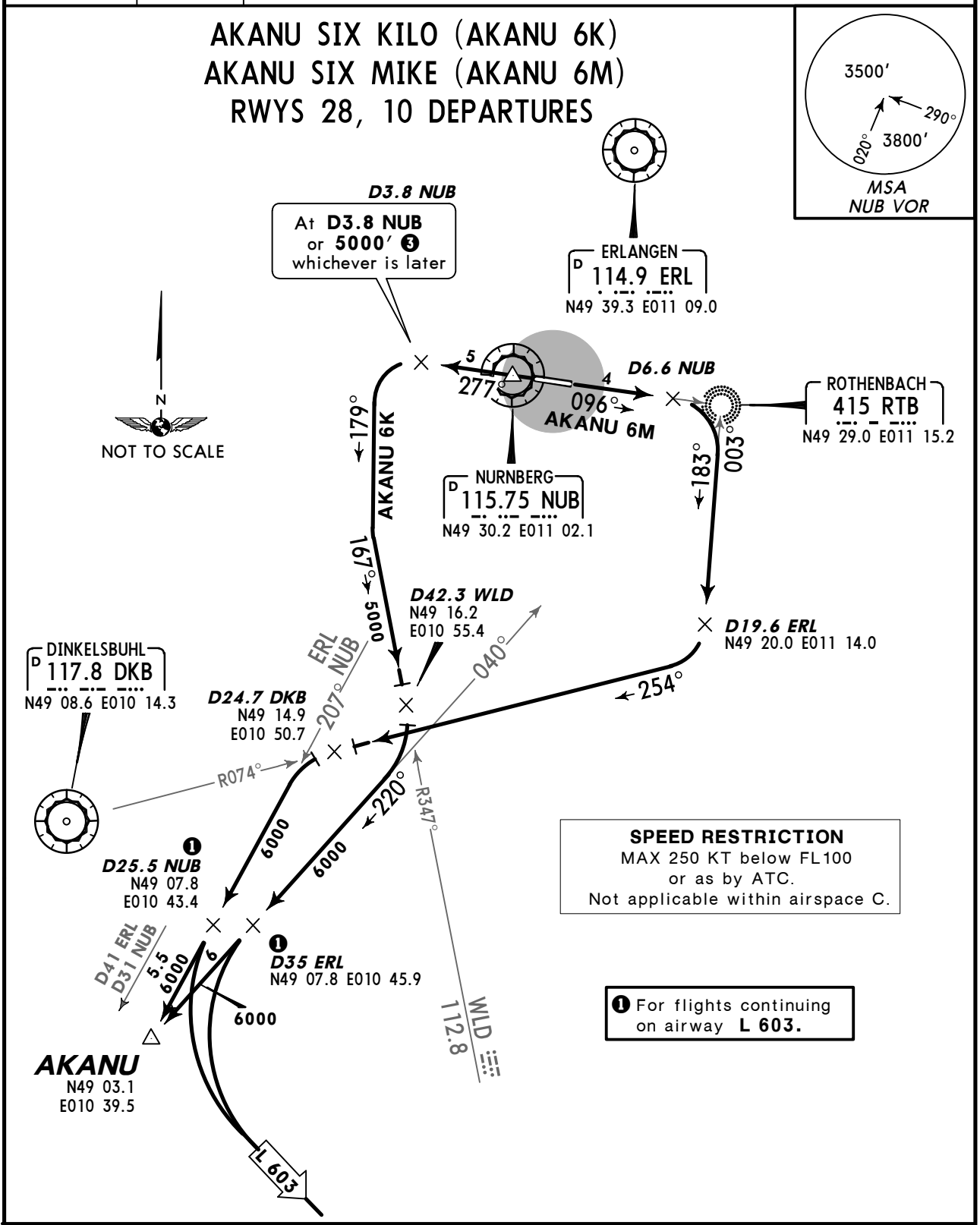
CHANGES: Transition ALB 28 replaced by UPALA 28; holding over LETKU; MSA.

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MUNICH Radar	*Apt Elev*
129.52	1046′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4).
Strict adherence within the limits of aircraft performance is mandatory.
3. Rwy 10: EXPECT close-in obstacles.

AKANU SIX KILO (AKANU 6K)
AKANU SIX MIKE (AKANU 6M)
RWYS 28, 10 DEPARTURES



Initial climb clearance **FL70**

SID	RWY	ROUTING
AKANU 6K	**28**	Intercept NUB R-277, at D3.8 NUB or **5000′** ❸, whichever is later, turn LEFT, 179° track, intercept WLD R-347 inbound to D42.3 WLD, turn RIGHT, intercept 220° bearing from RTB to AKANU.
AKANU 6M ❷	**10**	Intercept 096° bearing towards RTB, at D6.6 NUB turn RIGHT, intercept 183° bearing from RTB to D19.6 ERL, turn RIGHT, intercept DKB R-074 inbound to D24.7 DKB, turn LEFT, intercept NUB R-207 to AKANU.

❷ Transition to airways **(U)L 605** not possible. These flights shall file RODIS SID - airways **(U)L 604.**
❸ Altitude restriction applies during glider activity.

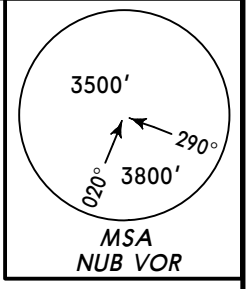
CHANGES: SIDs renumbered & revised; MSA.

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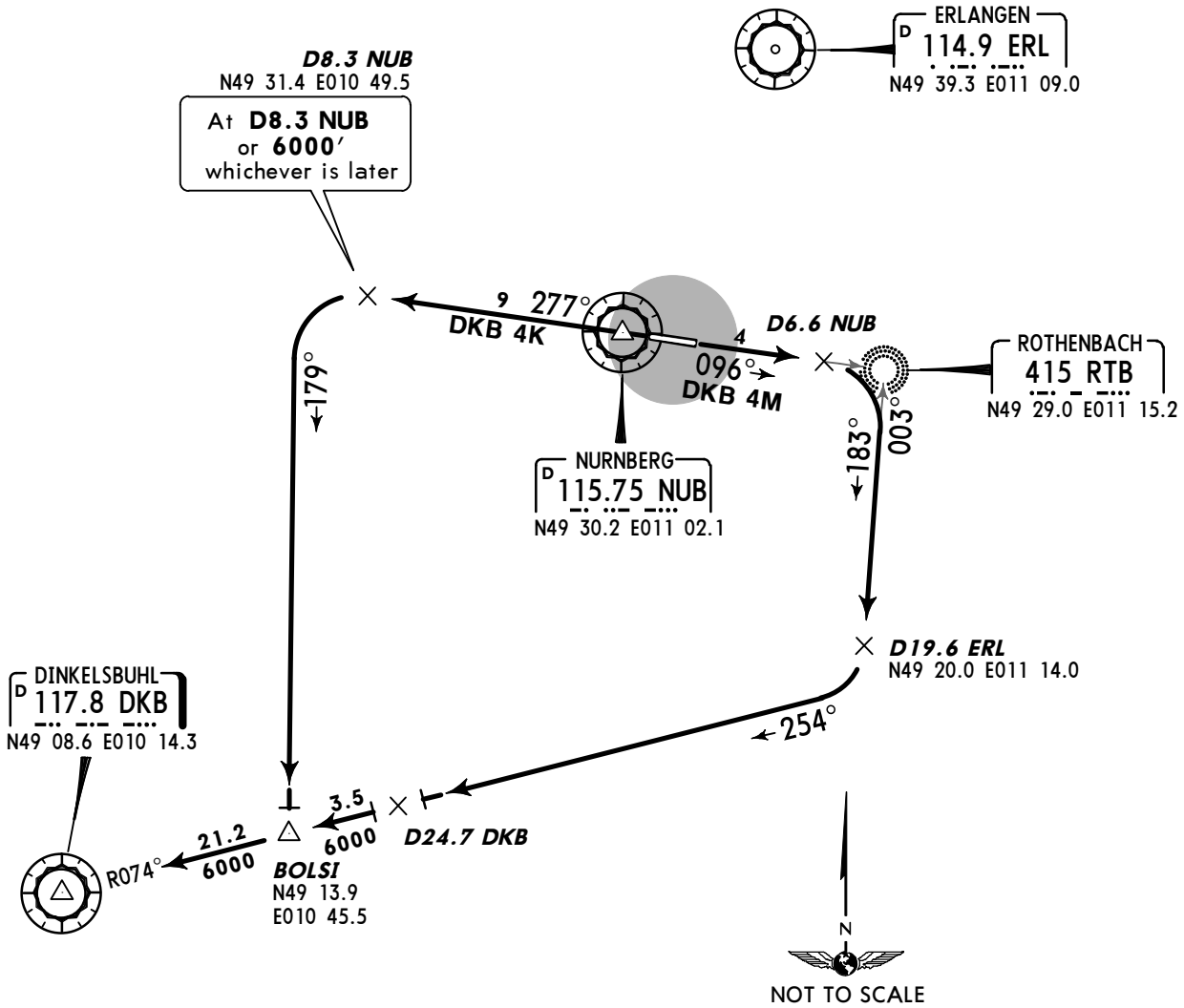
MUNICH Radar	*Apt Elev*
129.52	1046′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4).
Strict adherence within the limits of aircraft performance is mandatory.
3. Rwy 10: EXPECT close-in obstacles.

DINKELSBUHL FOUR KILO (DKB 4K)
DINKELSBUHL FOUR MIKE (DKB 4M)
RWYS 28, 10 DEPARTURES
NOT AVAILABLE FOR FLIGHTS TO CONTINUE
VIA AIRWAYS T 104 OR Y 161



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
DKB 4K	**28**	Intercept NUB R-277, at D8.3 NUB ❶ or **6000′**, whichever is later, turn LEFT, 179° track to BOLSI, turn RIGHT, intercept DKB R-074 inbound to DKB.
DKB 4M	**10**	Intercept 096° bearing towards RTB, at D6.6 NUB turn RIGHT, intercept 183° bearing from RTB to D19.6 ERL, turn RIGHT, intercept DKB R-074 inbound to DKB.

❶ After D8.3 NUB BRNAV equipment necessary.

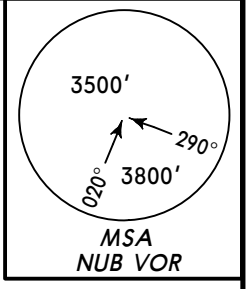
CHANGES: SIDs renumbered & revised; MSA.

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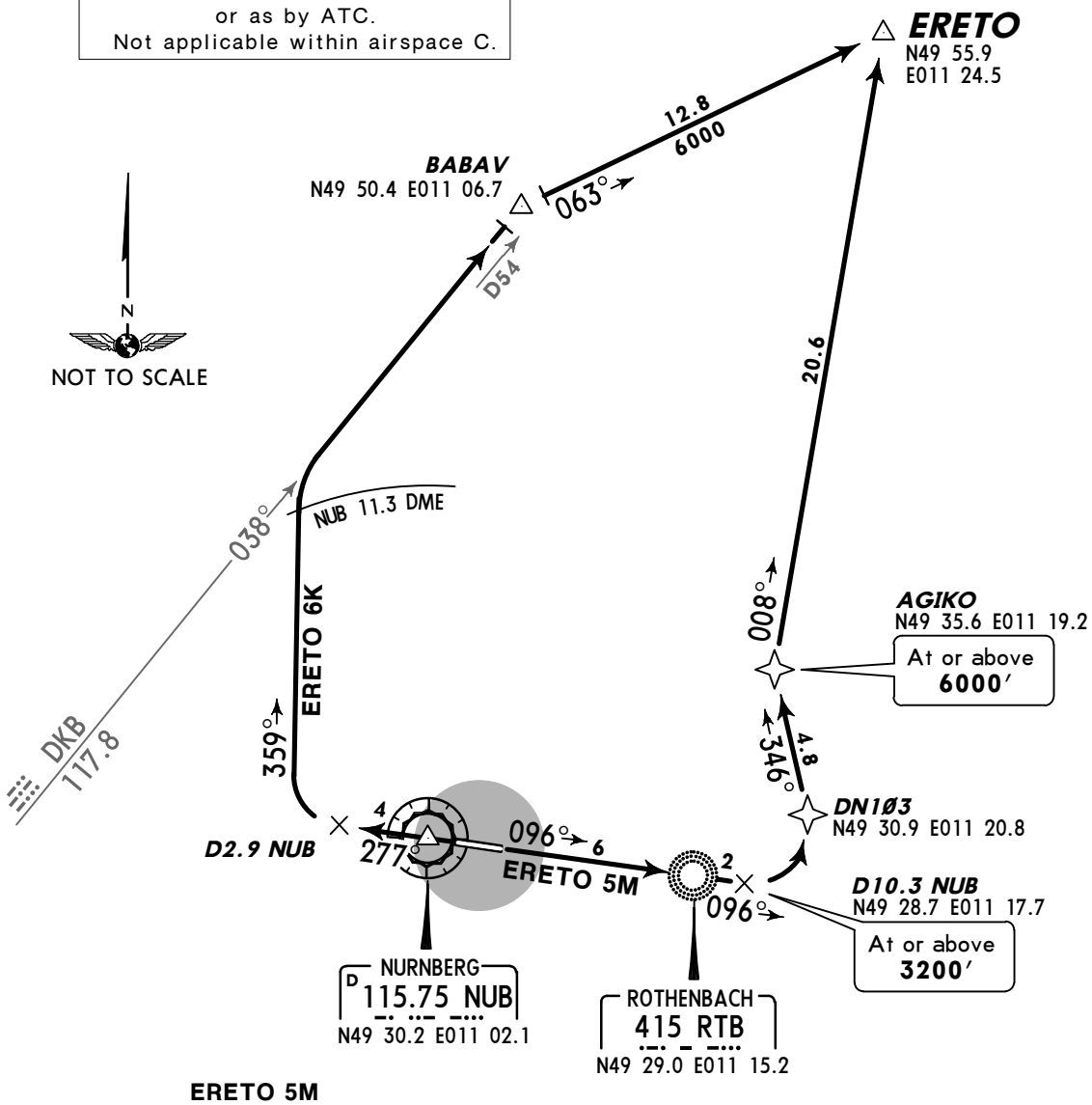
MUNICH Radar	*Apt Elev*
129.52	1046′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4).
Strict adherence within the limits of aircraft performance is mandatory.
3. Rwy 10: EXPECT close-in obstacles.

ERETO SIX KILO (ERETO 6K)
ERETO FIVE MIKE (ERETO 5M)
RWYS 28, 10 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



ERETO 5M
This SID requires a minimum climb gradient of
304′ per NM (5%) until passing **6000′** due to airspace structure and glider activity.
If unable to comply inform ATC.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519

Initial climb clearance **FL70**

SID	RWY	ROUTING
ERETO 6K	**28**	Intercept NUB R-277, at D2.9 NUB turn RIGHT, 359° track to NUB 11.3 DME, turn RIGHT, intercept DKB R-038 to BABAV ❶, 063° track to ERETO.
ERETO 5M	**10**	Intercept 096° bearing via RTB, at D10.3 NUB ❷ turn LEFT, 346° track via DN103 to AGIKO, turn RIGHT, 008° track to ERETO.

After BABAV ❶/D10.3 NUB ❷ BRNAV equipment necessary.

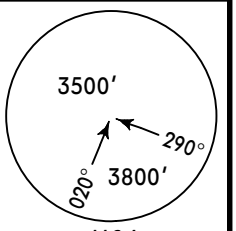
CHANGES: SIDs renumbered, revised & transferred; MSA.

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NURNBERG Tower 118.3	*Apt Elev* 1046′	Trans level: By ATC Trans alt: 5000′ **1.** Remain with NURNBERG Tower, contact MUNICH Radar when advised by Tower. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** Rwy 10: EXPECT close-in obstacles.

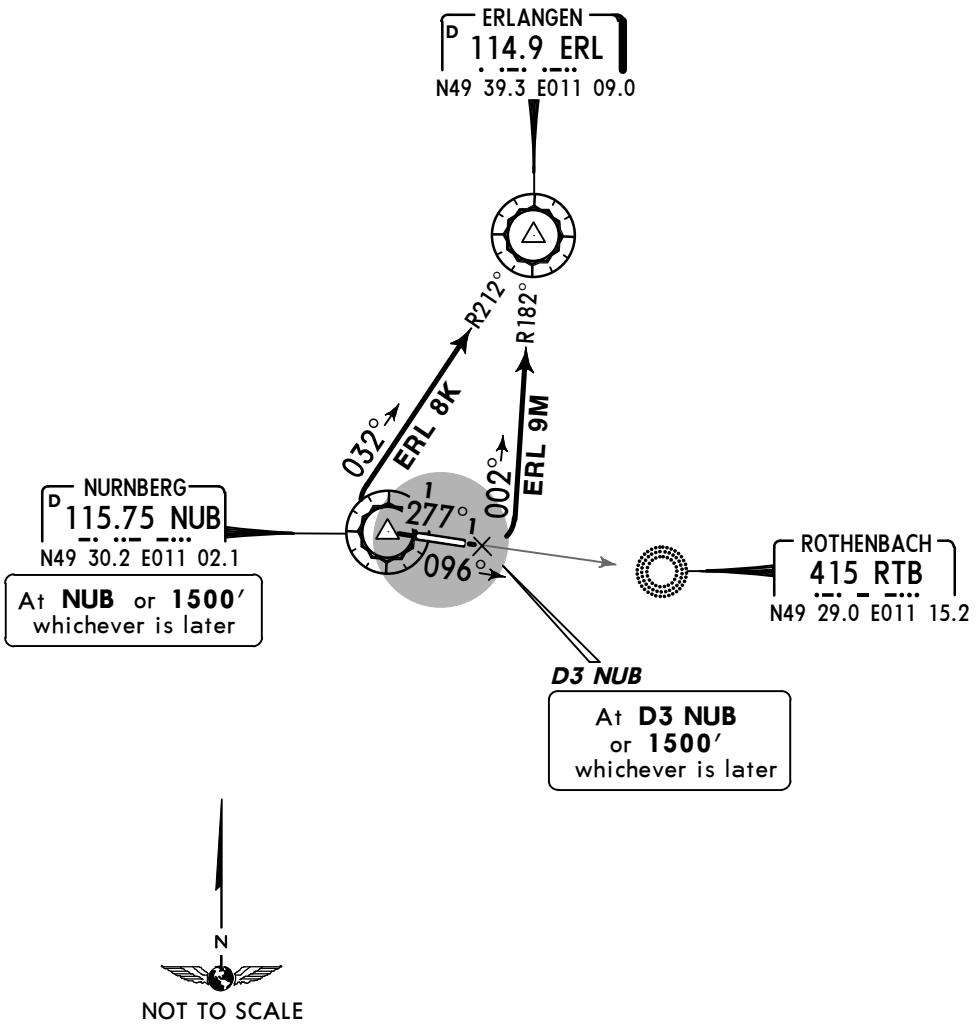
ERLANGEN EIGHT KILO (ERL 8K)
ERLANGEN NINE MIKE (ERL 9M)
RWYS 28, 10 DEPARTURES

FOR LOCAL IFR TRAINING FLIGHTS AT EDDN
PROP ACFT UP TO 5.7T MTOW ONLY



MSA
NUB VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
ERL 8K	**28**	To NUB or **1500′,** whichever is later, turn RIGHT, intercept ERL R-212 inbound to ERL.
ERL 9M	**10**	Intercept 096° bearing towards RTB, at D3 NUB or **1500′,** whichever is later, turn LEFT, intercept ERL R-182 inbound to ERL.

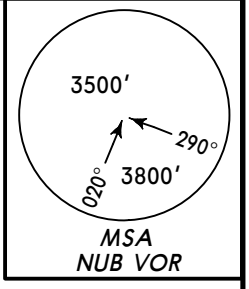
CHANGES: SIDs renumbered, revised & transferred; MSA.

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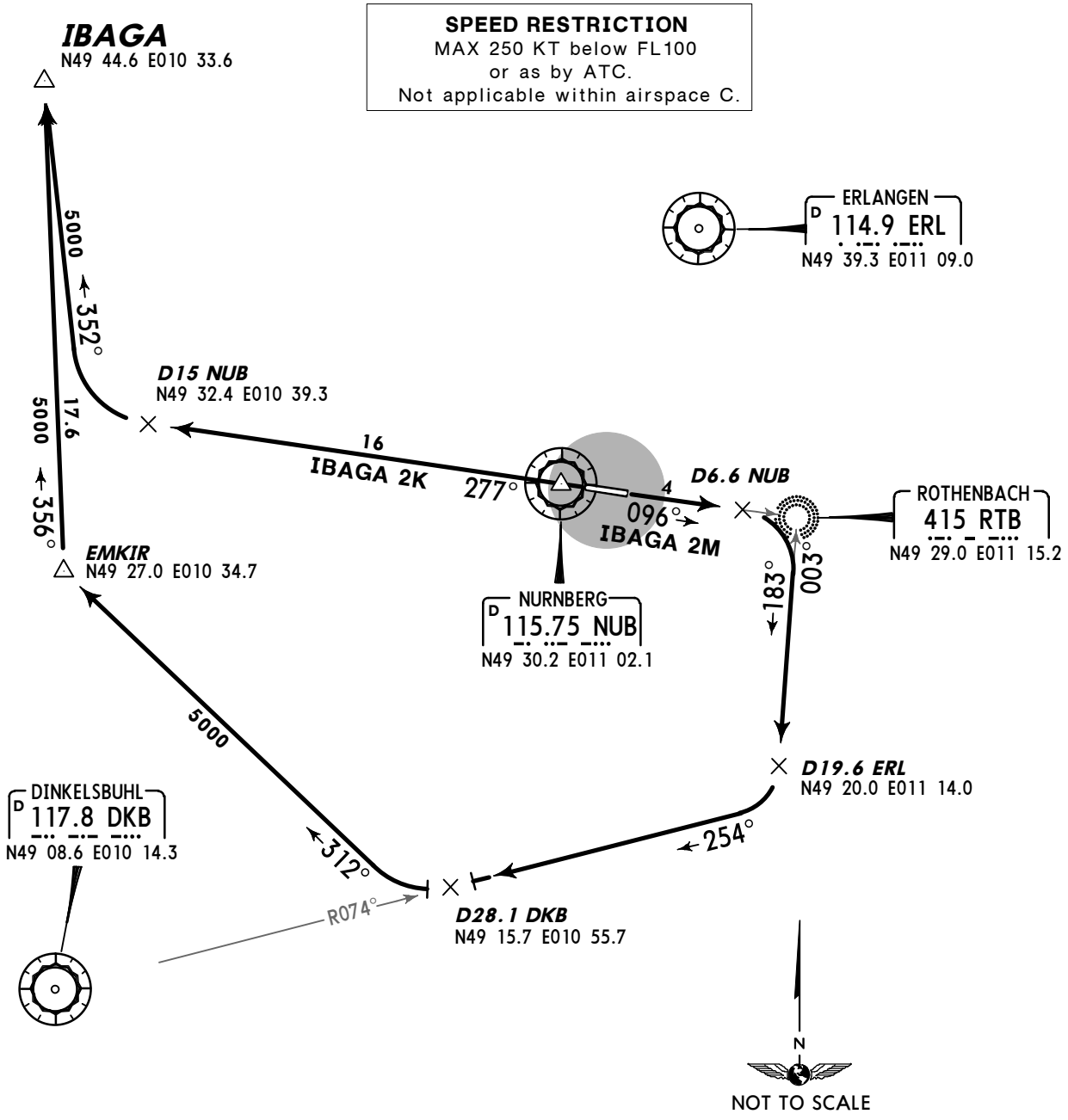
MUNICH Radar	*Apt Elev*	
129.52	1046′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwy 10: EXPECT close-in obstacles.

IBAGA TWO KILO (IBAGA 2K)
IBAGA TWO MIKE (IBAGA 2M)
RWYS 28, 10 DEPARTURES

NOT AVAILABLE FOR FLIGHTS INTENDING
TO PROCEED VIA OSBIT - AIRWAY G 5



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
IBAGA 2K	**28**	Intercept NUB R-277, at D15 NUB ❶ turn RIGHT, 352° track to IBAGA.
IBAGA 2M	**10**	Intercept 096° bearing towards RTB, at D6.6 NUB turn RIGHT, intercept 183° bearing from RTB to D19.6 ERL, turn RIGHT, intercept DKB R-074 inbound to D28.1 DKB ❷, turn RIGHT, 312° track to EMKIR, turn RIGHT, 356° track to IBAGA.

After D15 NUB ❶/D28.1 DKB ❷ BRNAV equipment necessary.

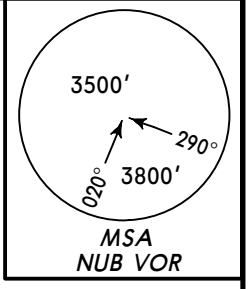
CHANGES: None.

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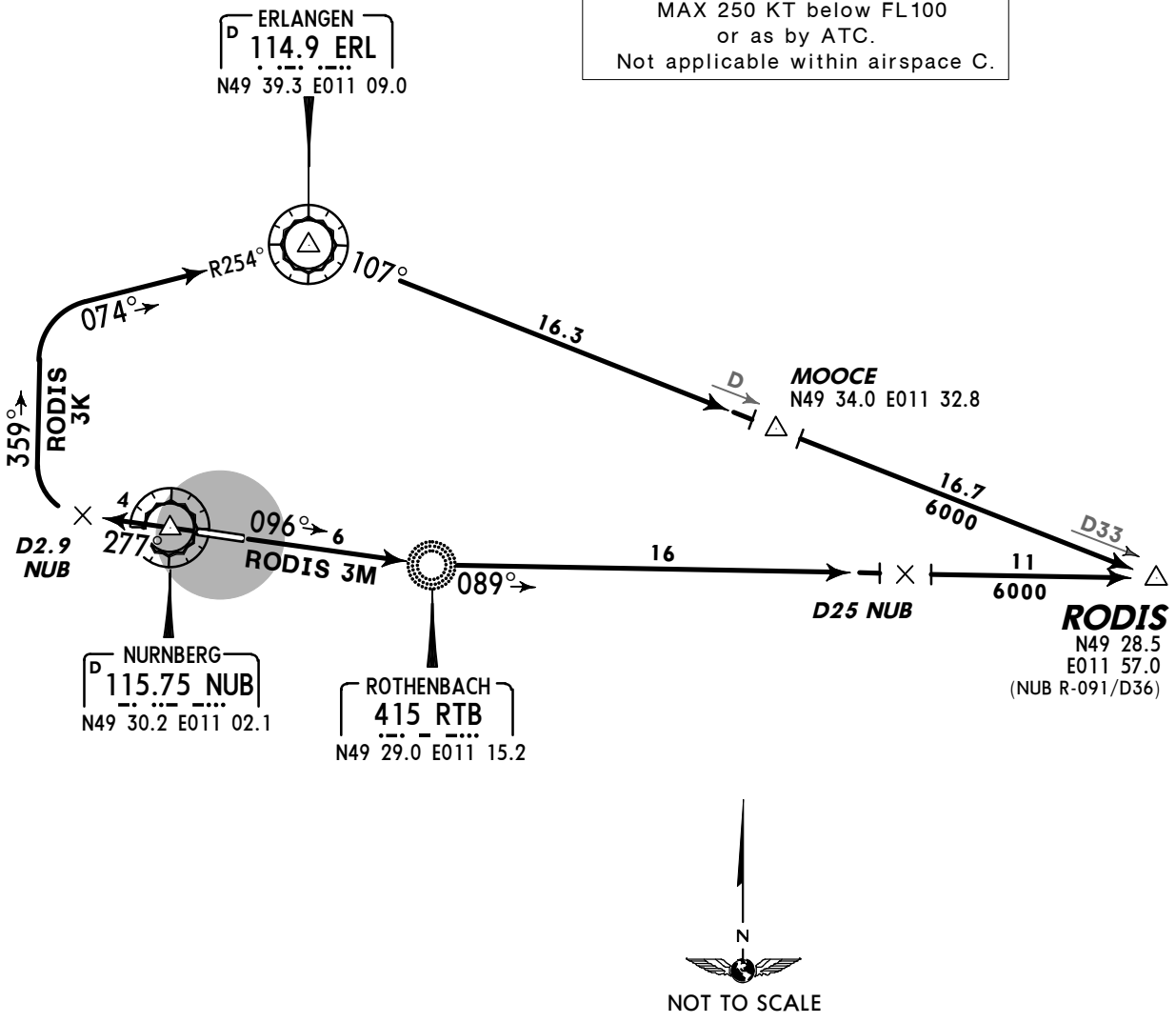
MUNICH Radar	*Apt Elev*	
129.52	1046′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwy 10: EXPECT close-in obstacles.

RODIS THREE KILO (RODIS 3K)
RODIS THREE MIKE (RODIS 3M)
RWYS 28, 10 DEPARTURES

ONLY AVAILABLE FOR FLIGHTS WITH DEST EDMM FIR, LKPR AND FOR FLIGHTS TO CONTINUE VIA AIRWAYS (U)L 604



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
RODIS 3K	**28**	Intercept NUB R-277, at D2.9 NUB turn RIGHT, 359° track, intercept ERL R-254 inbound to ERL, ERL R-107 via MOOCE to RODIS.
RODIS 3M	**10**	To RTB, turn LEFT, 089° bearing to RODIS.

CHANGES: SID availability.

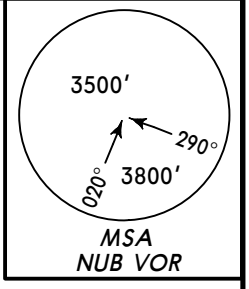
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MUNICH Radar	*Apt Elev*
129.52	1046′

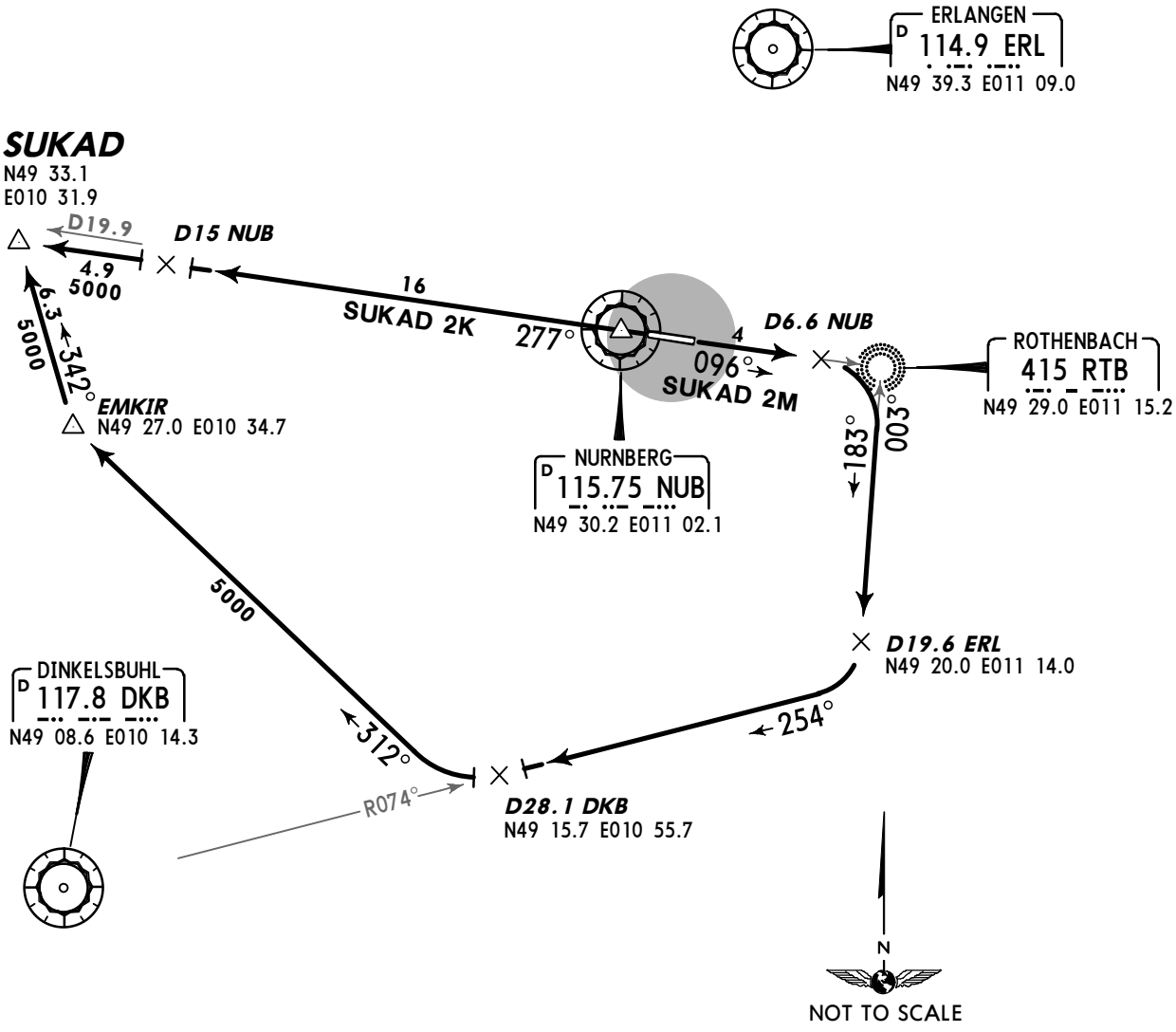
Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4).
Strict adherence within the limits of aircraft performance is mandatory.
3. Rwy 10: EXPECT close-in obstacles.

SUKAD TWO KILO (SUKAD 2K)
SUKAD TWO MIKE (SUKAD 2M)
RWYS 28, 10 DEPARTURES

ONLY FOR FLIGHTS WITH DEST EDDF OR ETOU
AND FLIGHTS WITH Y FPL



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
SUKAD 2K	**28**	Intercept NUB R-277 to SUKAD.
SUKAD 2M	**10**	Intercept 096° bearing towards RTB, at D6.6 NUB turn RIGHT, intercept 183° bearing from RTB to D19.6 ERL, turn RIGHT, intercept DKB R-074 inbound to D28.1 DKB ❶, turn RIGHT, 312° track to EMKIR, turn RIGHT, 342° track to SUKAD.

❶ After D28.1 DKB BRNAV equipment necessary.

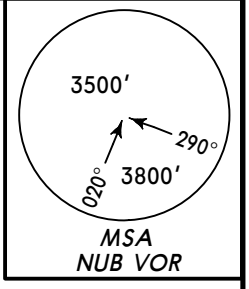
CHANGES: SIDs renumbered & revised; chart reindexed; MSA.

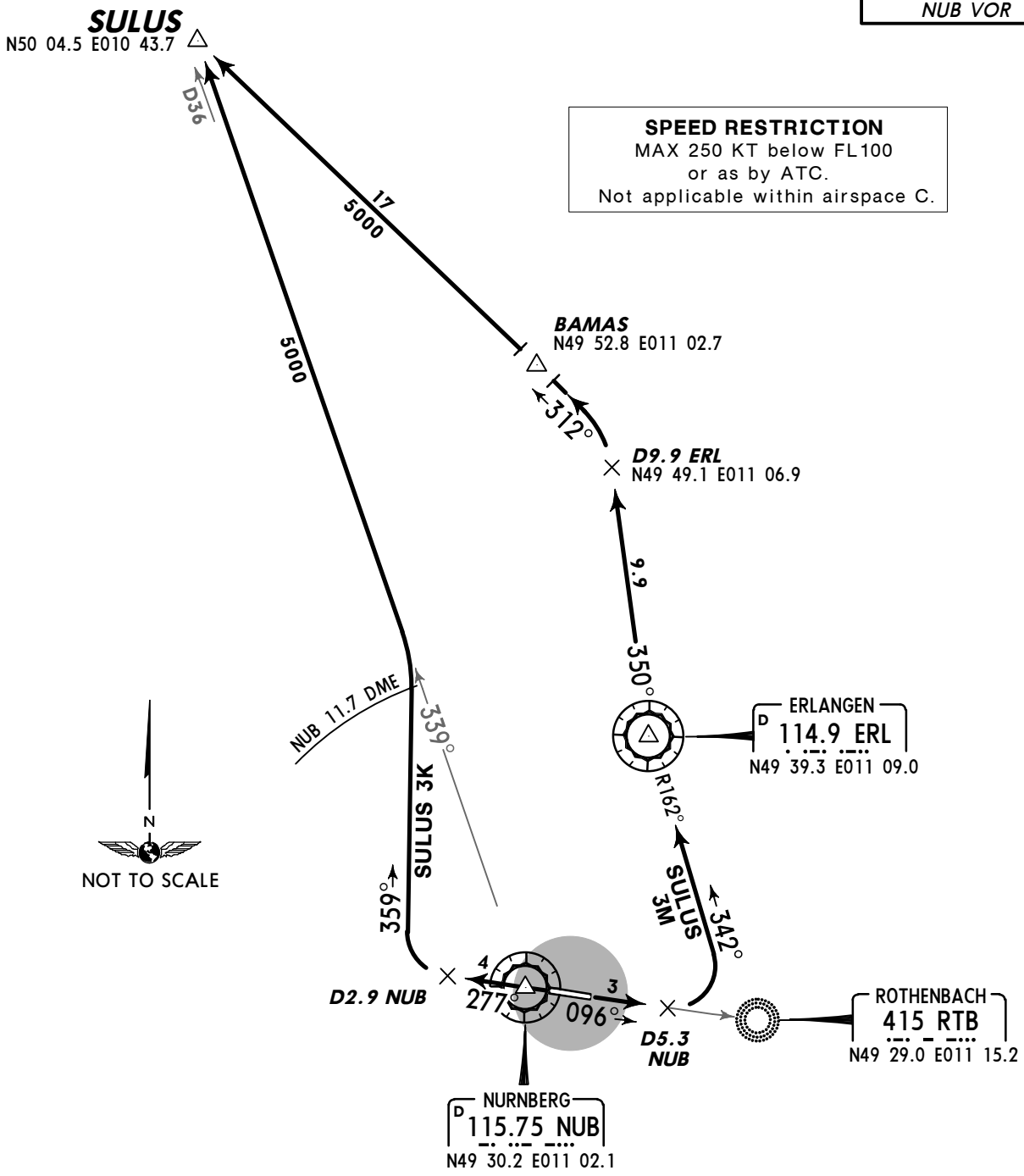
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MUNICH Radar	*Apt Elev*
129.52	1046′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4).
Strict adherence within the limits of aircraft performance is mandatory.
3. Rwy 10: EXPECT close-in obstacles.

SULUS THREE KILO (SULUS 3K)
SULUS THREE MIKE (SULUS 3M)
RWYS 28, 10 DEPARTURES
ONLY AVAILABLE FOR FLIGHTS INTENDING TO PROCEED SULUS - AIRWAY L 604





SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
SULUS 3K	**28**	Intercept NUB R-277, at D2.9 NUB turn RIGHT, 359° track to NUB 11.7 DME, turn LEFT, intercept NUB R-339 to SULUS.
SULUS 3M	**10**	Intercept 096° bearing towards RTB, at D5.3 NUB turn LEFT, intercept ERL R-162 inbound to ERL, ERL R-350 to D9.9 ERL ❶, turn LEFT, 312° track via BAMAS to SULUS.

❶ After D9.9 ERL BRNAV equipment necessary.

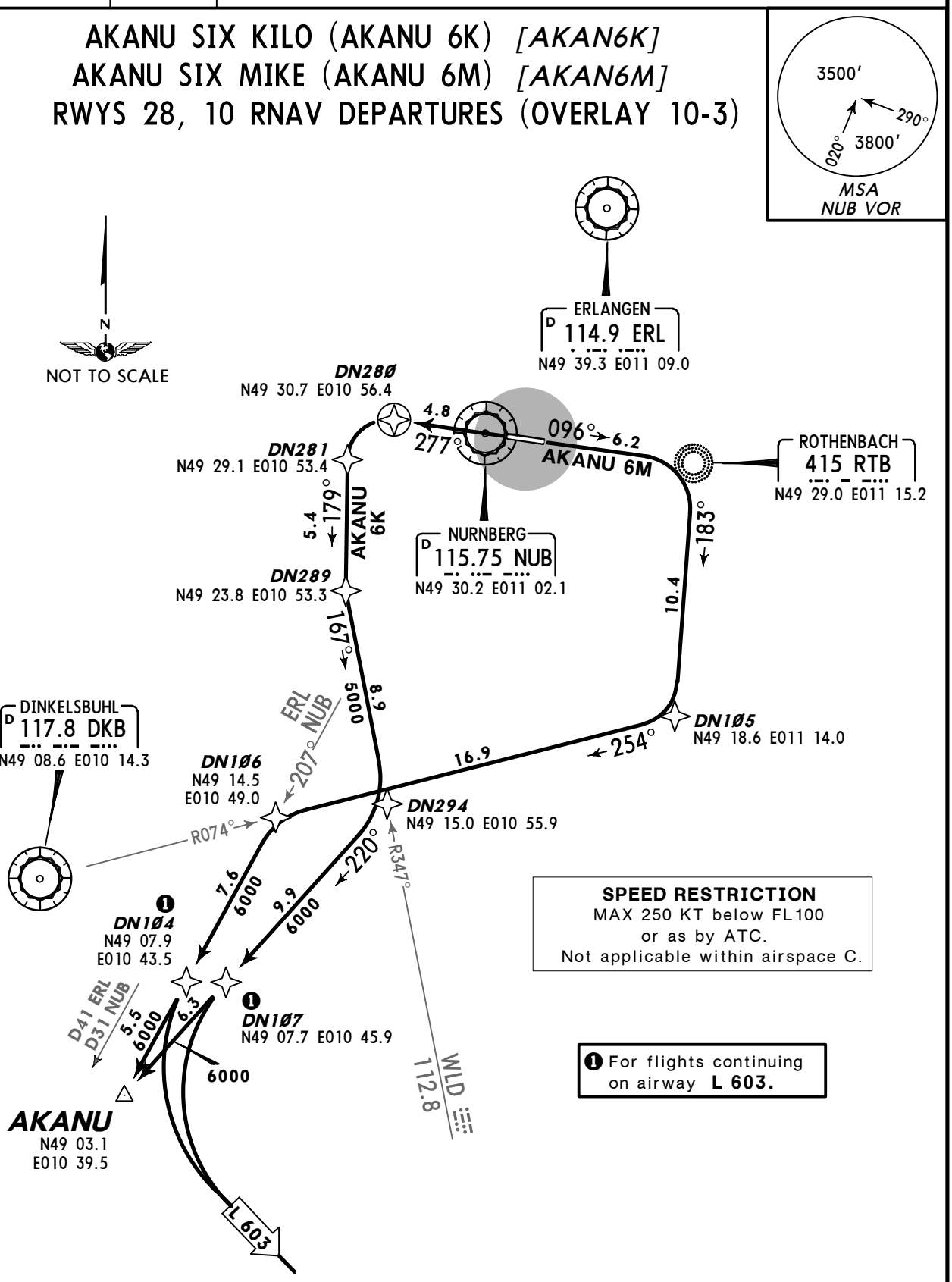
CHANGES: SIDs renumbered & revised; chart reindexed; MSA.

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MUNICH Radar	*Apt Elev*
129.52	1046′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4).
Strict adherence within the limits of aircraft performance is mandatory.
3. Rwy 10: EXPECT close-in obstacles.

AKANU SIX KILO (AKANU 6K) *[AKAN6K]*
AKANU SIX MIKE (AKANU 6M) *[AKAN6M]*
RWYS 28, 10 RNAV DEPARTURES (OVERLAY 10-3)



Initial climb clearance **FL70**

SID	RWY	ROUTING
AKANU 6K	**28**	**(1500+) -** DN280 - **(5000′+ 3) -** DN281 - DN289 - DN294 - DN107 - AKANU.
AKANU 6M 2	**10**	**(1500+) -** RTB - DN105 - DN106 - DN104 - AKANU.

2 Transition to airways **(U)L 605** not possible. These flights shall file RODIS SID - airways **(U)L 604.**
3 Altitude restriction applies during glider activity.

CHANGES: SIDs renumbered & revised; chart reindexed; MSA.

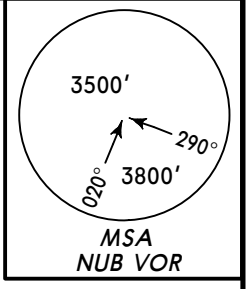
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MUNICH Radar	*Apt Elev*
129.52	1046′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4).
Strict adherence within the limits of aircraft performance is mandatory.
3. Rwy 10: EXPECT close-in obstacles.

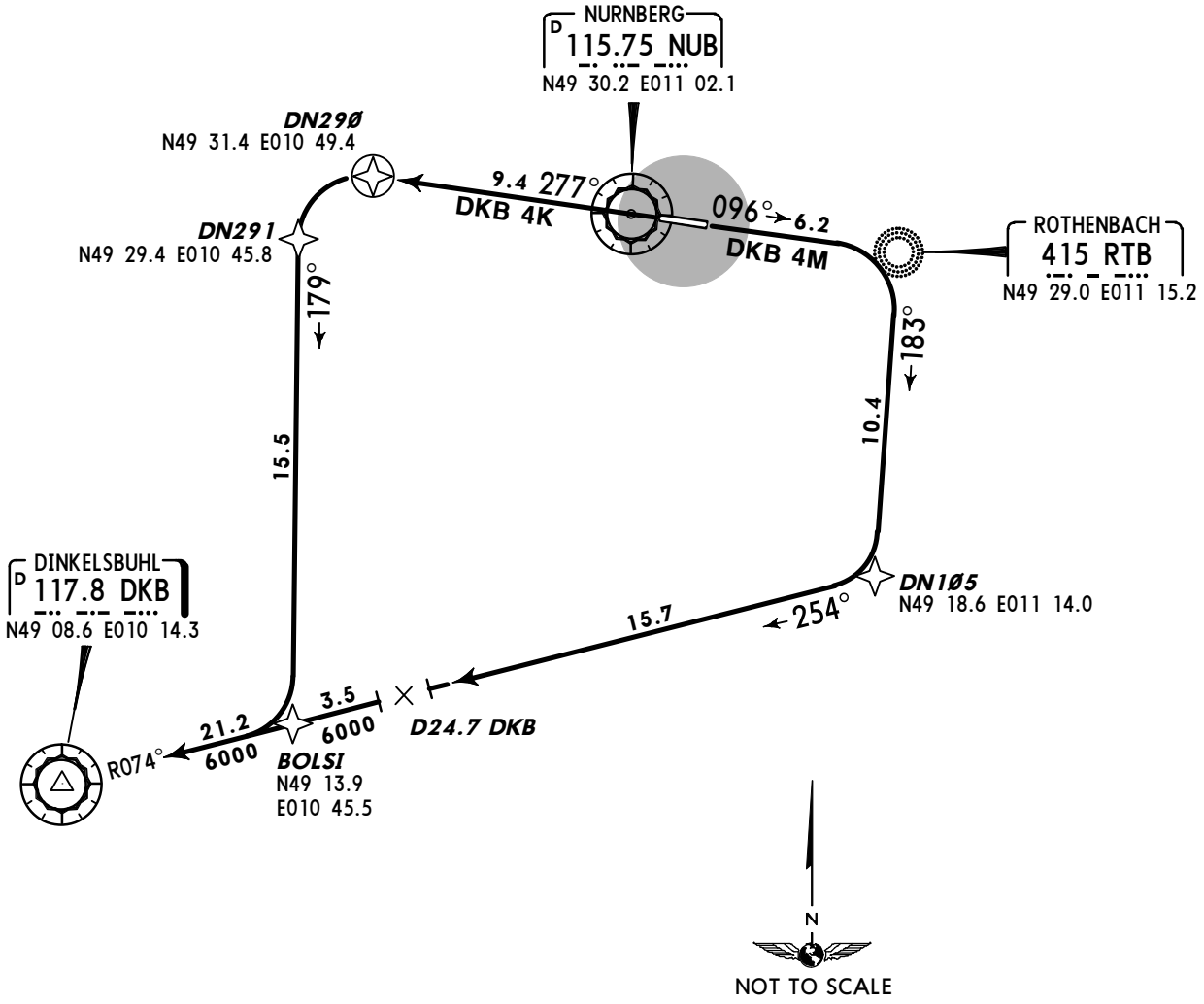
DINKELSBUHL FOUR KILO (DKB 4K)
DINKELSBUHL FOUR MIKE (DKB 4M)
RWYS 28, 10 RNAV DEPARTURES (OVERLAY 10-3A)

NOT AVAILABLE FOR FLIGHTS TO CONTINUE
VIA AIRWAYS T 104 OR Y 161



MSA
NUB VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

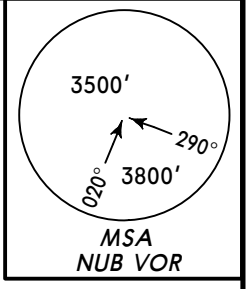
SID	RWY	ROUTING
DKB 4K	**28**	**(1500+) -** DN290 - **(6000′+) -** DN291 - BOLSI - DKB.
DKB 4M	**10**	**(1500+) -** RTB - DN105 - DKB.

CHANGES: SIDs renumbered & revised; chart reindexed; MSA.

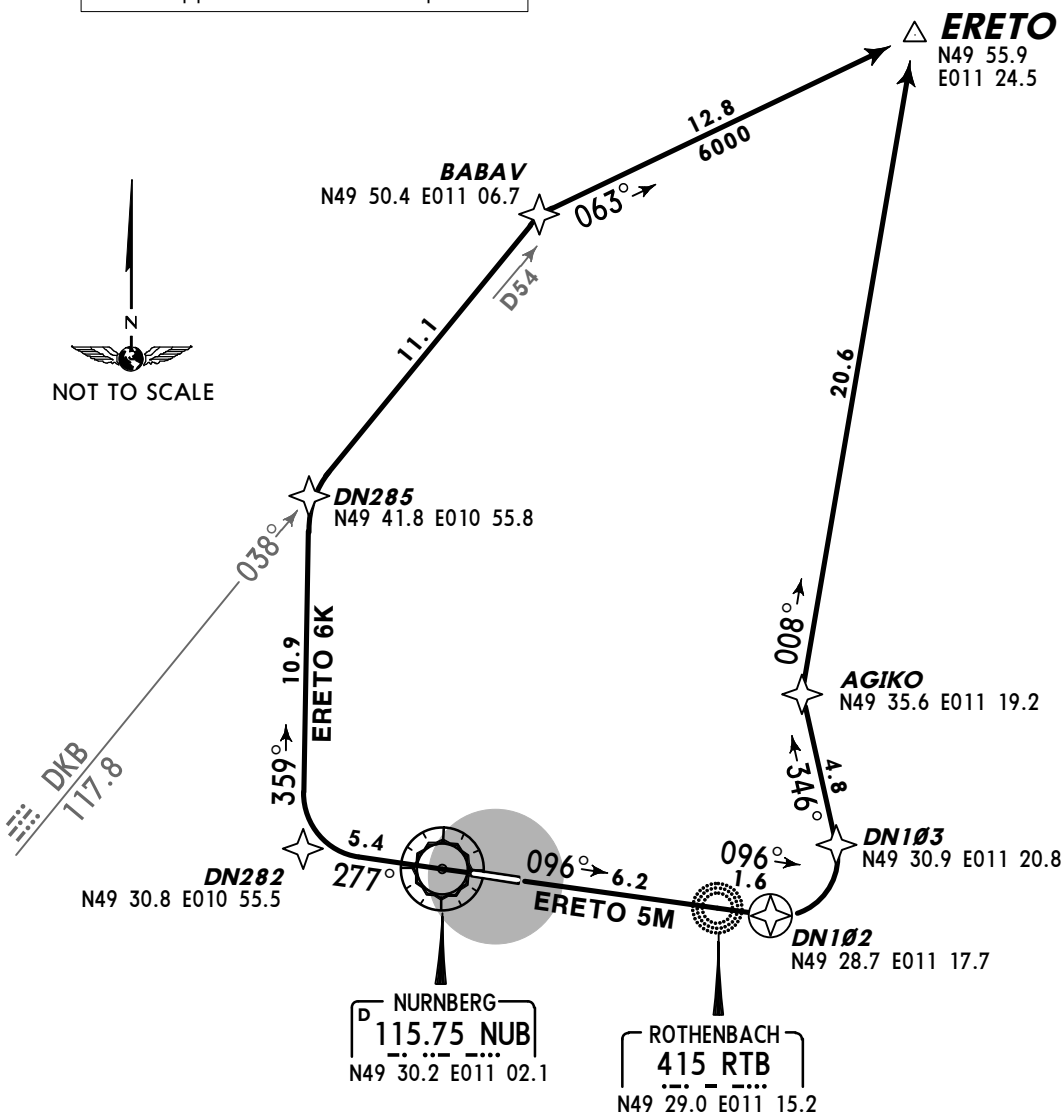
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MUNICH Radar	*Apt Elev*	
129.52	1046′	Trans level: By ATC Trans alt: 5000′ **1.** Contact MUNICH Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** Rwy 10: EXPECT close-in obstacles.

ERETO SIX KILO (ERETO 6K) *[ERET6K]*
ERETO FIVE MIKE (ERETO 5M) *[ERET5M]*
RWYS 28, 10 RNAV DEPARTURES (OVERLAY 10-3B)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



ERETO 5M
This SID requires a minimum climb gradient of
304′ per NM (5%) until passing **6000**′ due to airspace structure and glider activity.
If unable to comply inform ATC.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519

Initial climb clearance **FL70**

SID	RWY	ROUTING
ERETO 6K	**28**	**(1500+) -** DN282 - DN285 - BABAV - ERETO.
ERETO 5M	**10**	**(1500+) -** RTB - DN102 - DN103 - AGIKO - ERETO.

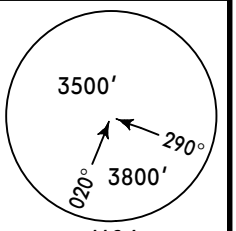
CHANGES: SIDs renumbered, revised & transferred; MSA.

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NURNBERG Tower 118.3	*Apt Elev* 1046′	Trans level: By ATC Trans alt: 5000′ **1.** Remain with NURNBERG Tower, contact MUNICH Radar when advised by Tower. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. **3.** Rwy 10: EXPECT close-in obstacles.

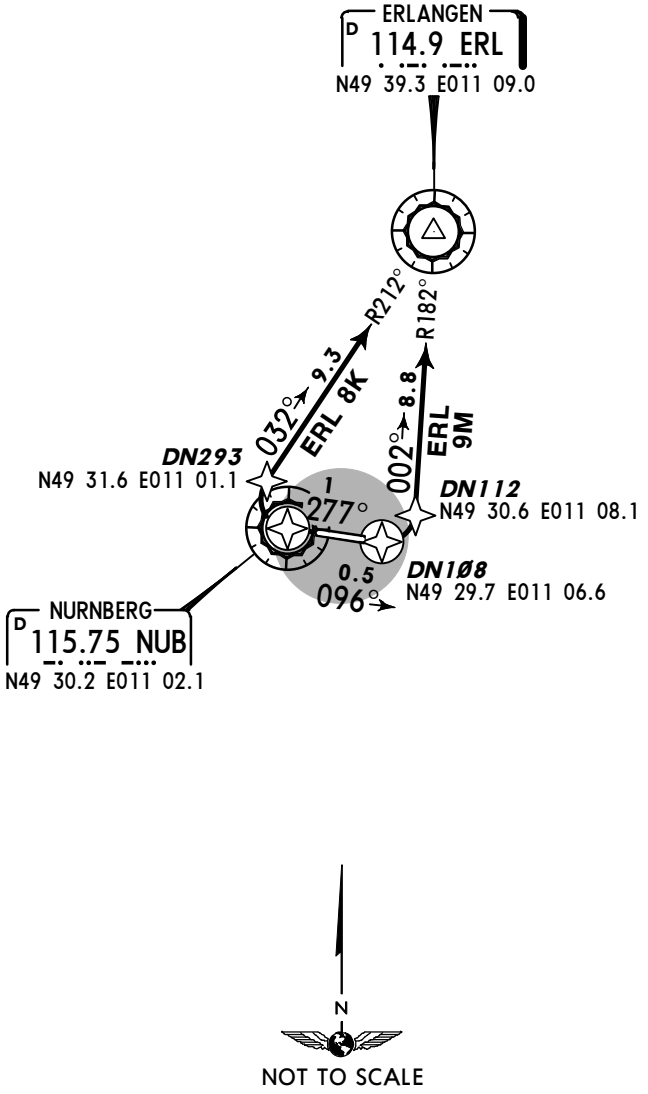
ERLANGEN EIGHT KILO (ERL 8K)
ERLANGEN NINE MIKE (ERL 9M)
RWYS 28, 10 RNAV DEPARTURES (OVERLAY 10-3C)

FOR LOCAL IFR TRAINING FLIGHTS AT EDDN
PROP ACFT UP TO 5.7T MTOW ONLY



MSA
NUB VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
ERL 8K	**28**	NUB - **(1500+) -** DN293 - ERL.
ERL 9M	**10**	DN108 - **(1500+) -** DN112 - ERL.

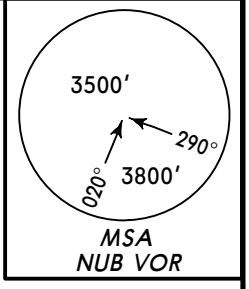
CHANGES: SIDs renumbered, revised & transferred; MSA.

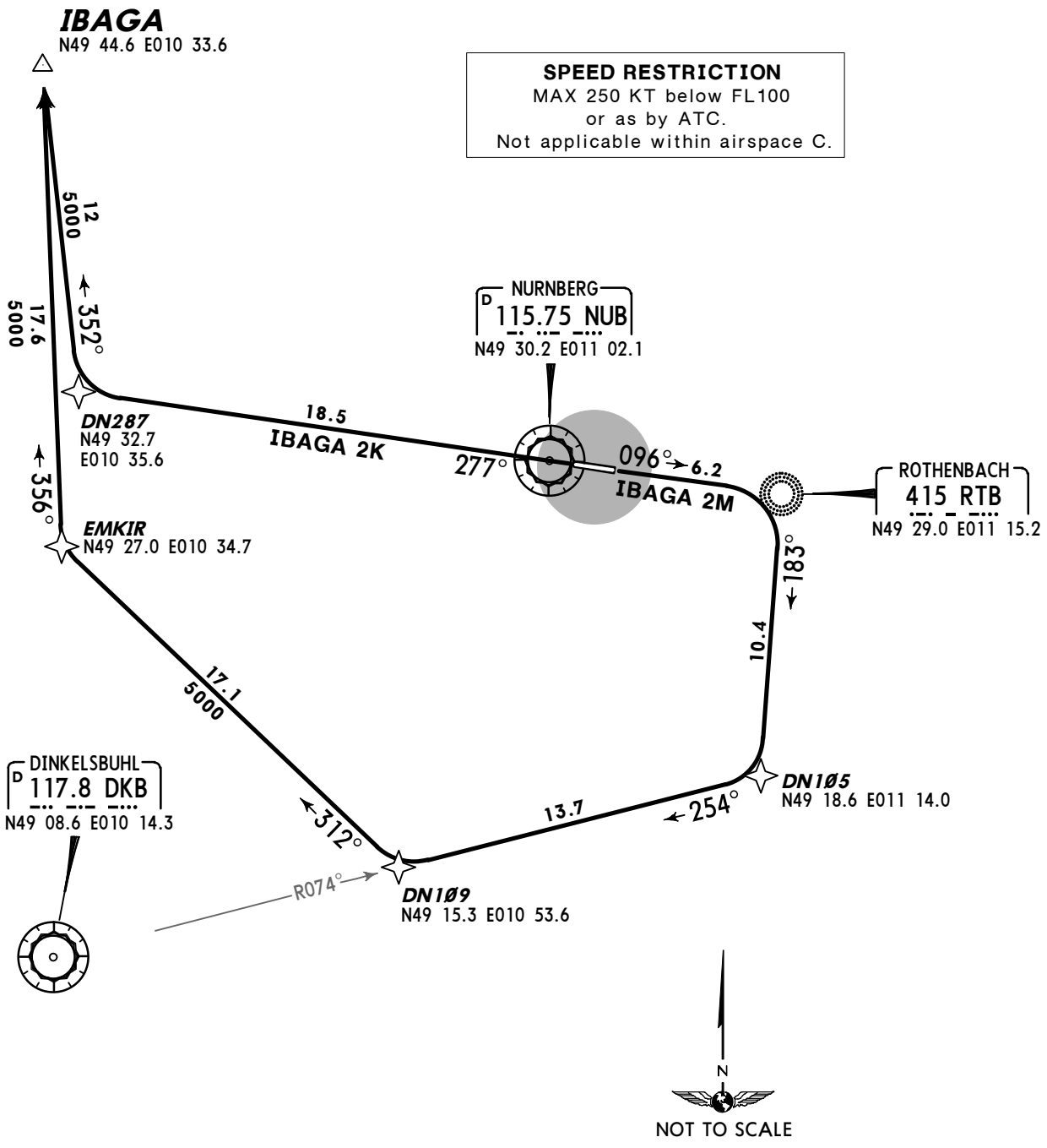
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MUNICH Radar	*Apt Elev*	
129.52	1046′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwy 10: EXPECT close-in obstacles.

IBAGA TWO KILO (IBAGA 2K) *[IBAG2K]*
IBAGA TWO MIKE (IBAGA 2M) *[IBAG2M]*
RWYS 28, 10 RNAV DEPARTURES (OVERLAY 10-3D)

NOT AVAILABLE FOR FLIGHTS INTENDING
TO PROCEED VIA OSBIT - AIRWAY G 5





Initial climb clearance **FL70**

SID	RWY	ROUTING
IBAGA 2K	**28**	**(1500+) -** DN287 - IBAGA.
IBAGA 2M	**10**	**(1500+) -** RTB - DN105 - DN109 - EMKIR - IBAGA.

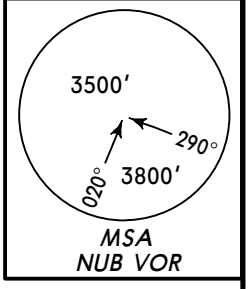
CHANGES: None.

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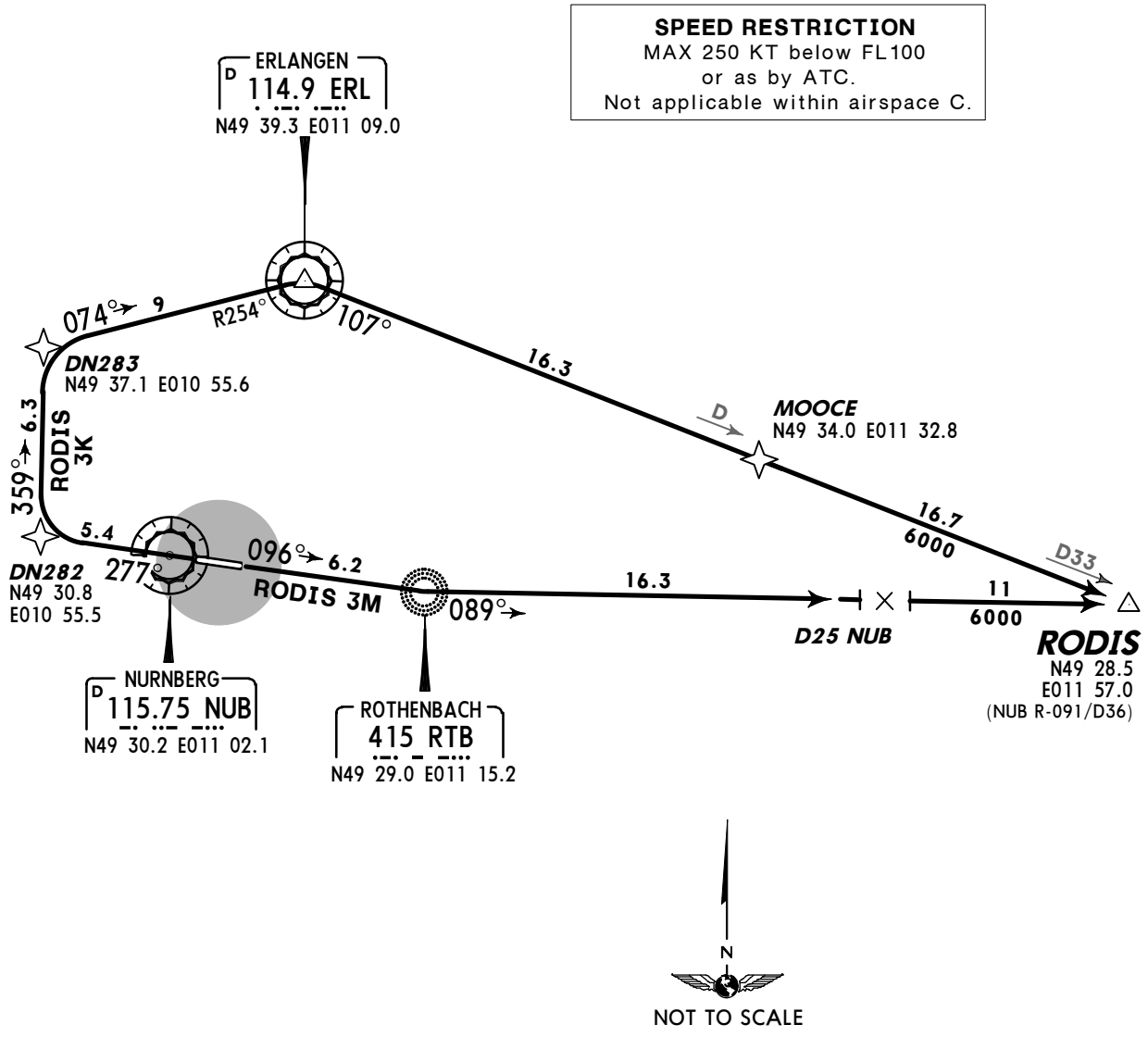
MUNICH Radar	*Apt Elev*	
129.52	1046′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Rwy 10: EXPECT close-in obstacles.

RODIS THREE KILO (RODIS 3K) *[RODI3K]*
RODIS THREE MIKE (RODIS 3M) *[RODI3M]*
RWYS 28, 10 RNAV DEPARTURES (OVERLAY 10-3E)

ONLY AVAILABLE FOR FLIGHTS WITH DEST EDMM FIR, LKPR
AND FOR FLIGHTS TO CONTINUE VIA AIRWAYS (U)L 604



MSA
NUB VOR



Initial climb clearance **FL70**

SID	RWY	ROUTING
RODIS 3K	**28**	**(1500+) -** DN282 - DN283 - ERL - MOOCE - RODIS.
RODIS 3M	**10**	**(1500+) -** RTB - RODIS.

CHANGES: SID availability.

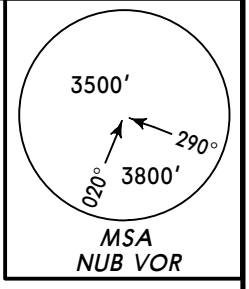
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MUNICH Radar	*Apt Elev*
129.52	1046′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4).
Strict adherence within the limits of aircraft performance is mandatory.
3. Rwy 10: EXPECT close-in obstacles.

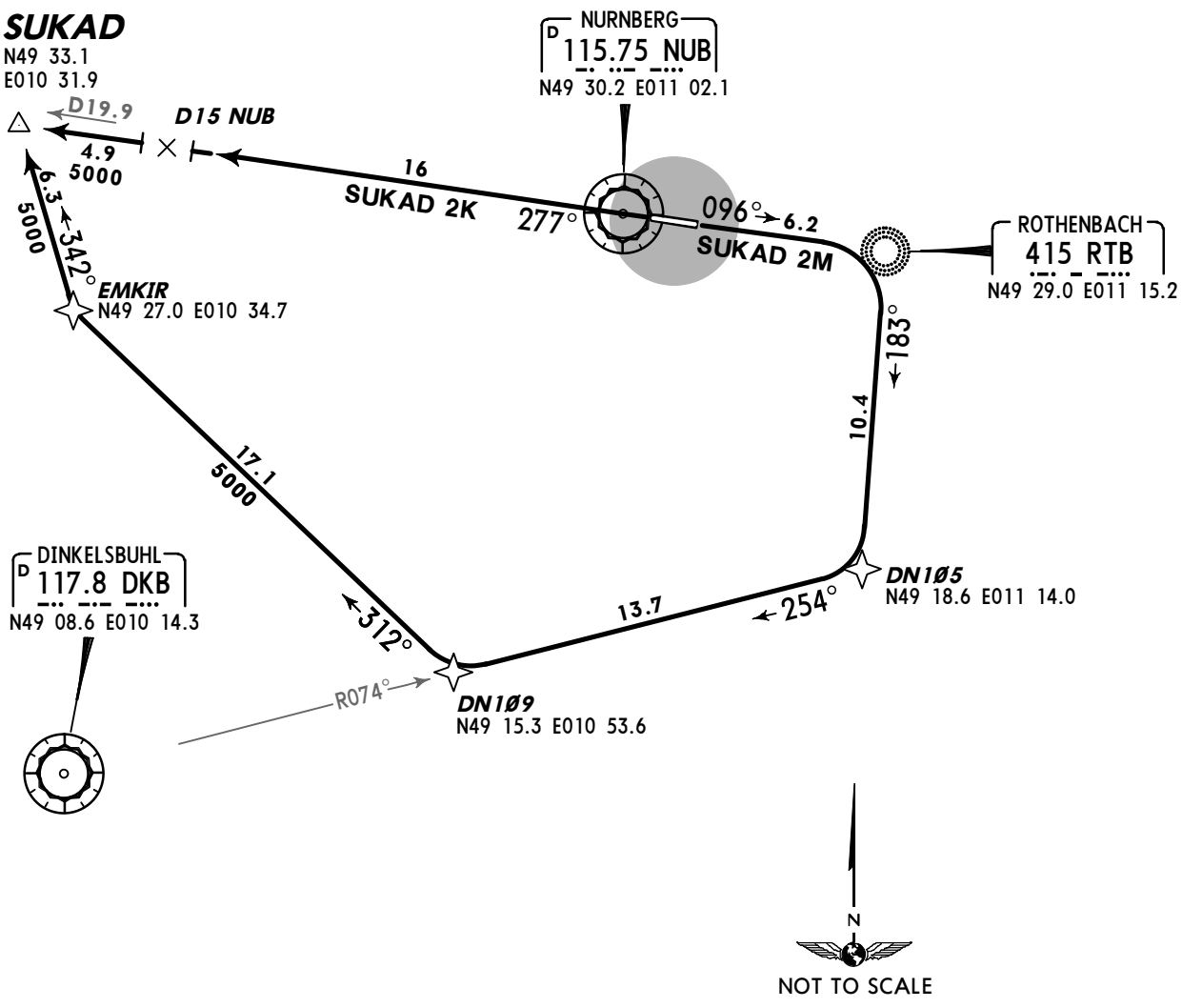
SUKAD TWO KILO (SUKAD 2K) *[SUKA2K]*
SUKAD TWO MIKE (SUKAD 2M) *[SUKA2M]*
RWYS 28, 10 RNAV DEPARTURES (OVERLAY 10-3F)

ONLY FOR FLIGHTS WITH DEST EDDF OR ETOU
AND FLIGHTS WITH Y FPL



MSA
NUB VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
SUKAD 2K	**28**	**(1500+) -** SUKAD.
SUKAD 2M	**10**	**(1500+) -** RTB - DN105 - DN109 - EMKIR - SUKAD.

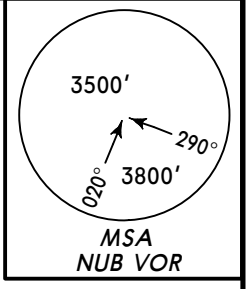
CHANGES: New chart.

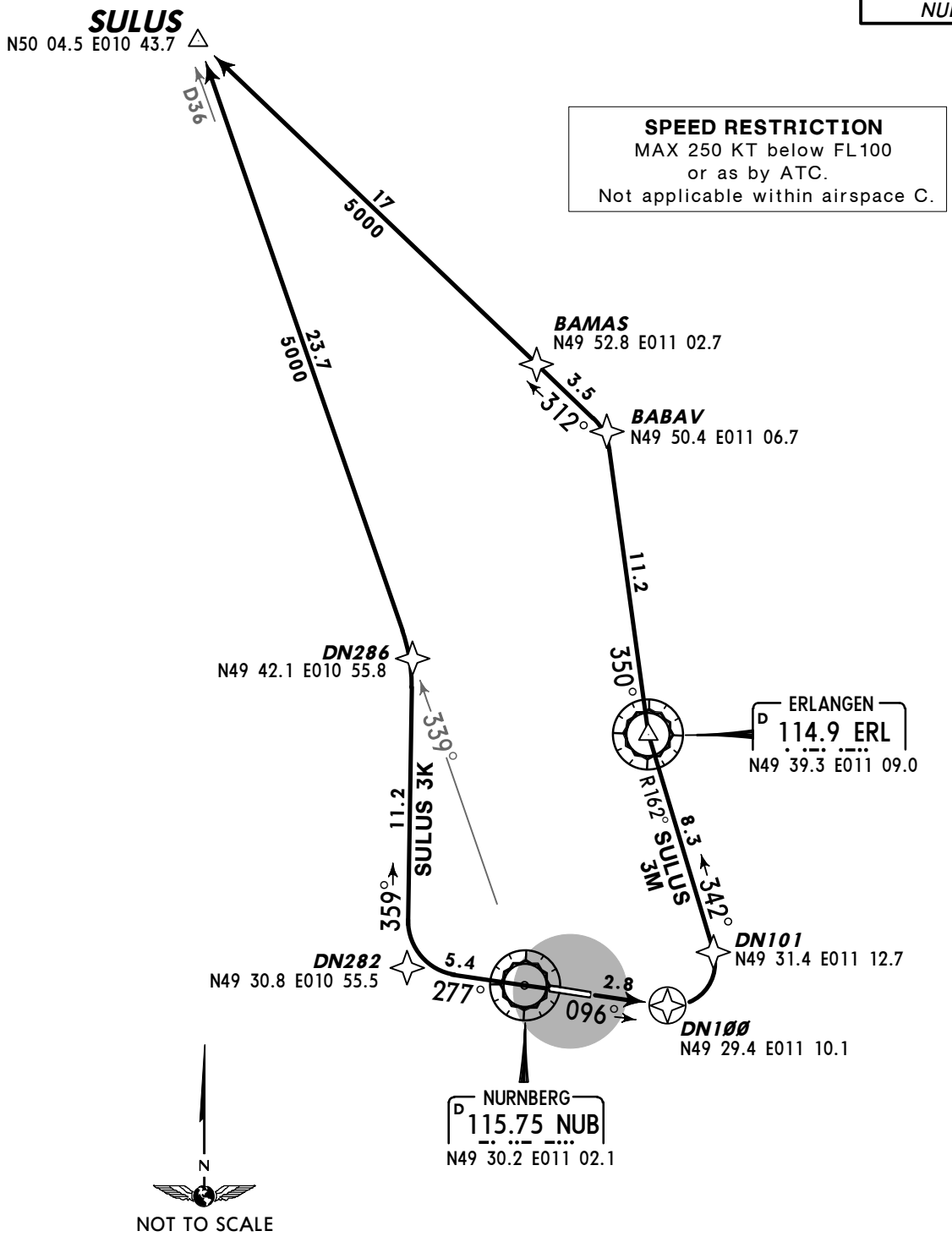
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MUNICH Radar	*Apt Elev*
129.52	1046′

Trans level: By ATC Trans alt: 5000′
1. Contact MUNICH Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4).
Strict adherence within the limits of aircraft performance is mandatory.
3. Rwy 10: EXPECT close-in obstacles.

SULUS THREE KILO (SULUS 3K) *[SULU3K]*
SULUS THREE MIKE (SULUS 3M) *[SULU3M]*
RWYS 28, 10 RNAV DEPARTURES (OVERLAY 10-3G)
ONLY AVAILABLE FOR FLIGHTS INTENDING
TO PROCEED SULUS - AIRWAY L 604





Initial climb clearance **FL70**

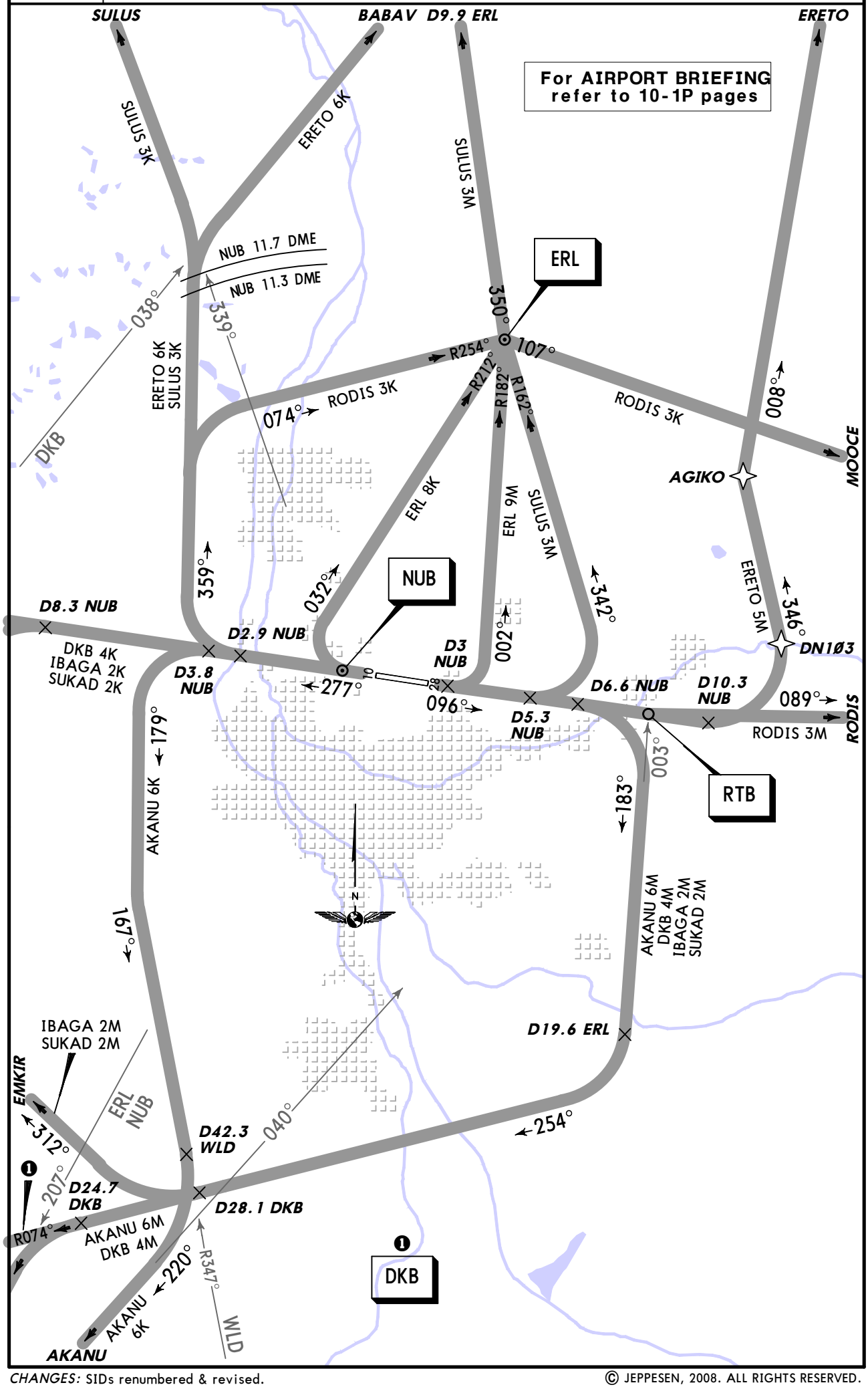
SID	RWY	ROUTING
SULUS 3K	**28**	**(1500+) -** DN282 - DN286 - SULUS.
SULUS 3M	**10**	**(1500+) -** DN100 - DN101 - ERL - BABAV - BAMAS - SULUS.

CHANGES: SIDs renumbered & revised; chart reindexed; MSA.

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Apt Elev
1046'

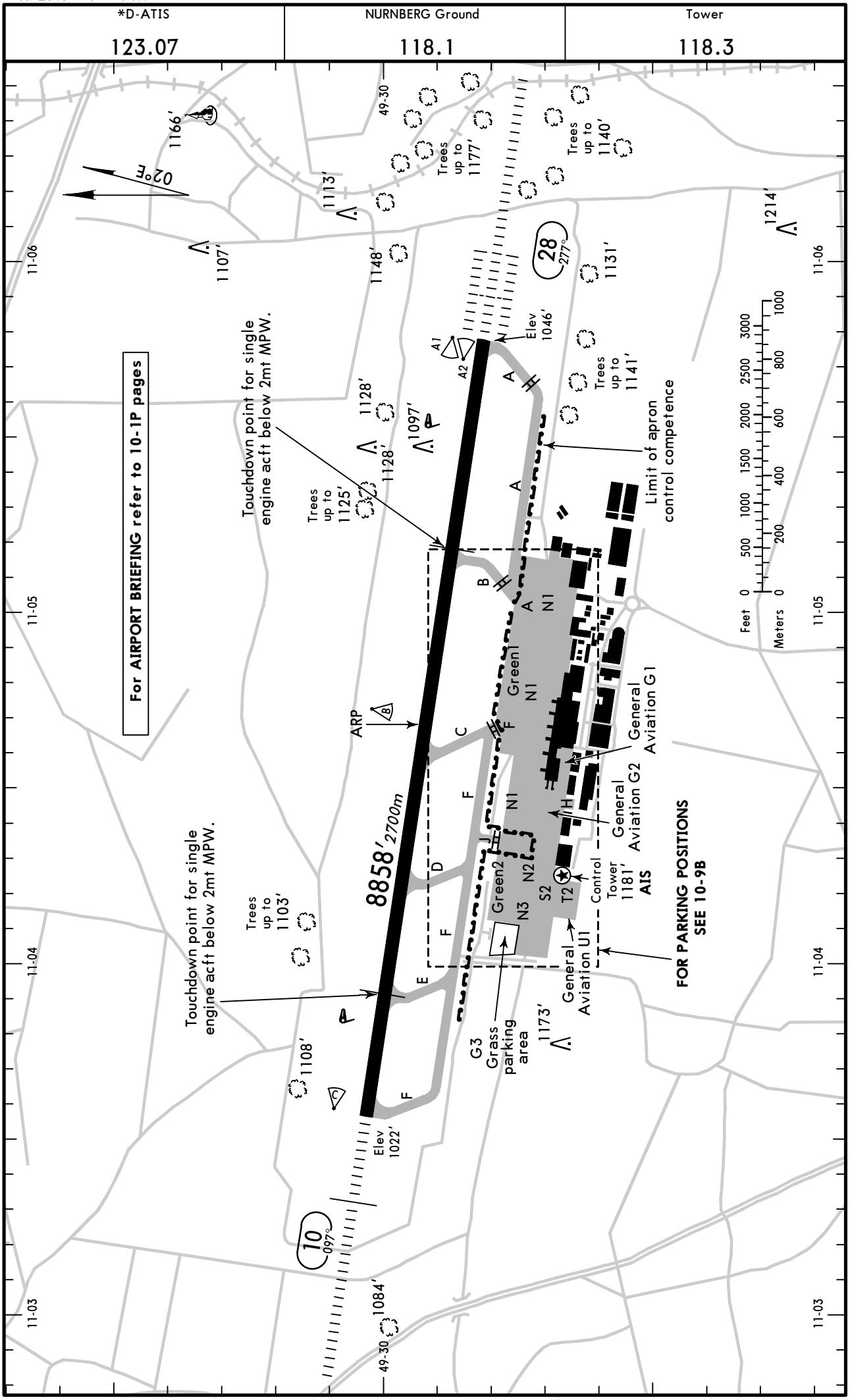
NOISE ABATEMENT



CHANGES: SIDs renumbered & revised.

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*D-ATIS	NURNBERG Ground	Tower
123.07	118.1	118.3



CHANGES: Apron U1.

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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
10	HIRL HIALS SFL REIL PAPI-L (3.0°) RVR		7657′ *2334m*	❶	148′ *45m*
28	HIRL CL ALSF-II TDZ REIL PAPI-L (3.0°) RVR		7696′ *2346m*		

❶ TAKE-OFF RUN AVAILABLE

RWY 10: From rwy head 8858′ (2700m)
twy E int 7546′ (2300m)
twy D int 6234′ (1900m)
twy C int 4757′ (1450m)

RWY 28: From rwy head 8858′ (2700m)
twy B int 6437′ (1962m)
twy C int 4101′ (1250m)

Standard

TAKE-OFF 1

All Rwys

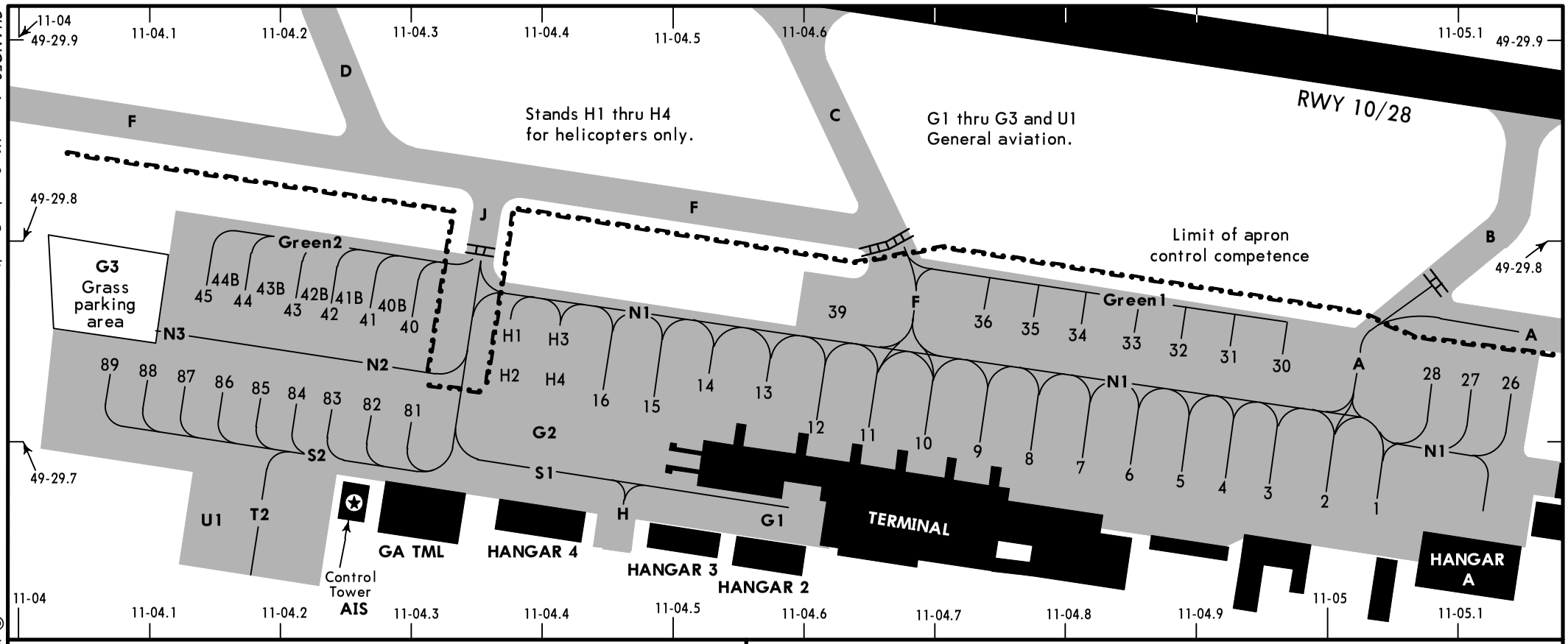
LVP must be in Force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: None.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1, 2	N49 29.7 E011 05.0	32	N49 29.8 E011 04.9
3 thru 5	N49 29.7 E011 04.9	33 thru 35	N49 29.8 E011 04.8
6, 7	N49 29.7 E011 04.8	36	N49 29.8 E011 04.7
8 thru 10	N49 29.7 E011 04.7	39	N49 29.8 E011 04.6
11 thru 13	N49 29.7 E011 04.6	40 thru 41B	N49 29.8 E011 04.3
14, 15	N49 29.7 E011 04.5	42 thru 44B	N49 29.8 E011 04.2
16	N49 29.7 E011 04.4	45	N49 29.8 E011 04.1
26 thru 28	N49 29.7 E011 05.1	81, 82	N49 29.7 E011 04.3
30	N49 29.7 E011 05.0	83 thru 88	N49 29.7 E011 04.2
31	N49 29.8 E011 05.0	89	N49 29.7 E011 04.0

CHANGES: Apron U1. Stands. Coordinates.

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NURNBERG, GERMANY

NURNBERG

STRAIGHT-IN RWY		A	B	C	D
10	ILS ❶	**1235**′(213′)	**1245**′(223′)	**1255**′(233′)	**1265**′(243′)
		R600m	**R600m**	**R600m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC ❶	**1440**′(418′)	**1440**′(418′)	**1440**′(418′)	**1440**′(418′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV) ❶	**1440**′(418′)	**1440**′(418′)	**1440**′(418′)	**1440**′(418′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV) ❶	**1430**′(408′)	**1430**′(408′)	**1430**′(408′)	**1430**′(408′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	VOR ❶	**1530**′(508′)	**1530**′(508′)	**1530**′(508′)	**1530**′(508′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**1580**′(558′)	**1580**′(558′)	**1580**′(558′)	**1580**′(558′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
28	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**1146**′(100′)	**1146**′(100′)	**1146**′(100′)	**1146**′(100′)
		RA98′ R300m	**RA98′ R300m**	**RA98′ R300m**	**RA98′ R300m**
	ILS	**1258**′(212′)	**1268**′(222′)	**1291**′(245′)	**1301**′(255′)
		R600m	**R600m**	**R600m**	**R650m**
	ALS out	R1000m	R1000m	R1000m	R1200m
	LOC	**1450**′(404′)	**1450**′(404′)	**1450**′(404′)	**1450**′(404′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**1520**′(474′)	**1520**′(474′)	**1520**′(474′)	**1520**′(474′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV)	**1670**′(624′)	**1670**′(624′)	**1670**′(624′)	**1670**′(624′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR	**1670**′(624′)	**1670**′(624′)	**1670**′(624′)	**1670**′(624′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**1670**′(624′)	**1670**′(624′)	**1670**′(624′)	**1670**′(624′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

❶ Missed apch climb gradient mim 3.5% until passing 5000′.

CHANGES: LOC Rwy 28.

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CIRCLE-TO-LAND ❶ ❷	100 KT	135 KT	180 KT	205 KT
	1720′(674′)	**1720**′(674′)	**1920**′(874′)	**1940**′(894′)
	V1500m	V1600m	V2400m	V3600m

❶ Not authorized South of airport.
❷ After RNAV or SRE apch: NOT APPLICABLE.

TAKE-OFF RWY 10

	LVP must be in Force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A, B, C	*250m*	*400m*	*500m*
D	*300m*		

TAKE-OFF RWY 28

	Approved Operators	LVP must be in Force				
	HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A, B, C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

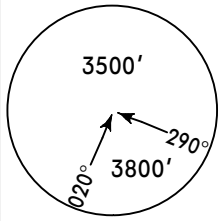
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*D-ATIS	MUNICH Radar (APP)	NURNBERG Director	NURNBERG Tower	Ground
123.07	129.52	119.47	118.3	118.1

BRIEFING STRIP ™

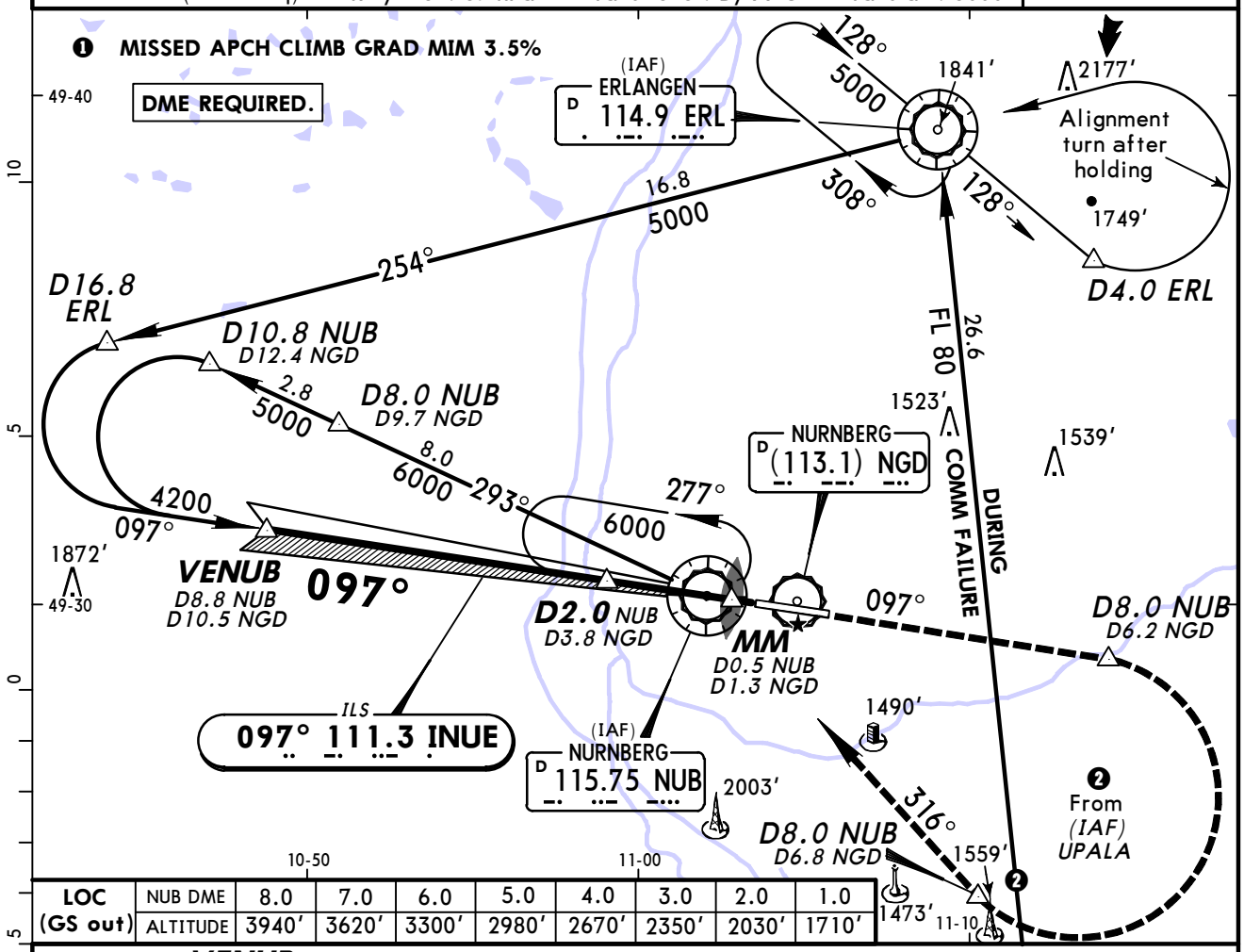
LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 1046′
INUE		D2.0 NUB	Refer to Minimums	RWY 1022′
111.3	097°	2030′ (1008′)		

MISSED APCH: Climb on R-097 NUB to D8.0 NUB, then turn RIGHT onto R-136 inbound to NUB VOR climbing to 6000′. Cross D8.0/R-136 NUB at or above 5000′.

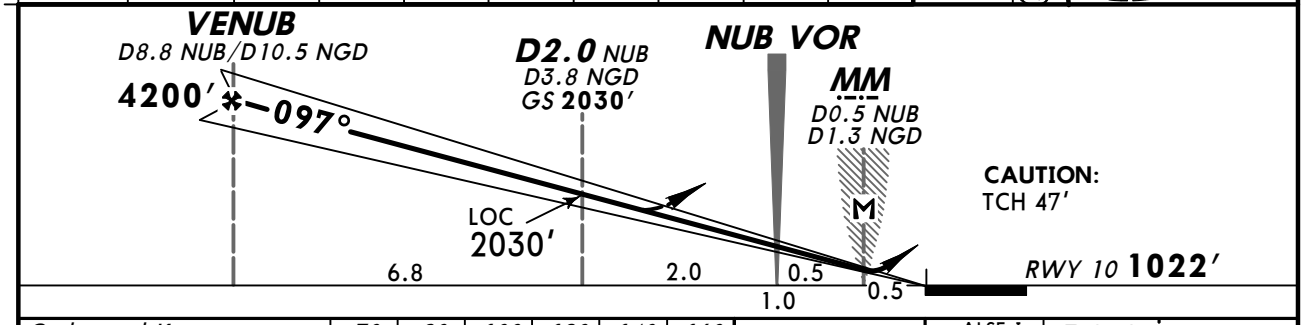


MSA NUB VOR

Alt Set: hPa (IN on req) Rwy Elev: 37 hPa Trans level: By ATC Trans alt: 5000′



LOC (GS out)	NUB DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
	ALTITUDE	3940′	3620′	3300′	2980′	2670′	2350′	2030′	1710′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	377	485	539	647	755	862
MAP at MM/D0.5 NUB/D1.3 NGD							

ALSF-I
REIL
PAPI

D8.0 NUB on NUB 115.75 R-097

Standard STRAIGHT-IN LANDING RWY 10

Missed apch climb gradient mim 3.5% until passing 5000′.

	ILS ❶		LOC (GS out)	
	DA(H) C:1255′(233′) D:1265′(243′)		DA(H) 1440′(418′)	
	FULL/Limited	ALS out		ALS out
A	RVR 800m	RVR 1200m	RVR 1500m	
B				
C			RVR 1500m	RVR 1900m
D		RVR 1300m		

CIRCLE-TO-LAND
Not authorized
South of airport

Max Kts	MDA(H)	VIS
100	1720′(674′)	1500m
135	1720′(674′)	1600m
180	1920′(874′)	2400m
205	1940′(894′)	3600m

❶ DA(H) CAT A: 1235′(213′), CAT B: 1245′(223′).

PANS OPS 4

CHANGES: Missed apch climb grad.

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EDDN/NUE
NURNBERG

JEPPESEN
13 AUG 10 (11-2)

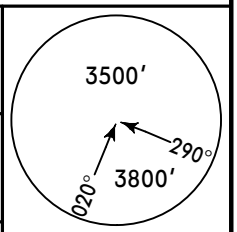
NURNBERG, GERMANY
ILS or LOC Rwy 28

*D-ATIS	MUNICH Radar (APP)	NURNBERG Director	NURNBERG Tower	Ground
123.07	129.52	119.47	118.3	118.1

BRIEFING STRIP™

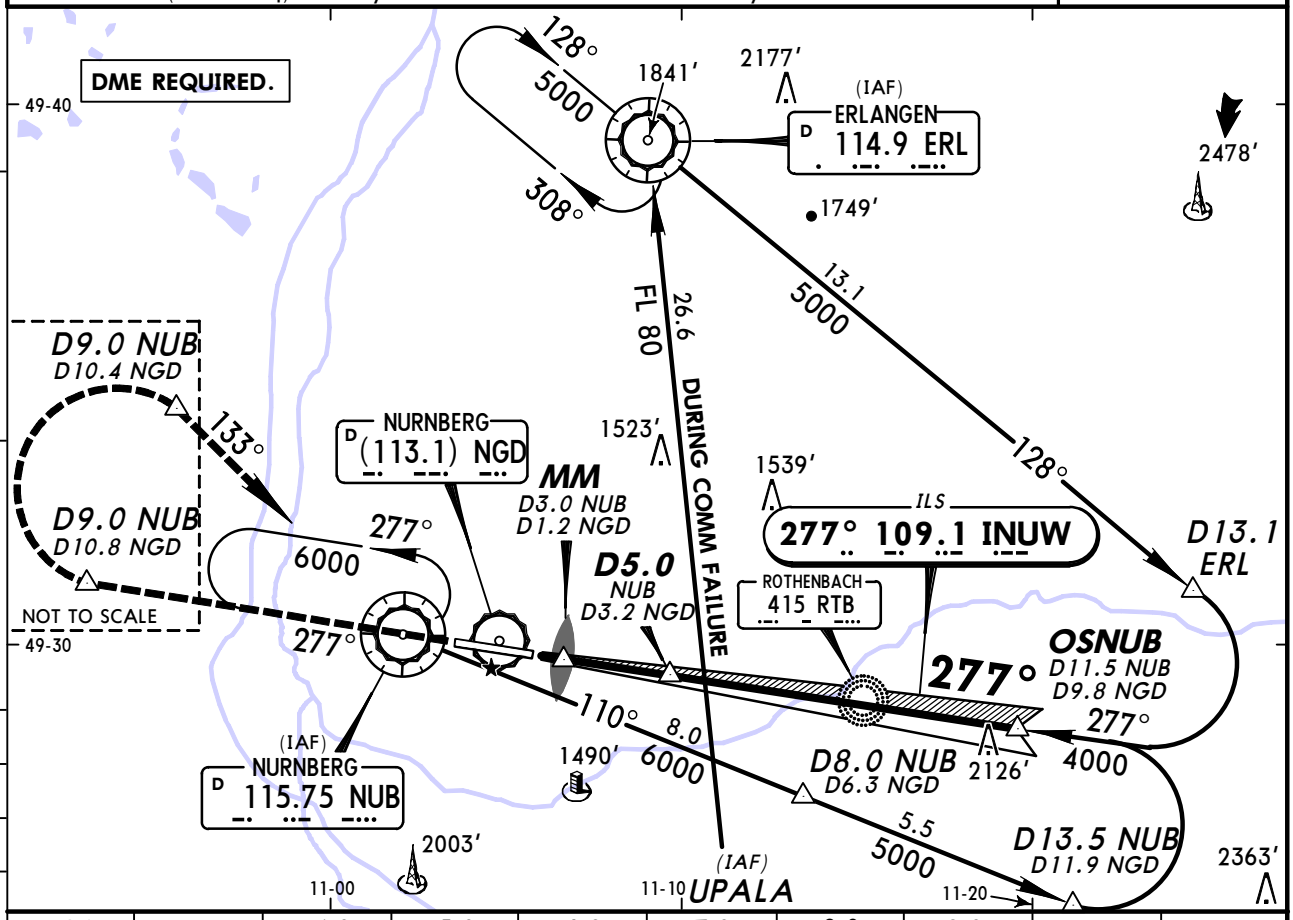
LOC	Final	GS	ILS	Apt Elev 1046′
INUW	Apch Crs	D5.0 NUB	DA(H)	RWY 1046′
109.1	277°	1930′ (884′)	Refer to Minimums	

MISSED APCH: Climb on R-277 NUB to D9.0 NUB, then turn RIGHT onto R-313 inbound to NUB VOR climbing to 6000′.
Cross D9.0/R-313 NUB at 5000′ or above.

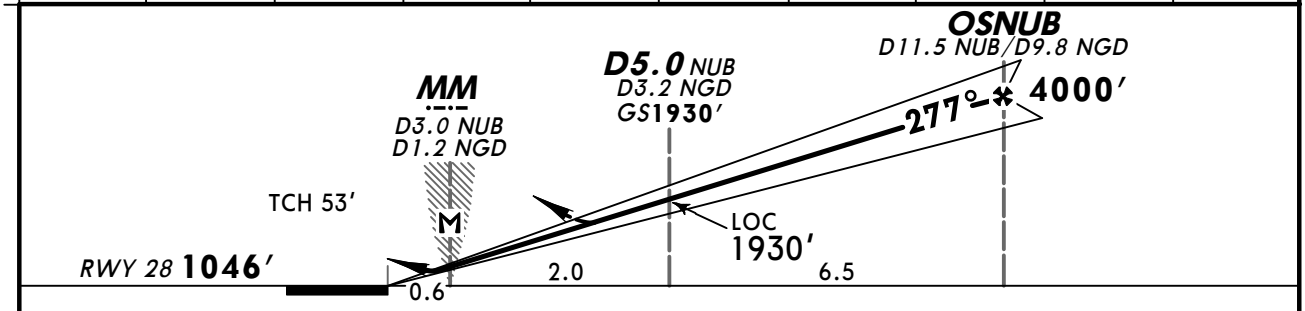


MSA NUB VOR

Alt Set: hPa (IN on req) | Rwy Elev: 38 hPa | Trans level: By ATC | Trans alt: 5000′



LOC (GS out)	NUB DME	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
	ALTITUDE	1610′	1930′	2250′	2570′	2890′	3210′	3520′	3840′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Desc Angle 3.00°	377	485	539	647	755	862
MAP at MM/D3.0 NUB/D1.2 NGD						

ALSF-II
REIL
PAPI

D9.0 NUB on NUB 115.75 R-277

Standard STRAIGHT-IN LANDING RWY 28

ILS		LOC (GS out)	
DA(H) A: 1258′ (212′) C: 1291′ (245′)		DA(H) 1450′ (404′)	
B: 1268′ (222′) D: 1301′ (255′)			
FULL	Limited	ALS out	ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C			RVR 1300m		RVR 1900m
D	RVR 600m				

CIRCLE-TO-LAND
Not authorized South of airport

Max Kts	MDA(H)	VIS
100	1720′ (674′)	1500m
135	1720′ (674′)	1600m
180	1920′ (874′)	2400m
205	1940′ (894′)	3600m

PANS OPS 4

CHANGES: Minimums.

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EDDN/NUE
NURNBERG

JEPPESEN
13 AUG 10 (11-2A)

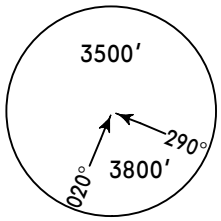
NURNBERG, GERMANY
CAT II ILS Rwy 28

*D-ATIS	MUNICH Radar (APP)	NURNBERG Director	NURNBERG Tower	Ground
123.07	129.52	119.47	118.3	118.1

BRIEFING STRIP™

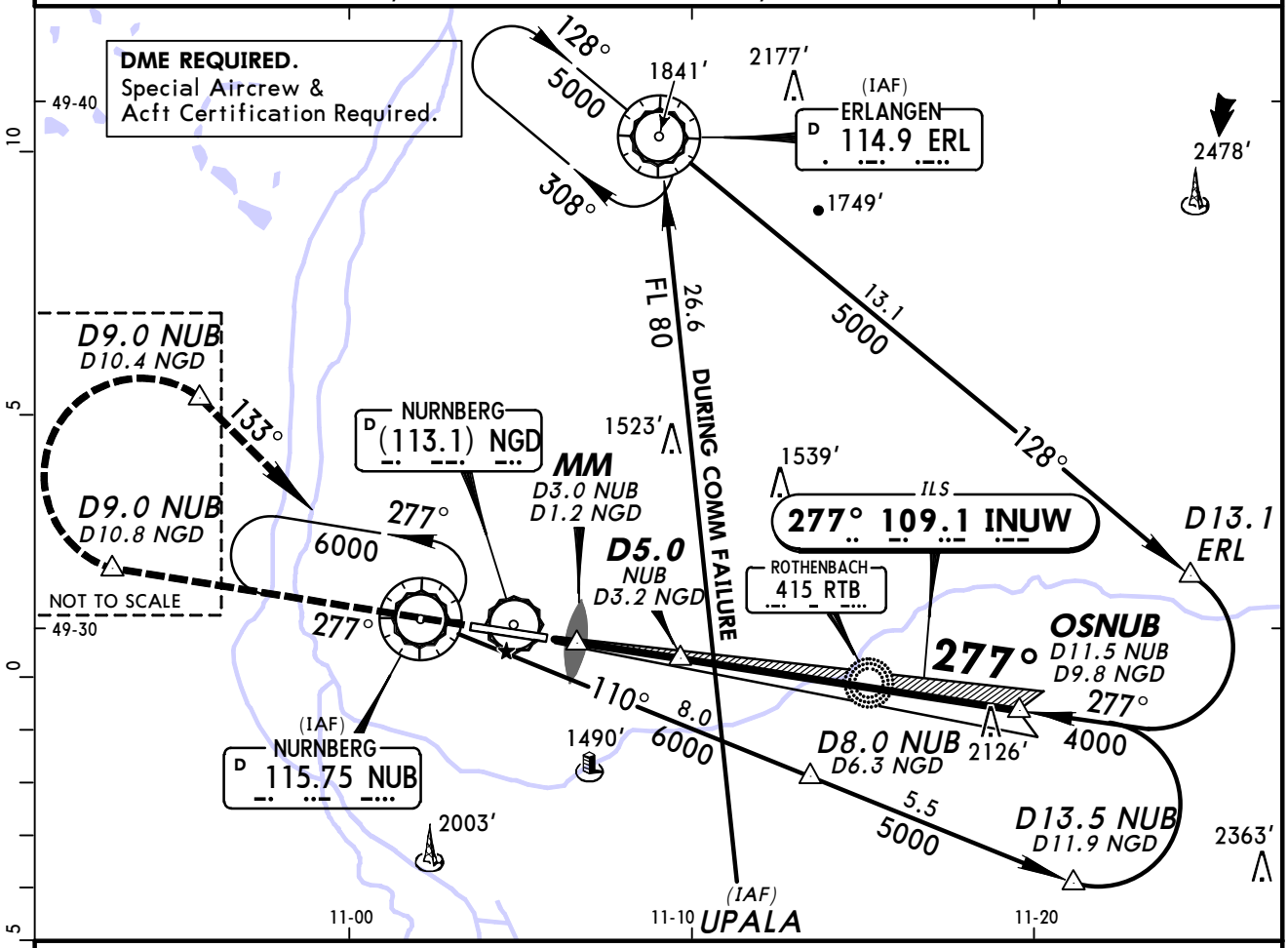
LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev 1046′
INUW	277°	D5.0 NUB	RA 98′	RWY 1046′
109.1		1930′ (884′)	DA(H) 1146′ (100′)	

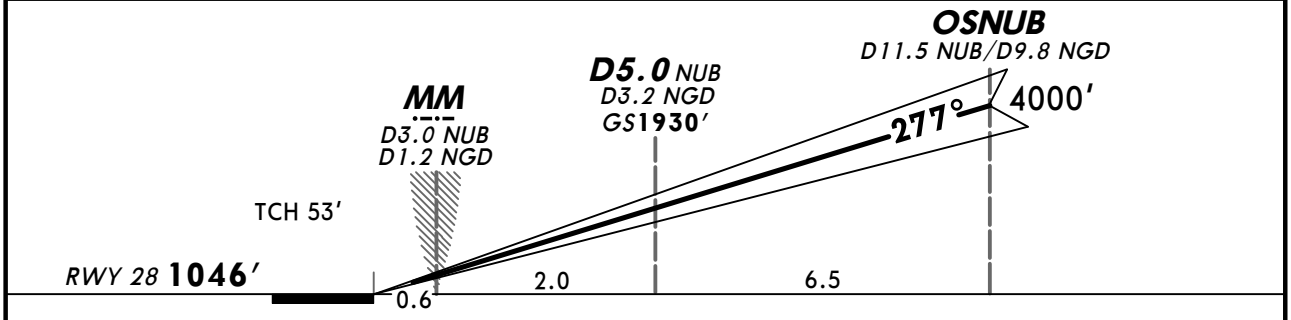
MISSED APCH: Climb on R-277 NUB to D9.0 NUB, then turn RIGHT onto R-313 inbound to NUB VOR climbing to 6000′.
Cross D9.0/R-313 NUB at 5000′ or above.



MSA NUB VOR

Alt Set: hPa (IN on req) | Rwy Elev: 38 hPa | Trans level: By ATC | Trans alt: 5000′





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

ALSF-II
REIL
PAPI

D9.0 NUB

NUB on 115.75
R-277

Standard

STRAIGHT-IN LANDING RWY **28**
CAT II ILS
ABCD
RA 98′
DA(H) **1146′** (100′)

RVR 300m [1]

PANS OPS 4

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

CHANGES: None.

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EDDN/NUE
NURNBERG

JEPPESEN
1 JAN 10
Eff 14 Jan
12-1

NURNBERG, GERMANY
❶ RNAV (GPS) Rwy 10

*D-ATIS	MUNICH Radar (APP)	NURNBERG Director	NURNBERG Tower	Ground
123.07	129.52	119.47	118.3	118.1

BRIEFING STRIP™

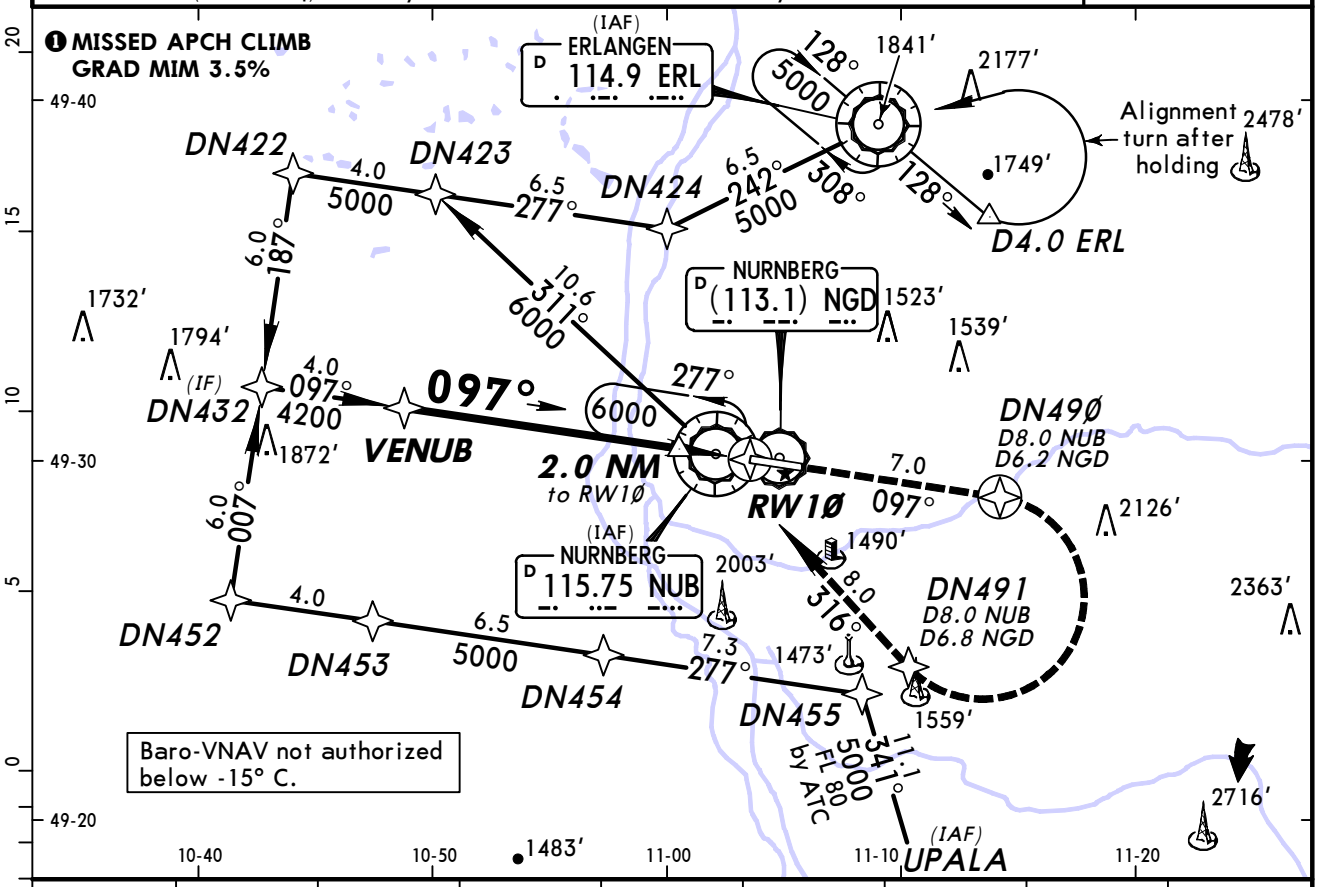
RNAV	Final Apch Crs	Minimum Alt	LNAV DA(H)	Apt Elev 1046′
	097°	VENUB 4200′ (3178′)	1430′ (408′)	RWY 1022′

MISSED APCH: Climb on 097° to DN49Ø, then turn RIGHT via DN491 onto 316° to NUB VOR climbing to 6000′.
Cross DN491 at 5000′ or above.

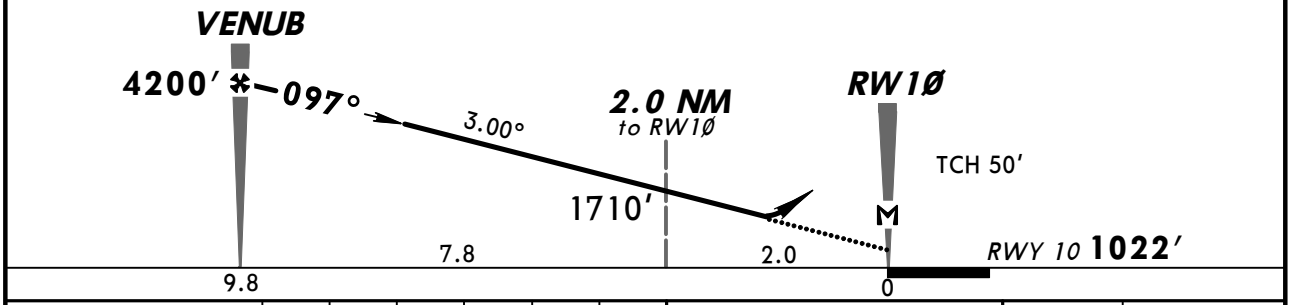
NON-RNAV: Climb on R-097 NUB to D8.0 NUB, then turn RIGHT onto R-136 inbound to NUB VOR climbing to 6000′.
Cross D8.0/R-136 NUB at 5000′ or above.

3800′
MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 37 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RW1Ø	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3940′	3620′	3310′	2990′	2670′	2350′	2030′	1710′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW1Ø							

HIALS
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **10**

Missed apch climb gradient mim 3.5% until passing 5000′.

	LNAV/VNAV DA(H) 1440′ (418′)		LNAV DA(H) 1430′ (408′)	
		ALS out		ALS out
A	RVR 1200m	RVR 1500m	RVR 1500m	
B				
C		RVR 1900m	RVR 1500m	RVR 1900m
D				

CHANGES: Note. Minimums.

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EDDN/NUE
NURNBERG

JEPPESEN
1 JAN 10 (12-2) Eff 14 Jan

NURNBERG, GERMANY
RNAV (GPS) Rwy 28

*D-ATIS	MUNICH Radar (APP)	NURNBERG Director	NURNBERG Tower	Ground
123.07	129.52	119.47	118.3	118.1

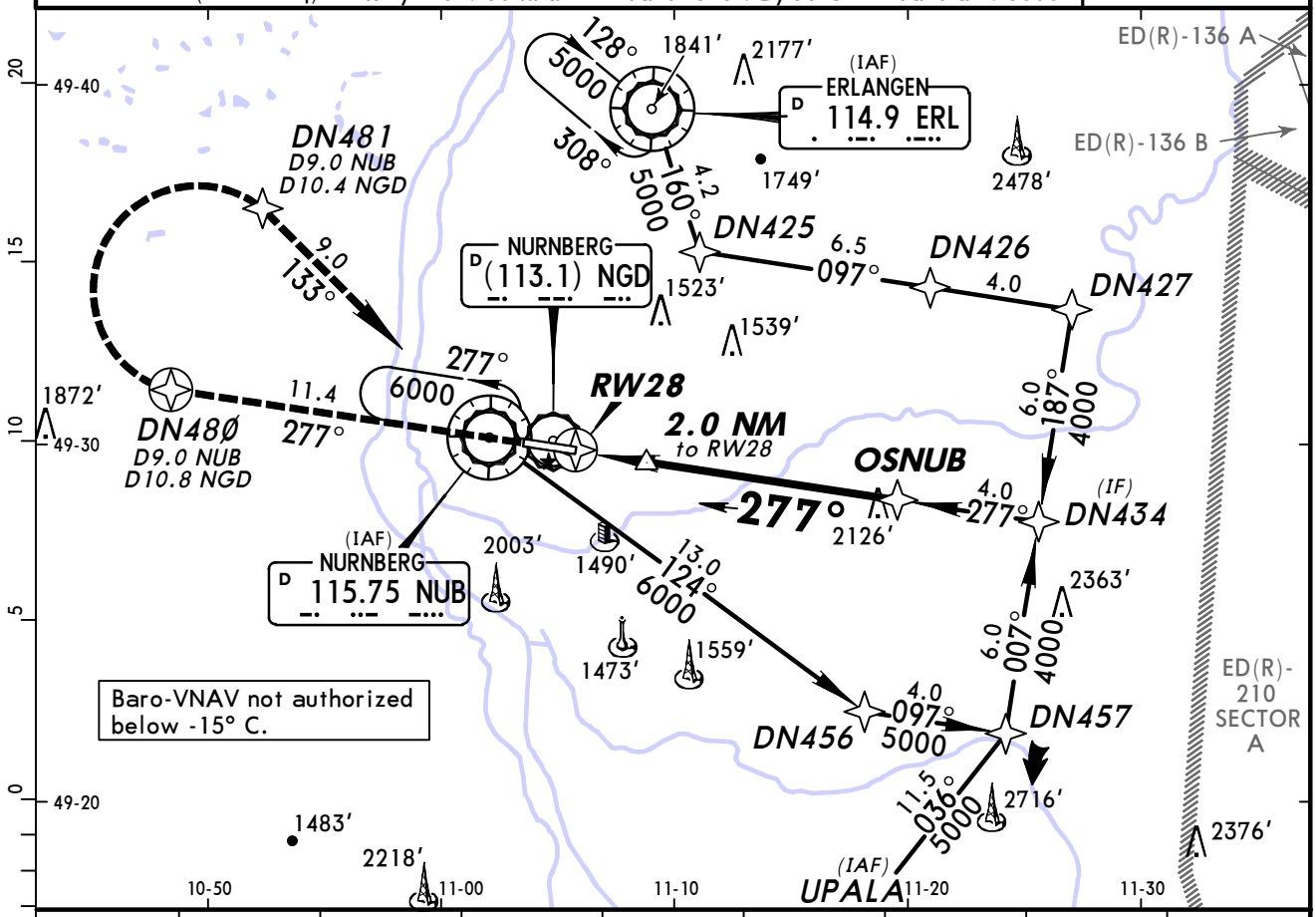
BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 1046′
	277°	OSNUB 4000′ (2954′)	1520′ (474′)	RWY 1046′

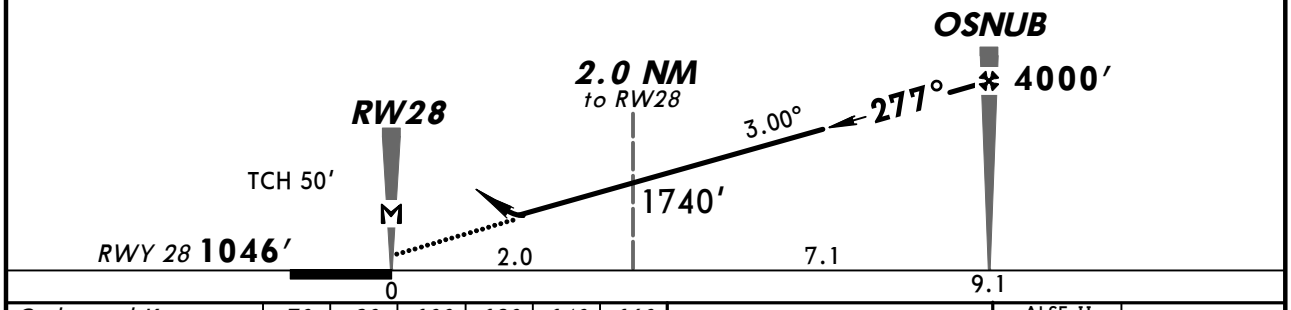
MISSED APCH: Climb on 277° to DN48Ø, then turn RIGHT via DN481 onto 133° to NUB VOR climbing to 6000′. Cross DN481 at 5000′ or above.
NON-RNAV: Climb on R-277 NUB to D9.0 NUB, then turn RIGHT onto R-313 inbound to NUB VOR climbing to 6000′. Cross D9.0/R-313 NUB at 5000′ or above.

3800′
MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 38 hPa Trans level: By ATC Trans alt: 5000′



DIST to RW28	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	1740′	2060′	2370′	2690′	3010′	3330′	3650′	3970′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW28						

ALSF-II
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **28**

	LNAV/VNAV DA(H) 1520′ (474′)		LNAV DA(H) 1670′ (624′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1500m	CMV 2200m	CMV 2200m	CMV 2400m
D				

CHANGES: Note. Minimums.

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EDDN/NUE
NURNBERG

JEPPESEN 7 AUG 09 (13-1)

MISSED APCH CLIMB GRAD MIM 3.5%

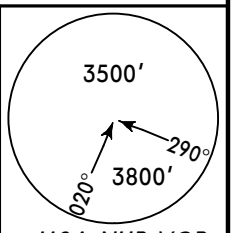
NURNBERG, GERMANY
VOR Rwy 10

*D-ATIS	MUNICH Radar (APP)	NURNBERG Director	NURNBERG Tower	Ground
123.07	129.52	119.47	118.3	118.1

BRIEFING STRIP™

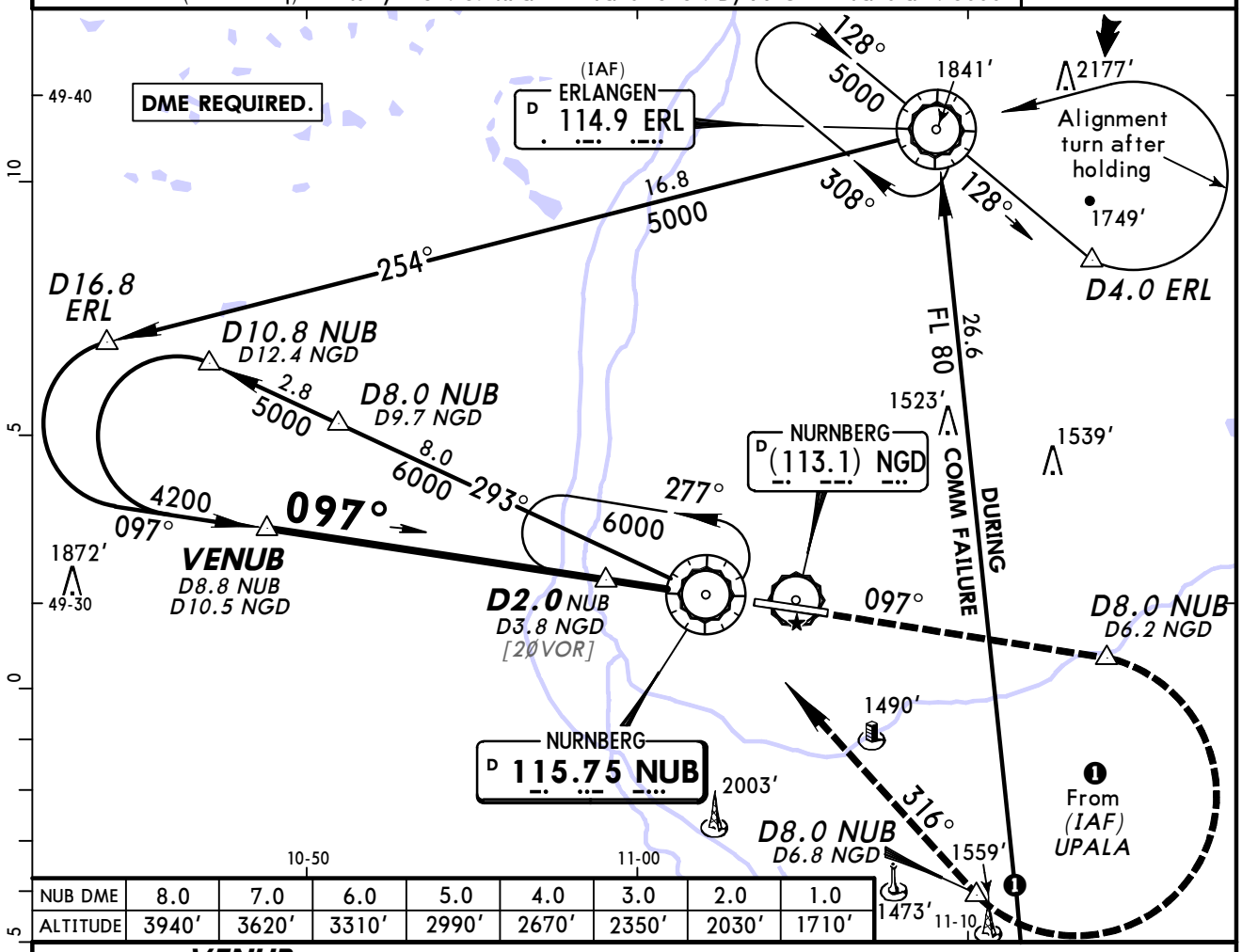
VOR NUB	Final Apch Crs	Minimum Alt VENUB	DA(H)	Apt Elev 1046′
115.75	097°	4200′ (3178′)	1530′ (508′)	RWY 1022′

MISSED APCH: Climb on R-097 NUB to D8.0 NUB, then turn RIGHT onto R-136 inbound to NUB VOR climbing to 6000′. Cross D8.0/R-136 NUB at or above 5000′.

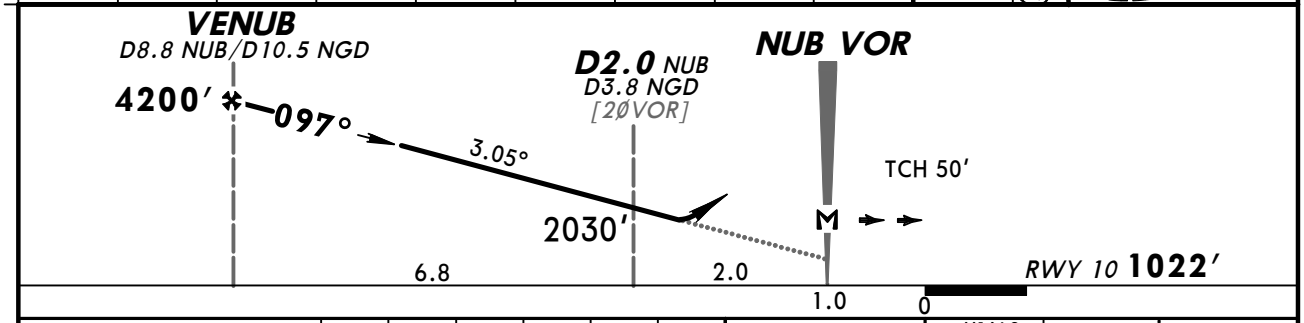


MSA NUB VOR

Alt Set: hPa (IN on req) Rwy Elev: 37 hPa Trans level: By ATC Trans alt: 5000′



NUB DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
ALTITUDE	3940′	3620′	3310′	2990′	2670′	2350′	2030′	1710′



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

HIALS
REIL
PAPI

D8.0 NUB on NUB 115.75 R-097

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 10

Missed apch climb gradient mim 3.5% until passing 5000′.

DA(H) 1530′ (508′)

ALS out

A	RVR 1500m	
B		
C	RVR 1600m	CMV 2400m
D		

CIRCLE-TO-LAND

Not authorized South of airport

Max Kts	MDA(H)	VIS
100	1720′ (674′)	1500m
135	1720′ (674′)	1600m
180	1920′ (874′)	2400m
205	1940′ (894′)	3600m

CHANGES: Minimums.

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EDDN/NUE
NURNBERG

JEPPESEN
7 AUG 09 (13-2)

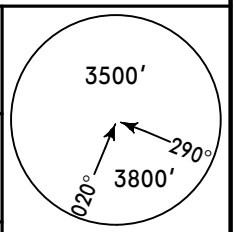
NURNBERG, GERMANY
VOR Rwy 28

*D-ATIS	MUNICH Radar (APP)	NURNBERG Director	NURNBERG Tower	Ground
123.07	129.52	119.47	118.3	118.1

BRIEFING STRIP™

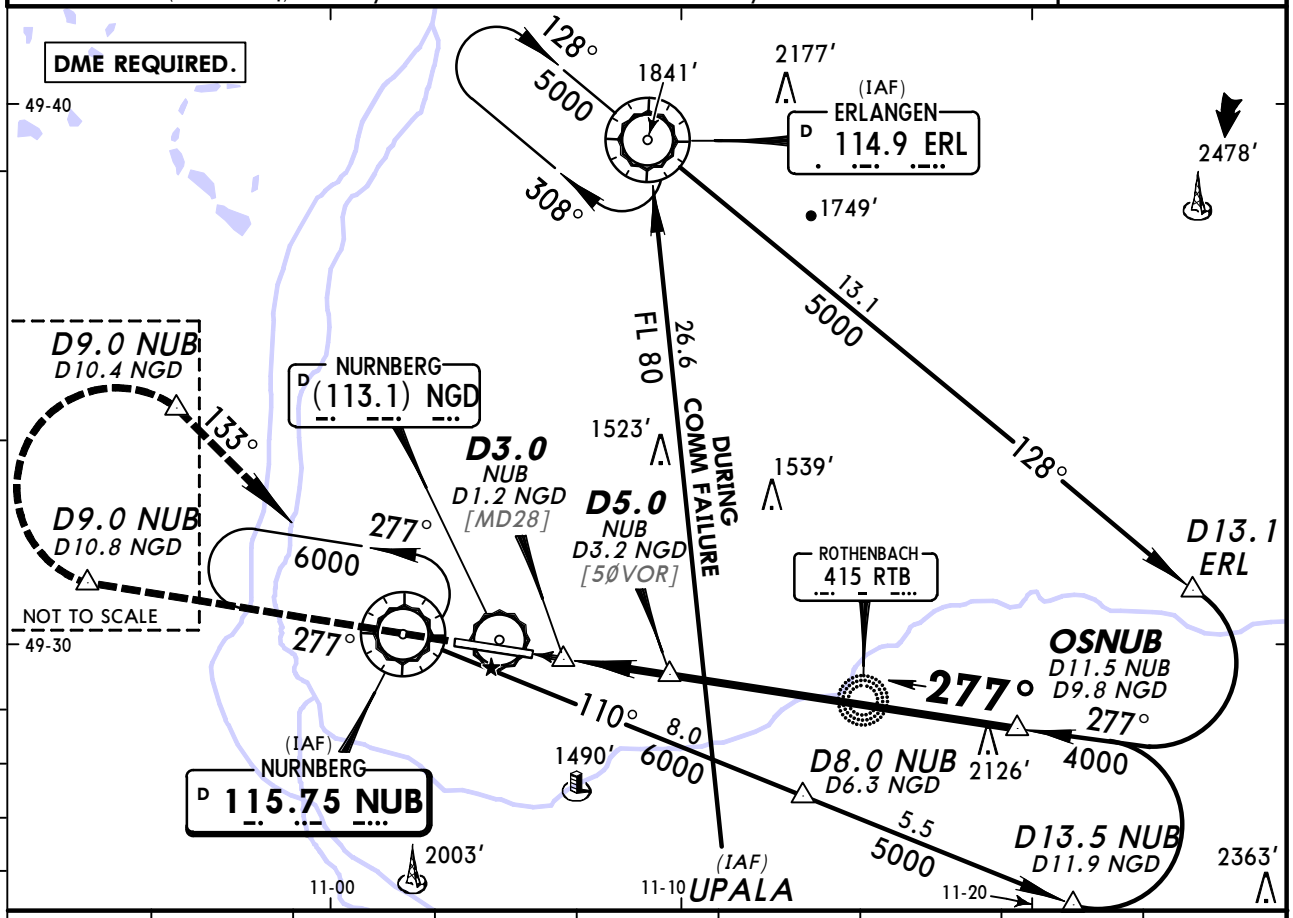
VOR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 1046′
NUB 115.75	277°	OSNUB 4000′ (2954′)	1670′ (624′)	RWY 1046′

MISSED APCH: Climb on R-277 NUB to D9.0 NUB, then turn RIGHT onto R-313 inbound to NUB VOR climbing to 6000′. Cross D9.0/R-313 NUB at or above 5000′.

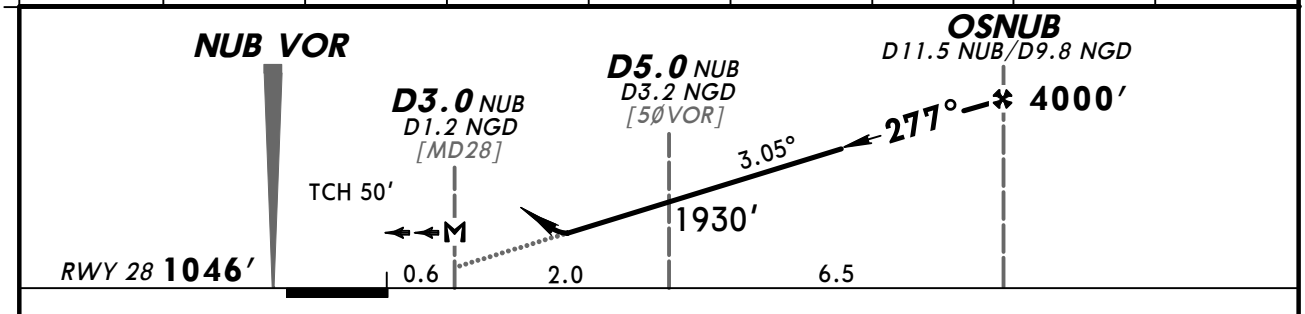


MSA NUB VOR

Alt Set: hPa (IN on req) Rwy Elev: 38 hPa Trans level: By ATC Trans alt: 5000′



NUB DME	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
ALTITUDE	1610′	1930′	2250′	2570′	2880′	3200′	3520′	3840′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.05°	378	486	540	648	755	863
MAP at D3.0 NUB/D1.2 NGD							

ALSF-II
REIL
PAPI

D9.0 NUB

NUB on 115.75
R-277

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 28

DA(H) 1670′ (624′)

ALS out

			Max Kts	MDA(H)	VIS
A	RVR 1500m		100	1720′ (674′)	1500m
B			135	1720′ (674′)	1600m
C	CMV 2200m	CMV 2400m	180	1920′ (874′)	2400m
D			205	1940′ (894′)	3600m

CIRCLE-TO-LAND

Not authorized
South of airport

CHANGES: None.

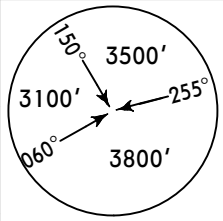
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BRIEFING STRIP™

*D-ATIS	MUNICH Radar (APP)	NURNBERG Director	NURNBERG Tower	Ground
123.07	129.52	119.47	118.3	118.1

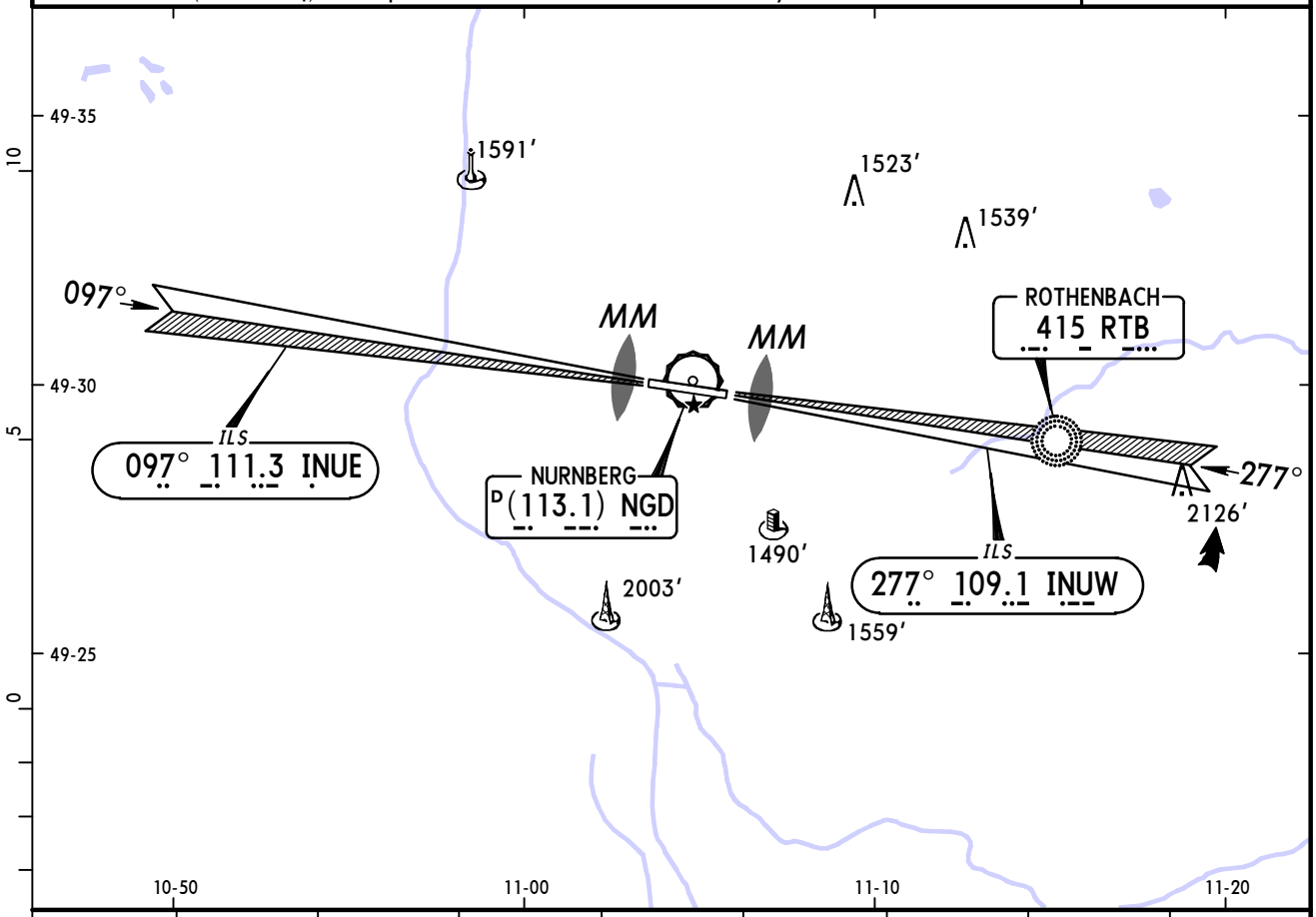
RADAR	Final Apch Crs By ATC	Minimum Alt See table below	DA(H) Refer to Minimums	Apt Elev 1046′ RWY 10 **1022′** RWY 28 **1046′**

MISSED APCH: Climb STRAIGHT AHEAD to 5000′.



MSA RTB NDB

Alt Set: hPa (IN on req) Apt Elev: 38 hPa Trans level: By ATC Trans alt: 5000′



RADAR FIX	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	4100′	3800′	3500′	3200′	2900′	2600′	2300′	2000′

Minimum Alt/NM	10.0 FAF	5.0
SRE 10, SRE 28	**4100′**	2400′

Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	2.80°	347	447	496	595	695	794
MAP at THR							

Lighting-Refer to Airport Chart

5000′

Standard STRAIGHT-IN LANDING

	SRE 10 DA(H) **1580′** (558′)		SRE 28 DA(H) **1670′** (624′)	
		ALS out		ALS out
A B C D	CMV 2100m	CMV 2500m	CMV 2200m	CMV 2900m

PANS OPS 4

CHANGES: OM withdrawn. Minimums.

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General Information

Location: Leipzig-Halle Deu
IATA Code: LEJ
Lat/Long: N51° 25.4' E012° 14.2'
Elevation: 470 ft

Airport Use: Public
Magnetic Variation: 2.5°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0601 Z
Sunset: 1646 Z,

Runway Information

Runway: 08L
Length x Width: 11811 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 418 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 08R
Length x Width: 11811 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 428 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 26L
Length x Width: 11811 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 470 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 26R
Length x Width: 11811 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 448 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Communication Information

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ATIS 123.95
Leipzig Ground Tower 121.675
Leipzig Delivery Tower 121.8
Leipzig Tower 125.95
Leipzig Tower 121.1
Leipzig Tower 36.907
Leipzig De-Icing Ramp/Taxi Control 121.6
Munich Radar Approach Control 126.175
Munich Radar Approach Control 37.992 Military
Leipzig Director Approach Control 128.475

1. GENERAL

1.1. ATIS

D-ATIS 123.95

1.2. NOISE ABATEMENT PROCEDURES

For additional depiction refer to 10-4.

1.2.1. NIGHT FLYING RESTRICTIONS

From 2200-0600LT, flight operations at Leipzig/Halle APT will be restricted to prevent noise disturbance at night. Take-offs and landings between 2200-0600LT are only permitted as follows:

1.2.1.1. In commercial passenger traffic

a) Take-offs and landings of air carriers in commercial airline traffic and non-scheduled air transport (with the exception of air taxis) from 2200-2330LT and from 0530-0600LT.
b) Delayed landings and take-offs from 2330-0000LT if the planned arrival or departure time at/from Leipzig/Halle APT is before 2330LT and the arrival or departure takes place before 0000LT; premature landings from 0500-0530LT if the planned time of arrival is after 0530LT.
c) Flights by air carriers according to para a), whose ACFT are mainly maintained at Leipzig/Halle APT and who conduct commercial airline traffic and non-scheduled air transport at Leipzig/Halle APT for the purpose of service/repairs as well as ferry flights/relocation flights by these air carriers from 2200-2330LT and from 0530-0600LT.

1.2.1.2. In commercial air freight operations

a) Flights by air carriers which are logistically bound up with the cargo terminal at Leipzig/Halle APT.
b) Flights by air carriers according to para a), whose ACFT are mainly maintained at Leipzig/Halle APT for the purpose of service/repairs as well as ferry/relocation flights by these air carriers.
c) Flights conducted for services pursuant to paragraph 4 No. 1 PostG.

Main maintenance, pursuant to the above para 1.2.1.1. c) and 1.2.1.2. b), is when an air carrier actually has servicing prescribed by law, including servicing from the so-called A-check upwards, regularly carried out on ACFT at Leipzig/Halle APT by a maintenance firm approved in accordance with paragraph 13 LuftGerPV.

Exceptions:
Above stated restrictions regarding operating times do not apply to:
- Flights on missions of aid in cases of emergency and catastrophe.
- Flights which are absolutely necessary for medical supplies and to fulfill humanitarian assignments.
- Landings for meteorological, technical and other safety reasons.
- Calibration flights by Deutsche Flugsicherung GmbH (DFS) or on their behalf.
- Flights due to police or military requirements.
- Flights which the Aviation Supervision Office has permitted in justified individual cases because they are necessary to avoid considerable impairment to air traffic or for other reasons of special public interest.

Applications shall be directed in writing (Fax) to:

Landesdirektion Dresden
Luftaufsichtsstelle Flughafen Leipzig/Halle
P.O.B. 1
04029 Leipzig
Fax: +49 341 224 1175
Tel: +49 341 224 1457/1130

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1. GENERAL

Take-off clearance, issued by ATC in keeping with the restrictions applying at night, does not include the required exceptional permission from the aviation supervision office at Leipzig/Halle Airport.
As a rule, ATC does not issue exceptional permission for night landings via radiotelephony in keeping with the restrictions applying at night. Thus the landing clearance issued by ATC for safety reasons does not include a decision by the responsible aviation supervision office as to the admissibility of a night landing.
In the case of a delayed/premature landing (after 0000LT and prior to 0500LT) which was not permitted by the responsible authority, the pilot shall contact the Aviation Supervision Office (Tel. +49 (0) 341/224-1457 or-1130) immediately after landing in order to justify the admissibility of his night landing.

1.2.2. RUN-UP TESTS

Engine test-runs require permission from the APT operator.
Engine test-runs may be carried out in the engine test-run stand only. Test-runs with engines idle as well as examinations of the engines in keeping with pre-flight controls intended by the manufacturer immediately prior to taking off (run-up) are exempt from this regulation.
The engine test-run stand is open H24. As long as there is no regulation by contract, it may be used for a fee corresponding to the Airport Charges at Leipzig/Halle Airport GmbH in their valid version.
Intended use of the engine test-run stand shall be reported to operations control "Verkehrszentrale" at the APT by telephone (+49 341 224-1130) in good time (if possible, 2 hours in advance).
Operations control will specify the sequence and time of the engine test-runs depending on the availability of the engine test-run stand.
Instructions from the personnel in the hangar and in attendance shall be followed at all times.
The regulations applying to implementation are binding in their respective valid version in accordance with the "Ordinance on the Operation of Engine Test-Run Stands".

1.2.3. REVERSE THRUST

Reverse thrust other than idle may only be used to an extent necessary for safety reasons.

1.3. RWY OPERATIONS

For ACFT with wingspan of MIM 213'/65m, as a rule, RWY 08R/26L shall be used for take-off and landing.
In justified exceptional cases, RWY 08L/26R may be used.

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1. GENERAL

1.4. TAXI PROCEDURES

1.4.1. GENERAL

On apron taxi only at absolute MIM engine speed.
Taxiing with loading hatch open is prohibited.
ACFT must taxi on or along yellow, blue or orange taxiing guide lines.
Orange guideline may be used with Follow-me car only, or after explicit clearance by DFS.
ACFT Southbound on TWY E8 for Apron 1 taxi slowly and use CAUTION when making RIGHT turn onto TWY N.
TWYs M, Z1.1, Z1.2, Z2.1 , Z2.2, Z3.1, Z3.2, Z4.1, Z4.3 and Z5.1 MAX wingspan 171'/52m.
If maintenance position at DP6 is occupied, MAX wingspan on TWY V between TWYs S2 and Y is 171'/52m.
TWY P2 MAX wingspan less than 171'/52m.
TWY L between stands 101 thru 111 MAX wingspan 118'/36m.

No taxiing and holding traffic may be located at CAT I holding position on TWYs A1 and A2 at the same time.
No taxiing and holding traffic may be located at CAT II/III holding position on TWYs A1 and A2 at the same time if wingspan of one of the ACFT concerned exceeds 171'/52m.
This only applies, however, when the ACFT holding or taxiing on TWY A2 has taxied from TWY C onto TWY A2.

No taxiing and/or holding traffic may be located at CAT I holding position on TWYs A8 and A9 at the same time if wingspan of one of the ACFT concerned exceeds 171'/52m.

If ACFT are holding on TWYs S1 thru S10 at CAT I or II/III holding position, no ACFT may taxi behind on TWY T.
Taxiing from TWY S6 onto TWY T in Western direction is not permitted.

When using Taxilane Z4.2 or Z5.2, neither the orange (Z4.1 or Z5.1) nor the blue (Z4.3) guideline may be used, irrespective of wingspan.
This applies analogously when de-icing pads are in use.
Changing of taxilanes (from orange to blue or vice versa) is only possible with Follow-me car.

1.4.2. ACFT WITH WINGSPAN OF MIM 213'/65M

Taxiing on DP2, DP4, TWY H2 and TWY N between TWYs H2 and M is only possible with Follow-me car.
If ACFT taxiing on TWY T has not passed intersection point, an other ACFT taxiing on TWY V may not turn to TWYs S1 thru S10 or to TWY Y in direction of TWY T.
If ACFT taxiing on TWY V has not passed intersection point, an other ACFT taxiing on TWY T may not turn to TWYs S1 thru S10 or to TWY Y in direction of TWY V.

1.5. PARKING INFORMATION

Stands 126 thru 136, 401 thru 445, 446, 447, 448, 449, 450, 451, 452 thru 462, 463 thru 466, 467, 468, 469 thru 472, 473, 474 and 475 thru 478 equipped with visual docking guidance system.
On Apron 4, guidance system will show ONBLOK on pilot display unit after standstill.

1.6. OTHER INFORMATION

Birds in vicinity of APT.

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2. ARRIVAL

2.1. CAT II/III OPERATIONS

RWYs 08L/26R and 08R/26L approved for CAT II/III operations, special aircrew and ACFT certification required.

3. DEPARTURE

3.1. DE-ICING

The request for a de-icing procedure shall be reported in time (60 min prior to EOBT).

The de-icing of jet-propelled ACFT as well as of ACFT which are able to apply the propeller brakes will be carried out with running engines.

ACFT unable to brake the propeller, will turn off the engines. Equipment to start the engines is available locally.

Pilots will taxi to the de-icing area of their own accord according to instructions from the aerodrome control unit. The aerodrome control unit only, will order a change frequency. When taxiing onto DP6, ACFT with wingspan exceeding 171'/52m shall follow the orange guideline (surface lights orange/green). ACFT with MAX wingspan 171'/52m will use the yellow guideline (surface lights green).

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

On nose-in positions, ACFT will be pushed-back into the taxi line by means of a towing aid. In exceptional cases, thrust to taxi back into the taxi line is possible after due clearance.

On free positions, a Follow-me car will be assigned to taxi into the lighted taxi line at the request of the aerodrome control unit of the ACFT crew.

3.3. OTHER INFORMATION

3.3.1. DATALINK DEPARTURE CLEARANCE (DCL)

DFS (Deutsche Flugsicherung GmbH) is offering start-up and enroute clearances using Datalink.

The following temporal parameters apply:

t_i 25 min prior to EOBT for unregulated flights.
30 min prior to CTOT for ATFM regulated flights.

t_t 11 min prior to EOBT for unregulated flights.
16 min prior to CTOT for ATFM regulated flights.

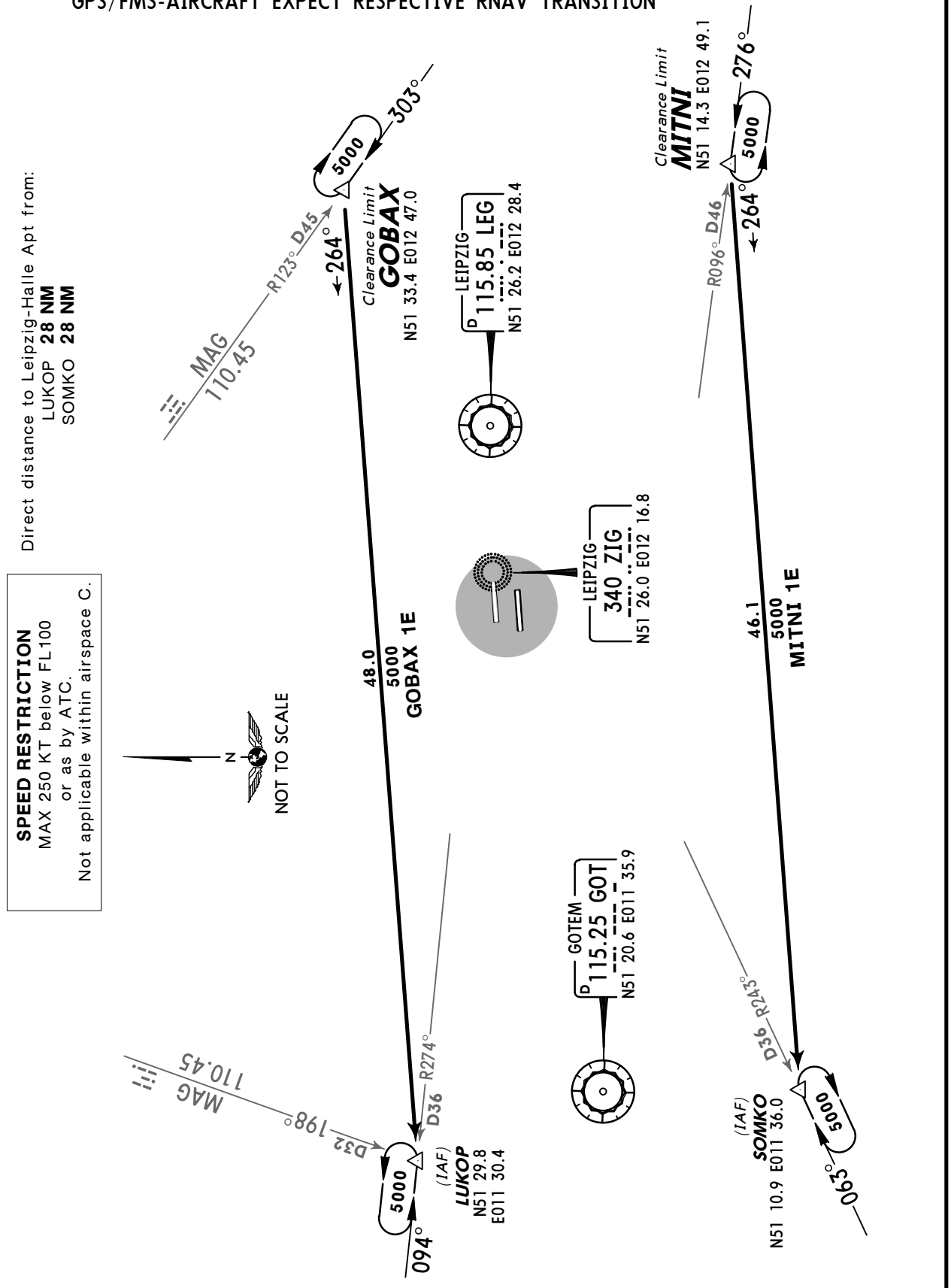
t_l 5 min

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D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
123.95	470′	Trans level: By ATC Trans alt: 5000′

GOBAX ONE ECHO (GOBAX 1E) *[GOBA1E]*
MITNI ONE ECHO (MITNI 1E) *[MITN1E]*
RWYS 08L/R ARRIVALS

BRNAV EQUIPMENT NECESSARY
BRNAV AND NON-RNAV AIRCRAFT EXPECT
RADAR VECTORS TO FINAL
GPS/FMS-AIRCRAFT EXPECT RESPECTIVE RNAV TRANSITION



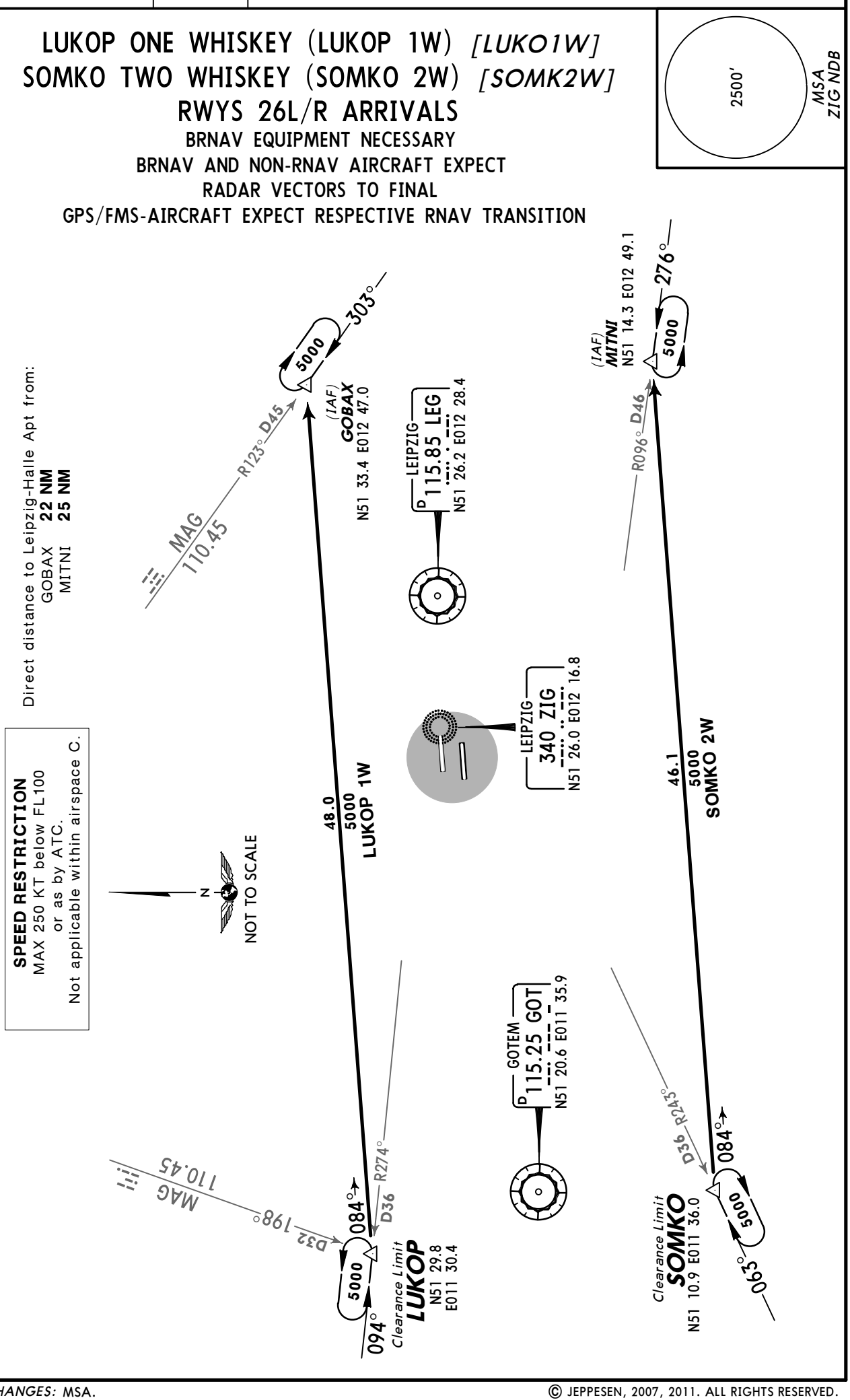
CHANGES: MSA.

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D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
123.95	470′	Trans level: By ATC Trans alt: 5000′

LUKOP ONE WHISKEY (LUKOP 1W) *[LUKO1W]*
SOMKO TWO WHISKEY (SOMKO 2W) *[SOMK2W]*
RWYS 26L/R ARRIVALS

BRNAV EQUIPMENT NECESSARY
BRNAV AND NON-RNAV AIRCRAFT EXPECT
RADAR VECTORS TO FINAL
GPS/FMS-AIRCRAFT EXPECT RESPECTIVE RNAV TRANSITION

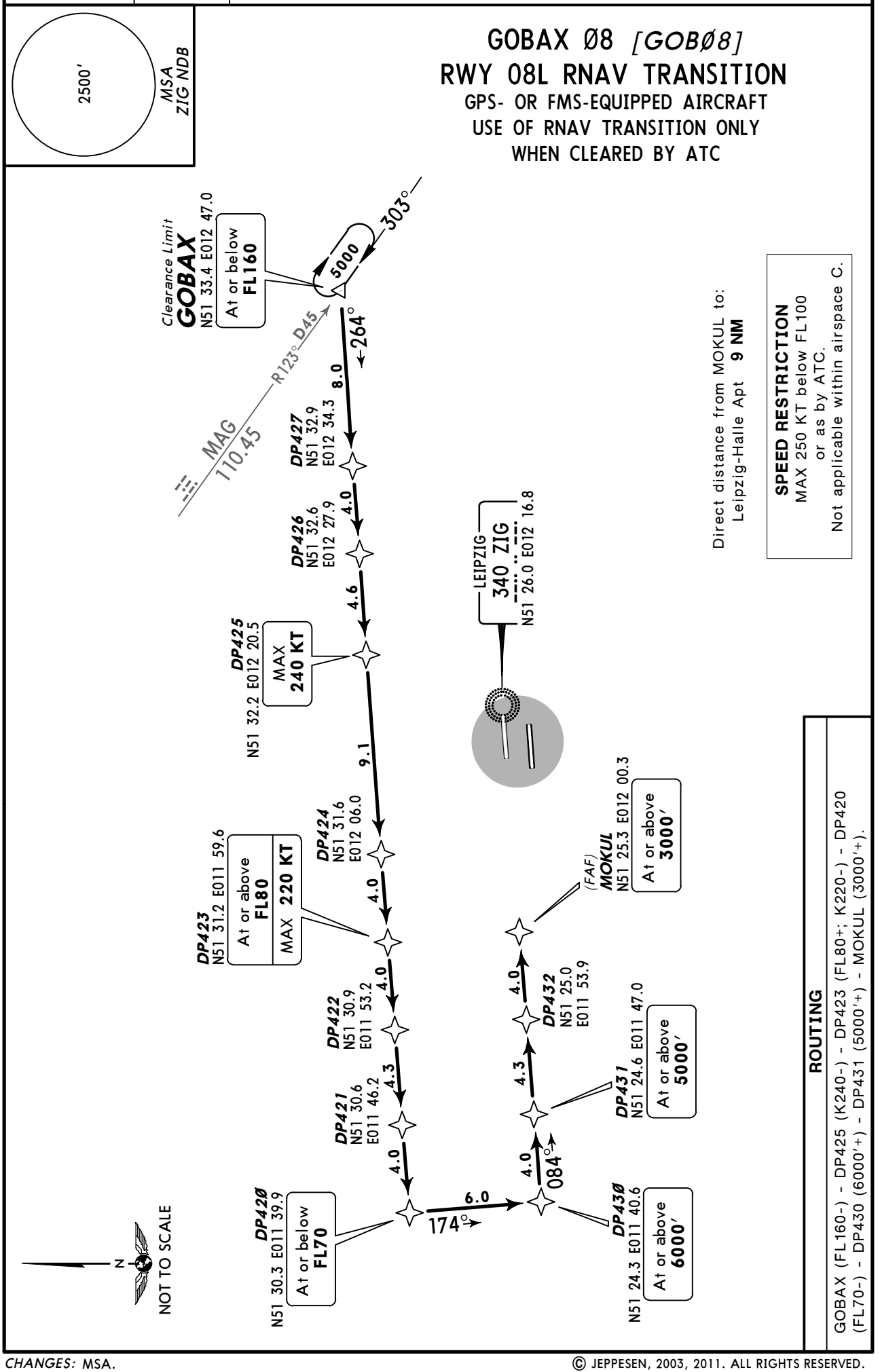


CHANGES: MSA.

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D-ATIS	Apt Elev
123.95	470′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect radar vectors to final.
2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

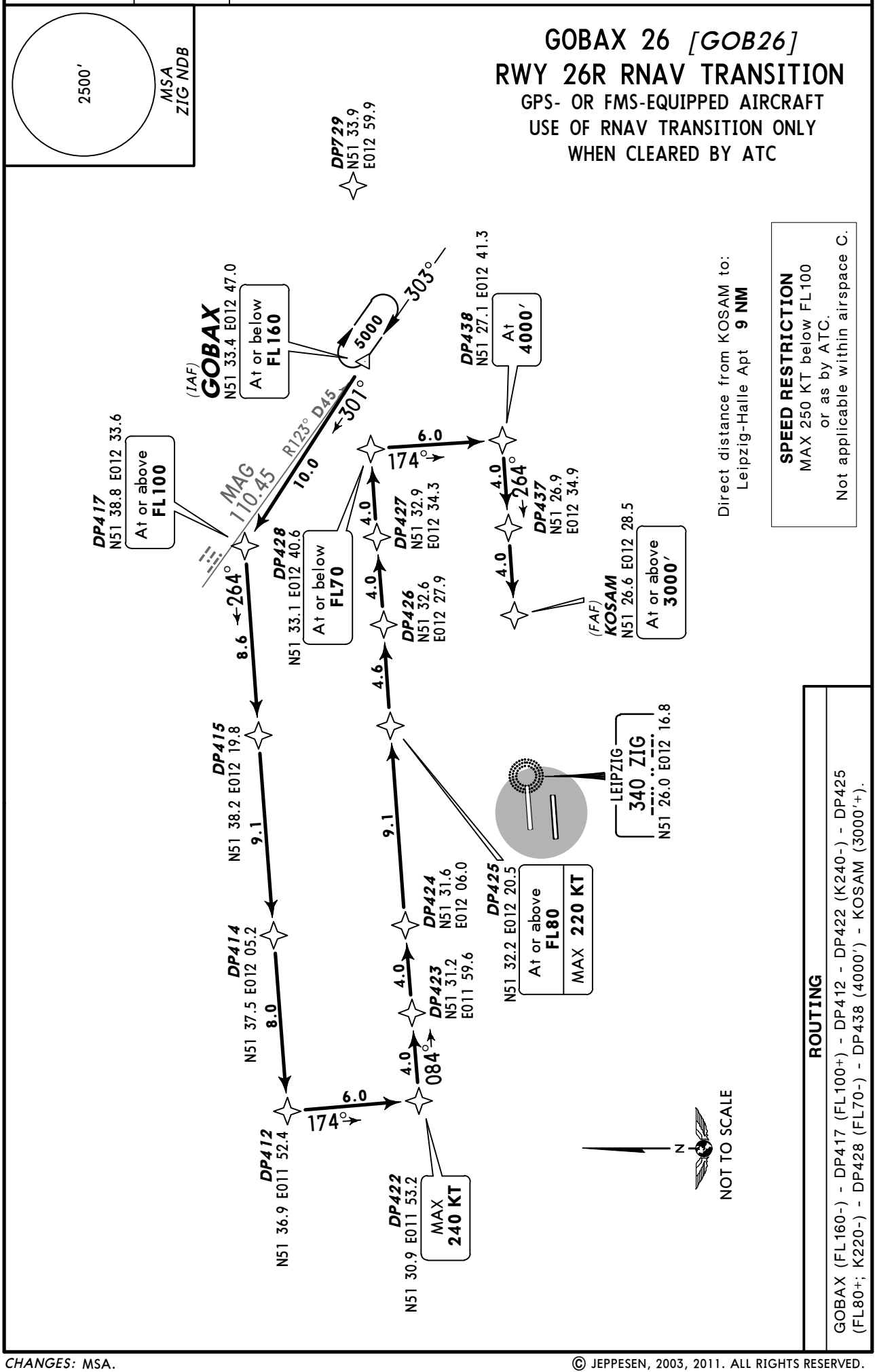


CHANGES: MSA.

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D-ATIS	Apt Elev
123.95	470′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect radar vectors to final.
2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.



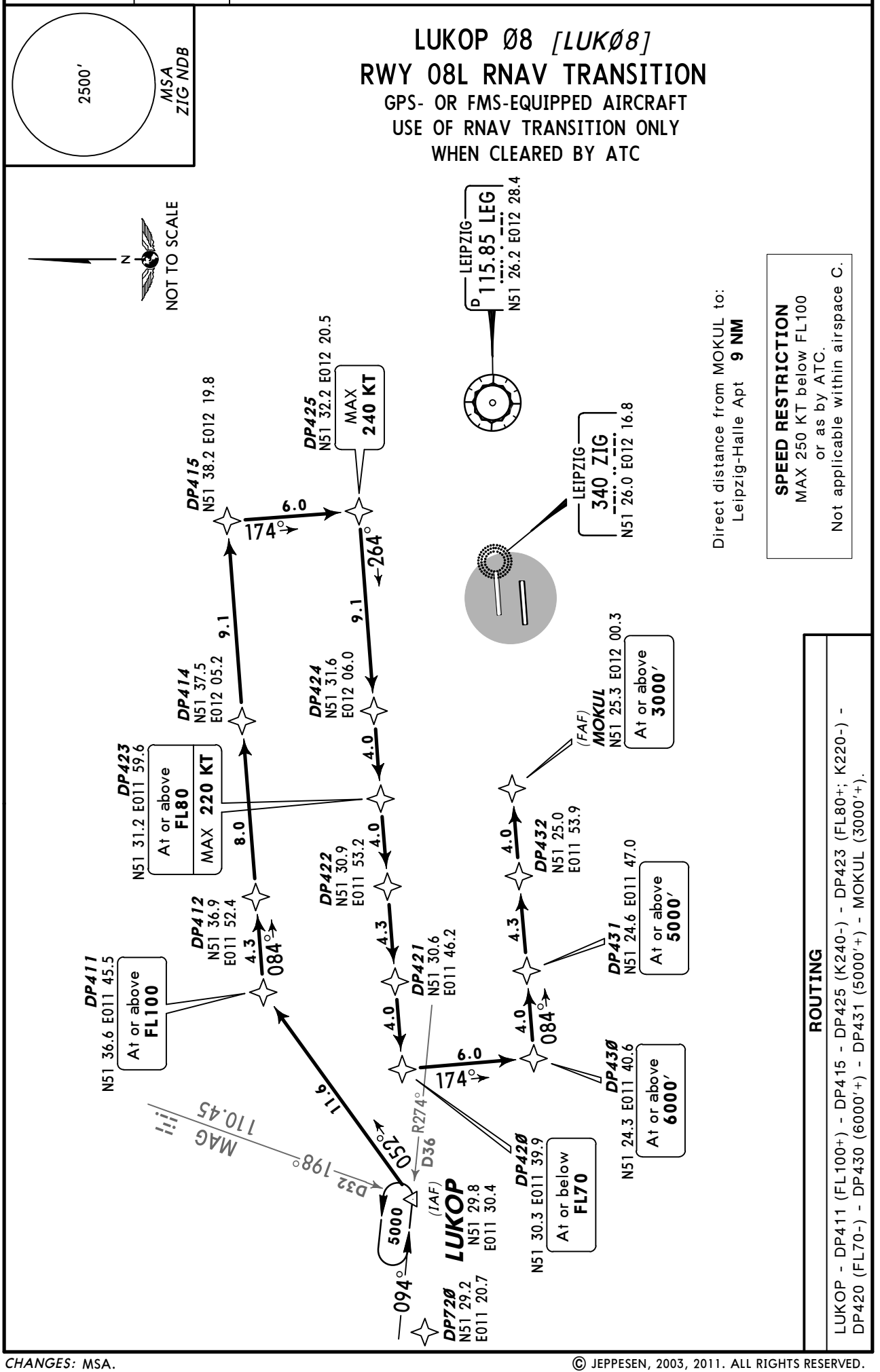
CHANGES: MSA.

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D-ATIS	Apt Elev
123.95	470′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect radar vectors to final.
2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

LUKOP Ø8 *[LUKØ8]*
RWY 08L RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC



ROUTING

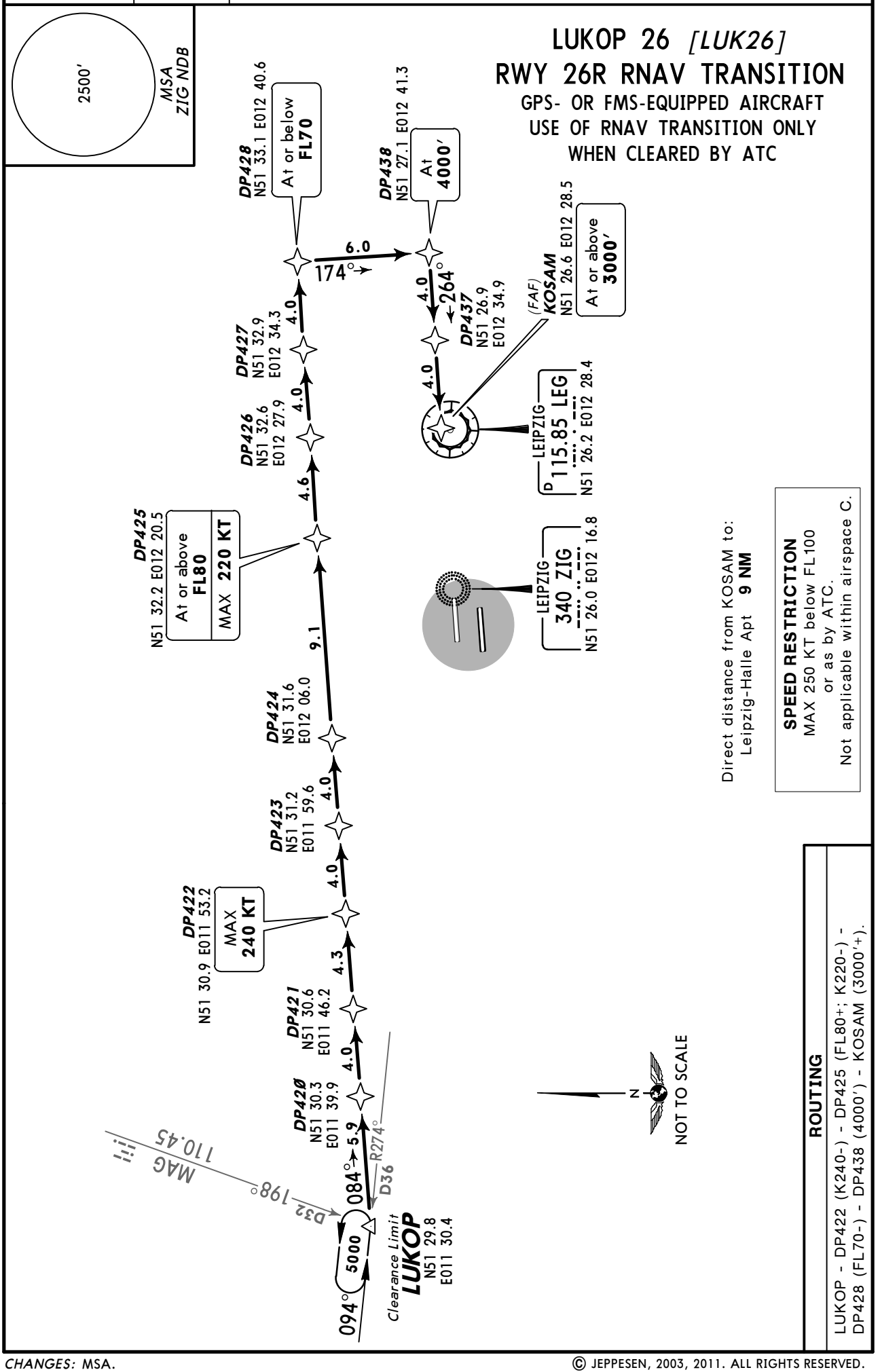
LUKOP - DP411 (FL100+) - DP415 - DP425 (K240-) - DP423 (FL80+; K220-) - DP420 (FL70-) - DP430 (6000′+) - DP431 (5000′+) - MOKUL (3000′+).

CHANGES: MSA.

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D-ATIS	Apt Elev
123.95	470′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect radar vectors to final.
2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.



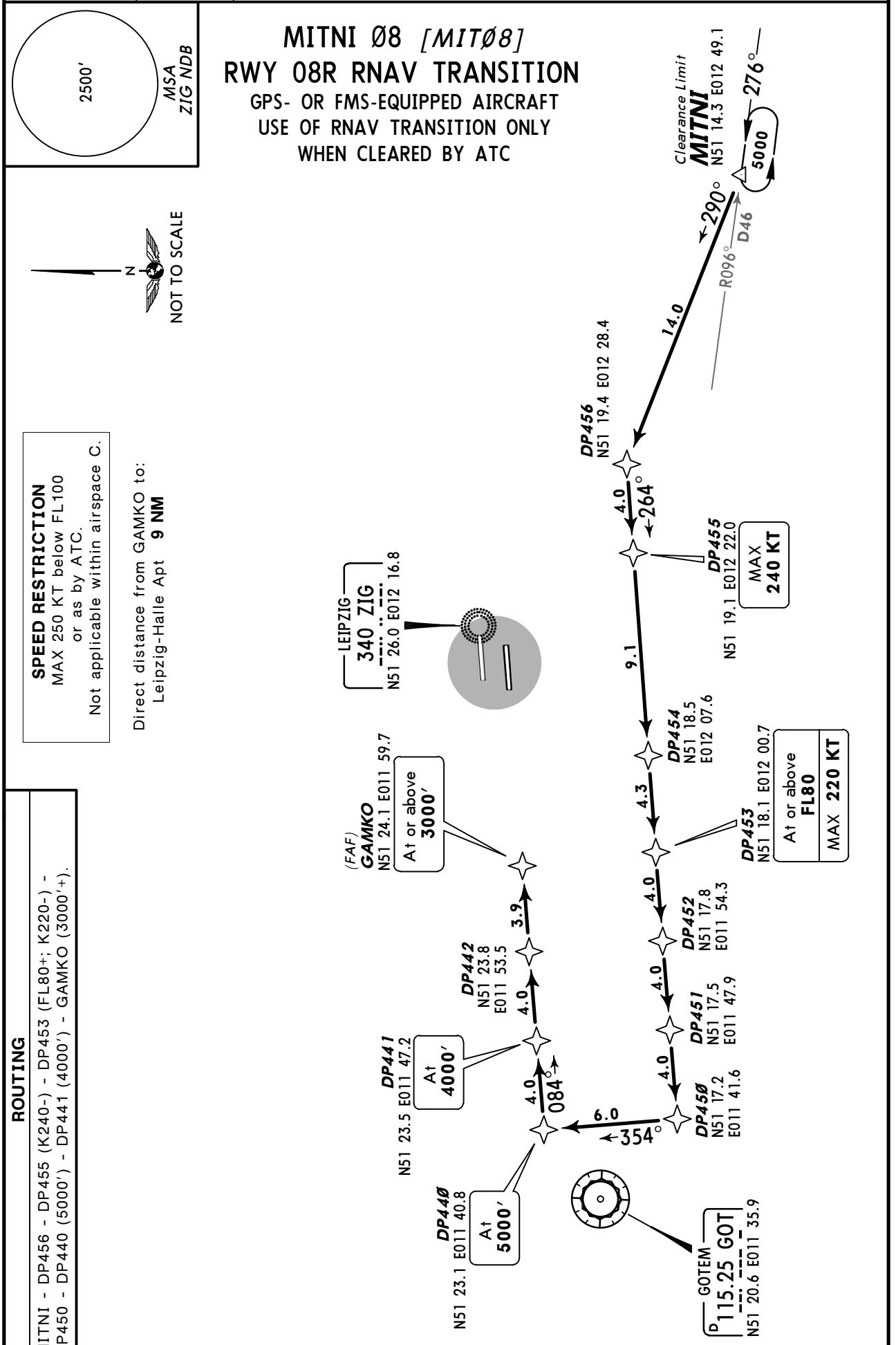
CHANGES: MSA.

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D-ATIS	Apt Elev
123.95	470′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect radar vectors to final.
2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

MITNI Ø8 *[MITØ8]*
RWY 08R RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC

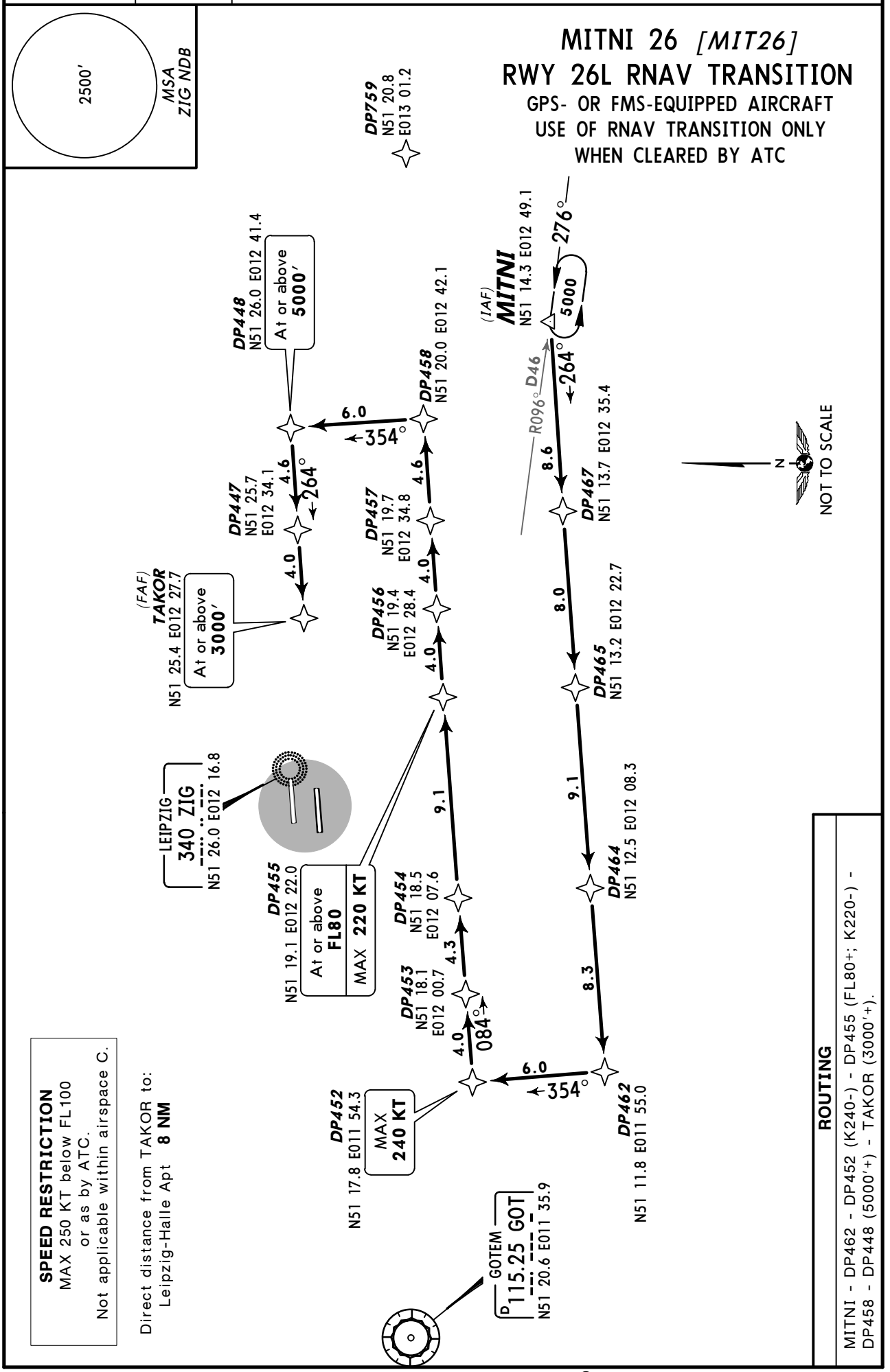


CHANGES: MSA.

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D-ATIS	Apt Elev
123.95	470′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect radar vectors to final.
2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.



CHANGES: MSA.

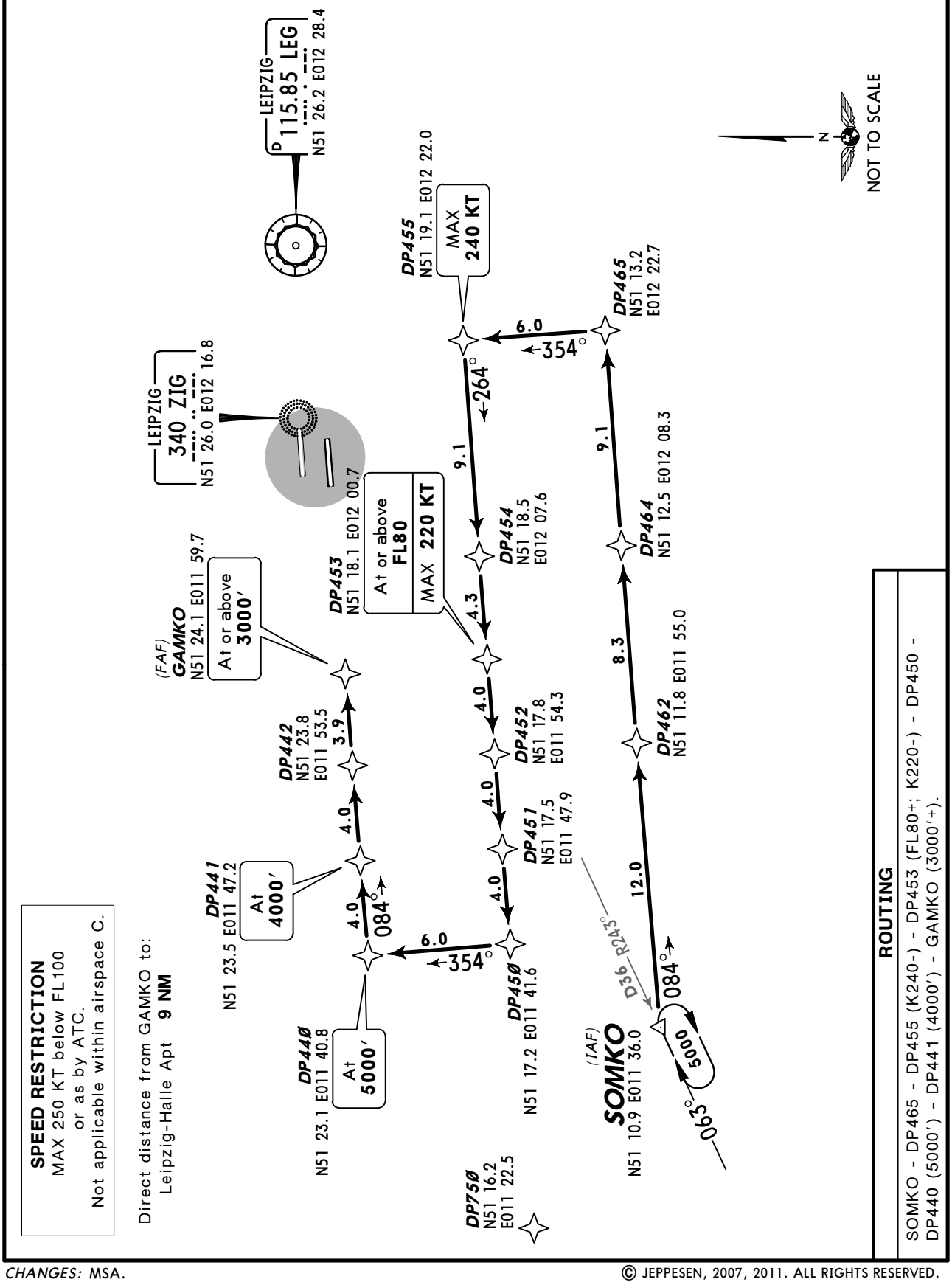
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D-ATIS	Apt Elev
123.95	470′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect radar vectors to final.
2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

2500′ MSA ZIG NDB

SOMKO Ø8 *[SOMØ8]*
RWY 08R RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Direct distance from GAMKO to:
Leipzig-Halle Apt **9 NM**

ROUTING

SOMKO - DP465 - DP455 (K240-) - DP453 (FL80+; K220-) - DP450 - DP440 (5000′) - DP441 (4000′) - GAMKO (3000′+).

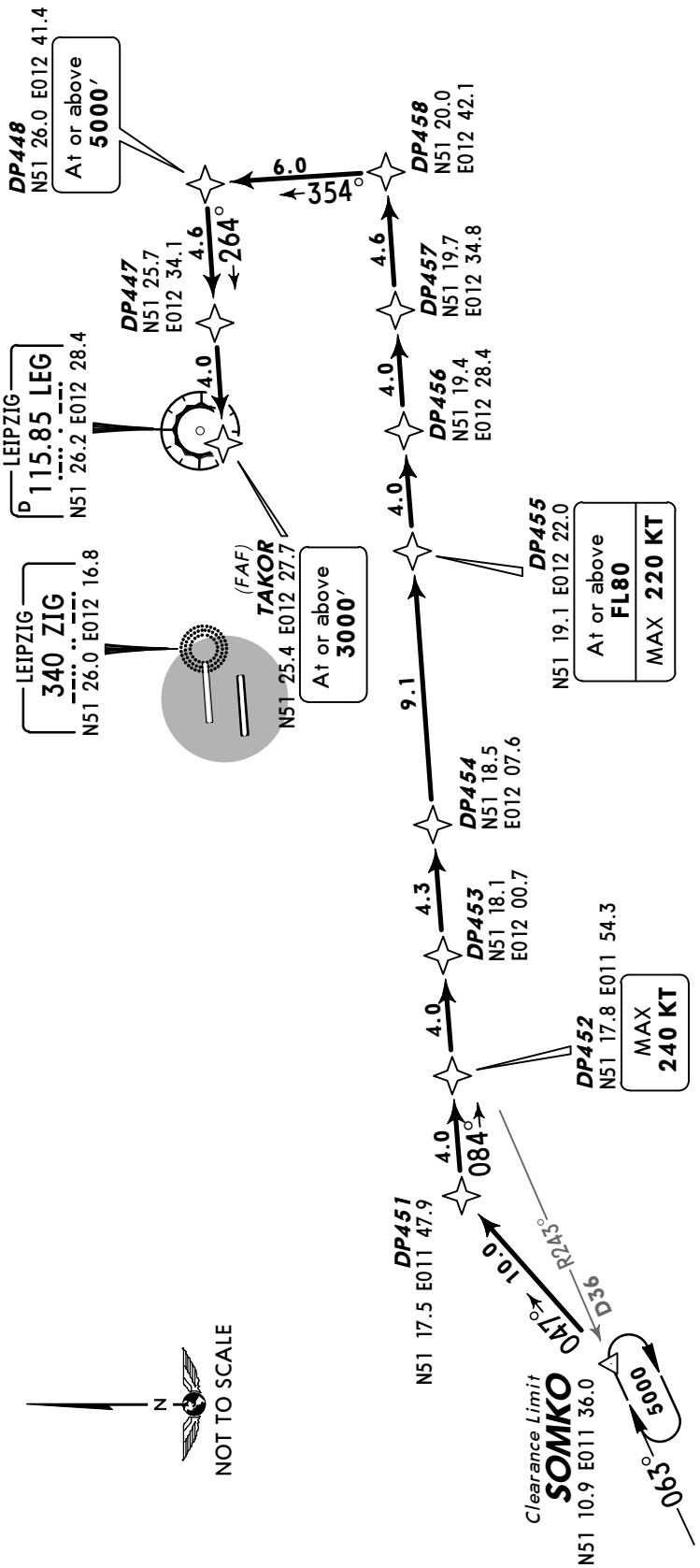
CHANGES: MSA.

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D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
123.95	470′	1. On downwind expect radar vectors to final. 2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

2500′ MSA ZIG NDB

SOMKO 26 [SOM26]
RWY 26L RNAV TRANSITION
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Direct distance from TAKOR to:
Leipzig-Halle Apt **8 NM**

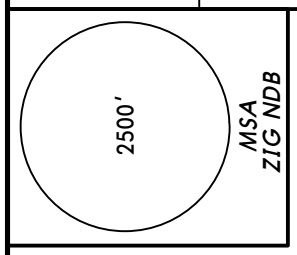
ROUTING

SOMKO - DP451 - DP452 (K240-) - DP455 (FL80+; K220-) - DP458 - DP448 (5000′+) - TAKOR (3000′+).

CHANGES: MSA.

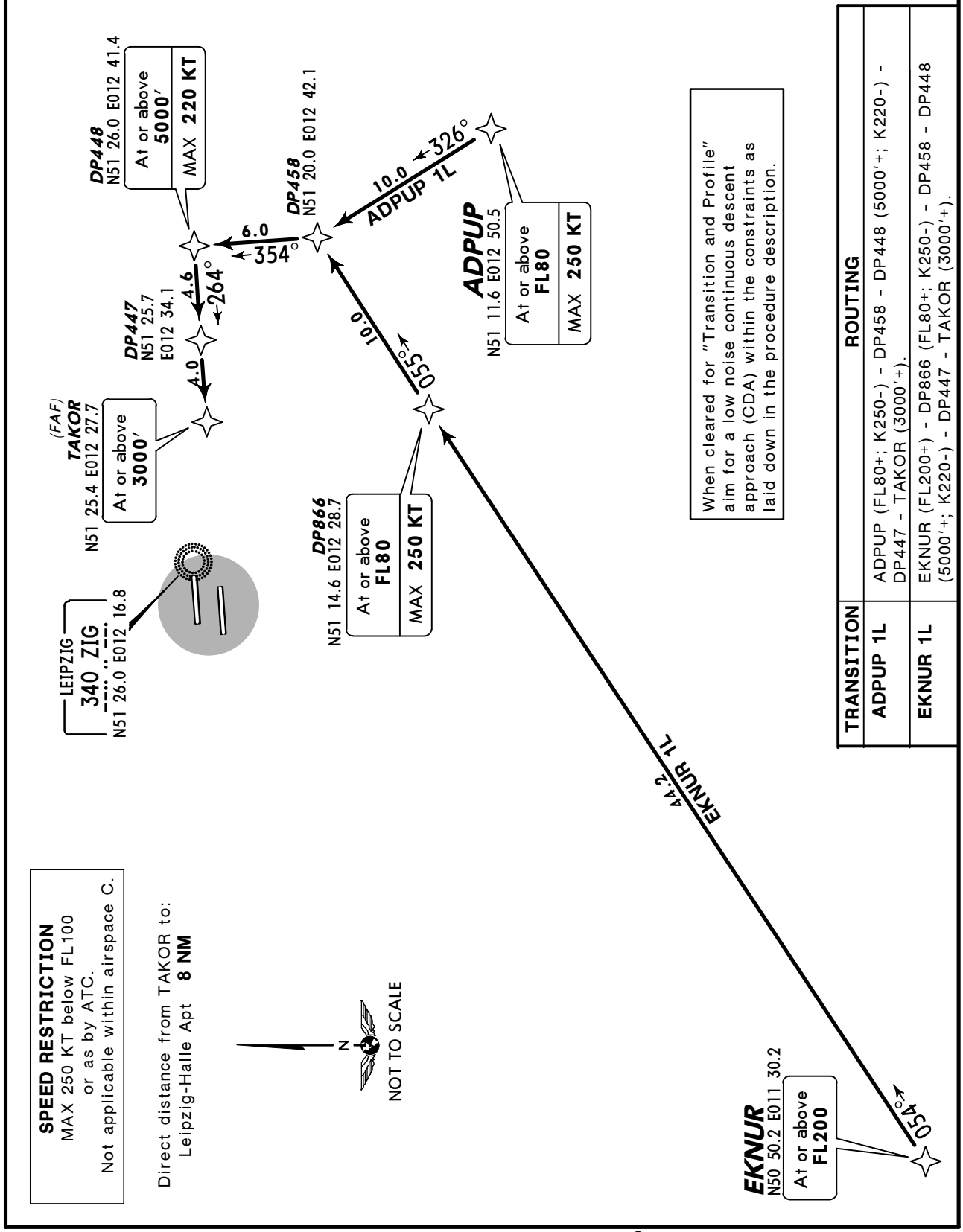
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D-ATIS	Apt Elev	
123.95	470′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′



ADPUP 1L *[ADP1L]*
EKNUR 1L *[EKN1L]*
RWY 26L RNAV TRANSITIONS (CDA)

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC



TRANSITION	ROUTING
ADPUP 1L	ADPUP (FL80+; K250-) - DP458 - DP448 (5000′+; K220-) - DP447 - TAKOR (3000′+).
EKNUR 1L	EKNUR (FL200+) - DP866 (FL80+; K250-) - DP458 - DP448 (5000′+; K220-) - DP447 - TAKOR (3000′+).

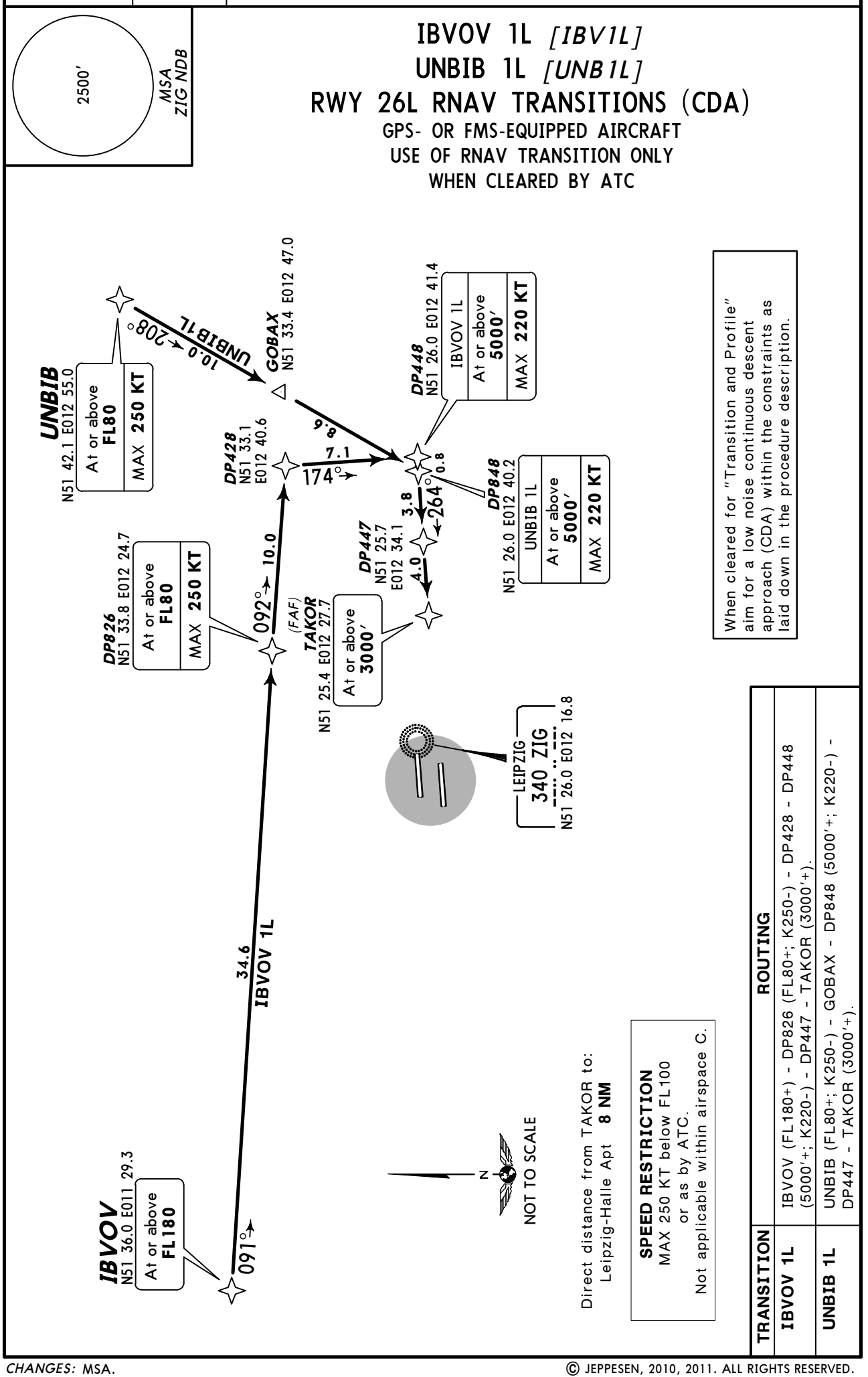
CHANGES: MSA.

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D-ATIS	Apt Elev	
123.95	470′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′

IBVOV 1L *[IBV1L]*
UNBIB 1L *[UNB1L]*
RWY 26L RNAV TRANSITIONS (CDA)

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC



TRANSITION	ROUTING
IBVOV 1L	IBVOV (FL180+) - DP826 (FL80+; K250-) - DP428 - DP448 (5000′+; K220-) - DP447 - TAKOR (3000′+).
UNBIB 1L	UNBIB (FL80+; K250-) - GOBAX - DP848 (5000′+; K220-) - DP447 - TAKOR (3000′+).

CHANGES: MSA.

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D-ATIS	Apt Elev	
123.95	470′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′

2500′ MSA ZIG NDB

ADPUP 1N *[ADP1N]*
EKNUR 1N *[EKN1N]*
RWY 08L RNAV TRANSITIONS (CDA)

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC

Direct distance from MOKUL to:
Leipzig-Halle Apt **9 NM**

N

NOT TO SCALE

ADPUP
N51 11.6 E012 50.5
At or above **FL170**

273°

32.4
ADPUP 1N

LEIPZIG
340 ZIG
N51 26.0 E012 16.8

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

When cleared for "Transition and Profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.

TRANSITION	ROUTING
ADPUP 1N	ADPUP (FL170+) - DP853 (FL80+; K250-) - DP850 - DP831 (5000′+; K220-) - DP432 - MOKUL (3000′+).
EKNUR 1N	EKNUR (FL130+) - DP860 (FL80+; K250-) - DP850 - DP831 (5000′+; K220-) - DP432 - MOKUL (3000′+).

(FAF)
MOKUL
N51 25.3 E012 00.3
At or above **3000′**

DP853
N51 14.2 E011 59.1
At or above **FL80**
MAX **250 KT**

286°
10.0

DP432
N51 25.0
E011 53.9

4.0
3.9
084°

DP831
N51 24.6 E011 47.8
At or above **5000′**
MAX **220 KT**

7.7

DP850
N51 17.3 E011 44.0

10.0

DP860
N51 07.8 E011 39.1
At or above **FL80**
MAX **250 KT**

18.4
EKNUR 1N

016°

EKNUR
N50 50.2 E011 30.2
At or above **FL130**

CHANGES: MSA.

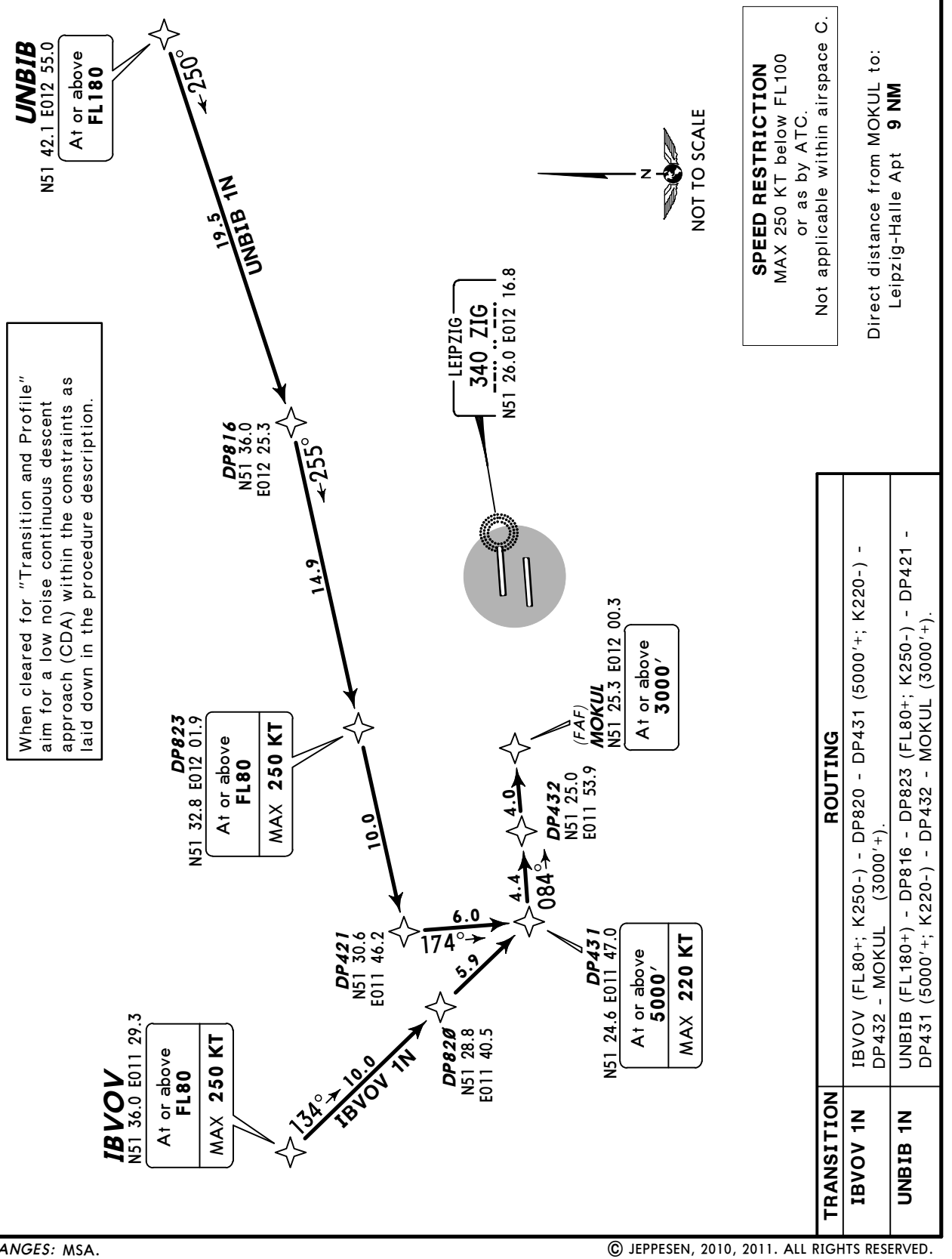
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D-ATIS	Apt Elev	
123.95	470′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′

2500′ MSA ZIG NDB

IBVOV 1N *[IBV1N]*
UNBIB 1N *[UNB1N]*
RWY 08L RNAV TRANSITIONS (CDA)

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC

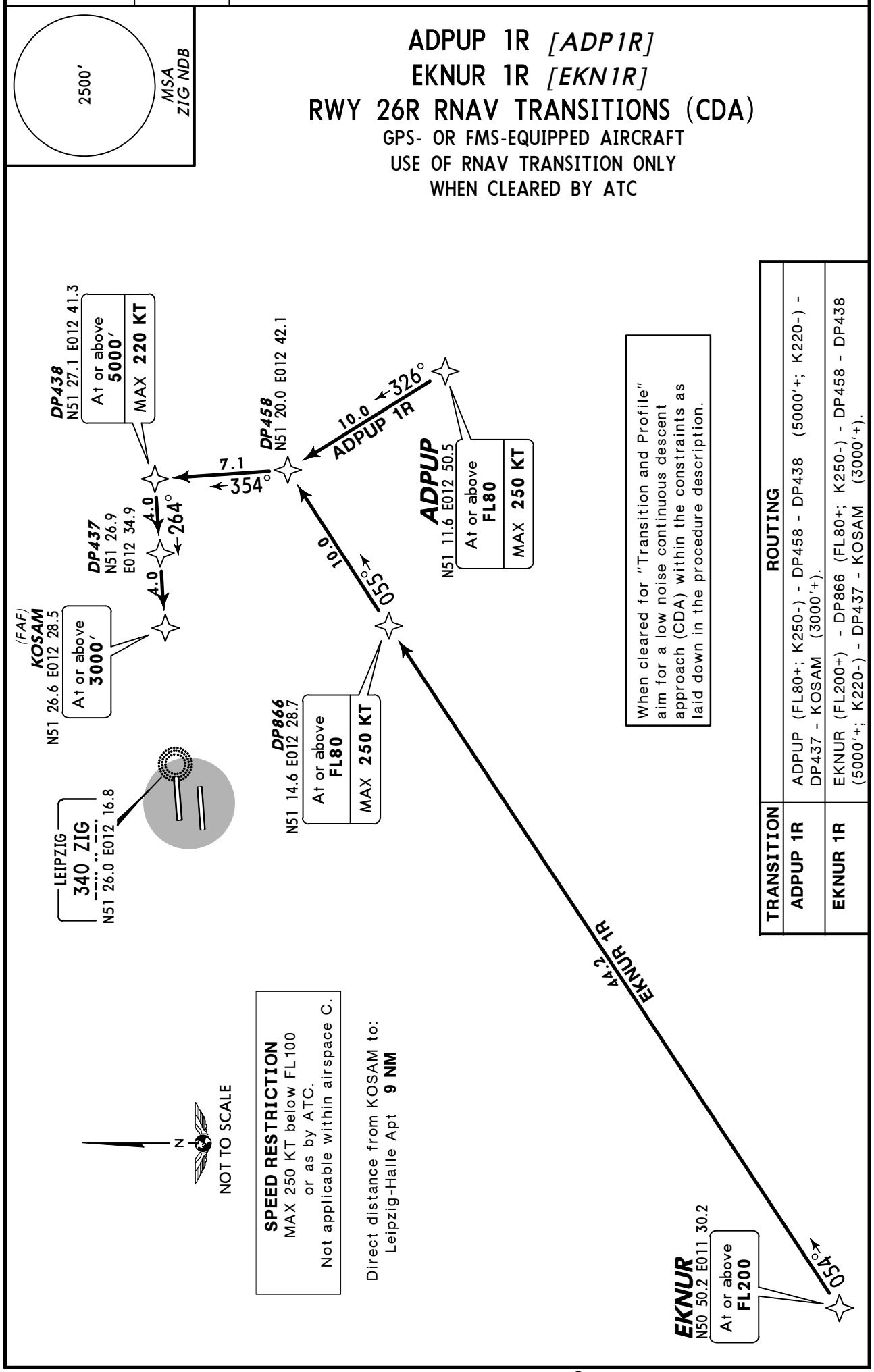


TRANSITION	ROUTING
IBVOV 1N	IBVOV (FL80+; K250-) - DP820 - DP431 (5000′+; K220-) - DP432 - MOKUL (3000′+).
UNBIB 1N	UNBIB (FL180+) - DP816 - DP823 (FL80+; K250-) - DP421 - DP431 (5000′+; K220-) - DP432 - MOKUL (3000′+).

CHANGES: MSA.

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D-ATIS	Apt Elev	
123.95	470′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′



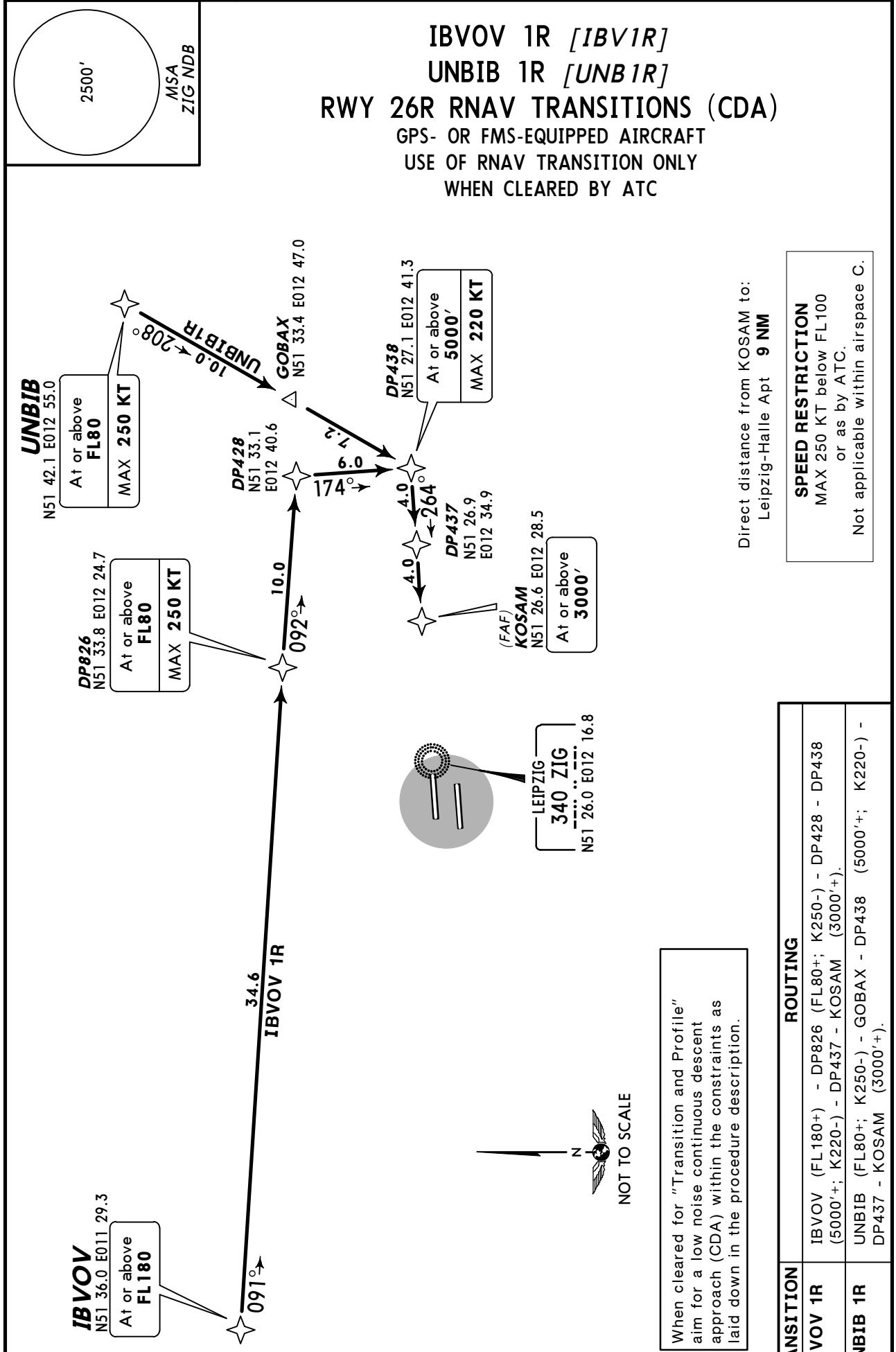
CHANGES: MSA.

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D-ATIS	Apt Elev	
123.95	470′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′

IBVOV 1R *[IBV1R]*
UNBIB 1R *[UNB1R]*
RWY 26R RNAV TRANSITIONS (CDA)

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC



TRANSITION	ROUTING
IBVOV 1R	IBVOV (FL180+) - DP826 (FL80+; K250-) - DP428 - DP438 (5000′+; K220-) - DP437 - KOSAM (3000′+).
UNBIB 1R	UNBIB (FL80+; K250-) - GOBAX - DP438 (5000′+; K220-) - DP437 - KOSAM (3000′+).

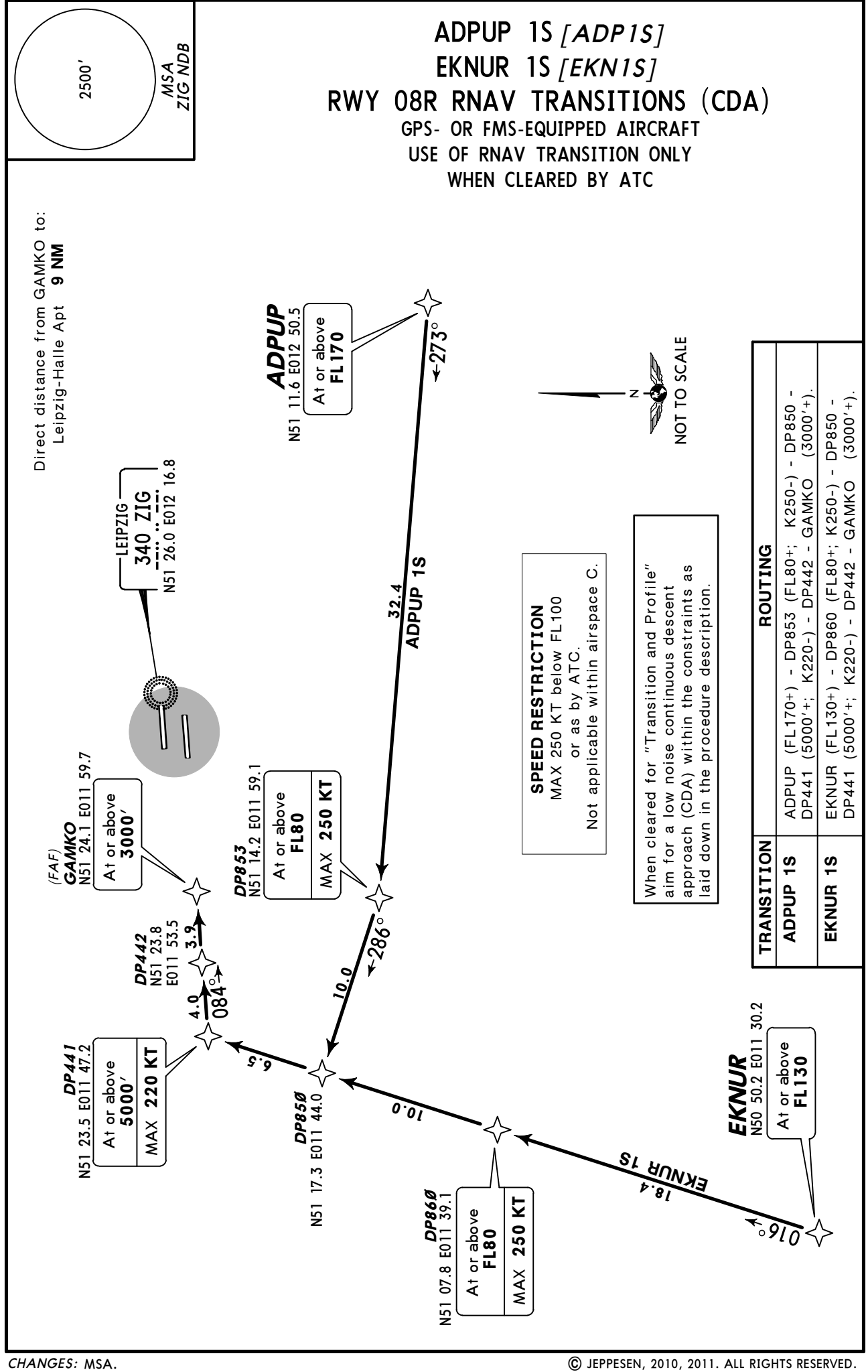
CHANGES: MSA.

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D-ATIS	Apt Elev	
123.95	470′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′

ADPUP 1S *[ADP1S]*
EKNUR 1S *[EKN1S]*
RWY 08R RNAV TRANSITIONS (CDA)

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC



TRANSITION	ROUTING
ADPUP 1S	ADPUP (FL170+) - DP853 (FL80+; K250-) - DP850 - DP441 (5000′+; K220-) - DP442 - GAMKO (3000′+).
EKNUR 1S	EKNUR (FL130+) - DP860 (FL80+; K250-) - DP850 - DP441 (5000′+; K220-) - DP442 - GAMKO (3000′+).

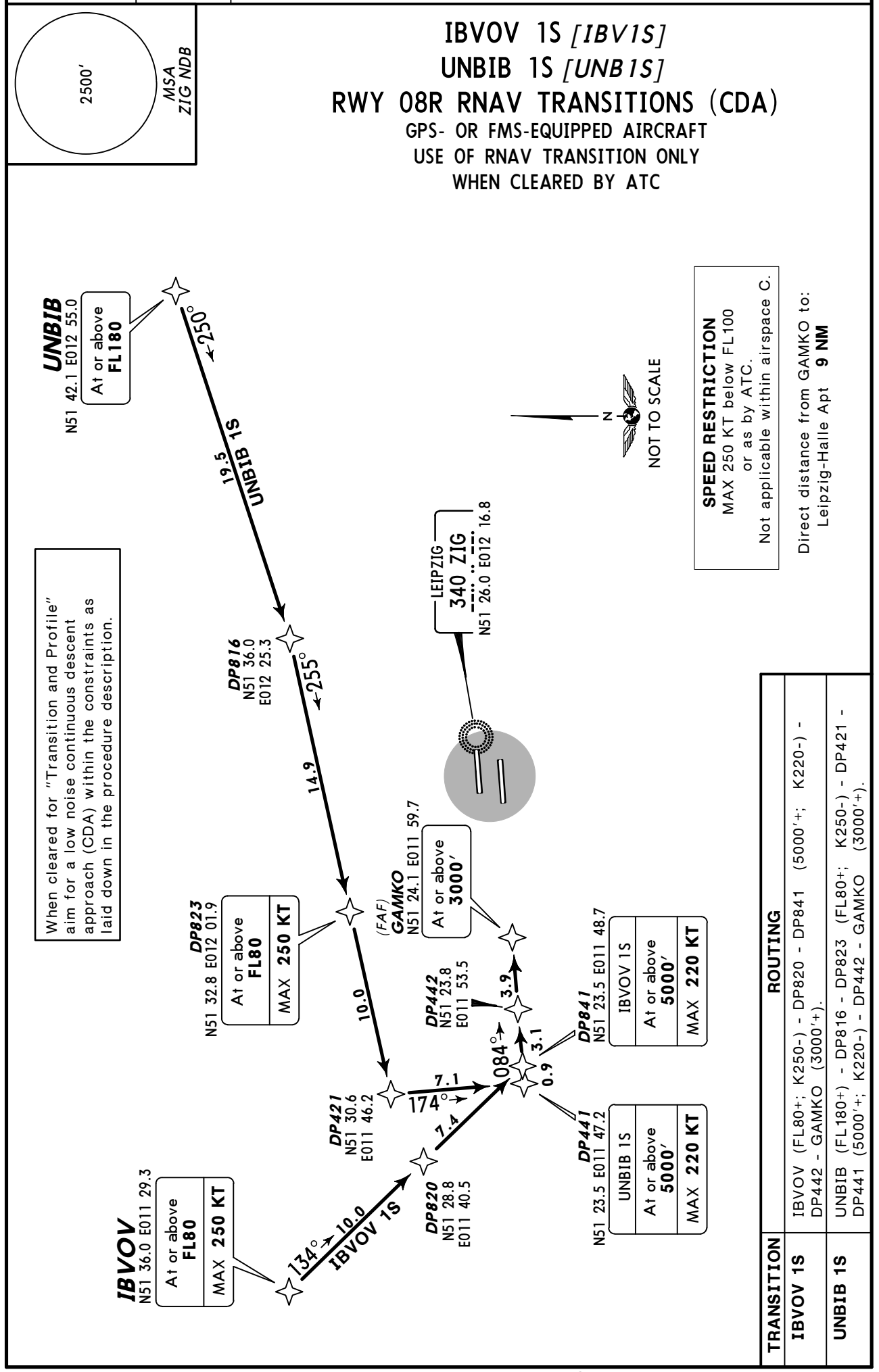
CHANGES: MSA.

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D-ATIS	Apt Elev	
123.95	470′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′

IBVOV 1S *[IBV1S]*
UNBIB 1S *[UNB1S]*
RWY 08R RNAV TRANSITIONS (CDA)

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY
WHEN CLEARED BY ATC



TRANSITION	ROUTING
IBVOV 1S	IBVOV (FL80+; K250-) - DP820 - DP841 (5000′+; K220-) - DP442 - GAMKO (3000′+).
UNBIB 1S	UNBIB (FL180+) - DP816 - DP823 (FL80+; K250-) - DP421 - DP441 (5000′+; K220-) - DP442 - GAMKO (3000′+).

CHANGES: MSA.

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RNAV SID DESIGNATION	REFER TO CHART
LELMA 1N, UMBAL 1N	10-3B
LELMA 1S, UMBAL 1S	10-3C
NAMUB 2E, 2Q	10-3D

SID DESIGNATION	REFER TO CHART
LELMA 1E, 1Q	10-3F
MAGDEBURG 1E, 2Q	10-3G
MAGDEBURG 2N, 2S	10-3H
NAMUB 1H, 1L, 2Z	10-3J
NAMUB 1N, 1S	10-3K
ODLUN 1E, 1Q	10-3L
ODLUN 1N, 1S	10-3M
ORTAG 1E, 1Q	10-3N
ORTAG 1N, 1S	10-3P
TORPU 1E, 1Q	10-3Q
TORPU 2N, 2S	10-3S
TORPU 1W, 1X	10-3T
UMBAL 1E, 1Q	10-3U

FOR RNAV SID (OVERLAY) DESIGNATION REFER TO PAGE 10-3A

CHANGES: Charts reindexed.

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RNAV SID DESIGNATION	REFER TO CHART
LELMA 1E, 1Q	10-3V
NAMUB 1H, 1L, 2Z	10-3W
NAMUB 1N, 1S	10-3X
ODLUN 1E, 1Q	10-3X1
ODLUN 1N, 1S	10-3X2
ORTAG 1E, 1Q	10-3X3
ORTAG 1N, 1S	10-3X4
TORPU 1E, 1Q	10-3X5
TORPU 2N, 2S	10-3X6
TORPU 1W, 1X	10-3X7
UMBAL 1E, 1Q	10-3X8

CHANGES: LELMA RNAV SIDs chart reindexed.

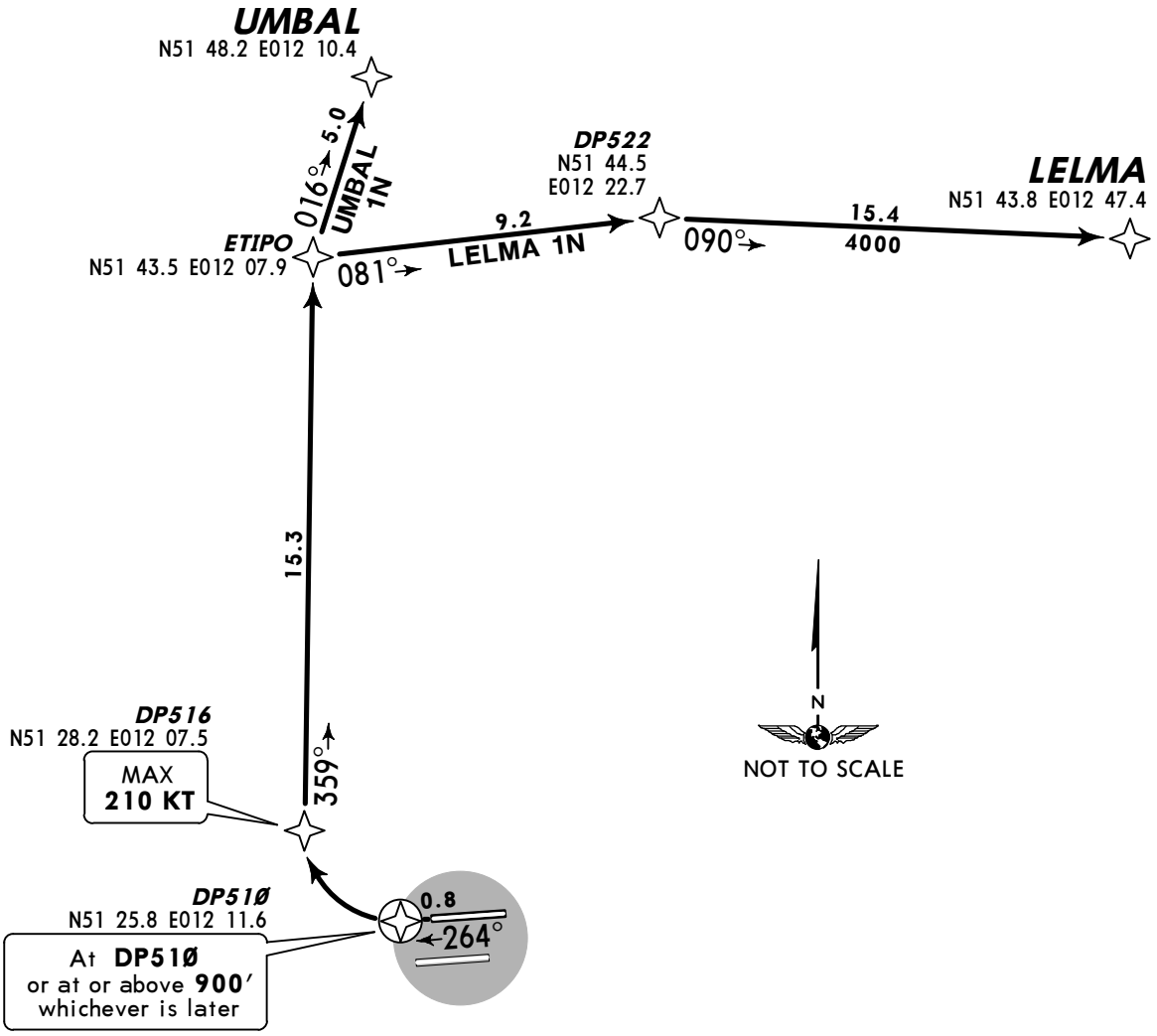
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

LELMA ONE NOVEMBER (LELMA 1N) *[LELM1N]*
UMBAL ONE NOVEMBER (UMBAL 1N) *[UMBA1N]*
RWY 26R RNAV DEPARTURES
RNAV (GPS)

2500′
MSA
ARP

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	ROUTING
LELMA 1N	(900′+) - DP510 (900′+) - DP516 (K210-) - ETIPO - DP522 - LELMA.
UMBAL 1N ❶	(900′+) - DP510 (900′+) - DP516 (K210-) - ETIPO - UMBAL.

❶ Only available between 2300-0600LT. No access to airway (U)Z-20.

CHANGES: MSA.

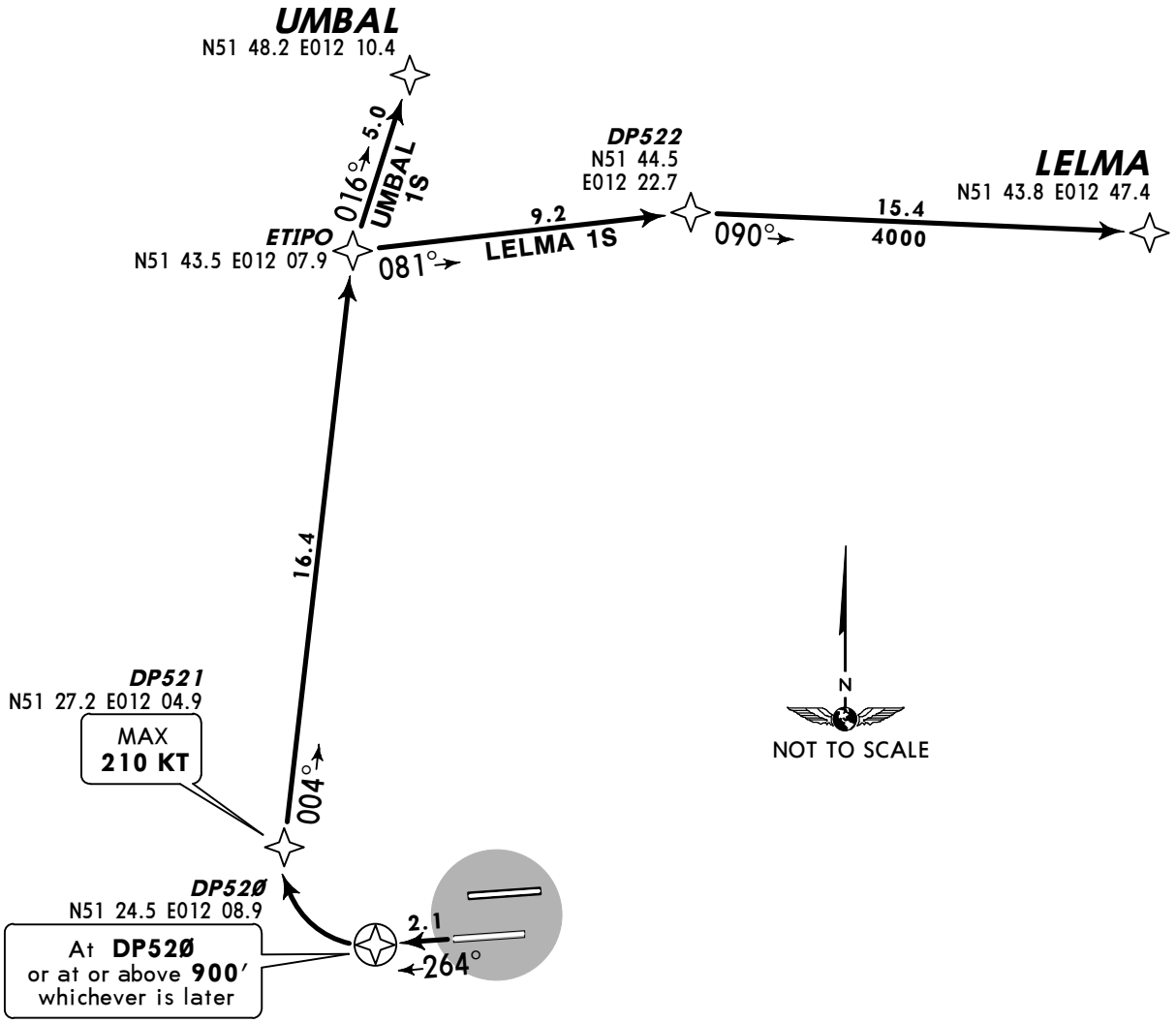
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

LELMA ONE SIERRA (LELMA 1S) *[LELM1S]*
UMBAL ONE SIERRA (UMBAL 1S) *[UMBA1S]*
RWY 26L RNAV DEPARTURES
RNAV (GPS)

2500′
MSA
ARP

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	ROUTING
LELMA 1S	(900′+) - DP520 (900′+) - DP521 (K210-) - ETIPO - DP522 - LELMA.
UMBAL 1S ❶	(900′+) - DP520 (900′+) - DP521 (K210-) - ETIPO - UMBAL.

❶ Only available between 2300-0600LT. No access to airway (U)Z-20.

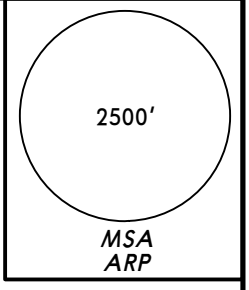
CHANGES: MSA.

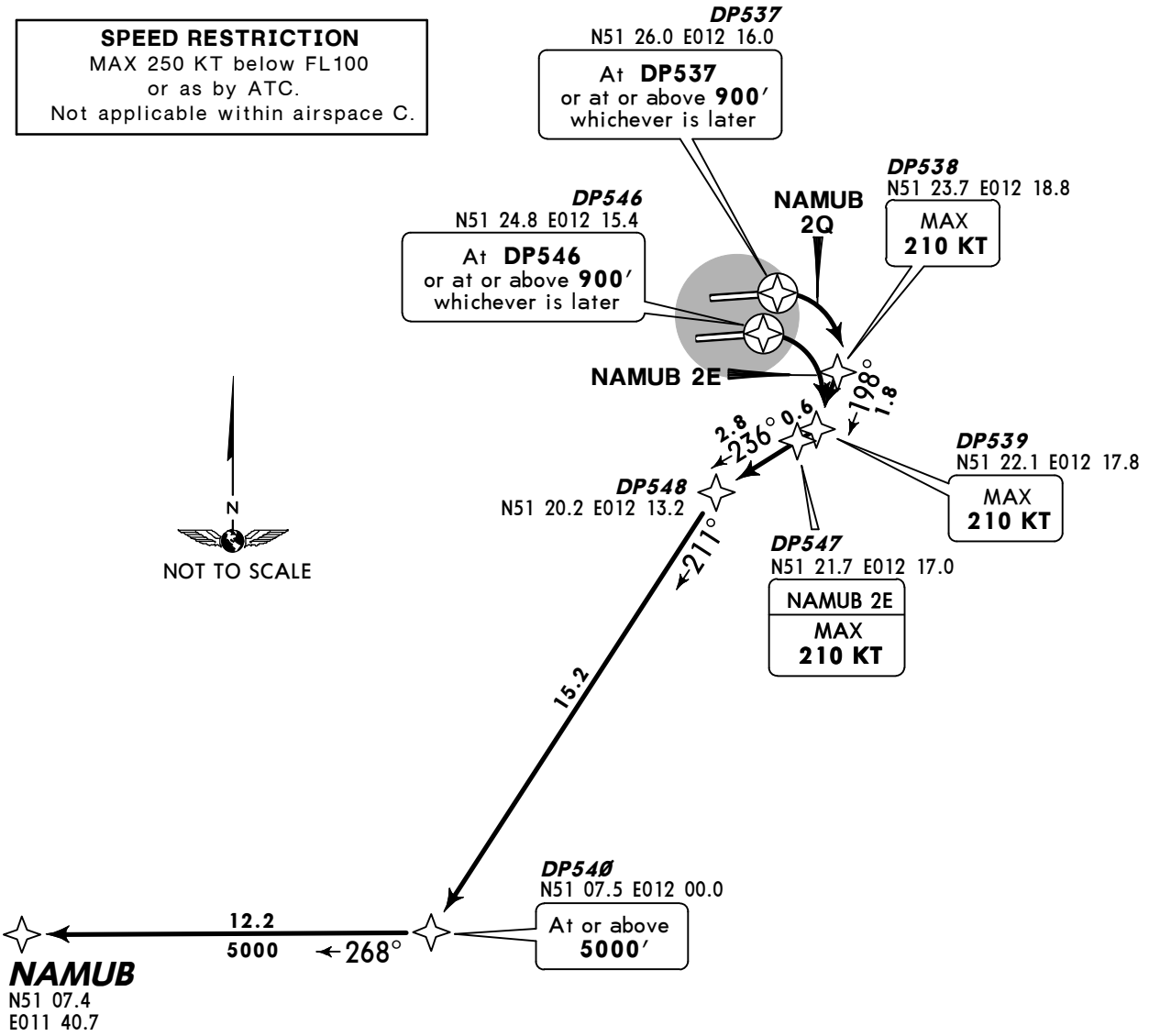
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

NAMUB TWO ECHO (NAMUB 2E) *[NAMU2E]*
NAMUB TWO QUEBEC (NAMUB 2Q) *[NAMU2Q]*
RWYS 08R/L RNAV DEPARTURES

RNAV (GPS)
ONLY AVAILABLE BETWEEN 0600-2200LT
ONLY AVAILABLE FOR ACFT WITH MTOW LESS THAN 136T





Initial climb clearance **FL70**

SID	RWY	ROUTING
NAMUB 2E ❶	**08R**	DP546 - (900′+) - DP547 (K210-) - DP548 - DP540 (5000′+) - NAMUB.
NAMUB 2Q ❷	**08L**	DP537 - (900′+) - DP538 (K210-) - DP539 (K210-) - DP548 - DP540 (5000′+) - NAMUB.

❶ If unable to comply file NAMUB 1L.
❷ If unable to comply file NAMUB 1H.

CHANGES: MSA; chart reindexed.

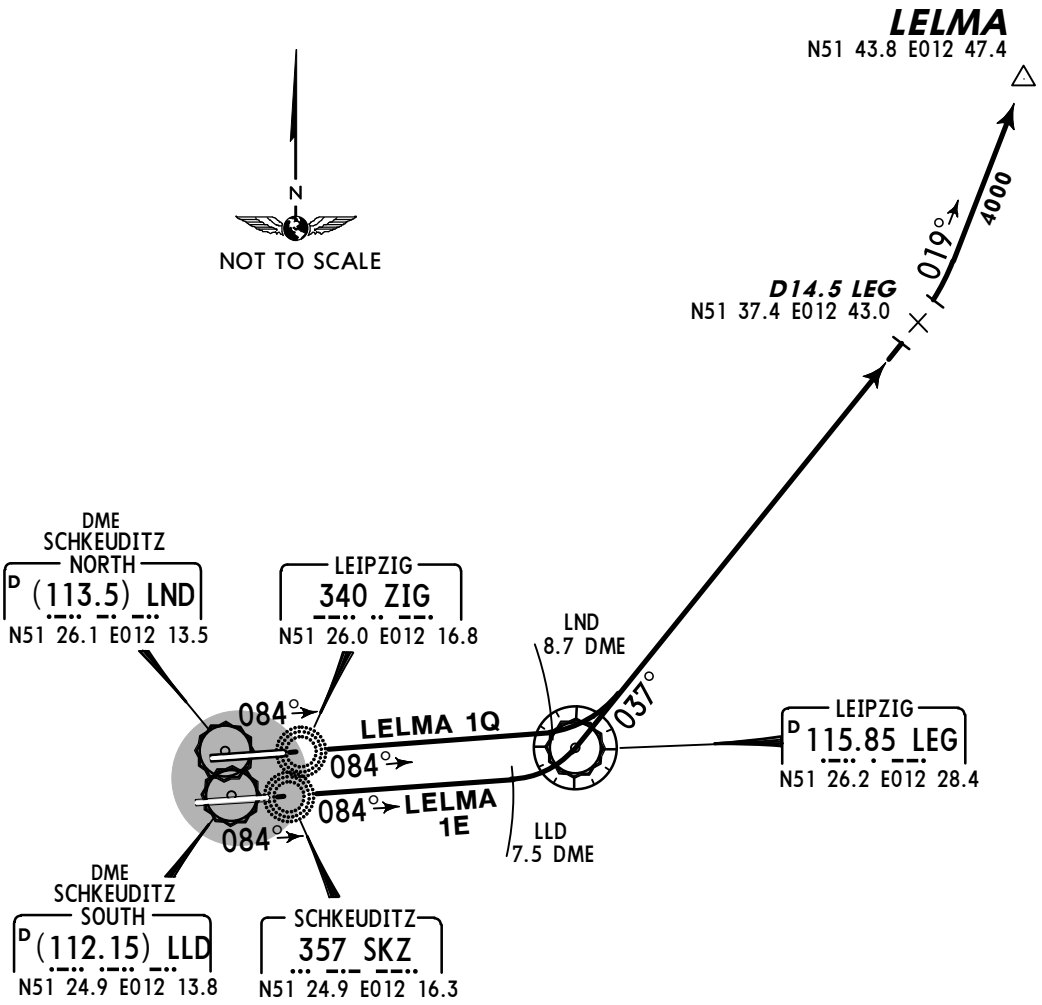
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

LELMA ONE ECHO (LELMA 1E)
LELMA ONE QUEBEC (LELMA 1Q)
RWYS 08R/L DEPARTURES

2500′
MSA
ZIG NDB

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
LELMA 1E	**08R**	On runway track via SKZ to LLD 7.5 DME, turn LEFT, intercept LEG R-037 to D14.5 LEG ❶, turn LEFT, 019° track to LELMA.
LELMA 1Q	**08L**	On runway track via ZIG to LND 8.7 DME, turn LEFT, intercept LEG R-037 to D14.5 LEG ❶, turn LEFT, 019° track to LELMA.

❶ After D14.5 LEG BRNAV equipment necessary.
If unable to comply request alternate route by ATC.

CHANGES: MSA; chart reindexed.

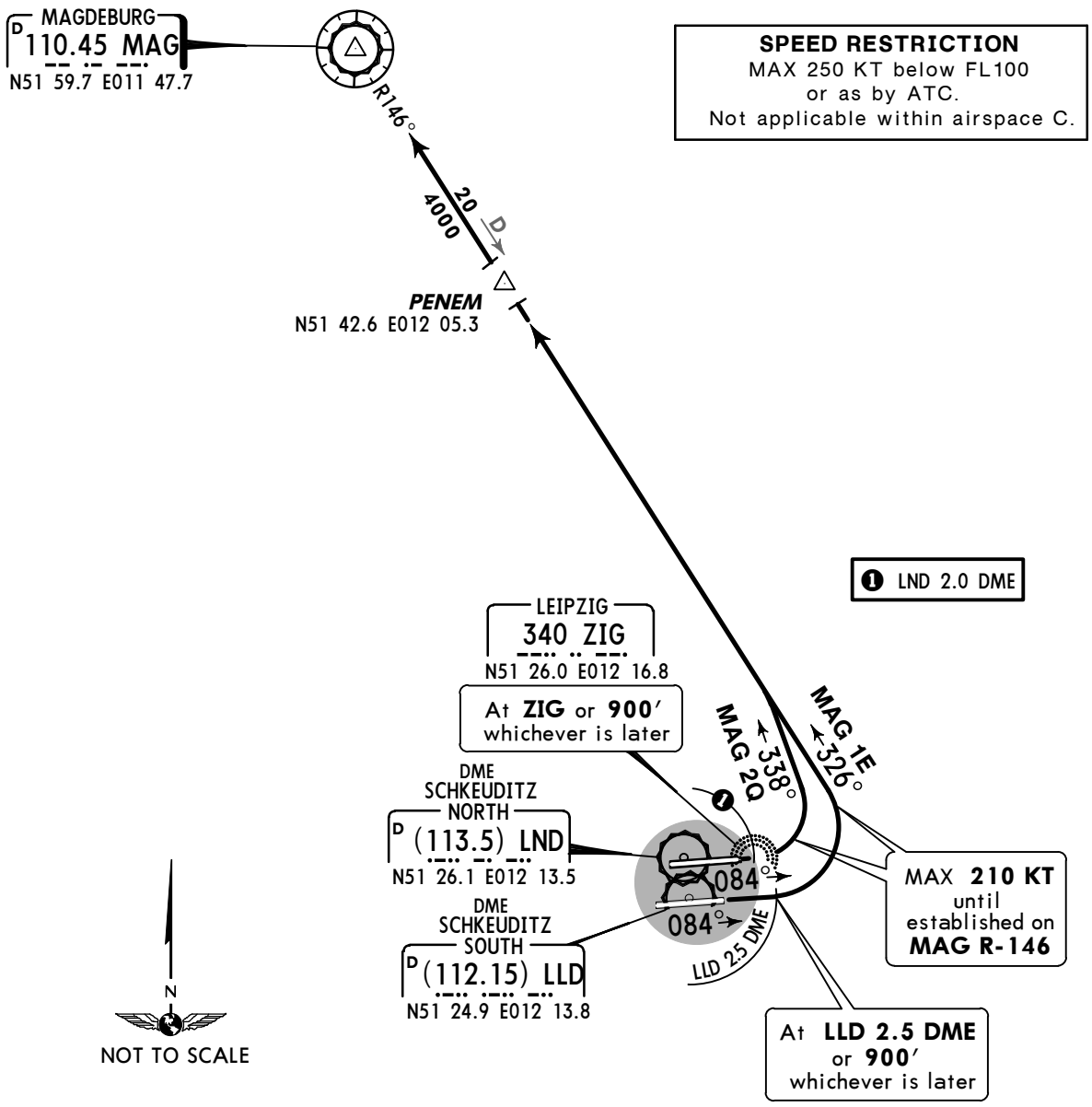
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

MAGDEBURG ONE ECHO (MAG 1E)
MAGDEBURG TWO QUEBEC (MAG 2Q)
RWYS 08R/L DEPARTURES

NO ACCESS TO AIRWAYS (U)Z-20 AND UN-746
NO ACCESS TO AIRWAY (U)L-986 EXCEPT NON-PRNAV EQUIPPED ACFT WILL BE ASSIGNED FOR NON-RNAV EQUIPPED ACFT BY ATC ONLY
RNAV EQUIPPED ACFT SHALL FILE SID ODLUN - AIRWAY Y-235 - MAG
NO RNAV OVERLAY EXISTING

2500′
MSA
ZIG NDB



These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing 2000′ due to navaid coverage. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **FL70**

SID	RWY	ROUTING
MAG 1E	**08R**	Climb on runway track to LLD 2.5 DME or 900′, whichever is later, turn LEFT, intercept MAG R-146 inbound via PENEM to MAG.
MAG 2Q	**08L**	Climb on runway track to ZIG (LND 2.0 DME) or 900′, whichever is later, turn LEFT, 338° track, intercept MAG R-146 inbound via PENEM to MAG.

CHANGES: MSA; chart reindexed.

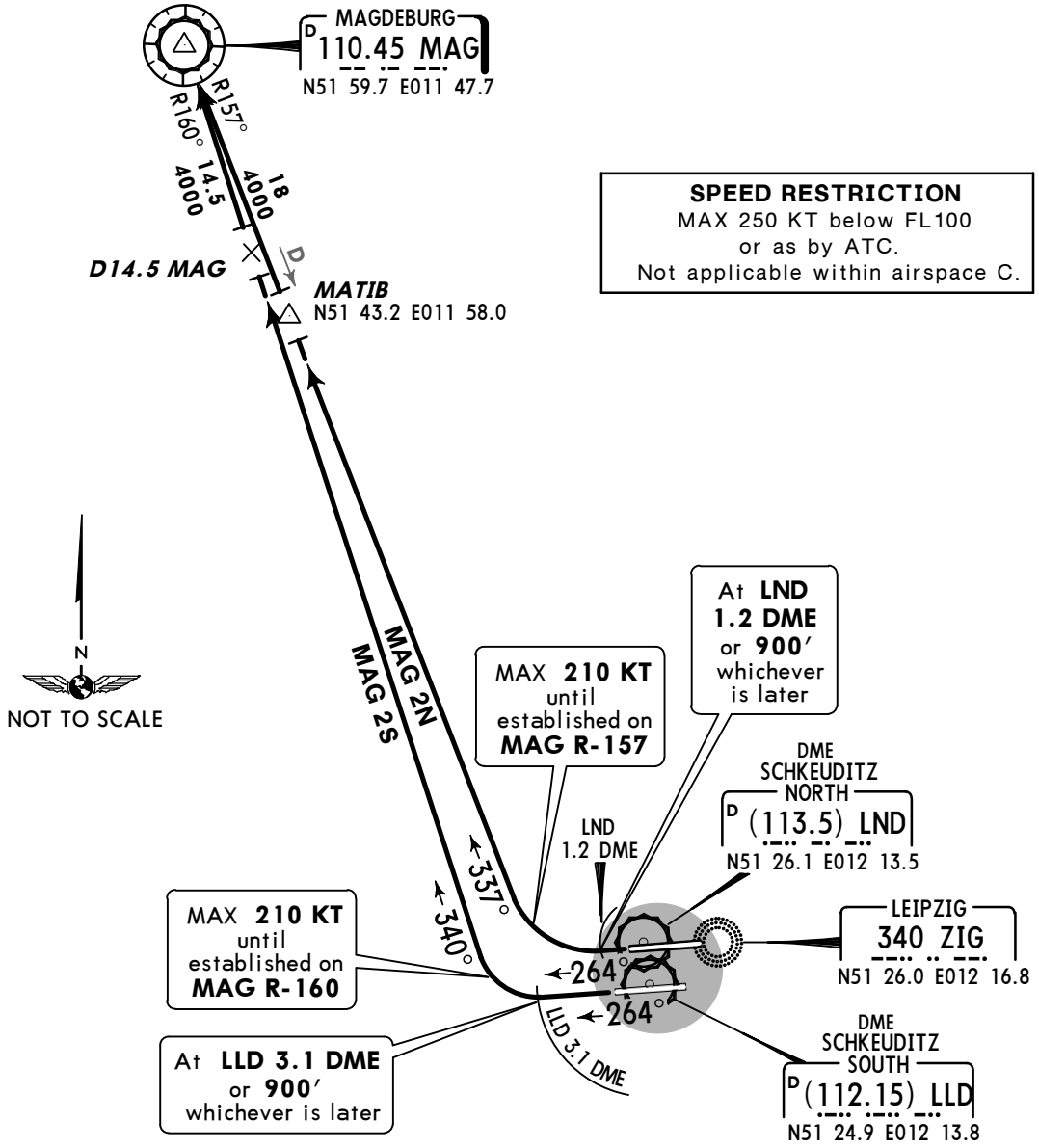
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

MAGDEBURG TWO NOVEMBER (MAG 2N)
MAGDEBURG TWO SIERRA (MAG 2S)
RWYS 26R/L DEPARTURES

NO ACCESS TO AIRWAYS (U)Z-20 AND UN-746
NO ACCESS TO AIRWAY (U)L-986 EXCEPT NON-PRNAV EQUIPPED ACFT WILL BE ASSIGNED FOR NON-RNAV EQUIPPED ACFT BY ATC ONLY
RNAV EQUIPPED ACFT SHALL FILE SID ODLUN - AIRWAY Y-235 - MAG
NO RNAV OVERLAY EXISTING

2500′
MSA
ZIG NDB



These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing 2000′ due to navaid coverage.
If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **FL70**

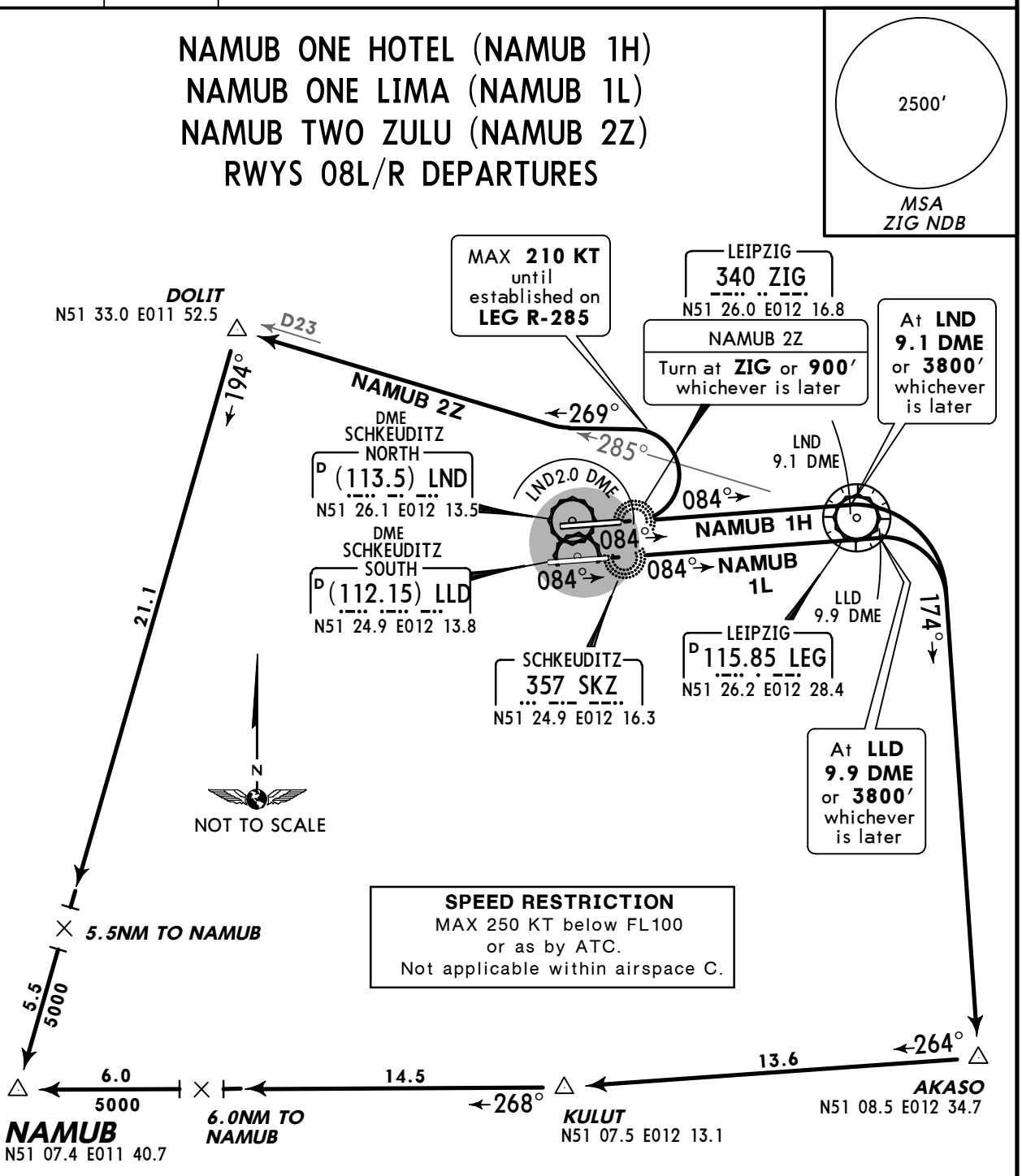
SID	RWY	ROUTING
MAG 2N	**26R**	Climb on runway track to LND 1.2 DME or 900′, whichever is later, turn RIGHT, intercept MAG R-157 inbound via MATIB to MAG.
MAG 2S	**26L**	Climb on runway track to LLD 3.1 DME or 900′, whichever is later, turn RIGHT, intercept MAG R-160 inbound to MAG.

CHANGES: MSA; chart reindexed.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

NAMUB ONE HOTEL (NAMUB 1H)
NAMUB ONE LIMA (NAMUB 1L)
NAMUB TWO ZULU (NAMUB 2Z)
RWYS 08L/R DEPARTURES



Initial climb clearance **FL70**

SID	RWY	ROUTING
NAMUB 1H	**08L**	Climb on runway track via ZIG to LND 9.1 DME or 3800′ ❷, whichever is later, turn RIGHT, 174° track to AKASO, turn RIGHT, 264° track to KULUT, turn RIGHT, 268° track to NAMUB.
NAMUB 1L	**08R**	Climb on runway track via SKZ to LLD 9.9 DME or 3800′ ❷, whichever is later, turn RIGHT, 174° track to AKASO, turn RIGHT, 264° track to KULUT, turn RIGHT, 268° track to NAMUB.
NAMUB 2Z ❶	**08L**	Climb on runway track to ZIG (LND 2 DME) or 900′, whichever is later, turn LEFT, 269° track, intercept LEG R-285 to DOLIT ❸, turn LEFT, 194° track to NAMUB.

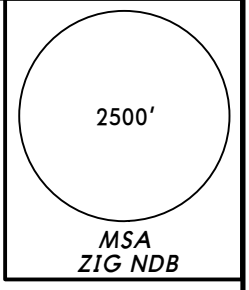
❶ Only available between 2200-0600LT.
BRNAV equipment necessary: ❷ when passing 3800′/ ❸ after DOLIT.
If unable to comply request alternate route by ATC.

CHANGES: MSA; chart reindexed.

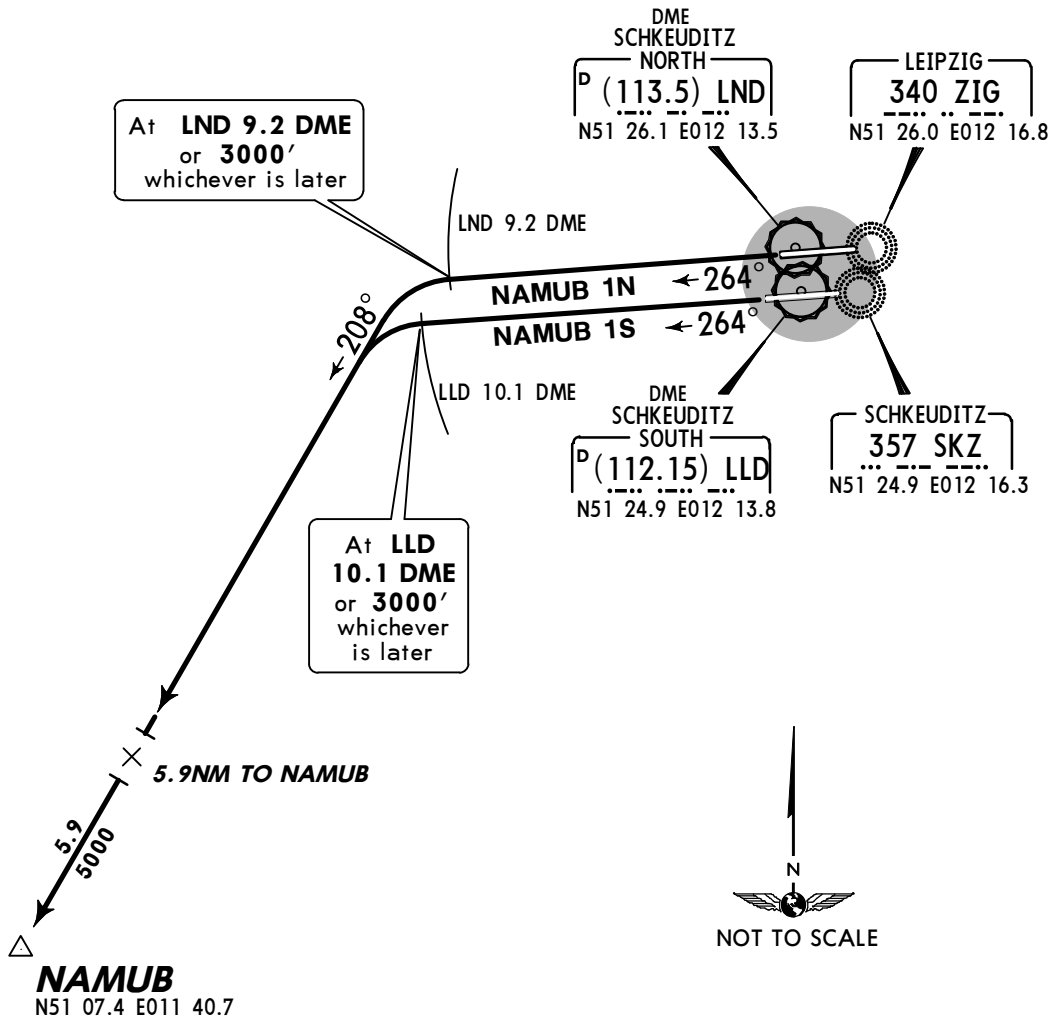
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

NAMUB ONE NOVEMBER (NAMUB 1N)
NAMUB ONE SIERRA (NAMUB 1S)
RWYS 26R/L DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
NAMUB 1N	**26R**	Climb on 264° bearing from ZIG to LND 9.2 DME or 3000′ ❶, whichever is later, turn LEFT, 208° track to NAMUB.
NAMUB 1S	**26L**	Climb on 264° bearing from SKZ to LLD 10.1 DME or 3000′ ❶, whichever is later, turn LEFT, 208° track to NAMUB.

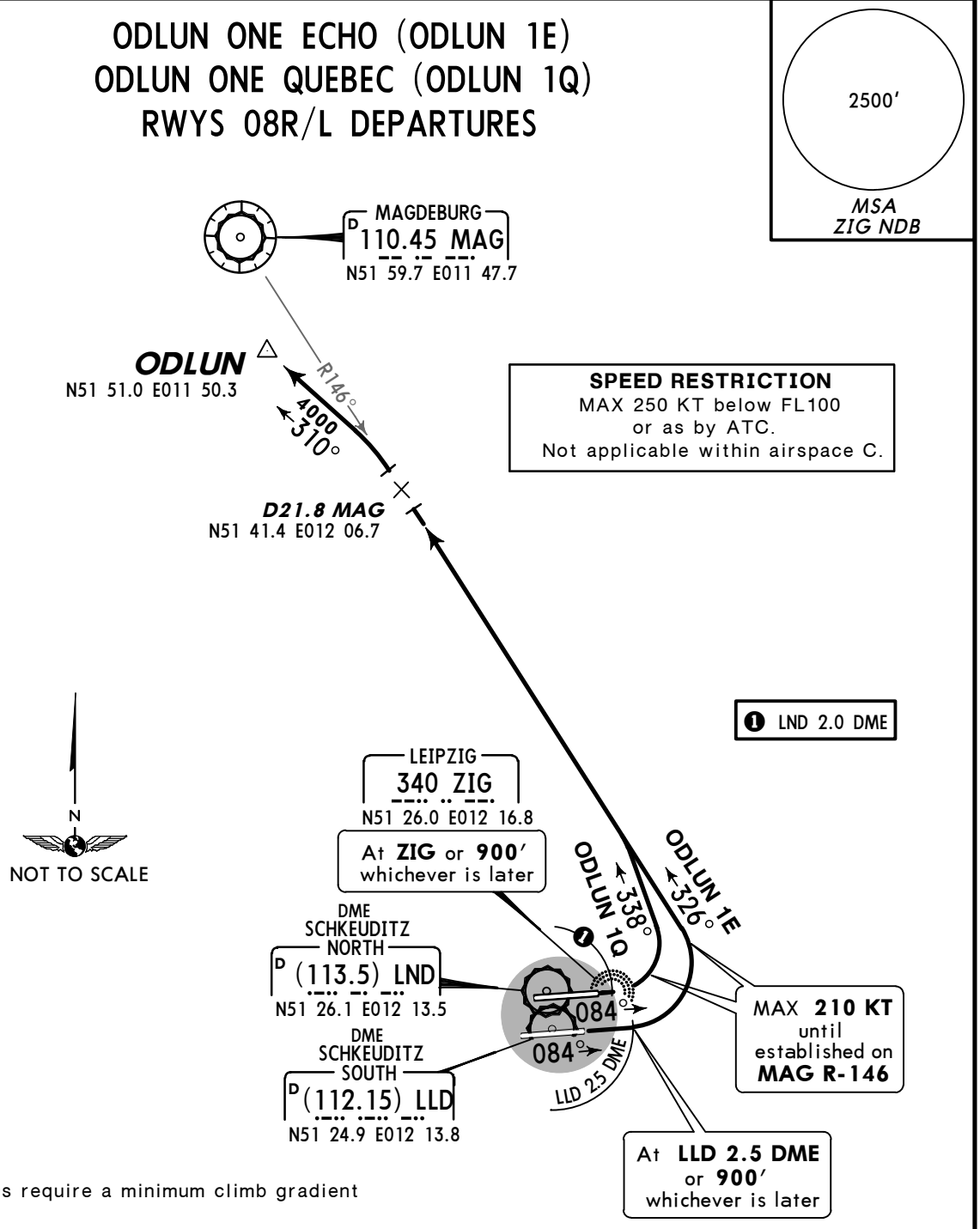
❶ When passing 3000′ BRNAV equipment necessary.
If unable to comply request alternate route by ATC.

CHANGES: MSA; chart reindexed.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ODLUN ONE ECHO (ODLUN 1E)
ODLUN ONE QUEBEC (ODLUN 1Q)
RWYS 08R/L DEPARTURES



These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing 2000′ due to navaid coverage. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **FL70**

SID	RWY	ROUTING
ODLUN 1E	**08R**	Climb on runway track to LLD 2.5 DME or 900′, whichever is later, turn LEFT, intercept MAG R-146 inbound to D21.8 MAG ❷, turn LEFT, 310° track to ODLUN.
ODLUN 1Q	**08L**	Climb on runway track to ZIG (LND 2.0 DME) or 900′, whichever is later, turn LEFT, 338° track, intercept MAG R-146 inbound to D21.8 MAG ❷, turn LEFT, 310° track to ODLUN.

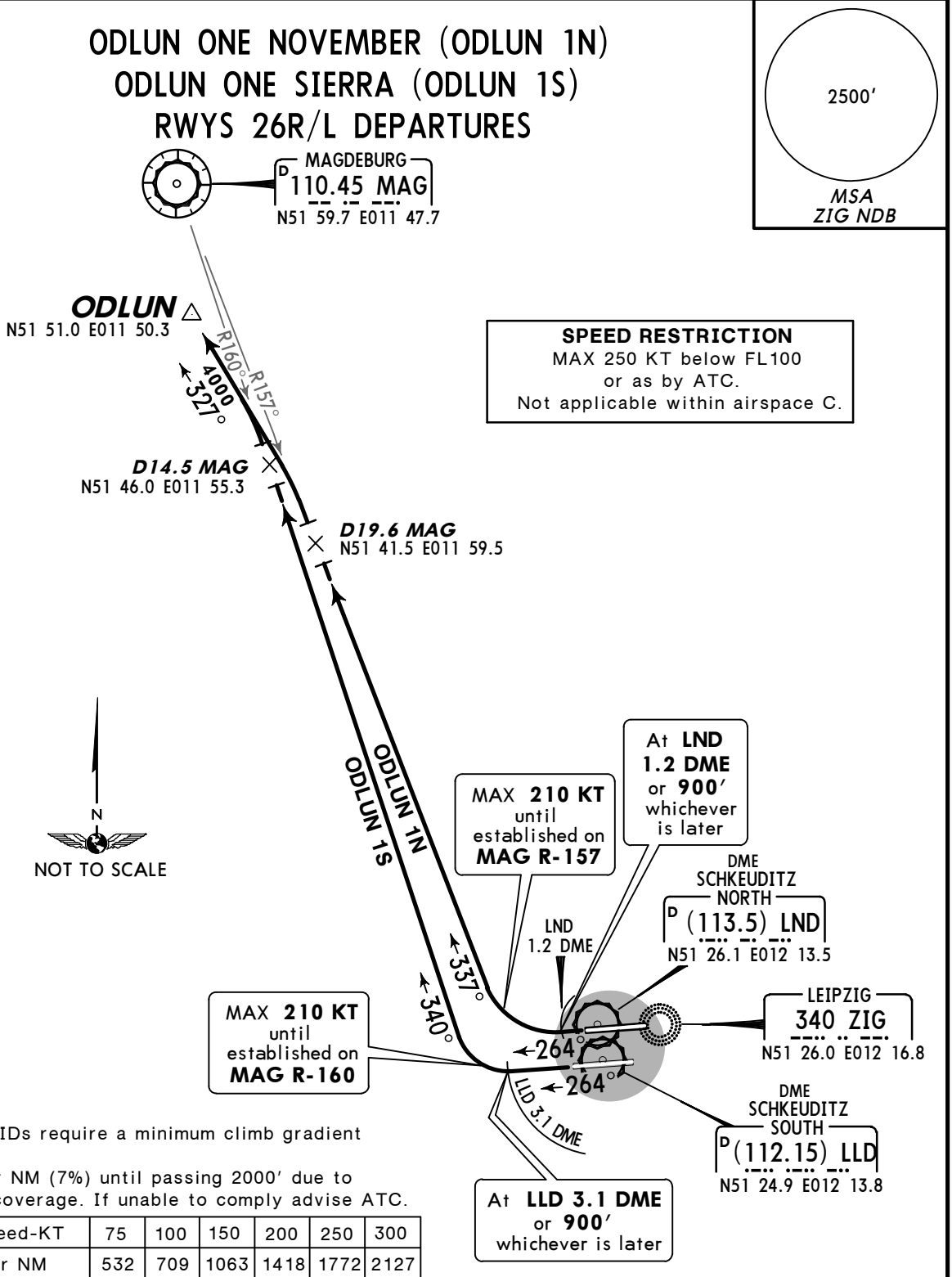
❷ After D21.8 MAG BRNAV equipment necessary.
If unable to comply request alternate route by ATC.

CHANGES: MSA; chart reindexed.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ODLUN ONE NOVEMBER (ODLUN 1N)
ODLUN ONE SIERRA (ODLUN 1S)
RWYS 26R/L DEPARTURES



These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing 2000′ due to navaid coverage. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **FL70**

SID	RWY	ROUTING
ODLUN 1N	**26R**	Climb on runway track to LND 1.2 DME or 900′, whichever is later, turn RIGHT, intercept MAG R-157 inbound to D19.6 MAG ❶, turn LEFT, 327° track to ODLUN.
ODLUN 1S	**26L**	Climb on runway track to LLD 3.1 DME or 900′, whichever is later, turn RIGHT, intercept MAG R-160 inbound to D14.5 MAG ❷, turn LEFT, 327° track to ODLUN.

BRNAV equipment necessary after: ❶ D19.6 MAG/ ❷ D14.5 MAG.
If unable to comply request alternate route by ATC.

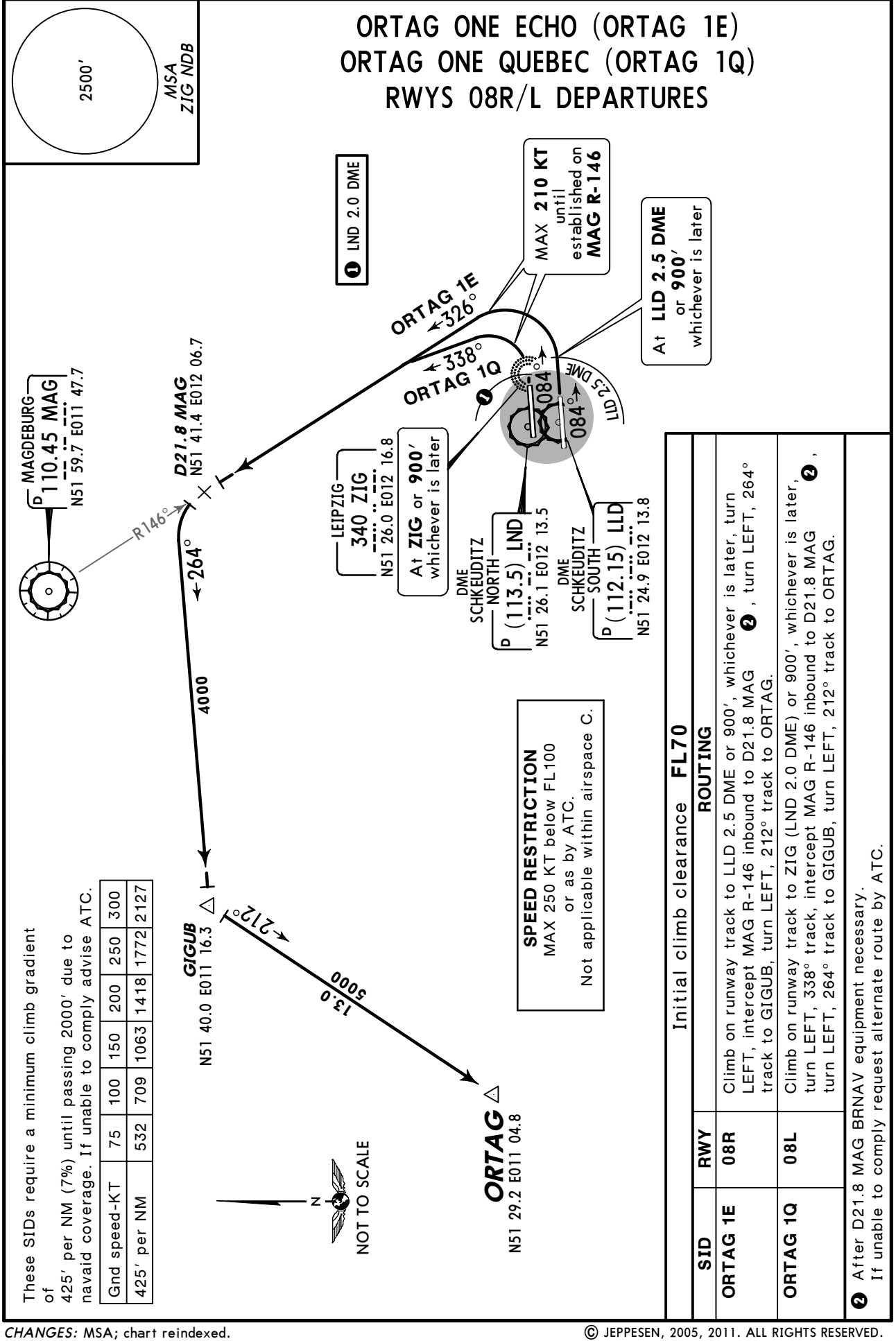
CHANGES: MSA; chart reindexed.

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MUNICH Radar 126.17	*Apt Elev* 470′

Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ORTAG ONE ECHO (ORTAG 1E)
ORTAG ONE QUEBEC (ORTAG 1Q)
RWYS 08R/L DEPARTURES



These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing 2000′ due to navaid coverage. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **FL70**

SID	RWY	ROUTING
ORTAG 1E	08R	Climb on runway track to LLD 2.5 DME or 900′, whichever is later, turn LEFT, intercept MAG R-146 inbound to D21.8 MAG ❷, turn LEFT, 264° track to GIGUB, turn LEFT, 212° track to ORTAG.
ORTAG 1Q	08L	Climb on runway track to ZIG (LND 2.0 DME) or 900′, whichever is later, turn LEFT, 338° track, intercept MAG R-146 inbound to D21.8 MAG ❷, turn LEFT, 264° track to GIGUB, turn LEFT, 212° track to ORTAG.

❷ After D21.8 MAG BRNAV equipment necessary.
If unable to comply request alternate route by ATC.

CHANGES: MSA; chart reindexed.

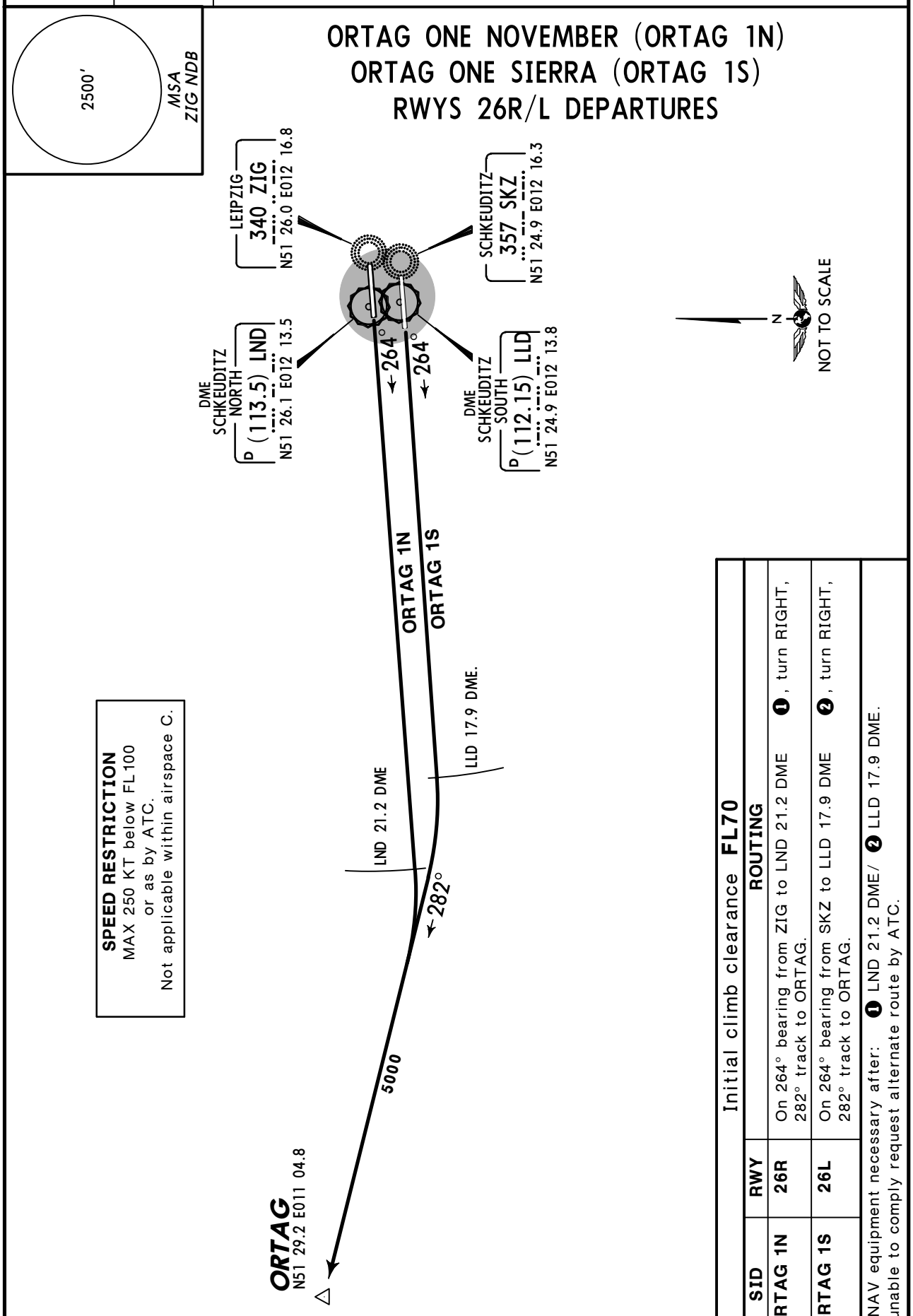
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MUNICH Radar 126.17	*Apt Elev* 470′

Trans level: By ATC Trans alt: 5000′

1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ORTAG ONE NOVEMBER (ORTAG 1N)
ORTAG ONE SIERRA (ORTAG 1S)
RWYS 26R/L DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
ORTAG 1N	26R	On 264° bearing from ZIG to LND 21.2 DME ❶, turn RIGHT, 282° track to ORTAG.
ORTAG 1S	26L	On 264° bearing from SKZ to LLD 17.9 DME ❷, turn RIGHT, 282° track to ORTAG.

BRNAV equipment necessary after: ❶ LND 21.2 DME/ ❷ LLD 17.9 DME.
If unable to comply request alternate route by ATC.

CHANGES: MSA; chart reindexed.

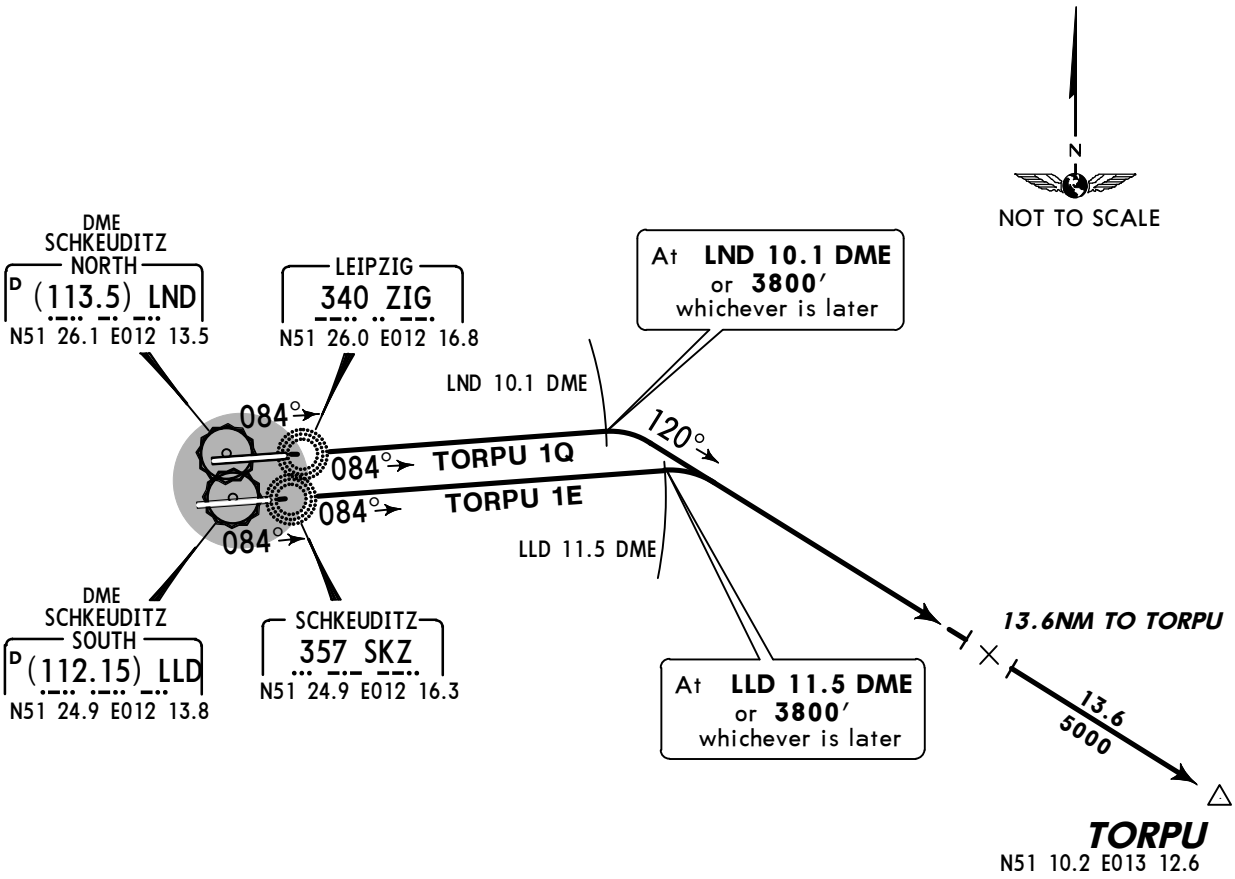
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

TORPU ONE ECHO (TORPU 1E)
TORPU ONE QUEBEC (TORPU 1Q)
RWYS 08R/L DEPARTURES

2500′
MSA
ZIG NDB

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
TORPU 1E	**08R**	Climb on runway track via SKZ to LLD 11.5 DME or 3800′ ❶, whichever is later, turn RIGHT, 120° track to TORPU.
TORPU 1Q	**08L**	Climb on runway track via ZIG to LND 10.1 DME or 3800′ ❶, whichever is later, turn RIGHT, 120° track to TORPU.

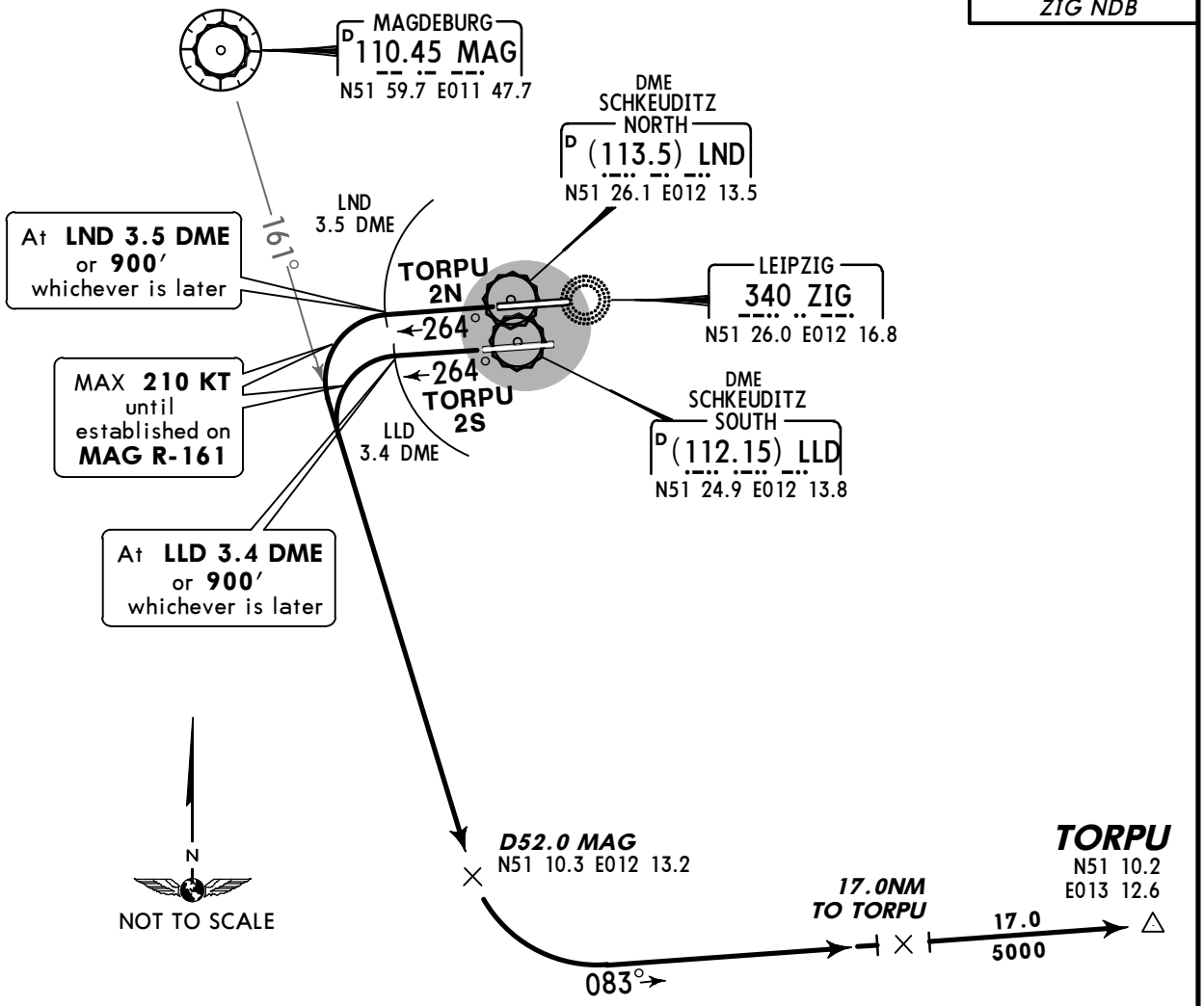
❶ When passing 3800′ BRNAV equipment necessary.
If unable to comply request alternate route by ATC.

CHANGES: MSA; chart reindexed.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

TORPU TWO NOVEMBER (TORPU 2N)
TORPU TWO SIERRA (TORPU 2S)
RWYS 26R/L DEPARTURES
ONLY AVAILABLE BETWEEN 0600-2200LT



These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing 2000′ due to navaid coverage. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

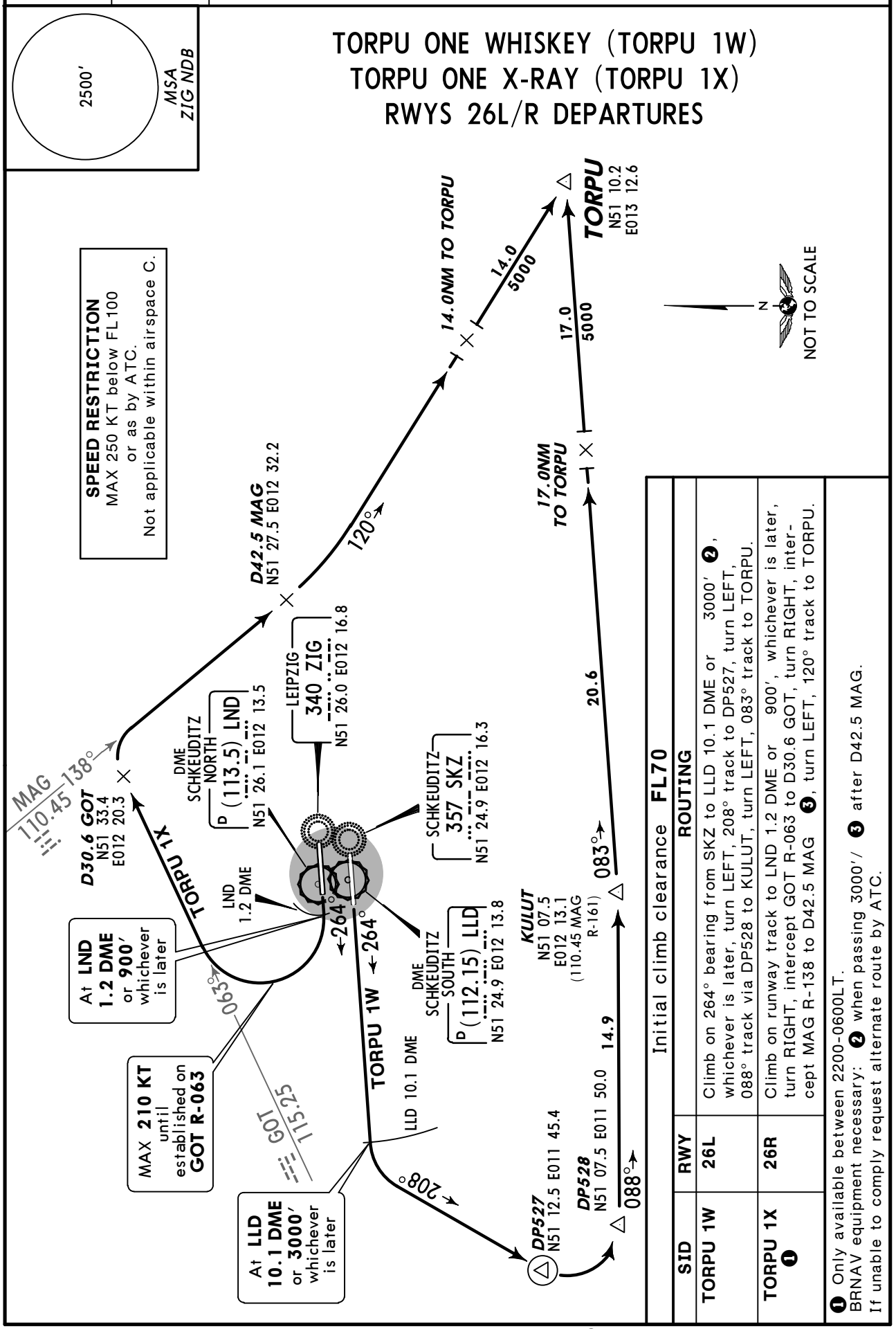
SID	RWY	ROUTING
TORPU 2N	**26R**	Climb on runway track to LND 3.5 DME or 900′, whichever is later, turn LEFT, intercept MAG R-161 to D52.0 MAG ❶, turn LEFT, 083° track to TORPU.
TORPU 2S	**26L**	Climb on runway track to LLD 3.4 DME or 900′, whichever is later, turn LEFT, intercept MAG R-161 to D52.0 MAG ❶, turn LEFT, 083° track to TORPU.

❶ After D52.0 MAG BRNAV equipment necessary.
If unable to comply request alternate route by ATC.

CHANGES: MSA; chart reindexed.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.



Initial climb clearance **FL70**

SID	RWY	ROUTING
TORPU 1W	26L	Climb on 264° bearing from SKZ to LLD 10.1 DME or 3000′ ❷, whichever is later, turn LEFT, 208° track to DP527, turn LEFT, 088° track via DP528 to KULUT, turn LEFT, 083° track to TORPU.
TORPU 1X ❶	26R	Climb on runway track to LND 1.2 DME or 900′, whichever is later, turn RIGHT, intercept GOT R-063 to D30.6 GOT, turn RIGHT, intercept MAG R-138 to D42.5 MAG ❸, turn LEFT, 120° track to TORPU.

❶ Only available between 2200-0600LT.
BRNAV equipment necessary: ❷ when passing 3000′/ ❸ after D42.5 MAG.
If unable to comply request alternate route by ATC.

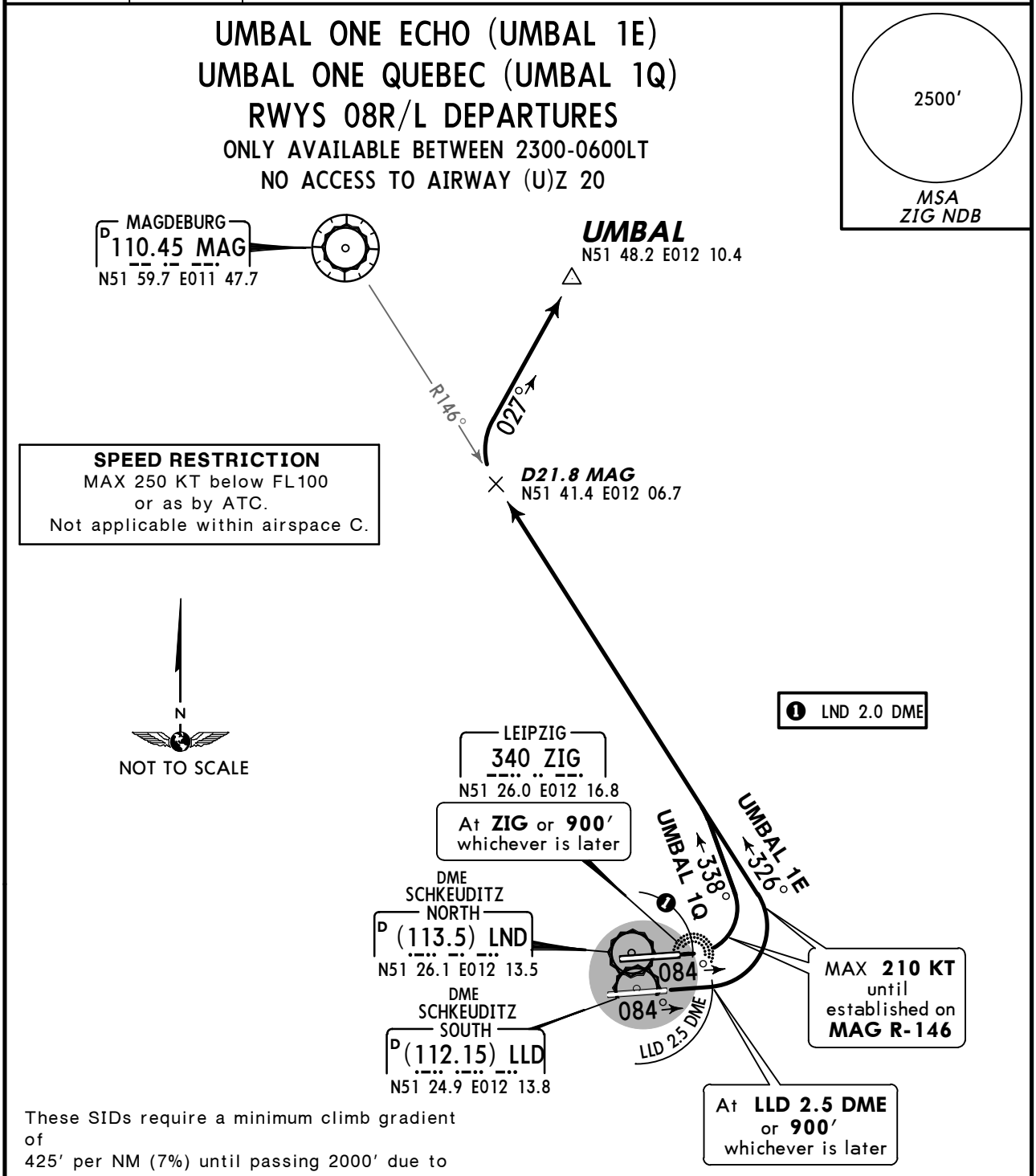
CHANGES: MSA; chart reindexed.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

UMBAL ONE ECHO (UMBAL 1E)
UMBAL ONE QUEBEC (UMBAL 1Q)
RWYS 08R/L DEPARTURES

ONLY AVAILABLE BETWEEN 2300-0600LT
NO ACCESS TO AIRWAY (U)Z 20



These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing 2000′ due to navaid coverage. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **FL70**

SID	RWY	ROUTING
UMBAL 1E	**08R**	Climb on runway track to LLD 2.5 DME or 900′, whichever is later, turn LEFT, intercept MAG R-146 inbound to D21.8 MAG ❷, turn RIGHT, 027° track to UMBAL.
UMBAL 1Q	**08L**	Climb on runway track to ZIG (LND 2.0 DME) or 900′, whichever is later, turn LEFT, 338° track, intercept MAG R-146 inbound to D21.8 MAG ❷, turn RIGHT, 027° track to UMBAL.

❷ After D21.8 MAG BRNAV equipment necessary.
If unable to comply request alternate route by ATC.

CHANGES: MSA; chart reindexed.

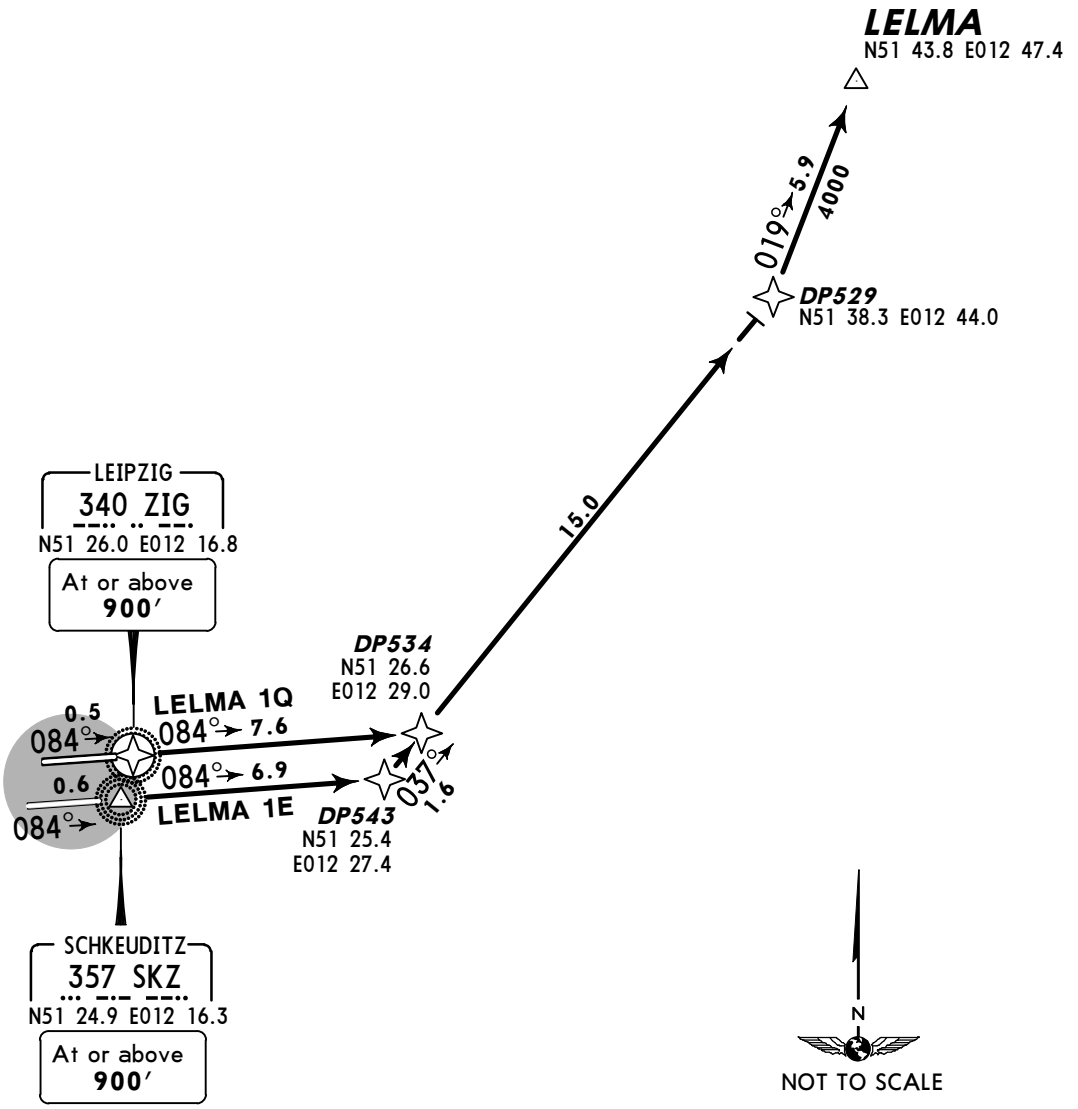
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

LELMA ONE ECHO (LELMA 1E) *[LELM1E]*
LELMA ONE QUEBEC (LELMA 1Q) *[LELM1Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3F)

2500′
MSA
ZIG NDB

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
LELMA 1E	**08R**	SKZ (900′+) - DP543 - DP529 - LELMA.
LELMA 1Q	**08L**	ZIG (900′+) - DP534 - DP529 - LELMA.

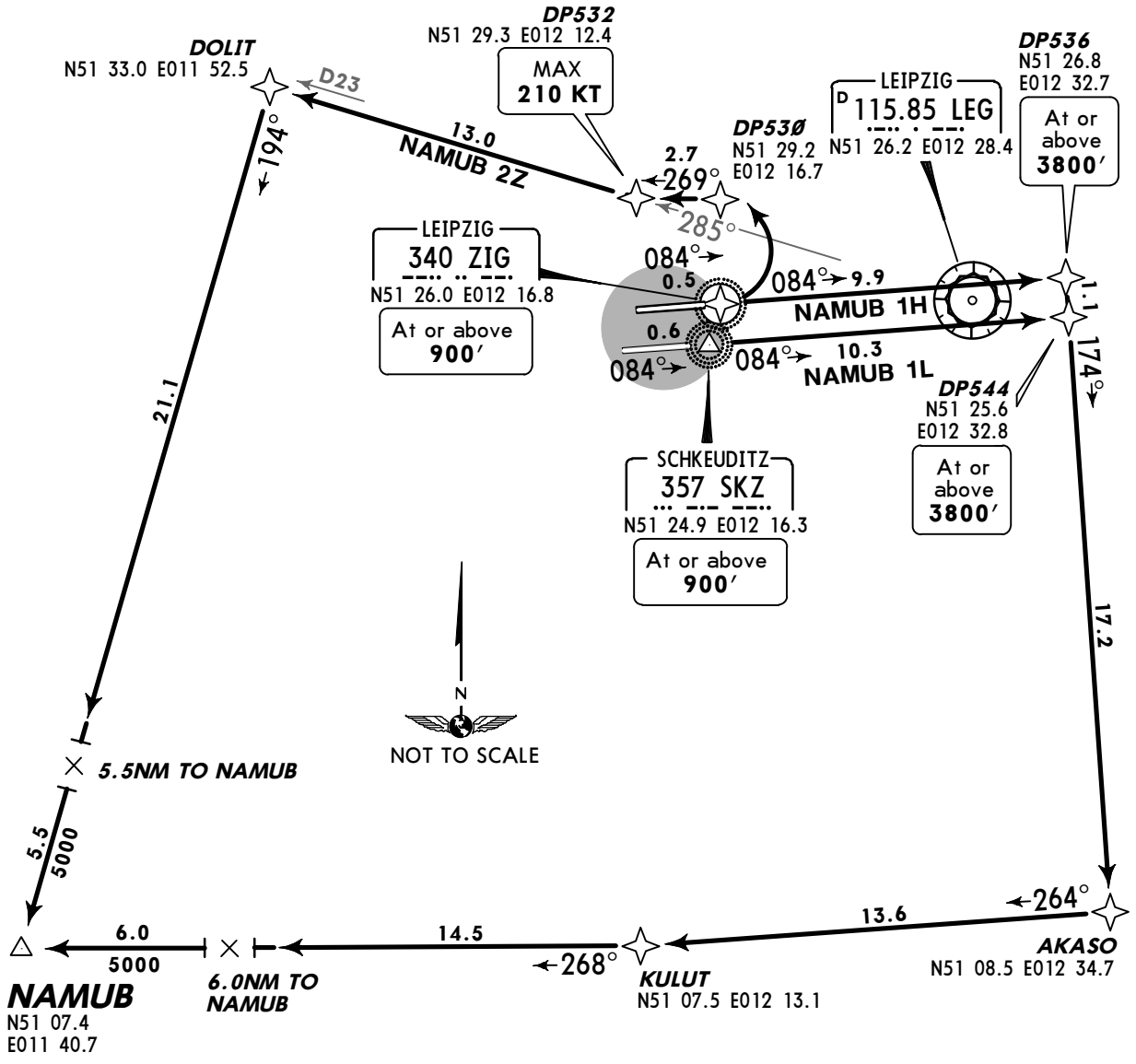
CHANGES: MSA; chart reindexed.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

NAMUB ONE HOTEL (NAMUB 1H) *[NAMU1H]*
NAMUB ONE LIMA (NAMUB 1L) *[NAMU1L]*
NAMUB TWO ZULU (NAMUB 2Z) *[NAMU2Z]*
RWYS 08L/R RNAV DEPARTURES (OVERLAY 10-3J)

2500′
MSA
ZIG NDB



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
NAMUB 1H	**08L**	ZIG (900′+) - DP536 (3800′+) - AKASO - KULUT - NAMUB.
NAMUB 1L	**08R**	SKZ (900′+) - DP544 (3800′+) - AKASO - KULUT - NAMUB.
NAMUB 2Z ❶	**08L**	ZIG (900′+) - DP530 - DP532 (K210-) - DOLIT - NAMUB.

❶ Only available between 2200-0600LT.

CHANGES: MSA.

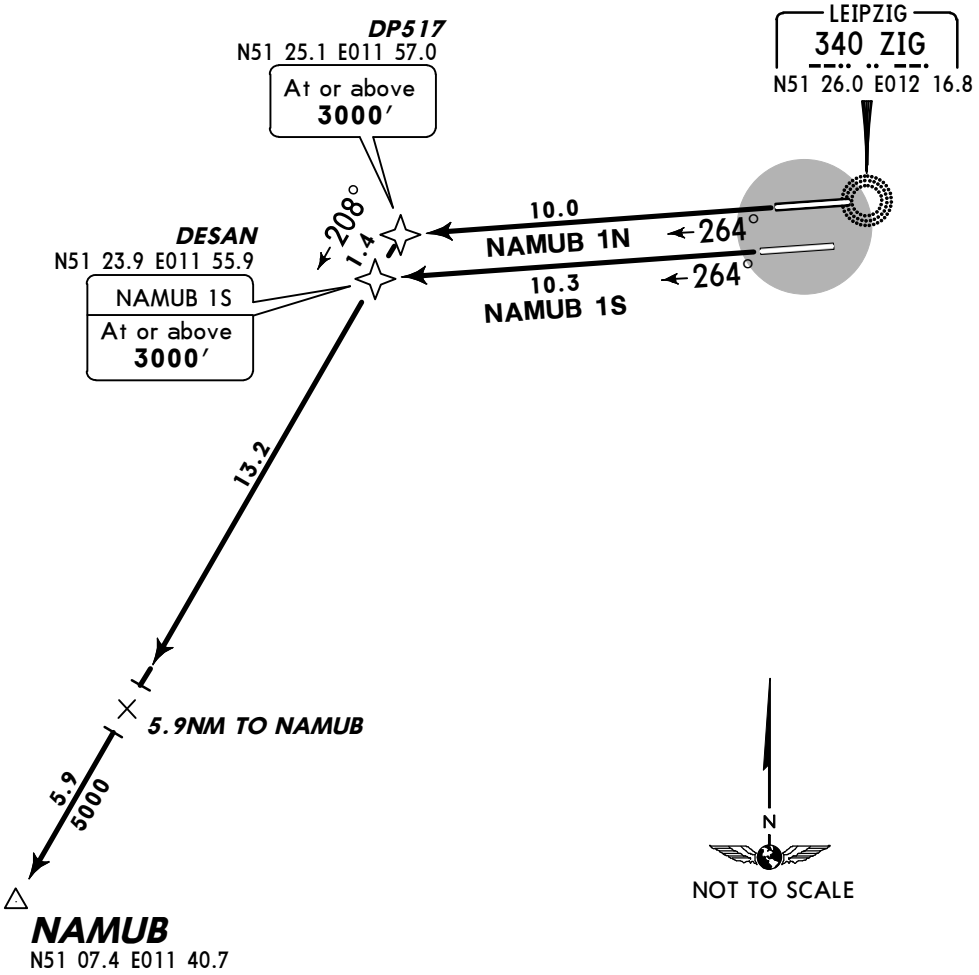
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

NAMUB ONE NOVEMBER (NAMUB 1N) *[NAMU1N]*
NAMUB ONE SIERRA (NAMUB 1S) *[NAMU1S]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3K)

2500′
MSA
ZIG NDB

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
NAMUB 1N	**26R**	(900′+) - DP517 (3000′+) - NAMUB.
NAMUB 1S	**26L**	(900′+) - DESAN (3000′+) - NAMUB.

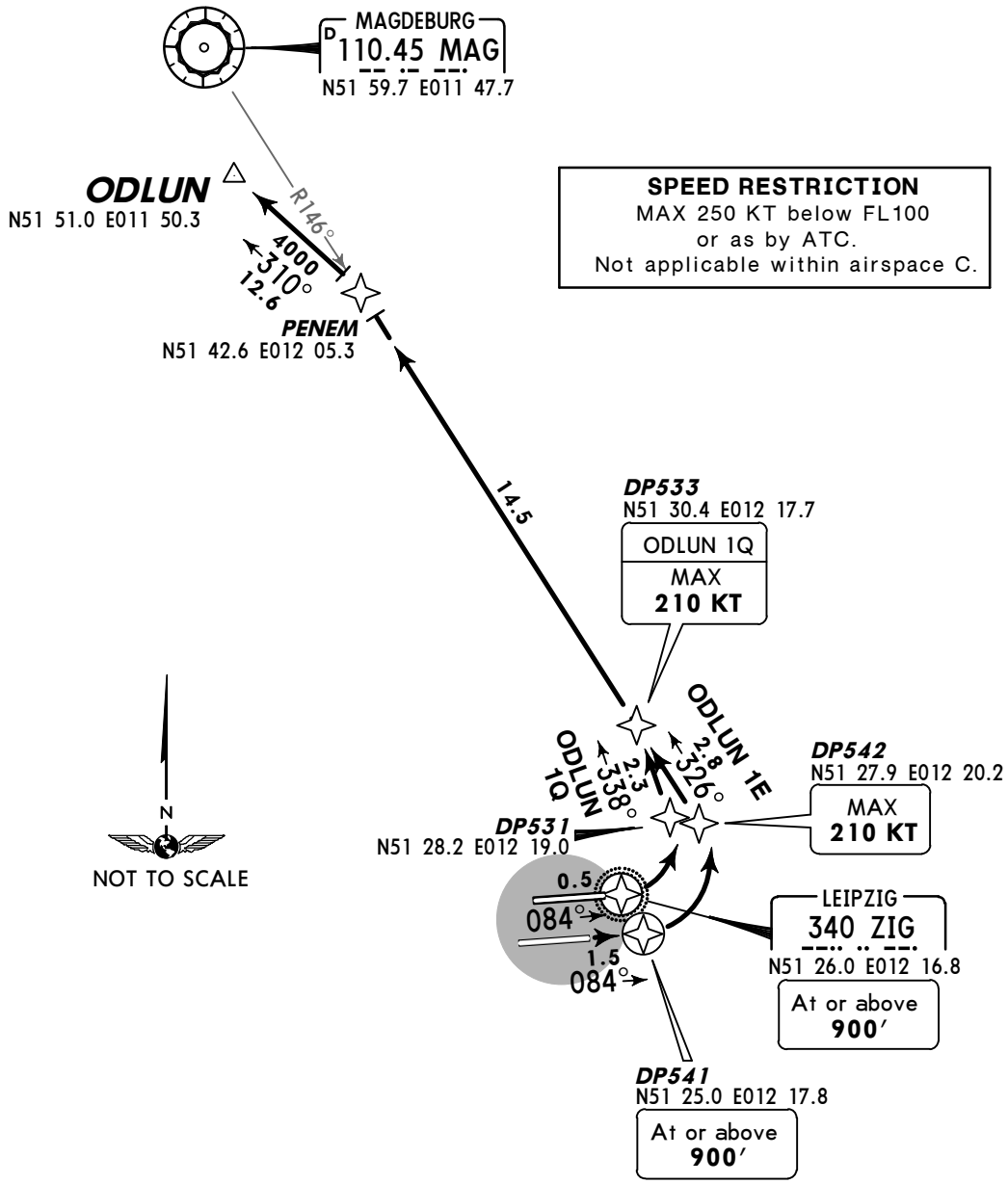
CHANGES: MSA.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ODLUN ONE ECHO (ODLUN 1E) *[ODLU1E]*
ODLUN ONE QUEBEC (ODLUN 1Q) *[ODLU1Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3L)

2500′
MSA
ZIG NDB



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing 2000′ due to navaid coverage. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **FL70**

SID	RWY	ROUTING
ODLUN 1E	**08R**	DP541 (900′+) - DP542 (K210-) - PENEM - ODLUN.
ODLUN 1Q	**08L**	ZIG (900′+) - DP531 - DP533 (K210-) - PENEM - ODLUN.

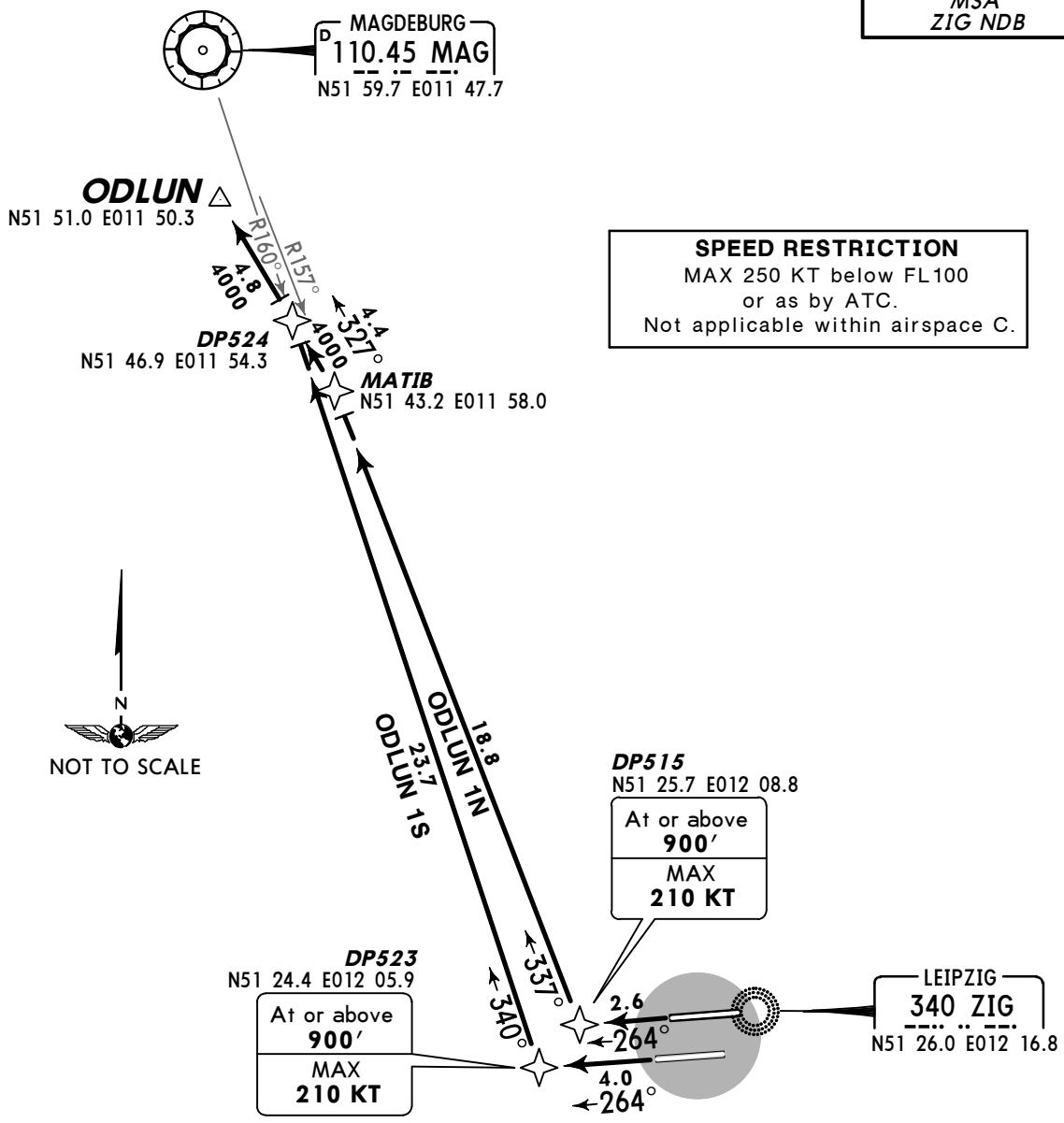
CHANGES: MSA.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

ODLUN ONE NOVEMBER (ODLUN 1N) *[ODLU1N]*
ODLUN ONE SIERRA (ODLUN 1S) *[ODLU1S]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3M)

2500′
MSA
ZIG NDB



These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing 2000′ due to navaid coverage. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

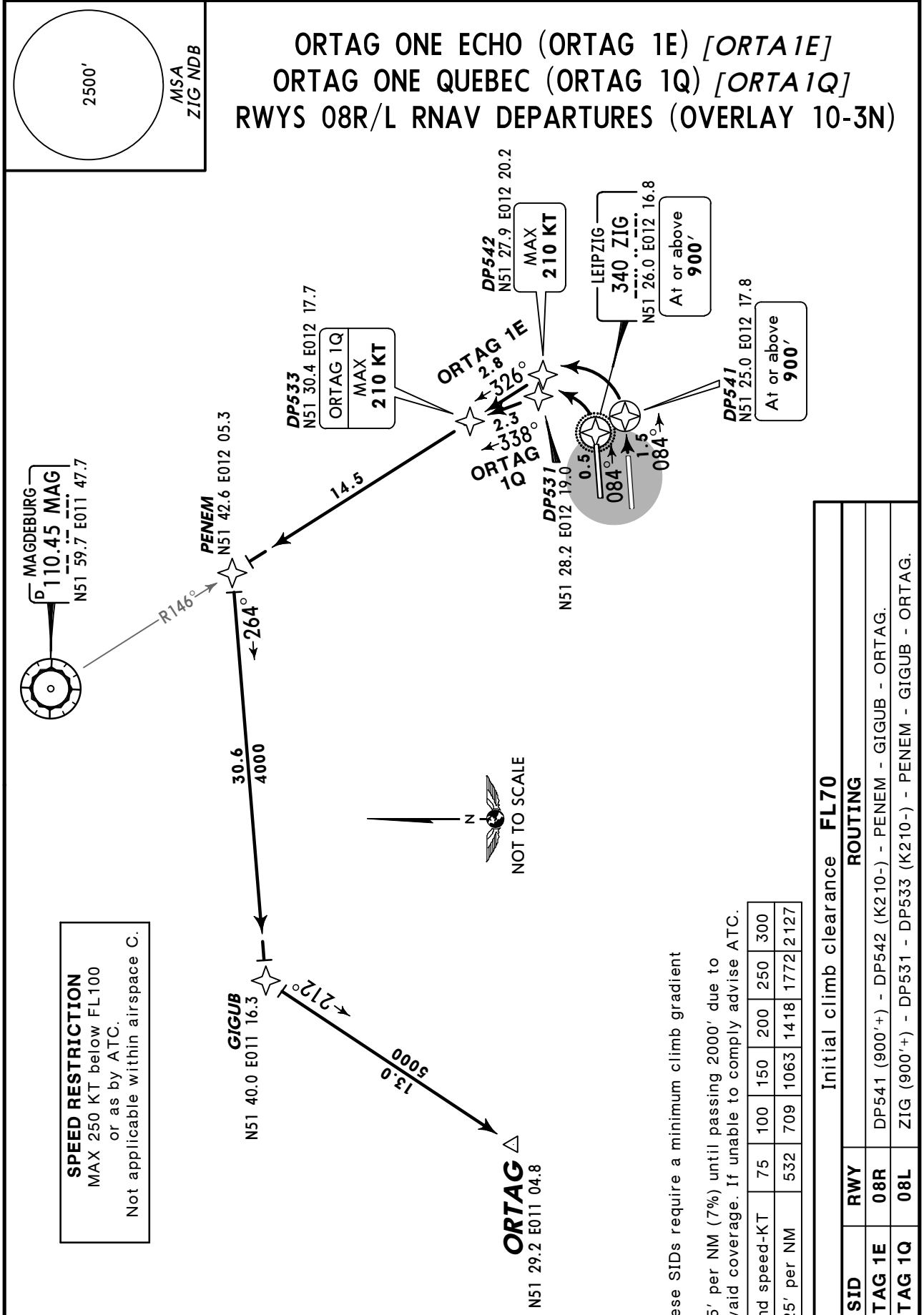
Initial climb clearance **FL70**

SID	RWY	ROUTING
ODLUN 1N	**26R**	DP515 (900′+; K210-) - MATIB - ODLUN.
ODLUN 1S	**26L**	DP523 (900′+; K210-) - DP524 - ODLUN.

CHANGES: MSA.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.



CHANGES: MSA.

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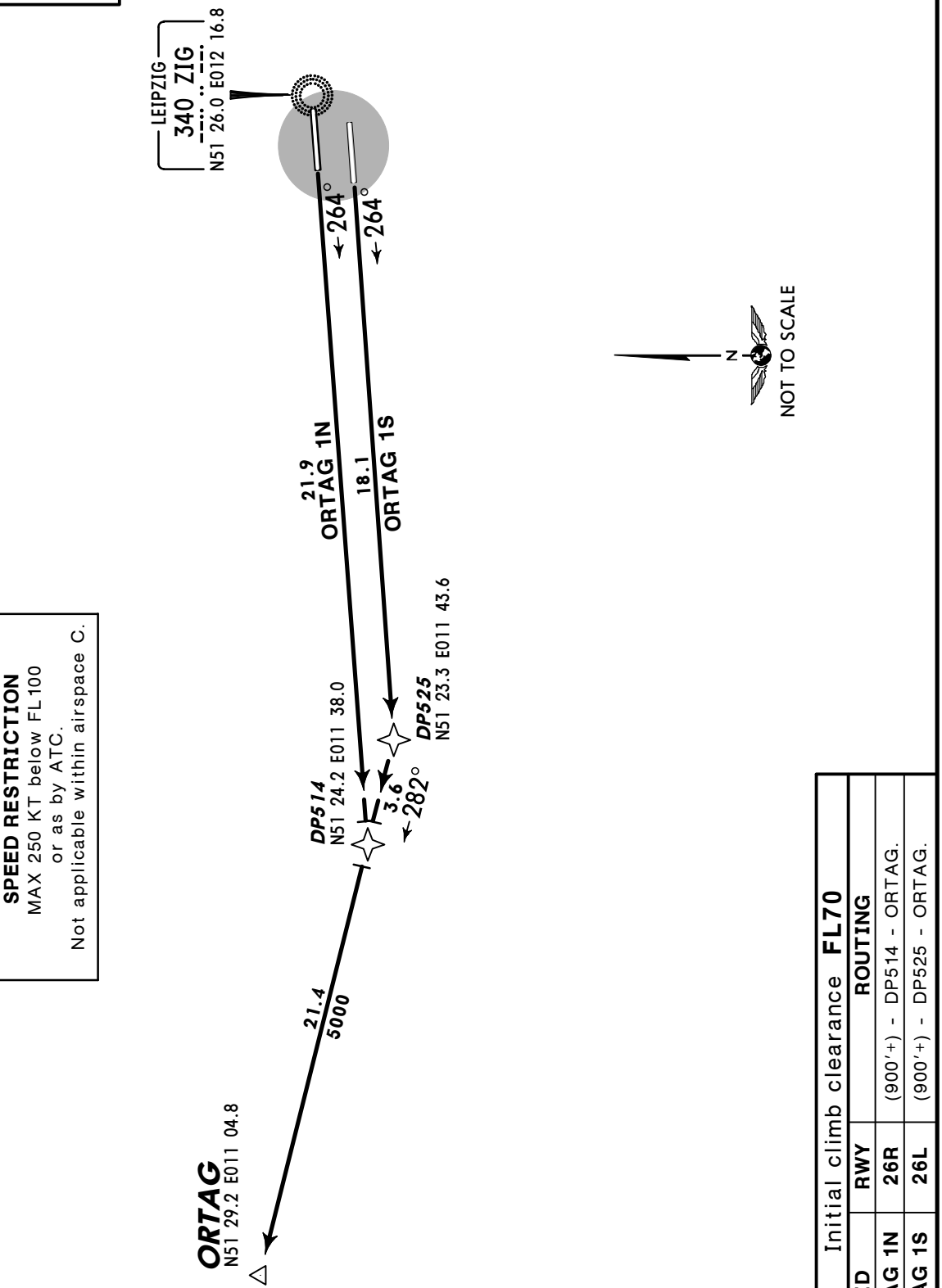
MUNICH Radar 126.17	*Apt Elev* 470′

Trans level: By ATC Trans alt: 5000′

1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

2500′ *MSA ZIG NDB*

ORTAG ONE NOVEMBER (ORTAG 1N) *[ORTA1N]*
ORTAG ONE SIERRA (ORTAG 1S) *[ORTA1S]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3P)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **FL70**

SID	RWY	ROUTING
ORTAG 1N	26R	(900′+) - DP514 - ORTAG.
ORTAG 1S	26L	(900′+) - DP525 - ORTAG.

CHANGES: MSA.

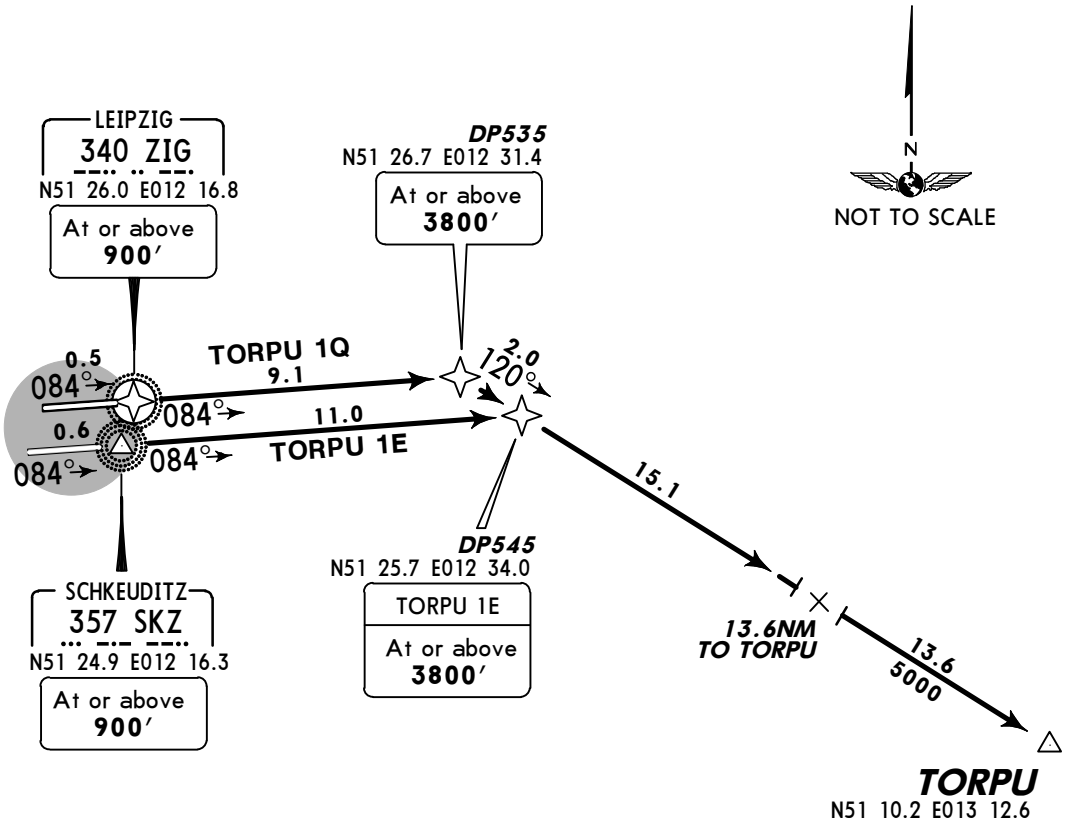
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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

TORPU ONE ECHO (TORPU 1E) *[TORP1E]*
TORPU ONE QUEBEC (TORPU 1Q) *[TORP1Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3Q)

2500′
MSA
ZIG NDB

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **FL70**

SID	RWY	ROUTING
TORPU 1E	**08R**	SKZ (900′+) - DP545 (3800′+) - TORPU.
TORPU 1Q	**08L**	ZIG (900′+) - DP535 (3800′+) - TORPU.

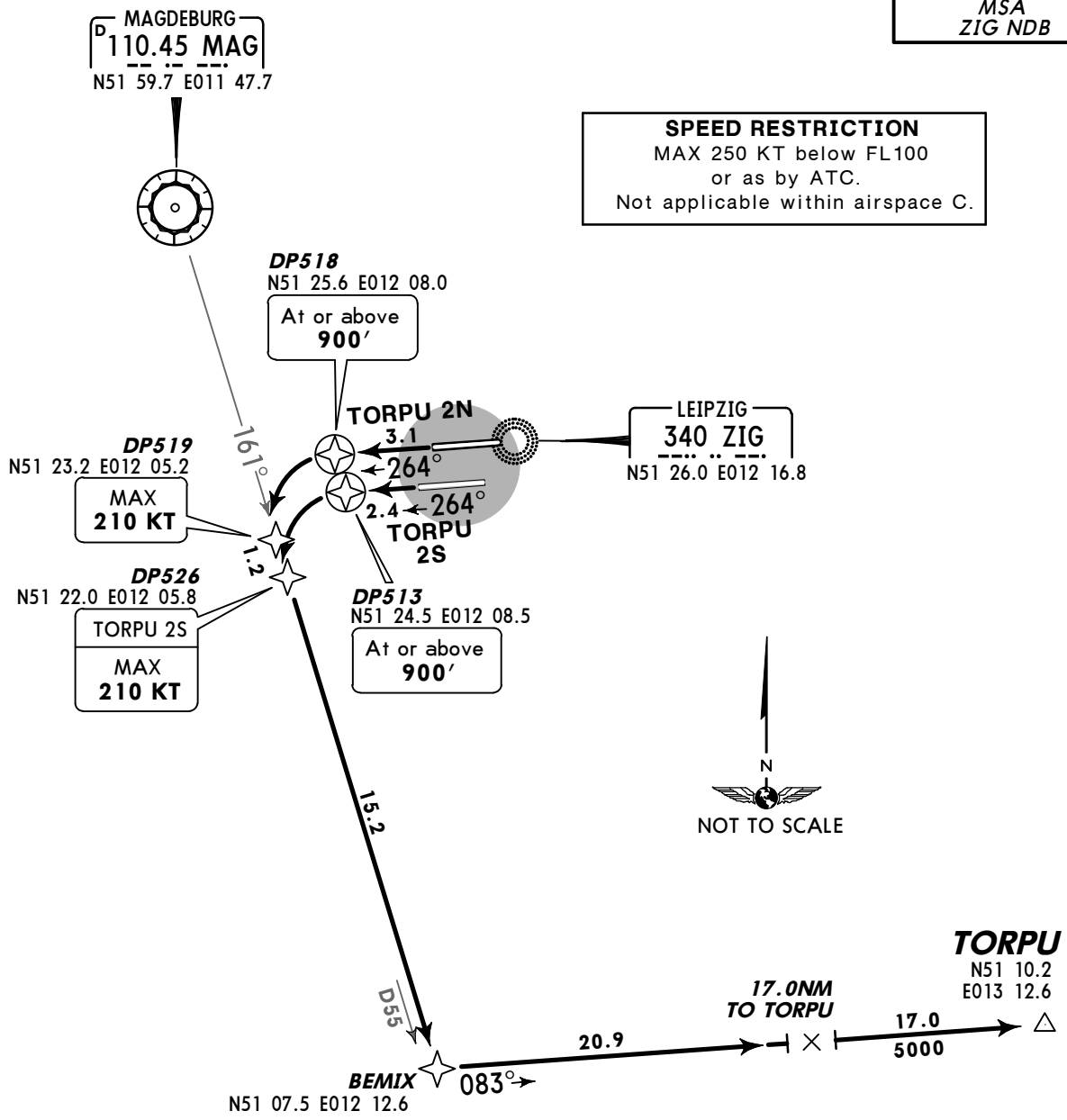
CHANGES: MSA.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

TORPU TWO NOVEMBER (TORPU 2N) *[TORP2N]*
TORPU TWO SIERRA (TORPU 2S) *[TORP2S]*
RWYS 26R/L RNAV DEPARTURES (OVERLAY 10-3S)
ONLY AVAILABLE BETWEEN 0600-2200LT

2500′
MSA
ZIG NDB



These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing 2000′ due to navaid coverage. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **FL70**

SID	RWY	ROUTING
TORPU 2N	**26R**	DP518 (900′+) - DP519 (K210-) - BEMIX - TORPU.
TORPU 2S	**26L**	DP513 (900′+) - DP526 (K210-) - BEMIX - TORPU.

CHANGES: MSA.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

2500′ *MSA ZIG NDB*

TORPU ONE WHISKEY (TORPU 1W) *[TORP1W]*
TORPU ONE X-RAY (TORPU 1X) *[TORP1X]*
RWYS 26L/R RNAV DEPARTURES (OVERLAY 10-3T)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

N
NOT TO SCALE

DP512 N51 33.9 E012 22.2
TADUV N51 25.8 E012 32.9
TORPU N51 10.2 E013 12.6
DP510 N51 25.8 E012 11.6 — At or above **900′**
DP511 N51 30.4 E012 09.7 — MAX **210 KT**
DP516 N51 28.2 E012 07.5
DESAN N51 23.9 E011 55.9 — At or above **3000′**
DP527 N51 12.5 E011 45.4
DP528 N51 07.5 E011 50.0
KULUT N51 07.5 E012 13.1 (110.45 MAG R-161)
LEIPZIG 340 ZIG N51 26.0 E012 16.8

MAG 110.45 138°
D44
10.6
15.4
120°
14.0NM TO TORPU
14.0 5000
17.0NM TO TORPU
17.0 5000
20.6
083°
TORPU 1X 8.5
0.8
264°
264°
063°
GOT 115.25
10.3
TORPU 1W
14.9
088°
208°
13.2

Initial climb clearance **FL70**

SID	RWY	ROUTING
TORPU 1W	26L	(900′+) - DESAN (3000′+) - DP527 - DP528 - KULUT - TORPU.
TORPU 1X ❶	26R	DP510 (900′+) - DP516 - DP511 (K210-) - DP512 - TADUV - TORPU.

❶ Only available between 2200-0600LT.

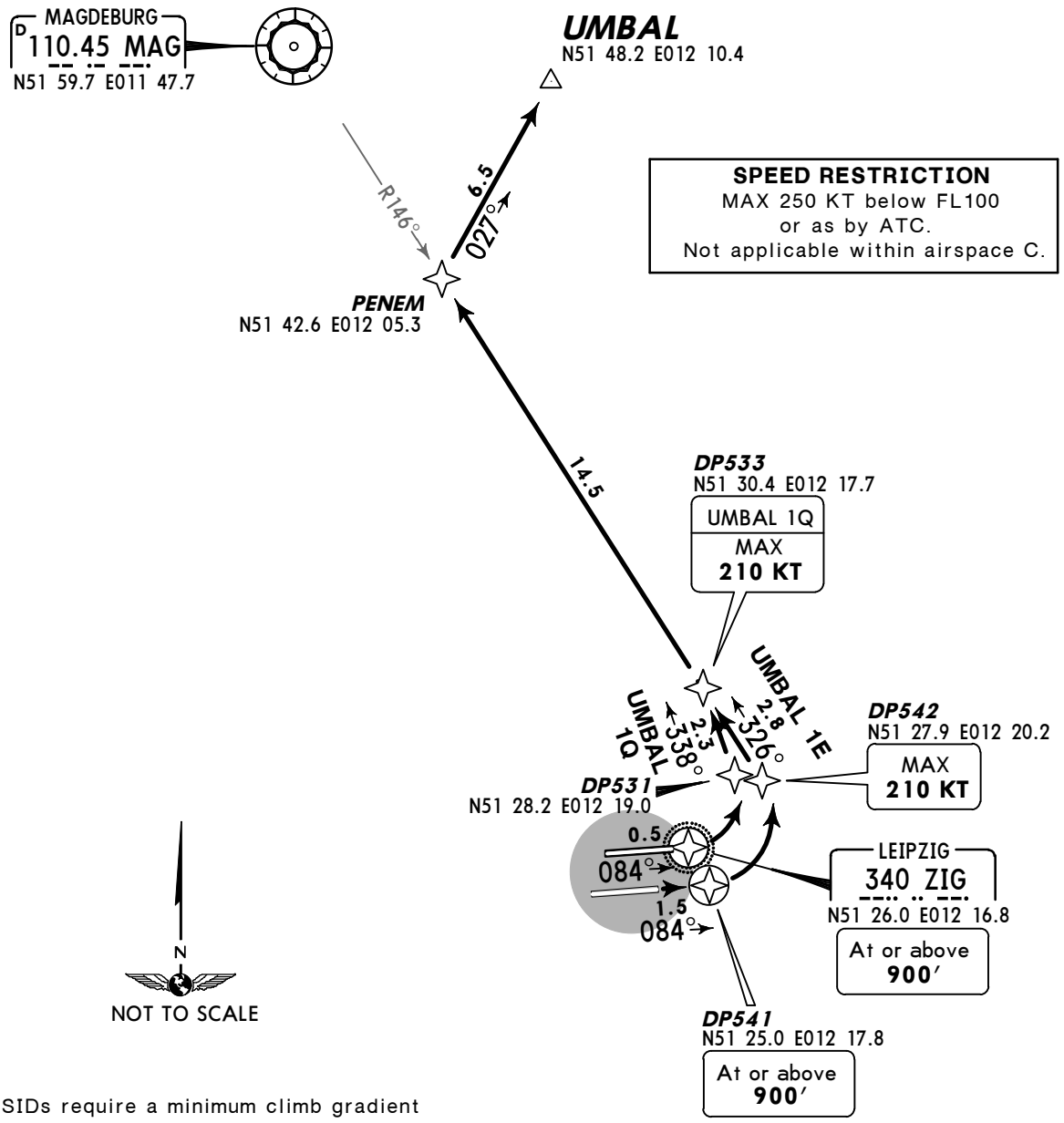
CHANGES: MSA.

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MUNICH Radar 126.17	*Apt Elev* 470′	Trans level: By ATC Trans alt: 5000′ 1. Remain on Tower frequency, when advised by Tower contact MUNICH Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. Simultaneous parallel departures in progress. Pilots have to proceed exactly on extended centerline until starting turns as published in departure routes.

UMBAL ONE ECHO (UMBAL 1E) *[UMBA1E]*
UMBAL ONE QUEBEC (UMBAL 1Q) *[UMBA1Q]*
RWYS 08R/L RNAV DEPARTURES (OVERLAY 10-3U)
ONLY AVAILABLE BETWEEN 2300-0600LT
NO ACCESS TO AIRWAY (U)Z-20

2500′
MSA
ZIG NDB



These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing 2000′ due to navaid coverage. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **FL70**

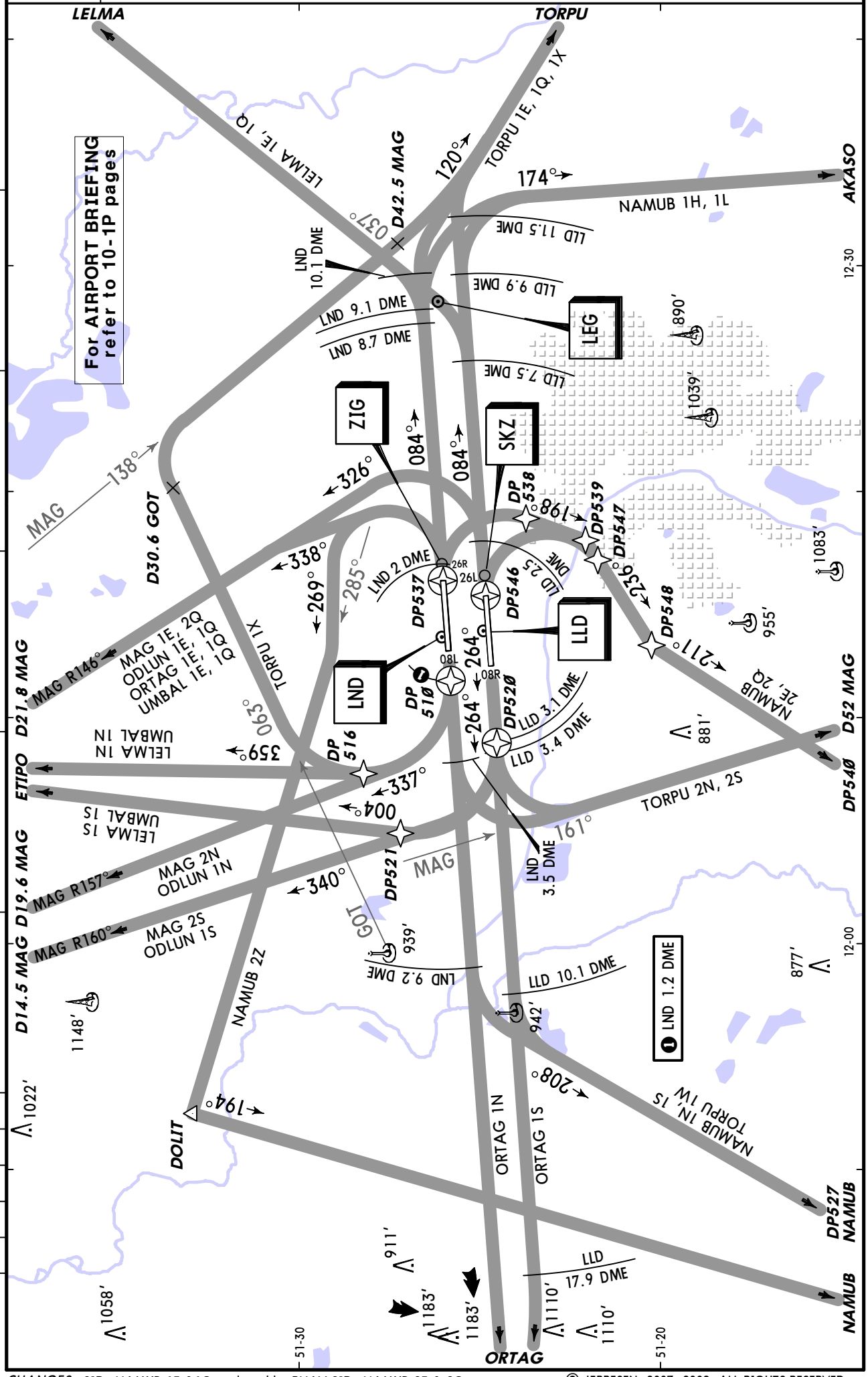
SID	RWY	ROUTING
UMBAL 1E	**08R**	DP541 (900′+) - DP542 (K210-) - PENEM - UMBAL.
UMBAL 1Q	**08L**	ZIG (900′+) - DP531 - DP533 (K210-) - PENEM - UMBAL.

CHANGES: MSA.

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Apt Elev 470'

NOISE ABATEMENT



CHANGES: SIDs NAMUB 1E &1Q replaced by RNAV SIDs NAMUB 2E & 2Q.

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EDDP/LEJ

Apt Elev **470′**

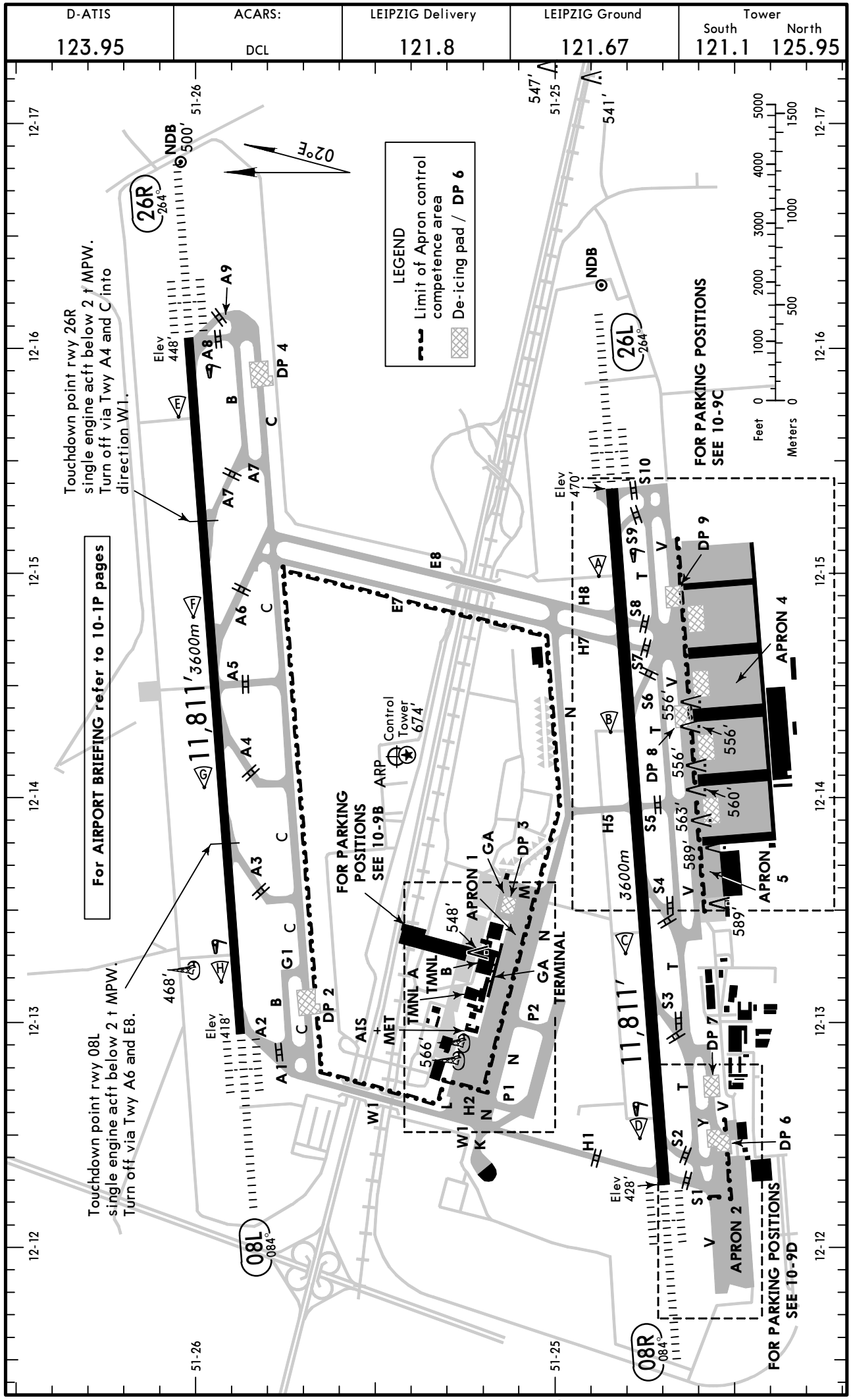
N51 25.4 E012 14.2

JEPPESEN **LEIPZIG-HALLE, GERMANY**

16 DEC 11 (10-9)

LEIPZIG-HALLE

D-ATIS	ACARS:	LEIPZIG Delivery	LEIPZIG Ground	Tower	
				South	North
123.95	DCL	121.8	121.67	121.1	125.95



CHANGES: Apron 4 extended.

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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
08L 26R	HIRL *(60m)* CL *(15m)* ALSF-II TDZ REIL ❶ RVR	❷	10,630′ *3240m*	❸	148′ *45m*

❶ PAPI-L (3.0°)

❷ Single engine acft below 2 t MPW: 2297′ (700m).

❸ TAKE-OFF RUN AVAILABLE

RWY 08L:

From rwy head	11,811′ (3600m)
twy A3 int	8038′ (2450m)
twy A4 int	6070′ (1850m)
twy A5 int	5725′ (1745m)

RWY 26R:

From rwy head	11,811′ (3600m)
twy A7 int	8038′ (2450m)
twy A6 int	6070′ (1850m)
twy A5 int	5725′ (1745m)

08R	HIRL *(60m)* CL *(15m)* ALSF-II TDZ REIL ❹ ❺ RVR		10,900′ *3322m*	❼	197′ *60m*
26L	HIRL *(60m)* CL *(15m)* ALSF-II TDZ REIL ❹ ❻ RVR		10,596′ *3230m*		

❹ PAPI-L (3.0°)

❺ HSTIL-S6

❻ HSTIL-S3 & S4

❼ TAKE-OFF RUN AVAILABLE

RWY 08R:

From rwy head	11,811′ (3600m)
twy S2 int	10,728′ (3270m)
twy S3 int	8038′ (2450m)
twy S4 int	6070′ (1850m)
twy H5/S5 int	5233′ (1595m)

RWY 26L:

From rwy head	11,811′ (3600m)
twy S9 int	10,728′ (3270m)
twy H8 int	9465′ (2885m)
twy S8 int	9350′ (2850m)
twy H7 int	9055′ (2760m)
twy S7 int	8940′ (2725m)
twy S6 int	7382′ (2250m)
twy H5/S5 int	6217′ (1895m)

Standard

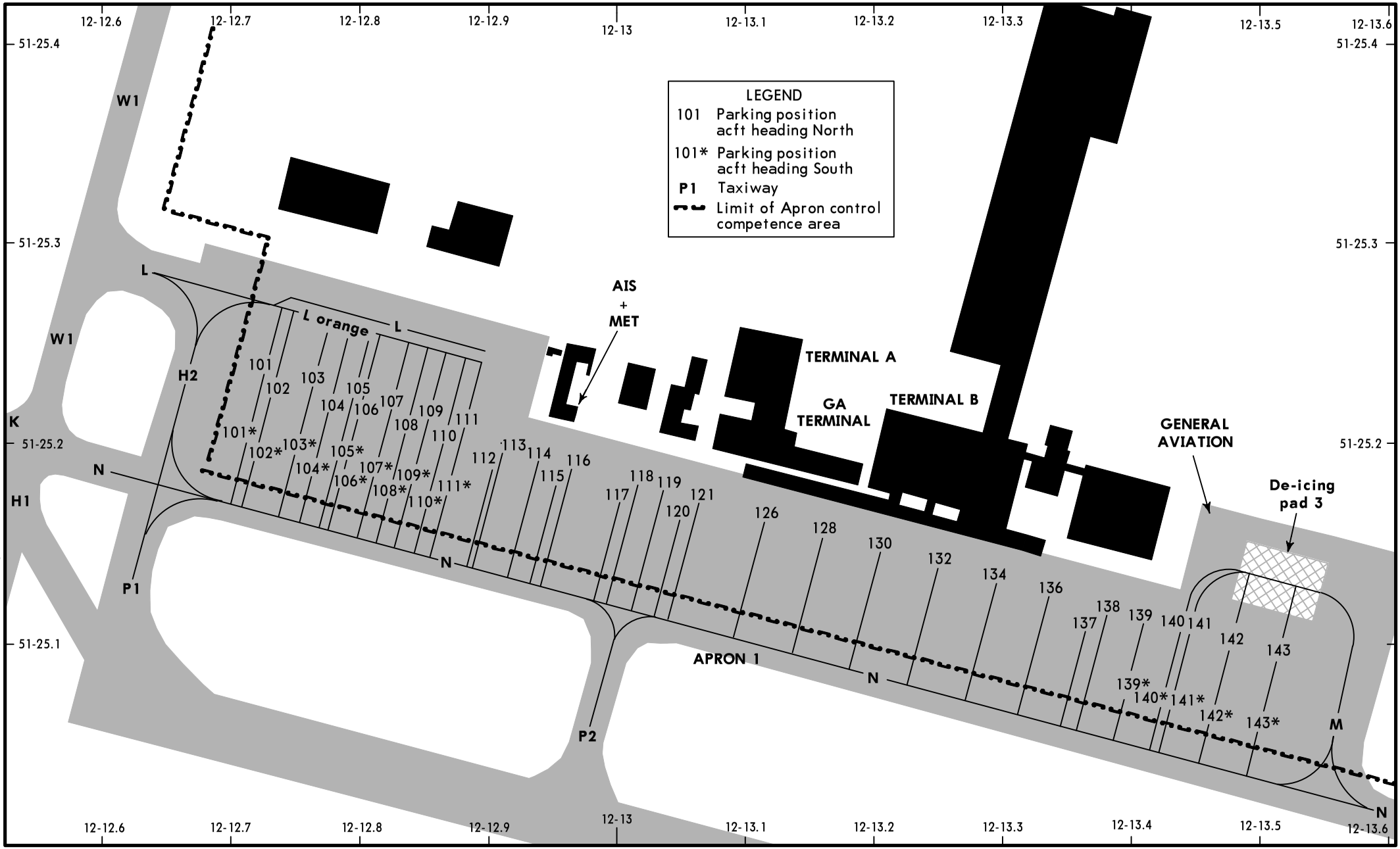
TAKE-OFF ■1

	Approved Operators	**LVP must be in Force**					
	HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

■1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

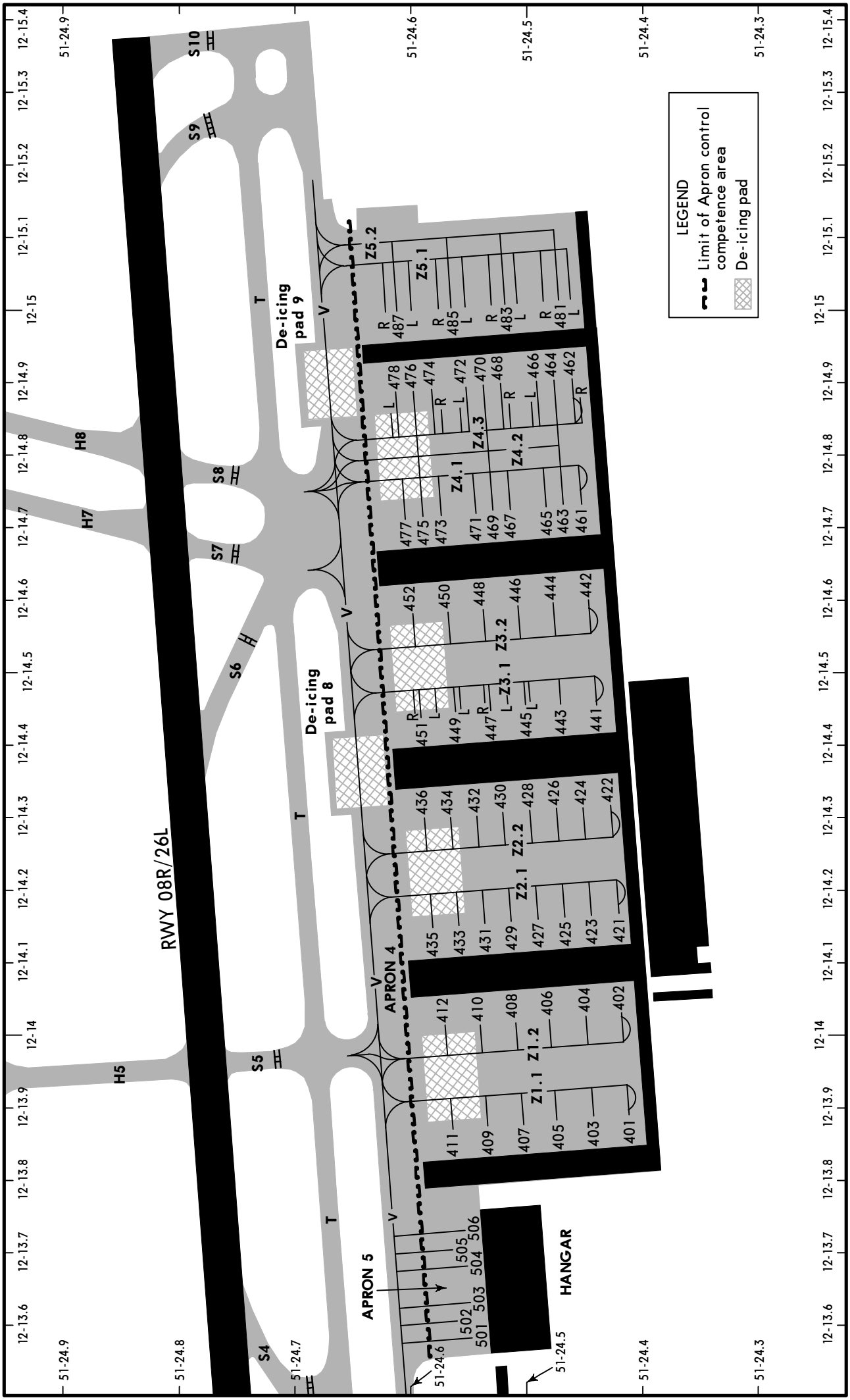
CHANGES: None.

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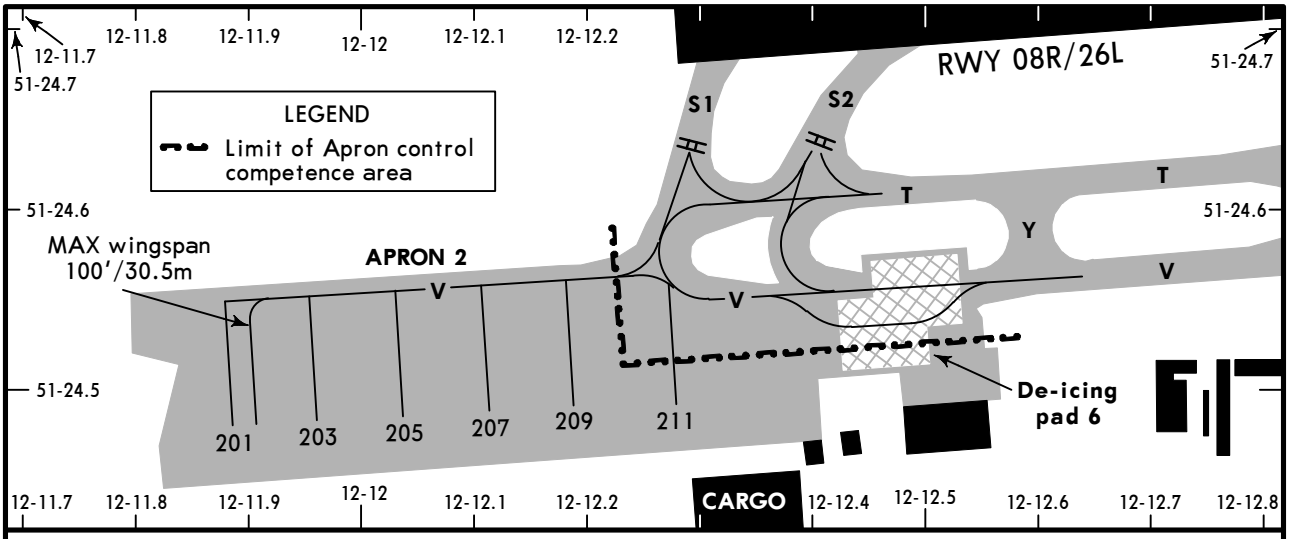
CHANGES: None.

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CHANGES: Apron 4 extended. Parking positions added.

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CHANGES: INS coordinates transferred to 10-9E.

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INS COORDINATES

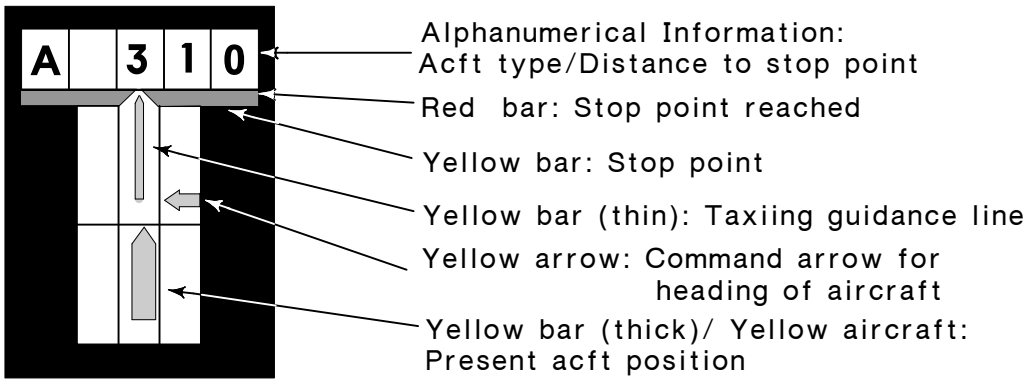
STAND No.	COORDINATES	STAND No.	COORDINATES
101 thru 102*	N51 25.2 E012 12.7	435	N51 24.6 E012 14.1
103 thru 107*	N51 25.2 E012 12.8	436	N51 24.6 E012 14.3
108	N51 25.2 E012 12.9	441	N51 24.4 E012 14.4
108*	N51 25.2 E012 12.8	442	N51 24.4 E012 14.6
109 thru 113	N51 25.2 E012 12.9	443	N51 24.5 E012 14.4
114 thru 119	N51 25.2 E012 13.0	444	N51 24.5 E012 14.6
120, 121, 126	N51 25.2 E012 13.1	445, 445L	N51 24.5 E012 14.4
128, 130	N51 25.2 E012 13.2	446	N51 24.5 E012 14.6
132	N51 25.2 E012 13.3	447 thru 447R	N51 24.5 E012 14.4
134	N51 25.1 E012 13.3	448	N51 24.5 E012 14.6
136 thru 139*	N51 25.1 E012 13.4	449	N51 24.6 E012 14.4
140	N51 25.1 E012 13.5	449L	N51 24.5 E012 14.4
140*	N51 25.1 E012 13.4	450	N51 24.6 E012 14.6
141 thru 143*	N51 25.1 E012 13.5	451 thru 451R	N51 24.6 E012 14.4
201	N51 24.5 E012 11.9	452	N51 24.6 E012 14.6
203, 205	N51 24.5 E012 12.0	461	N51 24.4 E012 14.7
207	N51 24.5 E012 12.1	462	N51 24.5 E012 14.9
209	N51 24.5 E012 12.2	462R	N51 24.4 E012 14.9
211	N51 24.5 E012 12.3	463	N51 24.5 E012 14.7
401	N51 24.4 E012 13.9	464	N51 24.5 E012 14.9
402	N51 24.4 E012 14.1	465	N51 24.5 E012 14.7
403	N51 24.4 E012 13.9	466, 466L	N51 24.5 E012 14.9
404	N51 24.4 E012 14.1	467	N51 24.5 E012 14.7
405	N51 24.5 E012 13.8	468,468R	N51 24.5 E012 14.9
406	N51 24.5 E012 14.1	469	N51 24.5 E012 14.7
407	N51 24.5 E012 13.8	470	N51 24.5 E012 14.9
408	N51 24.5 E012 14.1	471	N51 24.5 E012 14.7
409	N51 24.5 E012 13.8	472, 472L	N51 24.5 E012 14.9
410	N51 24.5 E012 14.1	473	N51 24.6 E012 14.7
411	N51 24.6 E012 13.8	474, 474R	N51 24.6 E012 14.9
412	N51 24.6 E012 14.1	475	N51 24.6 E012 14.7
421	N51 24.4 E012 14.1	476	N51 24.6 E012 14.9
422	N51 24.4 E012 14.4	477	N51 24.6 E012 14.7
423	N51 24.4 E012 14.1	478, 478L	N51 24.6 E012 14.9
424	N51 24.5 E012 14.4	481 thru 483R	N51 24.5 E012 15.0
425	N51 24.5 E012 14.1	485 thru 487R	N51 24.6 E012 15.0
426	N51 24.5 E012 14.4	501 thru 503	N51 24.5 E012 13.6
427	N51 24.5 E012 14.1	504 thru 507	N51 24.5 E012 13.7
428	N51 24.5 E012 14.4		
429	N51 24.5 E012 14.1		
430	N51 24.5 E012 14.3		
431	N51 24.5 E012 14.1		
432	N51 24.5 E012 14.3		
433	N51 24.6 E012 14.1		
434	N51 24.6 E012 14.3		

CHANGES: INS coordinates transferred from 10-9D. Stands and coords added.

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VISUAL AIRCRAFT DOCKING SYSTEM

If the crew notices during taxiing-in that the system is not functioning or that it shows an incorrect acft type or that the indicator on the tableau is not clearly legible, the acft must be stopped immediately and the fact reported to "LEIPZIG Ground/Tower". Continued taxiing will take place according to instructions by "LEIPZIG Ground/Tower". The system works parallax free, it can be read from each position in the cockpit.



1. Taxiing-in to the parking position via taxiing guidance line.
2. Acft type is displayed in the top line.
3. Lead-in guidance symbol will be shown after the system is activated.
4. Deviation from taxiing guidance line will be indicated by the lead-in guidance symbol (thick yellow bar) and the heading by an arrow.
5. 98'(30m) prior the stop point the display changes from indicating the acft type to indicating the remaining distance to stop point in meters (30m - 20m = 5m steps, 20m - 10m = 2m steps, 10m - 1m = 1m steps, 1m - STOP = 0.2m steps).
6. After the stop point has been reached, 'STOP OK' will appear on the display.
7. If taxiing past the stop point, 'TOO FAR' will appear on the display.

CHANGES: Chart reindexed.

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LEIPZIG-HALLE, GERMANY

LEIPZIG-HALLE

STRAIGHT-IN RWY		A	B	C	D
08L	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**518′**(100′)	**518′**(100′)	**518′**(100′)	**518′**(100′)
		RA106′R300m	**RA106′R300m**	**RA106′R300m**	**RA106′R300m**
	ILS	**618′**(200′)	**618′**(200′)	**618′**(200′)	**618′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**890′**(472′)	**890′**(472′)	**890′**(472′)	**890′**(472′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**870′**(452′)	**870′**(452′)	**870′**(452′)	**870′**(452′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV)	**920′**(502′)	**920′**(502′)	**920′**(502′)	**920′**(502′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**1020′**(602′)	**1020′**(602′)	**1020′**(602′)	**1020′**(602′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
08R	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**528′**(100′)	**528′**(100′)	**528′**(100′)	**528′**(100′)
		RA106′R300m	**RA106′R300m**	**RA106′R300m**	**RA106′R300m**
	ILS	**628′**(200′)	**628′**(200′)	**628′**(200′)	**628′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**960′**(532′)	**960′**(532′)	**960′**(532′)	**960′**(532′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**970′**(542′)	**970′**(542′)	**970′**(542′)	**970′**(542′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV)	**970′**(542′)	**970′**(542′)	**970′**(542′)	**970′**(542′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**1020′**(592′)	**1020′**(592′)	**1020′**(592′)	**1020′**(592′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

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LEIPZIG-HALLE, GERMANY

LEIPZIG-HALLE

STRAIGHT-IN RWY		A	B	C	D
26L	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**570′**(100′)	**570′**(100′)	**570′**(100′)	**570′**(100′)
		RA97′ R300m	**RA97′ R300m**	**RA97′ R300m**	**RA97′ R300m**
	ILS	**670′**(200′)	**670′**(200′)	**670′**(200′)	**670′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**950′**(480′)	**950′**(480′)	**950′**(480′)	**950′**(480′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**870′**(400′)	**870′**(400′)	**870′**(400′)	**870′**(400′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**920′**(450′)	**920′**(450′)	**920′**(450′)	**920′**(450′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**1000′**(530′)	**1000′**(530′)	**1000′**(530′)	**1000′**(530′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
26R	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**548′**(100′)	**548′**(100′)	**548′**(100′)	**548′**(100′)
		RA105′ R300m	**RA105′ R300m**	**RA105′ R300m**	**RA105′ R300m**
	ILS	**648′**(200′)	**648′**(200′)	**648′**(200′)	**648′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**900′**(452′)	**900′**(452′)	**900′**(452′)	**900′**(452′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**950′**(502′)	**950′**(502′)	**950′**(502′)	**950′**(502′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV)	**950′**(502′)	**950′**(502′)	**950′**(502′)	**950′**(502′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**1020′**(572′)	**1020′**(572′)	**1020′**(572′)	**1020′**(572′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

TAKE-OFF RWY 08L/R, 26L/R

LVP must be in Force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (11-1)

LEIPZIG-HALLE, GERMANY
ILS or LOC or NDB Rwy 08L

D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower	Ground
123.95	126.17	128.47	North 125.95 / South 121.1	121.67

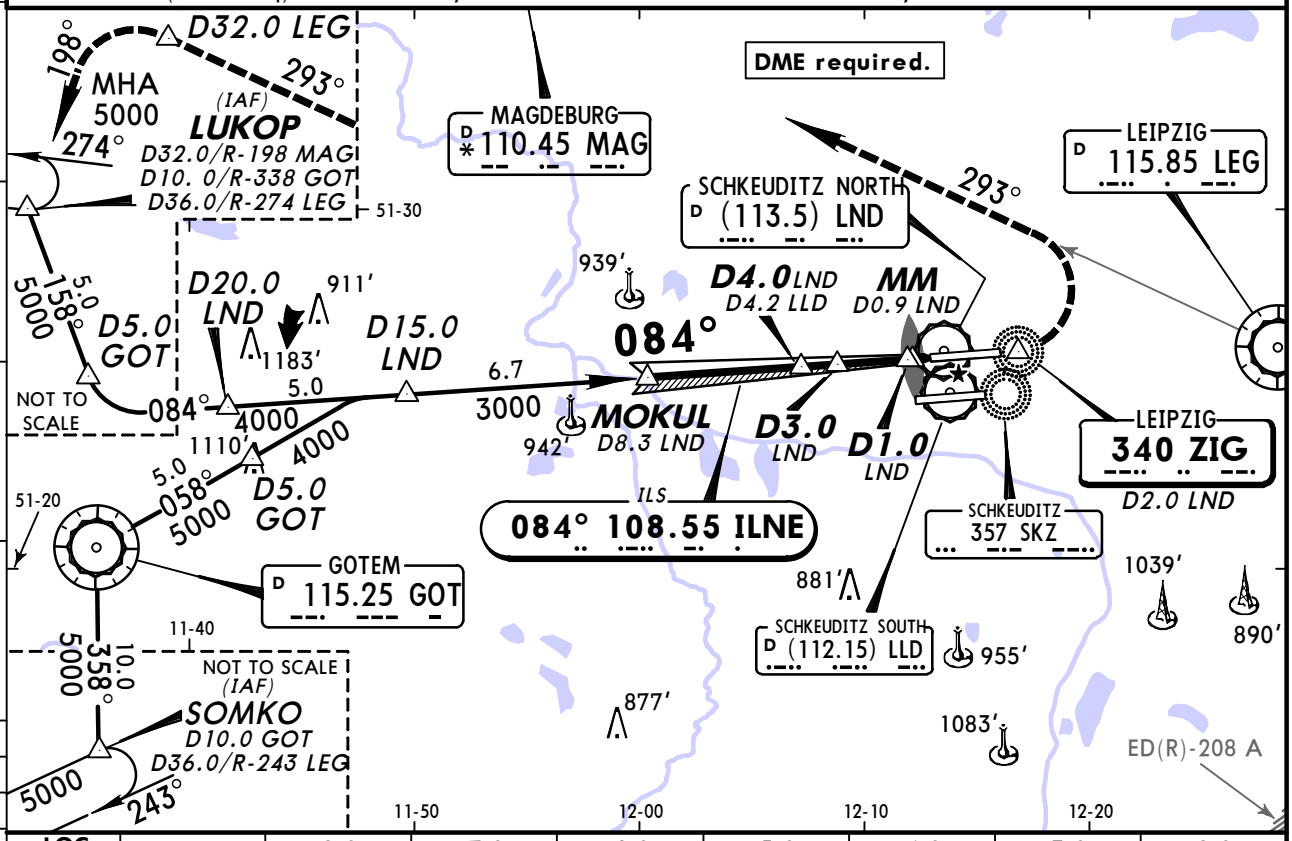
BRIEFING STRIP ™

LOC ILNE 108.55	Final Apch Crs 084°	GS D4.0 LND 1630′ (1212′)	ILS DA(H) 618′ (200′)	Apt Elev 470′
NDB ZIG 340		Minimum Alt MOKUL 3000′ (2582′)	NDB DA(H) 1020′ (602′)	RWY 418′

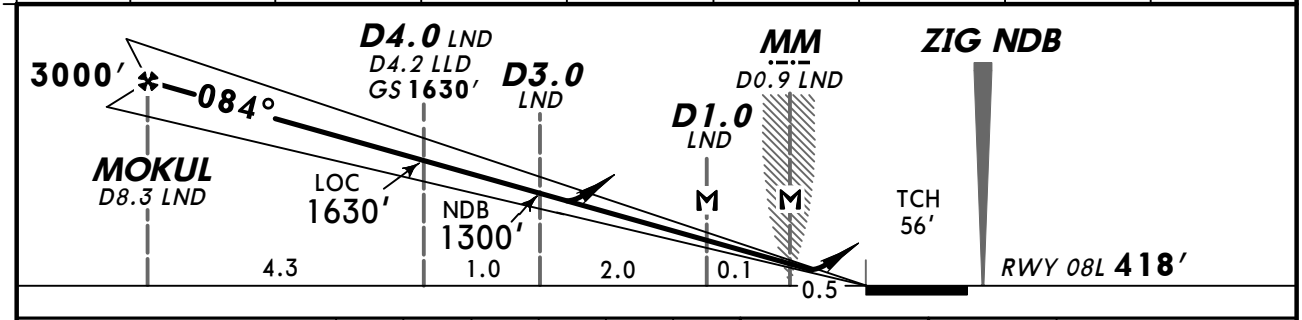
2500′ MSA ZIG NDB

MISSED APCH: Climb on 084° to ZIG NDB or 900′, whichever is later, then turn LEFT onto R-293 LEG to D32.0 LEG. Turn LEFT onto R-198 MAG to LUKOP, climbing to 5000′.

Alt Set: hPa (IN on req) | Rwy Elev: 15 hPa | Trans level: By ATC | Trans alt: 5000′



LOC (GS out) or NDB	LND DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	2900′	2580′	2260′	1940′	1630′	1310′	990′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS/LOC or NDB Descent Angle 3.00°	377	484	538	646	753	861
LOC: MAP at MM/D0.9 LND	NDB: MAP at D1.0 LND					

ALSF-II
REIL
PAPI

ZIG 340 900′ whichever later

Standard STRAIGHT-IN LANDING RWY **08L**

	ILS DA(H) 618′ (200′)			LOC (GS out) DA(H) 890′ (472′)		NDB DA(H) 1020′ (602′)	
	FULL	Limited	ALS out		ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m	RVR 1500m	RVR 1500m	
B							
C					CMV 2200m	CMV 2100m	CMV 2400m
D							

PANS OPS 4

CHANGES: MSA. Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (11-1A)

LEIPZIG-HALLE, GERMANY
CAT II/III ILS Rwy 08L

D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower North	LEIPZIG Tower South	Ground
123.95	126.17	128.47	125.95	121.1	121.67

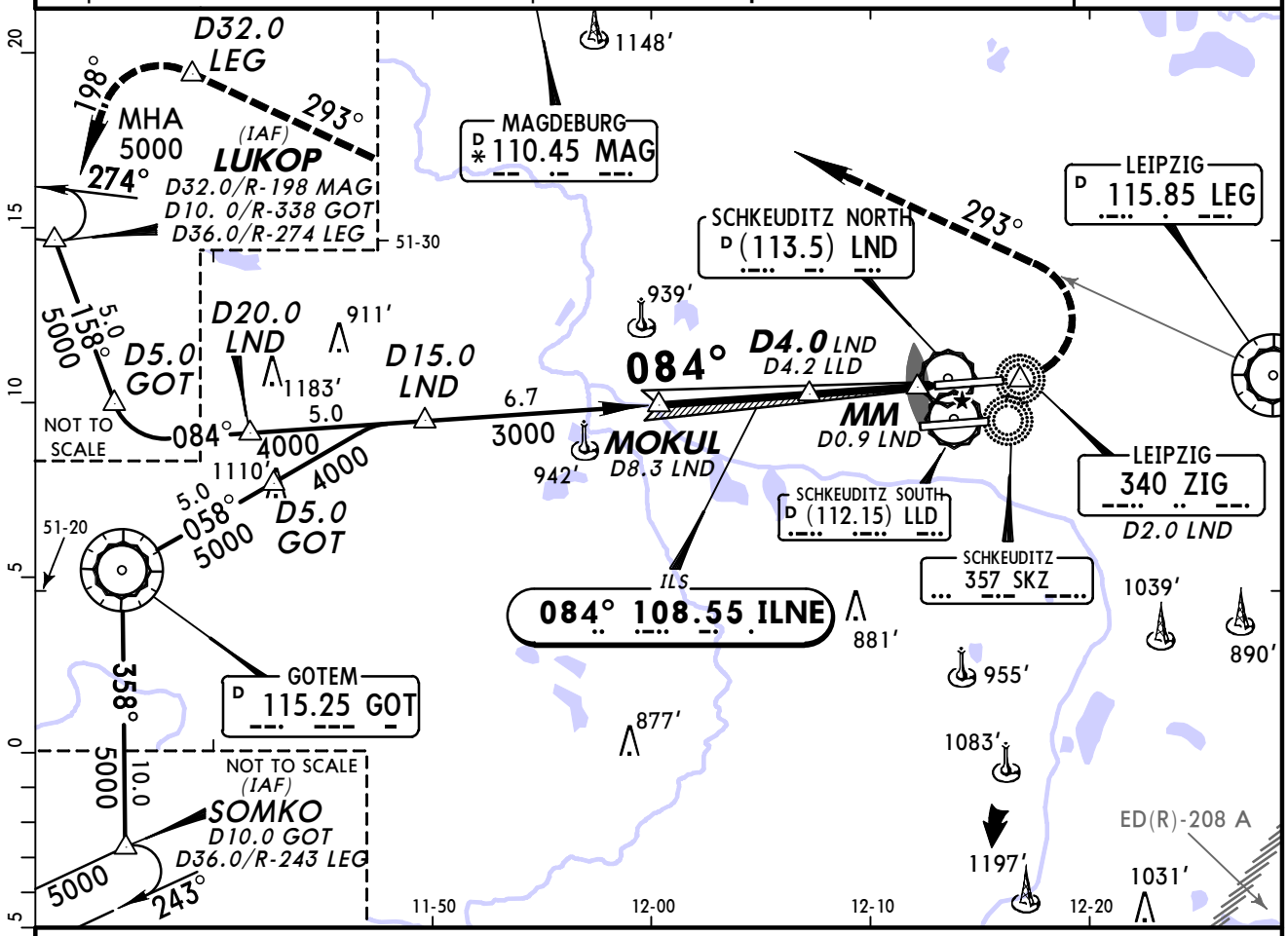
BRIEFING STRIP™

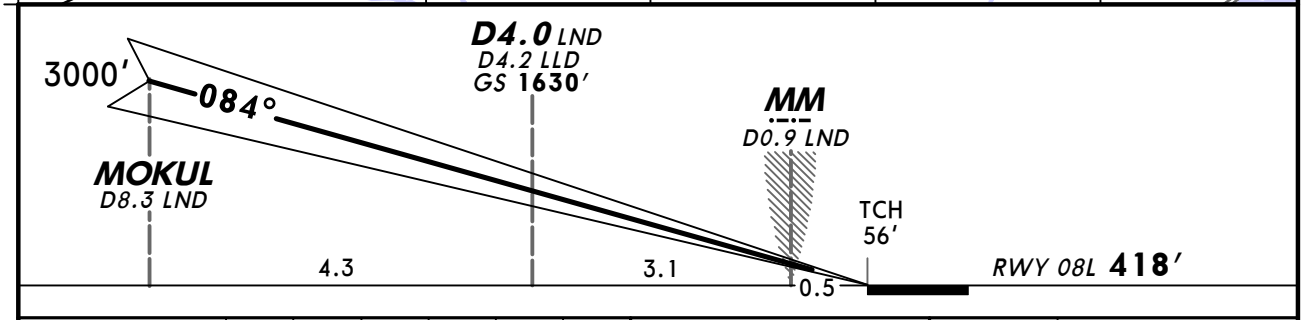
LOC ILNE	Final Apch Crs	GS	CAT II & IIIA ILS Refer to Minimums	Apt Elev / RWY
108.55	084°	D4.0 LND 1630′ (1212′)		Apt Elev 470′ RWY 418′

MISSED APCH: Climb on 084° to ZIG NDB or 900′, whichever is later, then turn LEFT onto R-293 LEG to D32.0 LEG. Turn LEFT onto R-198 MAG to LUKOP, climbing to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000′
1. Special Aircrew & Acft Certification required. 2. **DME required.**

2500′
MSA
ZIG NDB





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

ALSF-II
REIL
PAPI

ZIG 340 whichever later 900′

Standard STRAIGHT-IN LANDING RWY **08L**

CAT IIIA ILS	CAT II ILS ABCD
DH 50′	RA 106′ DA(H) 518′ (100′)
RVR 200m	RVR 300m [1]

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

PANS OPS 4

CHANGES: MSA. Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (11-2)

LEIPZIG-HALLE, GERMANY
ILS or LOC or NDB Rwy 08R

D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower South	LEIPZIG Tower North	Ground
123.95	126.17	128.47	121.1	125.95	121.67

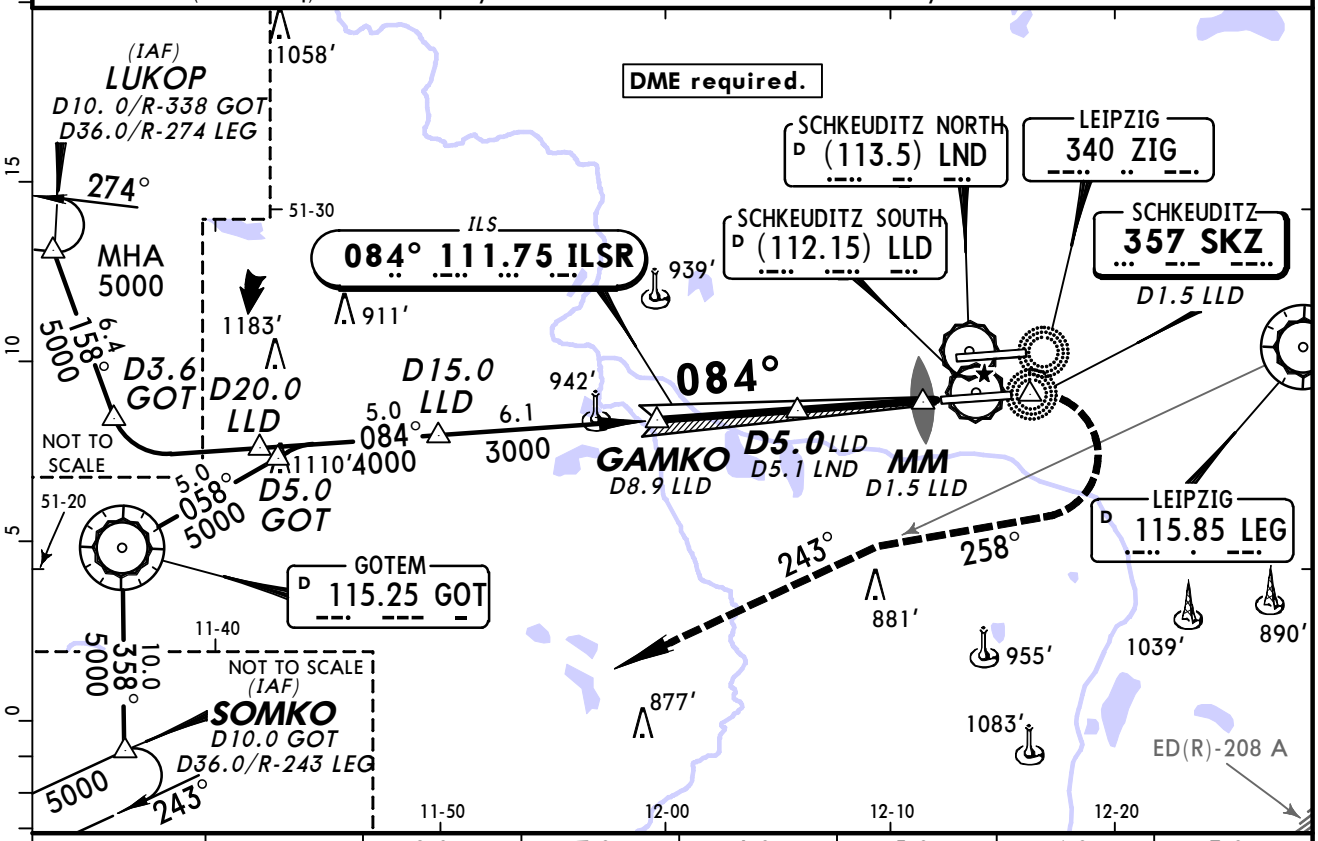
BRIEFING STRIP™

LOC ILSR	Final Apch Crs	GS D5.0 LLD	ILS DA(H)	Apt Elev 470′
111.75	084°	1760′ (1332′)	628′ (200′)	RWY 428′
NDB SKZ		Minimum Alt GAMKO	NDB DA(H)	
357		3000′ (2572′)	1020′ (592′)	

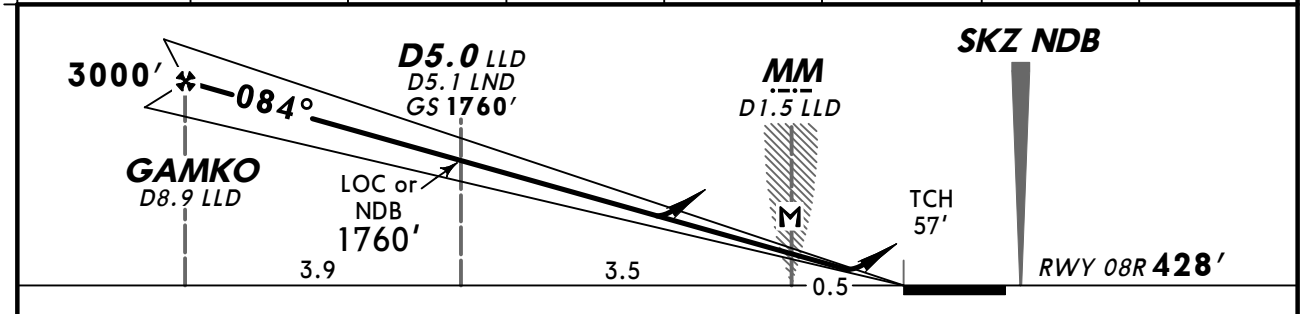
2500′ MSA ZIG NDB

MISSED APCH: Climb on 084° to SKZ NDB or 900′, whichever is later, then turn RIGHT onto 258° to intercept R-243 LEG and climb to SOMKO to 5000′.

Alt Set: hPa (IN on req) | Rwy Elev: 16 hPa | Trans level: By ATC | Trans alt: 5000′



LOC (GS out) or NDB	LLD DME	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	2720′	2400′	2080′	1760′	1450′	1130′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS/LOC or NDB Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.5 LLD						

ALSF-II
REIL
PAPI

SKZ 357 900′ whichever later

Standard STRAIGHT-IN LANDING RWY **08R**

	ILS DA(H) 628′ (200′)			LOC (GS out) DA(H) 960′ (532′)		NDB DA(H) 1020′ (592′)	
	FULL	Limited	ALS out		ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m		RVR 1500m	
B							
C				RVR 1700m	CMV 2400m	RVR 2000m	CMV 2400m
D							

PANS OPS 4

CHANGES: MSA.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (11-2A)

LEIPZIG-HALLE, GERMANY
CAT II/III ILS Rwy 08R

D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower South	LEIPZIG Tower North	Ground
123.95	126.17	128.47	121.1	125.95	121.67

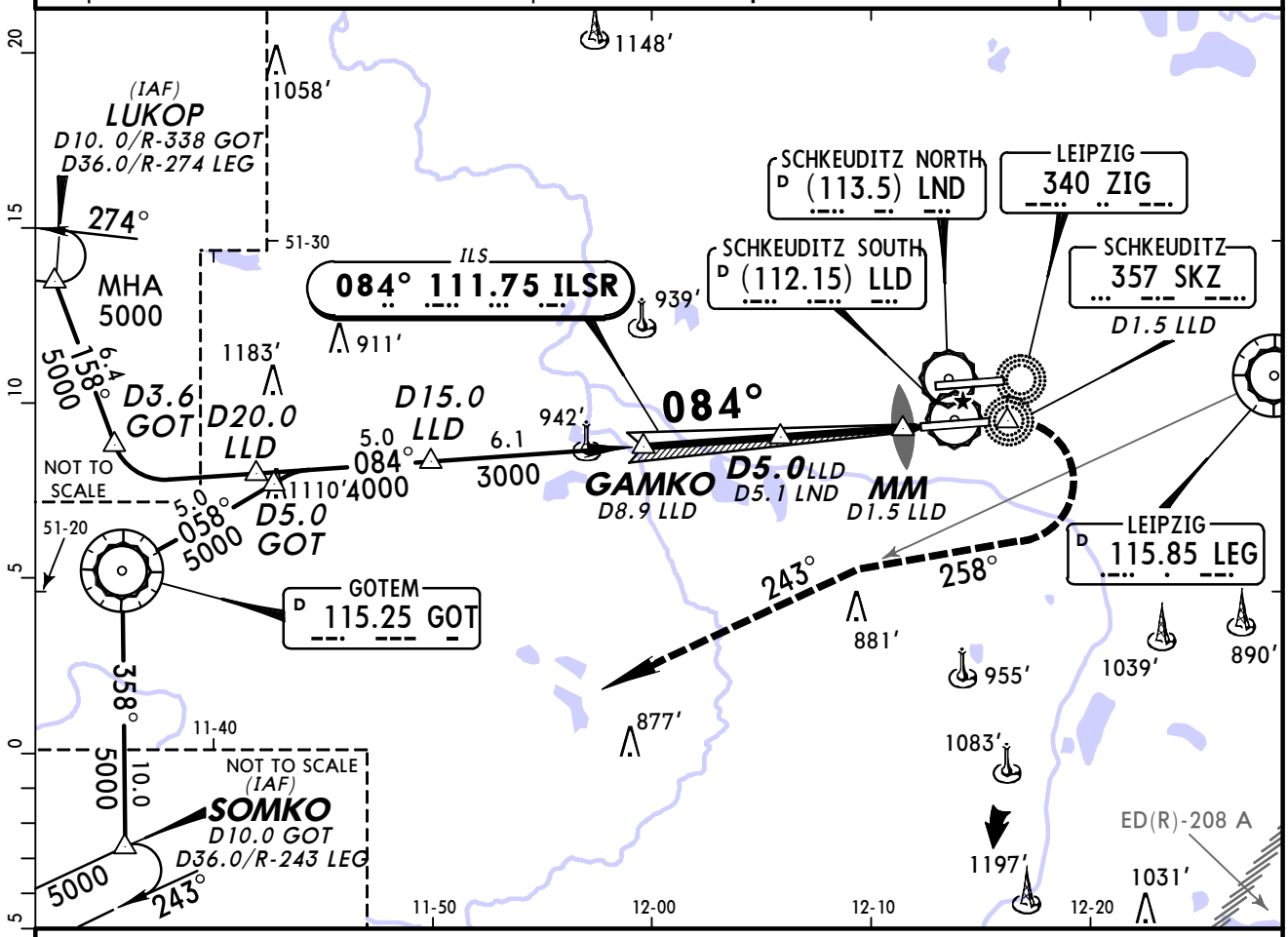
BRIEFING STRIP™

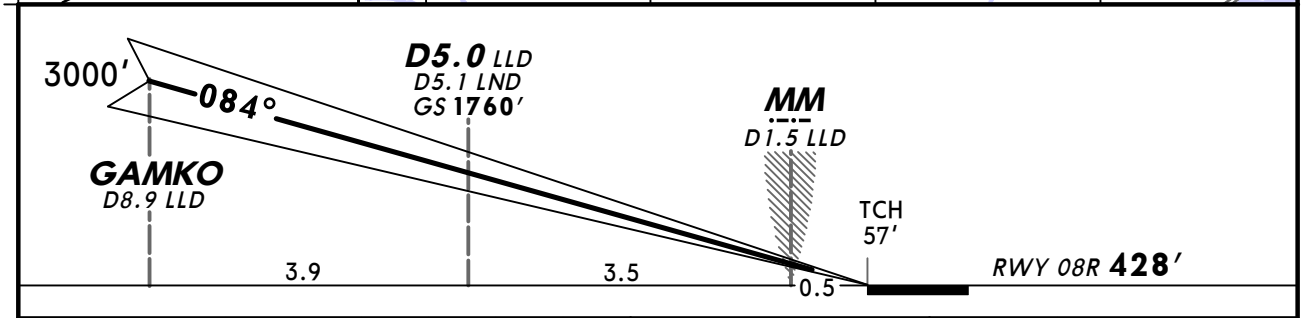
LOC ILSR	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev / RWY
111.75	084°	D5.0 LLD 1760′ (1332′)	Refer to Minimums	Apt Elev 470′ RWY 428′

MISSED APCH: Climb on 084° to SKZ NDB or 900′, whichever is later, then turn RIGHT onto 258° to intercept R-243 LEG and climb to SOMKO to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 16 hPa Trans level: By ATC Trans alt: 5000′
1. Special Aircrew & Acft Certification required. 2. **DME required.**

2500′
MSA
ZIG NDB





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

ALSF-II
REIL
PAPI

SKZ 357 900′ whichever later

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08R**

CAT IIIA ILS	CAT II ILS ABCD
DH **50′**	RA **106′** DA(H) **528′** (100′)
RVR 200m	RVR 300m [1]

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

CHANGES: MSA. Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (11-3)

LEIPZIG-HALLE, GERMANY
ILS or LOC or NDB Rwy 26L

BRIEFING STRIP ™

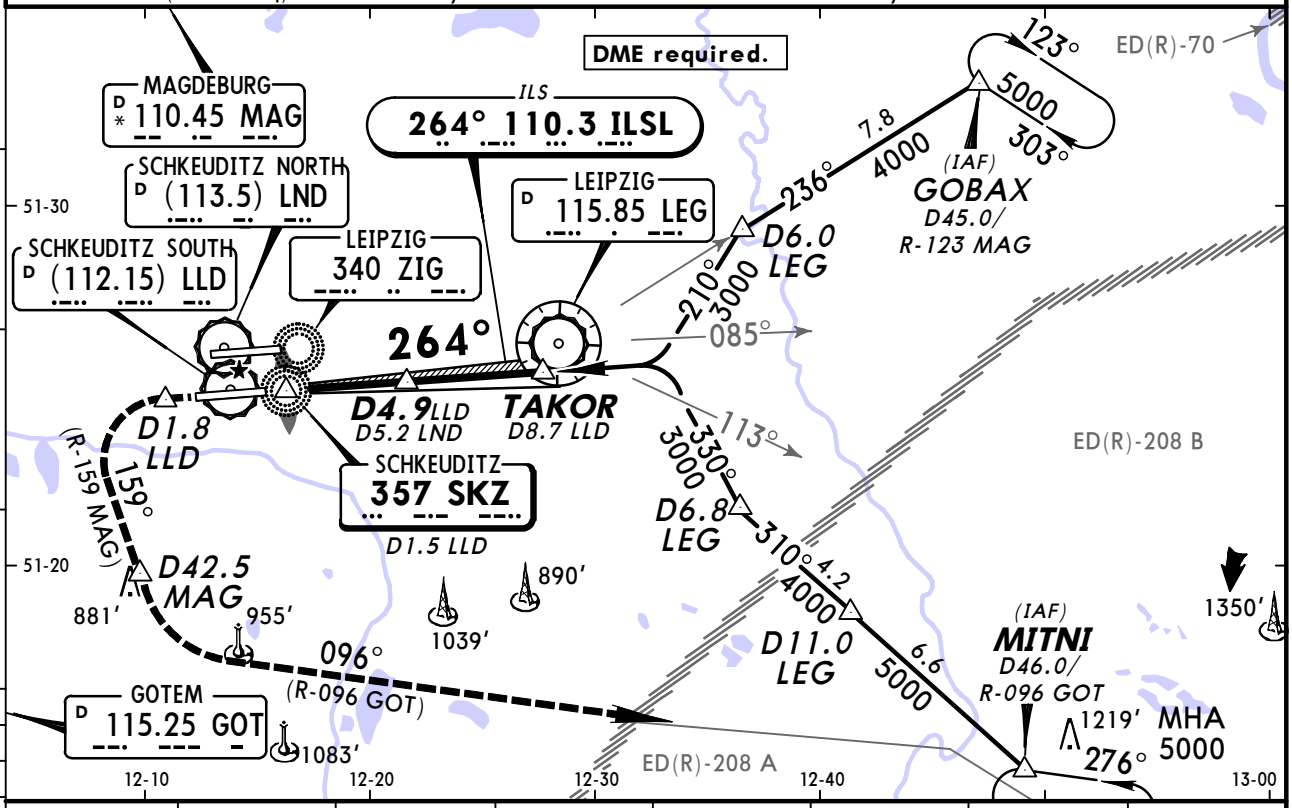
D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower South	LEIPZIG Tower North	Ground
123.95	126.17	128.47	121.1	125.95	121.67

LOC ILSL 110.3	Final Apch Crs 264°	GS D4.9 LLD 1800′ (1330′)	ILS DA(H) 670′ (200′)	Apt Elev 470′
NDB SKZ 357		Minimum Alt TAKOR 3000′ (2530′)	NDB DA(H) 1000′ (530′)	RWY 470′

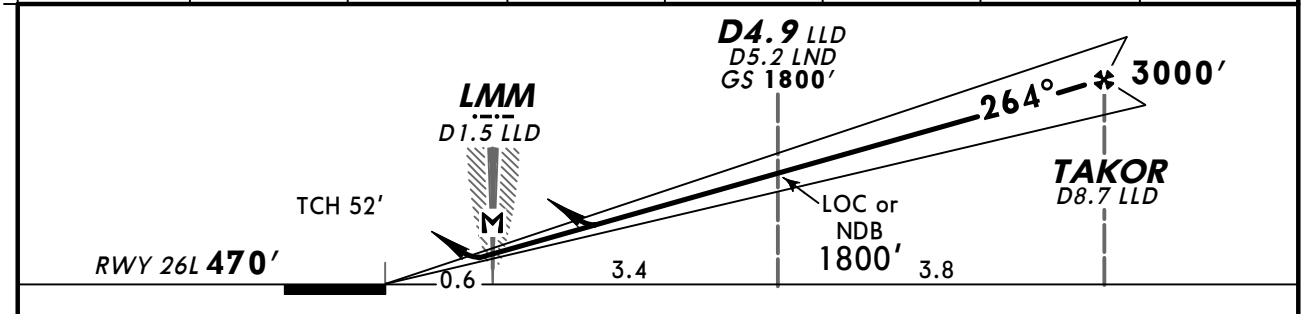
2500′ MSA ZIG NDB

MISSED APCH: Climb on 264° to D1.8 LLD or 900′, whichever is later, then turn LEFT onto R-159 MAG to D42.5 MAG, then turn LEFT to intercept R-096 GOT and climb to MITNI to 5000′.

Alt Set: hPa (IN on req) | Rwy Elev: 17 hPa | Trans level: By ATC | Trans alt: 5000′



LOC (GS out) or NDB	LLD DME	3.0	4.0	5.0	6.0	7.0	8.0
	ALTITUDE	1200′	1510′	1830′	2150′	2470′	2790′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS/LOC or NDB Descent Angle 3.00°	377	484	538	646	753	861
MAP at LMM/D1.5 LLD						

ALSF-II
REIL
PAPI

D1.8 LLD 900′ whichever later

Standard STRAIGHT-IN LANDING RWY **26L**

	ILS DA(H) 670′ (200′)			LOC (GS out) DA(H) 950′ (480′)		NDB DA(H) 1000′ (530′)	
	FULL	Limited	ALS out		ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m		RVR 1500m	
B							
C				RVR 1500m	CMV 2200m	RVR 1700m	CMV 2400m
D							

PANS OPS 4

CHANGES: MSA. Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (11-3A)

LEIPZIG-HALLE, GERMANY
CAT II/III ILS Rwy 26L

D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower South	LEIPZIG Tower North	Ground
123.95	126.17	128.47	121.1	125.95	121.67

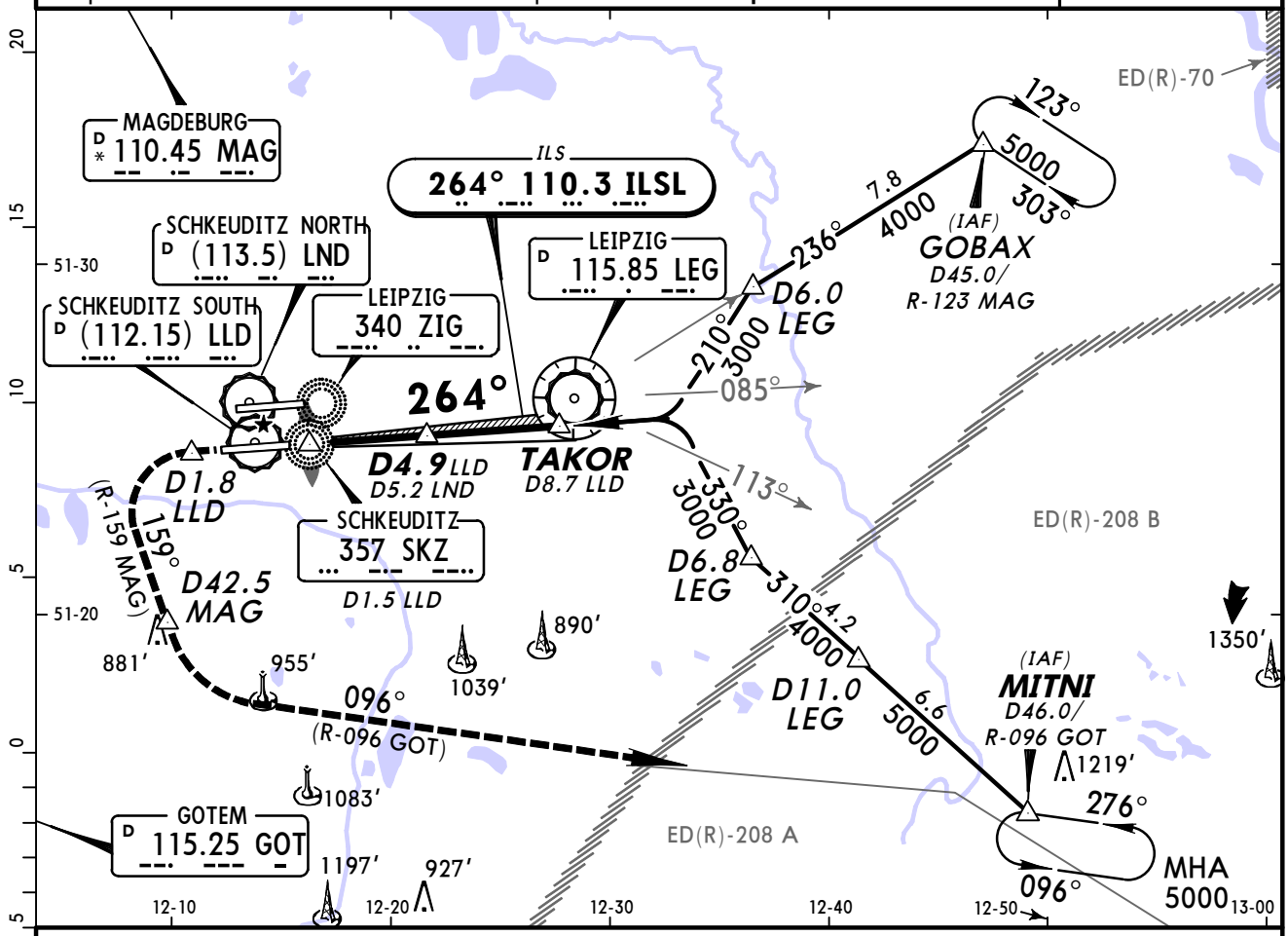
BRIEFING STRIP™

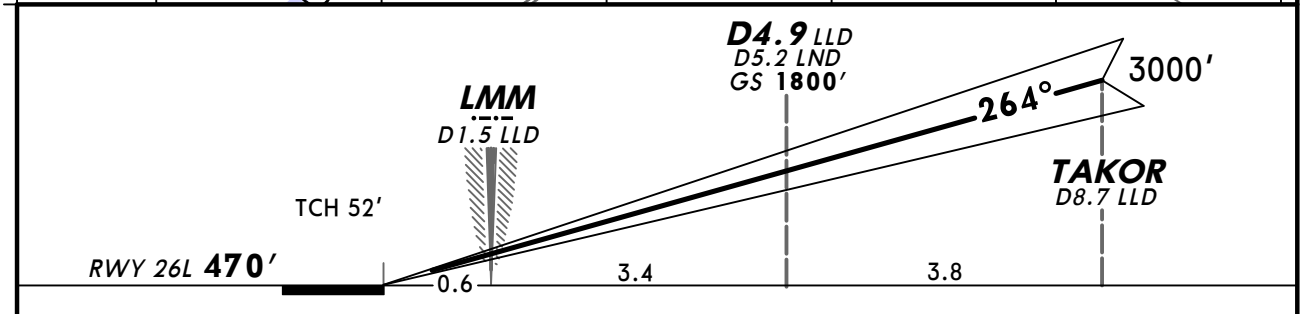
LOC ILSL	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev / RWY
110.3	264°	D4.9 LLD 1800′ (1330′)	Refer to Minimums	Apt Elev 470′ RWY 470′

MISSED APCH: Climb on 264° to D1.8 LLD or 900′, whichever is later, then turn LEFT onto R-159 MAG to D42.5 MAG, then turn LEFT to intercept R-096 GOT and climb to MITNI to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 17 hPa Trans level: By ATC Trans alt: 5000′
1. Special Aircrew & Acft Certification Required. 2. **DME required.**

2500′
MSA
ZIG NDB





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

ALSF-II
REIL
PAPI

D1.8 LLD 900′ whichever later

Standard STRAIGHT-IN LANDING RWY **26L**

CAT IIIA ILS	CAT II ILS ABCD
DH 50′	RA 97′ DA(H) 570′ (100′)
RVR 200m	RVR 300m [1]

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

PANS OPS 4

CHANGES: MSA. Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (11-4)

LEIPZIG-HALLE, GERMANY
ILS or LOC or NDB Rwy 26R

BRIEFING STRIP™

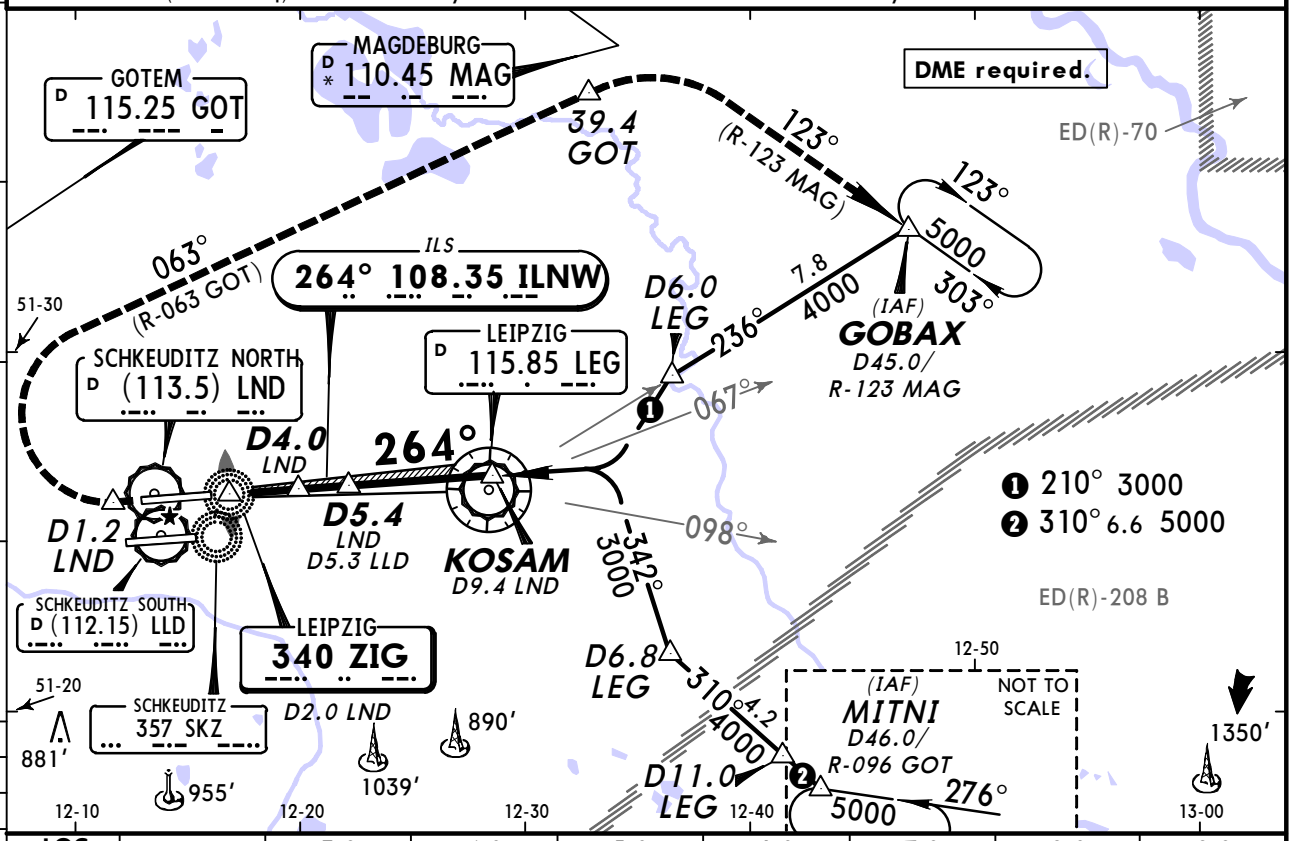
D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower		Ground
123.95	126.17	128.47	North 125.95	South 121.1	121.67

LOC / ILNW / 108.35	Final Apch Crs 264°	GS D5.4 LND 1710′ (1262′)	ILS DA(H) 648′ (200′)	Apt Elev 470′ / RWY 448′
NDB / ZIG / 340		Minimum Alt KOSAM 3000′ (2552′)	NDB DA(H) 1020′ (572′)	

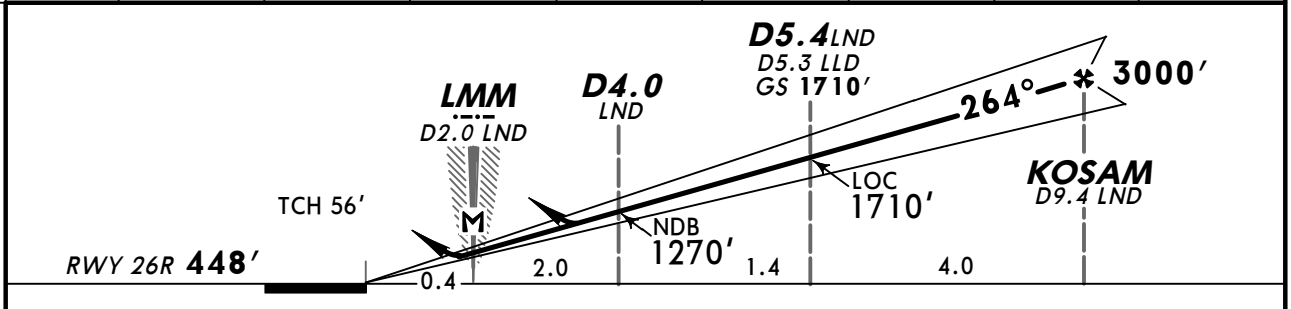
2500′ MSA ZIG NDB

MISSED APCH: Climb on 264° to D1.2 LND or 900′, whichever is later, then turn RIGHT to intercept R-063 GOT . At D39.4 GOT turn RIGHT onto R-123 MAG to GOBAX, climbing to 5000′.

Alt Set: hPa (IN on req) | Rwy Elev: 16 hPa | Trans level: By ATC | Trans alt: 5000′



LOC (GS out) or NDB	LND DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	950′	1270′	1590′	1910′	2230′	2550′	2870′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS/LOC or NDB Descent Angle 3.00°	377	484	538	646	753	861
MAP at LMM/D2.0 LND						

ALSF-II
REIL
PAPI

D1.2 LND 900′ whichever later

Standard STRAIGHT-IN LANDING RWY **26R**

	ILS DA(H) 648′ (200′)			LOC (GS out) DA(H) 900′ (452′)		NDB DA(H) 1020′ (572′)	
	FULL	Limited	ALS out		ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m	RVR 1500m	
B							
C					CMV 2100m	RVR 1900m	CMV 2400m
D							

PANS OPS 4

CHANGES: MSA. Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (11-4A)

LEIPZIG-HALLE, GERMANY
CAT II/III ILS Rwy 26R

D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower North	LEIPZIG Tower South	Ground
123.95	126.17	128.47	125.95	121.1	121.67

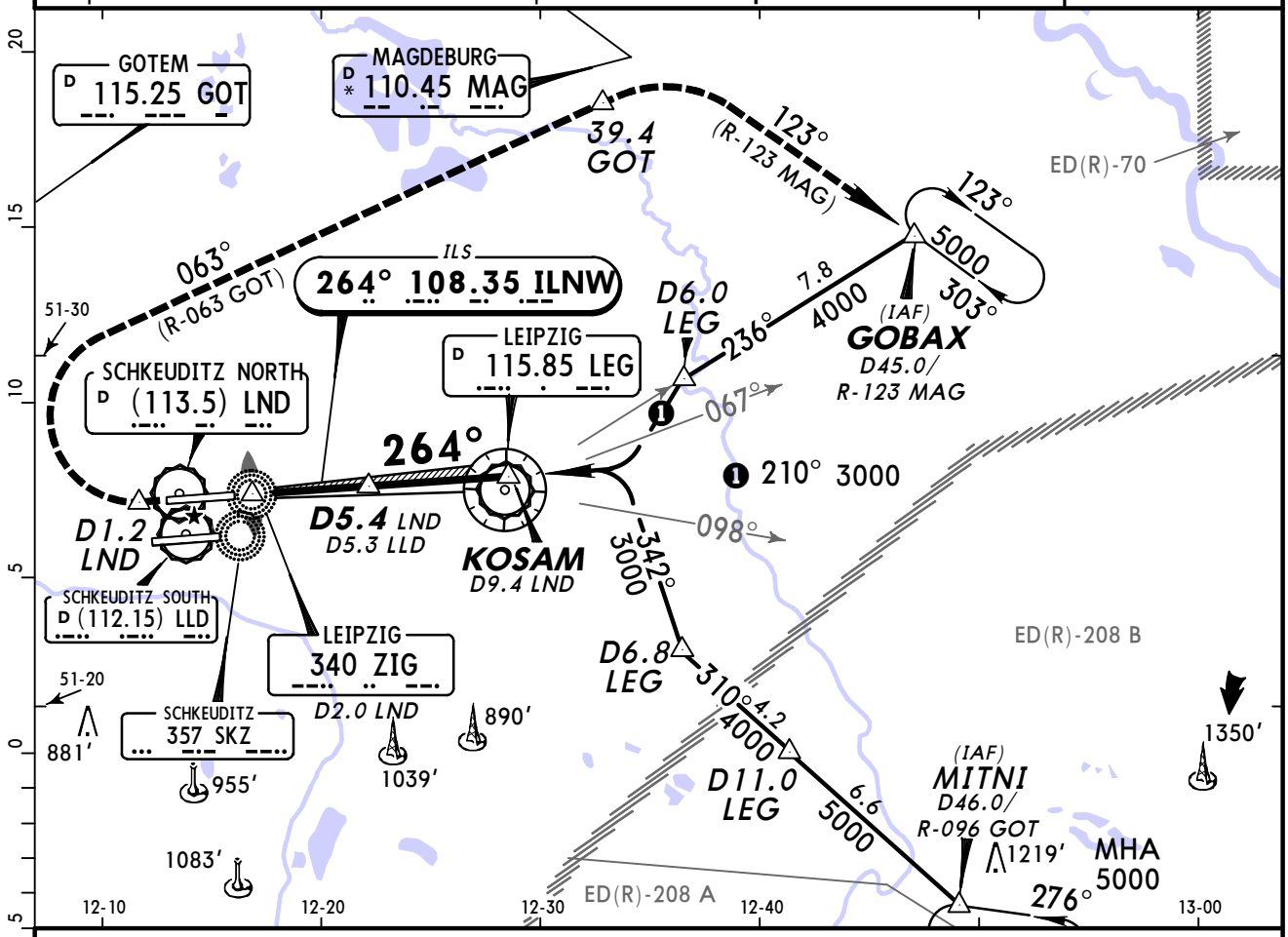
BRIEFING STRIP™

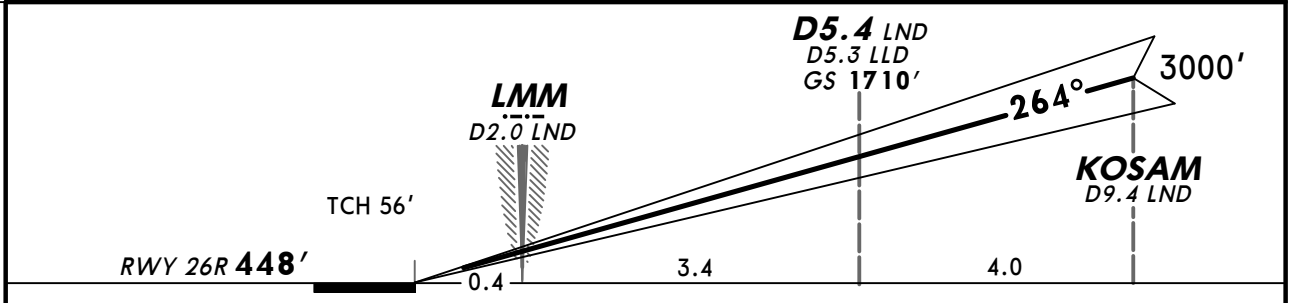
LOC	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev / RWY
ILNW 108.35	264°	D5.4 LND 1710′ (1262′)	Refer to Minimums	Apt Elev 470′ RWY 448′

MISSED APCH: Climb on 264° to D1.2 LND or 900′, whichever is later, then turn RIGHT to intercept R-063 GOT. At D39.4 GOT turn RIGHT onto R-123 MAG to GOBAX, climbing to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 16 hPa Trans level: By ATC Trans alt: 5000′
1. Special Aircrew & Acft Certification Required. 2. **DME required.**

2500′
MSA
ZIG NDB





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

ALSF-II
REIL
PAPI

D1.2 LND 900′ whichever later

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26R**

CAT IIIA ILS	CAT II ILS ABCD
DH 50′	RA 105′ DA(H) 548′ (100′)
RVR 200m	RVR 300m 1

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

CHANGES: MSA. Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (12-1)

LEIPZIG-HALLE, GERMANY
RNAV (GPS) Rwy 08L

D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower	Ground
123.95	126.17	128.47	North 125.95 South 121.1	121.67

BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt MOKUL	LNAV/VNAV DA(H)	Apt Elev 470′ RWY 418′
	084°	3000′ (2582′)	870′ (452′)	

MISSED APCH:
Climb on 084° to NDB or 900′, whichever is later, then turn LEFT via DP481 onto 293° to DP482. Turn LEFT onto 198° to LUKOP, climbing to 5000′.
NON-RNAV: Climb on 084° to NDB or 900′, whichever is later, then turn LEFT onto R-293 LEG to D32.0 LEG. Turn LEFT onto 198° to LUKOP, climbing to 5000′.

2500′
MSA
ARP

Alt Set: hPa (IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000′

Baro-VNAV operations not authorized below -15° C.

DP482 D32.0 LEG 198° 293° MHA 5000 (IAF) LUKOP D32.0/R-198 MAG D36.0/R-274 LEG 274° 51-30 NOT TO SCALE

MAGDEBURG D 110.45 MAG

LEIPZIG D 115.85 LEG

SCHKEUDITZ NORTH D (113.5) LND

293° DP481

939′

RWØ8L 084°

11.6 114° 5000 1183′ 911′ 1242′

4.3 084° 4000 4.0 3000 MOKUL 942′

DP431 1110′

(IF) DP432

4.0 NM to RWØ8L 2.0 NM to RWØ8L

SCHKEUDITZ 340 ZIG D2.0 LND

51-20

025° 15.4 5000

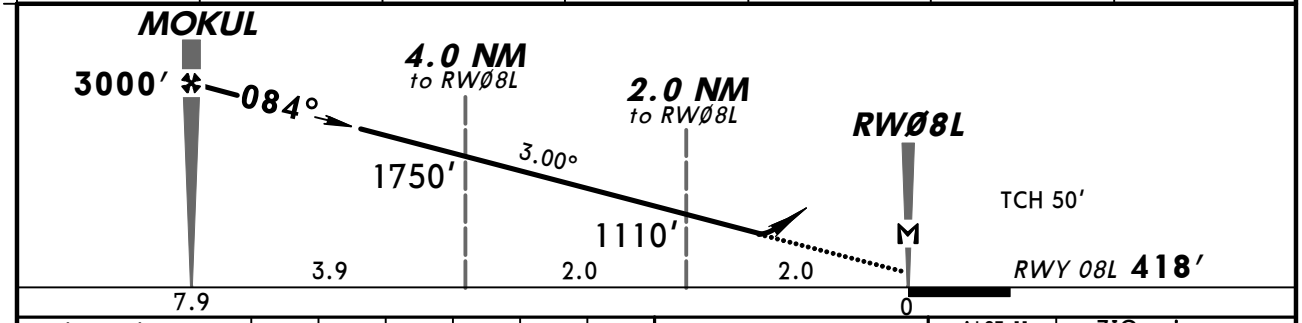
881′ 955′ 1039′ 890′ 877′ 1083′

NOT TO SCALE (IAF) SOMKO D36.0/ R-243 LEG 063° 5000 243°

ED(R)-208 A 1197′ 1031′

11-50 12-00 12-10 12-20

DIST to RWØ8L	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2700′	2380′	2060′	1750′	1430′	1110′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RWØ8L						

ALSF-II
REIL
PAPI

ZIG 340 900′ whichever later

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08L**

	LNAV/VNAV DA(H) 870′ (452′)		LNAV DA(H) 920′ (502′)	
		ALS out		ALS out
A	RVR 1400m	RVR 1500m	RVR 1500m	
B				
C		CMV 2100m	RVR 1600m	CMV 2400m
D				

CHANGES: MSA. Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (12-2)

LEIPZIG-HALLE, GERMANY
RNAV (GPS) Rwy 08R

D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower	Ground
123.95	126.17	128.47	South 121.1 / North 125.95	121.67

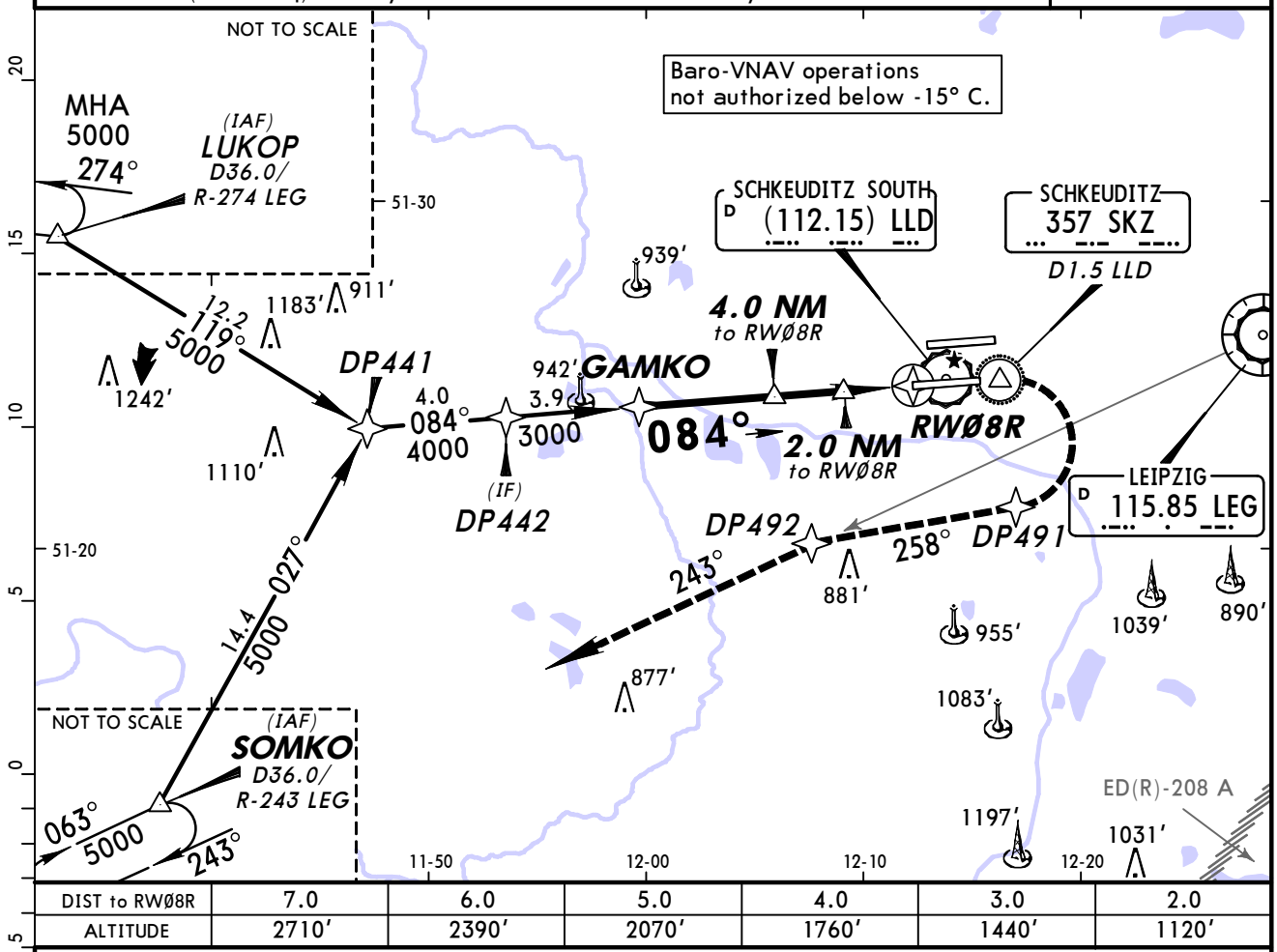
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	084°	GAMKO 3000′ (2572′)	970′ (542′)	470′ / 428′

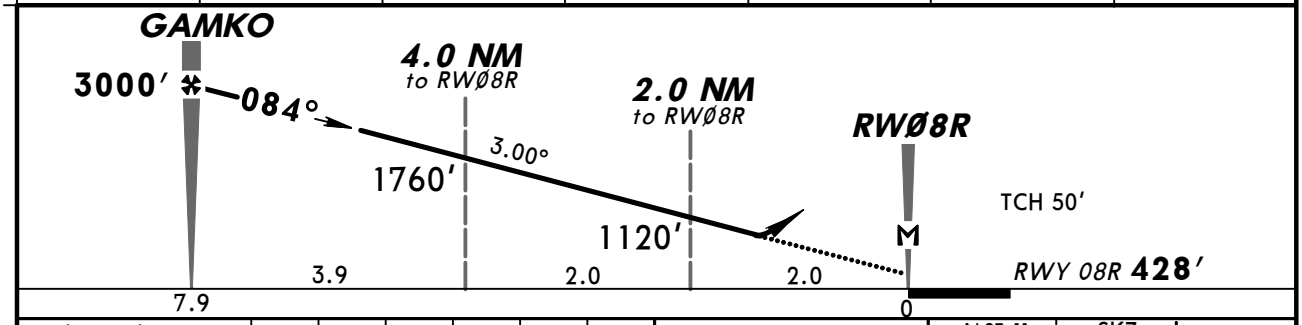
MISSED APCH:
Climb on 084° to NDB or 900′, whichever is later, then turn RIGHT via DP491 onto 258° to DP492. Turn LEFT onto 243° to SOMKO, climbing to 5000′.
NON-RNAV: Climb on 084° to NDB or 900′, whichever is later, then turn RIGHT onto 258° to intercept R-243 LEG to SOMKO, climbing to 5000′.

2500′
MSA
ARP

Alt Set: hPa (IN on req) Rwy Elev: 16 hPa Trans level: By ATC Trans alt: 5000′



DIST to RWØ8R	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2710′	2390′	2070′	1760′	1440′	1120′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RWØ8R						

ALSF-II
REIL
PAPI

SKZ 357 900′
whichever later

Standard STRAIGHT-IN LANDING RWY **08R**

	LNAV/VNAV		LNAV	
	DA(H) 970′ (542′)		DA(H) 970′ (542′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1800m	CMV 2400m	RVR 1800m	CMV 2400m
D				

PANS OPS 4

CHANGES: MSA. Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (12-3)

LEIPZIG-HALLE, GERMANY
RNAV (GPS) Rwy 26L

D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower	Ground
123.95	126.17	128.47	South 121.1 | North 125.95	121.67

BRIEFING STRIP™

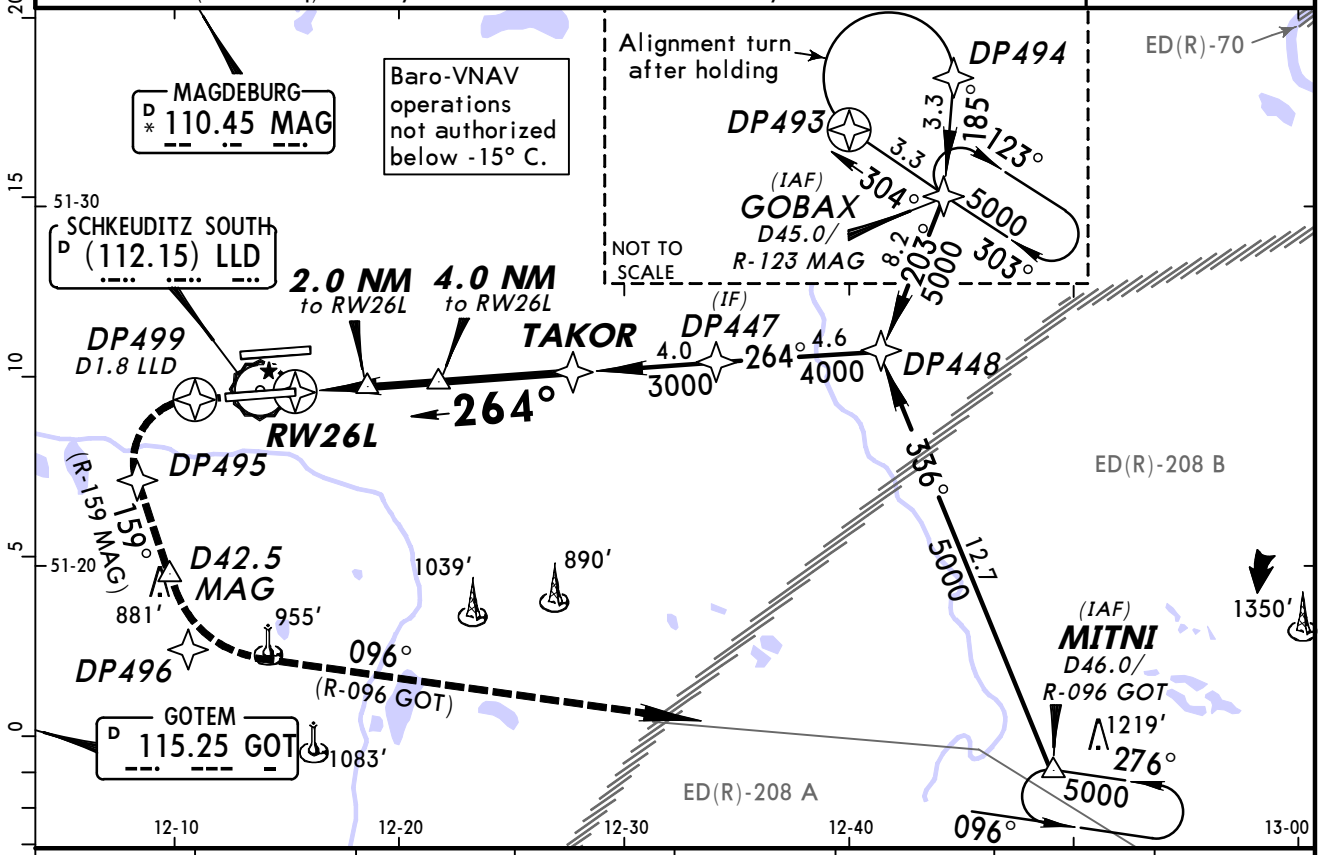
RNAV	Final Apch Crs	Minimum Alt TAKOR	LNAV/VNAV DA(H)	Apt Elev 470′ RWY 470′
	264°	3000′ (2530′)	870′ (400′)	

MISSED APCH: Climb on 264° to DP499 or 900′, whichever is later, then turn LEFT via DP495 onto 159° to DP496. Turn LEFT onto 096° to MITNI climbing to 5000′.

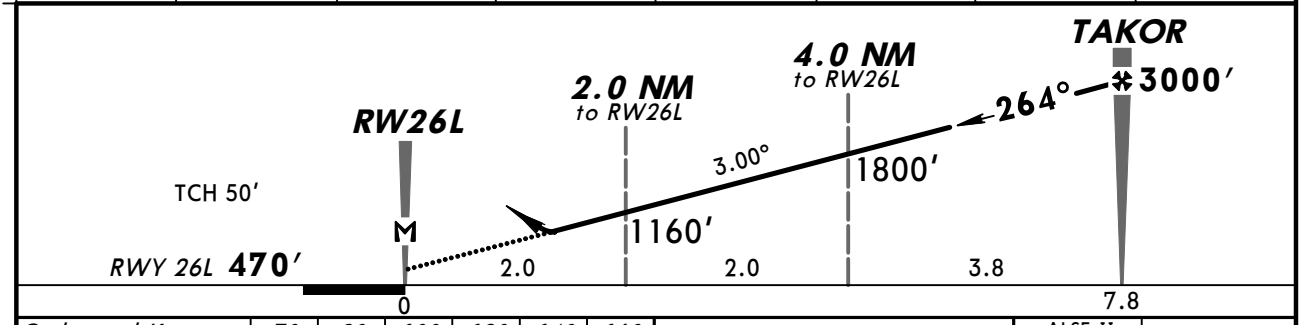
NON-RNAV: Climb on 264° to D1.8 LLD or 900′, whichever is later, then turn LEFT onto R-159 MAG to D42.5 MAG. Turn LEFT to intercept R-096 GOT to MITNI, climbing to 5000′.

2500′ MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 17 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RW26L	1.0	2.0	3.0	4.0	5.0	6.0	7.0
ALTITUDE	840′	1160′	1480′	1800′	2120′	2440′	2750′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW26L						

ALSF-II
REIL
PAPI

Refer to Missed apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26L**

	LNAV/VNAV DA(H) 870′ (400′)		LNAV DA(H) 920′ (450′)	
		ALS out		ALS out
A	RVR 1100m	RVR 1500m	RVR 1400m	RVR 1500m
B				
C		RVR 1800m		CMV 2100m
D				

CHANGES: MSA. Minimums.

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EDDP/LEJ
LEIPZIG-HALLE

JEPPESEN 2 SEP 11 (12-4)

LEIPZIG-HALLE, GERMANY
RNAV (GPS) Rwy 26R

D-ATIS	MUNICH Radar (APP)	LEIPZIG Director (APP)	LEIPZIG Tower	Ground
123.95	126.17	128.47	North 125.95 South 121.1	121.67

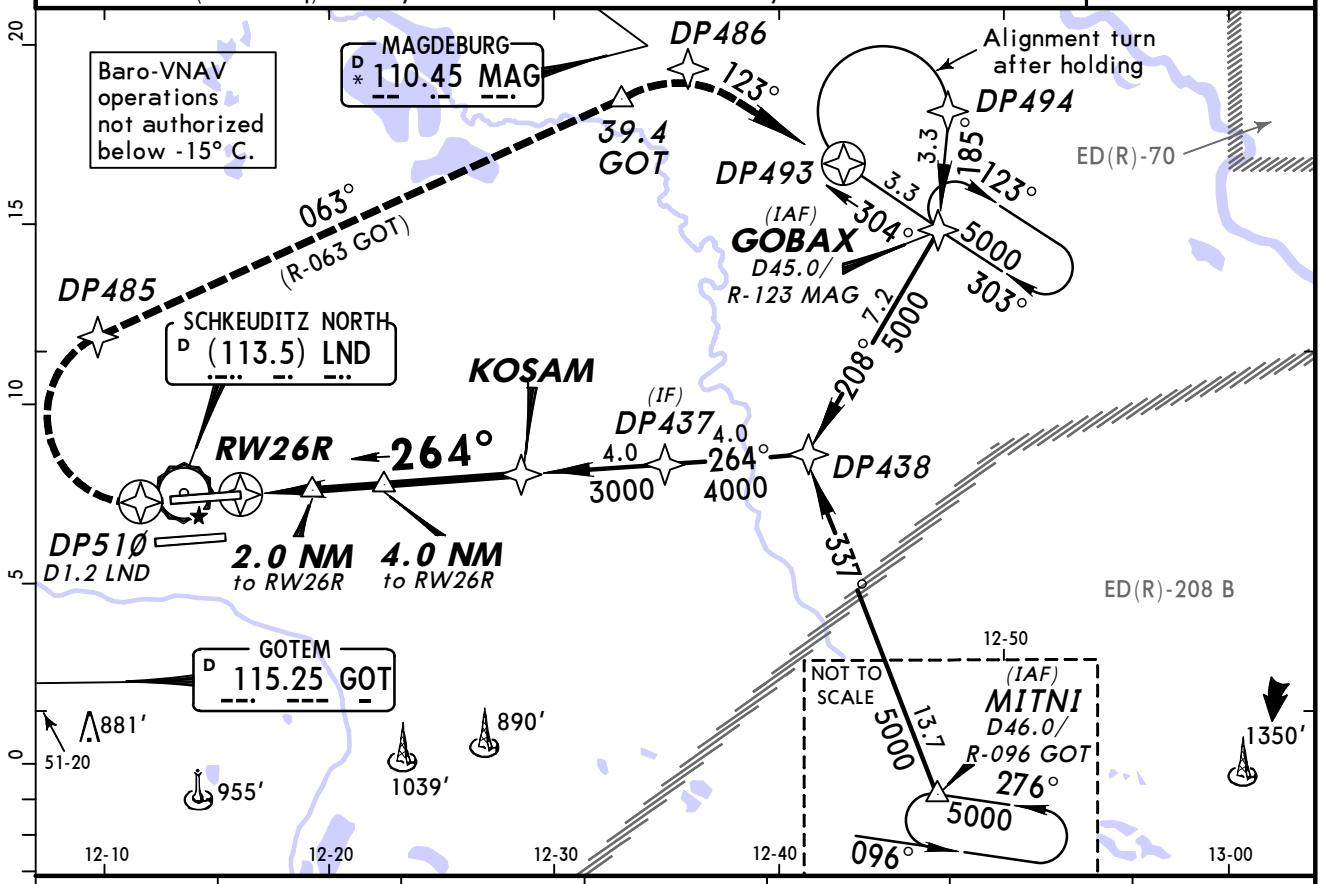
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt KOSAM	LNAV/VNAV DA(H)	Apt Elev 470′ RWY 448′
	264°	3000′ (2552′)	950′ (502′)	

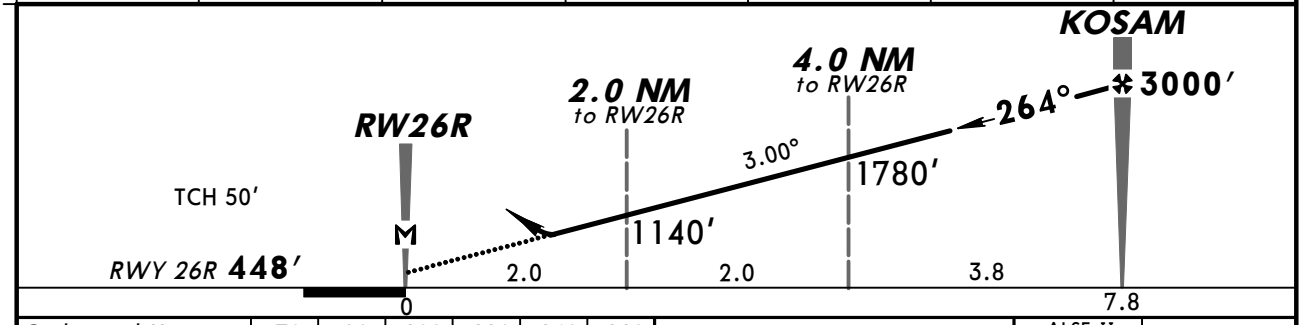
MISSED APCH: Climb on 264° to DP51Ø or 900′, whichever is later, then turn RIGHT via DP485 onto 063° to DP486. Turn RIGHT onto 123° to GOBAX, climbing to 5000′.
NON-RNAV: Climb on 264° to D1.2 LND or 900′, whichever is later, then turn RIGHT to intercept R-063 GOT to D39.4 GOT. Turn RIGHT onto R-123 MAG to GOBAX, climbing to 5000′.

2500′
MSA
ARP

Alt Set: hPa (IN on req) | Rwy Elev: 16 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RW26R	2.0	3.0	4.0	5.0	6.0	7.0
ALTITUDE	1140′	1460′	1780′	2090′	2410′	2730′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW26R						

ALSF-II
REIL
PAPI

Refer to Missed apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26R**

	LNAV/VNAV DA(H) 950′ (502′)		LNAV DA(H) 950′ (502′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1600m	CMV 2400m	RVR 1600m	CMV 2400m
D				

CHANGES: MSA. Minimums.

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General Information

Location: Saarbrucken Deu
IATA Code: SCN
Lat/Long: N49° 12.9' E007° 06.6'
Elevation: 1058 ft

Airport Use: Public
Magnetic Variation: 1.1°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0619 Z
Sunset: 1710 Z,

Runway Information

Runway: 09
Length x Width: 6529 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1024 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 164 ft

Runway: 27
Length x Width: 6529 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1058 ft
Lighting: Edge, ALS, Centerline
Displaced Threshold: 295 ft

Communication Information

ATIS 125.3
Saarbrucken Tower 118.55 Secondary
Saarbrucken Tower 118.35
Langen Radar Approach Control 129.675
Langen Radar Approach Control 25.667 Military

*D-ATIS	Apt Elev
125.3	1058′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
During activity of NIGHT LOW FLYING SYSTEM alternative instructions will be given by ATC.

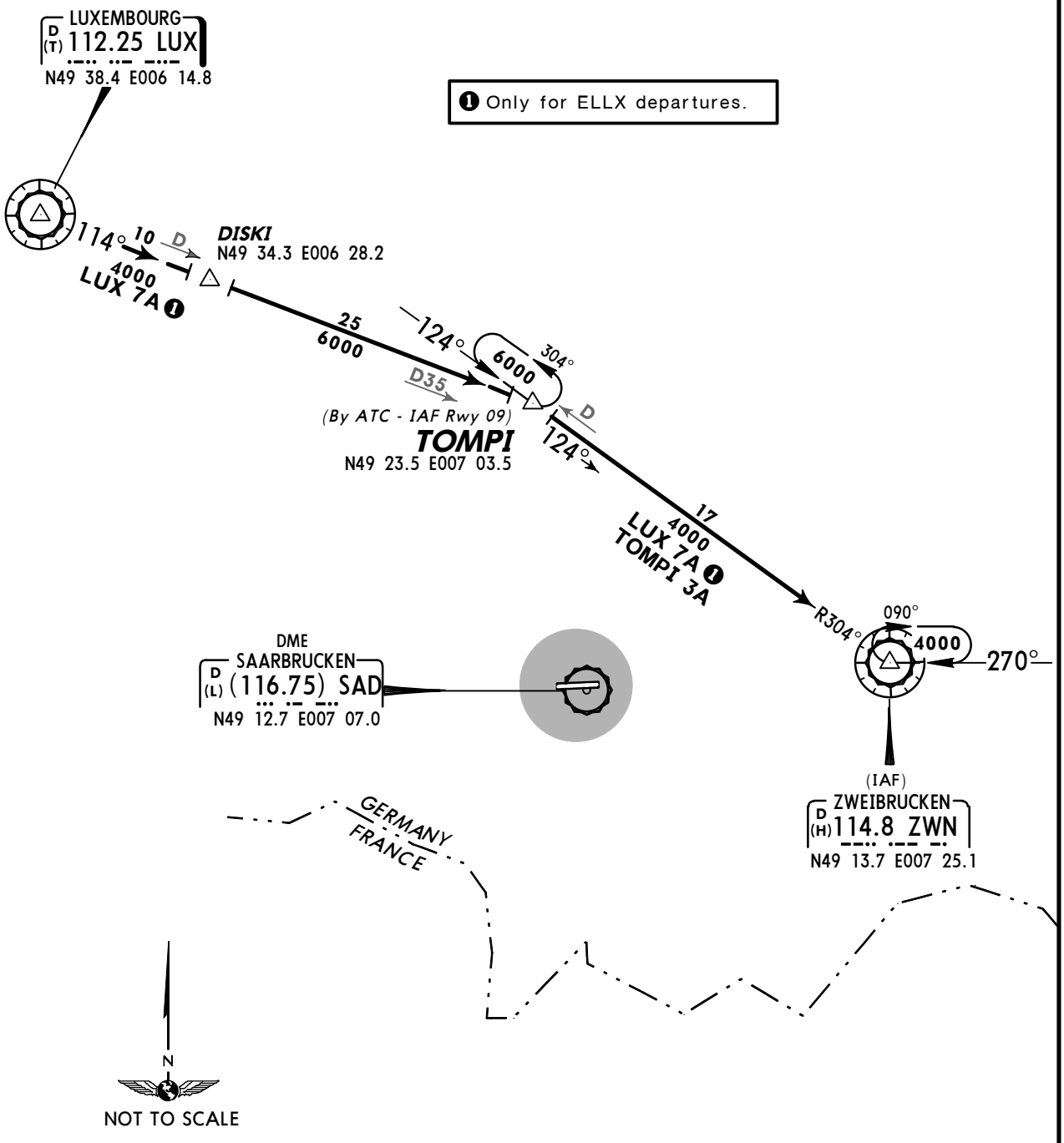
4000′

MSA
SAD DME
applicable over
German territory only

LUXEMBOURG SEVEN ALFA (LUX 7A)❶
TOMPI THREE ALFA (TOMPI 3A) *[TOMP3A]*
RWYS 09, 27 ARRIVALS

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ Only for ELLX departures.



CHANGES: STAR LUX 6A renumbered 7A.

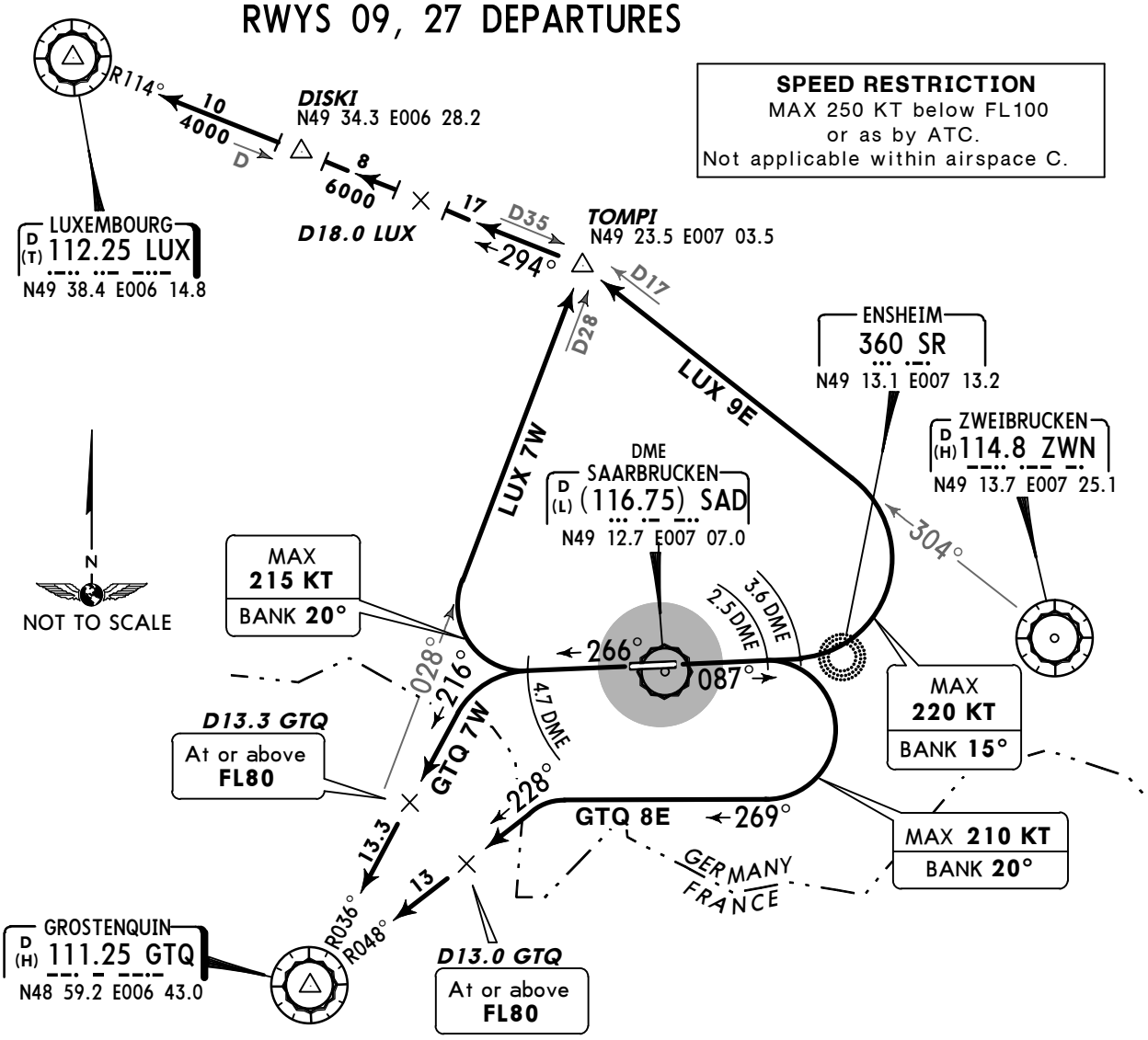
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LANGEN Radar	*Apt Elev*	
129.67	1058′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

4000′

MSA
SAD DME
applicable over German territory only

GROSTENQUIN EIGHT ECHO (GTQ 8E)
GROSTENQUIN SEVEN WHISKEY (GTQ 7W)
LUXEMBOURG NINE ECHO (LUX 9E)
LUXEMBOURG SEVEN WHISKEY (LUX 7W)
RWYS 09, 27 DEPARTURES



These SIDs require minimum climb gradients of
GTQ 8E: 395′ per NM (6.5%) until passing FL80 due to airspace structure.
GTQ 7W: 832′ per NM (13.7%) until passing FL80 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
832′ per NM	1041	1387	2081	2775	3468	4162
395′ per NM	494	658	987	1317	1646	1975

If unable to comply, inform ATC.

Initial climb clearance **4000′**

SID	RWY	ROUTING
GTQ 8E	**09**	On runway track towards SR, at SAD 2.5 DME turn RIGHT, 269° track, intercept GTQ R-048 inbound to GTQ.
GTQ 7W	**27**	On runway track to SAD 4.7 DME, turn LEFT, intercept GTQ R-036 inbound to GTQ.
LUX 9E ❶	**09**	On runway track towards SR, at SAD 3.6 DME turn LEFT, intercept ZWN R-304 to TOMPI, turn LEFT, intercept LUX R-114 inbound via DISKI to LUX.
LUX 7W ❶	**27**	On runway track to SAD 4.7 DME, turn RIGHT, intercept GTQ R-028 to TOMPI, turn LEFT, intercept LUX R-114 inbound via DISKI to LUX.

❶ For flights to ELLX. During activity of NIGHT LOW FLYING SYSTEM alternative instructions will be given by ATC.

CHANGES: SIDs renumbered.

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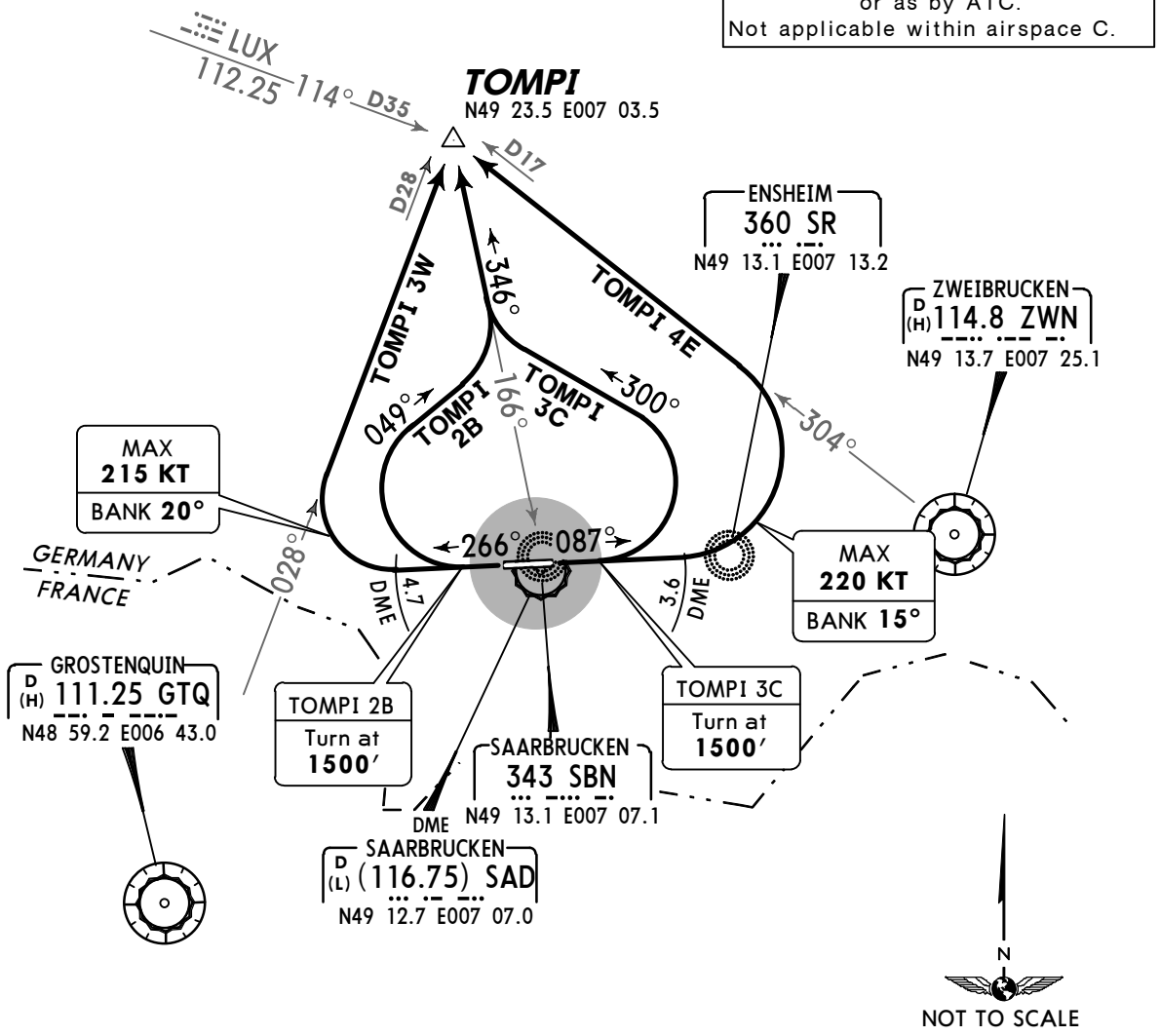
LANGEN Radar	*Apt Elev*	
129.67	1058′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. During activity of NIGHT LOW FLYING SYSTEM alternative instructions will be given by ATC.

4000′

MSA
SAD DME
applicable over
German territory only

TOMPI TWO BRAVO (TOMPI 2B)
TOMPI THREE CHARLIE (TOMPI 3C)
TOMPI FOUR ECHO (TOMPI 4E)
TOMPI THREE WHISKEY (TOMPI 3W)
RWYS 27, 09 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

SID	RWY	ROUTING
TOMPI 2B ❶	**27**	Climb on runway track to 1500′, turn RIGHT, 049° track, intercept 346° bearing from SBN to TOMPI.
TOMPI 3C ❶	**09**	Climb on runway track to 1500′, turn LEFT, 300° track, intercept 346° bearing from SBN to TOMPI.
TOMPI 4E		On runway track towards SR, at SAD 3.6 DME turn LEFT, intercept ZWN R-304 to TOMPI.
TOMPI 3W	**27**	On runway track to SAD 4.7 DME, turn RIGHT, intercept GTQ R-028 to TOMPI.

❶ Only for Prop/Turboprop aircraft up to 5.7T MTOW. Not to be filed in flight plan. Will be assigned by ATC on request.

CHANGES: SIDs renumbered.

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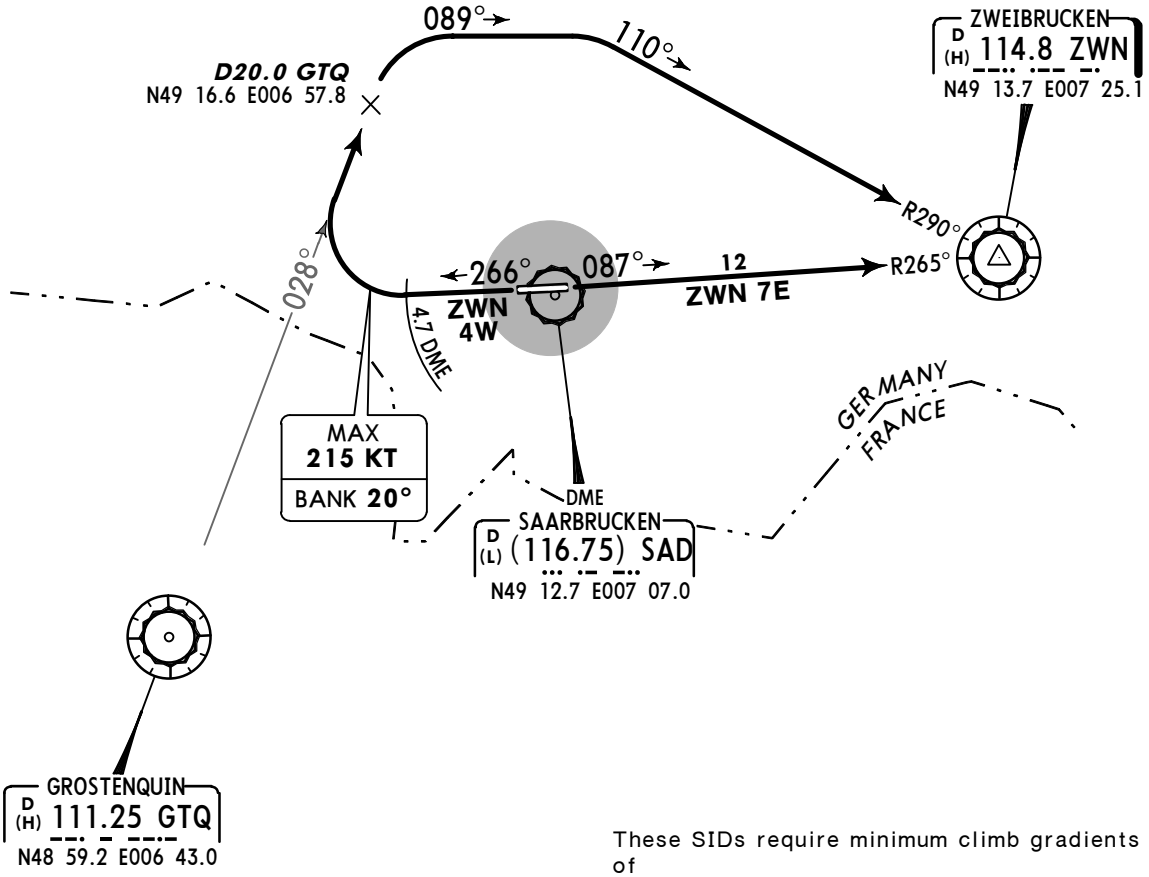
LANGEN Radar	*Apt Elev*	
129.67	1058′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

4000′

MSA
SAD DME
applicable over
German territory only

ZWEIBRUCKEN SEVEN ECHO (ZWN 7E)
ZWEIBRUCKEN FOUR WHISKEY (ZWN 4W)
RWYS 09, 27 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



N
NOT TO SCALE

These SIDs require minimum climb gradients of

ZWN 7E

425′ per NM (7%) until passing 3600′ due to airspace structure.

ZWN 4W

219′ per NM (3.6%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127
219′ per NM	273	365	547	729	911	1094

If unable to comply, inform ATC.

Initial climb clearance **4000′**

SID	RWY	ROUTING
ZWN 7E	**09**	On runway track to intercept ZWN R-265 inbound to ZWN.
ZWN 4W ❶	**27**	On runway track to SAD 4.7 DME, turn RIGHT, intercept GTQ R-028, at D20.0 GTQ turn RIGHT, 089° track, intercept ZWN R-290 inbound to ZWN.

❶ During activity of NIGHT LOW FLYING SYSTEM alternative instructions will be given by ATC.

CHANGES: SIDs renumbered.

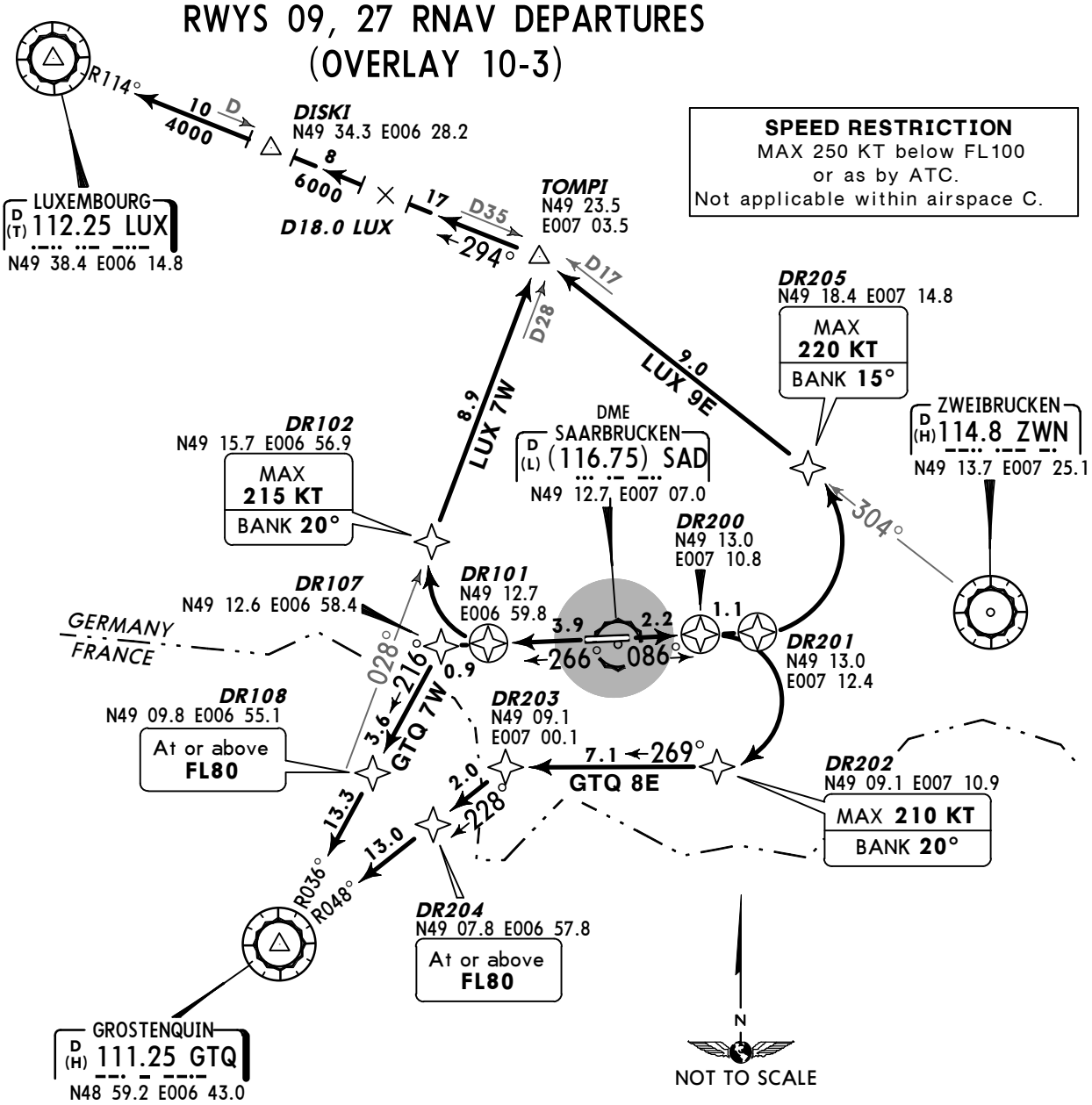
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LANGEN Radar	*Apt Elev*
129.67	1058′

Trans level: By ATC Trans alt: 5000′
1. Contact LANGEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

4000′
MSA
SAD DME
applicable over German territory only

GROSTENQUIN EIGHT ECHO (GTQ 8E)
GROSTENQUIN SEVEN WHISKEY (GTQ 7W)
LUXEMBOURG NINE ECHO (LUX 9E)
LUXEMBOURG SEVEN WHISKEY (LUX 7W)
RWYS 09, 27 RNAV DEPARTURES
(OVERLAY 10-3)



These SIDs require minimum climb gradients of
GTQ 8E: 395′ per NM (6.5%) until passing FL80 due to airspace structure.
GTQ 7W: 832′ per NM (13.7%) until passing FL80 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
832′ per NM	1041	1387	2081	2775	3468	4162
395′ per NM	494	658	987	1317	1646	1975

If unable to comply, inform ATC.

Initial climb clearance **4000′**

SID	RWY	ROUTING
GTQ 8E	**09**	(1500+) - DR200 - DR202 (K210-) - DR203 - DR204 (FL80+) - GTQ.
GTQ 7W	**27**	(1500+) - DR107 - DR108 (FL80+) - GTQ.
LUX 9E ❶	**09**	(1500+) - DR201 - DR205 (K220-) - TOMPI - DISKI - LUX.
LUX 7W ❶	**27**	(1500+) - DR101 - DR102 (K215-) - TOMPI - DISKI - LUX.

❶ For flights to ELLX. During activity of NIGHT LOW FLYING SYSTEM alternative instructions will be given by ATC.

CHANGES: RNAV SIDs renumbered; track update.

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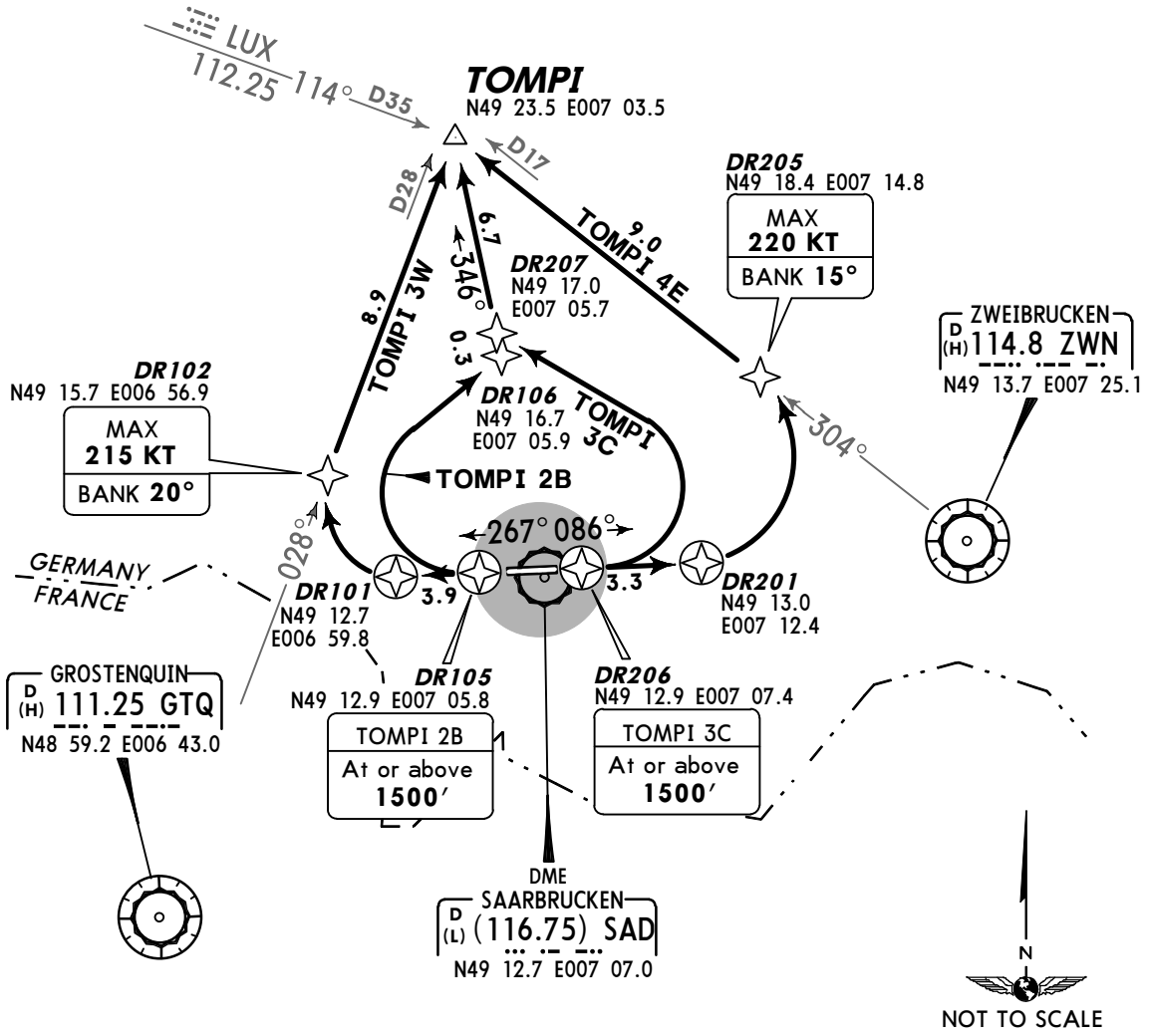
LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
129.67	1058′	1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. During activity of NIGHT LOW FLYING SYSTEM alternative instructions will be given by ATC.

4000′

MSA
SAD DME
applicable over German territory only

TOMPI TWO BRAVO (TOMPI 2B) *[TOMP2B]*
TOMPI THREE CHARLIE (TOMPI 3C) *[TOMP3C]*
TOMPI FOUR ECHO (TOMPI 4E) *[TOMP4E]*
TOMPI THREE WHISKEY (TOMPI 3W) *[TOMP3W]*
RWYS 27, 09 RNAV DEPARTURES
(OVERLAY 10-3A)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **4000′**

SID	RWY	ROUTING
TOMPI 2B ❶	**27**	DR105 (1500+) - DR106 - TOMPI.
TOMPI 3C ❶	**09**	DR206 (1500+) - DR207 - TOMPI.
TOMPI 4E		(1500+) - DR201 - DR205 (K220-) - TOMPI.
TOMPI 3W	**27**	(1500+) - DR101 - DR102 (K215-) - TOMPI.

❶ Only for Prop/Turboprop aircraft up to 5.7T MTOW. Not to be filed in flight plan. Will be assigned by ATC on request.

CHANGES: RNAV SIDs renumbered; track update.

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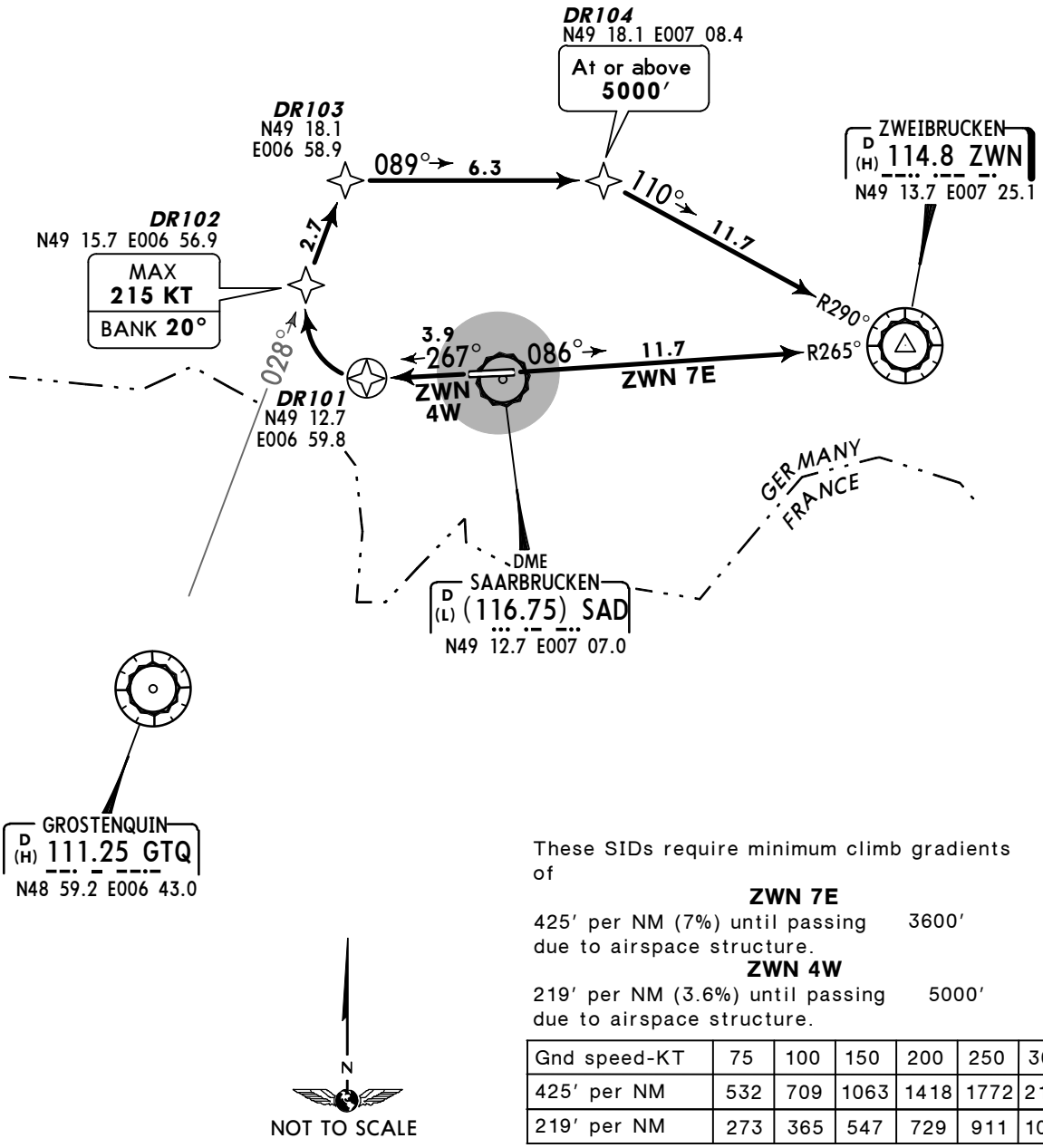
LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
129.67	1058′	

4000′

MSA
SAD DME
applicable over German territory only

ZWEIBRUCKEN SEVEN ECHO (ZWN 7E)
ZWEIBRUCKEN FOUR WHISKEY (ZWN 4W)
RWYS 09, 27 RNAV DEPARTURES
(OVERLAY 10-3B)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

ZWN 7E

425′ per NM (7%) until passing 3600′ due to airspace structure.

ZWN 4W

219′ per NM (3.6%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127
219′ per NM	273	365	547	729	911	1094

If unable to comply, inform ATC.

Initial climb clearance **4000′**

SID	RWY	ROUTING
ZWN 7E	**09**	(1500+) - ZWN.
ZWN 4W❶	**27**	(1500+) - DR101 - DR102 (K215-) - DR103 - DR104 (5000+) - ZWN.

❶ During activity of NIGHT LOW FLYING SYSTEM alternative instructions will be given by ATC.

CHANGES: RNAV SIDs renumbered; track update.

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NOISE ABATEMENT

SUMMER	**: LT minus 2 HOURS**	**= UTC (Z)**
WINTER	**: LT minus 1 HOUR**	**= UTC (Z)**

LOCAL TRAFFIC REGULATIONS

Aircraft not employed in scheduled and/or non-scheduled air transport are only permitted to take off and land between MON-SUN 0600-2230LT.
Jet-propelled aircraft exceeding the noise values according to ICAO Annex 16 Chapter 3 and aircraft with other power unit exceeding the noise values according to ICAO Annex 16 Chapters 3, 6, 8 or 10 are only permitted to take off and land between MON-SUN 0800-1230LT and 1400-1800LT (Excepted are flights conducted regularly from/to Saarbrucken with aircraft complying with the requirements of ICAO Annex 16, Chapter 3 only in justified exceptional cases with other aircraft and only within a maximum of 10% of the flights during a flight plan period).

Delayed take-offs and landings in scheduled air traffic and routine non-scheduled air traffic are permitted in justified exceptional cases between MON-SUN until 2400LT if the original take-off or landing was planned within the published operating hours and if the aircraft complies with the noise values of ICAO Annex 16 Chapters 3, 6, 8 or 10 and if it has been confirmed in good time prior to take-off that the aerodrome is ready for operations.
When it has been confirmed that the aerodrome is ready for operations, the following exceptions to these regulations can be granted:
- use of the airport as emergency or alternate aerodrome for meteorological, technical or other safety reasons
- use of the airport on a mission in disasters or rendering medical assistance, and by ambulance flights
- calibration flights on behalf of the DFS (Deutsche Flugsicherung GmbH).

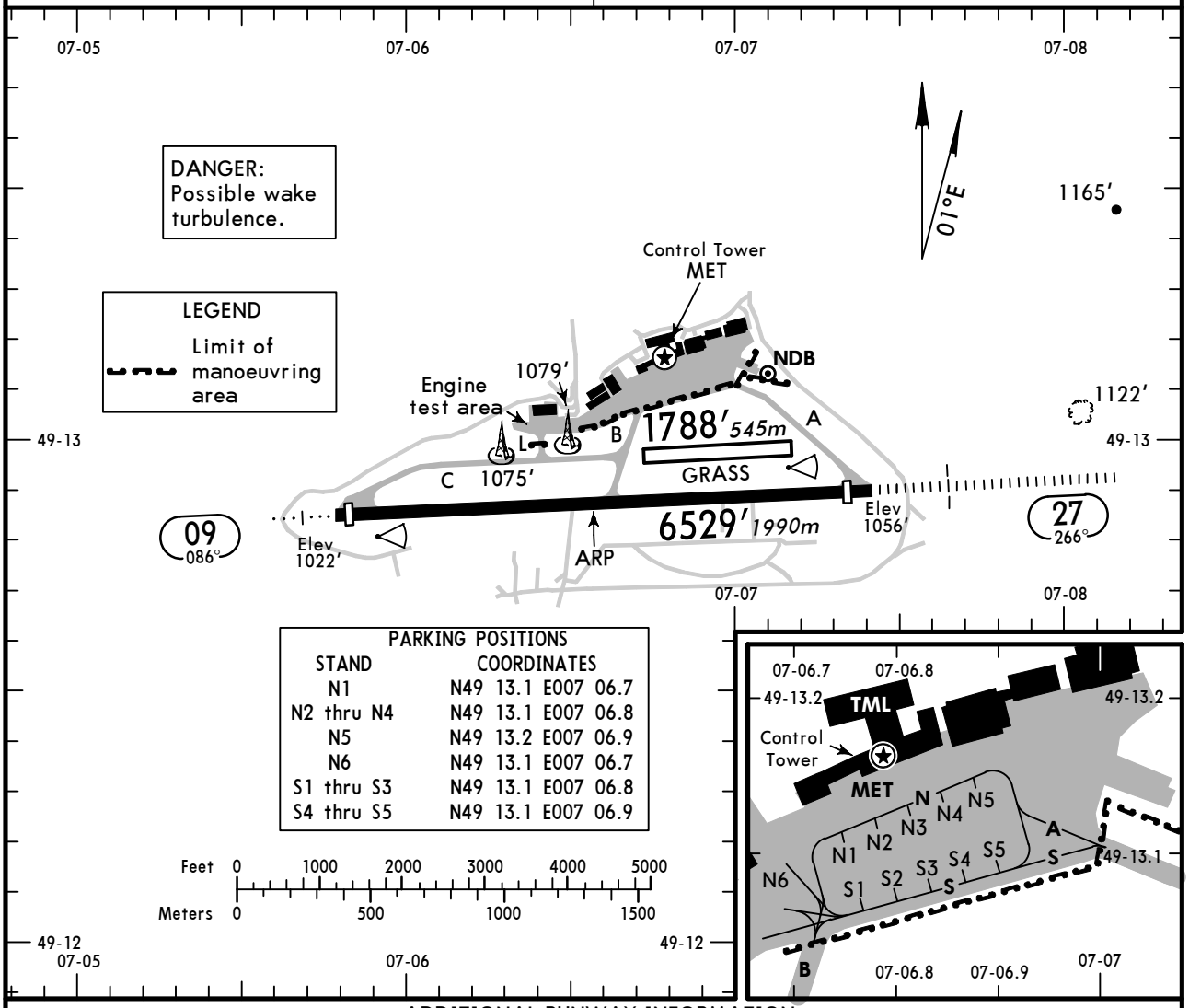
The "Ministerium fuer Wirtschaft" of the Saarland may grant exceptions to the regulations listed above in substantiated cases if this is necessary to avoid serious disturbance to air traffic or in cases of special public interest.

RUN-UP TESTS

Engine test-runs may only be performed in the noise protection facility and only if the noise protection box is functioning fully.
Engine test-runs may be carried out between 2200-0530LT with an adjustment of performance which does not exceed a maximum sound level of 103 dB(A) within the box (usually 70% performance).

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*D-ATIS	*SAARBRUCKEN Tower
125.3	118.35



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
09 ❶ 27	HIRL ❷CL ODALS SFL REIL PAPI-L (3.2°) RVR	6070′ *1850m*		❸	148′ *45m*
	HIRL ❷CL HIALS SFL PAPI-L (3.0°) RVR		4976′ *1517m*		
09 27	Grass runway				164′ *50m*

❶ Rwy with anti-skid layer.
❷ CL *(15m spacing),* (43W, 10R & W, 12R)
❸ TAKE-OFF RUN AVAILABLE

RWY 09:
From rwy head 6234′ (1900m)
twy B int 2943′ (897m)

RWY 27:
From rwy head 6365′ (1940m)
twy B int 3245′ (989m)

Standard TAKE-OFF **1**

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
	LVP must be in force					
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved HUD required below 150m.

CHANGES: Variation. Apron layout.

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SAARBRUCKEN, GERMANY

SAARBRUCKEN

STRAIGHT-IN RWY		A	B	C	D
09	RNAV	**1500**′(476′)	**1500**′(476′)	**1500**′(476′)	**1500**′(476′)
		R1500m	**R1500m**	**R1800m**	**R2000m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR	**1610**′(586′)	**1610**′(586′)	**1610**′(586′)	**1610**′(586′)
		R1500m	**R1500m**	**R1800m**	**R2000m**
	ALS out	R1500m	R1500m	R2000m	R2000m
27	ILS	**1258**′(200′)	**1258**′(200′)	**1258**′(200′)	**1258**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1490**′(432′)	**1490**′(432′)	**1490**′(432′)	**1490**′(432′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**1490**′(432′)	**1490**′(432′)	**1490**′(432′)	**1490**′(432′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	VOR	**1610**′(552′)	**1610**′(552′)	**1610**′(552′)	**1610**′(552′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**1610**′(552′)	**1610**′(552′)	**1610**′(552′)	**1610**′(552′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

CIRCLE-TO-LAND ❶	100 KT	135 KT	180 KT	205 KT
Not authorized South of airport	**1660**′(602′)	**1720**′(662′)	**1840**′(782′)	**1840**′(782′)
	V1500m	V1600m	V2400m	V3600m

❶ After RNAV and VOR Rwy 09: NOT APPLICABLE.

TAKE-OFF RWY 09, 27

	LVP must be in force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

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BRIEFING STRIP™

*D-ATIS	LANGEN Radar (APP)	*SAARBRUCKEN Tower
125.3	129.67	118.35

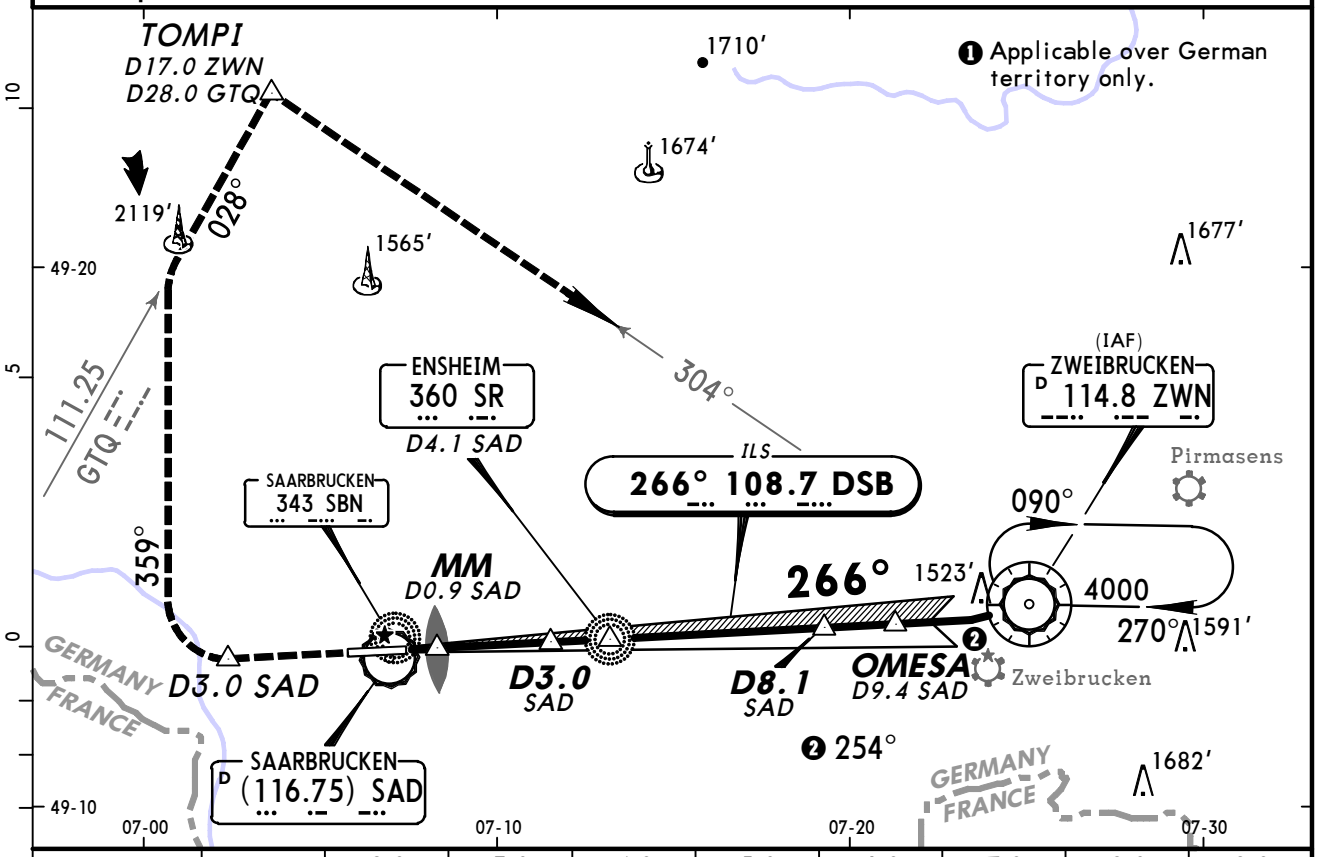
LOC DSB	Final Apch Crs	GS SR NDB	ILS DA(H)	Apt Elev / RWY
108.7	266°	2330′ (1272′)	1258′ (200′)	1058′ / RWY 1058′

MISSED APCH: Climb STRAIGHT AHEAD to D3.0 SAD or 2500′, whichever is later, then turn RIGHT on track 359°. Turn RIGHT to intercept and follow R-028 GTQ to TOMPI climbing to 4000′, then turn RIGHT to ZWN VOR.

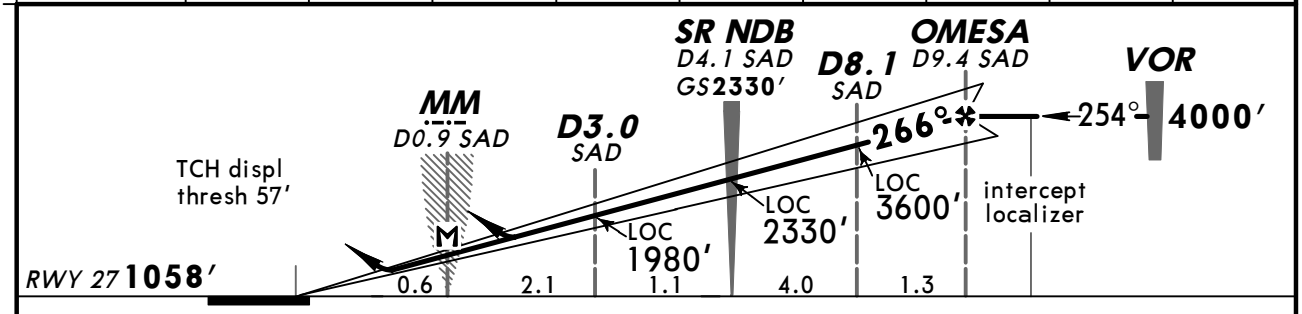
4000′ ❶ MSA SAD DME

Alt Set: hPa (IN on req) | Rwy Elev: 38 hPa | Trans level: By ATC | Trans alt: 5000′

DME required.



LOC (GS out)	SAD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	1660′	1980′	2300′	2620′	2930′	3250′	3570′	3890′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	372	478	531	637	743	849
MAP at MM/D0.9 SAD						

HIALS
PAPI

D3.0 SAD whichever later 2500′

Standard STRAIGHT-IN LANDING RWY 27

	ILS DA(H) 1258′ (200′) FULL	ILS DA(H) 1258′ (200′) Limited	ILS DA(H) 1258′ (200′) ALS out	LOC (GS out) DA(H) 1490′ (432′)	LOC (GS out) DA(H) 1490′ (432′) ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1300m	RVR 1500m
B					
C					RVR 2000m
D					

CIRCLE-TO-LAND
Not authorized South of airport

Max Kts	MDA(H)	VIS
100	1660′ (602′)	1500m
135	1720′ (662′)	1600m
180	1840′ (782′)	2400m
205	1840′ (782′)	3600m

PANS OPS 4

CHANGES: Procedure.

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EDDR/SCN
SAARBRUCKEN

JEPPESEN 3 FEB 12 (12-1) Eff 9 Feb

SAARBRUCKEN, GERMANY
RNAV (GPS) Rwy 09

*D-ATIS	LANGEN Radar (APP)	*SAARBRUCKEN Tower
125.3	129.67	118.35

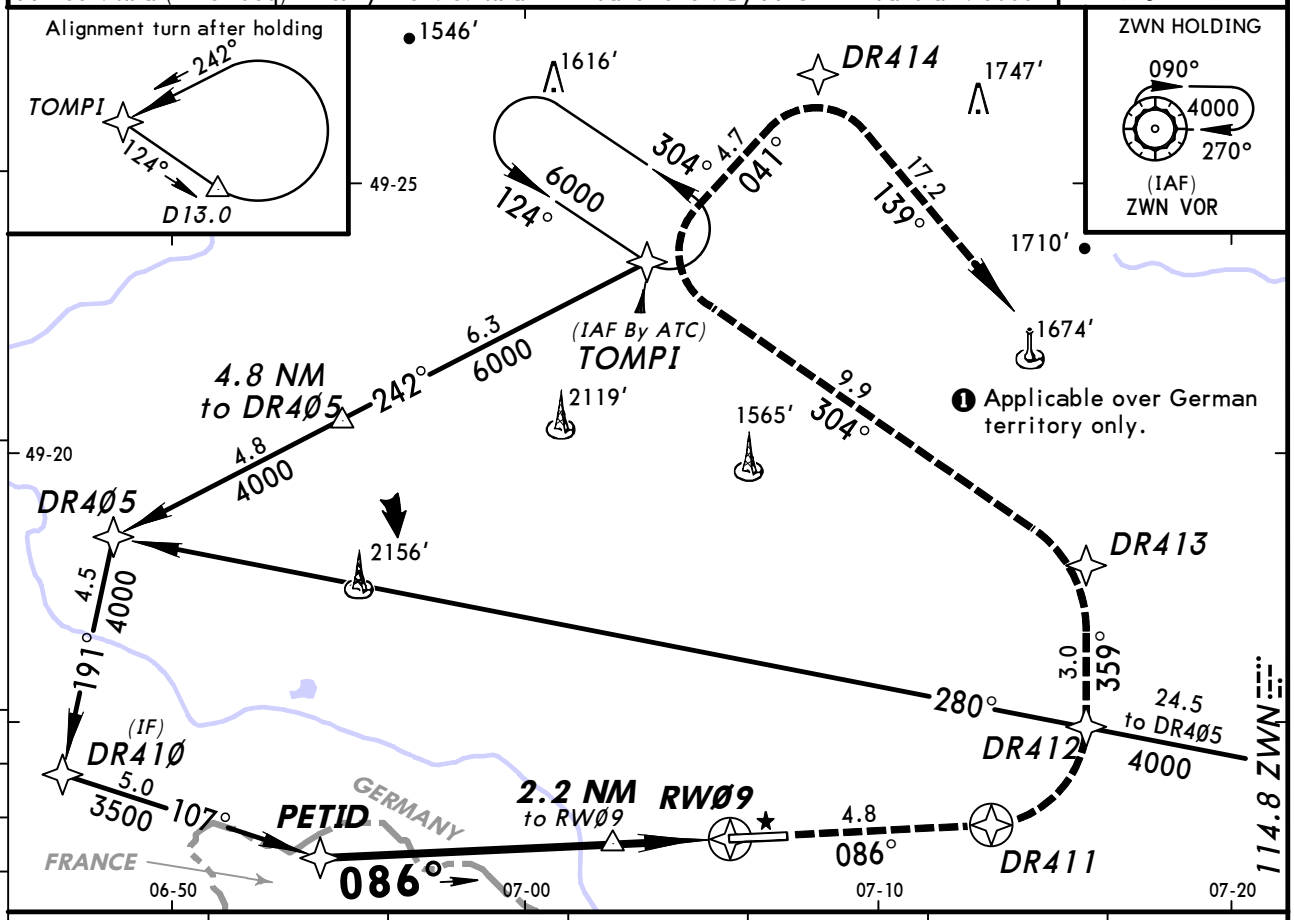
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV DA(H)	Apt Elev 1058′
	086°	PETID 3500′ (2476′)	1500′ (476′)	RWY 1024′

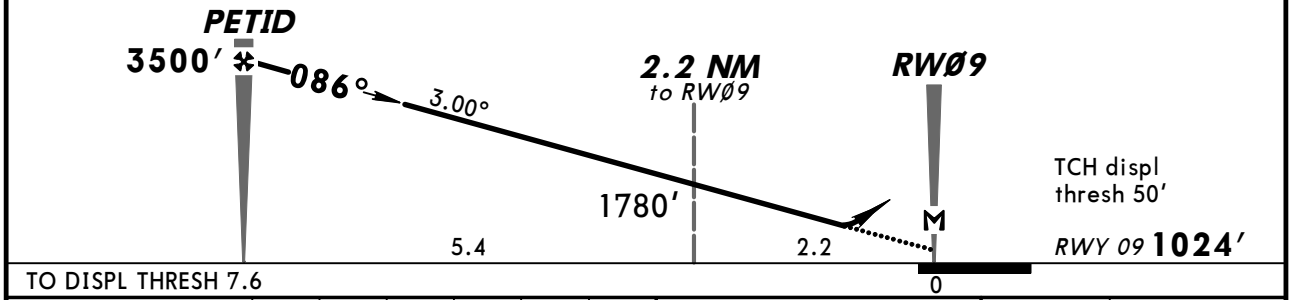
MISSED APCH: Climb on track 086° to DR411, then turn LEFT via DR412 on track 359° to DR413. Turn LEFT on track 304° to TOMPI climbing to 4000′, then turn RIGHT via DR414 on track 139° to VOR.

4000′ ❶ MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 37 hPa Trans level: By ATC Trans alt: 5000′



DIST to RWØ9	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3310′	2990′	2670′	2350′	2030′	1710′



TO DISPL THRESH 7.6

Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RWØ9						

ODALS
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **09**

LNAV
DA(H) **1500′** (476′)

ALS out

A	RVR 1500m	
B		
C	RVR 2000m	CMV 2200m
D		

CHANGES: Bearings. Descent angle. Minimums.

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BRIEFING STRIP™

*D-ATIS	LANGEN Radar (APP)	*SAARBRUCKEN Tower
125.3	129.67	118.35

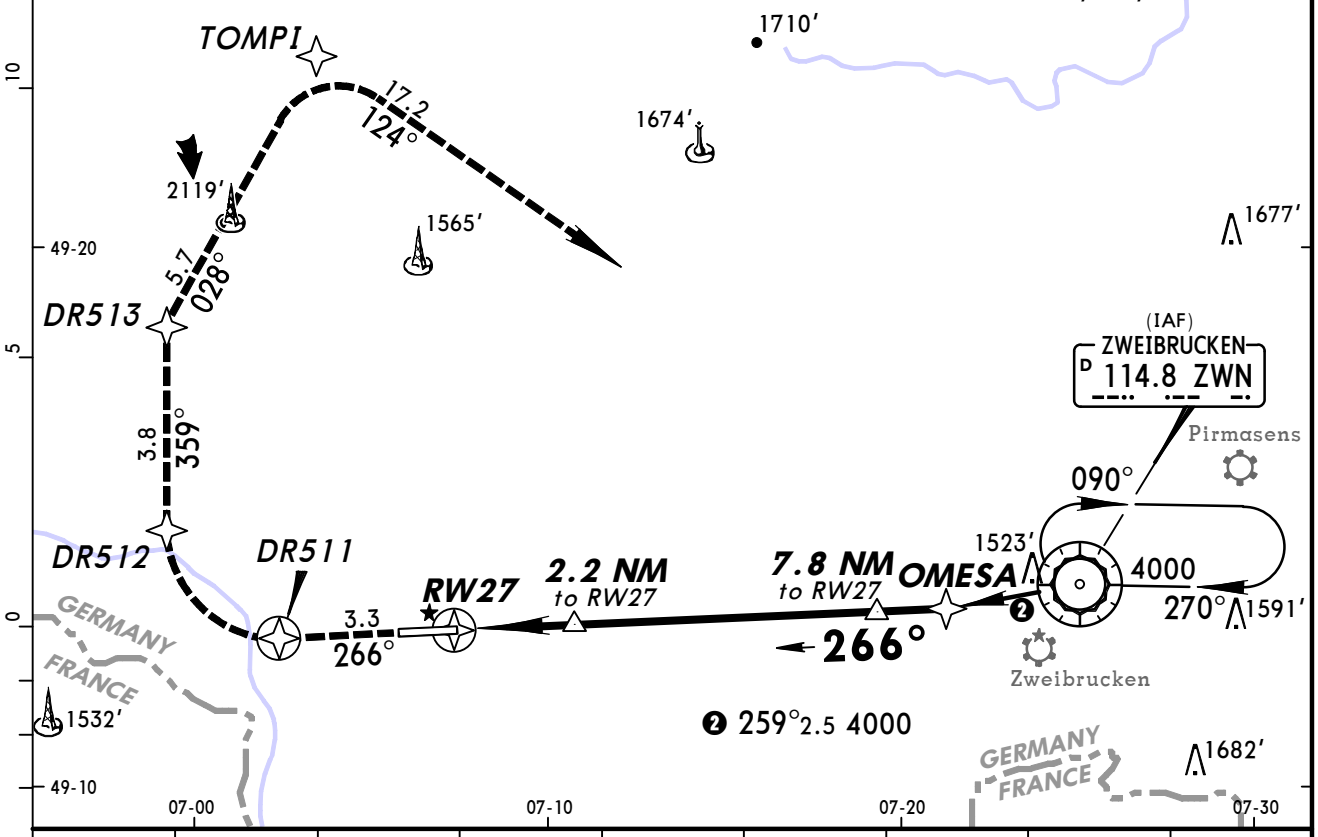
RNAV	Final Apch Crs	Minimum Alt	LNAV DA(H)	Apt Elev / RWY
	266°	OMESA 4000′ (2942′)	1490′ (432′)	Apt Elev 1058′ RWY 1058′

MISSED APCH: Climb on track 266° to DR511 or 2500′, whichever is later, then turn RIGHT via DR512 on track 359° to DR513. Turn RIGHT on track 028° to TOMPI climbing to 4000′, then turn RIGHT on track 124° to VOR.

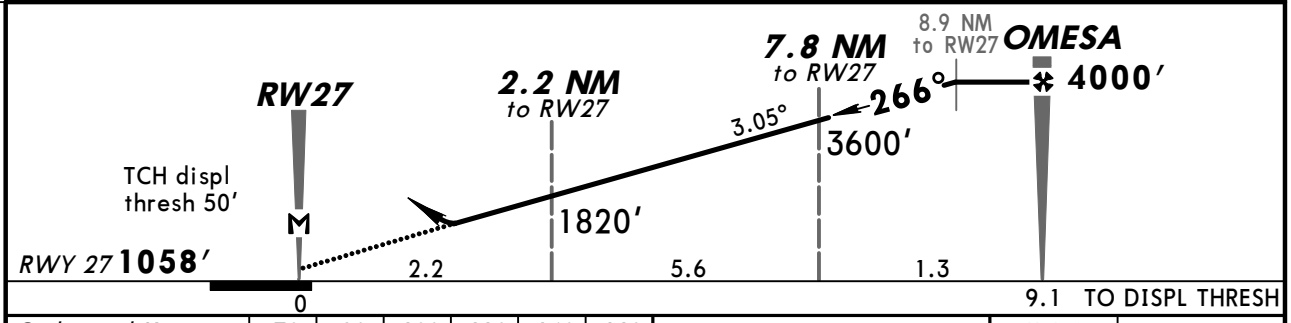
4000′ ❶ MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 38 hPa Trans level: By ATC Trans alt: 5000′

❶ Applicable over German territory only.



DIST to RW27	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	1750′	2070′	2380′	2700′	3020′	3340′	3660′	3980′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.05°	378	486	540	648	755	863
MAP at RW27						

HIALS
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **27**
LNAV
DA(H) **1490′** (432′)

		ALS out
A	RVR 1300m	RVR 1500m
B		
C		RVR 2000m
D		

CIRCLE-TO-LAND
Not authorized
South of airport

Max Kts	MDA(H)	VIS
100	1660′ (602′)	1500m
135	1720′ (662′)	1600m
180	1840′ (782′)	2400m
205	1840′ (782′)	3600m

CHANGES: Bearings. Minimums.

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*D-ATIS	LANGEN Radar (APP)	*SAARBRUCKEN Tower
125.3	129.67	118.35

BRIEFING STRIP™

VOR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 1058′
ZWN 114.8	085°	D8.4 SAD 3500′ (2476′)	1610′ (586′)	RWY 1024′

MISSED APCH: Climb on track 086° to D4.1 SAD, then turn LEFT on track 359°. Turn LEFT to intercept R-304 to TOMPI climbing to 4000′, then turn RIGHT to VOR.

Alt Set: hPa (IN on req) Rwy Elev: 37 hPa Trans level: By ATC Trans alt: 5000′
1. DME required. 2. Final apch track offset 1° from rwy centerline.

4000′ ❶
MSA
SAD DME

ZWN HOLDING
090° 4000 270°
(IAF)
ZWN VOR

❶ Applicable over German territory only.

TOMPI
D17.0 ZWN

1710′
1674′
2119′
1565′
304°
2156′
49-20

(IAF)
ZWEIBRUCKEN
D 114.8 ZWN

CAUTION: During final apch SAD DME is to be used with ZWN VOR.

D22.0
ZWN

359°
275°
1523′

MAX 210 KT
Bank angle 022°

SAARBRUCKEN
343 SBN

086°

D4.1
SAD

GERMANY
FRANCE

D8.4
SAD
[FDØ9]

085°
1532′

D4.0
SAD
[4ØDM2]

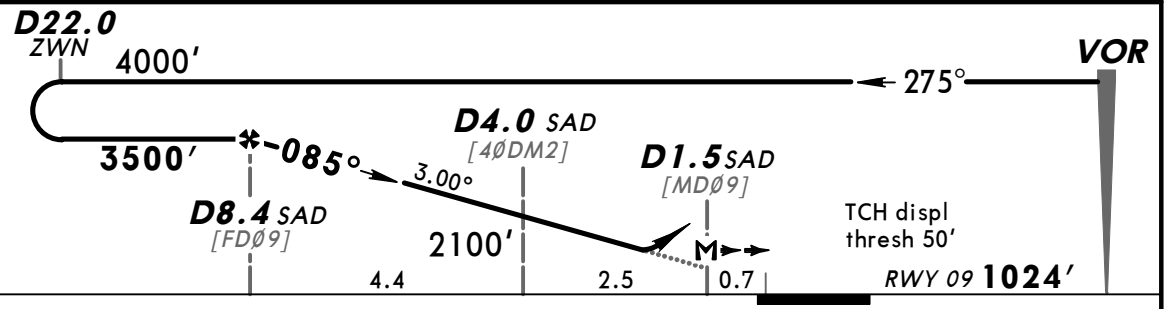
D1.5
SAD
[MDØ9]

SAARBRUCKEN
D (116.75) SAD

Zweibrucken

49-10
06-50
07-00
07-10
07-20

SAD DME	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	3370′	3050′	2730′	2410′	2100′	1780′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.5 SAD						

ODALS
REIL
PAPI

086° RT

D4.1 SAD

Standard STRAIGHT-IN LANDING RWY **09**

DA(H) **1610′** (586′)

ALS out

PANS OPS 4

A	RVR 1500m
B	
C	CMV 2400m
D	

CHANGES: Bearings.

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BRIEFING STRIP ™

*D-ATIS	LANGEN Radar (APP)	*SAARBRUCKEN Tower
125.3	129.67	118.35

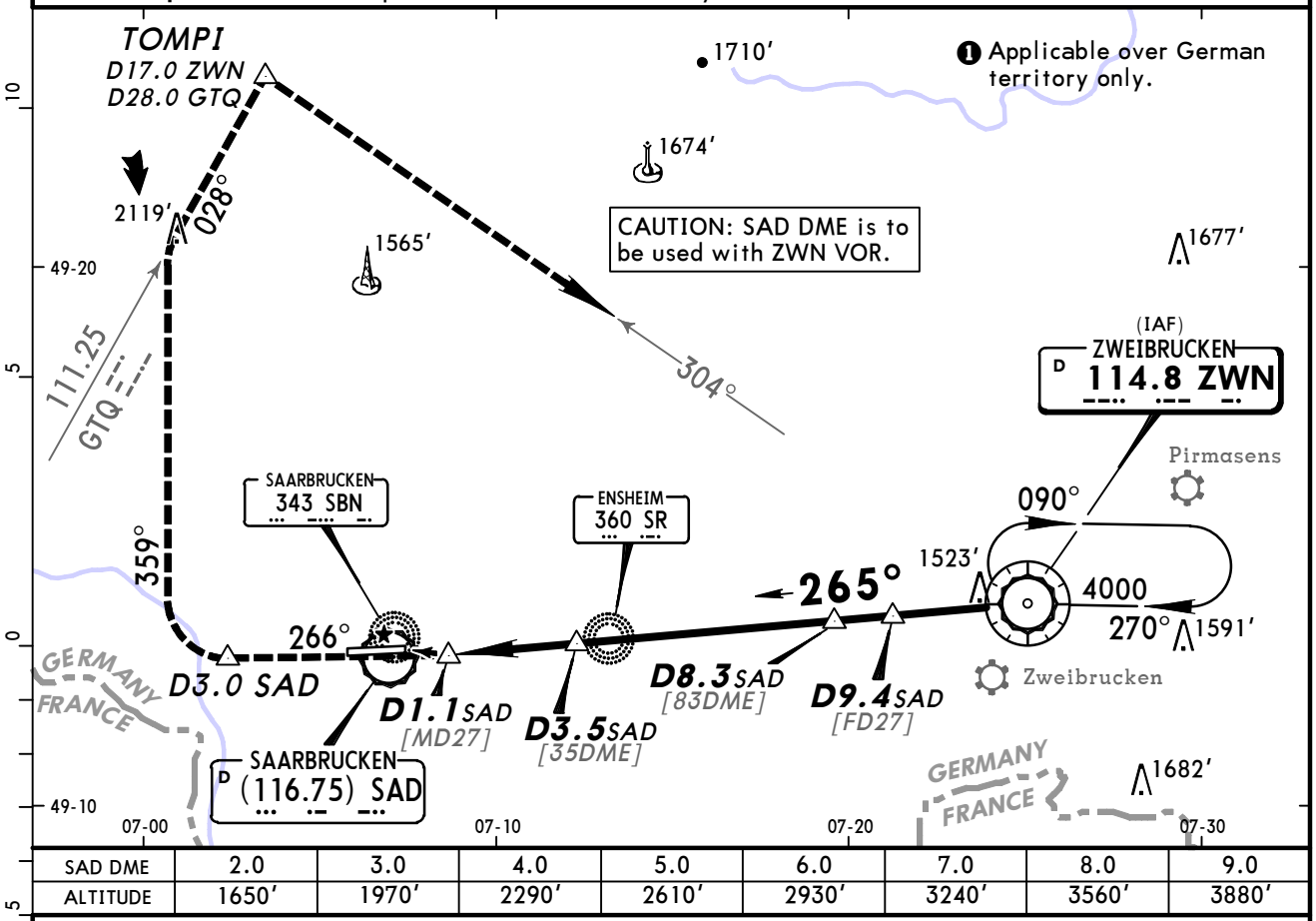
VOR ZWN	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
114.8	265°	D9.4 SAD 4000′ (2942′)	1610′ (552′)	Apt Elev 1058′ RWY 1058′

MISSED APCH: Climb on track 266° to D3.0 SAD or 2500′, wichever is later, then turn RIGHT on track 359°. Turn RIGHT to intercept and follow R-028 GTQ to TOMPI climbing to 4000′, then turn RIGHT to ZWN VOR.

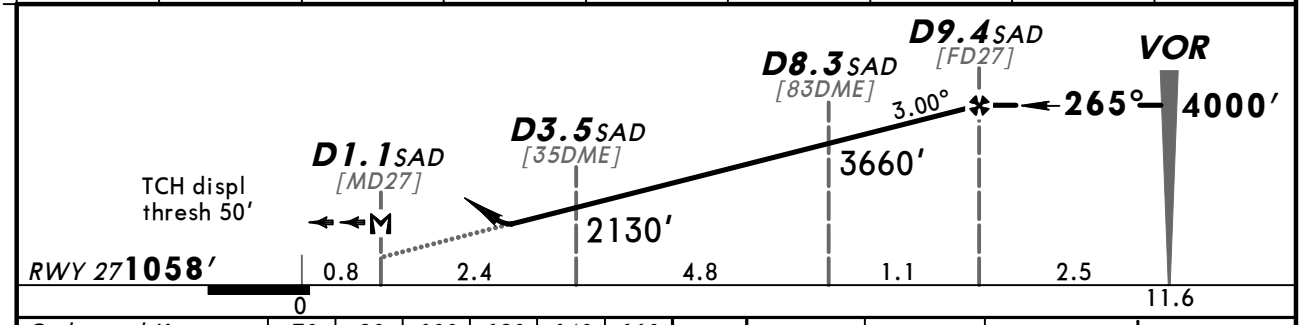
4000′ ❶ MSA SAD DME

Alt Set: hPa (IN on req) Rwy Elev: 38 hPa Trans level: By ATC Trans alt: 5000′

1. **DME required.** 2. Final apch track offset 1° from rwy centerline.



SAD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	1650′	1970′	2290′	2610′	2930′	3240′	3560′	3880′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.1 SAD						

HIALS PAPI | 266° RT | D3.0 SAD whichever later | 2500′

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **27**

DA(H) **1610′** (552′)

	ALS out	
A	RVR 1500m	
B		
C	RVR 1800m	CMV 2400m
D		

CIRCLE-TO-LAND
Not authorized
South of airport

Max Kts	MDA(H)	VIS
100	1660′ (602′)	1500m
135	1720′ (662′)	1600m
180	1840′ (782′)	2400m
205	1840′ (782′)	3600m

CHANGES: Bearings.

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BRIEFING STRIP™

*D-ATIS	LANGEN Radar (APP)	*SAARBRUCKEN Tower
125.3	129.67	118.35

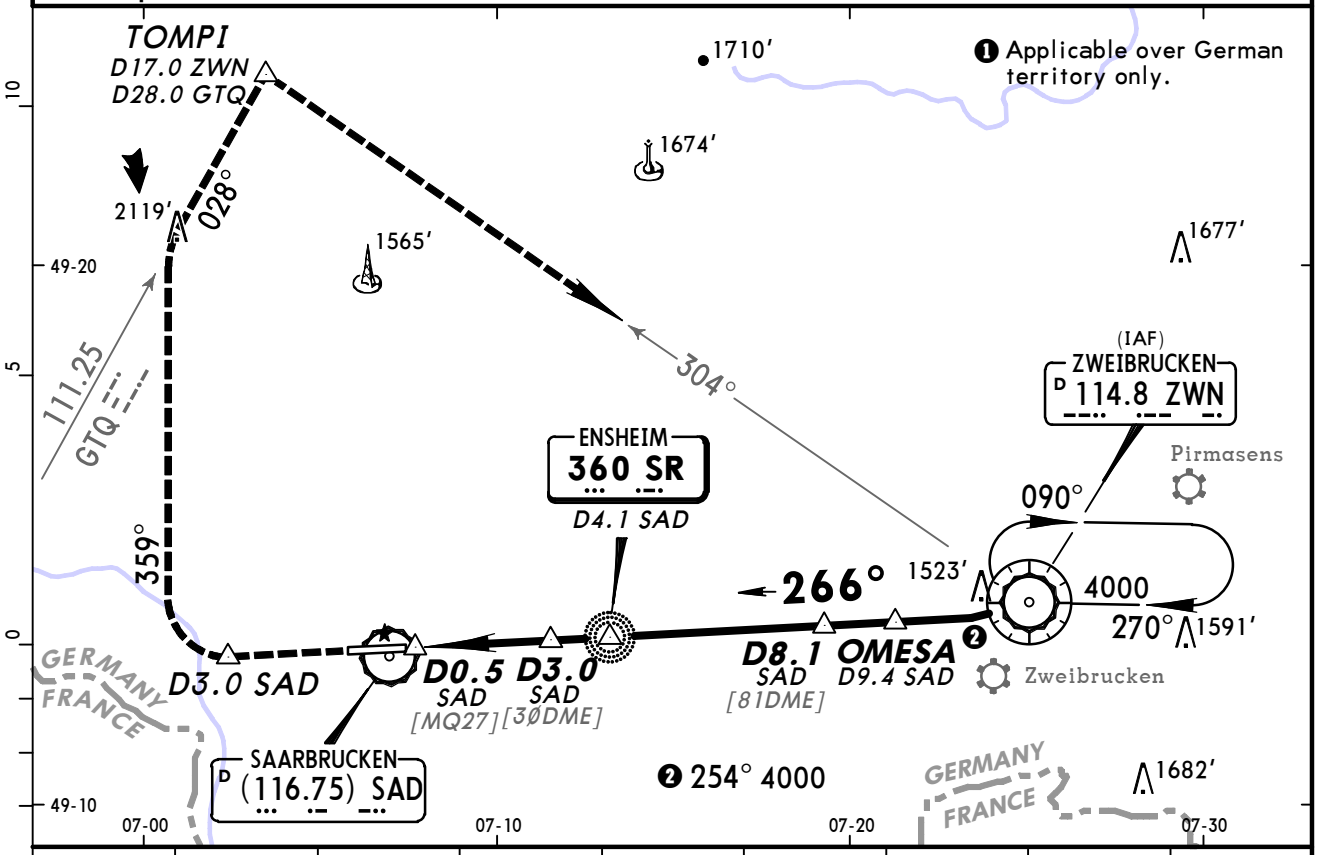
NDB SR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
360	266°	OMESA 4000′ (2942′)	1610′ (552′)	Apt Elev 1058′ RWY 1058′

MISSED APCH: Climb STRAIGHT AHEAD to D3.0 SAD or 2500′, whichever is later, then turn RIGHT on track 359°. Turn RIGHT to intercept and follow R-028 GTQ to TOMPI climbing to 4000′, then turn RIGHT to ZWN VOR.

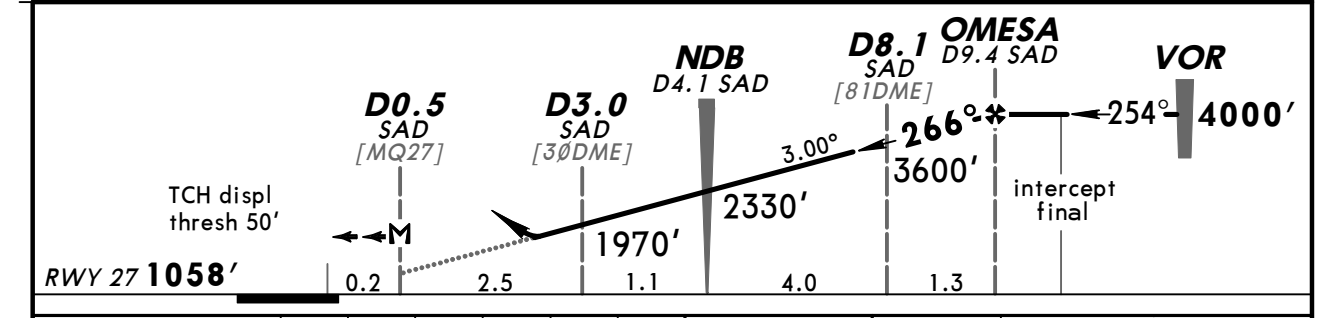
4000′ ❶ MSA SAD DME

Alt Set: hPa (IN on req) | Rwy Elev: 38 hPa | Trans level: By ATC | Trans alt: 5000′

DME required.



SAD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	1650′	1970′	2290′	2610′	2930′	3240′	3560′	3880′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D0.5 SAD						

HIALS
PAPI
D3.0 SAD whichever later 2500′

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **27**

DA(H) **1610′** (552′)

	ALS out	
A	RVR 1500m	
B		
C	RVR 1800m	CMV 2400m
D		

CIRCLE-TO-LAND
Not authorized
South of airport

Max Kts	MDA(H)	VIS
100	1660′ (602′)	1500m
135	1720′ (662′)	1600m
180	1840′ (782′)	2400m
205	1840′ (782′)	3600m

CHANGES: Bearings. Descent angle.

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General Information

Location: Stuttgart Deu
IATA Code: STR
Lat/Long: N48° 41.4' E009° 13.3'
Elevation: 1276 ft

Airport Use: Public
Magnetic Variation: 1.7°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0610 Z
Sunset: 1702 Z,

Runway Information

Runway: 07
Length x Width: 10974 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 1267 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 984 ft

Runway: 25
Length x Width: 10974 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 1181 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Communication Information

ATIS 126.125
Stuttgart Ground Tower 118.6
Stuttgart Delivery Tower 121.9
Stuttgart Tower 28.402 Military
Stuttgart Tower 119.05
Stuttgart Tower 118.8
Stuttgart Tower 37.835 Military
Stuttgart Director Approach Control 119.85
Stuttgart Director Approach Control 28.08 Military
Langen Radar Approach Control 125.05
Langen Radar Approach Control 119.2

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Langen Radar Approach Control 34.042 Military

1. GENERAL

1.1. ATIS

*D-ATIS 126.12

1.2. NOISE ABATEMENT PROCEDURES

For additional depiction refer to 10-4.

1.2.1. LOCAL FLYING RESTRICTIONS

Airplanes and rotorcraft are admitted at Stuttgart APT, however jet airplanes are admitted only if licensed in accordance with ICAO Annex 16, Chapter 3.
Other ACFT PPR.

EXCEPTIONS

Excepted from this restriction are subsonic jet airplanes corresponding to the regulations in VOL I, Part II, Chapter 2 of ANNEX 16 pertaining to the ICAO Agreement:

- When using the APT by the German Federal Armed Forces or the U.S. Armed Forces in connection with their official duties.
- In other justified individual cases with the approval of the authorizing agency as far as this appears necessary in the special public interest.

PPR procedures shall be adressed to

Flughafen Stuttgart GmbH
Verkehrsaufsicht
Postfach 230461
70624 Stuttgart
Telefax: (0711) 948-2349
Telefon: (0711) 948-3586

prior to applying for slots from the Flight Scheduling Coordinator of the Federal Republic of Germany according to FAL 1-6/7.
The application shall contain the following data:

a) name and address of the applicant (with telefax or telephone number)
b) ACFT identification
c) ACFT type
d) day(s) on which the individual flight or flights are to be conducted by the ACFT listed under b)
e) time of arrival in Stuttgart
f) time of departure in Stuttgart
g) flight numbers.

The authorization of applications does not replace and/or include the necessary application of slots from the Flight Scheduling Coordinator of the Federal Republic of Germany. The status of Stuttgart APT as a completely coordinated APT is expressly pointed out.

1.2.2. NIGHT FLYING RESTRICTIONS

Between 2300-0600 LT civil jet ACFT with a noise certificate according to ICAO Annex 16, Chapter 3 are not permitted to take-off or land.

EXCEPTIONS

Excepted from this restriction are:

- Landings of ACFT with a noise certificate according to ICAO Annex 16, Chapter 3 between 2300-2330 LT.
- delayed landings of ACFT with a noise certificate according to ICAO Annex 16, Chapter 3 if the planned time of arrival is before 2330 LT and the delayed landing is conducted by 2400 LT.
- ACFT using the APT as emergency or alternate aerodrome for meteorological, technical or other safety reasons.
- ACFT on a mission in disasters or rendering medical assistance.
- ACFT operated in the night air-mail service of the "Deutsche Post AG" with a noise certificate according to ICAO Annex 16, Chapter 3.

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1. GENERAL

- conducting flight checks for the unit responsible for air navigation services.

The approving authority may grant exceptions in justified individual cases for Stuttgart APT (Tel.: 0711-948-4460) or, according to their specifications for the Aviation Supervision Office at Stuttgart APT if this seems necessary in the public interest, especially to maintain the safety of air traffic or to avoid disturbance to air traffic.

1.2.3. RUN-UP TESTS

Test runs or run-ups of engines are generally permitted between 0600-2200LT only.
Test runs and run-ups of engines are permitted only after prior consent and on special instruction by the Aviation Supervision Office.
Idle test runs (ground idle) are excluded.

1.3. TAXI PROCEDURES

TWY M between stands 32 thru 35 and 61 thru 65
MAX wingspan 118'/36m.
Apron GA3 and TWY O between stands 60 thru 64 and 70 thru 73
MAX wingspan 95'/29m.
Entry/exit between Aprons GA2 and GA3 (Exit 2)
MAX wingspan 75'/23m.
Entry/exit at the western edge of Apron GA3 (Exit 3)
MAX wingspan 95'/29m.

1.4. PARKING INFORMATION

Aprons GA2 available for ACFT up to 2000kg only.
On stands 8 thru 32, 33, 34, 35, 36, 105 and 106 push-back required.
Stands 9 thru 32, 33, 34, 35 and 36 equipped with APIS.

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2. ARRIVAL

2.1. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC,
Not applicable within airspace C.

2.2. NOISE ABATEMENT PROCEDURES

2.2.1. VISUAL APPROACHES

Visual approaches to RWY 07 and 25 are permitted only for acft with MTOW not exeeding 5.7 t, whereby the overflying of built-up areas shall be avoided as far as possible.

2.2.2. REVERSE THRUST

When landing, Reverse thrust other than idle thrust shall only be used to an extent necessary for safety reasons.

2.3. CAT II/III OPERATIONS

RWY 07/25 approved for CAT II/III operations, special aircrew and ACFT certification required.

2.4. TAXI PROCEDURES

Arriving ACFT with more than 5.7 tons MTOW shall use following turn-offs when RWY conditions permit:
RWY 07 - Jets use TWY D and Props use TWY E.
RWY 25 - Use TWY F.

2.5. OTHER INFORMATION

2.5.1. FUEL SAVING AND NOISE REDUCING ILS APPROACH PROCEDURES (CONTINUOUS DESCENT APPROACH - CDA)

2.5.1.1. GENERAL

For the purpose of fuel-saving and noise abatement during approach the following approach procedure is announced. It may be requested by the pilot or offered by the controller. It can be performed only in connection with an ILS approach.

2.5.1.2. PROCEDURE

ACFT will be guided by the approach control unit by means of radar vectoring and will be cleared for a continuous descent to the intermediate approach altitude in such a way that after reaching this intermediate approach altitude on the localizer course, about 1 NM will be left for intercepting the glide path in level flight. This intermediate approach segment will serve to reduce speed.
Intermediate approach altitude: 3500'.
It is assumed that the continuous descent will be performed at a rate of 300 ft/NM (descent angle approx 3°), down to the cleared altitude.

If, for specific reasons (e.g. separation, airspace structure, obstacles), altitudes above the intermediate approach altitude have to be initially assigned, these restrictions will be lifted early enough to allow a continuous descent at a rate of 300 ft/NM.

Details about the distance from touchdown will be transmitted to the pilot together with the clearance for descent and usually at 20, 15 and 10 NM from touchdown. This should enable the pilot to correct the rate of descent as required.

In case of traffic situations allowing no CDA (e.g. approaches of ACFT with different performance data), pilots will be informed by the notice NO CDA POSSIBLE. In this case, approaches must be conducted according to the previous procedures.

2.5.1.3. NOISE ABATEMENT

On approaches in accordance with the CDA, pilots are also expected to use the approach techniques recommended for noise abatement in the vicinity of APTs (see AIR TRAFFIC CONTROL page GERMANY-1).

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3. DEPARTURE

3.1. DE-ICING

ACFT de-icing will be performed on de-icing-areas DP1 thru DP4.
ACFT may taxi on the de-icing positions and the surrounding TWYs only with the absolute minimum engine speed required.
Pilots have to inform Delivery about necessary de-icing 20 min prior to start-up request.
Ground may instruct pilots to change parking position in case de-icing positions are occupied.
When de-icing position is available, Ground will give taxi instructions and will request pilots to establish radio contact with the de-icing service.
During the de-icing procedure, only the engines of prop ACFT and of ACFT with jet engines, for which special regulations exist, have to be turned-off.
After de-icing pilots have to request new start-up (where required) and/or taxi instructions from Ground.

3.2. SPEED RESTRICTIONS

MAX 250 KT below FL100 or by ATC.
Not applicable within airspace C.

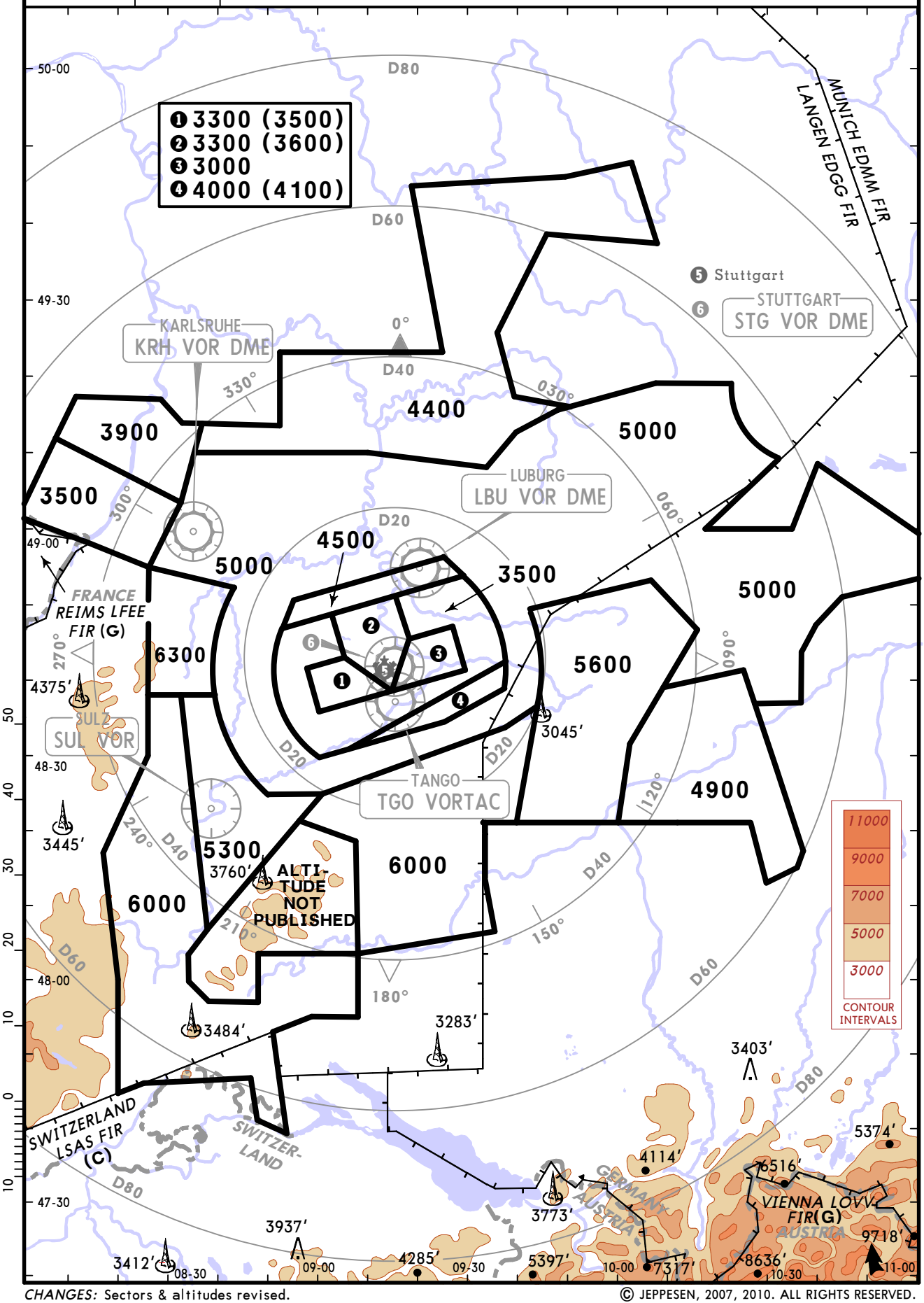
3.3. OTHER INFORMATION

3.3.1. DATALINK DEPARTURE CLEARANCE (DCL)

t_i 25 min prior to EOBT for unregulated flights.
30 min prior to CTOT for ATFM regulated flights.
t_t 11 min prior to EOBT for unregulated flights.
16 min prior to CTOT for ATFM regulated flights.
t_l 5 min

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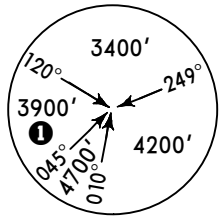
LANGEN Radar (APP) 125.05 119.2	*Apt Elev* 1276′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000′ above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500′). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only. Altitudes in brackets apply for the period from AIRAC date in November until AIRAC date in March in order to meet required obstacle clearance at cold temperatures.



CHANGES: Sectors & altitudes revised.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
126.12	1276′	Trans level: By ATC Trans alt: 5000′



1 3300′ within 10 NM

BADSO ONE ALFA (BADSO 1A) *[BADS1A]*
REUTL FOUR ALFA (REUTL 4A) *[REUT4A]*
TEKSI FOUR ALFA (TEKSI 4A) *[TEKS4A]*
RWYS 07, 25 ARRIVALS

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

KARLSRUHE
D 115.95 KRH
N48 59.6 E008 35.1

174°
7000
354°
D10
D
30
5000
BADSO 1A
078°
R258°

178°
5000
358°
(IAF)
LUBURG
D 109.2 LBU
N48 54.8 E009 20.4

STUTTGART
D 116.85 STG
N48 41.8 E009 15.4

2 *Clearance limit*
BADSO
N48 49.2 E008 36.3

D
257°
17
5000
BABEG
N48 40.3
E009 39.9

16.1
265°
6000
261°
6000
4 TEKSI 4A

3 *Clearance limit*
TEKSI
N48 41.4 E010 04.1
(TGO R-081/D32)

(IAF)
TANGO
D 112.5 TGO
N48 37.1 E009 15.6

R077°
5000
228°
R163°
048°
5000
16
343°
D
5000
REUTL 4A
6000
343°

3 *Clearance limit*
REUTL
N48 22.1 E009 21.7

N
NOT TO SCALE

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

2 BADSO 1A
In case of radio communication failure proceed to LBU for standard approach.

3 REUTL 4A, TEKSI 4A
In case of radio communication failure proceed to TGO for standard approach.

LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS

LOST COMMS

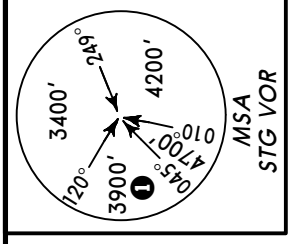
4 Between TEKSI & BABEG
BRNAV equipment necessary.

CHANGES: STARs renumbered & revised.

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*D-ATIS	Apt Elev
126.12	1276′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect vectors to final.
2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.



1 3300′ within 10 NM

BADSO Ø7 *[BADØ7]*, KRH Ø7
LBU Ø7, NOSBU Ø7 *[NOSØ7]*
RWY 07 RNAV TRANSITIONS

FROM NORTH

GPS- OR FMS-EQUIPPED AIRCRAFT

USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC

NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NOSBU N49 03.1 E009 27.3 — At or above FL100 / 240 KT

(IAF) LUBURG D 109.2 LBU N48 54.8 E009 20.4 — At or above FL100 / 240 KT

D STUTTGART 116.85 STG N48 41.8 E009 15.4

DS413 N48 35.5 E008 42.7 — At or above 6500′

DS418 N48 45.8 E009 07.5 — 220 KT

VATER (FAF) N48 38.9 E009 00.1 — At or above 4000′

DS411 N48 37.8 E008 54.3 — At or above 4500′

DS412 N48 36.6 E008 48.5 — At or above 5500′

DS421 N48 42.9 E008 52.0

DS422 N48 41.7 E008 46.2

DS423 N48 40.6 E008 40.4

DS424 N48 39.5 E008 34.7

DS414 N48 34.4 E008 36.9 — At or above FL80

DS419 N48 45.0 E009 03.1 — At or above FL80

DS417 N48 49.5 E009 03.0 — 220 KT

DS416 N48 57.0 E009 02.9 — At or above FL100

D KARLSRUHE 115.95 KRH N48 59.6 E008 35.1

Clearance Limit **BADSO** N48 49.2 E008 36.3 — At or above FL100 / 240 KT

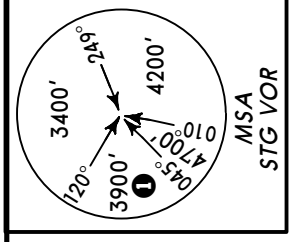
D10

TRANSITION	ROUTING
BADSO Ø7	BADSO **(FL100+;** K240) - DS417 (K220) - DS419 **(FL80+) -** DS424 - DS414 **(FL80+) -** DS413 **(6500′+)** - DS412 **(5500′+)** - DS411 **(4500′+)** - VATER **(4000′+).**
KRH Ø7	KRH - DS416 **(FL100+)** - DS417 (K220) - DS419 **(FL80+) -** DS424 - DS414 **(FL80+) -** DS413 **(6500′+)** - DS412 **(5500′+)** - DS411 **(4500′+)** - VATER **(4000′+).**
LBU Ø7	LBU **(FL100+;** K240) - DS418 (K220) - DS419 **(FL80+) -** DS424 - DS414 **(FL80+) -** DS413 **(6500′+)** - DS412 **(5500′+)** - DS411 **(4500′+)** - VATER **(4000′+).**
NOSBU Ø7	NOSBU **(FL100+;** K240) - DS416 **(FL100+)** - DS417 (K220) - DS419 **(FL80+) -** DS424 - DS414 **(FL80+) -** DS413 **(6500′+)** - DS412 **(5500′+)** - DS411 **(4500′+)** - VATER **(4000′+).**

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*D-ATIS	Apt Elev
126.12	1276′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect vectors to final.
2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.



BADSO 25 *[BAD25]*, LBU 25
RWY 25 RNAV TRANSITIONS
FROM NORTH
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NOT TO SCALE

DS515 N48 48.9 E009 53.5 — At or above FL80
DS535 N48 53.6 E009 51.5
DS514 N48 47.3 E009 44.7 — At or above 6500′
DS513 N48 46.2 E009 38.9 — At or above 5500′
DS534 N48 52.0 E009 42.7
DS533 N48 50.9 E009 36.9
DS532 N48 49.9 E009 31.1
DS512 N48 45.1 E009 33.1 — At or above 4500′
(FAF) UNSER N48 44.0 E009 27.2 — At or above 4000′
DS531 N48 48.6 E009 24.3 — 220 KT
DS530 N48 46.5 E009 13.0 — BADSO 25 / At or above FL100
(IAF) LUBURG 109.2 LBU N48 54.8 E009 20.4 — At or above FL100 / 240 KT
STUTTGART 116.85 STG N48 41.8 E009 15.4
KARLSRUHE 115.95 KRH N48 59.6 E008 35.1
Clearance Limit BADSO N48 49.2 E008 36.3 — At or above FL100 / 240 KT
DS529 N48 40.4 E008 41.1
D10

TRANSITION	ROUTING
BADSO 25	BADSO **(FL100+;** K240) - DS529 - DS531 **(FL100+;** K220) - DS535 - DS515 **(FL80+)** - DS514 **(6500′+)** - DS513 **(5500′+)** - DS512 **(4500′+)** - UNSER **(4000′+).**
LBU 25	LBU **(FL100+;** K240) - DS531 (K220) - DS535 - DS515 **(FL80+)** - DS514 **(6500′+)** - DS513 **(5500′+)** - DS512 **(4500′+)** - UNSER **(4000′+).**

CHANGES: Radial update; VENUD withdrawn.

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*D-ATIS	Apt Elev
126.12	1276′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect vectors to final.
2. Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

REUTL Ø7 *[REUØ7]*
TEKSI Ø7 *[TEKØ7]*, TGO Ø7
RWY 07 RNAV TRANSITIONS
FROM SOUTH
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION
ONLY WHEN CLEARED BY ATC

MSA
STG VOR
3400′ 249° 4200′ 010° 047° 120° 3900′
1 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NOT TO SCALE

HOLDING OVER TGO
228° 6000 048°

STUTTGART
116.85 STG
N48 41.8 E009 15.4

(IAF)
TANGO
112.5 TGO
N48 37.1 E009 15.6
At or above FL80

Clearance Limit
TEKSI
N48 41.4 E010 04.1
At or above FL100
240 KT

Clearance Limit
REUTL
N48 22.1 E009 21.7
At or above FL100
240 KT

DS426
N48 40.3 E009 39.9

DS427
N48 32.7 E009 26.2
220 KT

DS428
N48 26.4 E008 53.0
At or above FL100

DS429
N48 36.0 E009 09.8
220 KT

DS431
N48 33.4 E008 56.2

DS432
N48 32.3 E008 50.4

DS433
N48 31.2 E008 44.6

DS434
N48 30.0 E008 38.9

(FAF)
VATER
N48 38.9 E009 00.1
At or above 4000′

DS411
N48 37.8 E008 54.3
At or above 4500′

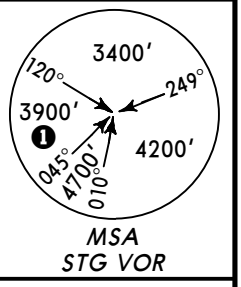
DS412
N48 36.6 E008 48.5
At or above 5500′

DS413
N48 35.5 E008 42.7
At or above 6500′

DS414
N48 34.4 E008 36.9
At or above FL80

D32 R081° 261° 265° 6000 16.1 TEKSI Ø7 6000 1.8 229° 6000 253° 23 6000 9.4 4 6000 10.1 290° 6000 342° 4.5 073° 6000 4 4 4

*D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.
126.12	1276′	



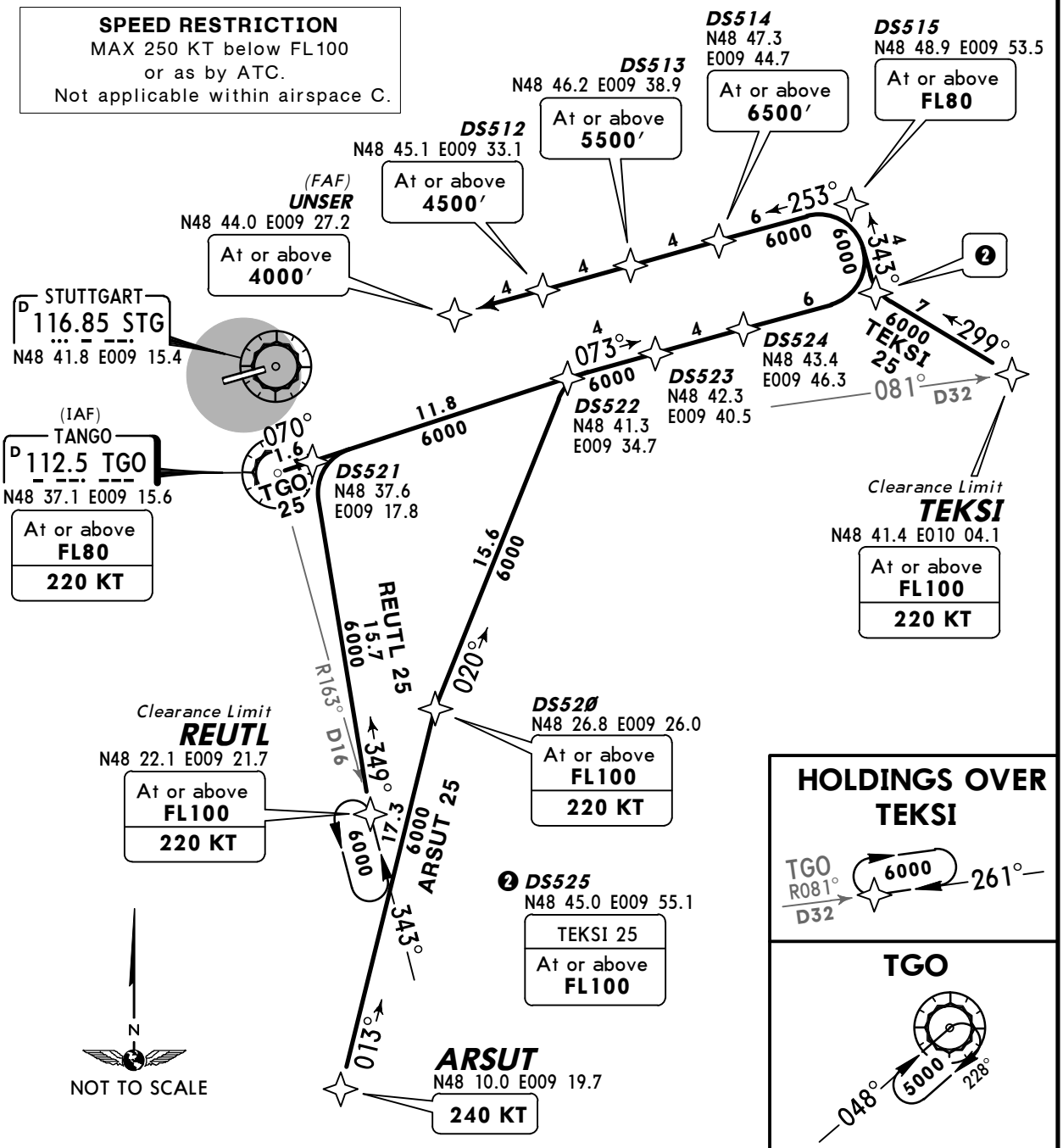
❶ 3300′ within 10 NM

ARSUT 25 *[ARS25]*, REUTL 25 *[REU25]* TEKSI 25 *[TEK25]*, TGO 25 RWY 25 RNAV TRANSITIONS

FROM SOUTH

GPS- OR FMS-EQUIPPED AIRCRAFT

USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



TRANSITION	ROUTING
ARSUT 25	ARSUT (K240) - DS520 **(FL100+;** K220) - DS522 - DS525 - DS515 **(FL80+) -** DS514 **(6500′+) -** DS513 **(5500′+) -** DS512 **(4500′+) -** UNSER **(4000′+).**
REUTL 25	REUTL **(FL100+;** K220) - DS521 - DS522 - DS525 - DS515 **(FL80+) -** DS514 **(6500′+) -** DS513 **(5500′+) -** DS512 **(4500′+) -** UNSER **(4000′+).**
TEKSI 25	TEKSI **(FL100+;** K220) - DS525 **(FL100+) -** DS515 **(FL80+) -** DS514 **(6500′+) -** DS513 **(5500′+) -** DS512 **(4500′+) -** UNSER **(4000′+).**
TGO 25	TGO **(FL80+;** K220) - DS522 - DS525 - DS515 **(FL80+) -** DS514 **(6500′+) -** DS513 **(5500′+) -** DS512 **(4500′+) -** UNSER **(4000′+).**

CHANGES: Radial update; MIPSI withdrawn.

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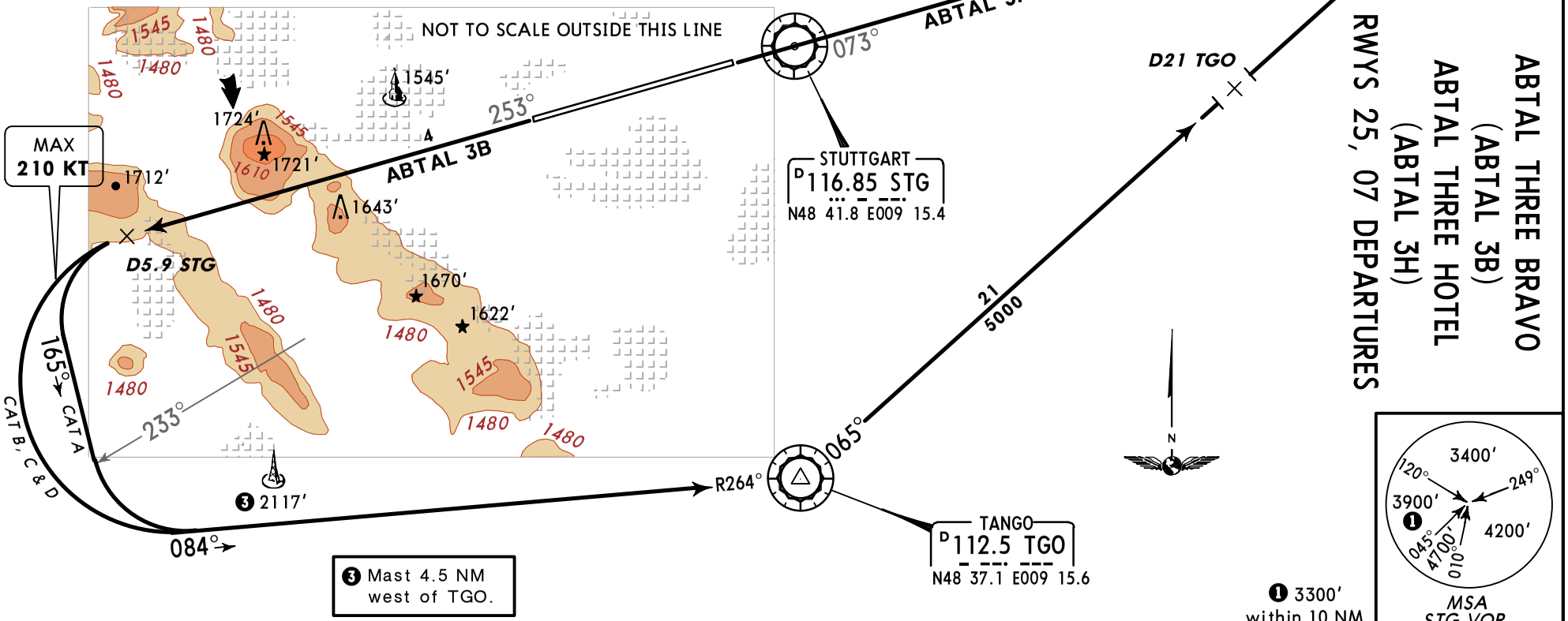
CHANGES: SID ABTAL 2B renumbered 3B & revised.

Initial climb clearance 5000′		
SID	**RWY**	**ROUTING**
ABTAL 3B	**25**	Intercept STG R-253 to D5.9 STG, turn LEFT (CAT A: 165° track, when passing STG R-233 turn LEFT), intercept TGO R-264 inbound to TGO ❷, turn LEFT, TGO R-065 to ABTAL.
ABTAL 3H	**07**	Intercept STG R-073 to ABTAL.
❷ At TGO transition to airways **(U)N 869** or **UL 607** not possible.		

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of
ABTAL 3B: 243′ per NM (4%) until passing **1900′**, 310′ per NM (5.1%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
ABTAL 3H: 249′ per NM (4.1%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215



ABTAL THREE BRAVO (ABTAL 3B)
ABTAL THREE HOTEL (ABTAL 3H)
RWYS 25, 07 DEPARTURES

LANGEN Radar (APP) 125.05

Apt Elev 1276′

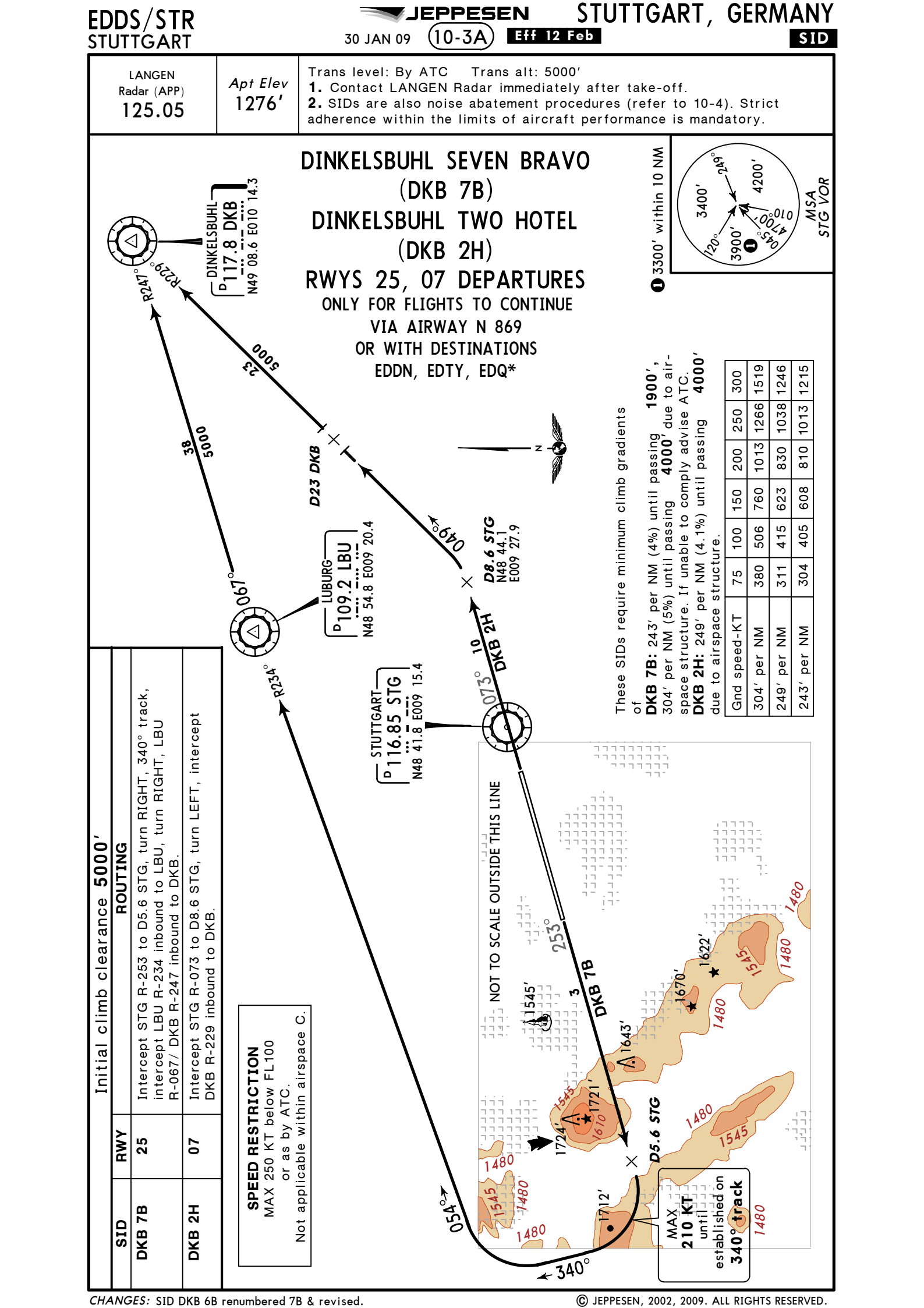
Trans level: By ATC Trans alt: 5000′
1. Contact LANGEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

DINKELSBUHL SEVEN BRAVO (DKB 7B)
DINKELSBUHL TWO HOTEL (DKB 2H)
RWYS 25, 07 DEPARTURES

ONLY FOR FLIGHTS TO CONTINUE
VIA AIRWAY N 869
OR WITH DESTINATIONS
EDDN, EDTY, EDQ*



Initial climb clearance 5000′		
SID	RWY	ROUTING
DKB 7B	25	Intercept STG R-253 to D5.6 STG, turn RIGHT, 340° track, intercept LBU R-234 inbound to LBU, turn RIGHT, LBU R-067/ DKB R-247 inbound to DKB.
DKB 2H	07	Intercept STG R-073 to D8.6 STG, turn LEFT, intercept DKB R-229 inbound to DKB.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of
DKB 7B: 243′ per NM (4%) until passing **1900′**, 304′ per NM (5%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
DKB 2H: 249′ per NM (4.1%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

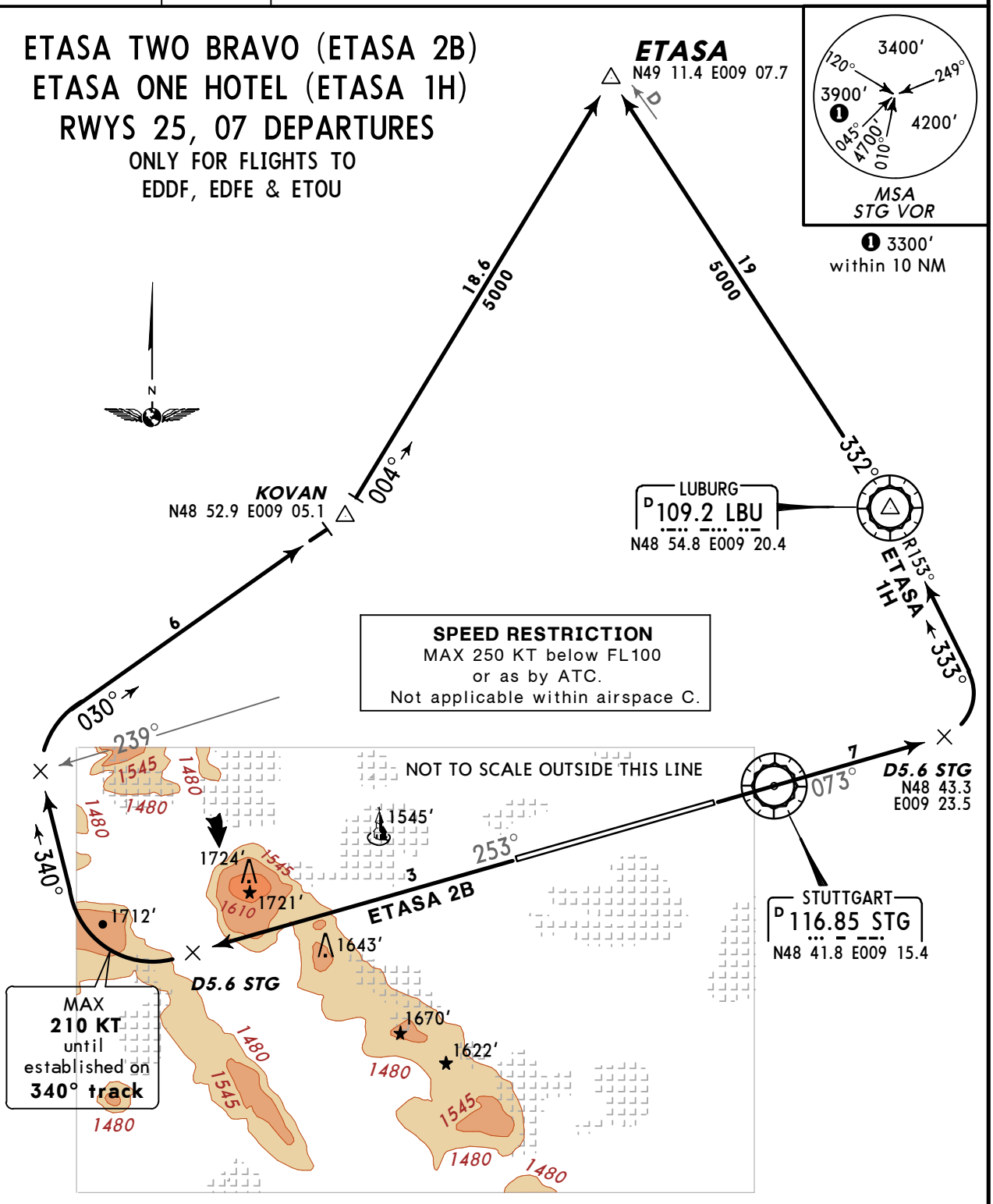
CHANGES: SID DKB 6B renumbered 7B & revised.

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LANGEN Radar (APP) 125.05	*Apt Elev* 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

ETASA TWO BRAVO (ETASA 2B)
ETASA ONE HOTEL (ETASA 1H)
RWYS 25, 07 DEPARTURES

ONLY FOR FLIGHTS TO
EDDF, EDFE & ETOU



These SIDs require minimum climb gradients of
ETASA 2B: 243′ per NM (4%) until passing **1900′**, 304′ per NM (5%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
ETASA 1H: 219′ per NM (3.6%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215
219′ per NM	273	365	547	729	911	1094

Initial climb clearance **5000′**

SID	RWY	ROUTING
ETASA 2B	**25**	Intercept STG R-253 to D5.6 STG, turn RIGHT, 340° track, when passing LBU R-239 ❷ turn RIGHT, 030° track to KOVAN, 004° track to ETASA.
ETASA 1H	**07**	Intercept STG R-073 to D5.6 STG, turn LEFT, intercept LBU R-153 inbound to LBU, LBU R-332 to ETASA.

❷ After passing LBU R-239 BRNAV equipment necessary.

CHANGES: SIDs ETASA 1B renumbered 2B & revised.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

GEBNO FIVE BRAVO (GEBNO 5B)
GEBNO FOUR HOTEL (GEBNO 4H)
RWYS 25, 07 DEPARTURES
ONLY FOR FLIGHTS TO CONTINUE VIA AIRWAY Z 76 NORTHBOUND MAX FL180

SID	RWY	ROUTING
GEBNO 5B	25	Intercept STG R-253 to D5.6 STG, turn RIGHT, 340° track, intercept LBU R-234 inbound to LBU, turn RIGHT, LBU R-067/DKB R-247 inbound to D15.2 DKB ❷, turn LEFT, 360° track to GEBNO.
GEBNO 4H	07	Intercept STG R-073 to D8.6 STG, turn LEFT, intercept DKB R-229 inbound to KEMAV ❸, 360° track to GEBNO.

After D15.2 DKB ❷ /KEMAV ❸ BRNAV equipment necessary.

Initial climb clearance 5000′

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

DINKELSBUHL
117.8 DKB
N49 08.6 E010 14.3

GEBNO
N49 10.0 E009 55.9

KEMAV
N48 58.6 E009 55.6
(DKB R-229/D16)

D15.2 DKB
N49 03.3
E009 52.6

D23 DKB

D8.6 STG
N48 44.1
E009 27.9

LUBURG
109.2 LBU
N48 54.8 E009 20.4

STUTTGART
116.85 STG
N48 41.8 E009 15.4

D5.6 STG

GEBNO 5B

GEBNO 4H

R247°
360°
5000
11.4
D28
056°
23
5000
067°
R234°
1
5000
049°
10
073°
253°
3
054°
340°

NOT TO SCALE OUTSIDE THIS LINE

1545′
1643′
1724′
1721′
1712′
1670′
1622′
1480
1545
1670

MAX 210 KT until established on 340° track

❶ 3300′ within 10 NM

MSA
STG VOR
3400′
4200′
3900′
249°
010°
047°
045°
120°

These SIDs require minimum climb gradients of
GEBNO 5B: 243′ per NM (4%) until passing **1900′**, 304′ per NM (5%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
GEBNO 4H: 249′ per NM (4.1%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

CHANGES: SID GEBNO 4B renumbered 5B & revised.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

KARLSRUHE THREE BRAVO (KRH 3B)
KARLSRUHE ONE HOTEL (KRH 1H)
RWYS 25, 07 DEPARTURES
ONLY FOR FLIGHTS TO EDDR, EDRZ, EDSB, ETAR & ETIP
MAX FL80, EXCEPT WEEKENDS

Initial climb clearance **5000′**

SID	RWY	ROUTING
KRH 3B	25	Intercept STG R-253 to D5.6 STG, turn RIGHT, 340° track, when crossing LBU R-239 ❷ turn LEFT, 338° track to ABGAN, 278° track to KRH.
KRH 1H	07	Intercept STG R-073 to D5.6 STG, turn LEFT, intercept LBU R-153 inbound to LBU, LBU R-278 via ABGAN to KRH.

❷ After passing LBU R-239 BRNAV equipment necessary.

MSA STG VOR
3400′ 249° 4200′ 010° 045° 120° 3900′ ❶

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215
219′ per NM	273	365	547	729	911	1094

❶ 3300′ within 10 NM

KARLSRUHE
D 115.95 KRH
N48 59.6 E008 35.1

ABGAN
N48 57.5
E008 55.0

R098° 13.3 5000

D D

17 5000

278°

R153°

LUBURG
D 109.2 LBU
N48 54.8 E009 20.4

333°

D5.6 STG
N48 43.3
E009 23.5

7 KRH 1H

073°

STUTTGART
D 116.85 STG
N48 41.8 E009 15.4

N

NOT TO SCALE OUTSIDE THIS LINE

253°

3 KRH 3B

1545′ 1643′ 1670′ 1622′ 1724′ 1721′ 1712′

1480 1545 1610

D5.6 STG

239°

10.1

338° 340°

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

MAX **210 KT** until established on **340° track**

These SIDs require minimum climb gradients of

KRH 3B
243′ per NM (4%) until passing **1900′**,
304′ per NM (5%) until passing **4000′**
due to airspace structure. If unable to comply advise ATC.

KRH 1H
219′ per NM (3.6%) until passing **4000′**
due to airspace structure.

CHANGES: SID KRH 2B renumbered 3B & revised.

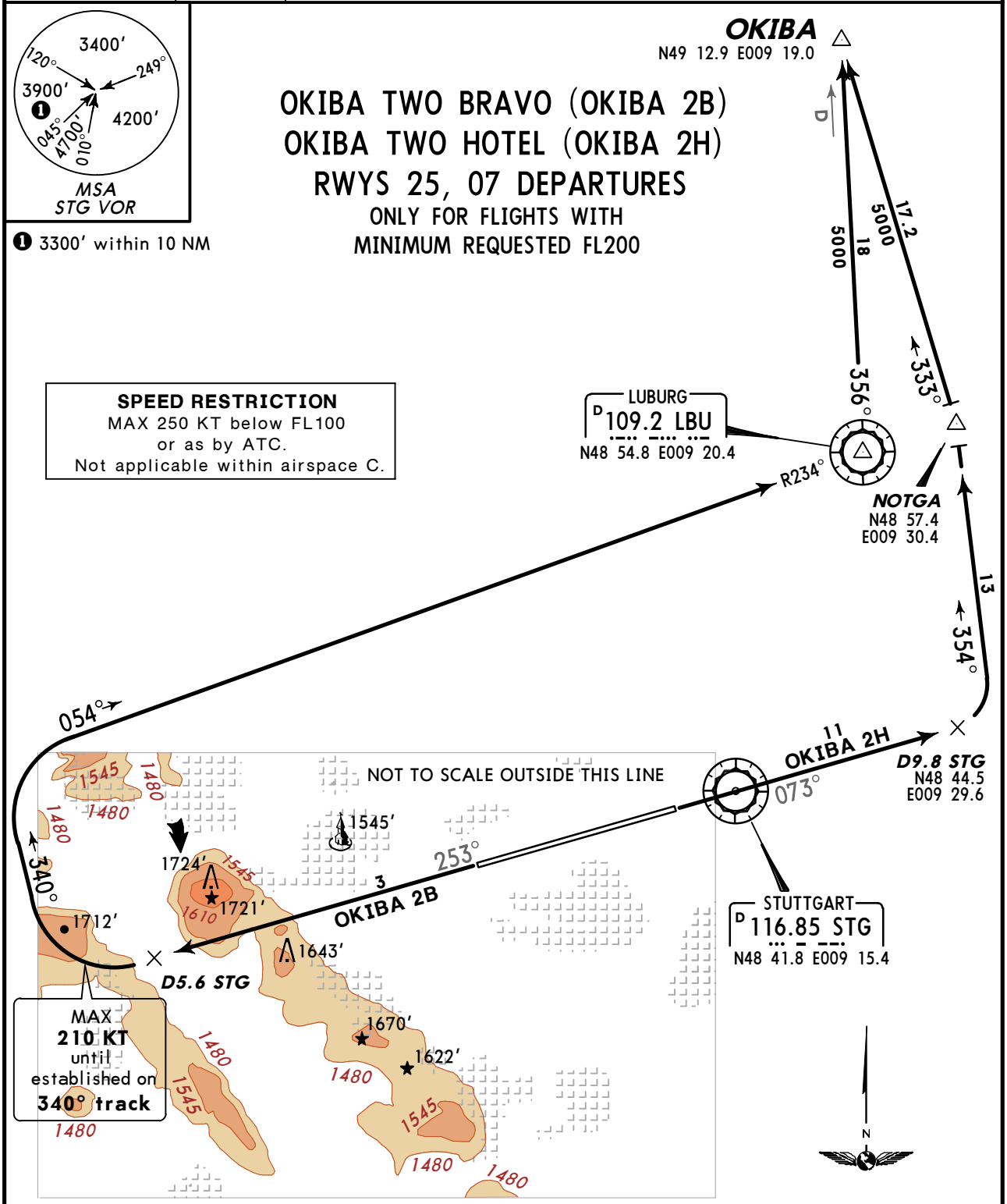
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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

❶ 3300′ within 10 NM

OKIBA TWO BRAVO (OKIBA 2B)
OKIBA TWO HOTEL (OKIBA 2H)
RWYS 25, 07 DEPARTURES
ONLY FOR FLIGHTS WITH
MINIMUM REQUESTED FL200

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of
OKIBA 2B: 243′ per NM (4%) until passing **1900′**, 304′ per NM (5%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
OKIBA 2H: 249′ per NM (4.1%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

Initial climb clearance **5000′**

SID	RWY	ROUTING
OKIBA 2B	**25**	Intercept STG R-253 to D5.6 STG, turn RIGHT, 340° track, intercept LBU R-234 inbound to LBU, turn LEFT, LBU R-356 to OKIBA.
OKIBA 2H ❷	**07**	Intercept STG R-073 to D9.8 STG, turn LEFT, 354° track to NOTGA, 333° track to OKIBA.

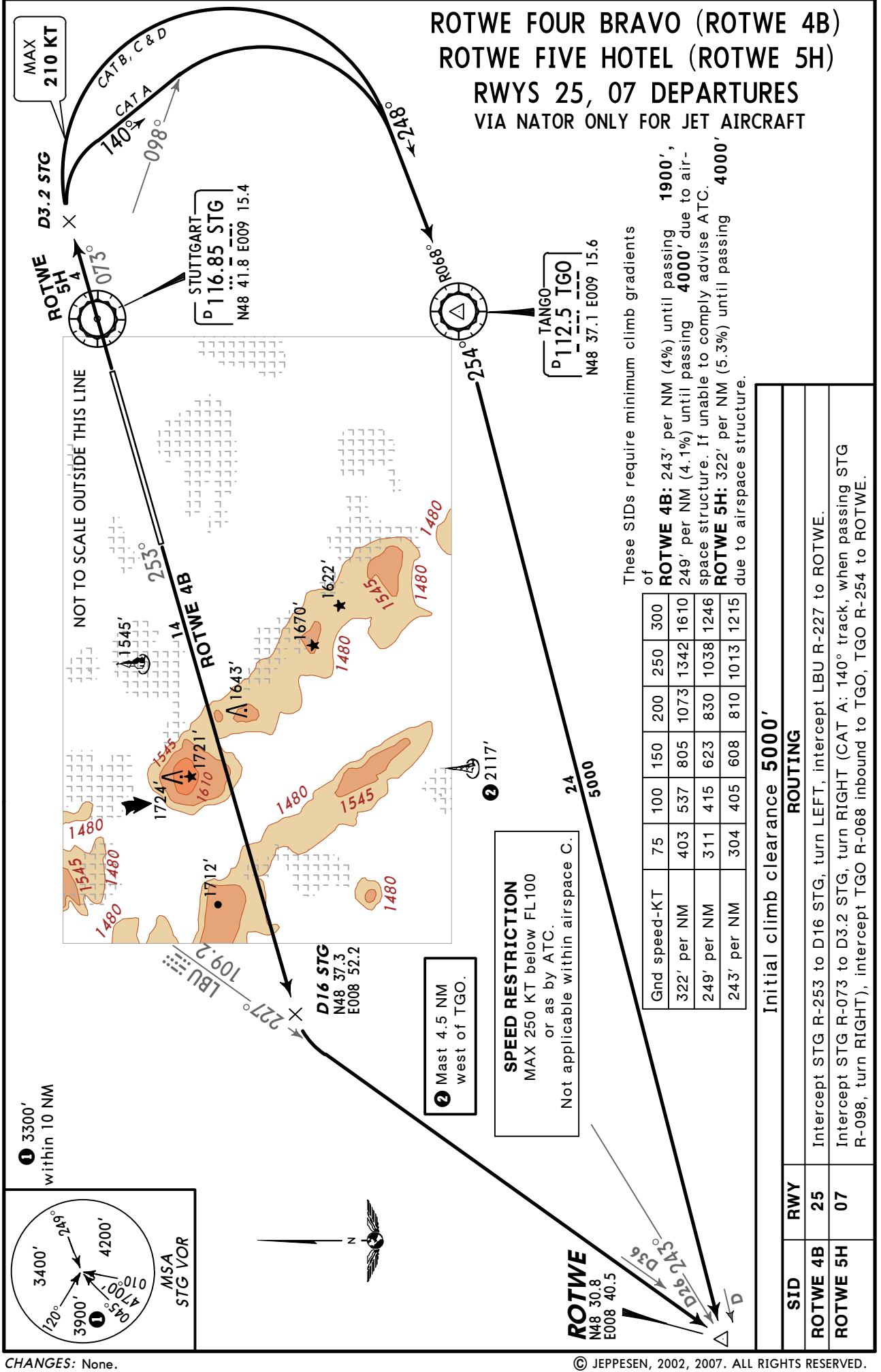
❷ After passing **5000′** BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

ROTWE FOUR BRAVO (ROTWE 4B)
ROTWE FIVE HOTEL (ROTWE 5H)
RWYS 25, 07 DEPARTURES
VIA NATOR ONLY FOR JET AIRCRAFT



Gnd speed-KT	75	100	150	200	250	300
322′ per NM	403	537	805	1073	1342	1610
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

Initial climb clearance **5000′**

SID	RWY	ROUTING
ROTWE 4B	25	Intercept STG R-253 to D16 STG, turn LEFT, intercept LBU R-227 to ROTWE.
ROTWE 5H	07	Intercept STG R-073 to D3.2 STG, turn RIGHT (CAT A: 140° track, when passing STG R-098, turn RIGHT), intercept TGO R-068 inbound to TGO, TGO R-254 to ROTWE.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

SULZ TWO BRAVO (SUL 2B)
SULZ ONE HOTEL (SUL 1H)
RWYS 25, 07 DEPARTURES

ONLY FOR PISTON ENGINE &
TURBOPRPOP ACFT
JET ACFT ONLY WITH DESTINATION
EDNY, EDTL, LSZH & LSZR

MAX 210 KT
CAT B, C & D
CAT A
140°
098°
D3.2 STG
073°
SUL 1H
STUTTGART
116.85 STG
N48 41.8 E009 15.4
NOT TO SCALE OUTSIDE THIS LINE
253°
SUL 2B
1545′
1643′
1721′
1724′
1712′
1622′
1670′
1480
1545
1610
D5.9 STG
2117′
Mast 4.5 NM west of TGO.
199°
248°
R068°
239°
TANGO
112.5 TGO
N48 37.1 E009 15.6
22
5000
D25 STG
6000
R059°
SULZ
116.1 SUL
N48 22.9 E008 38.7

Gnd speed-KT	75	100	150	200	250	300
322′ per NM	403	537	805	1073	1342	1610
273′ per NM	342	456	684	911	1139	1367
243′ per NM	304	405	608	810	1013	1215

Initial climb clearance **5000′**

SID	RWY	ROUTING
SUL 2B	25	Intercept STG R-253 to D5.9 STG, turn LEFT, 199° track, intercept SUL R-059 inbound to SUL.
SUL 1H	07	Intercept STG R-073 to D3.2 STG, turn RIGHT (CAT A: 140° track, when passing STG R-098, turn RIGHT), intercept TGO R-068 inbound to TGO, TGO R-239 to SUL.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of
SUL 2B: 243′ per NM (4%) until passing **1900′**, 273′ per NM (4.5%) until passing **4000′** due to airspace structure.
If unable to comply advise ATC.
SUL 1H: 322′ per NM (5.3%) until passing **4000′** due to airspace structure.

MSA
STG VOR
3400′
4200′
3900′
249°
010°
045°
120°
4700′

3300′ within 10 NM

CHANGES: SID SUL 9H renumbered 1H & revised.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

TAGIK TWO BRAVO (TAGIK 2B)
TAGIK ONE HOTEL (TAGIK 1H)
RWYS 25, 07 DEPARTURES
ONLY FOR FLIGHTS TO CONTINUE VIA ABUMO OR ASKIK WITH MAX FL240

Initial climb clearance **5000′**

SID	RWY	ROUTING
TAGIK 2B	25	Intercept STG R-253 to D5.6 STG, turn RIGHT, 340° track, when passing LBU R-239 ❷ turn LEFT, 338° track to ABGAN, 004° track to TAGIK.
TAGIK 1H	07	Intercept STG R-073 to D5.6 STG, turn LEFT, intercept LBU R-153 inbound to LBU, LBU R-278 to ABGAN ❸, 004° track to TAGIK.
After passing LBU R-239 ❷ /ABGAN ❸ BRNAV equipment necessary.		

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215
219′ per NM	273	365	547	729	911	1094

MSA STG VOR
3400′ 249° 4200′ 010° 047° 045° 120° 3900′ ❶

❶ 3300′ within 10 NM

NOT TO SCALE OUTSIDE THIS LINE

LUBURG D 109.2 LBU N48 54.8 E009 20.4

STUTTGART D 116.85 STG N48 41.8 E009 15.4

D5.6 STG N48 43.3 E009 23.5

TAGIK 1H

TAGIK 2B

D5.6 STG

R153° 333° 278° 073° 253° 239° 340° 338° 004° 10.1 14.3 5000 17 5000 D

1545′ 1643′ 1670′ 1622′ 1724′ 1721′ 1712′ 1610 1480 1545

TAGIK N49 11.7 E008 57.0

ABGAN N48 57.5 E008 55.0

R098° D13.3

KARLSRUHE D 115.95 KRH N48 59.6 E008 35.1

MAX **210 KT** until established on **340° track**

These SIDs require minimum climb gradients of

TAGIK 2B
243′ per NM (4%) until passing **1900′**,
304′ per NM (5%) until passing **4000′**
due to airspace structure. If unable to comply advise ATC.

TAGIK 1H
219′ per NM (3.6%) until passing **4000′**
due to airspace structure.

CHANGES: SID TAGIK 1B renumbered 2B & revised.

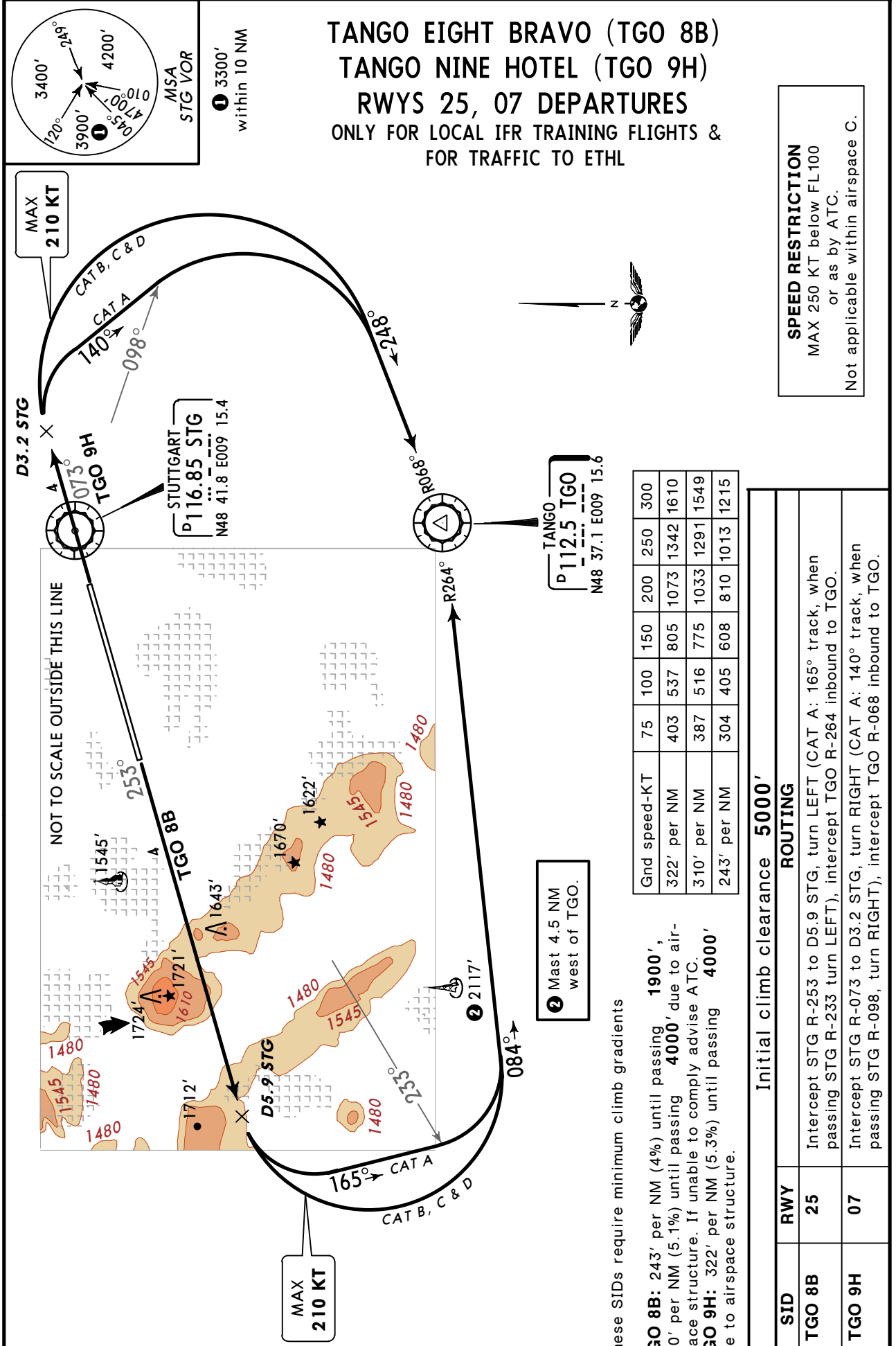
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STUTTGART Director	Apt Elev
119.85	1276′

Trans level: By ATC Trans alt: 5000′

1. Contact STUTTGART Director immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

TANGO EIGHT BRAVO (TGO 8B)
TANGO NINE HOTEL (TGO 9H)
RWYS 25, 07 DEPARTURES
ONLY FOR LOCAL IFR TRAINING FLIGHTS & FOR TRAFFIC TO ETHL



SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

Gnd speed-KT	75	100	150	200	250	300
322′ per NM	403	537	805	1073	1342	1610
310′ per NM	387	516	775	1033	1291	1549
243′ per NM	304	405	608	810	1013	1215

These SIDs require minimum climb gradients of
TGO 8B: 243′ per NM (4%) until passing **1900′**, 310′ per NM (5.1%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
TGO 9H: 322′ per NM (5.3%) until passing **4000′** due to airspace structure.

Initial climb clearance **5000′**

SID	RWY	ROUTING
TGO 8B	25	Intercept STG R-253 to D5.9 STG, turn LEFT (CAT A: 165° track, when passing STG R-233 turn LEFT), intercept TGO R-264 inbound to TGO.
TGO 9H	07	Intercept STG R-073 to D3.2 STG, turn RIGHT (CAT A: 140° track, when passing STG R-098, turn RIGHT), intercept TGO R-068 inbound to TGO.

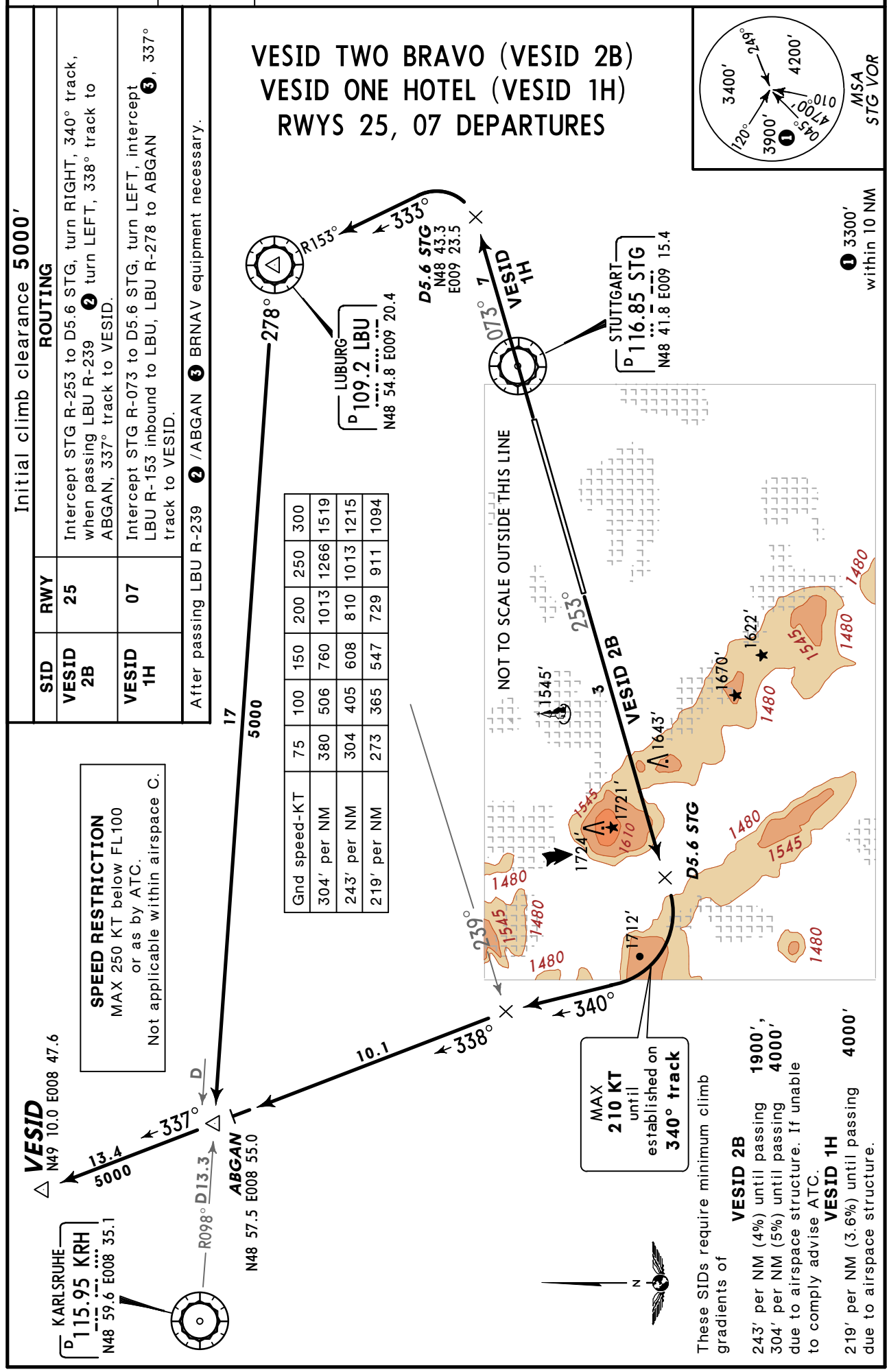
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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

VESID TWO BRAVO (VESID 2B)
VESID ONE HOTEL (VESID 1H)
RWYS 25, 07 DEPARTURES

Initial climb clearance 5000′

SID	RWY	ROUTING
VESID 2B	25	Intercept STG R-253 to D5.6 STG, turn RIGHT, 340° track, when passing LBU R-239 ❷ turn LEFT, 338° track to ABGAN, 337° track to VESID.
VESID 1H	07	Intercept STG R-073 to D5.6 STG, turn LEFT, intercept LBU R-153 inbound to LBU, LBU R-278 to ABGAN ❸, 337° track to VESID.
After passing LBU R-239 ❷ /ABGAN ❸ BRNAV equipment necessary.		



Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215
219′ per NM	273	365	547	729	911	1094

CHANGES: SID VESID 1B renumbered 2B & revised.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

ABTAL THREE BRAVO (ABTAL 3B) *[ABTA3B]*
ABTAL THREE HOTEL (ABTAL 3H) *[ABTA3H]*
RWYS 25, 07
RNAV DEPARTURES
(OVERLAY 10-3)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

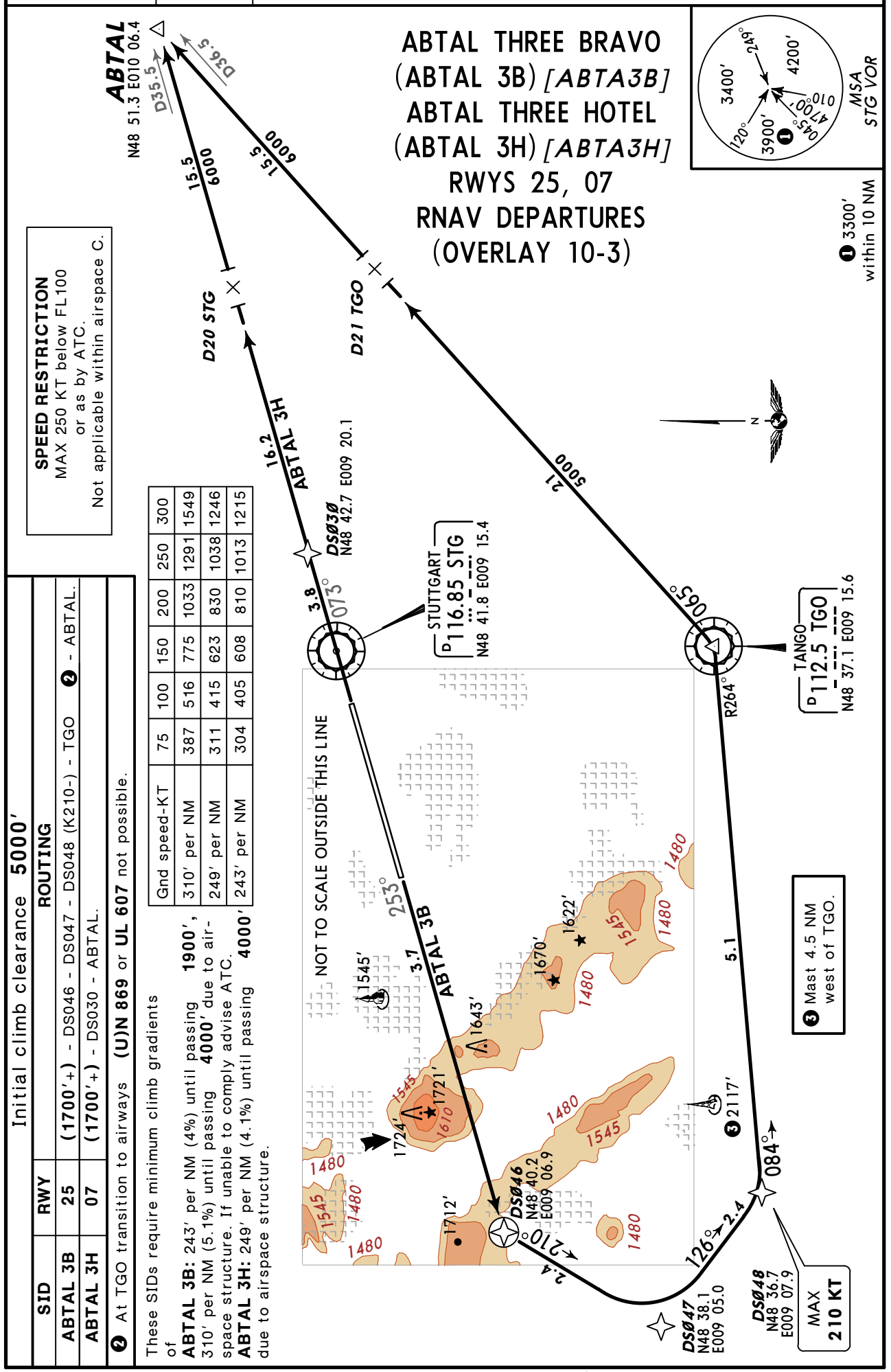
Initial climb clearance **5000′**

SID	RWY	ROUTING
ABTAL 3B	25	**(1700′+)** - DS046 - DS047 - DS048 (K210-) - TGO ❷ - ABTAL.
ABTAL 3H	07	**(1700′+)** - DS030 - ABTAL.

❷ At TGO transition to airways **(U)N 869** or **UL 607** not possible.

These SIDs require minimum climb gradients of
ABTAL 3B: 243′ per NM (4%) until passing **1900′**, 310′ per NM (5.1%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
ABTAL 3H: 249′ per NM (4.1%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215



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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

DINKELSBUHL SEVEN BRAVO (DKB 7B)
DINKELSBUHL TWO HOTEL (DKB 2H)
RWYS 25, 07 RNAV DEPARTURES
(OVERLAY 10-3A)

ONLY FOR FLIGHTS TO CONTINUE
VIA AIRWAY N 869 OR
WITH DESTINATIONS EDDN, EDTY, EDQ*

DINKELSBUHL D 117.8 DKB
N49 08.6 E010 14.3

LUBURG D 109.2 LBU
N48 54.8 E009 20.4

STUTTGART D 116.85 STG
N48 41.8 E009 15.4

DS032 N48 44.5 E009 29.7
DS050 N48 40.2 E009 07.3
DS040 N48 41.4 E009 04.0
DS041 N48 46.1 E009 01.7

R247° R229° 23 5000 D23 DKB 15 DKB 2H 049° 073° 10.3 R234° 067° 38 5000 15.1 050° 4.9 340°

3300′ within 10 NM
MSA STG VOR
3400′ 4200′ 3900′ 249° 010° 047° 120°

These SIDs require minimum climb gradients of
DKB 7B: 243′ per NM (4%) until passing **1900′**, 304′ per NM (5%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
DKB 2H: 249′ per NM (4.1%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

NOT TO SCALE OUTSIDE THIS LINE

1545′ 3.4 DKB 7B 253° 1643′ 1670′ 1622′ 1724′ 1721′ 1712′ 1480 1545 1610

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

MAX 210 KT

Initial climb clearance 5000′

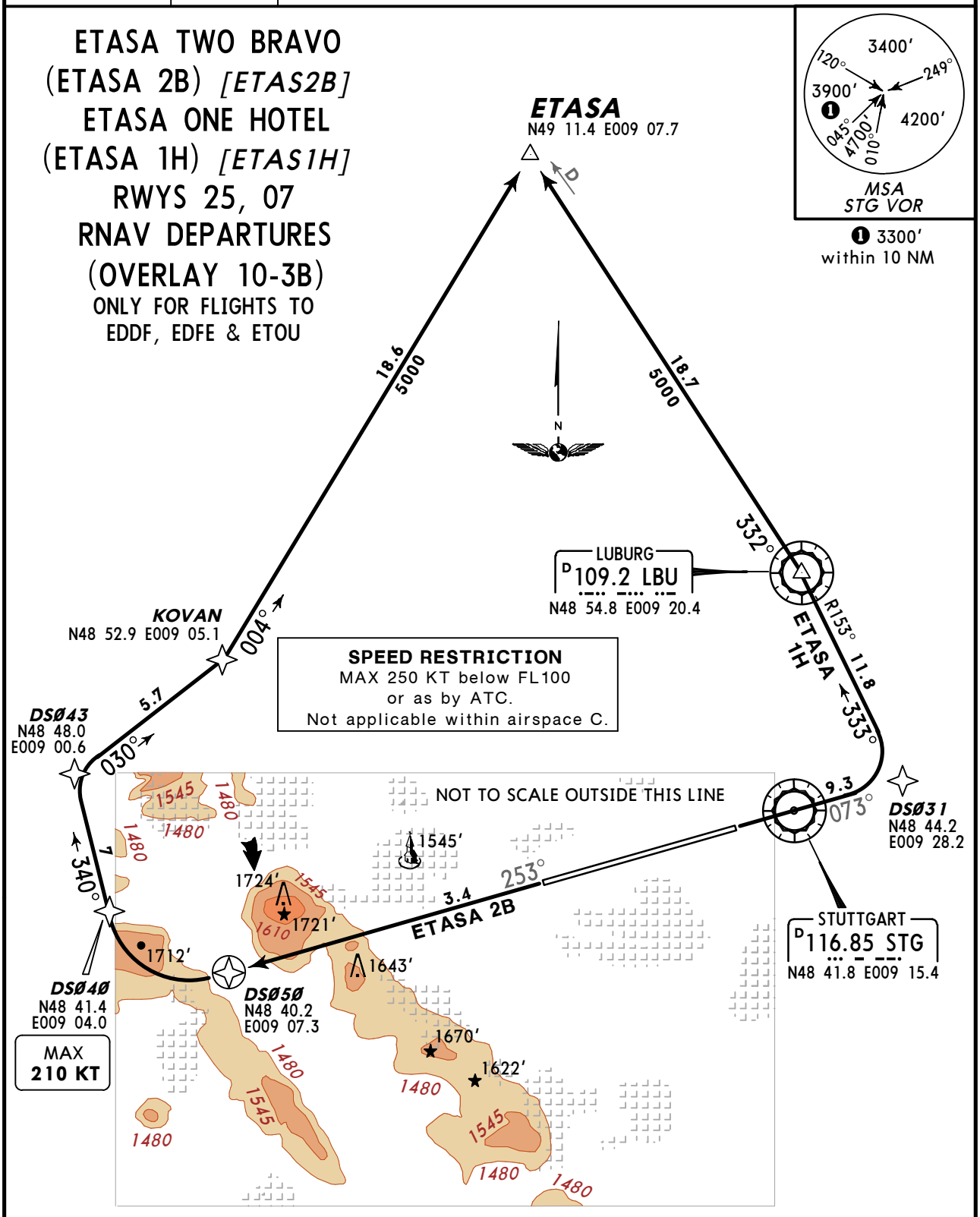
SID	RWY	ROUTING
DKB 7B	25	(1700′+) - DS050 - DS040 (K210-) - DS041 - LBU - DKB.
DKB 2H	07	(1700′+) - DS032 - DKB.

CHANGES: RNAV SID DKB 6B renumbered 7B & revised.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

ETASA TWO BRAVO (ETASA 2B) *[ETAS2B]*
ETASA ONE HOTEL (ETASA 1H) *[ETAS1H]*
RWYS 25, 07
RNAV DEPARTURES
(OVERLAY 10-3B)
ONLY FOR FLIGHTS TO
EDDF, EDFE & ETOU



These SIDs require minimum climb gradients of
ETASA 2B: 243′ per NM (4%) until passing **1900′**, 304′ per NM (5%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
ETASA 1H: 219′ per NM (3.6%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215
219′ per NM	273	365	547	729	911	1094

Initial climb clearance **5000′**

SID	RWY	ROUTING
ETASA 2B	**25**	**(1700′+)** -DS050 - DS040 (K210-) - DS043 - KOVAN - ETASA.
ETASA 1H	**07**	**(1700′+)** - DS031 - LBU - ETASA.

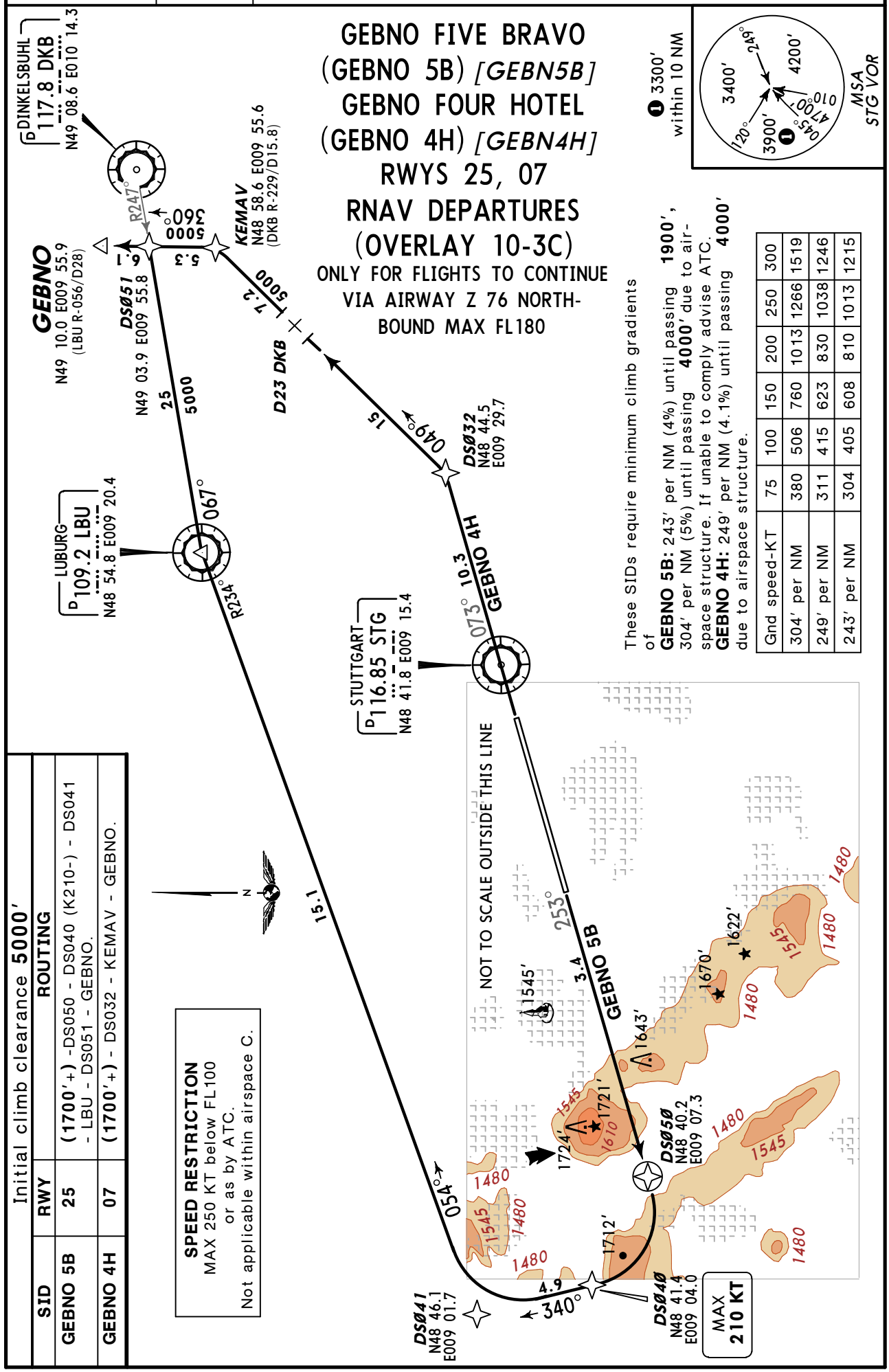
CHANGES: RNAV SIDs ETASA 1B renumbered 2B & revised.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

GEBNO FIVE BRAVO (GEBNO 5B) *[GEBN5B]*
GEBNO FOUR HOTEL (GEBNO 4H) *[GEBN4H]*
RWYS 25, 07
RNAV DEPARTURES
(OVERLAY 10-3C)

ONLY FOR FLIGHTS TO CONTINUE VIA AIRWAY Z 76 NORTHBOUND MAX FL180



These SIDs require minimum climb gradients of **GEBNO 5B:** 243′ per NM (4%) until passing **1900′**, 304′ per NM (5%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
GEBNO 4H: 249′ per NM (4.1%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

Initial climb clearance **5000′**

SID	RWY	ROUTING
GEBNO 5B	25	(1700′+) -DS050 - DS040 (K210-) - DS041 - LBU - DS051 - GEBNO.
	07	(1700′+) - DS032 - KEMAV - GEBNO.
GEBNO 4H		

CHANGES: RNAV SID GEBNO 4B renumbered 5B & revised.

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KARLSRUHE THREE BRAVO (KRH 3B)
KARLSRUHE ONE HOTEL (KRH 1H)
RWYS 25, 07 RNAV DEPARTURES
(OVERLAY 10-3D)

ONLY FOR FLIGHTS TO
EDDR, EDRZ, EDSB, ETAR & ETIP
MAX FL80, EXCEPT WEEKENDS

LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

Initial climb clearance **5000′**

SID	RWY	ROUTING
KRH 3B	25	(1700′+) - DS050 - DS040 (K210-) - DS042 - ABGAN - KRH.
KRH 1H	07	(1700′+) - DS031 - LBU - ABGAN - KRH.

LUBURG
D 109.2 LBU
N48 54.8 E009 20.4

DSØ31
N48 44.2
E009 28.2

STUTTGART
D 116.85 STG
N48 41.8 E009 15.4

KARLSRUHE
D 115.95 KRH
N48 59.6 E008 35.1

ABGAN
N48 57.5 E008 55.0

DSØ42
N48 47.4
E009 01.0

DSØ4Ø
N48 41.4
E009 04.0

DSØ5Ø
N48 40.2
E009 07.3

11.8 333° R153° 278°
9.3 KRH 1H 073°
253° 3.4 KRH 3B
6.3 340°
10.8 338°
13.3 R098°
17 5000 5000

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215
219′ per NM	273	365	547	729	911	1094

MSA
STG VOR
3400′ 249° 4200′ 010° 047° 120° 3900′ ❶

❶ 3300′ within 10 NM

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

MAX 210 KT

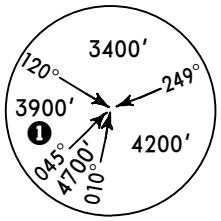
NOT TO SCALE OUTSIDE THIS LINE

1545′ 1643′ 1724′ 1721′ 1712′ 1670′ 1622′
1480 1545 1610

These SIDs require minimum climb gradients of
KRH 3B
243′ per NM (4%) until passing 1900′,
304′ per NM (5%) until passing 4000′
due to airspace structure. If unable to comply advise ATC.
KRH 1H
219′ per NM (3.6%) until passing 4000′
due to airspace structure.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

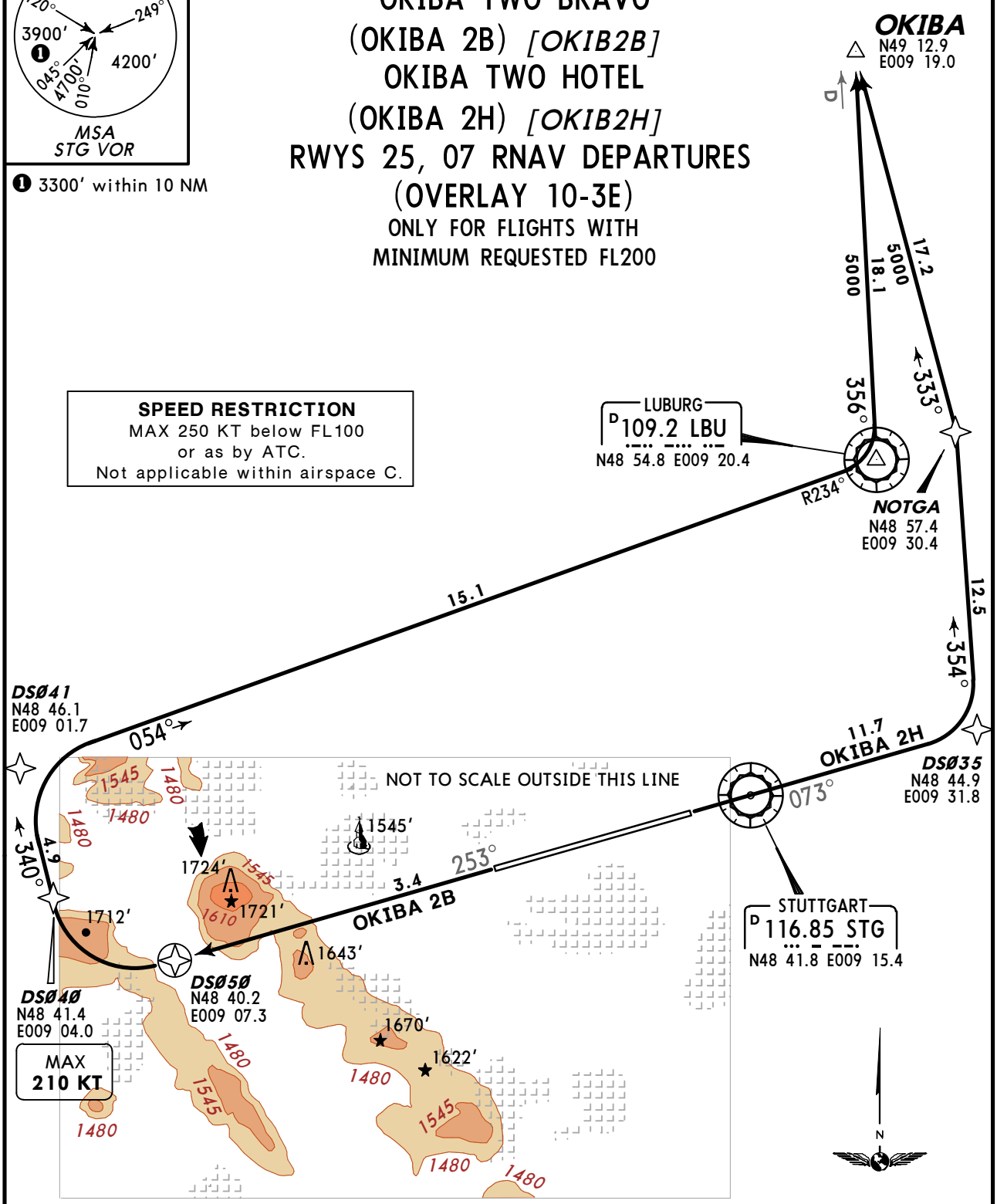


❶ 3300′ within 10 NM

OKIBA TWO BRAVO
(OKIBA 2B) *[OKIB2B]*
OKIBA TWO HOTEL
(OKIBA 2H) *[OKIB2H]*
RWYS 25, 07 RNAV DEPARTURES
(OVERLAY 10-3E)

ONLY FOR FLIGHTS WITH
MINIMUM REQUESTED FL200

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of **OKIBA 2B:** 243′ per NM (4%) until passing **1900′**, 304′ per NM (5%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
OKIBA 2H: 249′ per NM (4.1%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

Initial climb clearance **5000′**

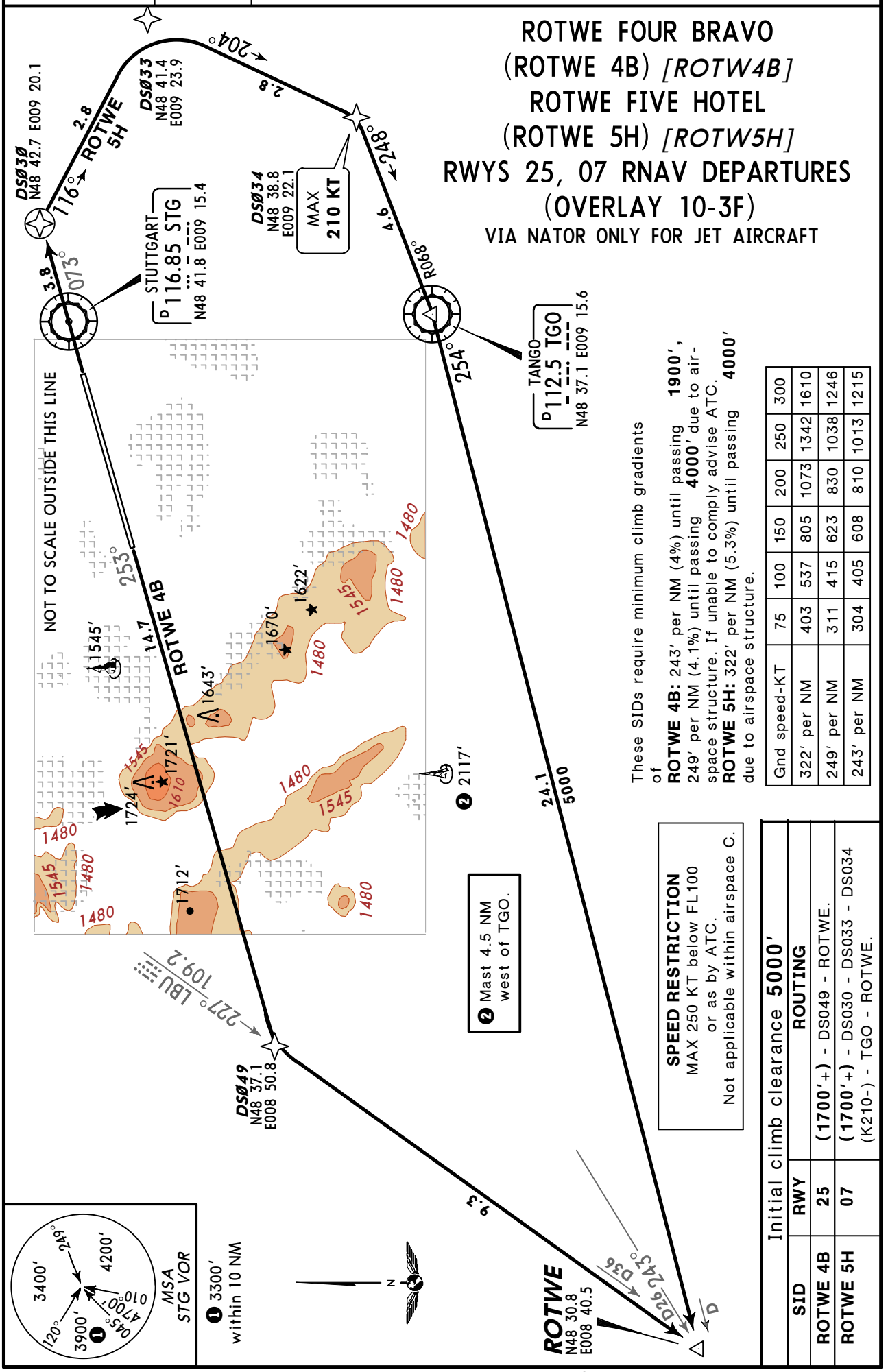
SID	RWY	ROUTING
OKIBA 2B	**25**	**(1700′+)** - DS050 - DS040 (K210-) - DS041 - LBU - OKIBA.
OKIBA 2H	**07**	**(1700′+)** - DS035 - NOTGA - OKIBA.

CHANGES: RNAV SIDs renumbered & revised.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

ROTWE FOUR BRAVO (ROTWE 4B) *[ROTW4B]*
ROTWE FIVE HOTEL (ROTWE 5H) *[ROTW5H]*
RWYS 25, 07 RNAV DEPARTURES (OVERLAY 10-3F)
VIA NATOR ONLY FOR JET AIRCRAFT



These SIDs require minimum climb gradients of
ROTWE 4B: 243′ per NM (4%) until passing **1900′**, 249′ per NM (4.1%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
ROTWE 5H: 322′ per NM (5.3%) until passing **4000′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
322′ per NM	403	537	805	1073	1342	1610
249′ per NM	311	415	623	830	1038	1246
243′ per NM	304	405	608	810	1013	1215

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**		
SID	**RWY**	**ROUTING**
ROTWE 4B	25	(1700′+) - DS049 - ROTWE.
ROTWE 5H	07	(1700′+) - DS030 - DS033 - DS034 (K210-) - TGO - ROTWE.

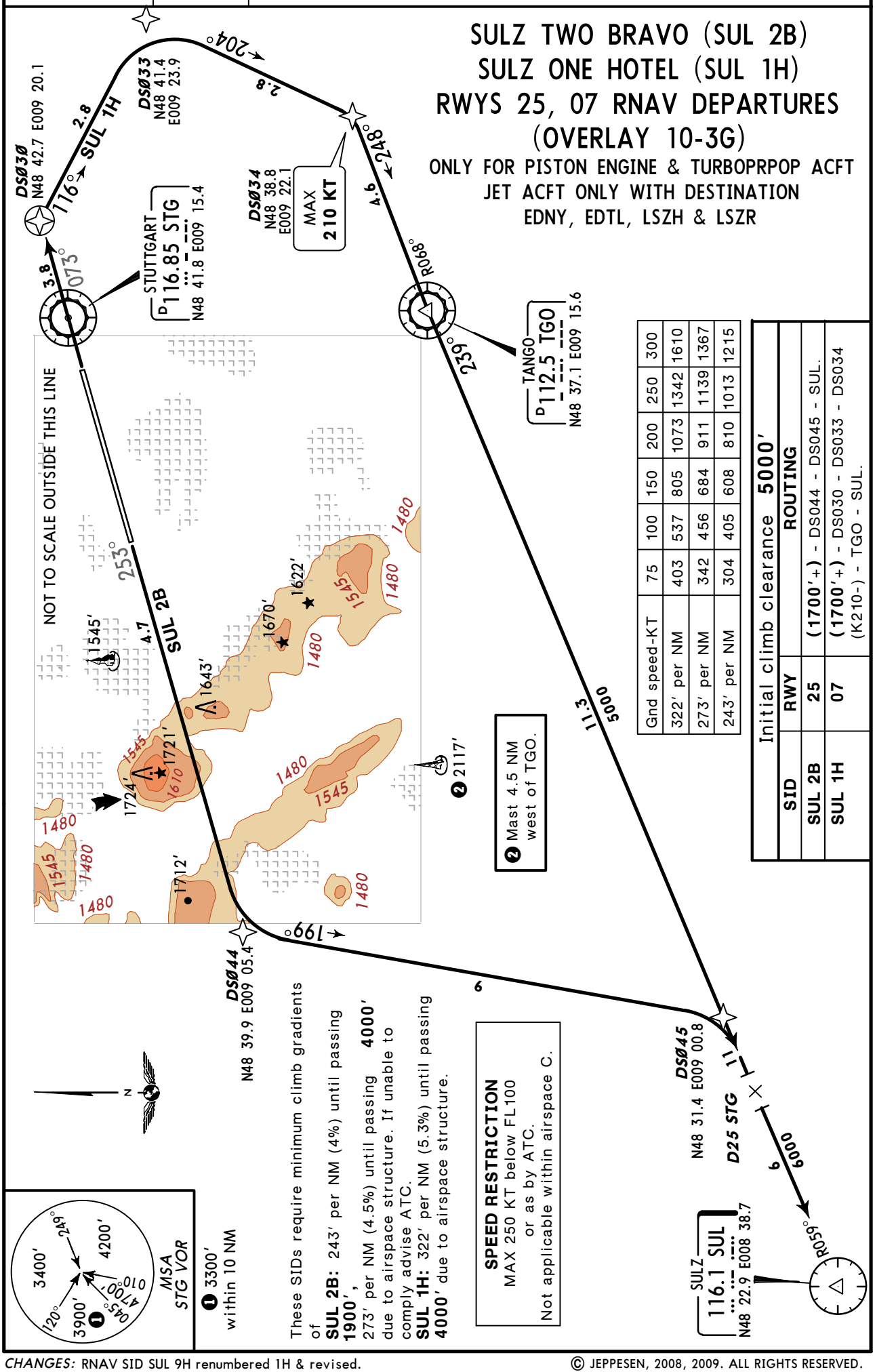
CHANGES: RNAV SID ROTWE 5H, radial update.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

SULZ TWO BRAVO (SUL 2B)
SULZ ONE HOTEL (SUL 1H)
RWYS 25, 07 RNAV DEPARTURES
(OVERLAY 10-3G)

ONLY FOR PISTON ENGINE & TURBOPRPOP ACFT
JET ACFT ONLY WITH DESTINATION
EDNY, EDTL, LSZH & LSZR



Gnd speed-KT	75	100	150	200	250	300
322′ per NM	403	537	805	1073	1342	1610
273′ per NM	342	456	684	911	1139	1367
243′ per NM	304	405	608	810	1013	1215

Initial climb clearance 5000′		
SID	RWY	ROUTING
SUL 2B	25	(1700′+) - DS044 - DS045 - SUL.
SUL 1H	07	(1700′+) - DS030 - DS033 - DS034 (K210-) - TGO - SUL.

These SIDs require minimum climb gradients of
SUL 2B: 243′ per NM (4%) until passing **1900′**, 273′ per NM (4.5%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
SUL 1H: 322′ per NM (5.3%) until passing **4000′** due to airspace structure.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

CHANGES: RNAV SID SUL 9H renumbered 1H & revised.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

TAGIK TWO BRAVO (TAGIK 2B) *[TAGI2B]*
TAGIK ONE HOTEL (TAGIK 1H) *[TAGI1H]*
RWYS 25, 07 RNAV DEPARTURES (OVERLAY 10-3H)
ONLY FOR FLIGHTS TO CONTINUE VIA ABUMO OR ASKIK WITH MAX FL240

Initial climb clearance **5000′**

SID	RWY	ROUTING
TAGIK 2B	25	(1700′+) - DS050 - DS040 (K210-) - DS042 - ABGAN - TAGIK.
TAGIK 1H	07	(1700′+) - DS031 - LBU - ABGAN - TAGIK.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215
219′ per NM	273	365	547	729	911	1094

MSA
STG VOR
3400′
4200′
3900′
049°
010°
045°
120°

LUBURG
D 109.2 LBU
N48 54.8 E009 20.4

STUTTGART
D 116.85 STG
N48 41.8 E009 15.4

KARLSRUHE
D 115.95 KRH
N48 59.6 E008 35.1

DS031
N48 44.2
E009 28.2

DS050
N48 40.2
E009 07.3

DS042
N48 47.4
E009 01.0

DS040
N48 41.4
E009 04.0

TAGIK
N49 11.7 E008 57.0

ABGAN
N48 57.5 E008 55.0

MAX 210 KT

NOT TO SCALE OUTSIDE THIS LINE

1480 1545 1610 1643′ 1670′ 1622′ 1724′ 1721′ 1712′ 1545′

These SIDs require minimum climb gradients of
TAGIK 2B
243′ per NM (4%) until passing 1900′,
304′ per NM (5%) until passing 4000′
due to airspace structure. If unable to comply advise ATC.
TAGIK 1H
219′ per NM (3.6%) until passing 4000′
due to airspace structure.

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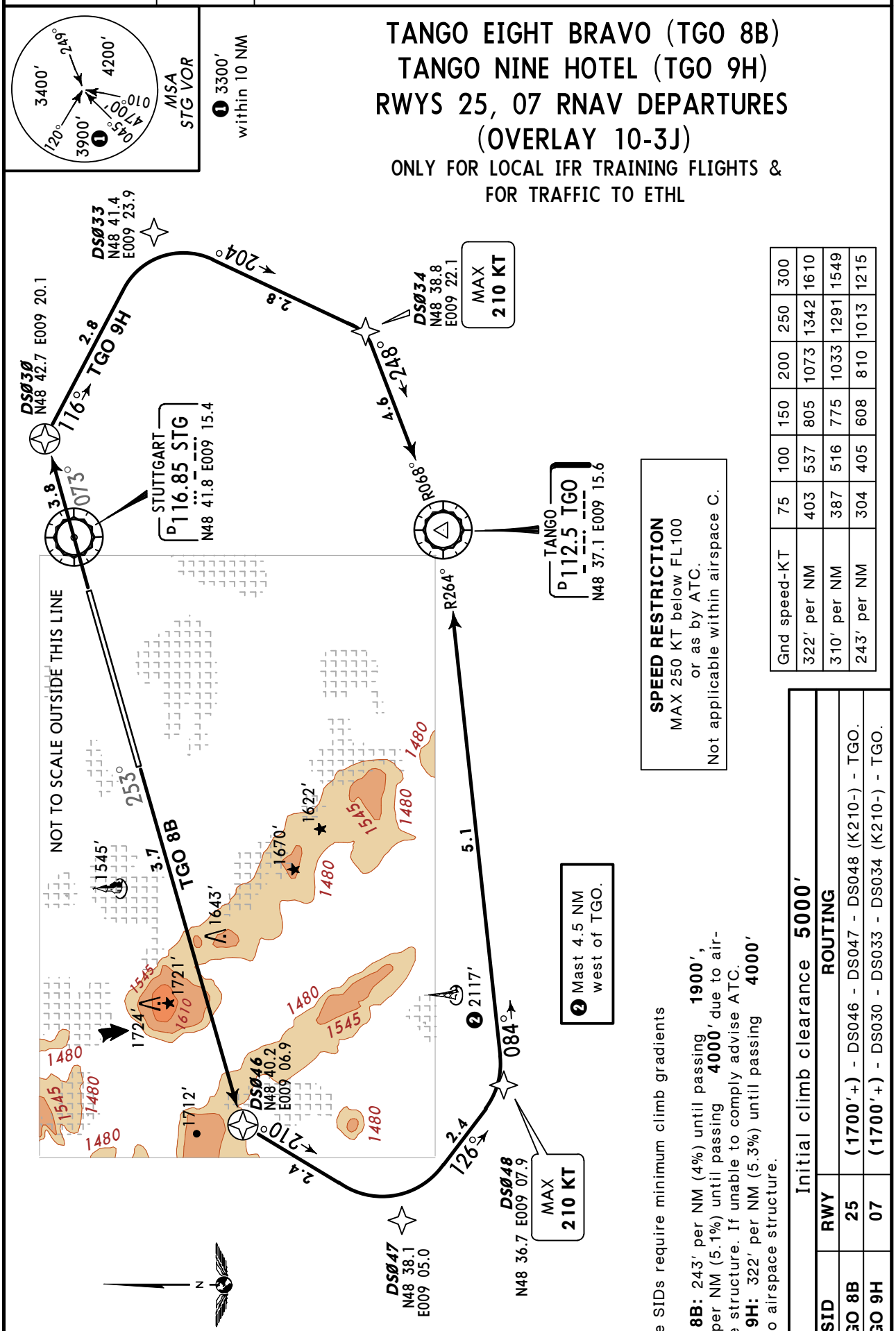
STUTTGART Director	Apt Elev
119.85	1276′

Trans level: By ATC Trans alt: 5000′

1. Contact STUTTGART Director immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

TANGO EIGHT BRAVO (TGO 8B)
TANGO NINE HOTEL (TGO 9H)
RWYS 25, 07 RNAV DEPARTURES
(OVERLAY 10-3J)

ONLY FOR LOCAL IFR TRAINING FLIGHTS & FOR TRAFFIC TO ETHL



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Gnd speed-KT	75	100	150	200	250	300
322′ per NM	403	537	805	1073	1342	1610
310′ per NM	387	516	775	1033	1291	1549
243′ per NM	304	405	608	810	1013	1215

These SIDs require minimum climb gradients of
TGO 8B: 243′ per NM (4%) until passing **1900′**, 310′ per NM (5.1%) until passing **4000′** due to airspace structure. If unable to comply advise ATC.
TGO 9H: 322′ per NM (5.3%) until passing **4000′** due to airspace structure.

SID	RWY	Initial climb clearance 5000′ ROUTING
TGO 8B	25	(1700′+) - DS046 - DS047 - DS048 (K210-) - TGO.
TGO 9H	07	(1700′+) - DS030 - DS033 - DS034 (K210-) - TGO.

CHANGES: RNAV SID TGO 9H, radial update.

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LANGEN Radar (APP) 125.05	Apt Elev 1276′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

VESID TWO BRAVO (VESID 2B) *[VESI2B]*
VESID ONE HOTEL (VESID 1H) *[VESI1H]*
RWYS 25, 07 RNAV DEPARTURES (OVERLAY 10-3K)

Initial climb clearance **5000′**

SID	RWY	ROUTING
VESID 2B	25	(1700′+) - DS050 - DS040 (K210-) - DS042 - ABGAN - VESID.
VESID 1H	07	(1700′+) - DS031 - LBU - ABGAN - VESID.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Gnd speed-KT	75	100	150	200	250	300
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215
219′ per NM	273	365	547	729	911	1094

MSA
STG VOR
3400′ 249° 4200′
120° 045° 010°
3900′ 4700′

3300′ within 10 NM

LUBURG
D 109.2 LBU
N48 54.8 E009 20.4

STUTTGART
D 116.85 STG
N48 41.8 E009 15.4

KARLSRUHE
D 115.95 KRH
N48 59.6 E008 35.1

VESID
N49 10.0 E008 47.6

ABGAN
N48 57.5 E008 55.0

DS031
N48 44.2
E009 28.2

DS050
N48 40.2
E009 07.3

DS042
N48 47.4
E009 01.0

DS040
N48 41.4
E009 04.0

R153° 11.8 333°
278°
R098° D13.3
13.4 5000 337°
10.8 338°
6.3 340°
253°
073°
3.4
VESID 1H 9.3
VESID 2B
17
5000
D
MAX 210 KT

NOT TO SCALE OUTSIDE THIS LINE

1545′ 1643′ 1670′ 1622′ 1724′ 1721′ 1712′
1480 1545

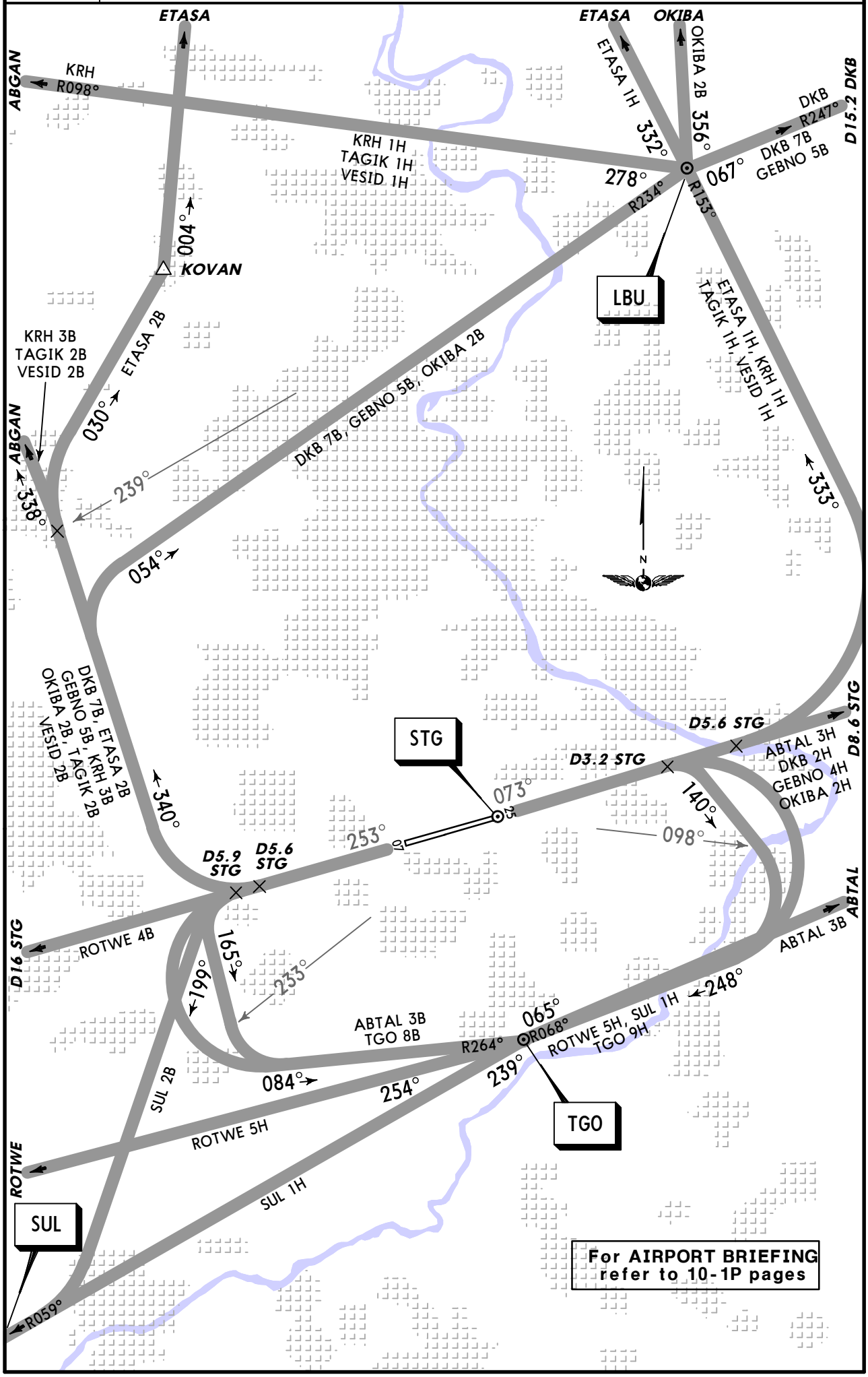
These SIDs require minimum climb gradients of
VESID 2B 1900′, 4000′
243′ per NM (4%) until passing
304′ per NM (5%) until passing
due to airspace structure. If unable to comply advise ATC.
VESID 1H 4000′
219′ per NM (3.6%) until passing
due to airspace structure.

CHANGES: RNAV SID VESID 1B renumbered 2B & revised.

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Apt Elev
1276'

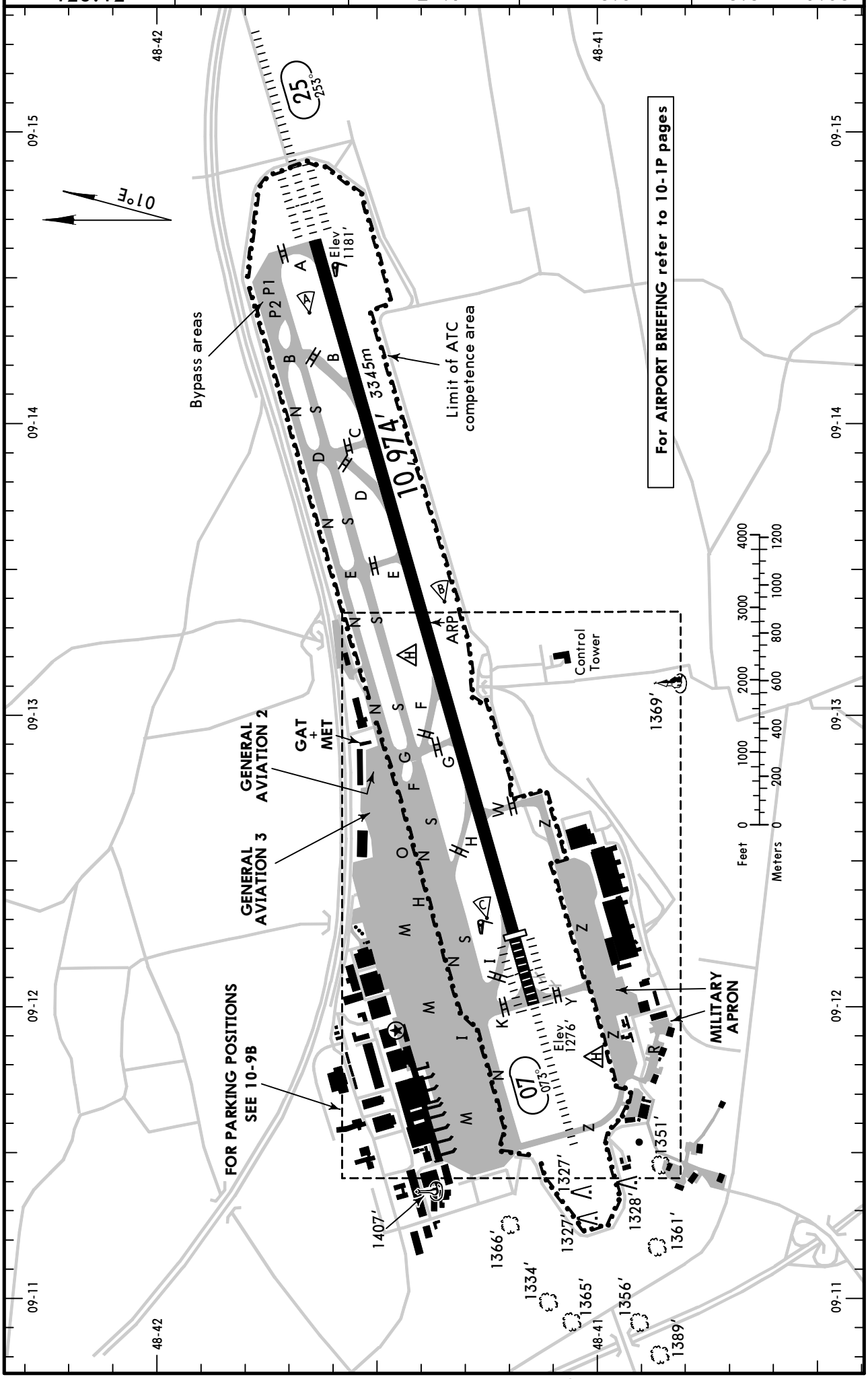
NOISE ABATEMENT



CHANGES: SIDs renumbered & revised.

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*D-ATIS	ACARS: DCL	STUTTGART Delivery	STUTTGART Ground	Tower
126.12		121.9	118.6	118.8 119.05



CHANGES: Taxiway X withdrawn. Apron extended.

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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND: Threshold	Glide Slope	TAKE-OFF	WIDTH
07	HIRL CL *(15m)* ALSF-II TDZ SFL REIL ❶ RVR	9990′ *3045m*	8643′ *2634m*	❷	148′ *45m*
25			10,002′ *3049m*		

❶ PAPI-L (angle 3.0°)

❷ TAKE-OFF RUN AVAILABLE

RWY 07:

From rwy head	10,974′ (3345m)
twy I int	10,138′ (3090m)
twy H int	8251′ (2515m)
twy W int	8268′ (2520m)
twy G int	7251′ (2210m)
twy F int	6627′ (2020m)
twy E int	4593′ (1400m)

RWY 25:

From rwy head	9990′ (3045m) ❸
twy B int	7989′ (2435m)
twy C int	7136′ (2175m)
twy D int	6529′ (1990m)
twy E int	5463′ (1665m)

❸ Additional 984′/300m available as stopway.

Standard

TAKE-OFF 1

All Rwys

LVP must be in Force

	Approved Operators: HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

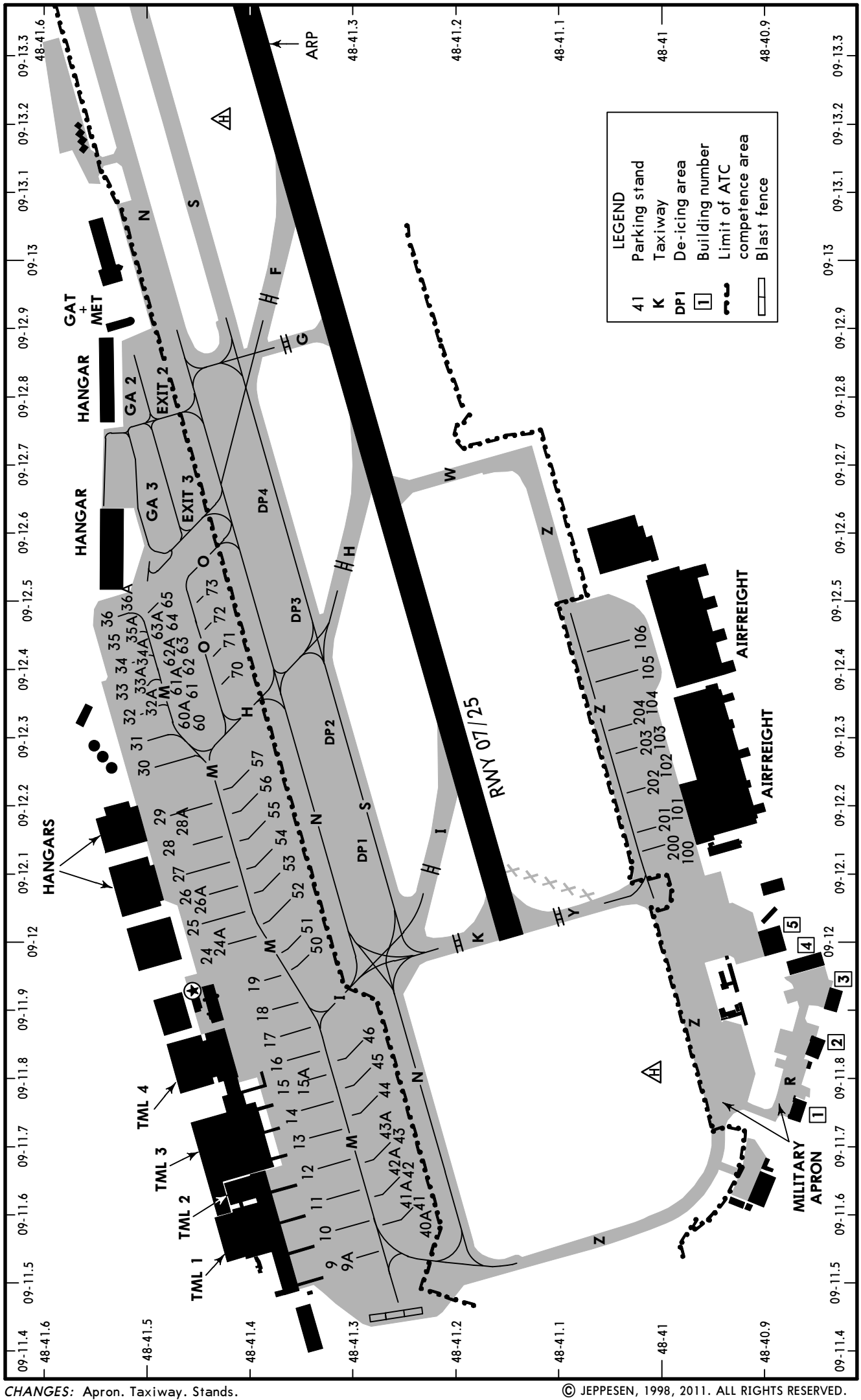
1 Operators applying U.S. Ops Specs: CL required below 300m; approved HUD required below 150m.

CHANGES: Usable lenghts.

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STUTTGART, GERMANY

STUTTGART



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INS COORDINATES

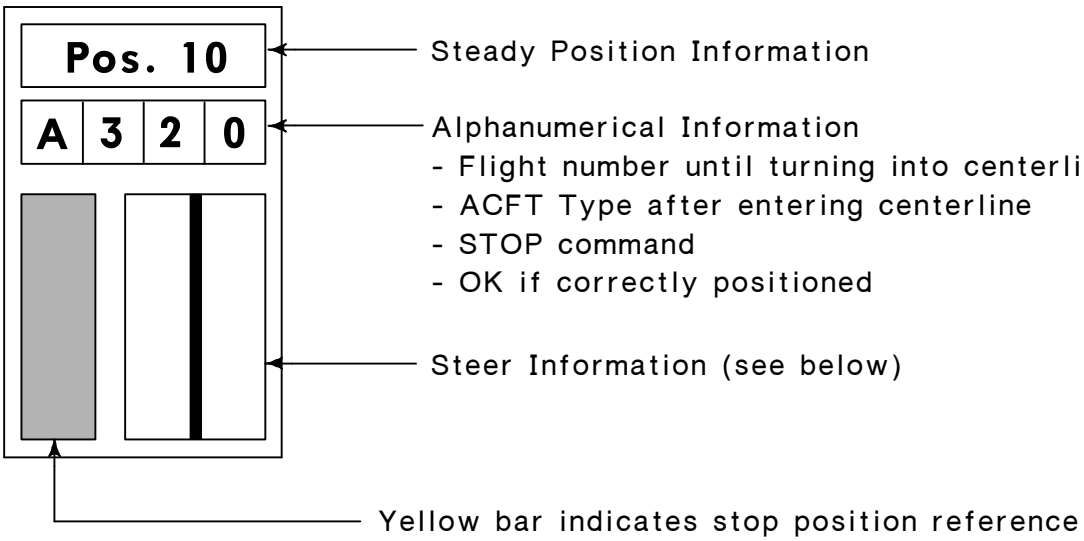
STAND No.	COORDINATES	STAND No.	COORDINATES
9, 9A	N48 41.3 E009 11.5	60	N48 41.4 E009 12.3
10, 11	N48 41.3 E009 11.6	60A, 61	N48 41.4 E009 12.4
12, 13	N48 41.4 E009 11.7	61A, 62	N48 41.5 E009 12.4
14 thru 17	N48 41.4 E009 11.8	62A	N48 41.5 E009 12.5
18, 19	N48 41.4 E009 11.9	63	N48 41.5 E009 12.4
24, 24A	N48 41.4 E009 12.0	63A thru 65	N48 41.5 E009 12.5
25	N48 41.5 E009 12.0	70, 71	N48 41.4 E009 12.4
26 thru 28A	N48 41.5 E009 12.1	72, 73	N48 41.4 E009 12.5
29	N48 41.5 E009 12.2	100	N48 41.0 E009 12.1
30 thru 32A	N48 41.5 E009 12.3	101, 102	N48 41.0 E009 12.2
33 thru 35A	N48 41.5 E009 12.4	103, 104	N48 41.0 E009 12.3
36, 36A	N48 41.5 E009 12.5	105	N48 41.0 E009 12.4
40A, 41	N48 41.2 E009 11.6	106	N48 41.0 E009 12.5
41A	N48 41.3 E009 11.6	200	N48 41.0 E009 12.1
42 thru 43A	N48 41.3 E009 11.7	201	N48 41.0 E009 12.2
44, 45	N48 41.3 E009 11.8	202 thru 204	N48 41.0 E009 12.3
46	N48 41.3 E009 11.9		
50, 51	N48 41.3 E009 12.0		
52, 53	N48 41.4 E009 12.1		
54 thru 57	N48 41.4 E009 12.2		

CHANGES: Stands. Coordinates.

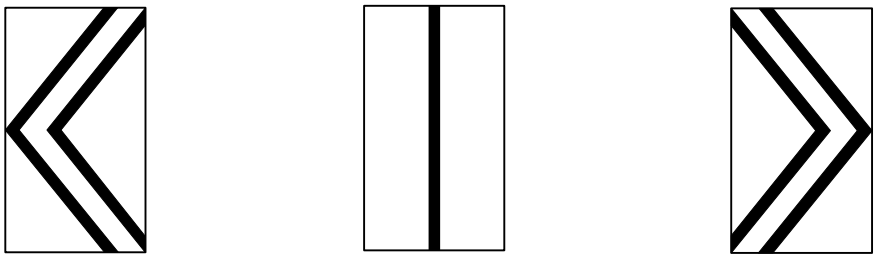
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VISUAL DOCKING GUIDANCE SYSTEM

APIS - AIRCRAFT POSITIONING & INFORMATION SYSTEM



STEER INFORMATION



Steer LEFT | On Centerline | Steer RIGHT

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STUTTGART, GERMANY

STUTTGART

STRAIGHT-IN RWY		A	B	C	D
07	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**1367′**(100′)	**1367′**(100′)	**1367′**(100′)	**1367′**(100′)
		RA91′ R300m	**RA91′ R300m**	**RA91′ R300m**	**RA91′ R300m**
	ILS	**1467′**(200′)	**1467′**(200′)	**1467′**(200′)	**1467′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC ❶	**1990′**(723′)	**1990′**(723′)	NOT APPLICABLE	NOT APPLICABLE
		R1200m	**R1400m**		
	ALS out	R1500m	R1500m		
	RNAV (GPS)	**1990′**(723′)	**1990′**(723′)	**1990′**(723′)	**1990′**(723′)
		R1200m	**R1400m**	**R1400m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR ❶	**1990′**(723′)	**1990′**(723′)	NOT APPLICABLE	NOT APPLICABLE
		R1200m	**R1400m**		
	ALS out	R1500m	R1500m		
	SRA ❷	**1980′**(713′)	**1980′**(713′)	NOT APPLICABLE	NOT APPLICABLE
		R1200m	**R1400m**		
	ALS out	R1500m	R1500m		
25	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**1281′**(100′)	**1281′**(100′)	**1281′**(100′)	**1281′**(100′)
		RA107′ R300m	**RA107′ R300m**	**RA107′ R300m**	**RA107′ R300m**
	ILS	**1381′**(200′)	**1381′**(200′)	**1381′**(200′)	**1381′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1590′**(409′)	**1590′**(409′)	**1590′**(409′)	**1590′**(409′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (GPS)	**1590′**(409′)	**1590′**(409′)	**1590′**(409′)	**1590′**(409′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	VOR	**1590′**(409′)	**1590′**(409′)	**1590′**(409′)	**1590′**(409′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	SRA	**1590′**(409′)	**1590′**(409′)	**1590′**(409′)	**1590′**(409′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m

❶ Only for acft up to 5.7 mt MTOW.
❷ For acft above 5.7 mt MTOW, only usable in case of emergency.

TAKE-OFF RWY 07/25

	LVP must be in Force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: New page.

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BRIEFING STRIP™

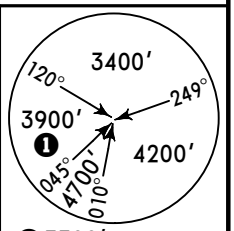
*D-ATIS	LANGEN Radar (APP)		*STUTTGART Director (APP)	STUTTGART Tower		Ground
126.12	125.05	119.2	119.85	118.8	119.05	118.6

LOC	Final Apch Crs	GS	ILS	Apt Elev 1276′
ISTE		D5.9 STG	DA(H)	
110.9	073°	2500′ (1233′)	1467′ (200′)	RWY 1267′

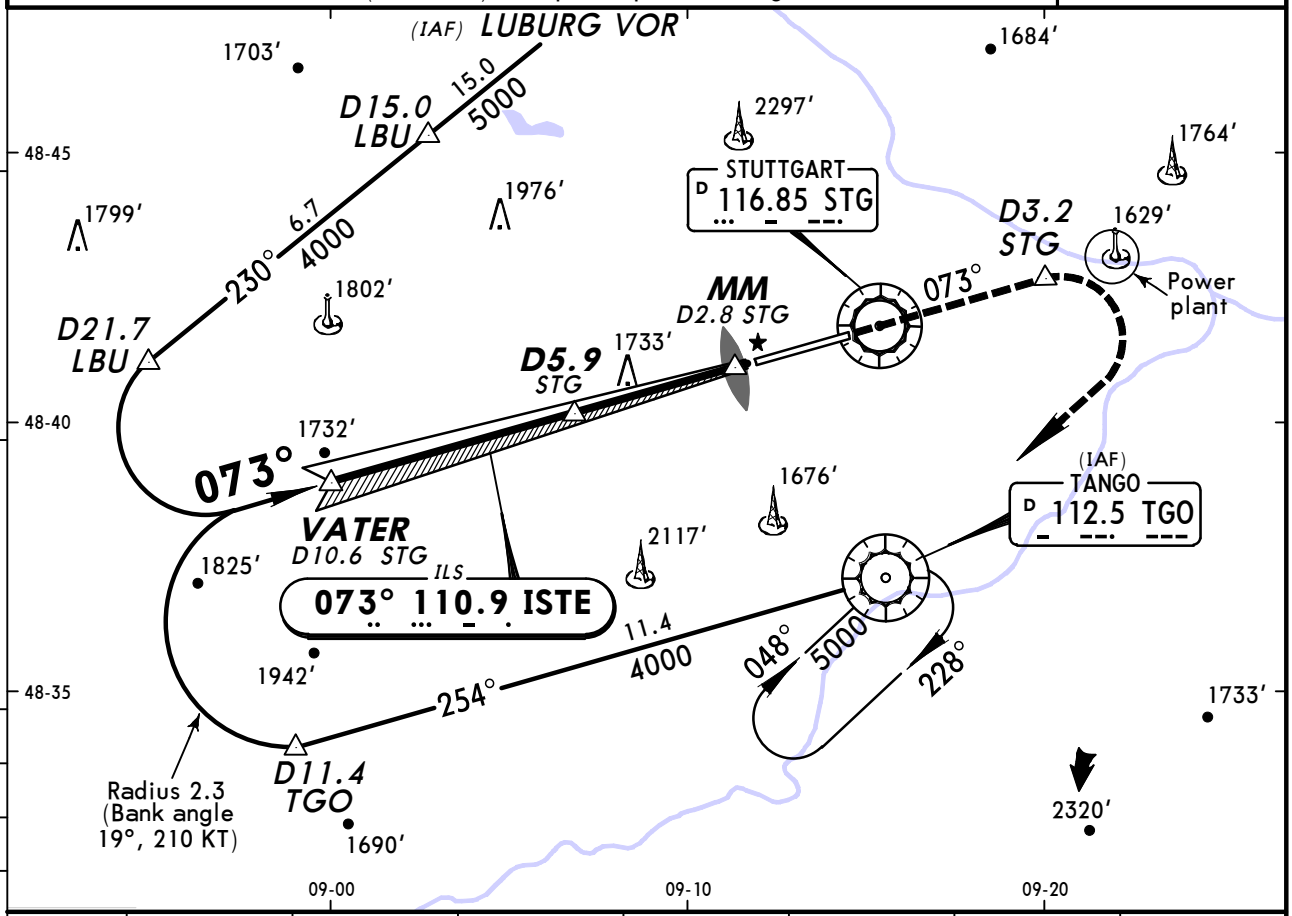
MISSED APCH: Climb on R-073 STG to D3.2 STG or 5000′, whichever is later, then turn RIGHT to TGO VOR.

Alt Set: hPa (IN on req) Rwy Elev: 46 hPa Trans level: By ATC Trans alt: 5000′

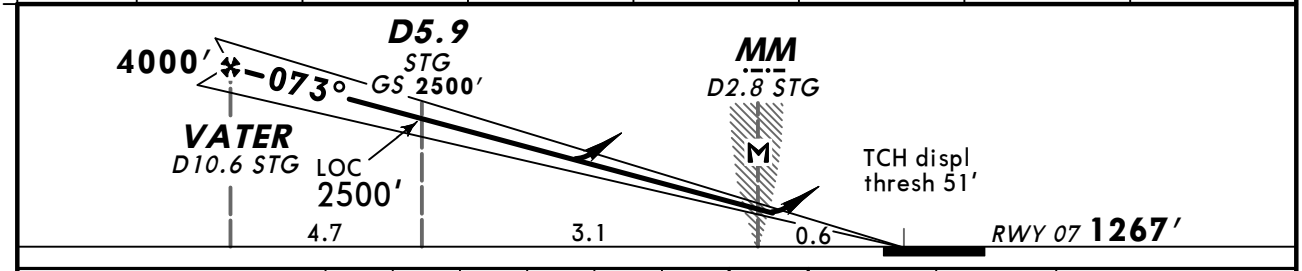
1. **DME required.**
2. CAUTION: Turbulence must be expected during moderate weather condition, wind 6 KT or less, on extended RCL (D4.6 STG) over power plant cooling tower.



1 3300′ within 10 NM.
MSA STG VOR



LOC (GS out)	STG DME	10.0	9.0	8.0	7.0	6.0	5.0
	ALTITUDE	3810′	3490′	3170′	2850′	2530′	2210′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D2.8 STG						

ALSF-II
REIL
PAPI

STG 116.85 R-073

D3.2 STG 5000′ whichever is later

Standard STRAIGHT-IN LANDING RWY 07

	ILS			LOC (GS out) 1	
	DA(H) 1467′ (200′)			DA(H) 1990′ (723′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m	
B					
C				NOT APPLICABLE	
D					

1 Only for acft up to 5.7 mt MTOW.

PANS OPS 4

CHANGES: Procedure.

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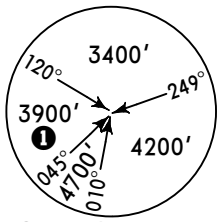
*D-ATIS	LANGEN Radar (APP)		*STUTTGART Director (APP)	STUTTGART Tower		Ground
126.12	125.05	119.2	119.85	118.8	119.05	118.6

LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev 1276′
ISTE	073°	D5.9 STG	RA 91′	RWY 1267′
110.9		2500′ (1233′)	DA(H) 1367′ (100′)	

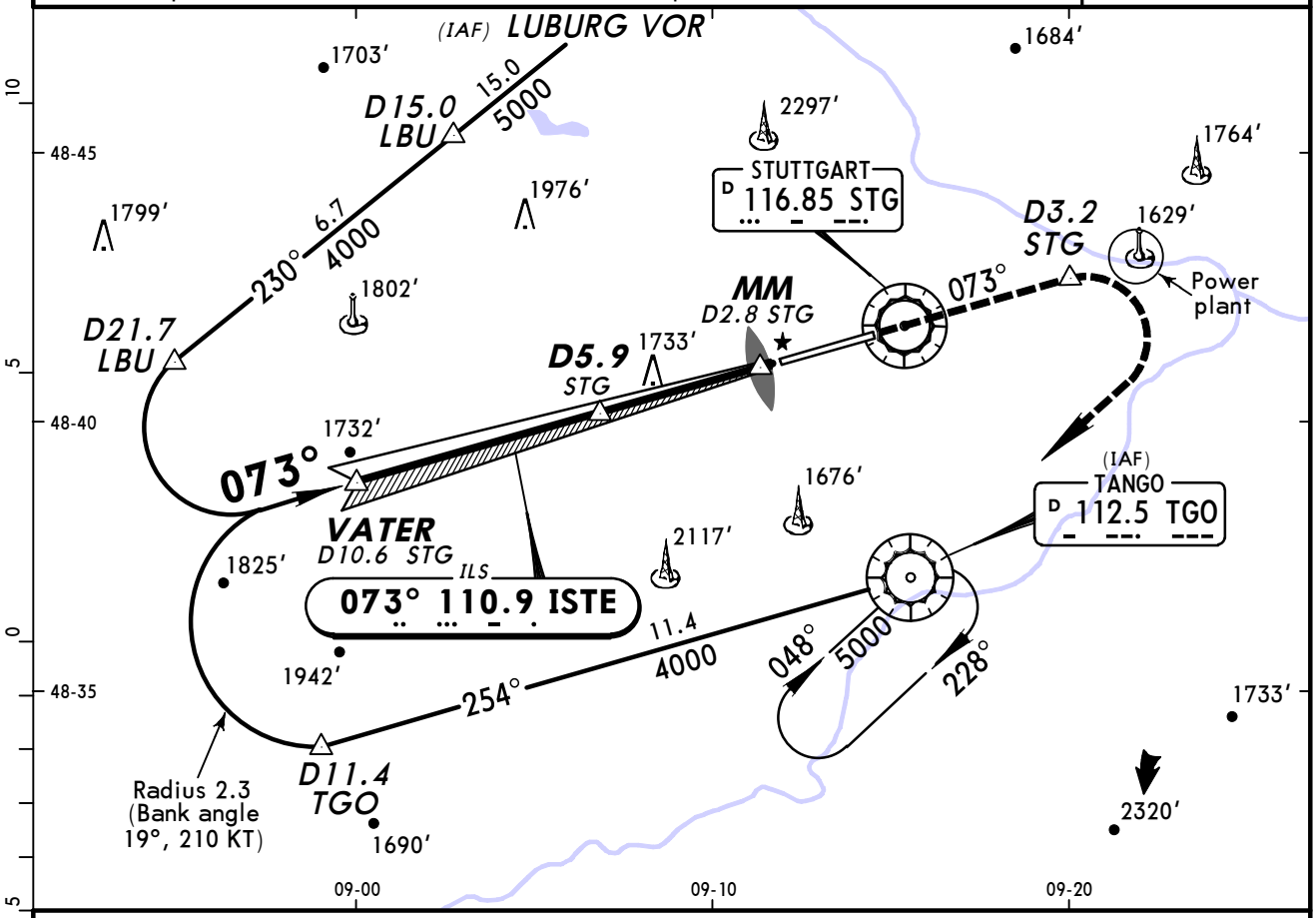
MISSED APCH: Climb on R-073 STG to D3.2 STG or 5000′, whichever is later, then turn RIGHT to TGO VOR.

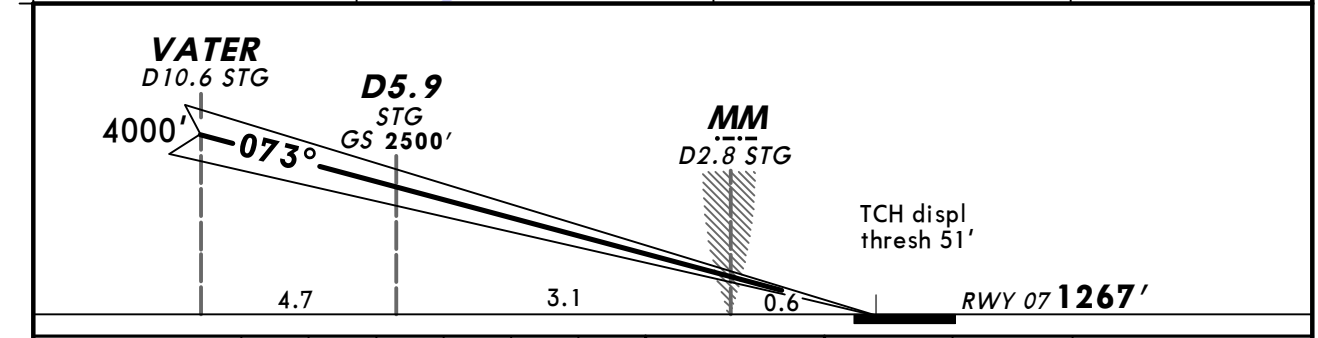
Alt Set: hPa (IN on req) Rwy Elev: 46 hPa Trans level: By ATC Trans alt: 5000′

1. **DME required.** 2. CAUTION: Turbulence must be expected during moderate weather condition, wind 6 KT or less, on extended RCL (D4.6 STG) over power plant cooling tower. 3. Special Aircrew & Aircraft Certification Required.



1 3300′ within 10 NM.
MSA STG VOR





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

ALSF-II
REIL
PAPI

STG
116.85
R-073

D3.2
STG
5000′
whichever is later

Standard

STRAIGHT-IN LANDING RWY **07**
CAT II ILS

ABCD
RA 91′
DA(H) **1367′** (100′)

RVR 300m 1

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

PANS OPS 4

CHANGES: Procedure.

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BRIEFING STRIP™

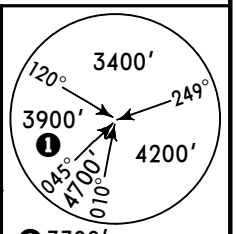
*D-ATIS	LANGEN Radar (APP)		*STUTTGART Director (APP)	STUTTGART Tower		Ground
126.12	125.05	119.2	119.85	118.8	119.05	118.6

LOC ISTW	Final Apch Crs	GS D3.2 STG	ILS DA(H)	Apt Elev 1276′
109.9	253°	2430′ (1249′)	1381′ (200′)	RWY 1181′

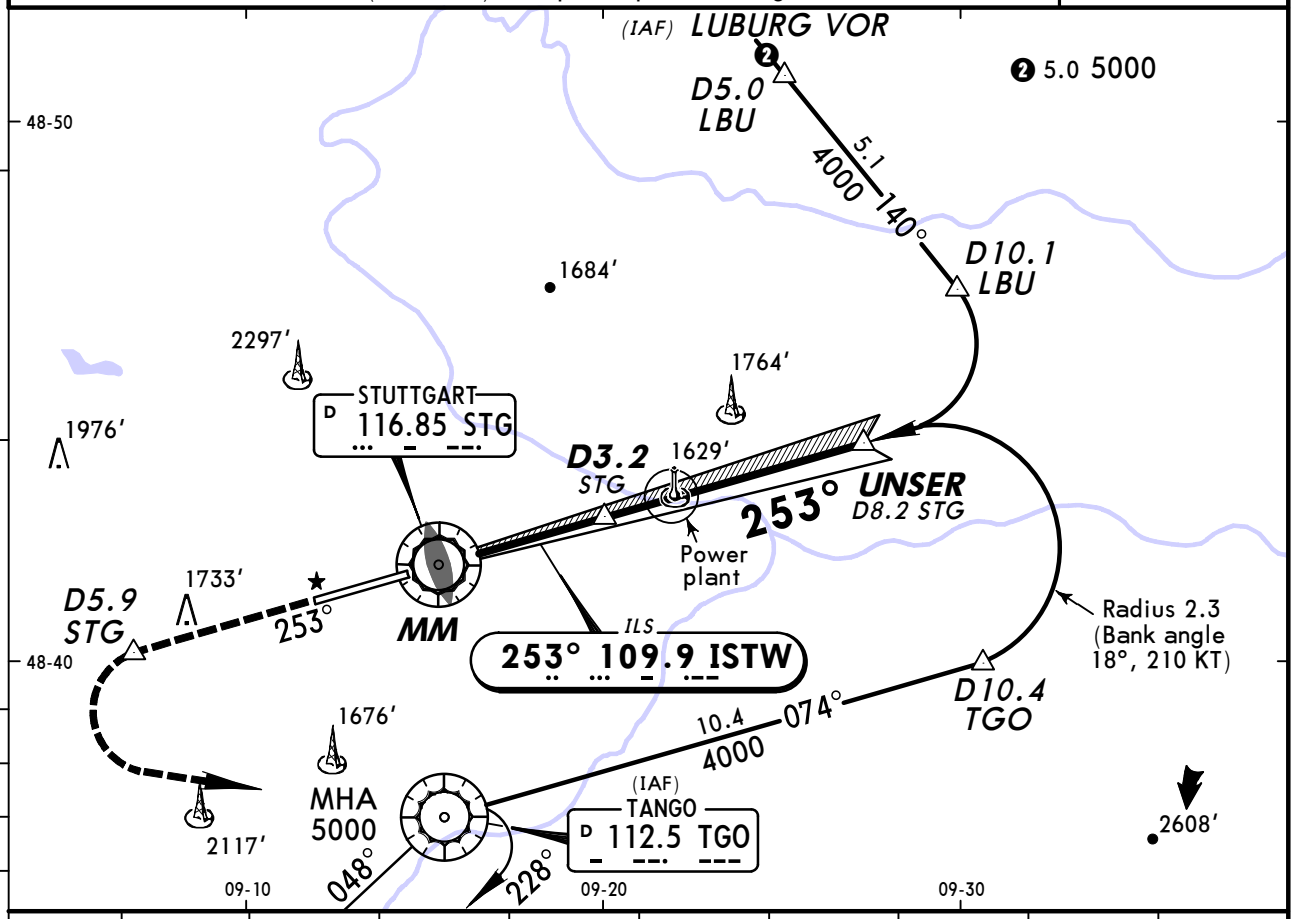
MISSED APCH: Climb on R-253 STG to D5.9 STG or 5000′, whichever is later, then turn LEFT to TGO VOR.

Alt Set: hPa (IN on req) Rwy Elev: 43 hPa Trans level: By ATC Trans alt: 5000′

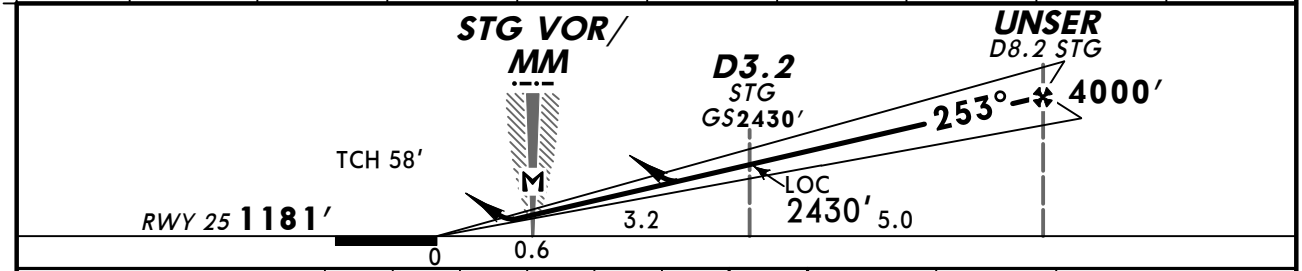
1. **DME required.**
2. CAUTION: Turbulence must be expected during moderate weather condition, wind 6 KT or less, on extended RCL (D4.6 STG) over power plant cooling tower.



❶ 3300′ within 10 NM.
MSA STG VOR



LOC (GS out)	STG DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
	ALTITUDE	1720′	2040′	2360′	2680′	3000′	3320′	3630′	3950′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at STG VOR/MM						

ALSF-II
REIL
PAPI

STG 116.85 R-253

D5.9 STG 5000′ whichever is later

Standard STRAIGHT-IN LANDING RWY 25

	ILS			LOC (GS out)	
	DA(H) 1381′ (200′)			DA(H) 1590′ (409′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C					RVR 1900m
D					

PANS OPS 4

CHANGES: Procedure. TCH.

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EDDS/STR
STUTTGART

JEPPESEN
10 SEP 10
Eff 23 Sep
11-2A

STUTTGART, GERMANY
CAT II ILS Rwy 25

*D-ATIS	LANGEN Radar (APP)		*STUTTGART Director (APP)	STUTTGART Tower		Ground
126.12	125.05	119.2	119.85	118.8	119.05	118.6

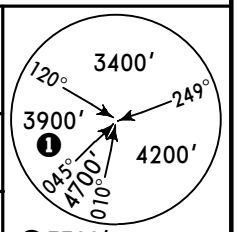
BRIEFING STRIP™

LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev 1276′
ISTW		D3.2 STG	RA 107′	
109.9	253°	2430′ (1249′)	DA(H) 1281′ (100′)	RWY 1181′

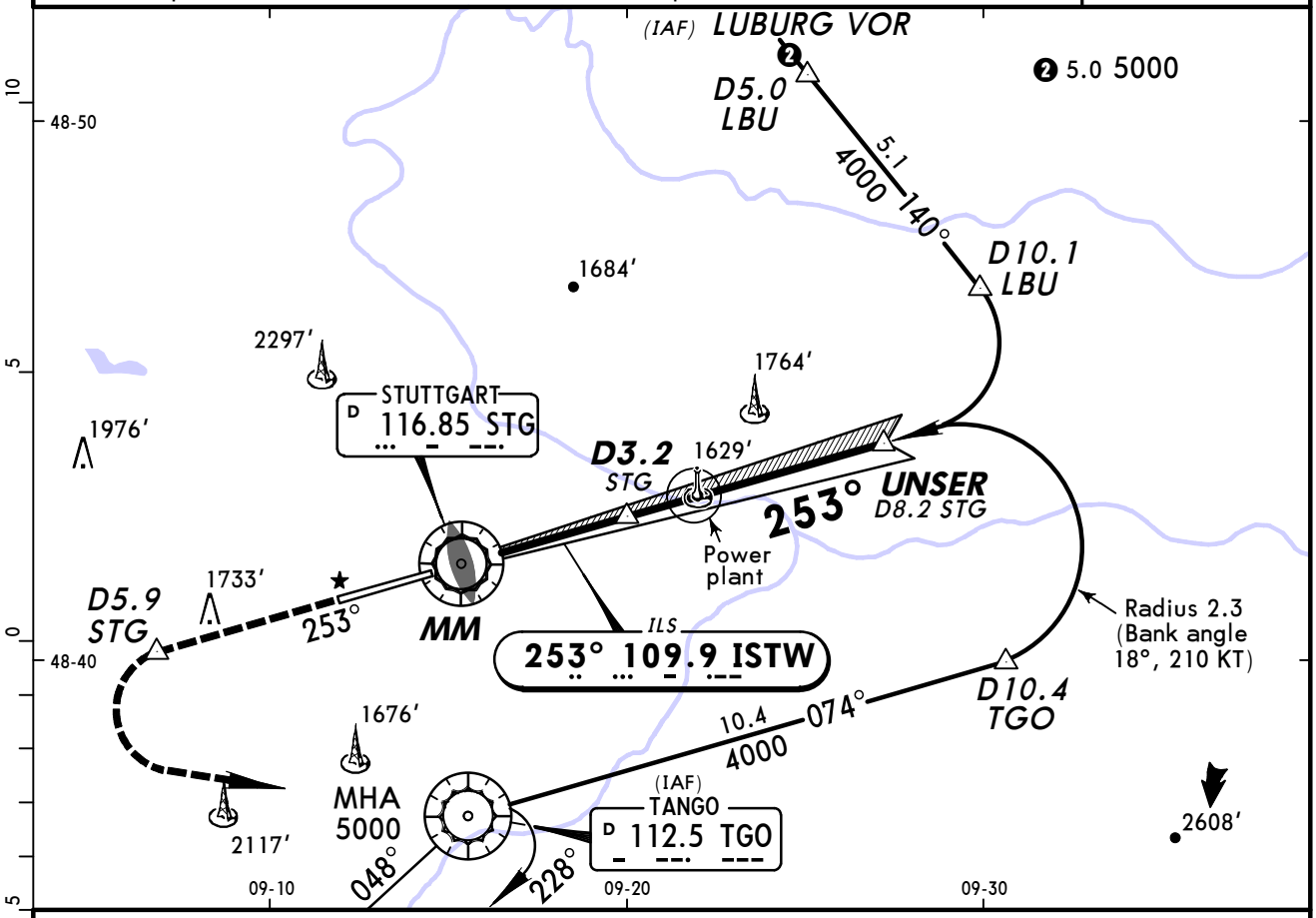
MISSED APCH: Climb on R-253 STG to D5.9 STG or 5000′, whichever is later, then turn LEFT to TGO VOR.

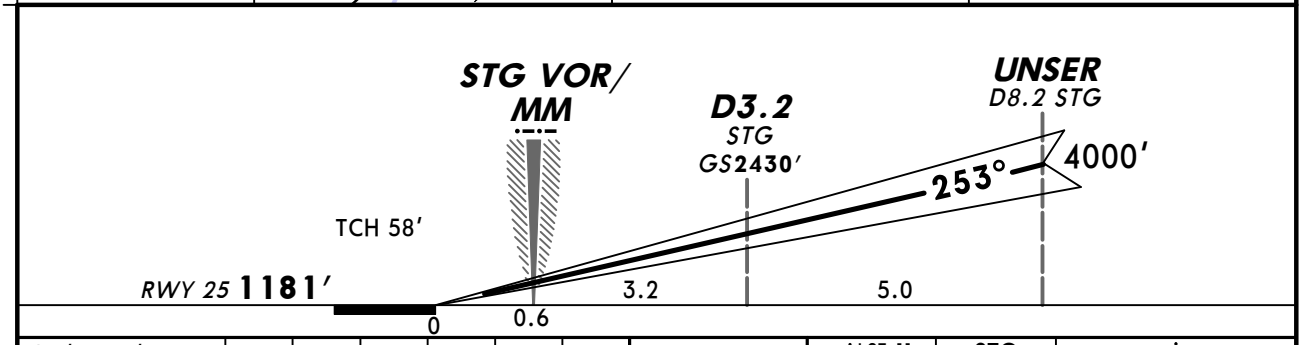
Alt Set: hPa (IN on req) Rwy Elev: 43 hPa Trans level: By ATC Trans alt: 5000′

1. **DME required.** 2. CAUTION: Turbulence must be expected during moderate weather condition, wind 6 KT or less, on extended RCL (D4.6 STG) over power plant cooling tower. 3. Special Aircrew & Aircraft Certification Required.



❶3300′ within 10 NM.
MSA STG VOR





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

ALSF-II
REIL
PAPI

STG 116.85 R-253

D5.9 STG 5000′ whichever is later

Standard

STRAIGHT-IN LANDING RWY **25**
CAT II ILS

ABCD
RA 107′
DA(H) **1281′** (100′)

RVR *300m* ❶

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

PANS OPS 4

CHANGES: Procedure. TCH.

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STUTTGART, GERMANY
❶ RNAV (GPS) Rwy 07

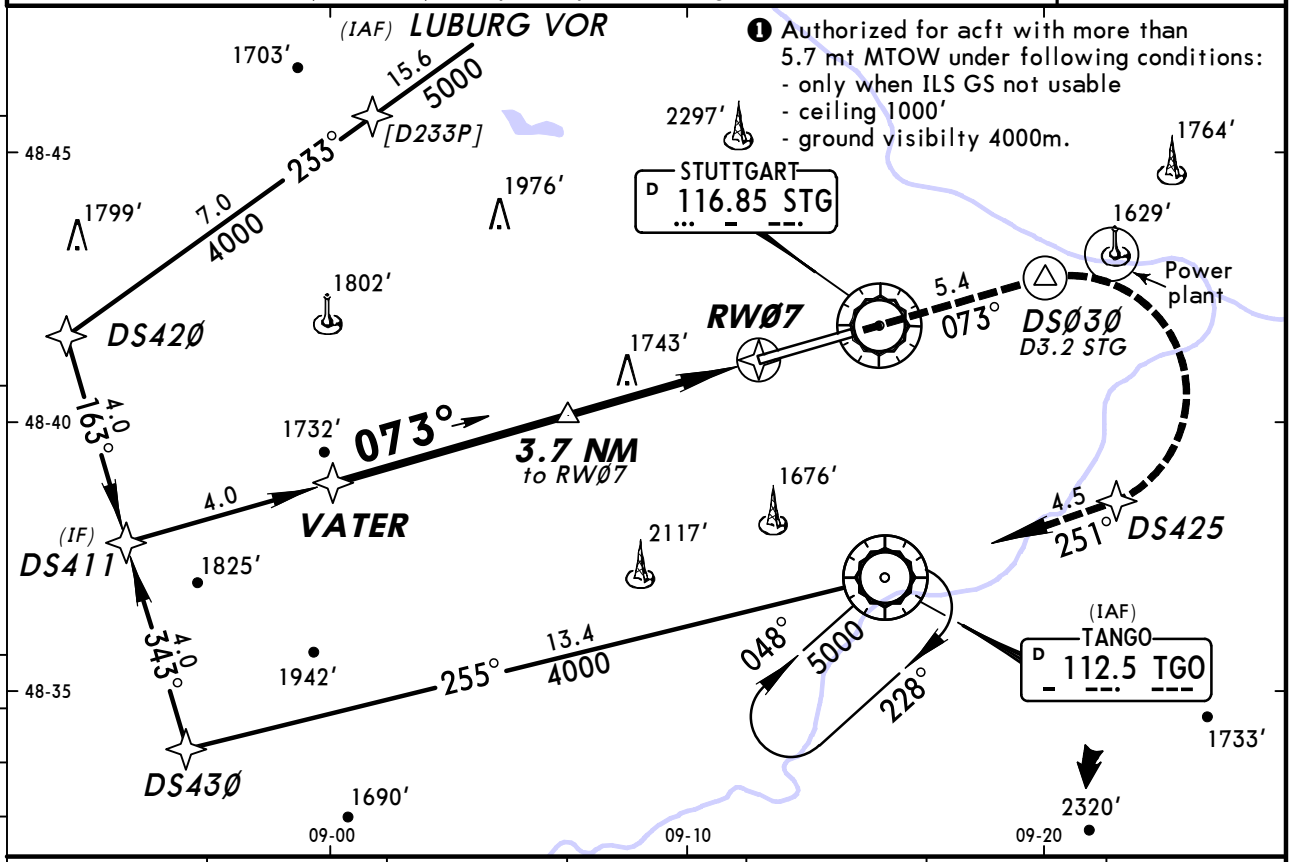
*D-ATIS	LANGEN Radar (APP)		*STUTTGART Director (APP)	STUTTGART Tower		Ground
126.12	125.05	119.2	119.85	118.8	119.05	118.6

RNAV	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
	073°	VATER 4000′ (2733′)	1990′ (723′)	1276′ / RWY 1267′

MISSED APCH: RNAV: Climb on 073° to DSØ3Ø or 5000′, whichever is later, then turn RIGHT via DS425 onto 251° to TGO VOR.
NON-RNAV: Climb on R-073 STG to D3.2 STG or 5000′, whichever is later, then turn RIGHT to TGO VOR.

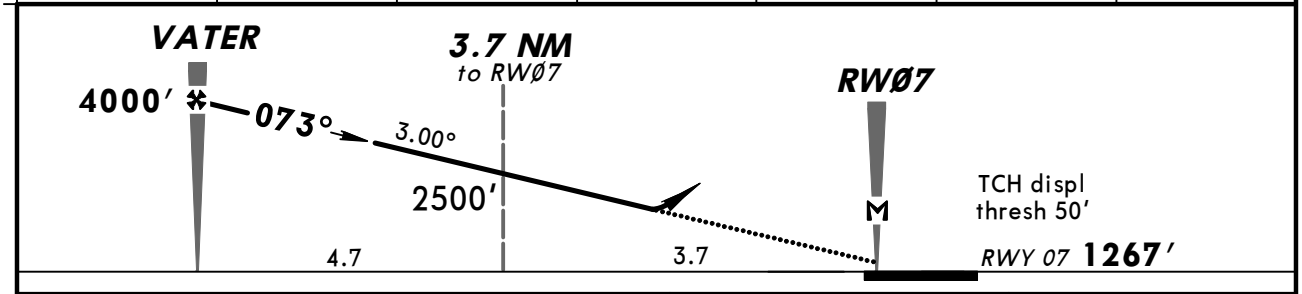
Alt Set: hPa (IN on req) Rwy Elev: 46 hPa Trans level: By ATC Trans alt: 5000′
CAUTION: Turbulence must be expected during moderate weather condition, wind 6 KT or less, on extended RCL (D4.6 STG) over power plant cooling tower.

4700′
MSA
ARP



❶ Authorized for acft with more than 5.7 mt MTOW under following conditions:
- only when ILS GS not usable
- ceiling 1000′
- ground visibilty 4000m.

DIST to RWØ7	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	3870′	3550′	3230′	2910′	2600′	2280′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RWØ7						

ALSF-II
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **07**

DA(H) **1990′** (723′)

ALS out

A	RVR 1500m
B	
C	CMV 2400m
D	

PANS OPS 4

CHANGES: Minimums.

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EDDS/STR
STUTTGART

JEPPESEN
12 MAR 10 (12-2)

STUTTGART, GERMANY
RNAV (GPS) Rwy 25

BRIEFING STRIP™

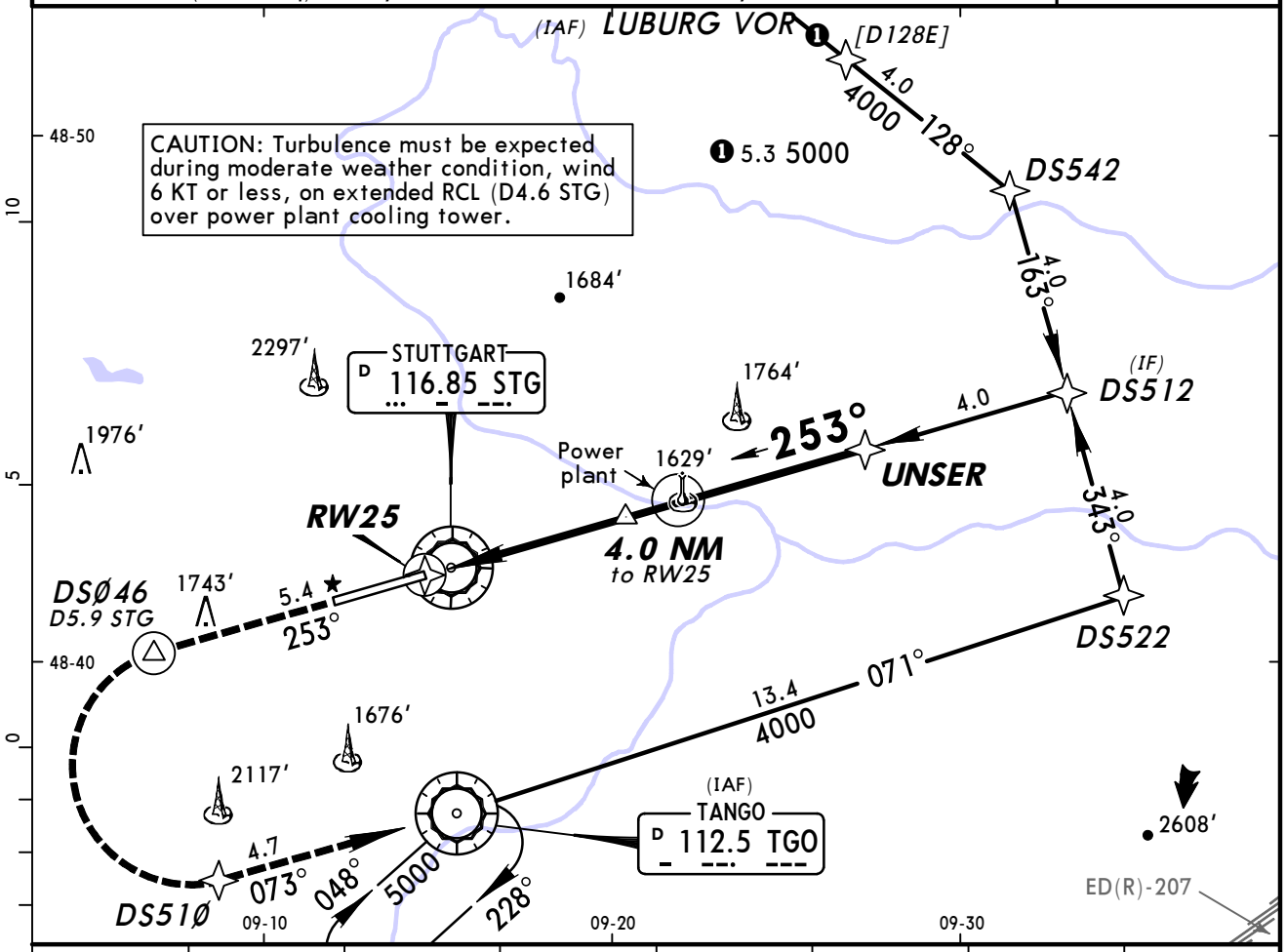
*D-ATIS	LANGEN Radar (APP)	*STUTTGART Director (APP)	STUTTGART Tower	Ground
126.12	125.05 119.2	119.85	118.8 119.05	118.6

RNAV	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
	253°	UNSER 4000′ (2819′)	1590′ (409′)	1276′ / RWY 1181′

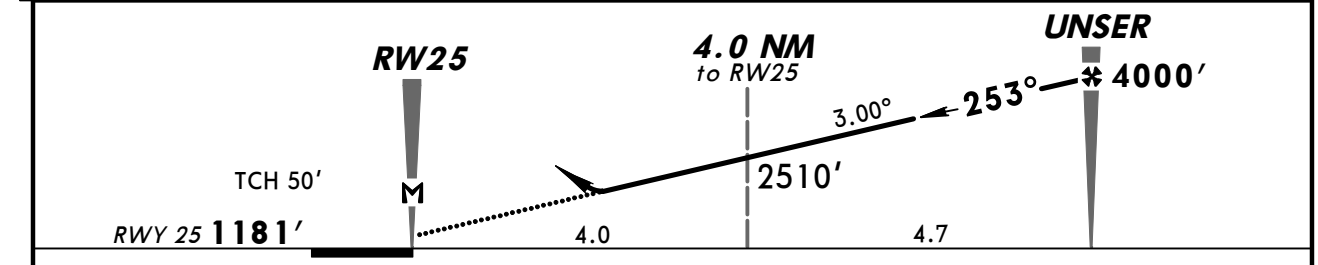
MISSED APCH: RNAV: Climb on 253° to DSØ46 or 5000′, whichever is later, then turn LEFT via DS51Ø onto 073° to TGO VOR.
NON-RNAV: Climb on R-253 STG to D5.9 STG or 5000′, whichever is later, then turn LEFT to TGO VOR.

Alt Set: hPa (IN on req) Rwy Elev: 43 hPa Trans level: By ATC Trans alt: 5000′

4700′
MSA
ARP



DIST to RW25	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1870′	2190′	2510′	2830′	3150′	3460′	3780′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW25						

ALSF-II
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **25**

DA(H) **1590′** (409′)

PANS OPS 4

		ALS out
A	RVR 1200m	RVR 1500m
B		
C		RVR 1900m
D		

CHANGES: Minimums.

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BRIEFING STRIP™

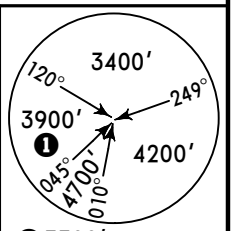
*D-ATIS	LANGEN Radar (APP)		*STUTTGART Director (APP)	STUTTGART Tower		Ground
126.12	125.05	119.2	119.85	118.8	119.05	118.6

VOR STG 116.85	Final Apch Crs 073°	Minimum Alt VATER 4000′ (2733′)	DA(H) 1990′ (723′)	Apt Elev 1276′ RWY 1267′

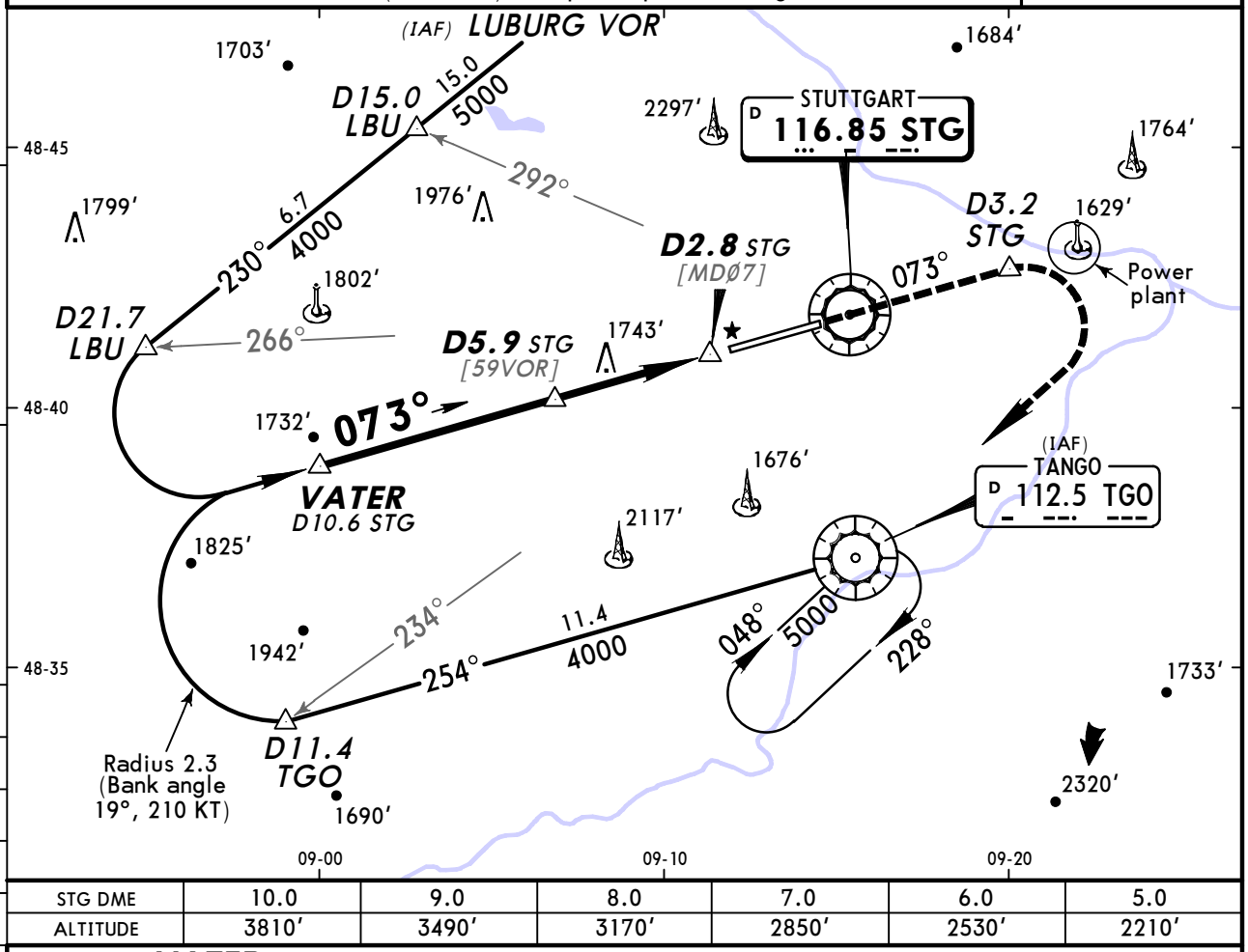
MISSED APCH: Climb on R-073 STG to D3.2 STG or 5000′, whichever is later, then turn RIGHT to TGO VOR.

Alt Set: hPa (IN on req) Rwy Elev: 46 hPa Trans level: By ATC Trans alt: 5000′

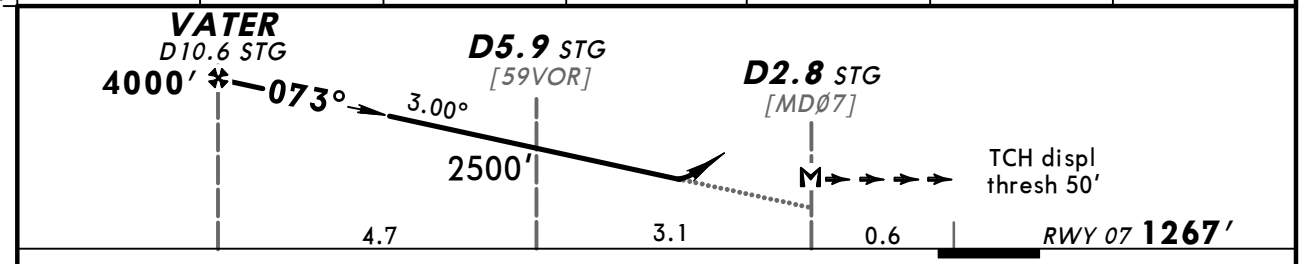
1. **DME REQUIRED.**
2. CAUTION: Turbulence must be expected during moderate weather condition, wind 6 KT or less, on extended RCL (D4.6 STG) over power plant cooling tower.



1 3300′ within 10 NM.
MSA STG VOR



STG DME	10.0	9.0	8.0	7.0	6.0	5.0
ALTITUDE	3810′	3490′	3170′	2850′	2530′	2210′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D2.8 STG							

ALSF-II
REIL
PAPI

STG 116.85 R-073

D3.2 STG 5000′ whichever is later

Standard STRAIGHT-IN LANDING RWY 07 1

DA(H) 1990′ (723′)

	ALS out
A	RVR 1500m
B	
C	NOT APPLICABLE
D	

1 Only for acft up to 5.7 mt MTOW.

PANS OPS 4

CHANGES: Minimums.

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BRIEFING STRIP™

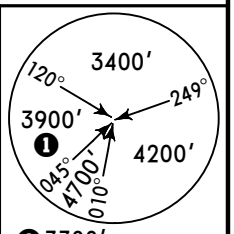
*D-ATIS	LANGEN Radar (APP)		*STUTTGART Director (APP)	STUTTGART Tower		Ground
126.12	125.05	119.2	119.85	118.8	119.05	118.6

VOR STG	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
116.85	253°	UNSER 4000′ (2819′)	1590′ (409′)	1276′ / RWY 1181′

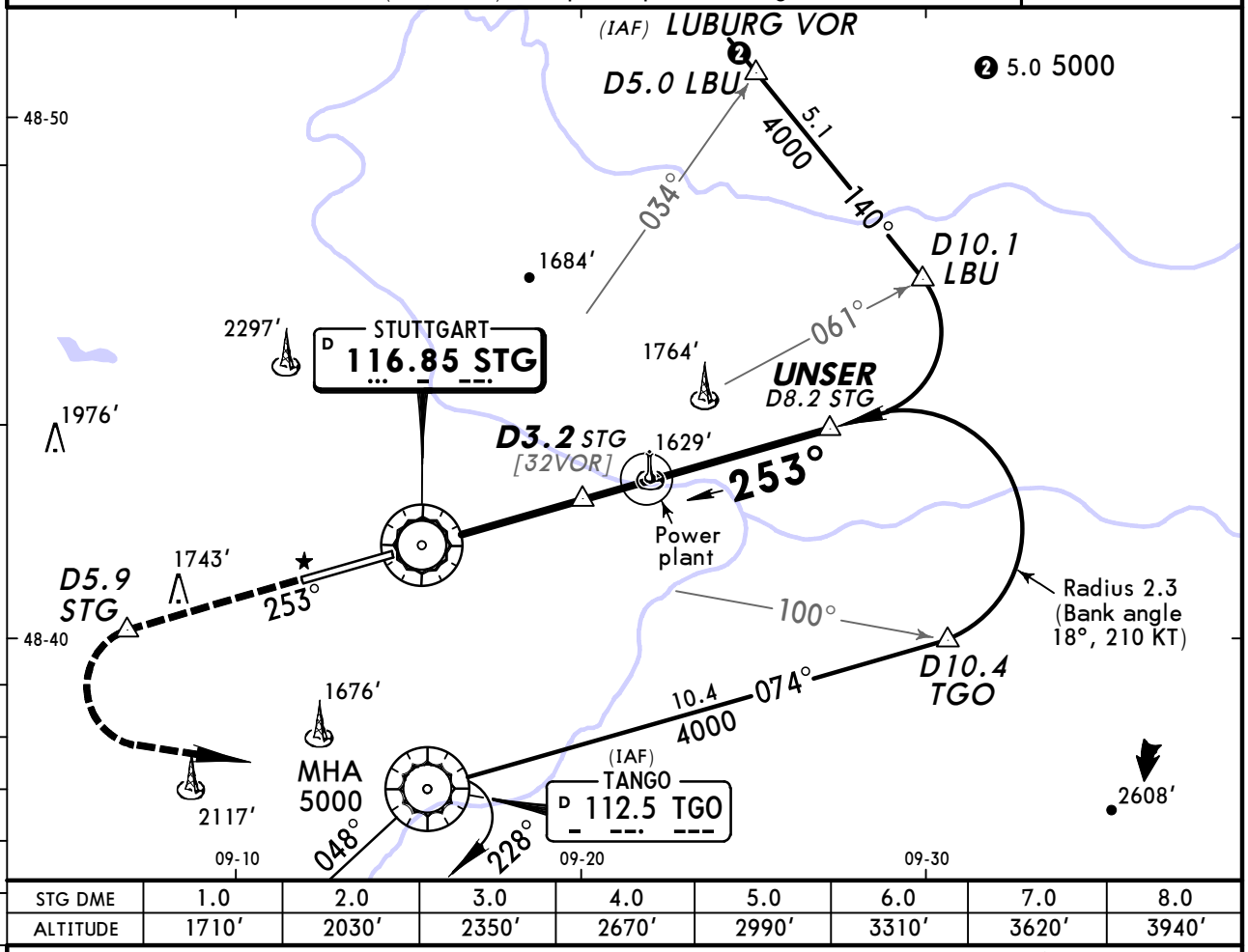
MISSED APCH: Climb on R-253 STG to D5.9 STG or 5000′, whichever is later, then turn LEFT to TGO VOR.

Alt Set: hPa (IN on req) Rwy Elev: 43 hPa Trans level: By ATC Trans alt: 5000′

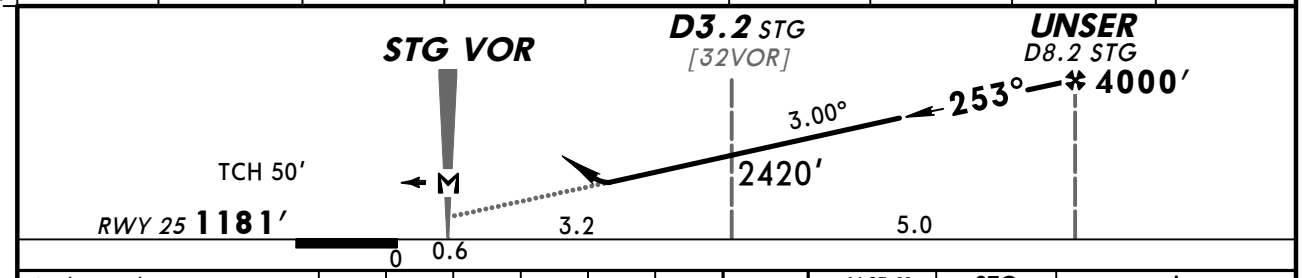
1. **DME REQUIRED.**
2. CAUTION: Turbulence must be expected during moderate weather condition, wind 6 KT or less, on extended RCL (D4.6 STG) over power plant cooling tower.



❶ 3300′ within 10 NM.
MSA STG VOR



STG DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1710′	2030′	2350′	2670′	2990′	3310′	3620′	3940′



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

ALSF-II
REIL
PAPI

STG 116.85 R-253

D5.9 STG 5000′ whichever is later

Standard STRAIGHT-IN LANDING RWY **25**

DA(H) **1590′** (409′)

	RVR	ALS out
A	1200m	1500m
B		
C		1900m
D		

PANS OPS 4

CHANGES: Minimums.

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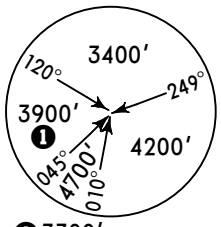
BRIEFING STRIP™

*D-ATIS	LANGEN Radar (APP)		*STUTTGART Director (APP)	STUTTGART Tower		Ground
126.12	125.05	119.2	119.85	118.8	119.05	118.6

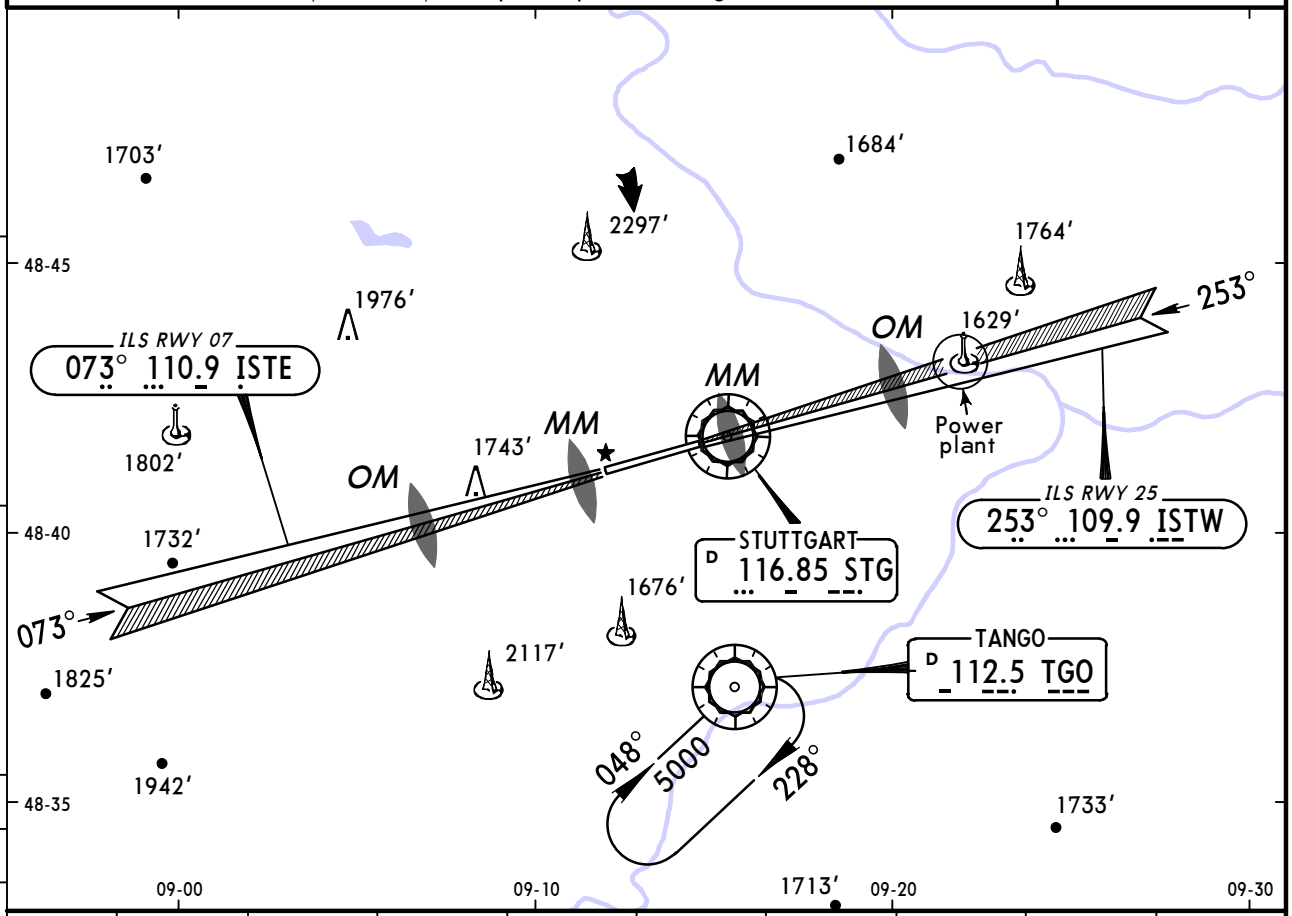
RADAR	Final Apch Crs By ATC	Minimum Alt See table below	MDA(H) Refer to Minimums	Apt Elev 1276′ RWY 07 1267′ RWY 25 1181′

MISSED APCH: Climb STRAIGHT AHEAD to 5000′.

Alt Set: hPa (IN on req) Apt Elev: 46 hPa Trans level: By ATC Trans alt: 5000′
CAUTION: Turbulence must be expected during moderate weather condition, wind 6 KT or less, on extended RCL (D4.6 STG) over power plant cooling tower.



1 3300′ within 10 NM.
MSA STG VOR



RWY 07	RADAR FIX	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	4300′	4000′	3700′	3400′	3100′	2800′	2500′	2200′

RWY 25	RADAR FIX	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	4300′	4000′	3700′	3400′	3100′	2800′	2500′	2200′	1840′

Minimum Alt/NM	10.0 FAF	4.0
SRA 07	**4300′**	—
SRA 25	**4300′**	2400′

Gnd speed-Kts		*70*	*90*	*100*	*120*	*140*	*160*
Descent Angle	2.83°	350	451	501	601	701	801
RWY 07: MAP 2.0 NM from THR							
RWY 25: MAP at THR							

Lighting-Refer to Airport Chart

5000′

PANS OPS 4

Standard STRAIGHT-IN LANDING

	SRA 07 1		SRA 25	
	MDA(H) **1980′** (713′)		MDA(H) **1590′** (409′)	
		ALS out		ALS out
A B	CMV *2800m*	CMV *3500m*	RVR *1400m*	CMV *2100m*
C D	NOT APPLICABLE		RVR *1600m*	CMV *2300m*

1 For acft above 5.7 mt MTOW, only usable in case of emergency.

CHANGES: Minimums.

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General Information

Location: Berlin Deu
IATA Code: TXL
Lat/Long: N52° 33.6' E013° 17.3'
Elevation: 122 ft

Airport Use: Public
Magnetic Variation: 2.9°E

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

Sunrise: 0559 Z
Sunset: 1641 Z,

Runway Information

Runway: 08L
Length x Width: 9918 ft x 151 ft
Surface Type: asphalt
TDZ-Elev: 110 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Stopway: 226 ft

Runway: 08R
Length x Width: 7966 ft x 151 ft
Surface Type: asphalt
TDZ-Elev: 109 ft
Lighting: Edge, ALS, Centerline
Displaced Threshold: 341 ft
Stopway: 207 ft

Runway: 26L
Length x Width: 7966 ft x 151 ft
Surface Type: asphalt
TDZ-Elev: 122 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 722 ft
Stopway: 157 ft

Runway: 26R
Length x Width: 9918 ft x 151 ft
Surface Type: asphalt
TDZ-Elev: 117 ft

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Lighting: Edge, ALS, Centerline, REIL, TDZ
Stopway: 223 ft

Communication Information

ATIS 125.9
ATIS 112.3
Tegel Ground Tower 121.75
Tegel Delivery Tower 121.925
Tegel Tower 124.525
Tegel Tower 118.85
Tegel Tower 27.892 Military
Berlin Military Ground Control 136.0 Military
Berlin Military Ground Control 36.925 Military
Bremen Radar Approach Control 126.425
Bremen Radar Approach Control 120.625 Departure Service
Bremen Radar Approach Control 119.625
Bremen Radar Approach Control 119.5
Bremen Radar Approach Control 39.857 Military
Bremen Radar Approach Control 31.35 Military
Berlin Director Approach Control 136.1
Berlin Director Approach Control 121.125

1. GENERAL

1.1. ATIS

D-ATIS 112.3 125.9

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. LOCAL FLYING RESTRICTIONS

Only jet ACFT licensed in accordance with ICAO Annex 16, Volume 1, Part II, Chapter 3 are permitted to take-off and land at the APT.

Exceptions:

- ACFT provably approaching the APT as alternate aerodrome for meteorological, technical or other safety reasons, **and if** Berlin Schonefeld cannot be approached.
- Take-offs and landings on a mission in disaster or rendering medical aid as well as in other emergency cases.

1.2.2. NIGHT FLYING RESTRICTIONS

Take-offs are not permitted between 2300 (2250 off blocks)-0600LT.
Landings are not permitted between 2300-0600LT.
For delayed take-offs and landings in scheduled air services and scheduled charter services with scheduled times of departure or arrival before 2300LT, an exception to the flying restrictions may be taken for granted in cases of provably unavoidable delays until 2400LT.
If the delay is unavoidable, this shall be reported in each individual case to the Aviation Supervision Office at the APT and also proved.
Delayed landings during closing time between 2400-0600LT are only possible in accordance with instructions below.

Exceptions:

- Landings of ACFT provably approaching the APT as alternate aerodrome for meteorological, technical or other safety reasons.
- Take-offs and landings on a mission in disaster or rendering medical assistance as well as in other emergency cases.
- ACFT operated in the night airmail service of the "Deutsche Post AG".
- Flight checks conducted by the DFS Deutsche Flugsicherung GmbH as far as required to maintain safety of flight operations.

Exceptions from the above mentioned regulations may be granted in individual cases, especially if required to avoid serious disturbances of air traffic or in cases of special public interest. If appropriate, requests shall be submitted to

Senatsverwaltung fuer Stadtentwicklung
Referat VII E
Am Koellnischen Park 3
10179 Berlin
Tel: (030) 9025-0
Fax: (030) 9025-1679

In urgent cases outside regular operating hours applications shall be submitted to the Aviation Supervision Office (Tel: [030] 4101 2300, Fax: [030] 4101 2364).
Clearances for take-offs during closing times issued by ATC do not include the necessary exceptional permission. Generally, exceptional permission for night landings during the closing times will not generally be granted by ATC via radio telephony. Accordingly, a landing clearance issued by ATC for safety reasons will not necessarily include the decision about the admissibility of a night landing. In case of a landing or premature landing (before 0600LT) not approved by the Aviation Supervision Office, the pilot shall appear in person at the Aviation Supervision Office immediately after landing in order to justify admissibility of the night landing.

1.2.3. REVERSE THRUST

Reverse thrust other than idle thrust shall only be used to an extent necessary for safety reasons.

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1. GENERAL

1.2.4. RUN-UP TESTS OF TURBO JET ENGINES

Between 0600-2200LT run-ups are generally permitted only with the noise suppressor device specified in the APT regulations.
Between 2200-2300LT run-ups are permitted with consent of the Aviation Supervision Office if necessary for safety reasons shortly prior to take-off until 2300LT of the same day.
Between 2200-0600LT run-ups are permitted with consent of the Aviation Supervision Office if necessary for safety reasons shortly prior to a take-off early in the morning for urgent maintenance purposes.

1.3. TAXI PROCEDURES

TWY PE/PW gradient 2%. Use extreme CAUTION when taxiing over bridge.

Use CAUTION after landing short distance between RWYs, expect to stop before parallel RWY.

Taxilanes PE, PM, PW and SM with reduced minimum separation distance between centerlines and obstacles (MIM 131'/40m).

Due to reduced wing-tip clearance, the yellow taxiguidelines shall be strictly adhere to. The taxispeed shall be adjusted accordingly.

ACFT with wingspan of 171'/52m or more, equipped with four engines, may run the outer engines for taxi operations at most in the IDLE position.

ACFT with wingspan of 171'/52m or more are only permitted to taxi on the apron with Follow-me car.

1.4. PARKING INFORMATION

Stands 1 thru 14 equipped with Visual Docking Guidance System AGNIS.
Stand 40 available for General Aviation.

1.5. OTHER INFORMATION

CAUTION: Birds on APT.
RWY 08L/26R with antiskid layer.

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2. ARRIVAL

2.1. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

2.2. NOISE ABATEMENT PROCEDURES

Clearances to perform visual approaches will not be granted, except for propeller ACFT up to 5700 kg MPW.

2.3. CAT II/III OPERATIONS

RWY 08L/26R approved for CAT II/III, RWY 26L for CAT II operations, special aircrew and ACFT certification required.

2.4. TAXI PROCEDURES

From RWY 08L/R:	
Stands 1 thru 6:	RE or SE to SM
Stands 7 thru 9:	RE or SE to SM to PM
Stands 10 thru 12:	RE or SE to SM to PM to PW
Stands 13 thru 19:	RE to SE to PE to PW SE to PE to PW
Stands 20 thru 24:	RE or SE to SM to PM to PW
Stands 25 and 26:	RE or SE to SM to PW
Stands 27 thru 35 and 51 thru 60:	RE or SE to SM
Stands 61 thru 65:	RE to SE to PE SE to PE
From RWY 26L/R:	
Stands 1 thru 6:	RW or SW to SM
Stands 7 thru 9:	RW or SW to SM to PM
Stands 10 thru 26:	RW or SW to SM to PW
Stands 27 thru 35 and 51 thru 60:	RW or SW to SM
Stands 61 thru 65:	RW or SW to SM to PE

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3. DEPARTURE

3.1. TAXI PROCEDURES

To RWY 08L/R:	
Stands 1 thru 6:	SM to RW or SW
Stands 7 thru 9:	PM to SM to RW or SW
Stands 10 thru 26:	PW to SM to RW or SW
Stands 27 thru 35 and 51 thru 60:	SM to RW or SW
Stands 61 thru 65:	PE to SM to RW or SW
To RWY 26L/R:	
Stands 1 thru 6:	SM to SE
Stands 7 thru 9:	PM to SM to SE
Stands 10 thru 12:	PW to PM to SM to SE
Stands 13 thru 19:	PW to PE to SE
Stands 20 thru 24:	PW to PM to SM to SE
Stands 25 and 26:	PW to SM to SE
Stands 27 thru 35 and 51 thru 60:	SM to SE
Stands 61 thru 65:	PE to SE

3.2. SPEED RESTRICTIONS

MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

3.3. OTHER INFORMATION

3.3.1. DATALINK DEPARTURE CLEARANCE (DCL)

Temporal parameters:

t_i 25 min prior to EOBT for unregulated flights.
30 min prior to CTOT for ATFM regulated flights.

t_t 11 min prior to EOBT for unregulated flights.
16 min prior to CTOT for ATFM regulated flights.

t_l 5 min

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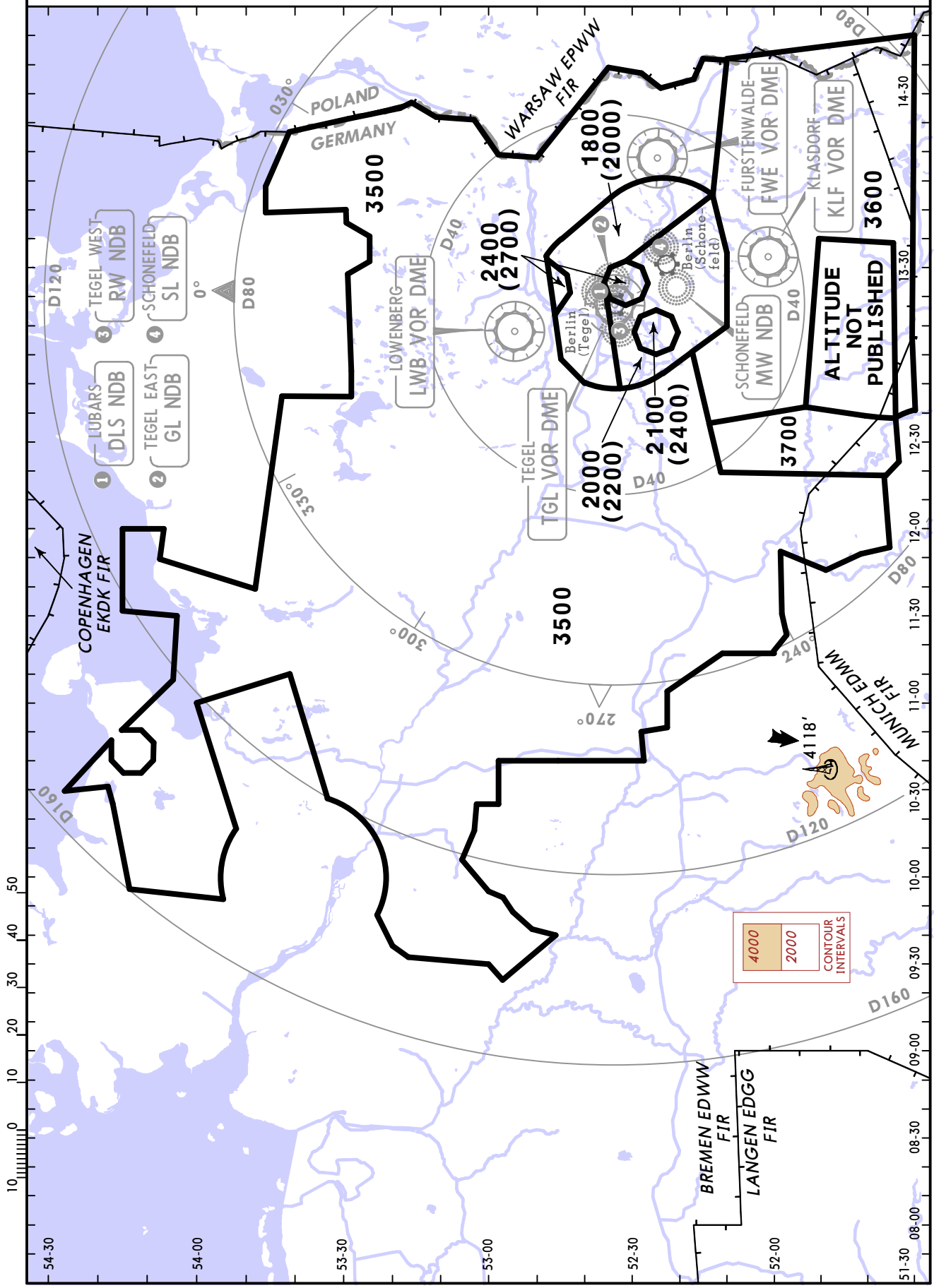
EDDT/TXL
TEGEL

JEPPESEN
13 MAY 11 (10-1R)

BERLIN, GERMANY
RADAR MINIMUM ALTITUDES

BREMEN Radar (APP)				Apt Elev	Alt Set: hPa (IN on request)
119.62	126.42	120.62	119.5	122′	Trans level: By ATC Trans alt: 5000′

The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000′ above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500′). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only. Altitudes in brackets apply for the period from AIRAC date in November until AIRAC date in March in order to meet required obstacle clearance at cold temperatures.



CHANGES: Sectors & altitudes.

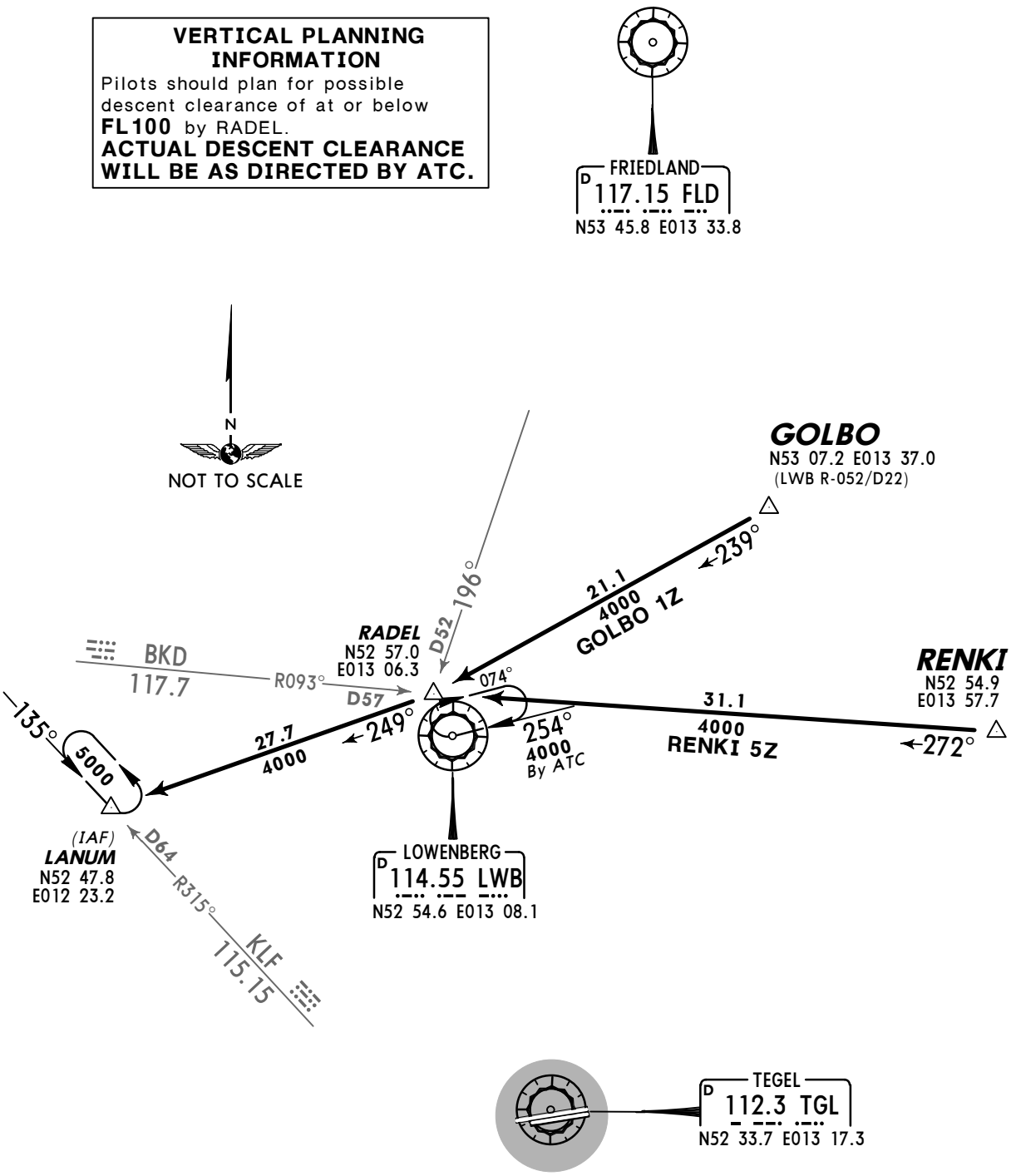
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D-ATIS		Apt Elev	Alt Set: hPa (IN on request)
112.3	125.9	122′	Trans level: By ATC Trans alt: 5000′

2400′
MSA
TGL VOR

GOLBO ONE ZULU (GOLBO 1Z) *[GOLB1Z]*
RENKI FIVE ZULU (RENKI 5Z) *[RENK5Z]*
RWYS 08L/R ARRIVALS
FROM NORTHEAST
BRNAV EQUIPMENT NECESSARY

VERTICAL PLANNING INFORMATION
Pilots should plan for possible descent clearance of at or below **FL100** by RADEL.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.



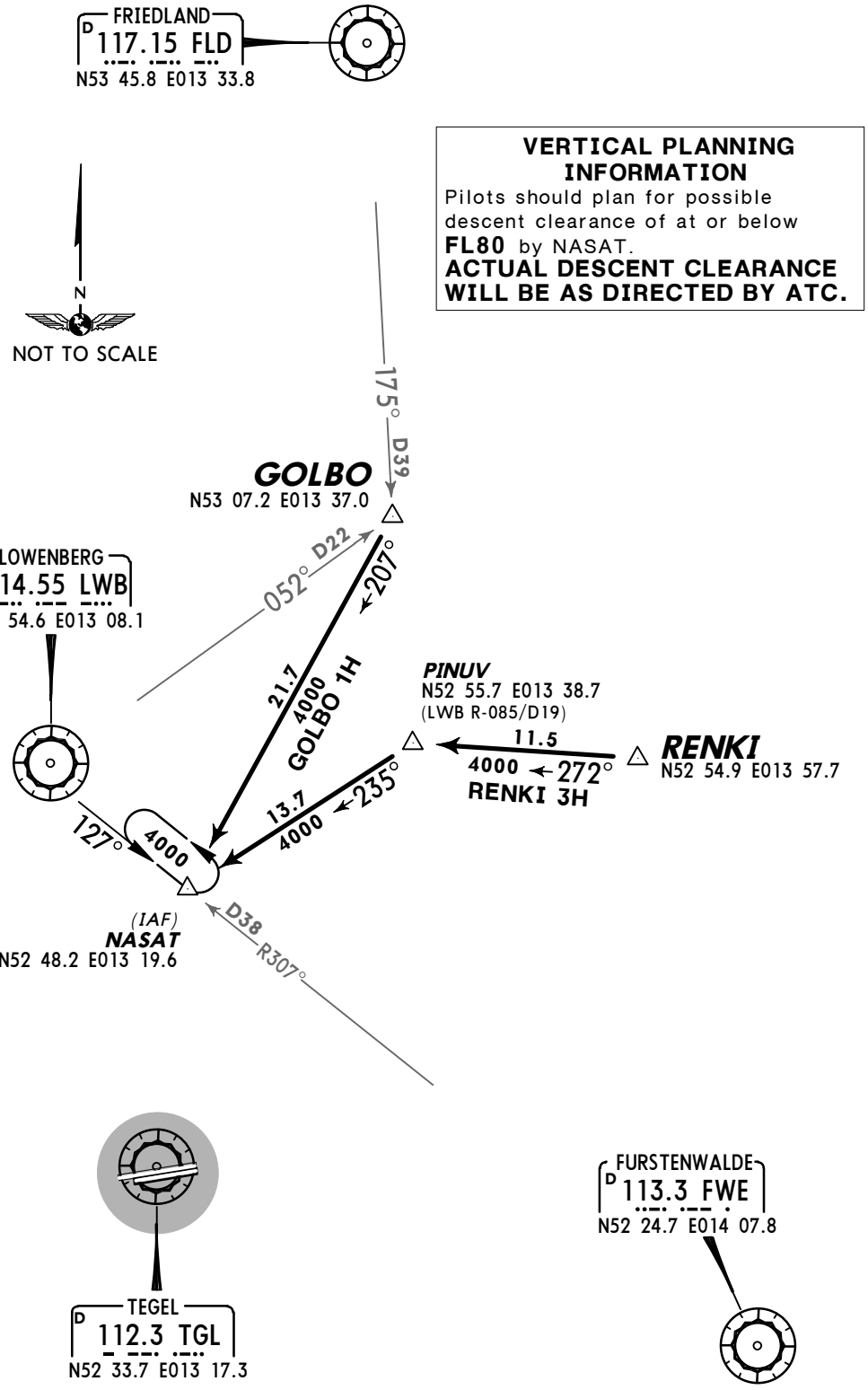
CHANGES: STAR BODLA 3Z withdrawn.

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D-ATIS		Apt Elev	Alt Set: hPa (IN on request)
112.3	125.9	122′	Trans level: By ATC Trans alt: 5000′

2400′
MSA
TGL VOR

GOLBO ONE HOTEL (GOLBO 1H) *[GOLB1H]*
RENKI THREE HOTEL (RENKI 3H) *[RENK3H]*
RWYS 26L/R ARRIVALS
FROM NORTHEAST
BRNAV EQUIPMENT NECESSARY



CHANGES: STAR BODLA 3H withdrawn.

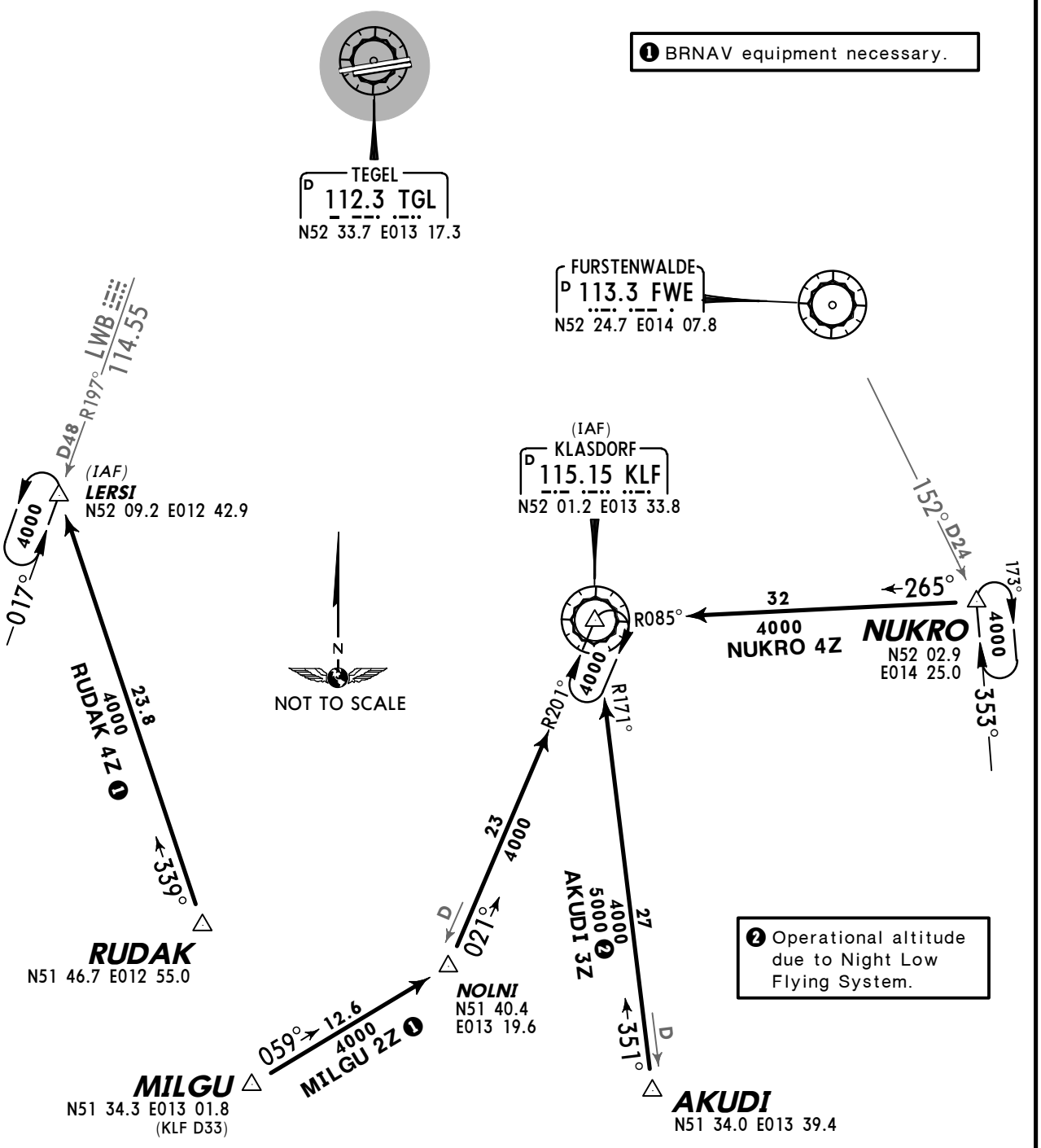
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D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
112.3 125.9	122′	Trans level: By ATC Trans alt: 5000′

2400′
MSA
TGL VOR

AKUDI THREE ZULU (AKUDI 3Z) *[AKUD3Z]*
MILGU TWO ZULU (MILGU 2Z) *[MILG2Z]* ❶
NUKRO FOUR ZULU (NUKRO 4Z) *[NUKR4Z]*
RUDAK FOUR ZULU (RUDAK 4Z) *[RUDA4Z]* ❶
RWYS 08L/R ARRIVALS
FROM SOUTH

❶ BRNAV equipment necessary.



❷ Operational altitude due to Night Low Flying System.

VERTICAL PLANNING INFORMATION

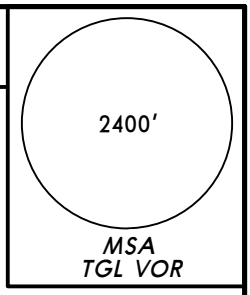
Pilots should plan for possible descent clearance as follows:

AKUDI 3Z, MILGU 2Z: at or below **FL110** by KLF.
NUKRO 4Z: at or below **FL140** by NUKRO,
at or below **FL110** by KLF.
RUDAK 4Z: at or below **FL100** by LERSI.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

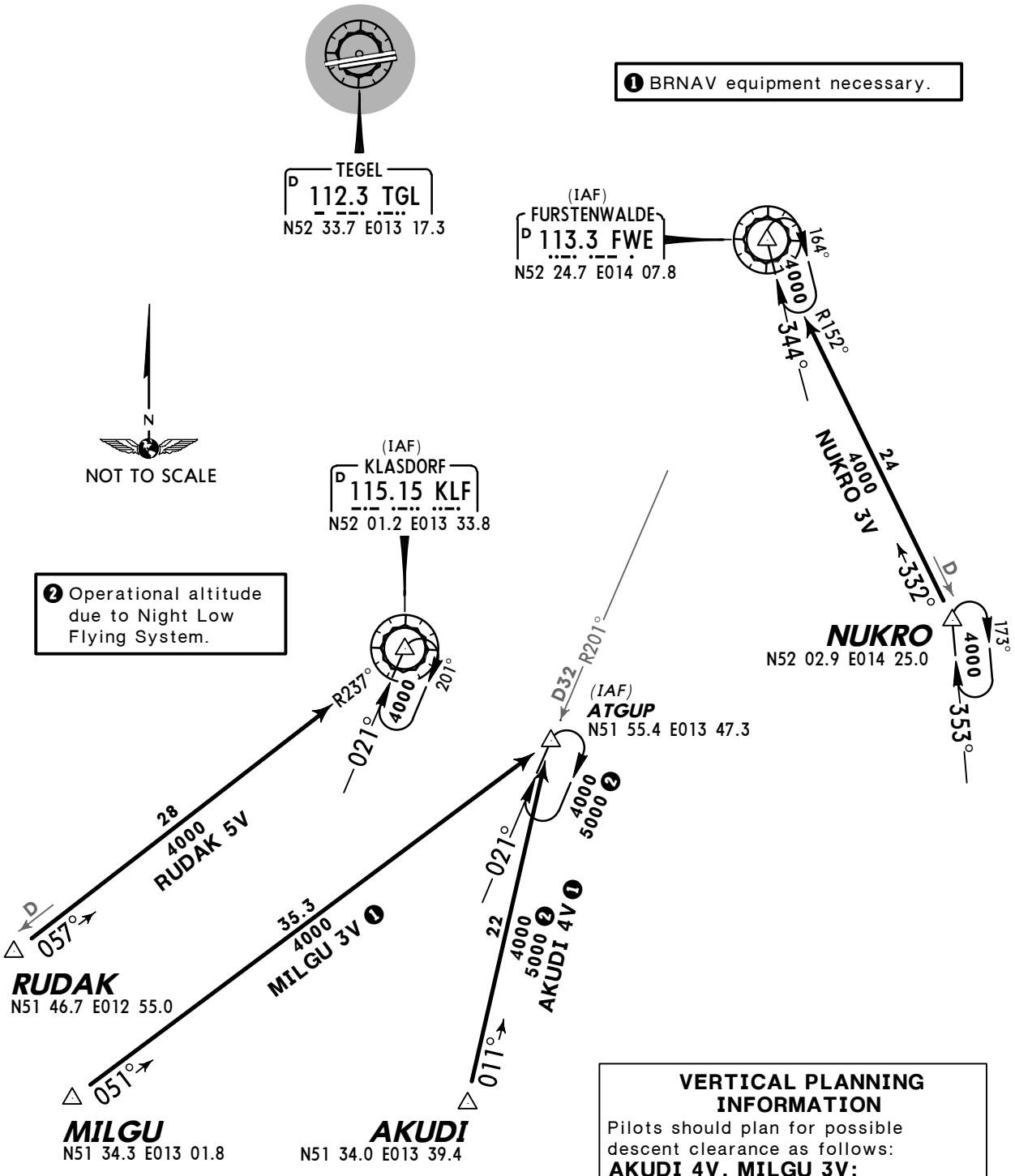
CHANGES: Vertical planning information.

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D-ATIS		Apt Elev	Alt Set: hPa (IN on request)
112.3	125.9	122′	Trans level: By ATC Trans alt: 5000′



AKUDI FOUR VICTOR (AKUDI 4V) *[AKUD4V]* ❶
MILGU THREE VICTOR (MILGU 3V) *[MILG3V]* ❶
NUKRO THREE VICTOR (NUKRO 3V) *[NUKR3V]*
RUDAK FIVE VICTOR (RUDAK 5V) *[RUDA5V]*
RWYS 26L/R ARRIVALS
FROM SOUTH



VERTICAL PLANNING INFORMATION

Pilots should plan for possible descent clearance as follows:

AKUDI 4V, MILGU 3V:
at or below **FL140** by ATGUP.

NUKRO 3V:
at or below **FL140** by NUKRO,
at or below **FL90** by FWE.

RUDAK 5V:
at or below **FL120** by KLF.

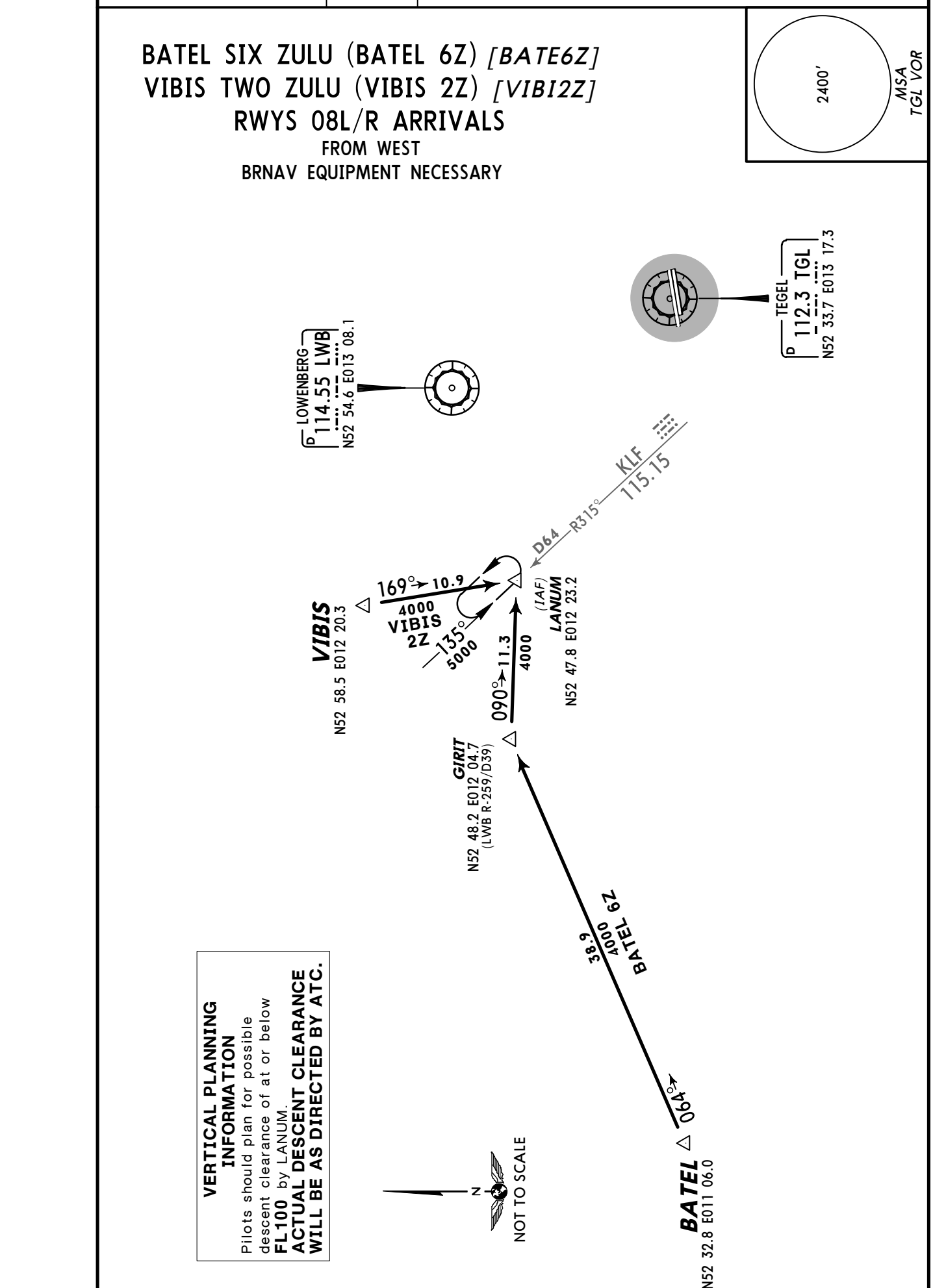
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

CHANGES: STARs AKUDI 3V, MILGU 2V renumbered 4V, 3V & revised.

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D-ATIS		Apt Elev	Alt Set: hPa (IN on request)
112.3	125.9	122′	Trans level: By ATC Trans alt: 5000′

BATEL SIX ZULU (BATEL 6Z) *[BATE6Z]*
VIBIS TWO ZULU (VIBIS 2Z) *[VIBI2Z]*
RWYS 08L/R ARRIVALS
FROM WEST
BRNAV EQUIPMENT NECESSARY

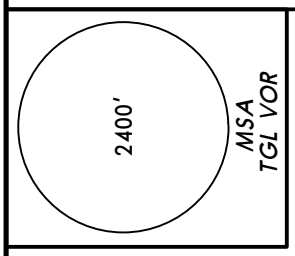


VERTICAL PLANNING INFORMATION
Pilots should plan for possible descent clearance of at or below **FL100** by LANUM.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

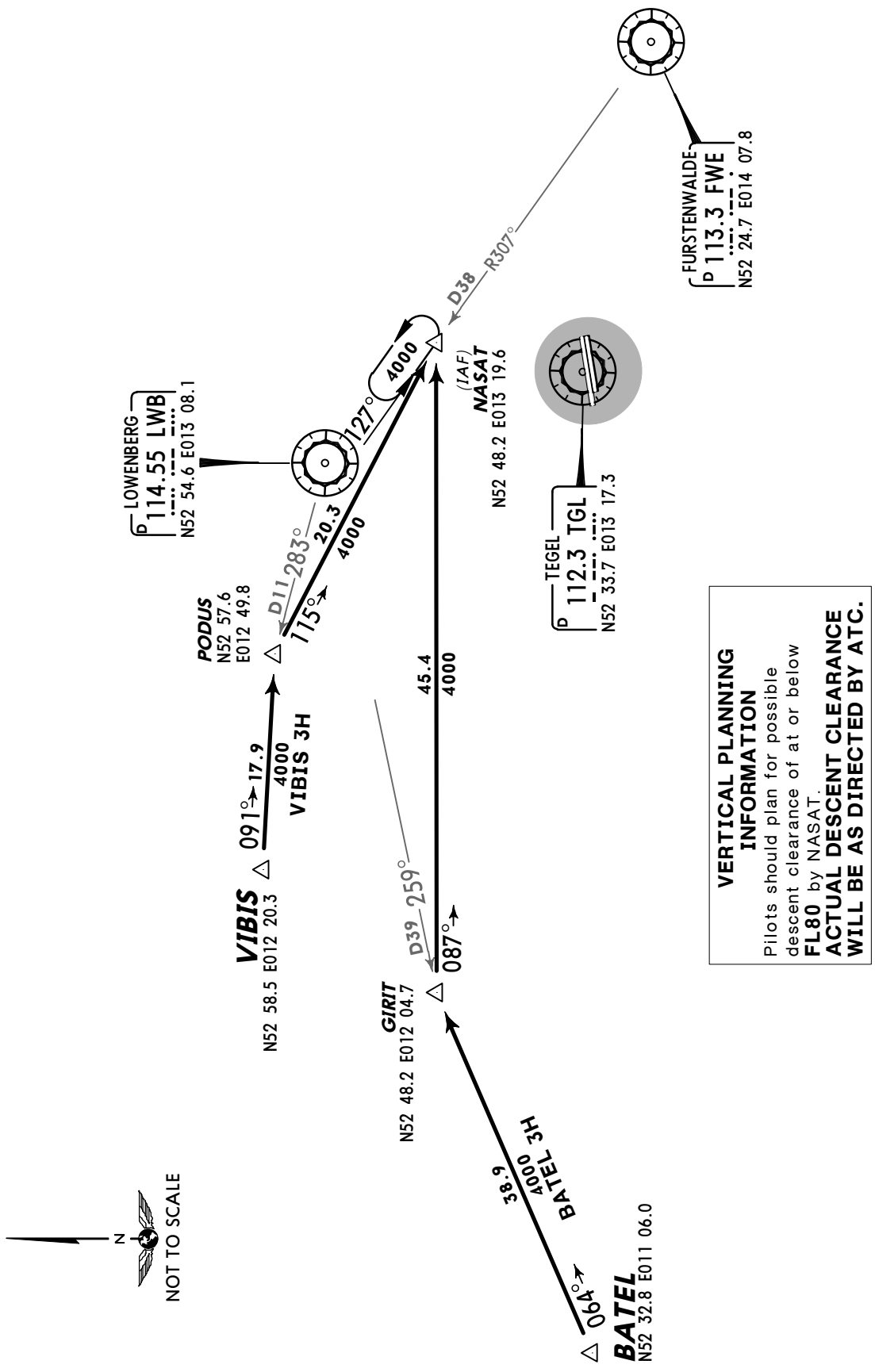
CHANGES: BATEL 5Z renumbered 6Z & revised; DLE 5Z withdrawn.

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D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
112.3 125.9	122′	Trans level: By ATC Trans alt: 5000′



BATEL THREE HOTEL (BATEL 3H) *[BATE3H]*
VIBIS THREE HOTEL (VIBIS 3H) *[VIBI3H]*
RWYS 26L/R ARRIVALS
FROM WEST
BRNAV EQUIPMENT NECESSARY



VERTICAL PLANNING INFORMATION
Pilots should plan for possible descent clearance of at or below **FL80** by NASAT.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

CHANGES: STARs renumbered, revised & withdrawn.

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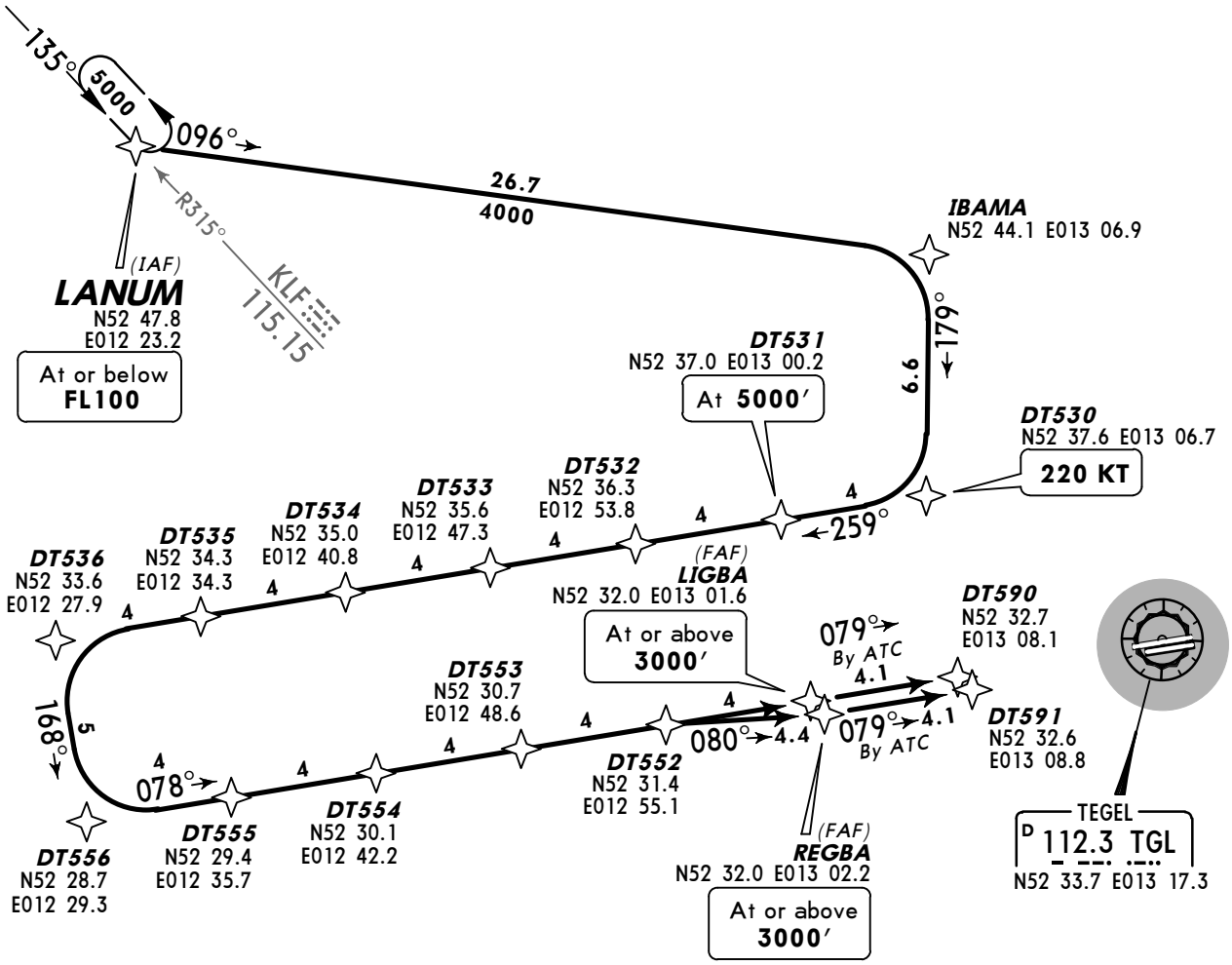
*D-ATIS 112.3 125.9	*Apt Elev* 122′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

2400′
MSA
TGL VOR

LANUM Ø8L *[LAØ8L]*, LANUM Ø8R *[LAØ8R]*
RWYS 08L/R RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM NORTH

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

N
NOT TO SCALE



TRANSITION	ROUTING
LANUM Ø8L	LANUM **(FL100-) -** IBAMA - DT530 (K220) - DT531 **(5000′) -** DT536 - DT556 - LIGBA **(3000′+).**
LANUM Ø8R	LANUM **(FL100-) -** IBAMA - DT530 (K220) - DT531 **(5000′) -** DT536 - DT556 - DT552 - REGBA **(3000′+).**

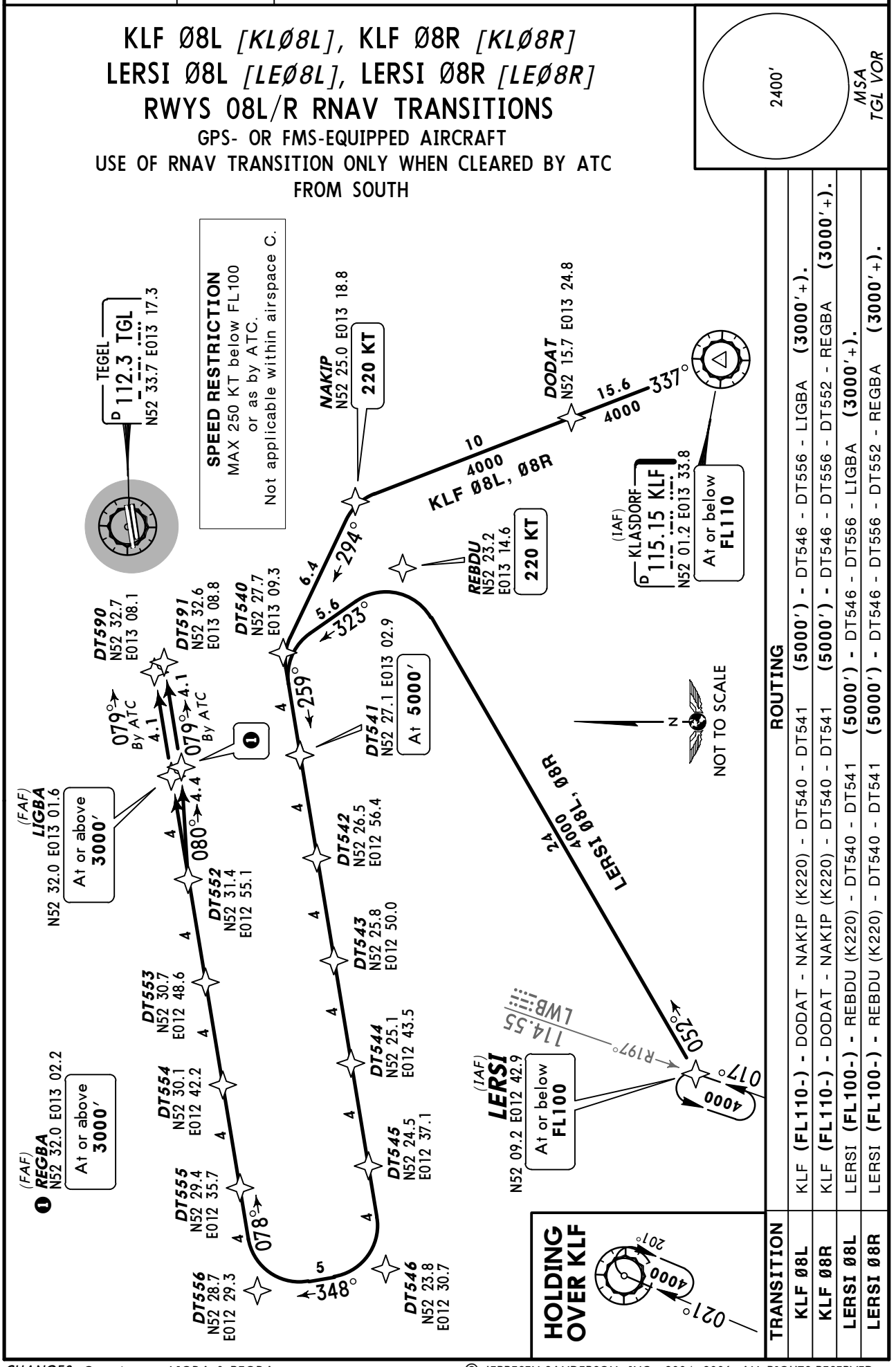
CHANGES: Crossings at LIGBA & REGBA.

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*D-ATIS	Apt Elev	
112.3 125.9	122′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

KLF Ø8L *[KLØ8L]*, KLF Ø8R *[KLØ8R]*
LERSI Ø8L *[LEØ8L]*, LERSI Ø8R *[LEØ8R]*
RWYS 08L/R RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM SOUTH



TRANSITION	ROUTING
KLF Ø8L	KLF **(FL110-) -** DODAT - NAKIP (K220) - DT540 - DT541 **(5000′) -** DT546 - DT556 - LIGBA **(3000′+).**
KLF Ø8R	KLF **(FL110-) -** DODAT - NAKIP (K220) - DT540 - DT541 **(5000′) -** DT546 - DT556 - DT552 - REGBA **(3000′+).**
LERSI Ø8L	LERSI **(FL100-) -** REBDU (K220) - DT540 - DT541 **(5000′) -** DT546 - DT556 - LIGBA **(3000′+).**
LERSI Ø8R	LERSI **(FL100-) -** REBDU (K220) - DT540 - DT541 **(5000′) -** DT546 - DT556 - DT552 - REGBA **(3000′+).**

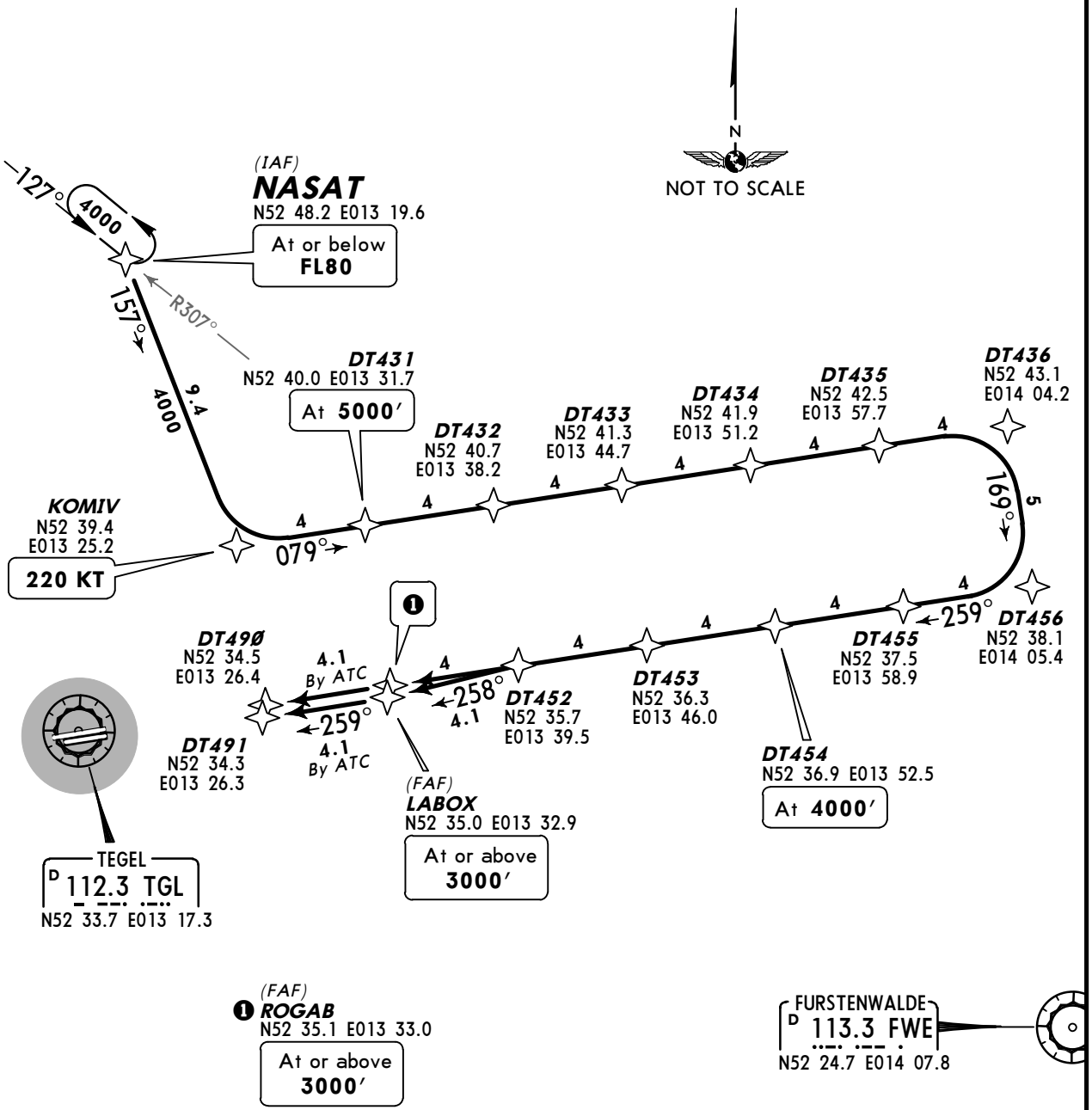
CHANGES: Crossings at LIGBA & REGBA.

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D-ATIS	Apt Elev	
112.3 125.9	122′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

2400′
MSA
TGL VOR

NASAT 26L *[NA26L]*, NASAT 26R *[NA26R]*
RWYS 26L/R RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM NORTH



TRANSITION	ROUTING
NASAT 26L	NASAT **(FL80-) -** KOMIV (K220) - DT431 **(5000′) -** DT436 - DT456 - DT454 **(4000′) -** DT452 - LABOX **(3000′+).**
NASAT 26R	NASAT **(FL80-) -** KOMIV (K220) - DT431 **(5000′) -** DT436 - DT456 - DT454 **(4000′) -** ROGAB **(3000′+).**

CHANGES: None.

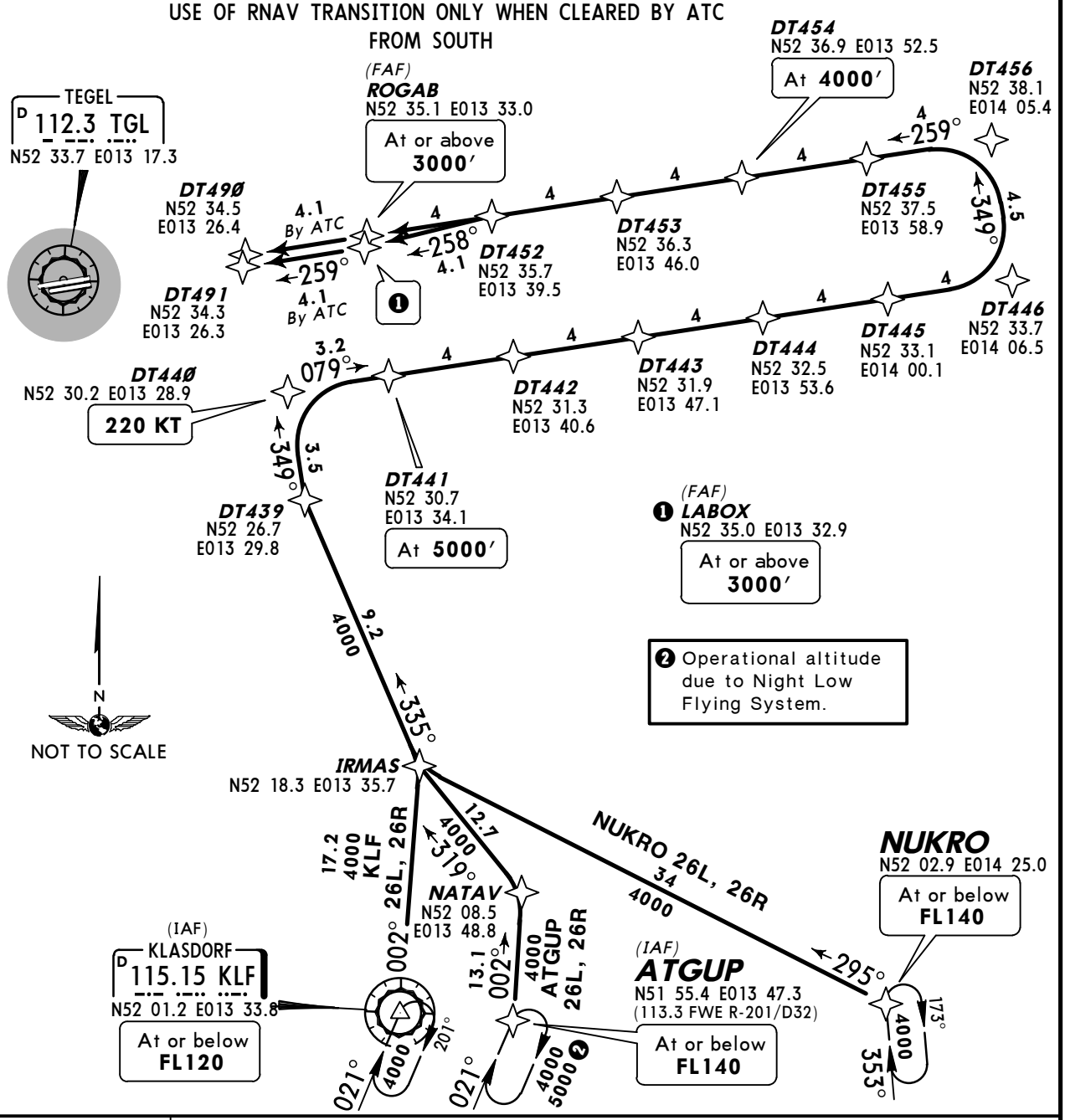
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D-ATIS	Apt Elev	
112.3 125.9	122′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ **1.** On downwind expect vectors to final. **2.** Speed restrictions on Transition (even without profile) are always mandatory, unless cancelled by ATC.

2400′
MSA
TGL VOR

ATGUP 26L *[AT26L]*, ATGUP 26R *[AT26R]*, KLF 26L *[KL26L]* KLF 26R *[KL26R]*, NUKRO 26L *[NU26L]*, NUKRO 26R *[NU26R]* RWYS 26L/R RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC
FROM SOUTH



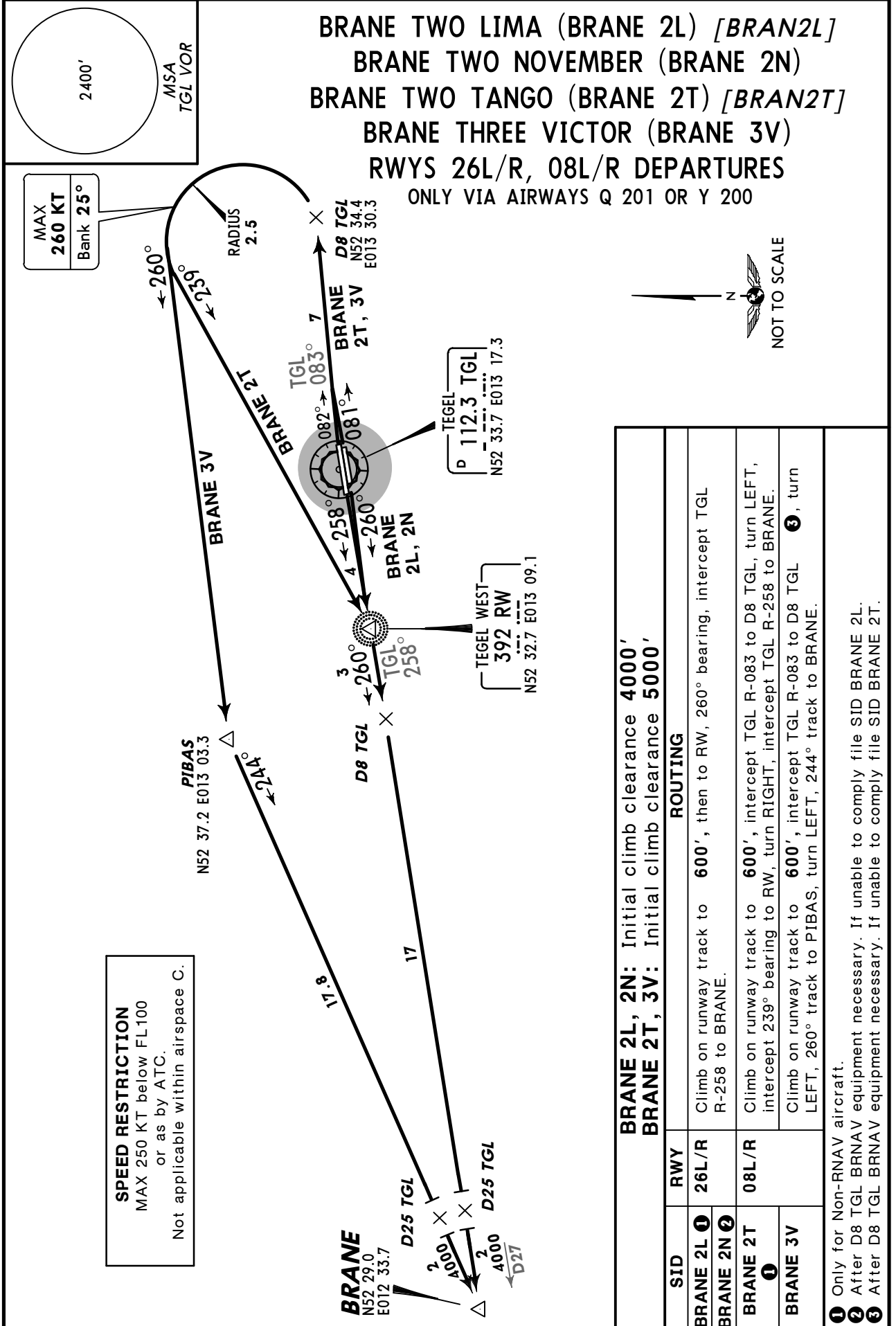
TRANSITION	ROUTING
ATGUP 26L	ATGUP **(FL140-) -** NATAV - IRMAS - DT439 - DT440 (K220) - DT441 **(5000′) -** DT446 - DT456 - DT454 **(4000′) -** DT452 - LABOX **(3000′+).**
ATGUP 26R	ATGUP **(FL140-) -** NATAV - IRMAS - DT439 - DT440 (K220) - DT441 **(5000′) -** DT446 - DT456 - DT454 **(4000′) -** ROGAB **(3000′+).**
KLF 26L	KLF **(FL120-) -** IRMAS - DT439 - DT440 (K220) - DT441 **(5000′) -** DT446 - DT456 - DT454 **(4000′) -** DT452 - LABOX **(3000′+).**
KLF 26R	KLF **(FL120-) -** IRMAS - DT439 - DT440 (K220) - DT441 **(5000′) -** DT446 - DT456 - DT454 **(4000′) -** ROGAB **(3000′+).**
NUKRO 26L	NUKRO **(FL140-) -** IRMAS - DT439 - DT440 (K220) - DT441 **(5000′) -** DT446 - DT456 - DT454 **(4000′) -** DT452 - LABOX **(3000′+).**
NUKRO 26R	NUKRO **(FL140-) -** IRMAS - DT439 - DT440 (K220) - DT441 **(5000′) -** DT446 - DT456 - DT454 **(4000′) -** ROGAB **(3000′+).**

CHANGES: ATGUP transitions revised.

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BREMEN Radar	*Apt Elev*	
120.62	122′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWYs 08L/R: EXPECT close-in obstacles.

BRANE TWO LIMA (BRANE 2L) *[BRAN2L]*
BRANE TWO NOVEMBER (BRANE 2N)
BRANE TWO TANGO (BRANE 2T) *[BRAN2T]*
BRANE THREE VICTOR (BRANE 3V)
RWYS 26L/R, 08L/R DEPARTURES
ONLY VIA AIRWAYS Q 201 OR Y 200



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

BRANE 2L, 2N: Initial climb clearance **4000′**
BRANE 2T, 3V: Initial climb clearance **5000′**

SID	RWY	ROUTING
BRANE 2L ❶	26L/R	Climb on runway track to **600′**, then to RW, 260° bearing, intercept TGL R-258 to BRANE.
BRANE 2N ❷		
BRANE 2T ❶	08L/R	Climb on runway track to **600′**, intercept TGL R-083 to D8 TGL, turn LEFT, intercept 239° bearing to RW, turn RIGHT, intercept TGL R-258 to BRANE.
BRANE 3V		Climb on runway track to **600′**, intercept TGL R-083 to D8 TGL ❸, turn LEFT, 260° track to PIBAS, turn LEFT, 244° track to BRANE.

❶ Only for Non-RNAV aircraft.
❷ After D8 TGL BRNAV equipment necessary. If unable to comply file SID BRANE 2L.
❸ After D8 TGL BRNAV equipment necessary. If unable to comply file SID BRANE 2T.

CHANGES: Restriction in chart heading established.

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BREMEN Radar	*Apt Elev*	
120.62	122′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWYs 08L/R: EXPECT close-in obstacles.

BRUNKENDORF SIX LIMA (BKD 6L)
BRUNKENDORF SEVEN TANGO (BKD 7T)
RWYS 26L/R, 08L/R DEPARTURES

BKD 6L: Initial climb clearance **4000′**
BKD 7T: Initial climb clearance **5000′**

SID	RWY	ROUTING
BKD 6L	26L/R	Climb on runway track to **600′**, then to RW, 260° bearing to D10 TGL ❶, turn RIGHT, 299° track via TUBRI to BKD.
BKD 7T	08L/R	Climb on runway track to **600′**, intercept TGL R-083 to D8 TGL ❷, turn LEFT, 260° track to VADUX, turn RIGHT, 320° track to ASKIX, turn LEFT, 276° track via VIBIS to BKD.

❶ After D10 TGL BRNAV equipment necessary.
❷ After D8 TGL BRNAV equipment necessary. If unable to comply file SID BRANE 2T.

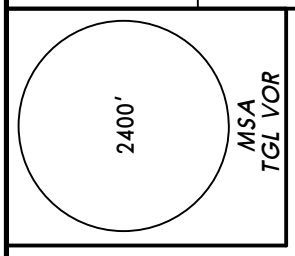
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

RADIUS 2.5
MAX 260 KT
Bank 25°
260°
D8 TGL
N52 34.4 E013 30.3
BKD 7T
7
TGL 083°
082°
081°
258°
260°
4
BKD 6L
TEGEL
112.3 TGL
N52 33.7 E013 17.3
TEGEL WEST
392 RW
N52 32.7 E013 09.1
VADUX
N52 37.9 E013 11.8
320°
19.6
D49 BKD
ASKIX
N52 56.3 E012 47.9
3.8
4000
276°
16.9
4000
VIBIS
N52 58.5 E012 20.3
28.9
4000
R096°
R119°
BRUNKENDORF
117.7 BKD
N53 02.1 E011 32.8
38
4000
TUBRI
N52 43.3 E012 27.3
7
4000
D45 BKD
299°
D10 TGL
N52 32.3 E013 01.0
5
260°
N
NOT TO SCALE
2400′
MSA
TGL VOR

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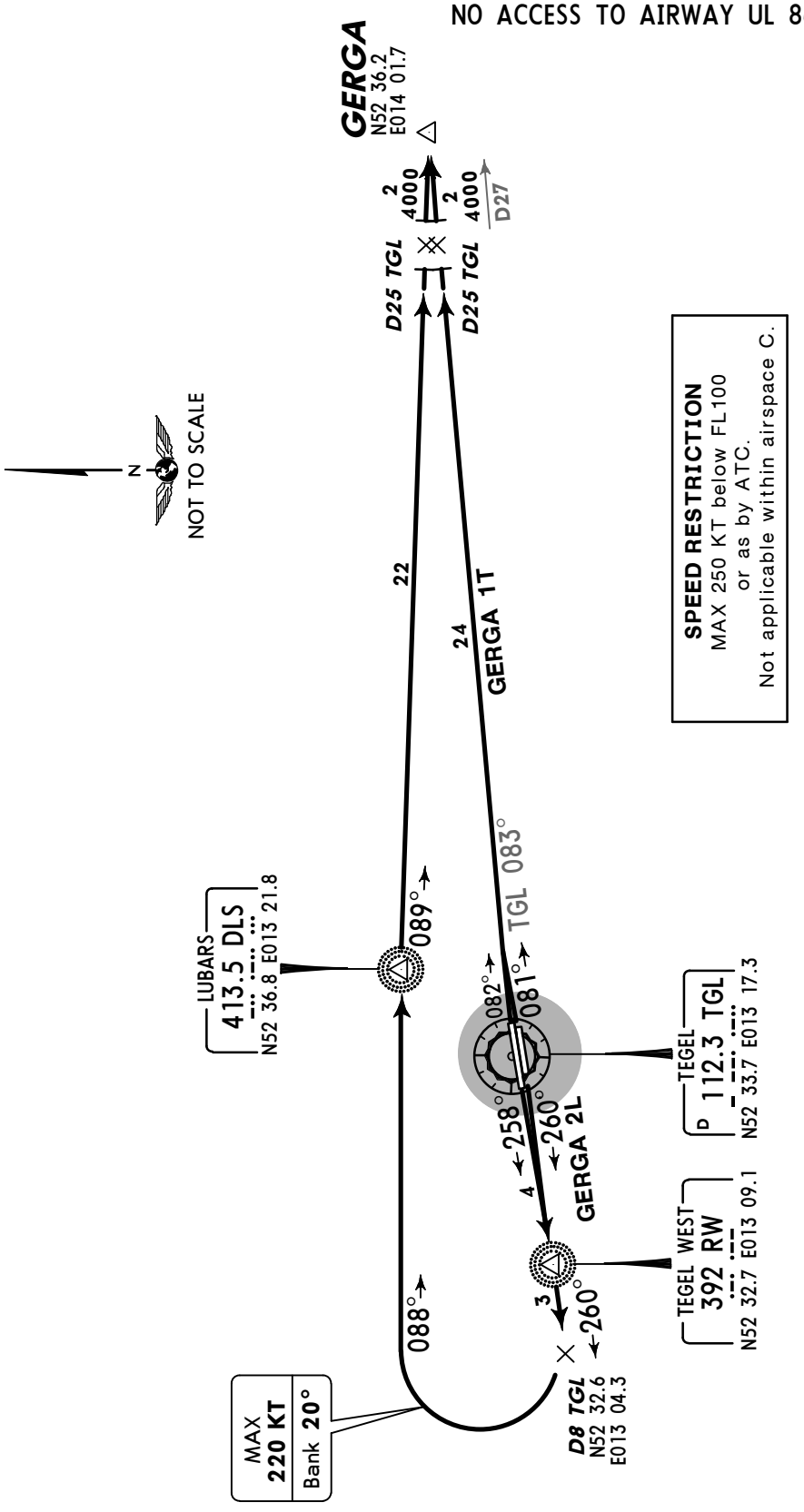
BREMEN Radar	Apt Elev
120.62	122′

Trans level: By ATC Trans alt: 5000′
1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
3. RWYs 08L/R: EXPECT close-in obstacles.



GERGA TWO LIMA (GERGA 2L)
GERGA ONE TANGO (GERGA 1T)
RWYS 26L/R, 08L/R DEPARTURES

FLIGHTS VIA AIRWAY (U)M 725
ONLY SOUTHBOUND POSSIBLE: GERGA - TUVAK
NO ACCESS TO AIRWAY UL 867



GERGA 2L: Initial climb clearance **4000′**
GERGA 1T: Initial climb clearance **5000′**

SID	RWY	ROUTING
GERGA 2L	26L/R	Climb on runway track to **600′**, then to RW, 260° bearing to D8 TGL, turn RIGHT, intercept 088° bearing to DLS, 089° bearing to GERGA.
GERGA 1T	08L/R	Climb on runway track to **600′**, intercept TGL R-083 to GERGA.

CHANGES: None.

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BREMEN Radar	Apt Elev
120.62	122′

Trans level: By ATC Trans alt: 5000′
1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
3. RWYs 08L/R: EXPECT close-in obstacles.

LANUM FOUR TANGO (LANUM 4T)
RWYS 08L/R DEPARTURE
ONLY FOR DESTINATIONS EDDB OR EDDT

MSA TGL VOR
2400′

MAX 260 KT
Bank 25°

286°
RADIUS 2.5
D8 TGL
N52 34.4 E013 30.3
7
TGL 083°
082°
081°

LOWENBERG
114.55 LWB
N52 54.6 E013 08.1

TEGEL
112.3 TGL
N52 33.7 E013 17.3

D46 BKD
4
4000

254°
D42 BKD
N52 49.4 E012 38.9

BKD 117.7 R106°
4000
D28
LANUM
N52 47.8 E012 23.2

N
NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

ROUTING

Climb on runway track to **600′**, intercept TGL R-083 to D8 TGL ❶, turn LEFT, intercept BKD R-106 inbound to D42 BKD, turn LEFT, intercept LWB R-254 to LANUM.

❶ After D8 TGL BRNAV equipment necessary.

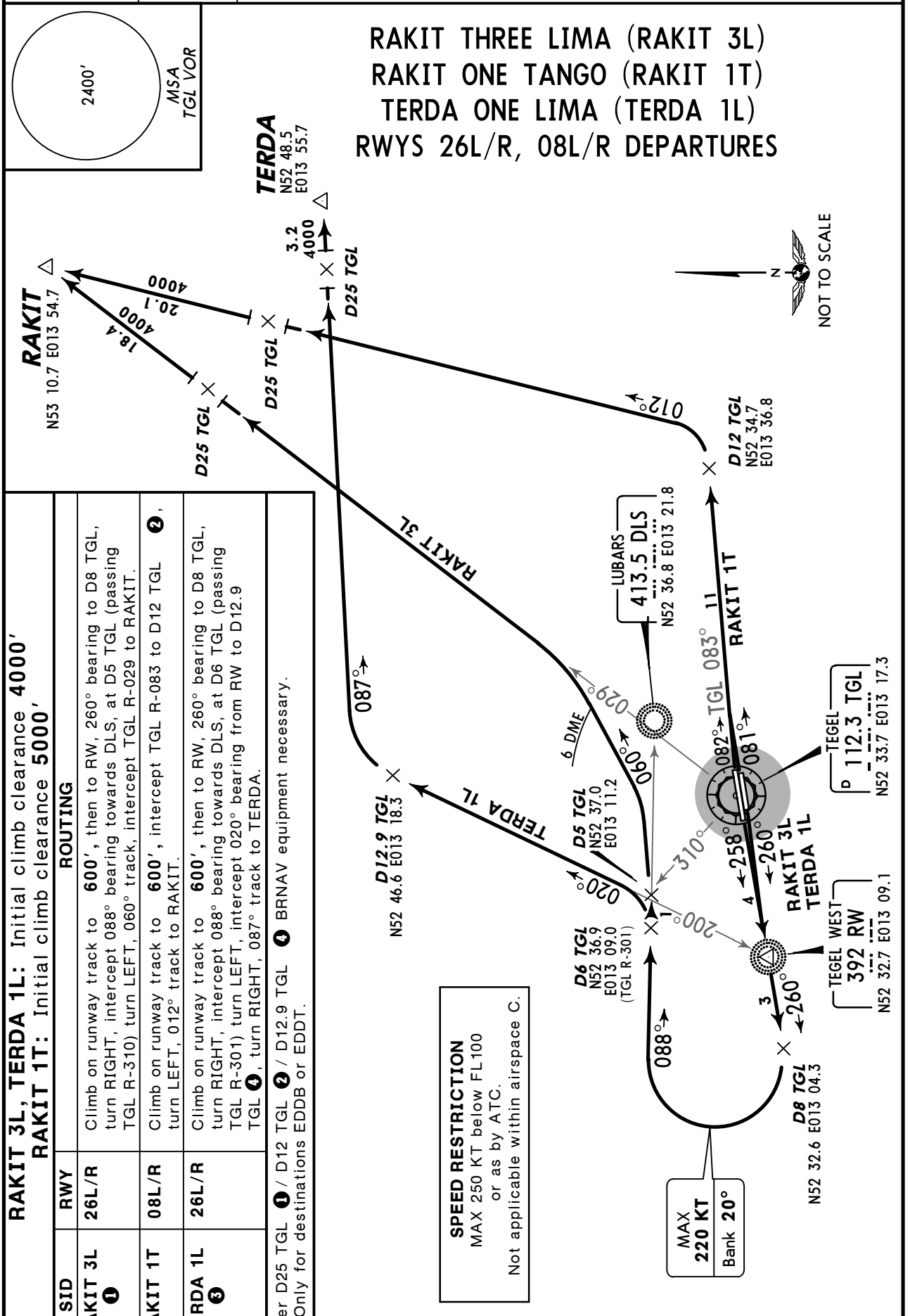
CHANGES: Restriction in chart heading revised.

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BREMEN Radar	*Apt Elev*
120.62	122′

Trans level: By ATC Trans alt: 5000′
1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
3. RWYs 08L/R: EXPECT close-in obstacles.

RAKIT THREE LIMA (RAKIT 3L)
RAKIT ONE TANGO (RAKIT 1T)
TERDA ONE LIMA (TERDA 1L)
RWYS 26L/R, 08L/R DEPARTURES



RAKIT 3L, TERDA 1L: Initial climb clearance **4000′**
RAKIT 1T: Initial climb clearance **5000′**

SID	RWY	ROUTING
RAKIT 3L ❶	26L/R	Climb on runway track to **600′**, then to RW, 260° bearing to D8 TGL, turn RIGHT, intercept 088° bearing towards DLS, at D5 TGL (passing TGL R-310) turn LEFT, 060° track, intercept TGL R-029 to RAKIT.
RAKIT 1T	08L/R	Climb on runway track to **600′**, intercept TGL R-083 to D12 TGL ❷, turn LEFT, 012° track to RAKIT.
TERDA 1L ❸	26L/R	Climb on runway track to **600′**, then to RW, 260° bearing to D8 TGL, turn RIGHT, intercept 088° bearing towards DLS, at D6 TGL (passing TGL R-301) turn LEFT, intercept 020° bearing from RW to D12.9 TGL ❹, turn RIGHT, 087° track to TERDA.

After D25 TGL ❶ / D12 TGL ❷ / D12.9 TGL ❹ BRNAV equipment necessary.
❸ Only for destinations EDDB or EDDT.

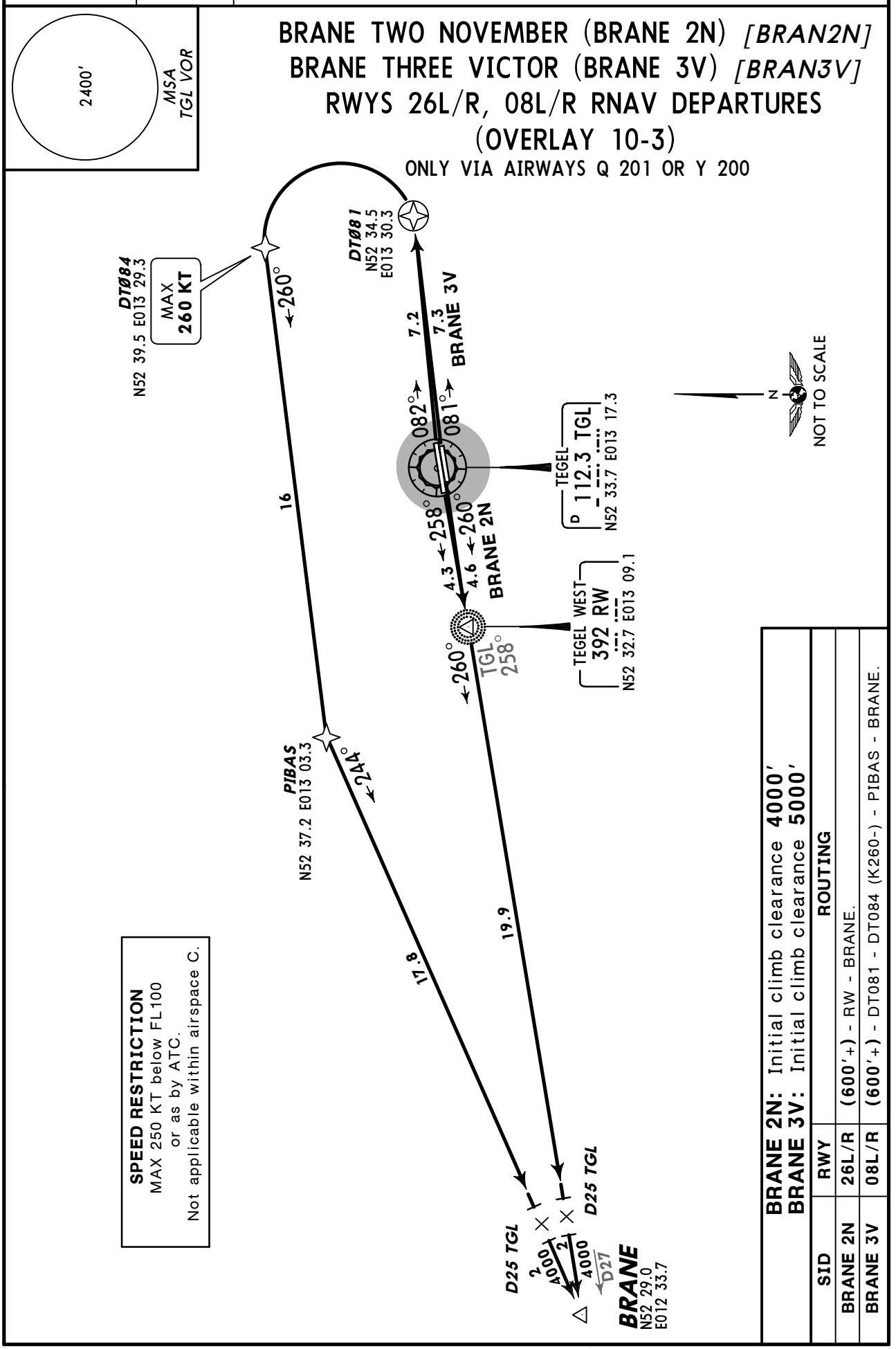
CHANGES: Ballnote 3 revised.

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BREMEN Radar	*Apt Elev*	
120.62	122′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWYs 08L/R: EXPECT close-in obstacles.

BRANE TWO NOVEMBER (BRANE 2N) *[BRAN2N]*
BRANE THREE VICTOR (BRANE 3V) *[BRAN3V]*
RWYS 26L/R, 08L/R RNAV DEPARTURES
(OVERLAY 10-3)

ONLY VIA AIRWAYS Q 201 OR Y 200



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

BRANE 2N: Initial climb clearance **4000′**
BRANE 3V: Initial climb clearance **5000′**

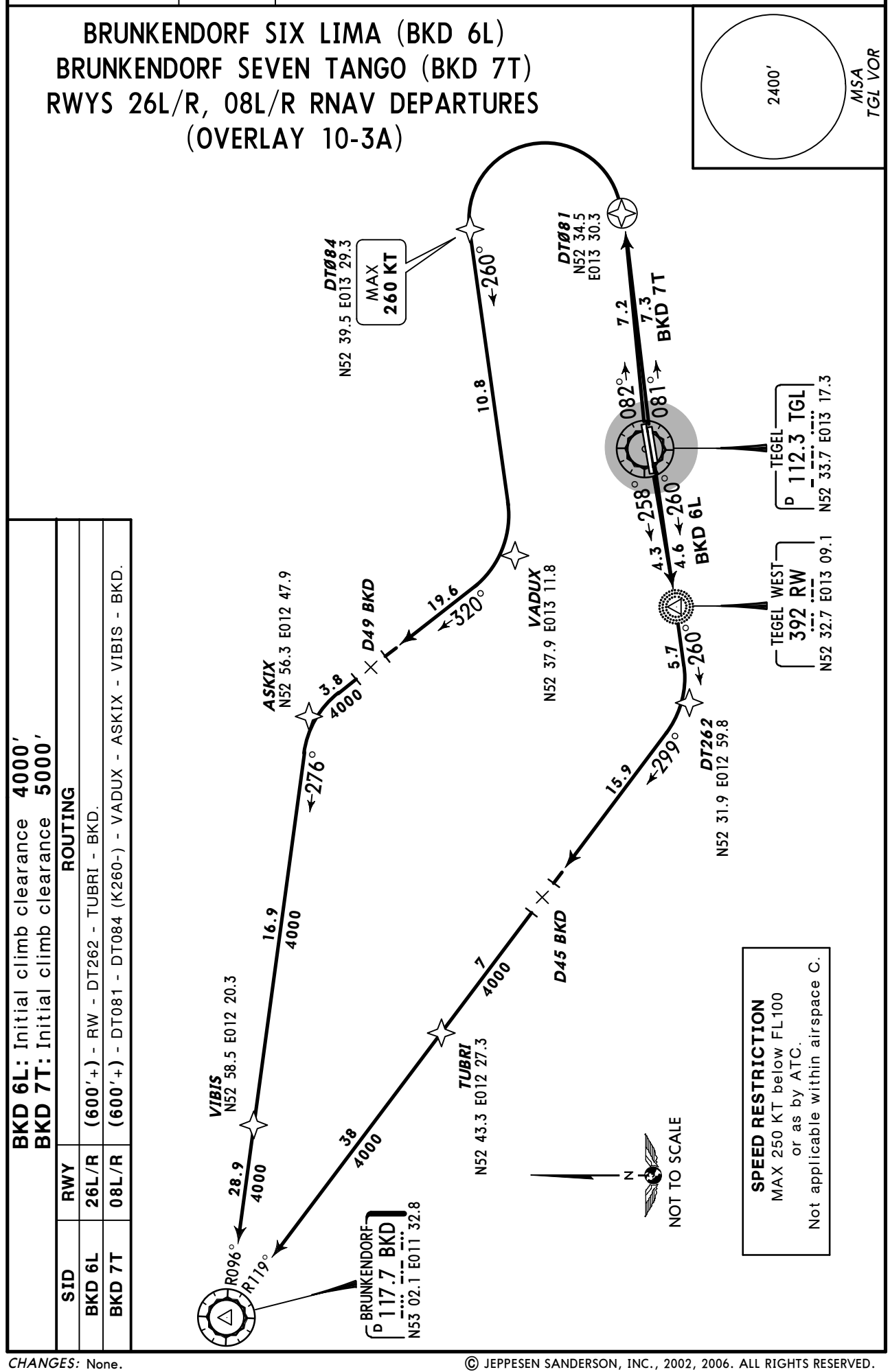
SID	RWY	ROUTING
BRANE 2N	26L/R	(600′+) - RW - BRANE.
BRANE 3V	08L/R	(600′+) - DT081 - DT084 (K260-) - PIBAS - BRANE.

CHANGES: Restriction in chart heading established.

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BREMEN Radar	Apt Elev	
120.62	122′	Trans level: By ATC Trans alt: 5000′ **1.** Remain on tower frequency until passing 2000′, then contact BREMEN Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWYs 08L/R: EXPECT close-in obstacles.

BRUNKENDORF SIX LIMA (BKD 6L)
BRUNKENDORF SEVEN TANGO (BKD 7T)
RWYS 26L/R, 08L/R RNAV DEPARTURES
(OVERLAY 10-3A)



BKD 6L: Initial climb clearance **4000′**
BKD 7T: Initial climb clearance **5000′**

SID	RWY	ROUTING
BKD 6L	26L/R	(600′+) - RW - DT262 - TUBRI - BKD.
BKD 7T	08L/R	(600′+) - DT081 - DT084 (K260-) - VADUX - ASKIX - VIBIS - BKD.

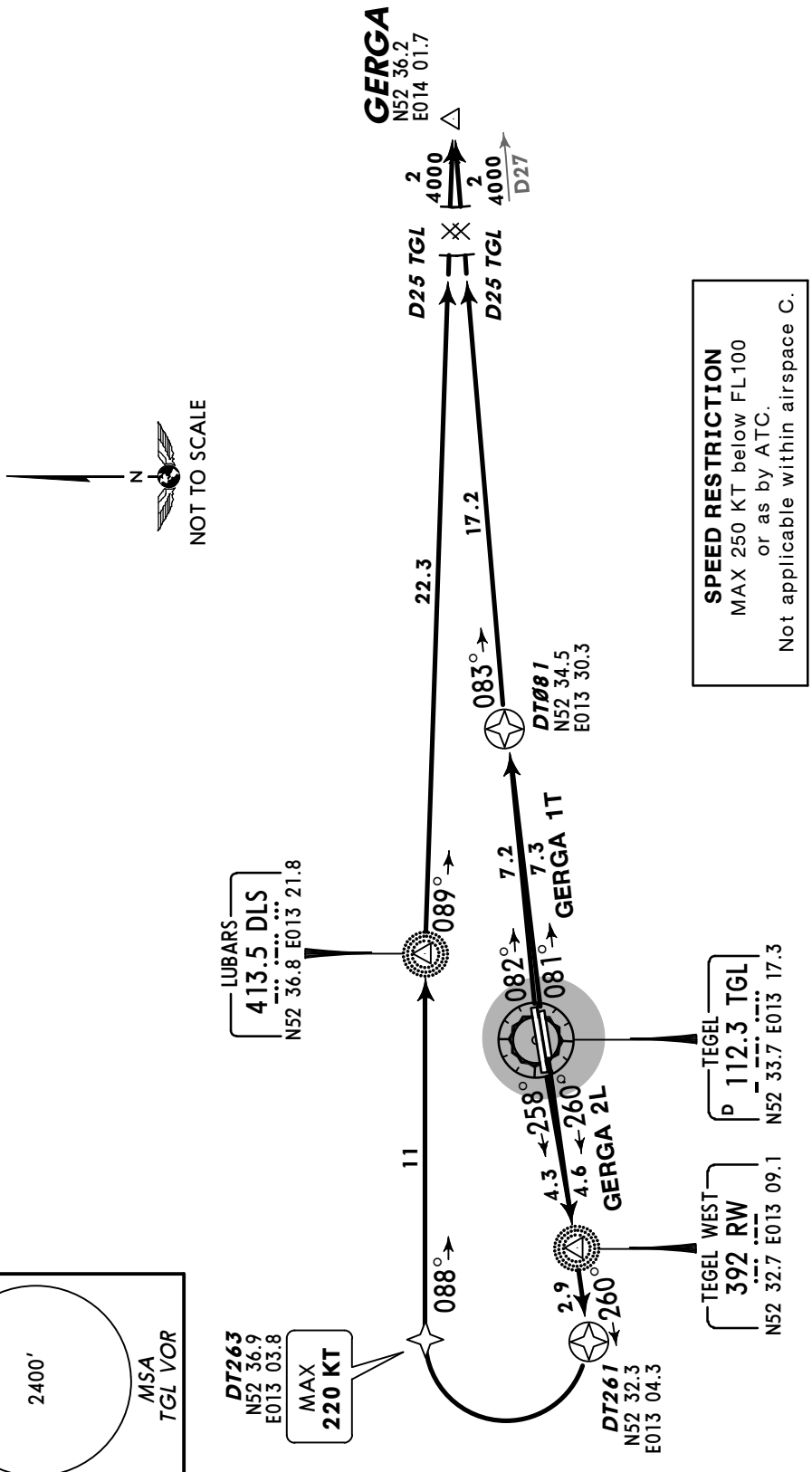
CHANGES: None.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
120.62	122′	**1.** Remain on tower frequency until passing 2000′, then contact BREMEN Radar. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. **3.** RWYs 08L/R: EXPECT close-in obstacles.

GERGA TWO LIMA (GERGA 2L) *[GERG2L]*
GERGA ONE TANGO (GERGA 1T) *[GERG1T]*
RWYS 26L/R, 08L/R RNAV DEPARTURES
(OVERLAY 10-3B)

FLIGHTS VIA AIRWAY (U)M 725 ONLY SOUTHBOUND POSSIBLE: GERGA - TUVAK
NO ACCESS TO AIRWAY UL 867



GERGA 2L: Initial climb clearance **4000′**
GERGA 1T: Initial climb clearance **5000′**

SID	RWY	ROUTING
GERGA 2L	26L/R	(600′+) - RW - DT261 - DT263 (K220-) - DLS - GERGA.
GERGA 1T	08L/R	(600′+) - DT081 - GERGA.

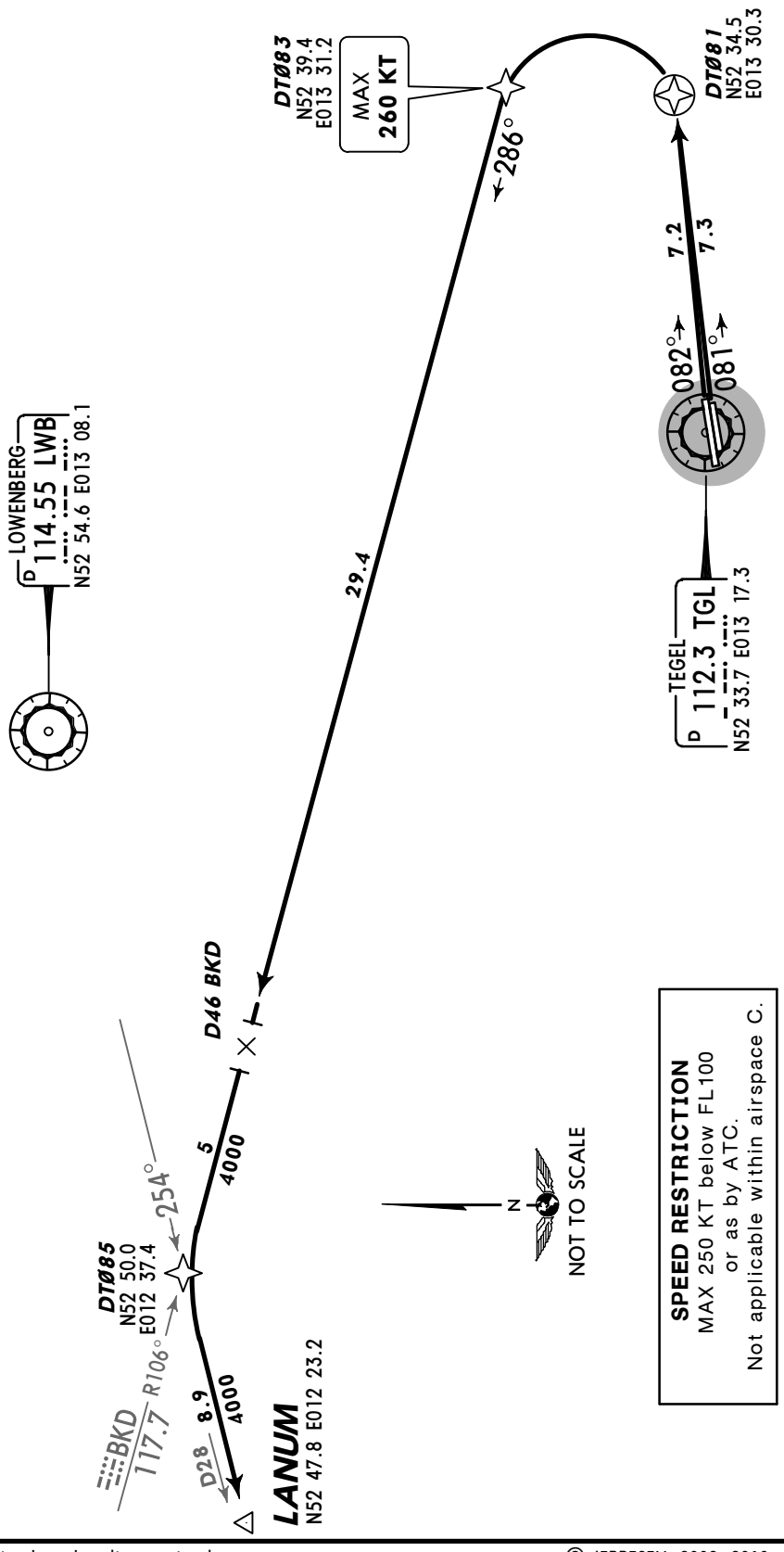
CHANGES: Remarks added & revised.

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BREMEN Radar	*Apt Elev*	
120.62	122′	Trans level: By ATC Trans alt: 5000′ 1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWYs 08L/R: EXPECT close-in obstacles.

2400′ *MSA TGL VOR*

LANUM FOUR TANGO (LANUM 4T) *[LANU4T]*
RWYS 08L/R RNAV DEPARTURE
(OVERLAY 10-3C)
ONLY FOR DESTINATIONS EDDB OR EDDT



CHANGES: Restriction in chart heading revised.

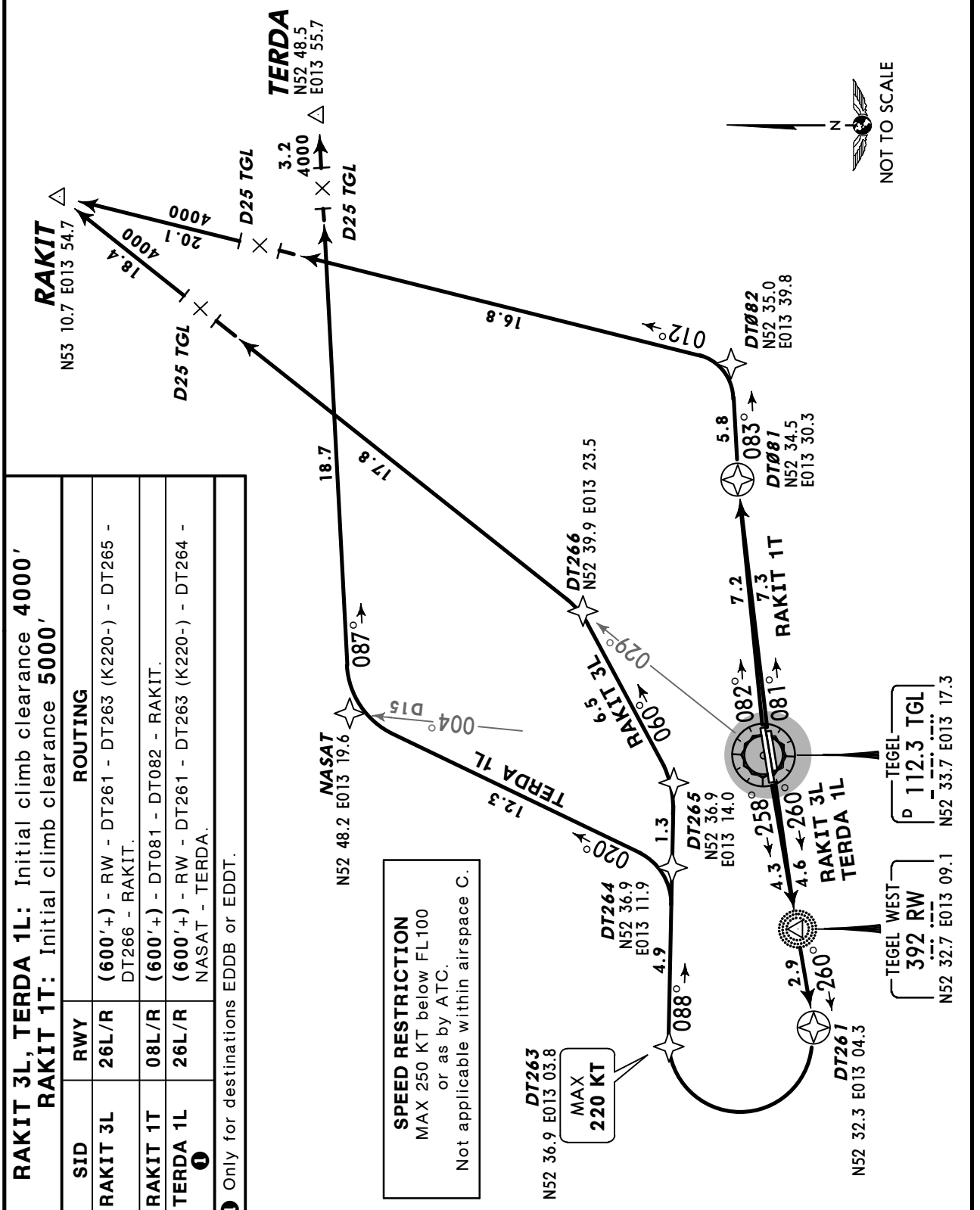
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BREMEN Radar	*Apt Elev*
120.62	122′

Trans level: By ATC Trans alt: 5000′
1. Remain on tower frequency until passing 2000′, then contact BREMEN Radar.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
3. RWYs 08L/R: EXPECT close-in obstacles.

2400′ *MSA TGL VOR*

RAKIT THREE LIMA (RAKIT 3L) *[RAKI3L]*
RAKIT ONE TANGO (RAKIT 1T) *[RAKI1T]*
TERDA ONE LIMA (TERDA 1L) *[TERD1L]*
RWYS 26L/R, 08L/R RNAV DEPARTURES
(OVERLAY 10-3D)



RAKIT 3L, TERDA 1L: Initial climb clearance **4000′**
RAKIT 1T: Initial climb clearance **5000′**

SID	RWY	ROUTING
RAKIT 3L	26L/R	(600′+) - RW - DT261 - DT263 (K220-) - DT265 - DT266 - RAKIT.
RAKIT 1T	08L/R	(600′+) - DT081 - DT082 - RAKIT.
TERDA 1L ❶	26L/R	(600′+) - RW - DT261 - DT263 (K220-) - DT264 - NASAT - TERDA.

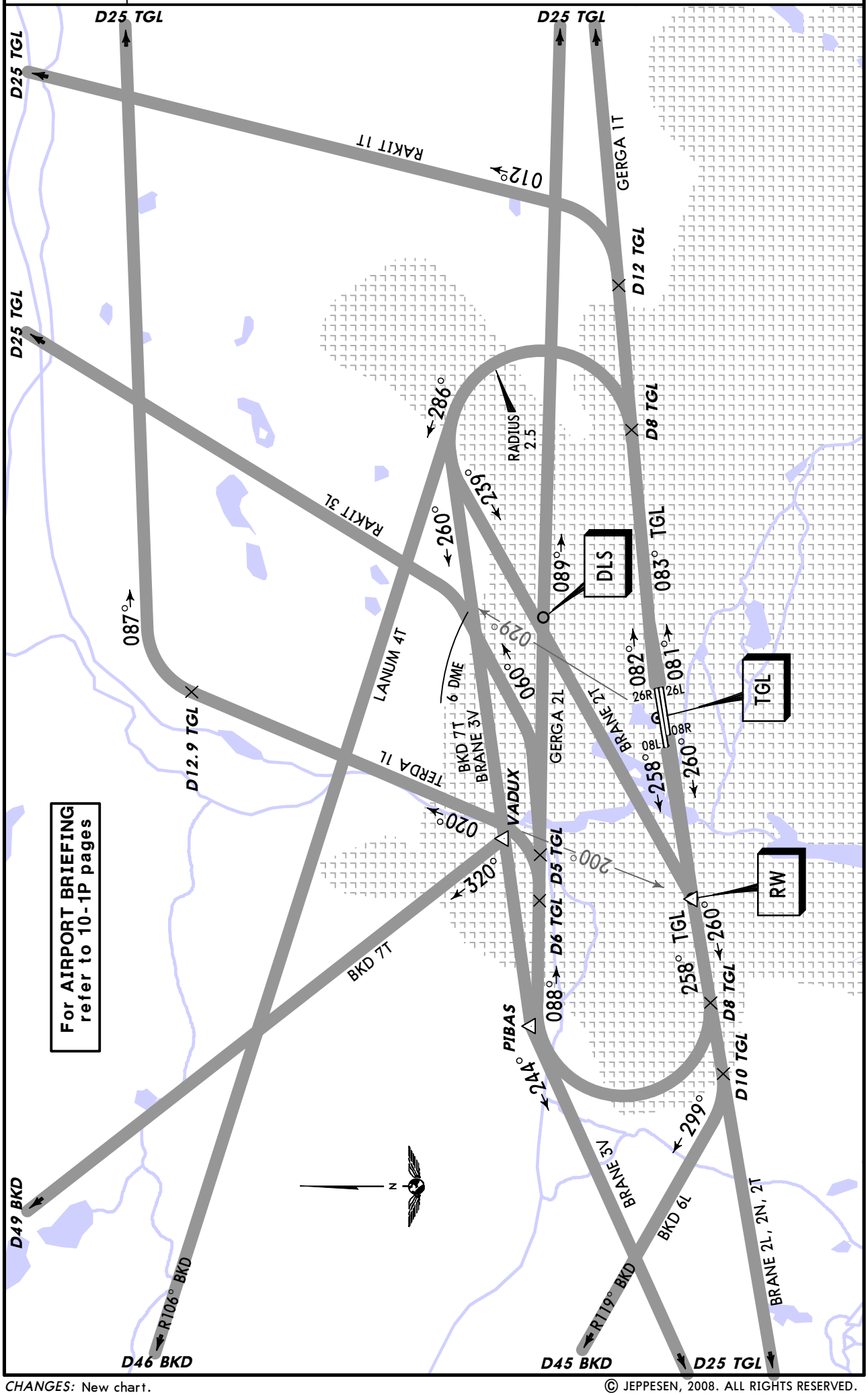
❶ Only for destinations EDDB or EDDT.

CHANGES: Ballnote 1 revised.

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Apt Elev
122′

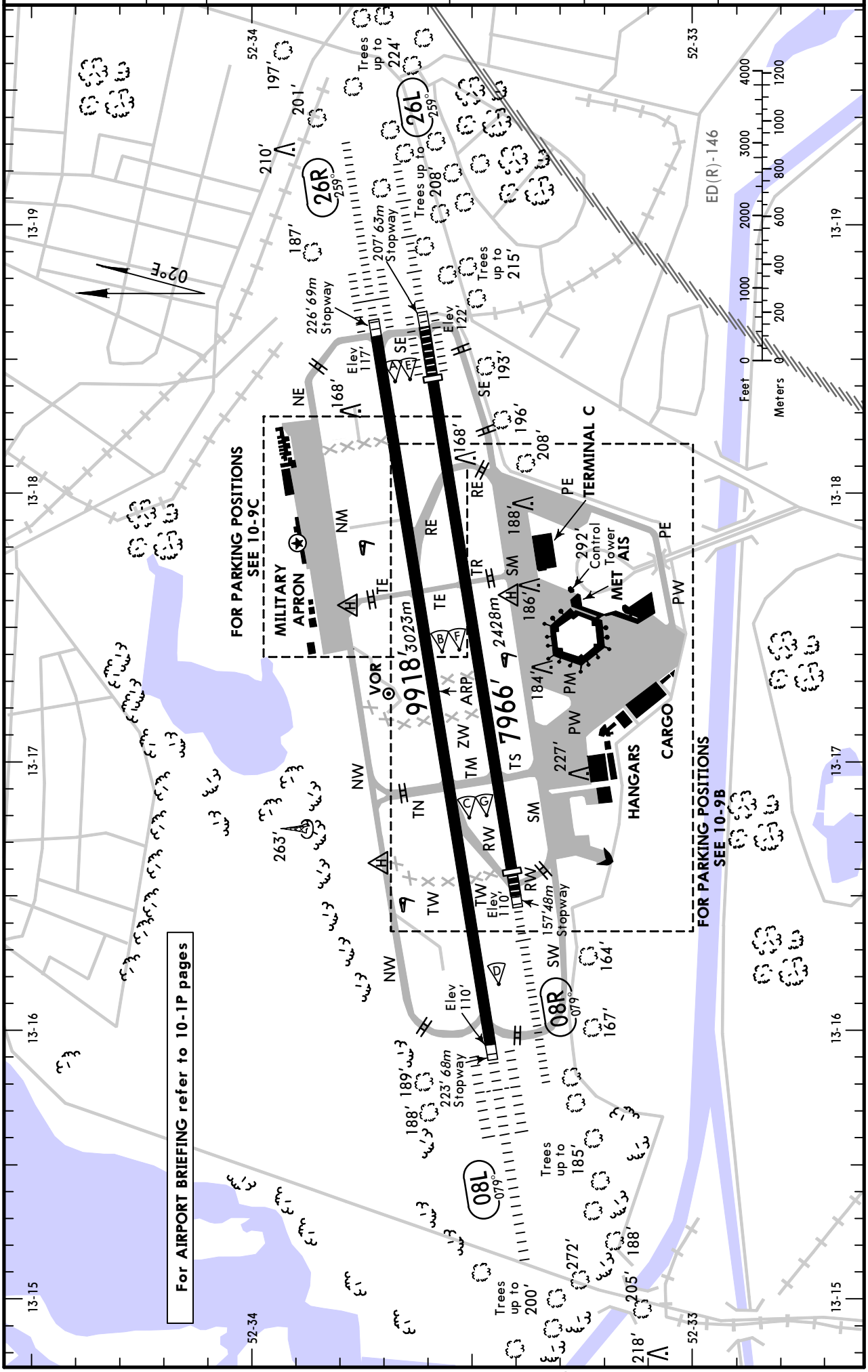
NOISE ABATEMENT



CHANGES: New chart.

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D-ATIS	ACARS: DCL	TEGEL Delivery (Initial call and Start-up clearance)	Ground	Tower	BREMEN Radar (DEP)
112.3 125.9		121.92	121.75	124.52	120.62



CHANGES: None.

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ADDITIONAL RUNWAY INFORMATION

RWY			USABLE LENGTHS — LANDING BEYOND Threshold	LANDING BEYOND Glide Slope	TAKE-OFF	WIDTH
08L	HIRL CL ALSF-II TDZ REIL PAPI-L (3.0°) HST-RE	RVR		8885′ *2708m*	❶	151′ *46m*
26R	HIRL CL ALSF-II TDZ REIL PAPI-L (3.0°) HST-RW	RVR		8946′ *2727m*		

❶ TAKE-OFF RUN AVAILABLE

RWY 08L:
From rwy head 9918′ (3023m)
twy RW int 6473′ (1973m)
twy TM/TN int 6365′ (1940m)

RWY 26R:
From rwy head 9918′ (3023m)
twy RE int 6447′ (1965m)

08R	HIRL CL HIALS SFL PAPI-L (3.0°)	RVR	7625′ *2324m*	6693′ *2040m*	❷	151′ *46m*
26L	HIRL CL HIALS-II SFL TDZ PAPI-L (3.0°)	RVR	7244′ *2208m*	6068′ *1850m*		

❷ TAKE-OFF RUN AVAILABLE

RWY 08R:
From rwy head 7966′ (2428m)
twy TS int 6220′ (1896m)

RWY 26L:
From rwy head 7966′ (2428m)
twy RE int 5551′ (1692m)

INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1, 2	N52 33.3 E013 17.5	31, 32	N52 33.3 E013 16.8
3 thru 5	N52 33.3 E013 17.4	33 thru 35	N52 33.3 E013 16.7
6 thru 9	N52 33.3 E013 17.3	51	N52 33.3 E013 17.6
10	N52 33.2 E013 17.3	52 thru 53VIP	N52 33.4 E013 17.6
11 thru 13A	N52 33.2 E013 17.4	54 thru 55B	N52 33.4 E013 17.7
14	N52 33.2 E013 17.5	56 thru 57	N52 33.4 E013 17.8
15 thru 16	N52 33.1 E013 17.5	58, 59	N52 33.4 E013 17.9
17	N52 33.1 E013 17.4	60	N52 33.4 E013 18.0
18 thru 20	N52 33.1 E013 17.3	61, 62	N52 33.4 E013 17.9
21	N52 33.1 E013 17.2	63 thru 65A	N52 33.3 E013 17.9
22, 23	N52 33.2 E013 17.2		
24	N52 33.2 E013 17.1		
25	N52 33.3 E013 17.1		
26 thru 28	N52 33.3 E013 17.0		
29	N52 33.3 E013 16.9		

Standard

TAKE-OFF [1]

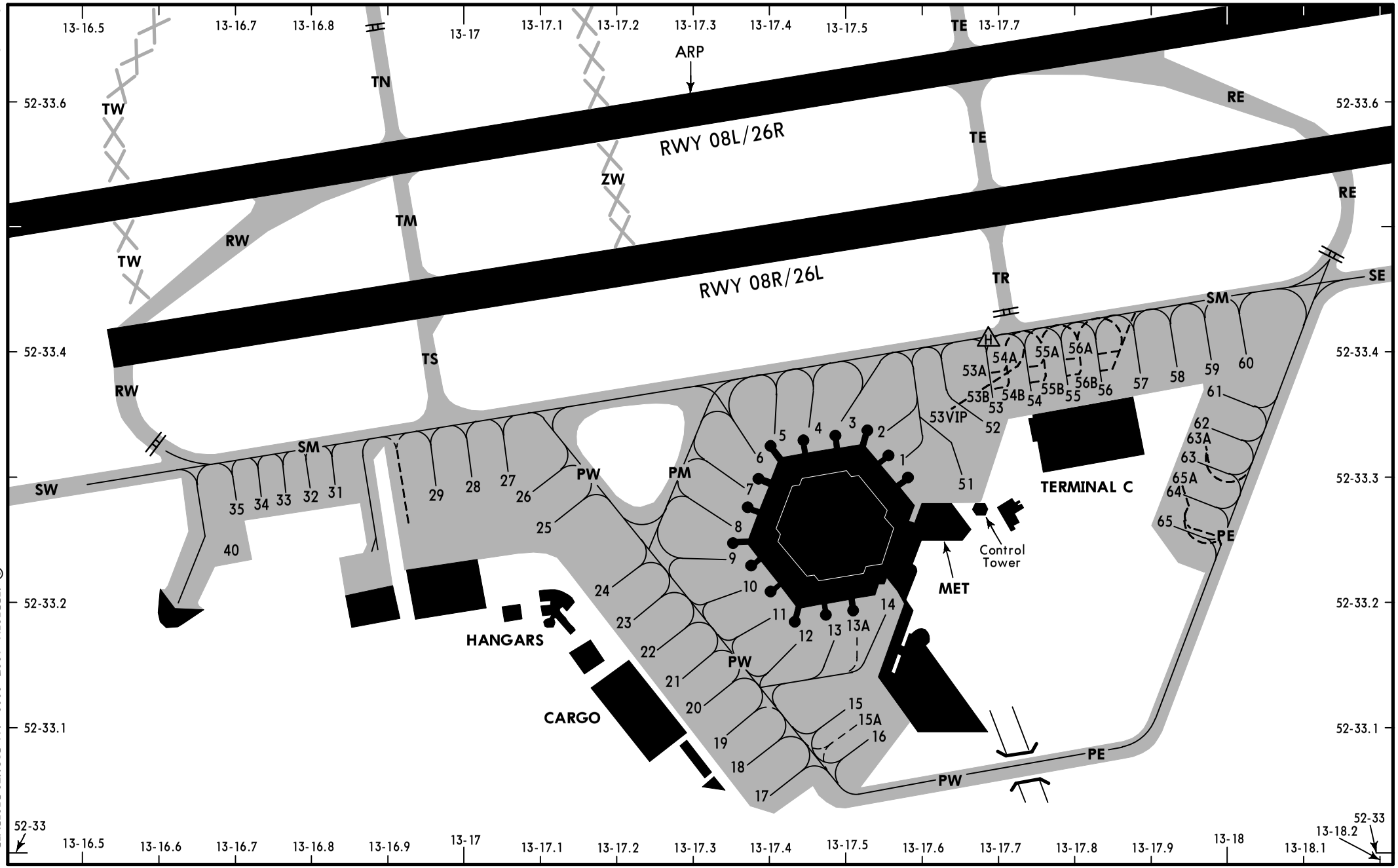
All Rwys
LVP must be in Force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

[1] Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: Minimums.

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EDDT/TXL

JEPPESEN

9 JAN 09

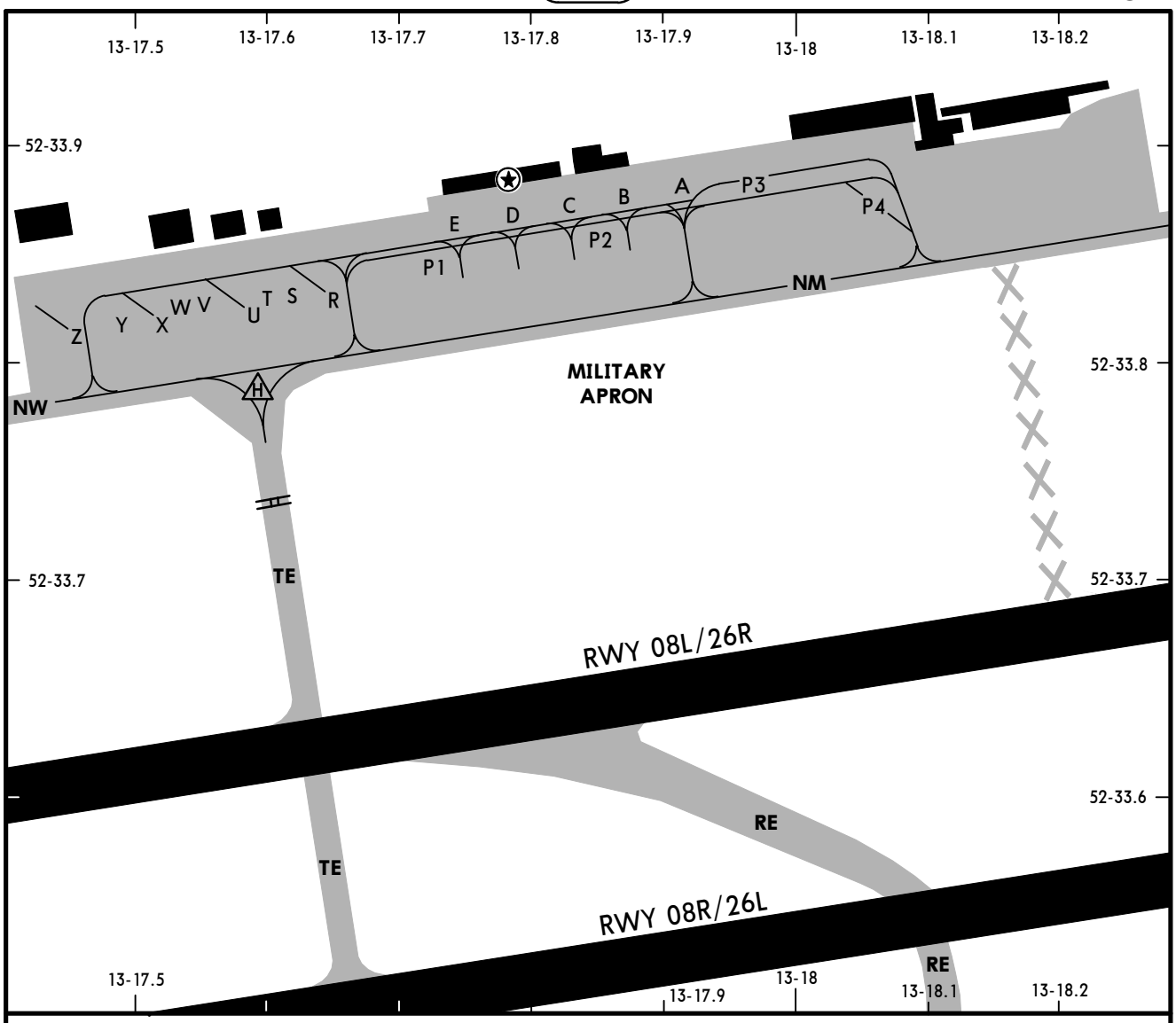
10-9B

BERLIN, GERMANY

TEGEL

CHANGES: Apron. Stands. Twy designation.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
A, B	N52 33.9 E013 17.9	P3, P4	N52 33.9 E013 18.0
C, D	N52 33.9 E013 17.8	R	N52 33.8 E013 17.7
E	N52 33.9 E013 17.7	S thru V	N52 33.8 E013 17.6
P1	N52 33.8 E013 17.7	W thru Z	N52 33.8 E013 17.5
P2	N52 33.8 E013 17.9		

CHANGES: Stands.

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STAND ENTRY GUIDANCE SYSTEM

A. GENERAL

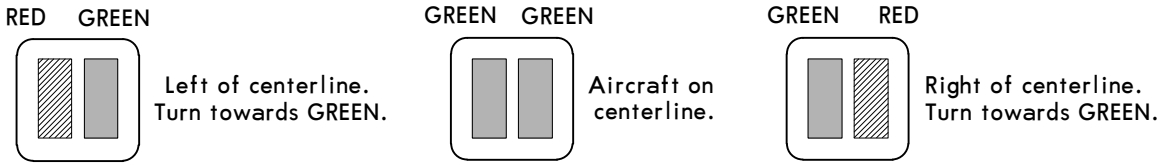
Pilot interpreted guidance systems for aircraft parking consists of two separate elements:

a) the centerline guidance system
b) the stopping guidance system

B. CENTERLINE GUIDANCE SYSTEMS

AGNIS-AZIMUTH GUIDANCE FOR NOSE-IN STANDS

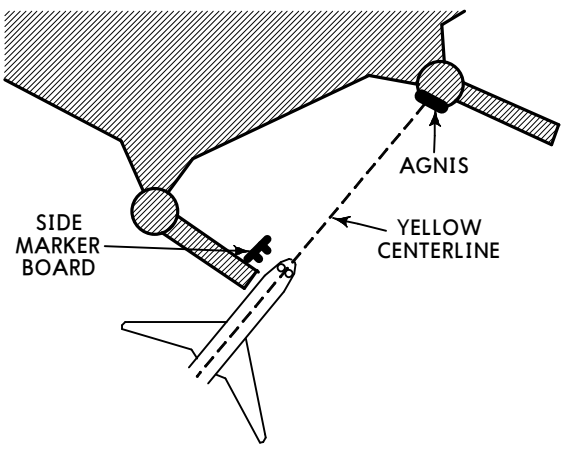
A red/green light system to guide along the stand centerline intended as a "back-up" to the stand centerline marking. It does not provide a stopping signal.
It consists of a unit emitting red and/or green light signals-mounted on the front of the piers at pilot eye level-aligned for interpretation by the pilot in the Left hand seat. The signals are to be interpreted as follows:

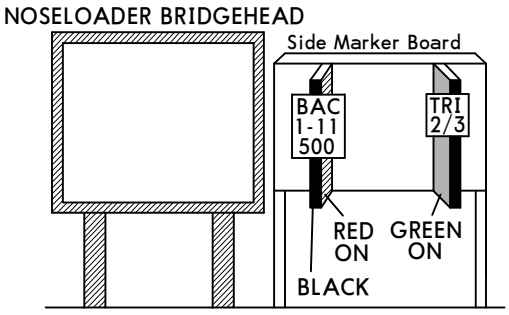


C.STOPPING GUIDANCE SYSTEMS

1.SMB-SIDE MARKER BOARD

A white base board with vertical slats extending the full height of the base board.
The edge of each slat is painted black, the side towards the taxiway is green, and the side towards the pier is red. Each slat bears the name tag to indicate the aircraft type(s) to which it applies.
The pilot entering the stand must use extreme care as the side marker board will be hidden by the jetway and will only be visible at the last minute as the aircraft should just about be stopped (refer drawing below).
The pilot entering the stand will see the green side, in correct STOP position the black edge only, passing the STOP position the red side of the slat will begin to appear.
Side marker boards are available at stands 3 through 12 for B727.





Stands 3, 4, 5 & 6
(marking for BAC 1-11 500-TRI 2/3-B737 & B727)
Stands 7, 8, 9, 10, 11 & 12
(marking for B727-B737-BAC 1-11-A300 & A320)

CHANGES: Note transferred to 10-1P pages.

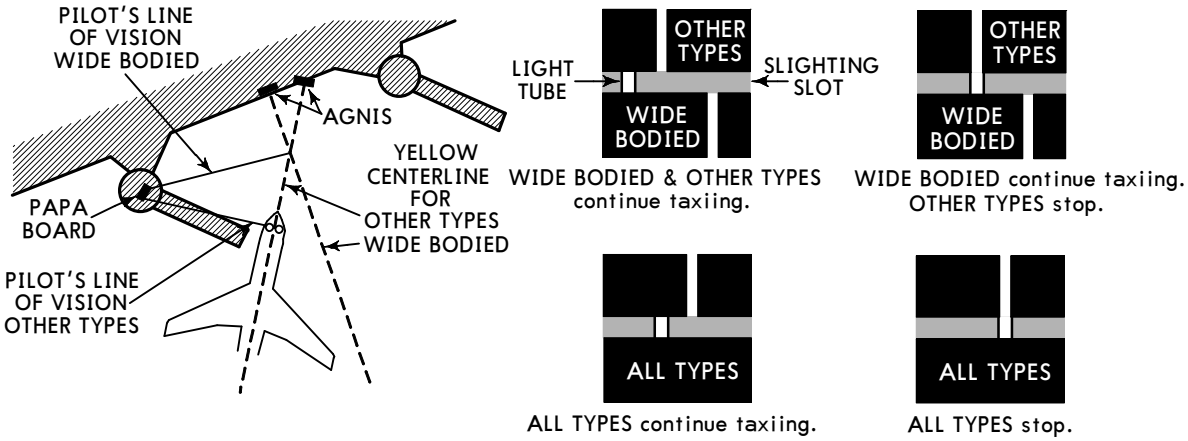
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2. PARALLAX AIRCRAFT PARKING AID (PAPA)

As shown in the diagram below, the Parallax Aircraft Parking Aid (PAPA) board is located on top of the jetway close to the terminal building.

Taxiing into a stand for which PAPA is provided, the pilot in the left hand seat will see the flourescent tube appear to move along the slot towards the reference marks. Correct stopping position is reached, when the tubular light registers in line with the appropriate vertical reference mark.

The PAPA is either provided for "ALL TYPES" or for "WIDE BODIED" & "OTHER TYPES".



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STRAIGHT-IN RWY		A	B	C	D
08L	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**210′**(100′)	**210′**(100′)	**214′**(104′)	**227′**(117′)
		RA102′R300m	**RA102′R300m**	**RA107′R300m**	**RA120′R300m**
	ILS	**310′**(200′)	**310′**(200′)	**310′**(200′)	**310′**(200′)❶
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**610′**(500′)	**610′**(500′)	**610′**(500′)	**610′**(500′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**530′**(420′)	**530′**(420′)	**530′**(420′)	**530′**(420′)
	LNAV/VNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**550′**(440′)	**550′**(440′)	**550′**(440′)	**550′**(440′)
	LNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**670′**(560′)	**670′**(560′)	**670′**(560′)	**670′**(560′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
08R	ILS	**354′**(245′)	**364′**(255′)	**374′**(265′)	**384′**(275′)
		R600m	**R650m**	**R650m**	**R650m**
	ALS out	R1000m	R1200m	R1200m	R1200m
	LOC	**590′**(481′)	**590′**(481′)	**590′**(481′)	**590′**(481′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**480′**(371′)	**480′**(371′)	**480′**(371′)	**480′**(371′)
	LNAV/VNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**540′**(431′)	**580′**(471′)	**580′**(471′)	**580′**(471′)
	LNAV	**R900m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**660′**(551′)	**660′**(551′)	**660′**(551′)	**660′**(551′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

❶LACFT: DA(H) 348′(238′), FULL: RVR 600m.

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BERLIN, GERMANY
TEGEL

STRAIGHT-IN RWY		A	B	C	D
26L	CAT 2 ILS	**222**′(100′)	**222**′(100′)	**260**′(138′)	**273**′(151′)
		RA99′ R300m	**RA99′ R300m**	**RA137′ R400m**	**RA151′ R450m**
	ILS	**363**′(241′)	**373**′(251′)	**383**′(261′)	**392**′(270′)
		R600m	**R650m**	**R650m**	**R650m**
	ALS out	R1000m	R1200m	R1200m	R1200m
	LOC	**600**′(478′)	**600**′(478′)	**600**′(478′)	**600**′(478′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**500**′(378′)	**500**′(378′)	**500**′(378′)	**500**′(378′)
	LNAV/VNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**580**′(458′)	**580**′(458′)	**580**′(458′)	**580**′(458′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**680**′(558′)	**680**′(558′)	**680**′(558′)	**680**′(558′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
26R	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**217**′(100′)	**217**′(100′)	**217**′(100′)	**217**′(100′)
		RA95′ R300m	**RA95′ R300m**	**RA95′ R300m**	**RA95′ R300m**
	ILS	**337**′(220′)	**347**′(230′)	**356**′(239′)	**366**′(249′)
		R600m	**R600m**	**R600m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**610**′(493′)	**610**′(493′)	**610**′(493′)	**610**′(493′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**530**′(413′)	**530**′(413′)	**530**′(413′)	**530**′(413′)
	LNAV/VNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**560**′(443′)	**560**′(443′)	**560**′(443′)	**560**′(443′)
	LNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**670**′(553′)	**670**′(553′)	**670**′(553′)	**670**′(553′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

TAKE-OFF RWY 08L, 26R

	LVP must be in Force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

TAKE-OFF RWY 08R, 26L

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

CHANGES: Minimums.

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EDDT/TXL
TEGEL

JEPPESEN
27 MAY 11 (11-1)

BERLIN, GERMANY
ILS or LOC Rwy 08L

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

BRIEFING STRIP™

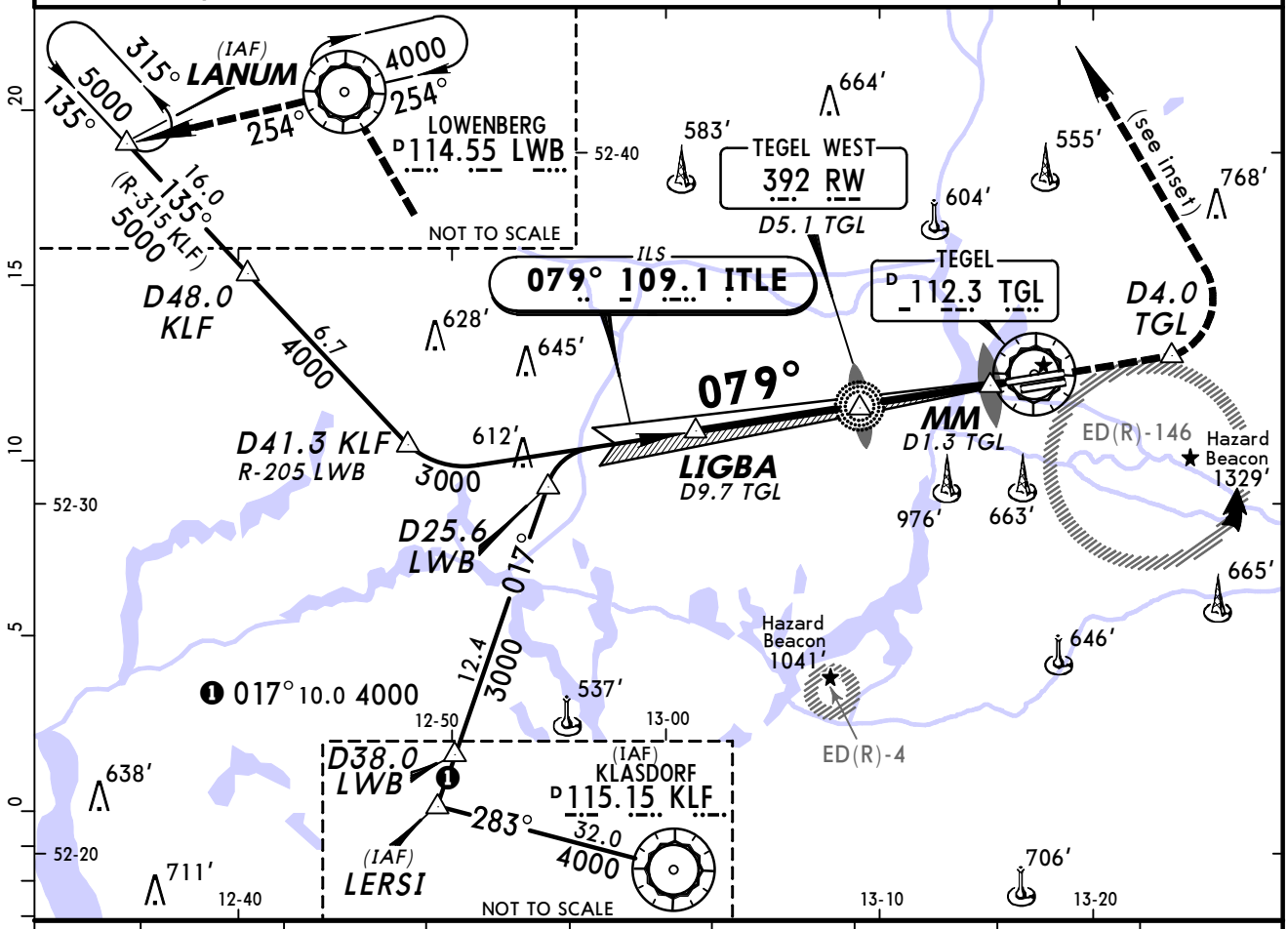
LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 122′
ITLE		LOM	Refer to	RWY 110′
109.1	079°	1530′ (1420′)	Minimums	

MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 TGL turn LEFT continue climb to 5000′ via LWB VOR to LANUM.

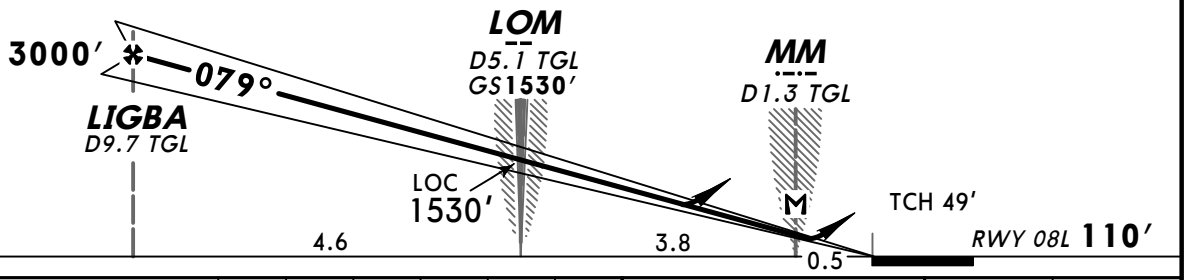
2400′

MSA
TGL VOR

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
LOC: **DME required.**



LOC (GS out)	TGL DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	2770′	2460′	2140′	1820′	1500′	1180′	860′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.3 TGL						

ALSF-II
REIL
PAPI

3000′ MAX

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08L**

	ILS 1 DA(H) 310′ (200′)			LOC (GS out) DA(H) 610′ (500′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m	
B					
C				RVR 1500m	CMV 2300m
D					

1 LACFT: DA(H) 348′(238′).

CHANGES: Minimums.

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EDDT/TXL
TEGEL

JEPPESEN
27 MAY 11 (11-1A)

BERLIN, GERMANY
CAT II/III ILS Rwy 08L

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

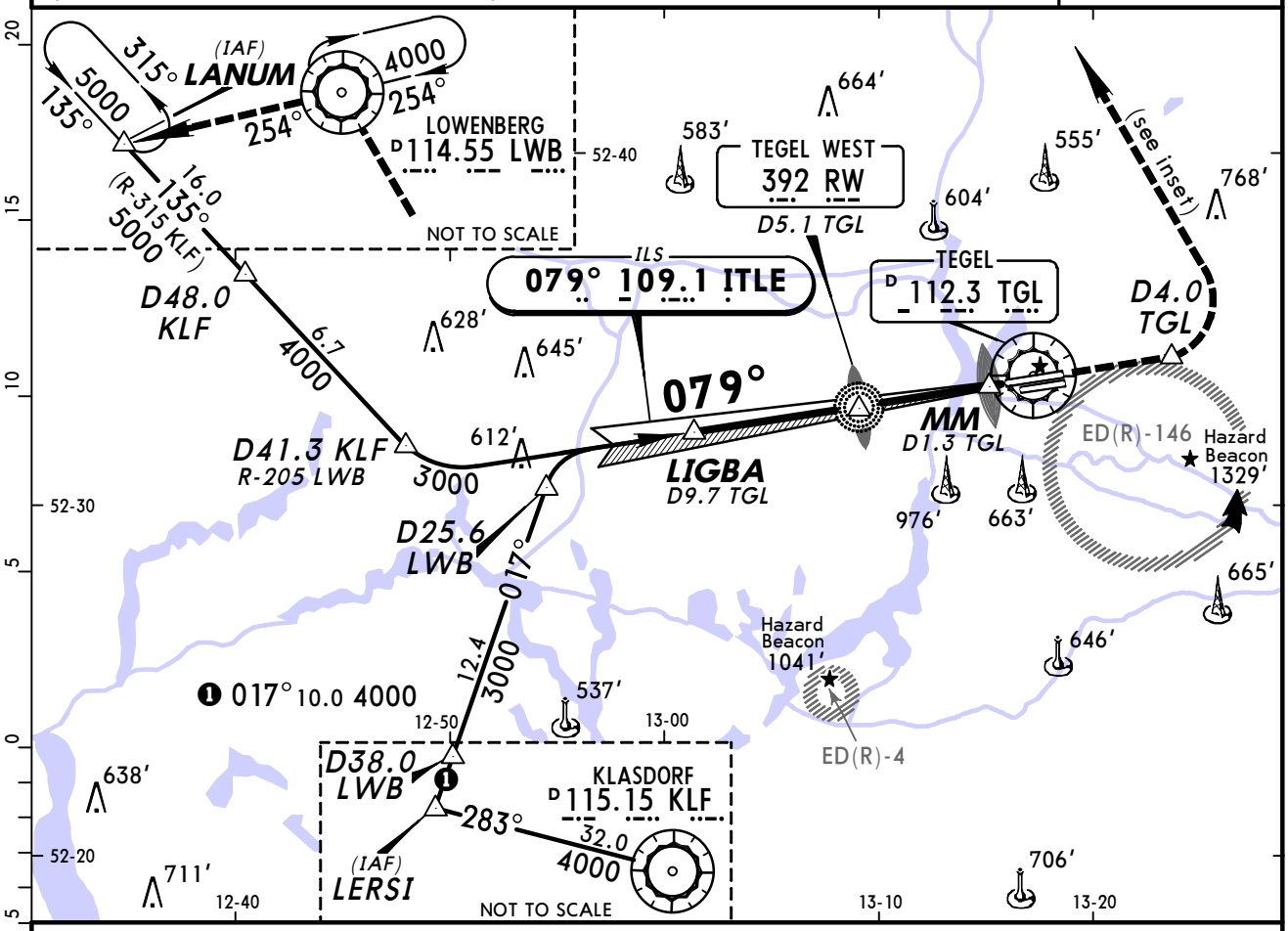
BRIEFING STRIP™

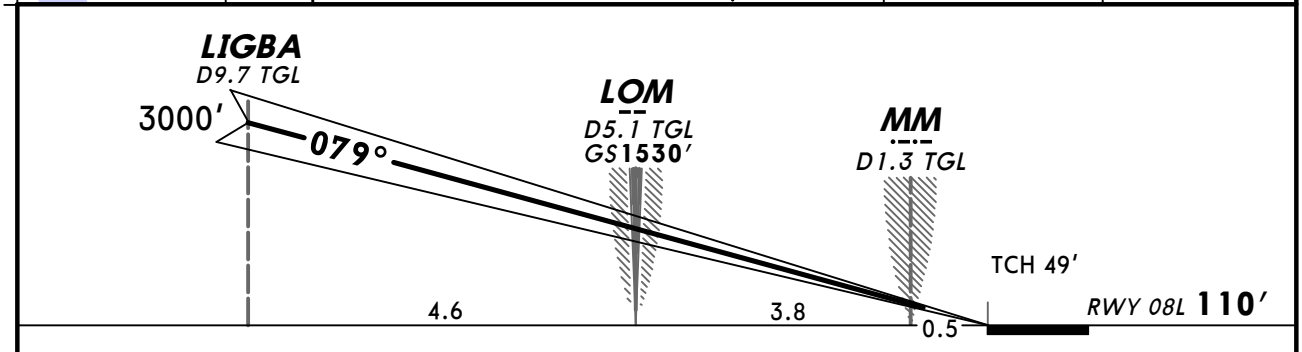
LOC	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev / RWY
ITLE 109.1	079°	LOM 1530′ (1420′)	Refer to Minimums	Apt Elev 122′ RWY 110′

MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 TGL turn LEFT continue climb to 5000′ via LWB VOR to LANUM.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.

2400′
MSA
TGL VOR





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

ALSF-II
REIL
PAPI
3000′ MAX

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08L**

CAT IIIA ILS	CAT II ILS	
	AB	C	D
DH **50′**	RA **102′** DA(H) **210′** (100′)	RA **107′** DA(H) **214′** (104′)	RA **120′** DA(H) **227′** (117′)
RVR 200m	RVR 300m 1		

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

CHANGES: Minimums.

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TEGEL

JEPPESEN
27 MAY 11 (11-2)

BERLIN, GERMANY
ILS or LOC Rwy 08R

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

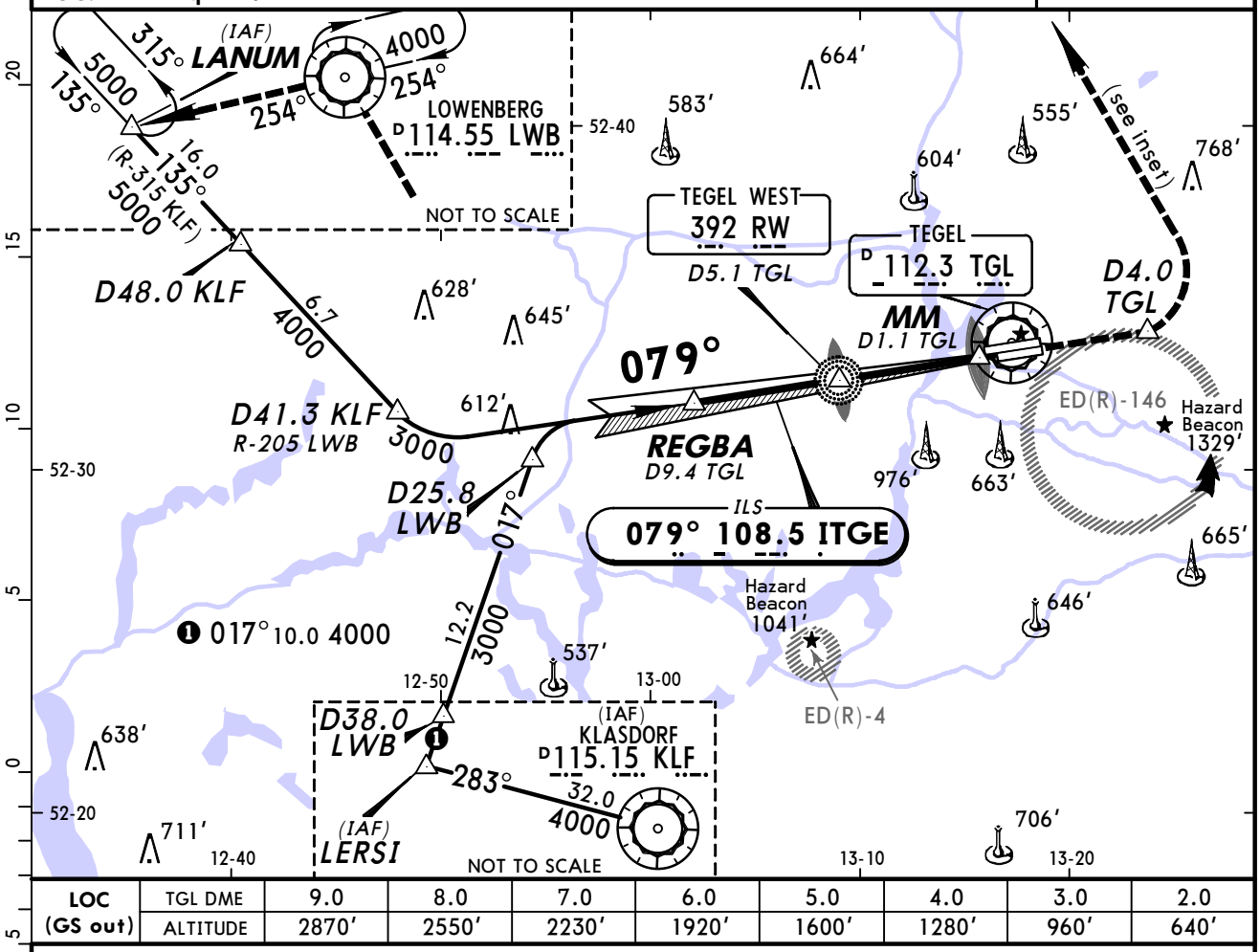
BRIEFING STRIP™

LOC ITGE	Final Apch Crs	GS LOM	ILS DA(H)	Apt Elev / RWY
108.5	**079°**	**1630′** (1521′)	Refer to Minimums	122′ / **109′**

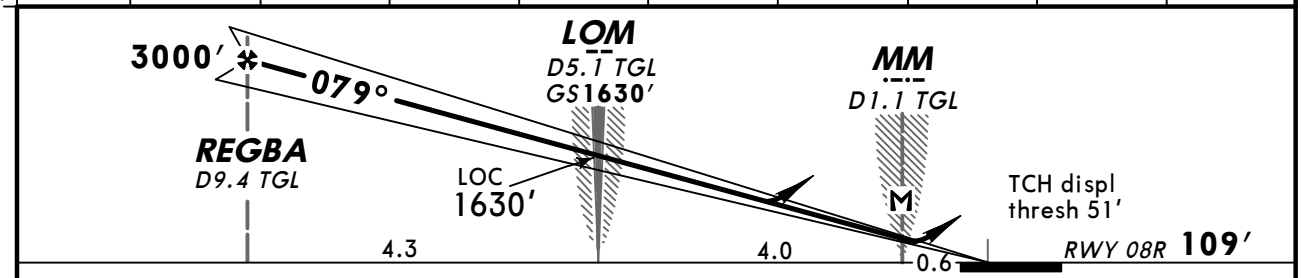
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 TGL turn LEFT continue climb to 5000′ via LWB VOR to LANUM.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
LOC: **DME required.**

2400′
MSA TGL VOR



LOC (GS out)	TGL DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	2870′	2550′	2230′	1920′	1600′	1280′	960′	640′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.1 TGL						

HIALS
PAPI
3000′ MAX

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08R**

DA(H) A: **354′** (245′) C: **374′** (265′)
B: **364′** (255′) D: **384′** (275′)

	FULL	Limited	ALS out
A	RVR 550m	RVR 750m	RVR 1300m
B	RVR 600m		
C			
D			

LOC (GS out)
DA(H) **590′** (481′)

		ALS out
RVR 1500m		
RVR 1500m		CMV 2300m

CHANGES: Minimums.

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JEPPESEN
27 MAY 11 (11-3)

BERLIN, GERMANY
ILS or LOC Rwy 26L

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

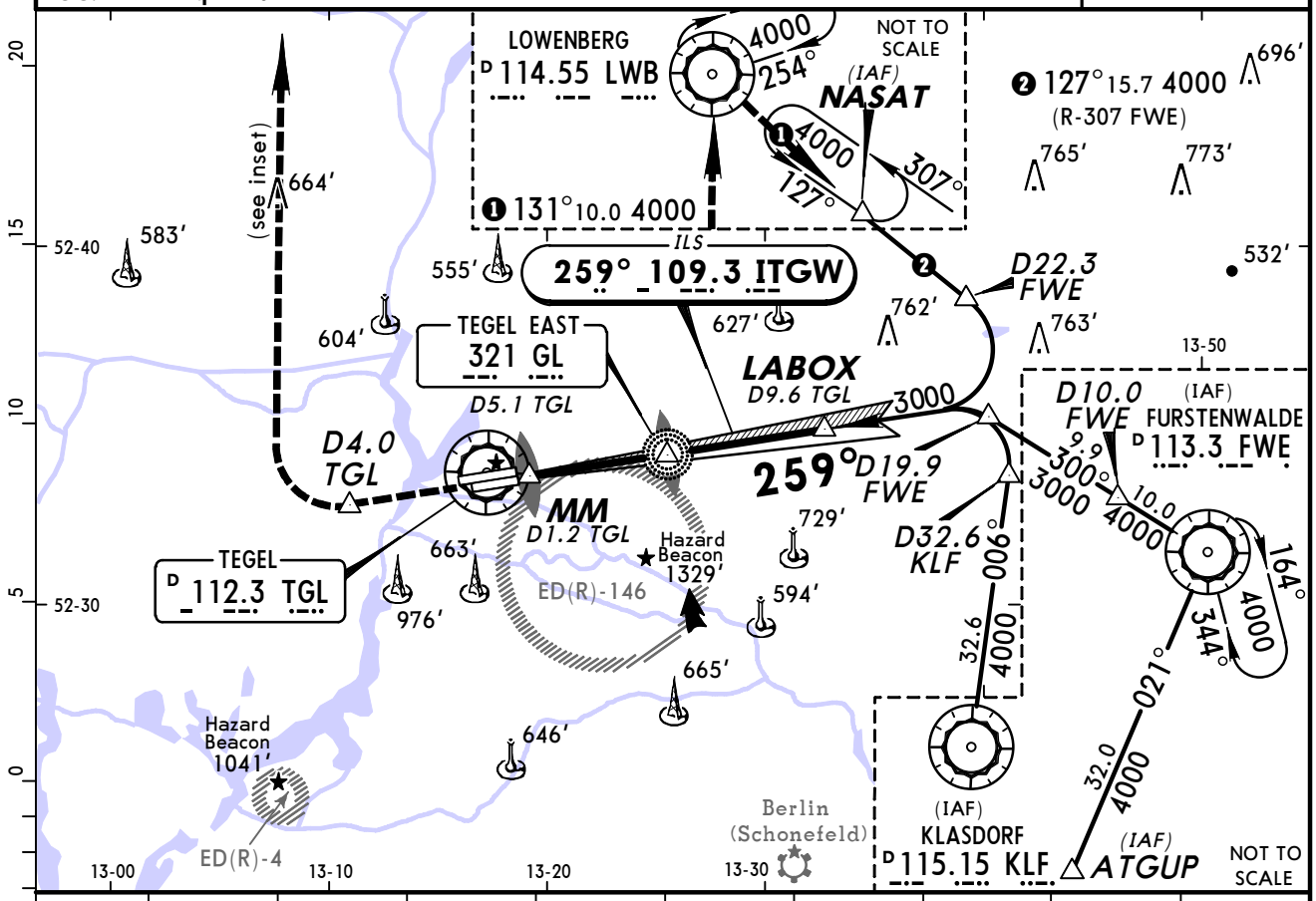
BRIEFING STRIP™

LOC ITGW	Final Apch Crs	GS LOM	ILS DA(H)	Apt Elev / RWY
109.3	259°	1580′ (1458′)	Refer to Minimums	122′ / 122′

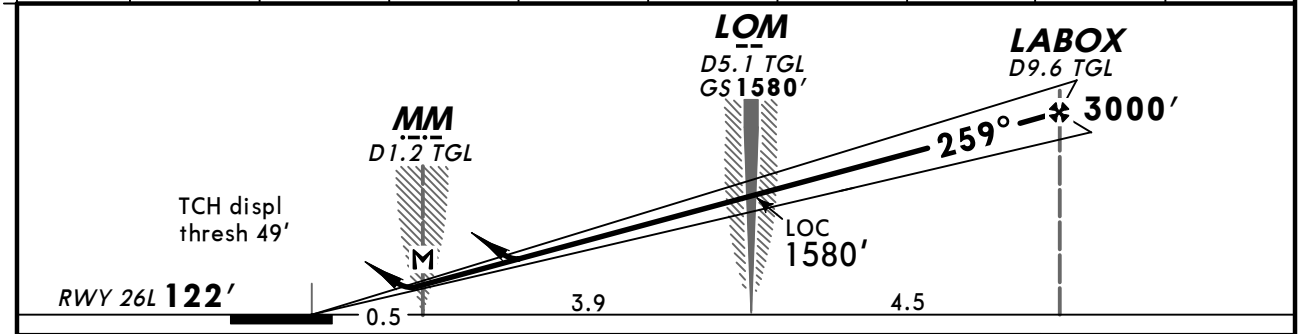
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 West of TGL VOR climb to 4000′ and turn RIGHT via LWB VOR to NASAT.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
LOC: **DME required.**

2400′
MSA TGL VOR



LOC (GS out)	TGL DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	590′	910′	1230′	1550′	1860′	2180′	2500′	2820′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.2 TGL						

HIALS-II
PAPI
3000′ MAX

Standard STRAIGHT-IN LANDING RWY 26L

ILS
DA(H) A: 363′ (241′) C: 383′ (261′)
B: 373′ (251′) D: 392′ (270′)

LOC (GS out)
DA(H) 600′ (478′)

PANS OPS 4

	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1300m	RVR 1500m	
B					
C	RVR 600m			RVR 1500m	CMV 2200m
D					

CHANGES: Minimums.

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TEGEL

JEPPESEN
27 MAY 11 (11-3A)

BERLIN, GERMANY
CAT II ILS Rwy 26L

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

BRIEFING STRIP™

LOC ITGW	Final Apch Crs	GS LOM	CAT II ILS RA/DA(H)	Apt Elev / RWY
109.3	259°	1580′ (1458′)	Refer to Minimums	122′ / 122′

MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 West of TGL VOR climb to 4000′ and turn RIGHT via LWB VOR to NASAT.

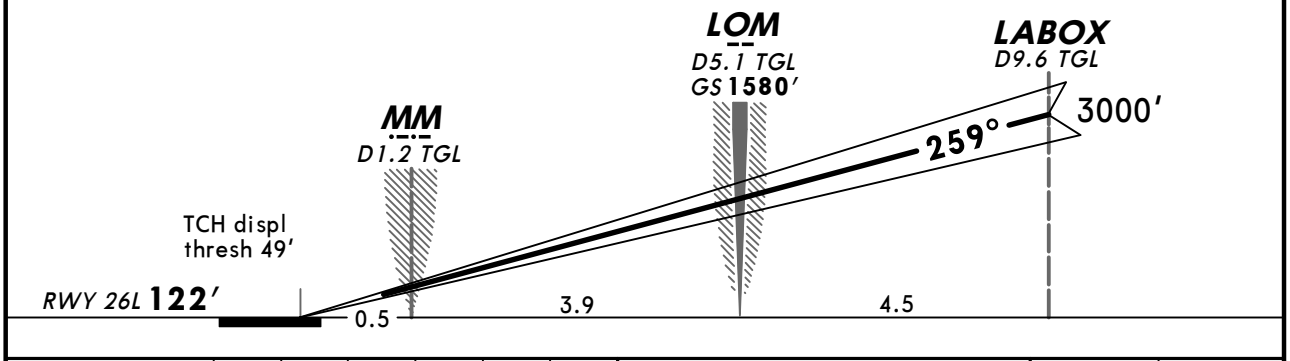
Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.

2400′
MSA
TGL VOR

NOT TO SCALE

LOWENBERG 114.55 LWB
4000 254° (IAF) NASAT
127° 307°
❶ 131° 10.0 4000
❷ 127° 15.7 4000 (R-307 FWE)
(see inset)
664′ 583′ 555′ 604′ 765′ 773′ 696′ 532′ 762′ 763′
ILS 259° 109.3 ITGW
D22.3 FWE
TEGEL EAST 321 GL
D5.1 TGL
LABOX D9.6 TGL
3000
D4.0 TGL
259° D19.9 FWE
D10.0 FWE (IAF) FURSTENWALDE D 113.3 FWE
MM D1.2 TGL
Hazard Beacon 1329′
ED(R)-146
729′ 663′ 976′ 594′ 665′ 646′
D32.6 KLF
TEGEL D 112.3 TGL
Hazard Beacon 1041′
ED(R)-4
Berlin (Schonefeld)
(IAF) KLASDORF D 115.15 KLF
(IAF) ATGUP
NOT TO SCALE

52-40 52-30 13-00 13-10 13-20 13-30 13-50
15 10 5 0 5



Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

HIALS-II
PAPI
3000′ MAX

Standard STRAIGHT-IN LANDING RWY **26L**
CAT II ILS

AB	C	D
RA 99′	**RA 137′**	**RA 151′**
DA(H) **222′** (100′)	DA(H) **260′** (138′)	DA(H) **273′** (151′)
RVR 300m ❶	RVR 400m	RVR 450m

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

PANS OPS 4

CHANGES: Minimums.

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JEPPESEN
27 MAY 11 (11-4)

BERLIN, GERMANY
ILS or LOC Rwy 26R

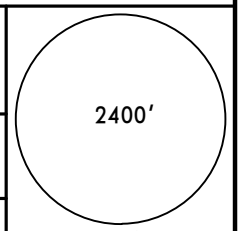
BRIEFING STRIP™

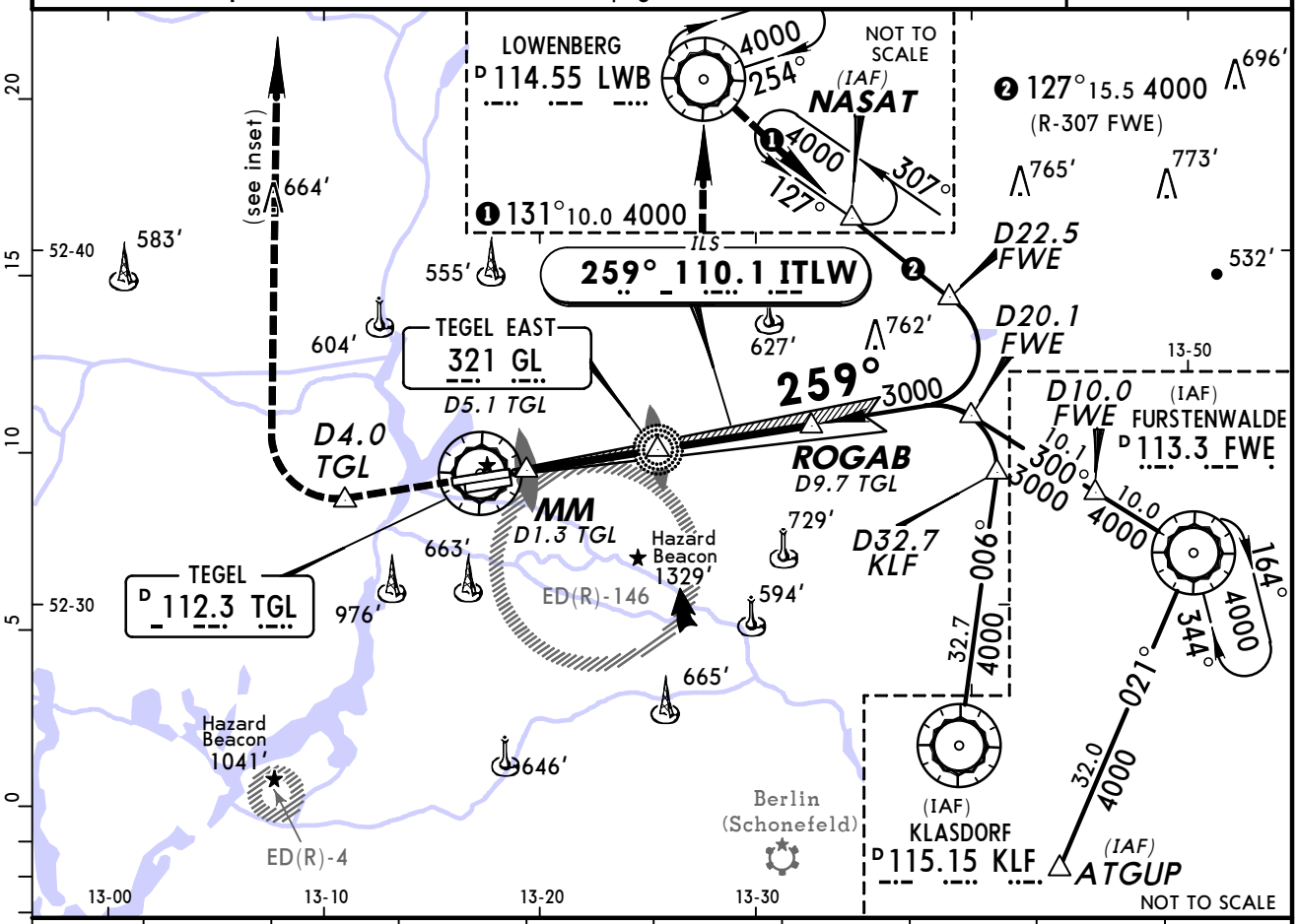
D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

LOC ITLW	Final Apch Crs	GS LOM	ILS DA(H)	Apt Elev / RWY
110.1	259°	1540′ (1423′)	Refer to Minimums	Apt Elev 122′ / RWY 117′

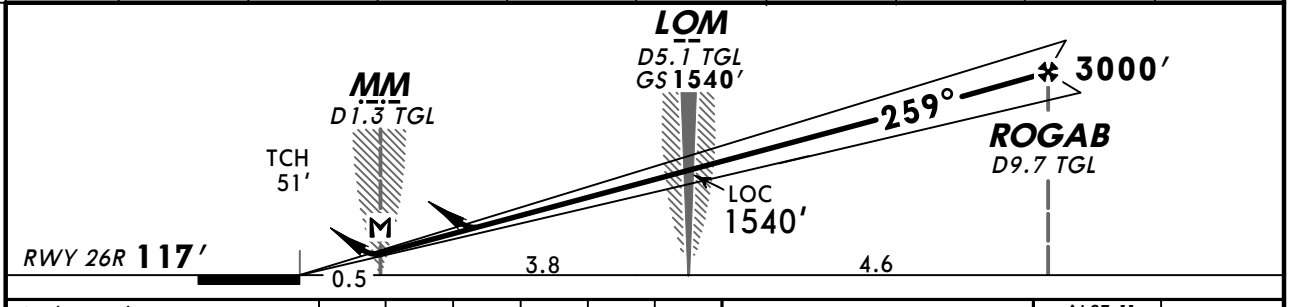
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 West of TGL VOR climb to 4000′ and turn RIGHT via LWB VOR to NASAT.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
1. LOC: **DME required.** 2. LACFT: See ATC state pages.





LOC (GS out)	TGL DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	560′	870′	1190′	1510′	1830′	2150′	2470′	2780′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.3 TGL						

ALSF-II
REIL
PAPI

3000′ MAX

Standard STRAIGHT-IN LANDING RWY **26R**

ILS DA(H)	LOC (GS out) DA(H)
A: 337′ (220′) C: 356′ (239′)	610′ (493′)
B: 347′ (230′) D: 366′ (249′)	

PANS OPS 4

	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1500m	
B					
C				RVR 1500m	CMV 2300m
D			RVR 1300m		

CHANGES: Minimums.

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EDDT/TXL
TEGEL

JEPPESEN
27 MAY 11 (11-4A)

BERLIN, GERMANY
CAT II/III ILS Rwy 26R

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

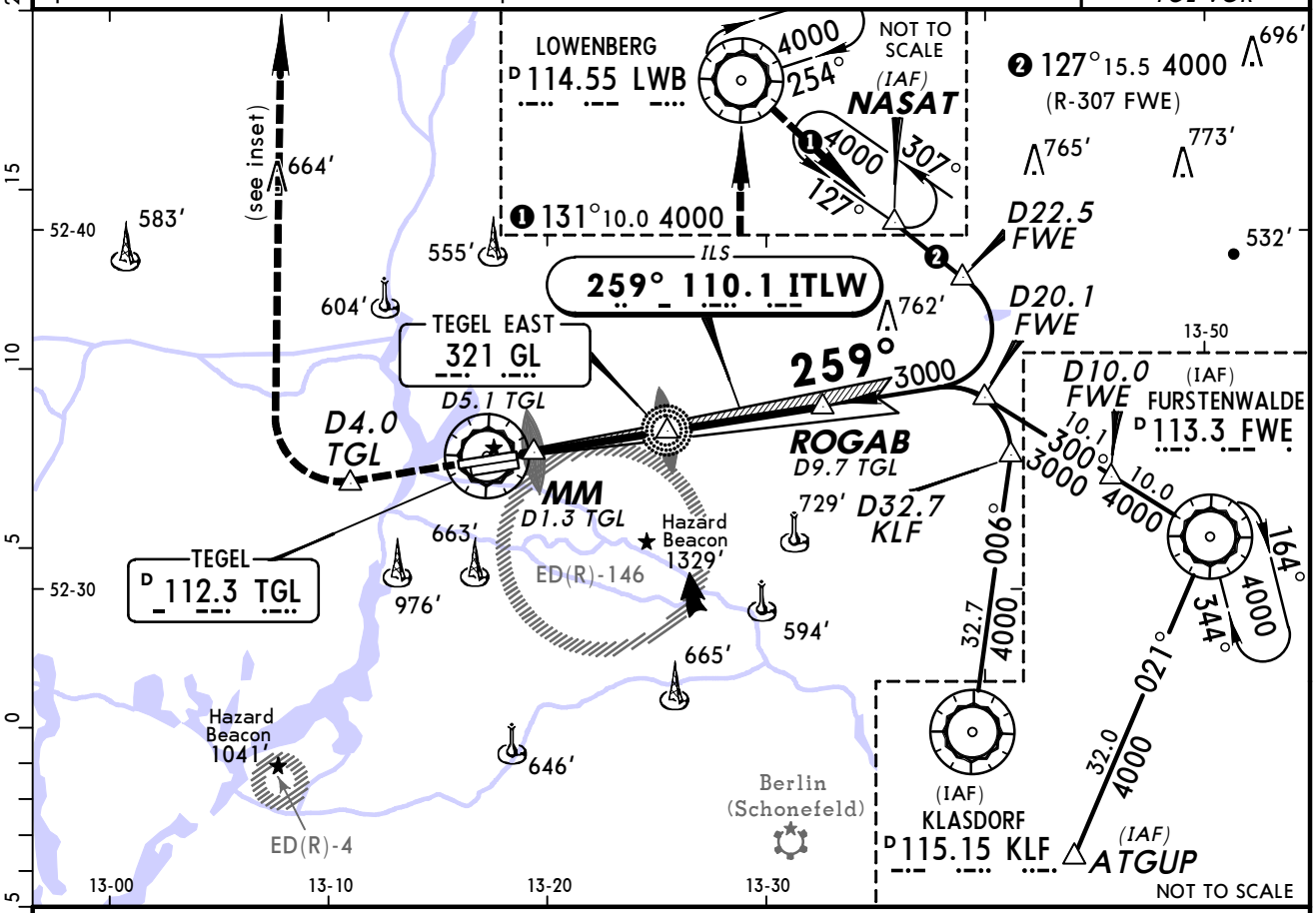
BRIEFING STRIP™

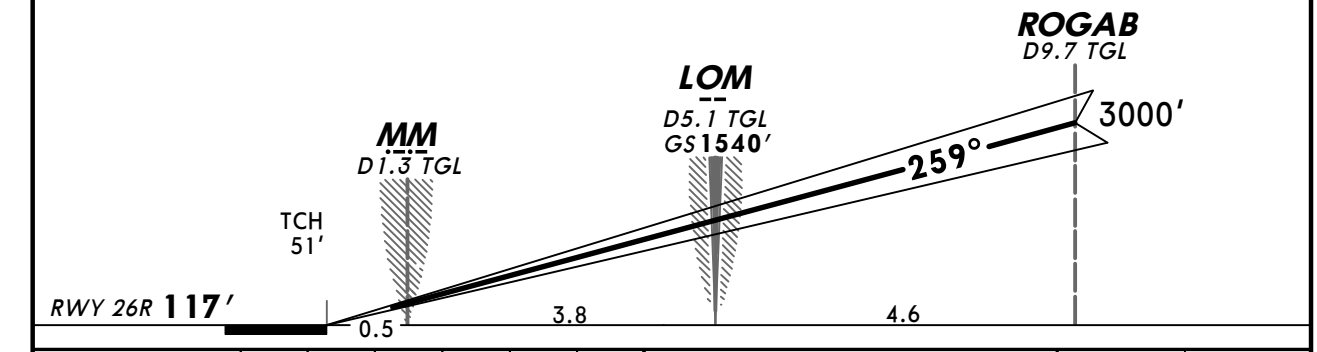
LOC ITLW	Final Apch Crs	GS LOM	CAT II & IIIA ILS Refer to Minimums	Apt Elev 122′ RWY 117′
110.1	259°	1540′ (1423′)		

MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 West of TGL VOR climb to 4000′ and turn RIGHT via LWB VOR to NASAT.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.

2400′
MSA
TGL VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

3000′ MAX

Standard STRAIGHT-IN LANDING RWY **26R**

CAT IIIA ILS	CAT II ILS
DH 50′	ABCD RA 95′ DA(H) 217′ (100′)
RVR 200m	RVR 300m 1

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

PANS OPS 4

CHANGES: Minimums.

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JEPPESEN
27 MAY 11 (12-1)

BERLIN, GERMANY
RNAV (GPS) Rwy 08L

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

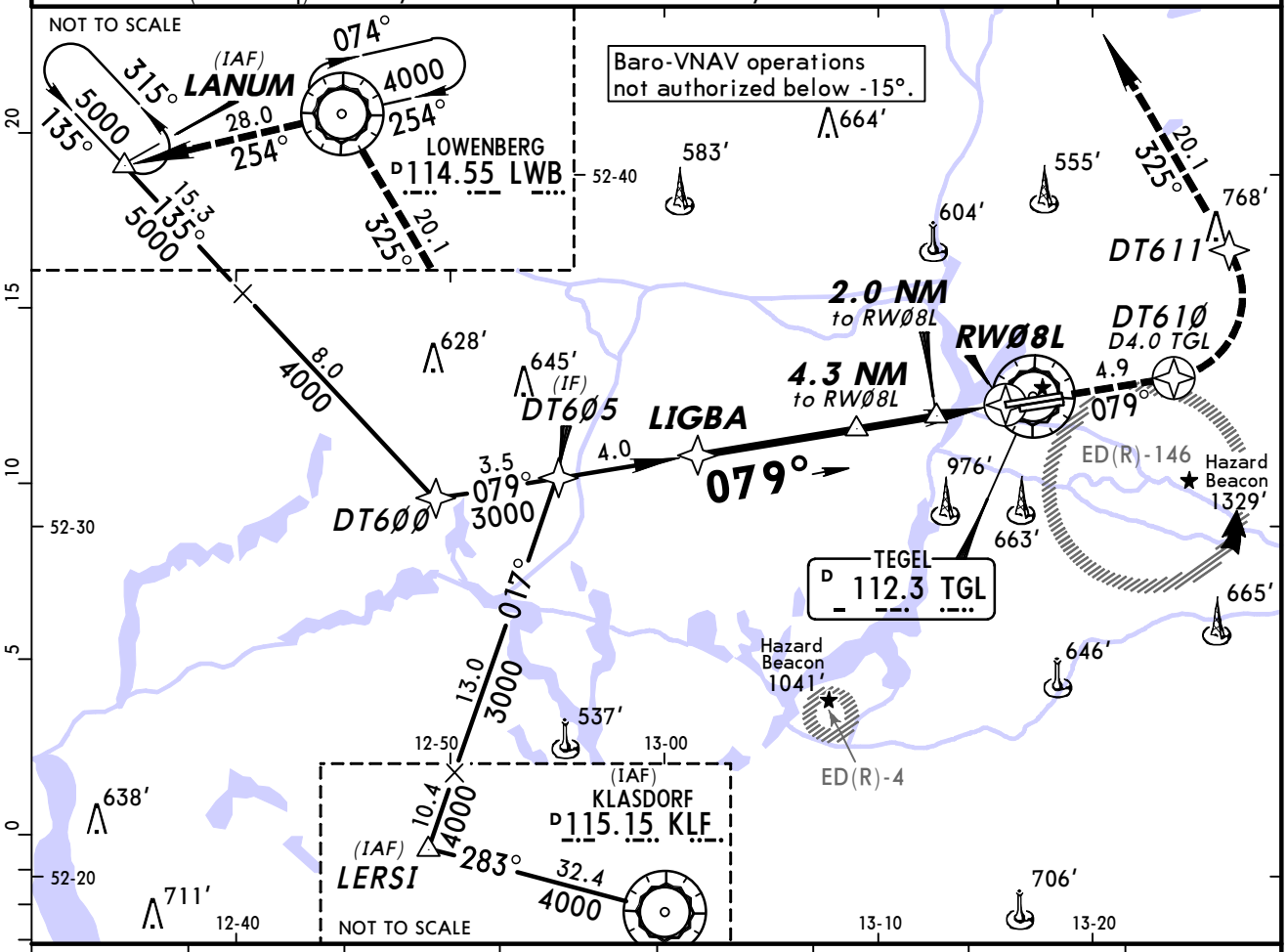
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	079°	LIGBA 3000′ (2890′)	530′ (420′)	122′ / RWY 110′

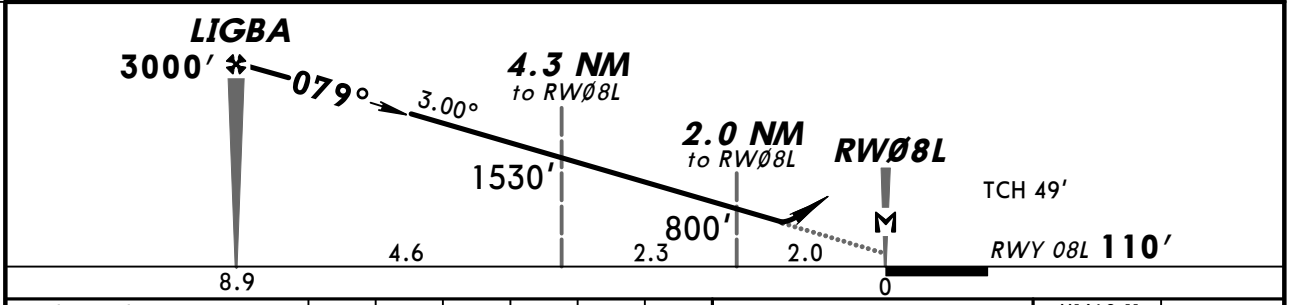
MISSED APCH RNAV: Climb on track 079° to DT61Ø (MAX 3000′), then turn LEFT via DT611 on 325° to LWB VOR climbing to 5000′, then turn LEFT on 254° to LANUM.
NON-RNAV: Climb on rwy track to MAX 3000′, at D4.0 EAST of TGL VOR turn LEFT continue climb to 5000′ via LWB VOR to LANUM.

2400′
MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 4 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RWØ8L	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2710′	2390′	2070′	1760′	1440′	1120′	800′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ8L							

HIALS-II
REIL
PAPI

3000′ MAX

Standard STRAIGHT-IN LANDING RWY **08L**

	LNAV/VNAV DA(H) 530′ (420′)		LNAV DA(H) 550′ (440′)	
		ALS out		ALS out
A	RVR 1200m	RVR 1500m	RVR 1300m	RVR 1500m
B				
C		RVR 1900m		RVR 2000m
D				

PANS OPS 4

CHANGES: Minimums.

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TEGEL

JEPPESEN
27 MAY 11 (12-2)

BERLIN, GERMANY
RNAV (GPS) Rwy 08R

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

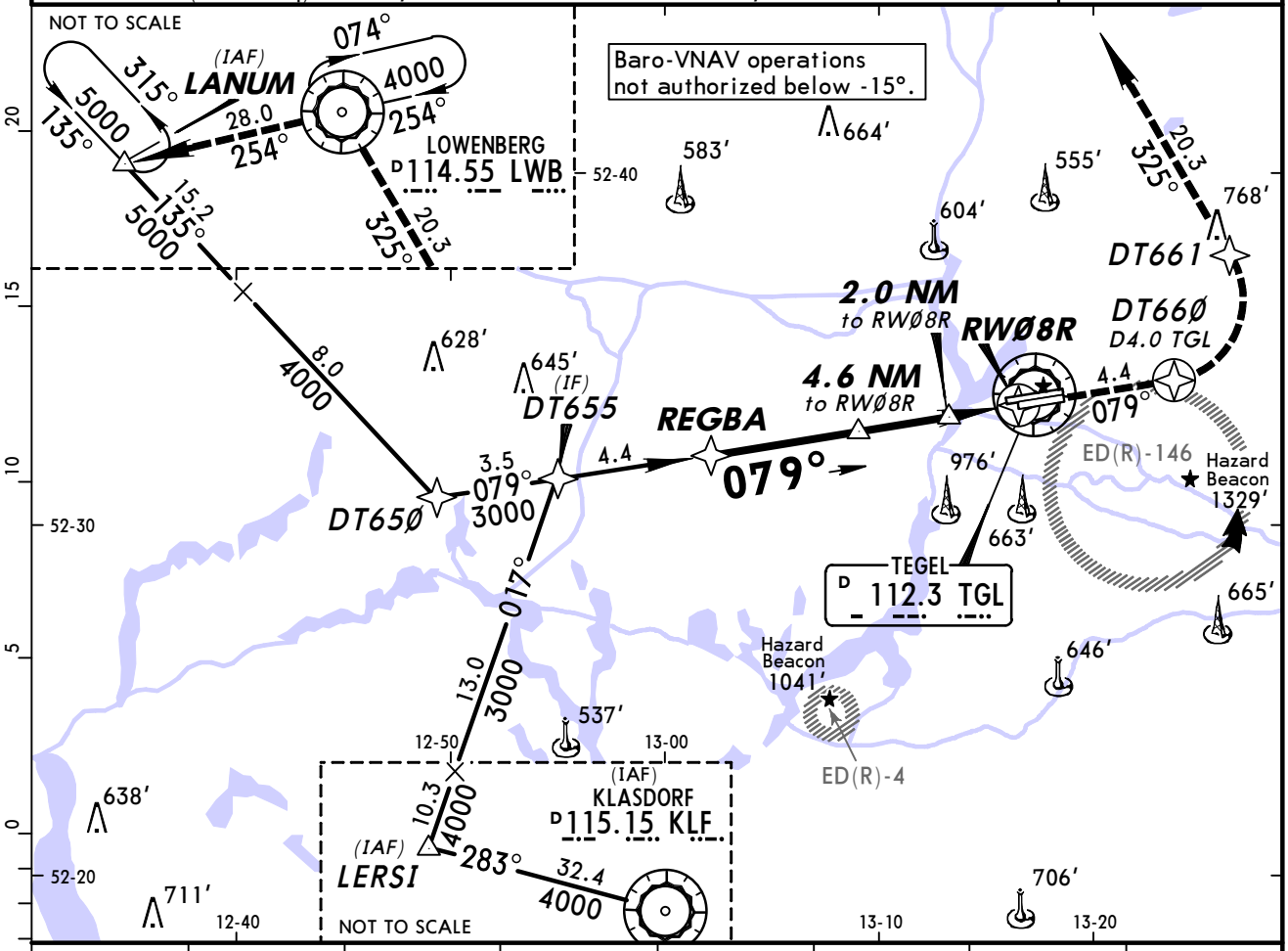
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	079°	REGBA 3000′ (2891′)	480′ (371′)	122′ / RWY 109′

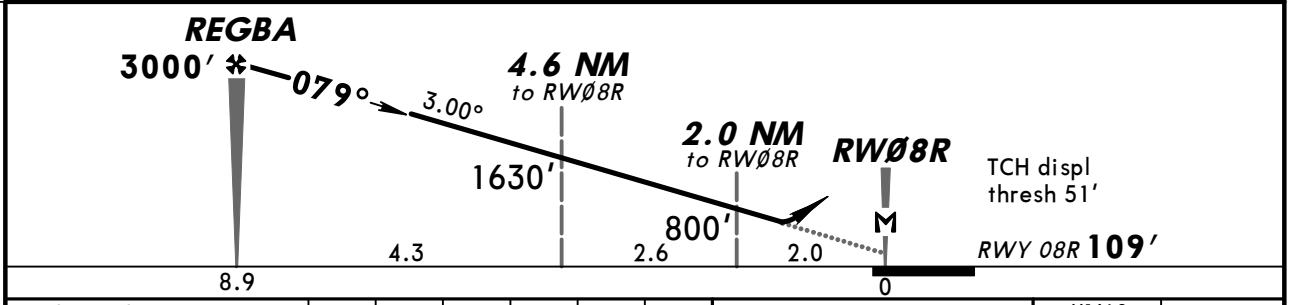
MISSED APCH RNAV: Climb on track 079° to DT66Ø (MAX 3000′), then turn LEFT via DT661 on 325° to LWB VOR climbing to 5000′, then turn LEFT on 254° to LANUM.
NON-RNAV: Climb on rwy track to MAX 3000′, at D4.0 EAST of TGL VOR turn LEFT continue climb to 5000′ via LWB VOR to LANUM.

2400′
MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 4 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RWØ8R	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2710′	2390′	2070′	1750′	1440′	1120′	800′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ8R							

HIALS
PAPI
3000′ MAX

Standard STRAIGHT-IN LANDING RWY **08R**

	LNAV/VNAV DA(H) 480′ (371′)		LNAV DA(H) A: 540′ (431′) BCD: 580′ (471′)	
		ALS out		ALS out
A	RVR 1000m	RVR 1500m	RVR 1300m	RVR 1500m
B				
C		RVR 1700m	RVR 1500m	CMV 2200m
D				

PANS OPS 4

CHANGES: Minimums.

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EDDT/TXL
TEGEL

JEPPESEN
27 MAY 11 (12-3)

BERLIN, GERMANY
RNAV (GPS) Rwy 26L

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

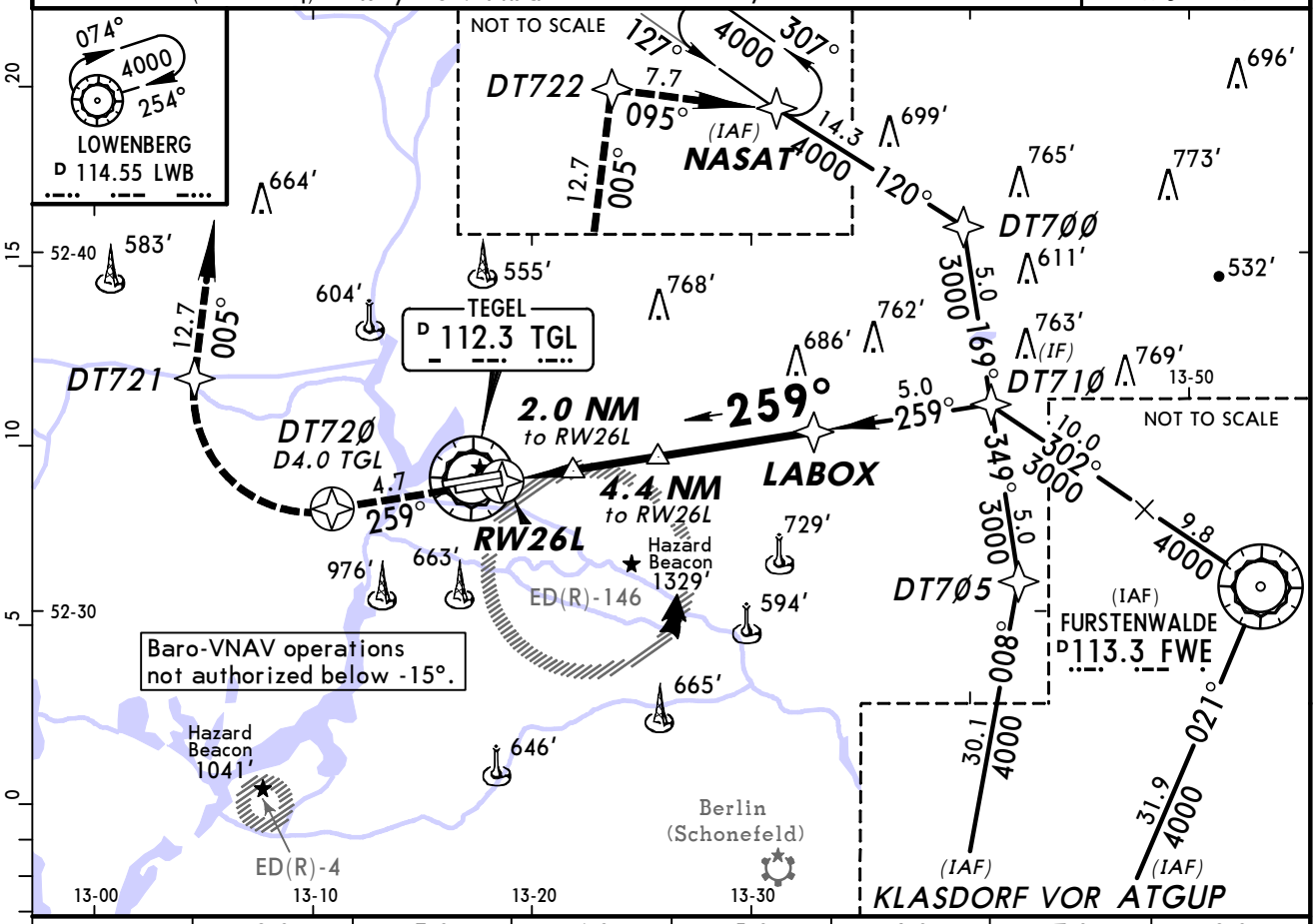
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt LABOX	LNAV/VNAV DA(H)	Apt Elev / RWY
	259°	3000′ (2878′)	500′ (378′)	122′ / 122′

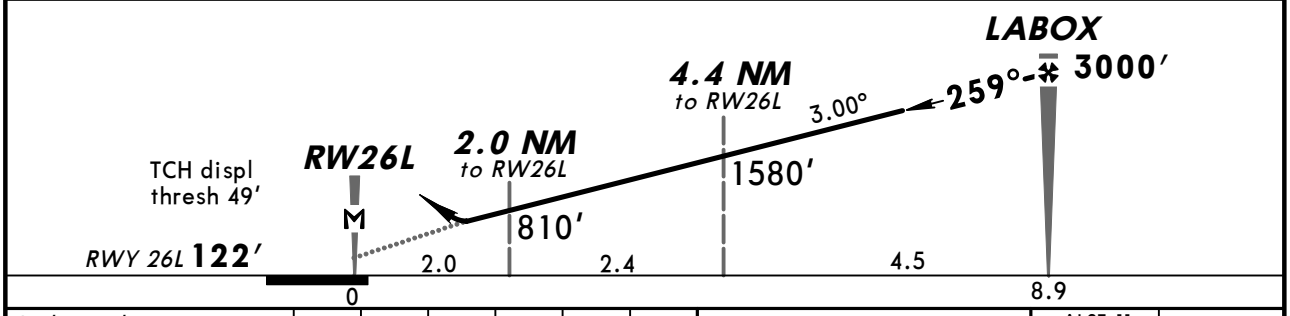
MISSED APCH RNAV: Climb on track 259° to DT72Ø (MAX 3000′), then turn RIGHT via DT721 on 005° to DT722 climbing to 4000′, then turn RIGHT on 095° to NASAT.
NON-RNAV: Climb on rwy track to MAX 3000′, at D4.0 WEST of TGL VOR turn RIGHT continue climb to 4000′ via LWB VOR to NASAT.

2400′
MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′



DIST to RW26L	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	810′	1130′	1450′	1770′	2090′	2400′	2720′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW26L							

ALSF-II
REIL
PAPI

3000′ MAX

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26L**

	LNAV/VNAV DA(H) 500′ (378′)		LNAV DA(H) 580′ (458′)	
		ALS out		ALS out
A	RVR 1000m	RVR 1500m	RVR 1400m	RVR 1500m
B				
C		RVR 1700m		CMV 2100m
D				

CHANGES: None.

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EDDT/TXL
TEGEL

JEPPESEN
27 MAY 11 (12-4)

BERLIN, GERMANY
RNAV (GPS) Rwy 26R

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt ROGAB	LNAV/VNAV DA(H)	Apt Elev 122′ RWY 117′
	259°	3000′ (2883′)	530′ (413′)	

MISSED APCH RNAV: Climb on track 259° to DT77Ø (MAX 3000′), then turn RIGHT via DT771 on 005° to DT772 climbing to 4000′, then turn RIGHT on 095° to NASAT.
NON-RNAV: Climb on rwy track to MAX 3000′, at D4.0 WEST of TGL VOR turn RIGHT continue climb to 4000′ via LWB VOR to NASAT.

2400′
MSA ARP

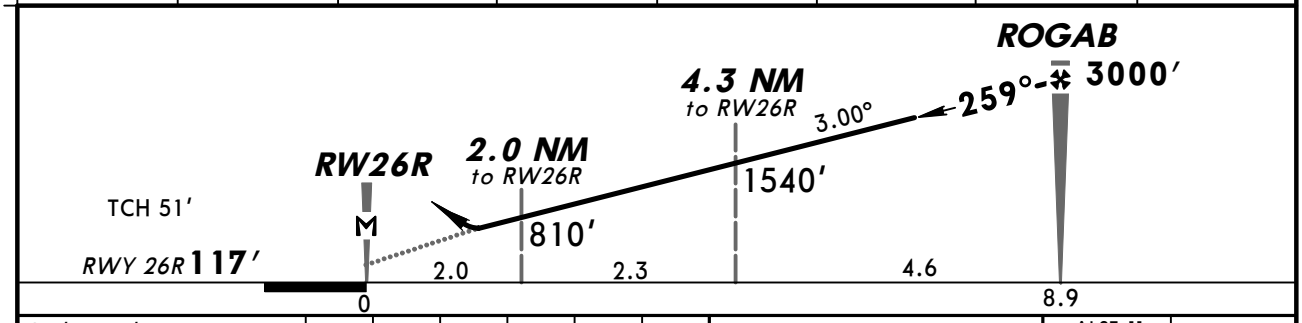
Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′

NOT TO SCALE

LOWENBERG
D 114.55 LWB

DT772 NASAT DT75Ø DT771 DT77Ø D4.0 TGL DT76Ø DT755
TEGEL D 112.3 TGL
RW26R
2.0 NM to RW26R
4.3 NM to RW26R
259° ROGAB 3000′
Hazard Beacon 1329′
ED(R)-146
Hazard Beacon 1041′
ED(R)-4
Berlin (Schonefeld)
Baro-VNAV operations not authorized below -15°.
(IAF) FURSTENWALDE D 113.3 FWE
(IAF) KLASDORF VOR
(IAF) ATGUP

DIST to RW26R	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	810′	1130′	1450′	1760′	2080′	2400′	2720′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW26R							

ALSF-II
REIL
PAPI

3000′ MAX

Standard STRAIGHT-IN LANDING RWY **26R**

	LNAV/VNAV DA(H) 530′ (413′)		LNAV DA(H) 560′ (443′)	
		ALS out		ALS out
A	RVR 1200m	RVR 1500m	RVR 1400m	RVR 1500m
B				
C		RVR 1900m		CMV 2100m
D				

PANS OPS 4

CHANGES: Minimums.

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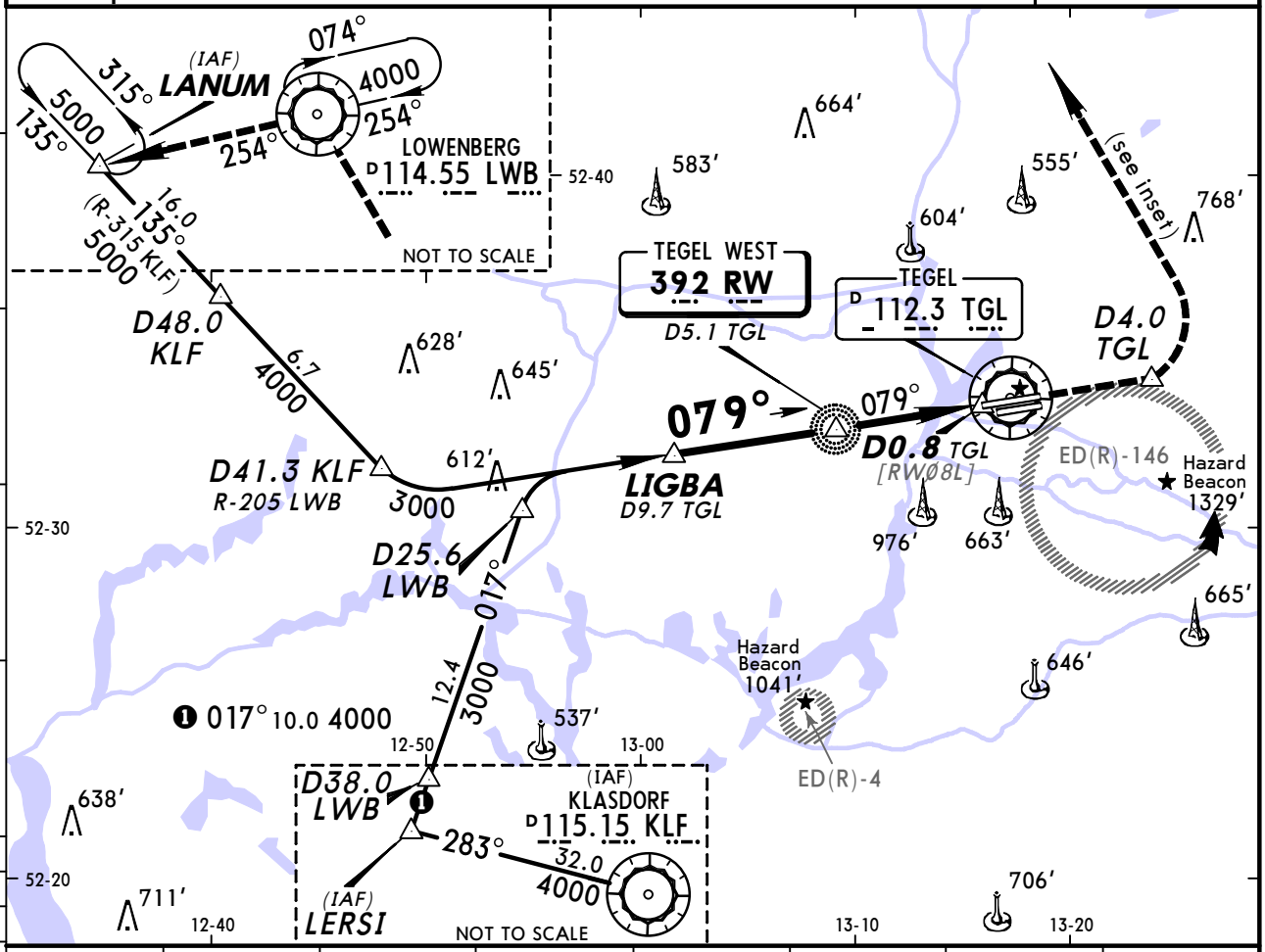
D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

NDB RW	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
392	079°	LIGBA 3000′ (2890′)	670′ (560′)	122′ / 110′

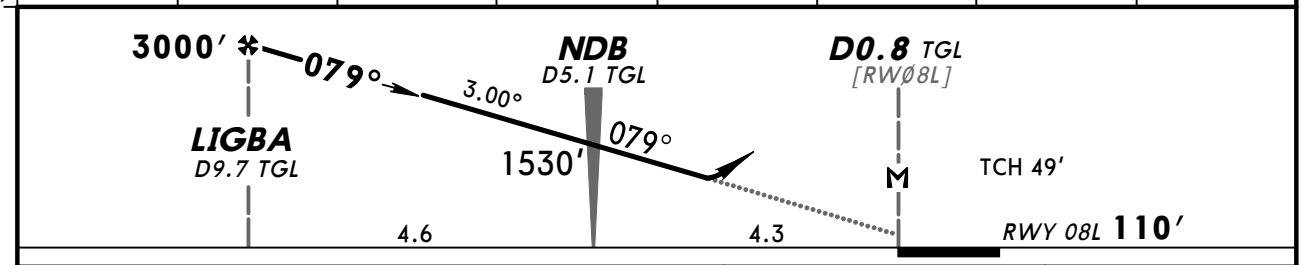
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 TGL turn LEFT continue climb to 5000′ via LWB VOR to LANUM.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2400′
MSA TGL VOR



TGL DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2770′	2460′	2140′	1820′	1500′	1180′	860′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.8 TGL							

HIALS-II
REIL
PAPI

3000′ MAX

Standard STRAIGHT-IN LANDING RWY **08L**

DA(H) **670′** (560′)

		ALS out
A	RVR 1500m	
B		
C	RVR 1800m	CMV 2400m
D		

PANS OPS 4

CHANGES: Minimums.

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EDDT/TXL
TEGEL

JEPPESEN
27 MAY 11 (16-2)

BERLIN, GERMANY
NDB Rwy 08R

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

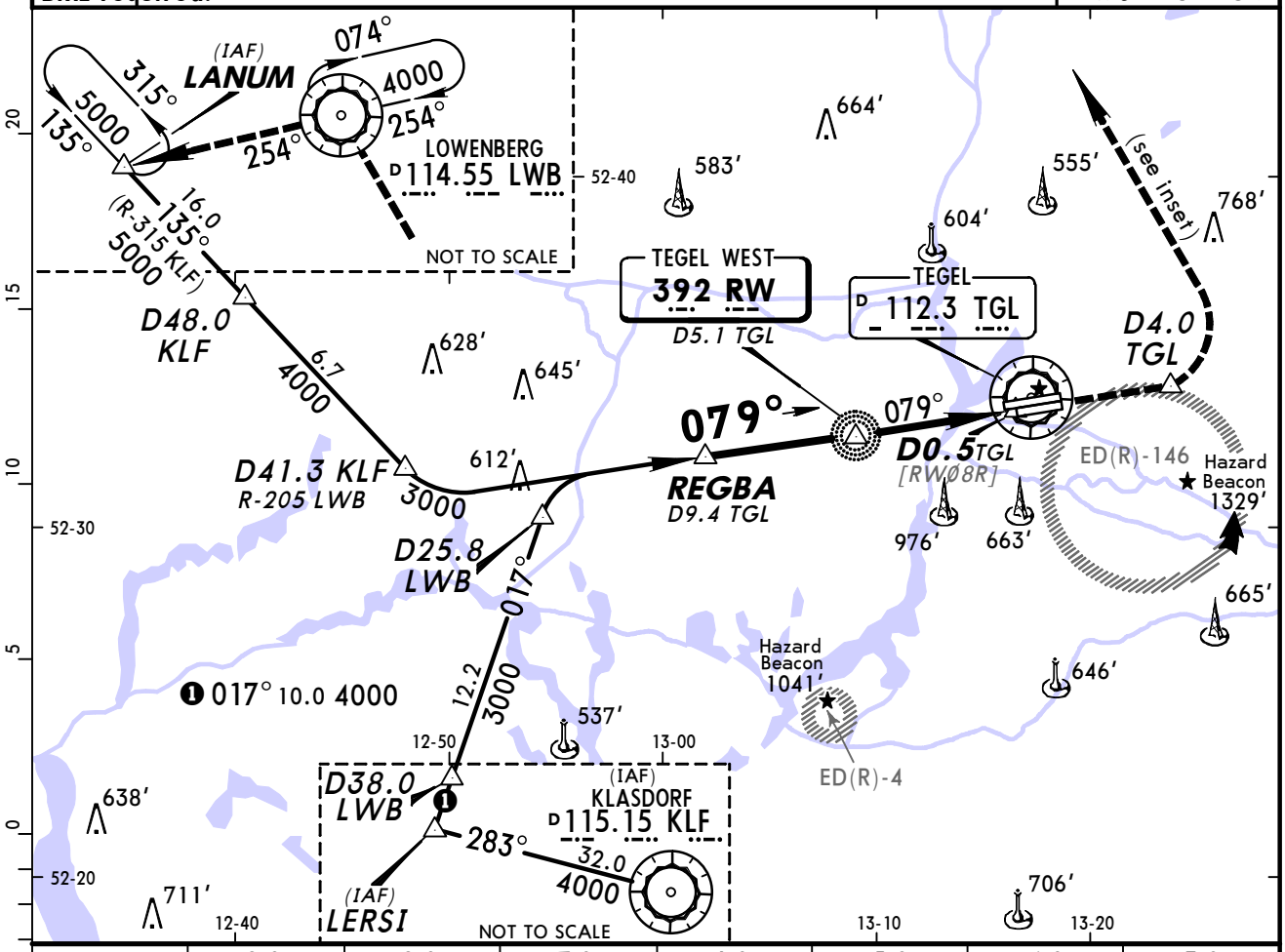
BRIEFING STRIP™

NDB RW	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
392	079°	REGBA 3000′ (2891′)	660′ (551′)	Apt Elev 122′ RWY 109′

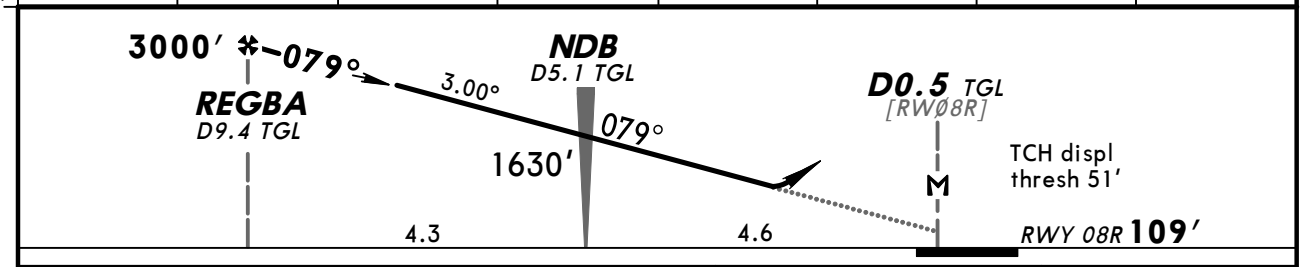
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 TGL turn LEFT continue climb to 5000′ via LWB VOR to LANUM.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2400′
MSA TGL VOR



TGL DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2870′	2550′	2230′	1910′	1600′	1280′	960′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.5 TGL							

HIALS
PAPI
3000′ MAX

Standard STRAIGHT-IN LANDING RWY **08R**

DA(H) **660′** (551′)

ALS out

PANS OPS 4

A	RVR 1500m	
B		
C	RVR 1800m	CMV 2400m
D		

CHANGES: Minimums.

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EDDT/TXL
TEGEL

JEPPESEN
27 MAY 11 (16-3)

BERLIN, GERMANY
NDB Rwy 26L

BRIEFING STRIP™

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

NDB GL 321	Final Apch Crs 259°	Minimum Alt LABOX 3000′ (2878′)	DA(H) 680′ (558′)	Apt Elev 122′ RWY 122′

MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 WEST of TGL VOR climb to 4000′ and turn RIGHT via LWB VOR to NASAT.

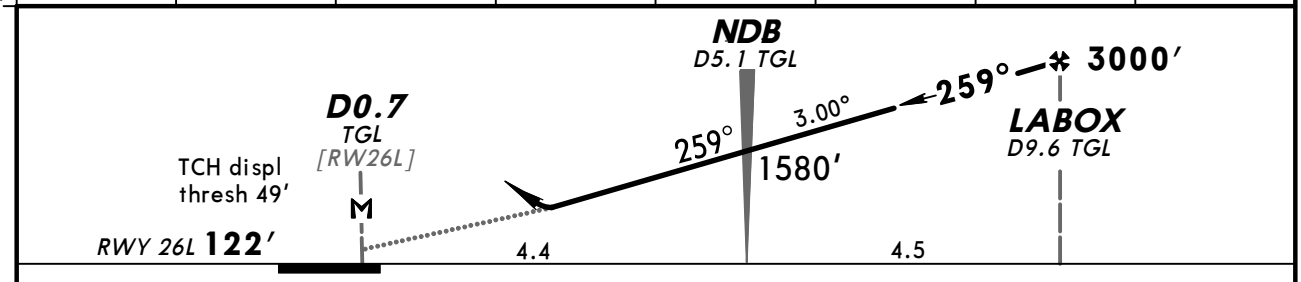
Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2400′
MSA TGL VOR

NOT TO SCALE

LOWENBERG
D 114.55 LWB
4000
254°
(IAF)
NASAT
4000
307°
127°
❶ 131° 10.0 4000
❷ 127° 15.7 4000
(R-307 FWE)
D22.3 FWE
TEGEL EAST
321 GL
D5.1 TGL
LABOX
D9.6 TGL
3000
259°
D4.0 TGL
D0.7 TGL
[RW26L]
Hazard Beacon 1329′
ED(R)-146
TEGEL
D 112.3 TGL
D19.9 FWE
D32.6 KLF
006°
D10.0 FWE (IAF)
FURSTENWALDE
D 113.3 FWE
10.0
4000
164°
344°
021°
32.6
32.0
Hazard Beacon 1041′
ED(R)-4
Berlin (Schonefeld)
(IAF)
KLASDORF
D 115.15 KLF
(IAF)
ATGUP
(see inset)
664′ 583′ 555′ 627′ 604′ 762′ 763′ 696′ 765′ 773′ 532′ 729′ 663′ 976′ 594′ 665′ 646′
52-40 52-30
13-00 13-10 13-20 13-30 13-40 13-50

TGL DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	910′	1230′	1550′	1860′	2180′	2500′	2820′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.7 TGL							

HIALS-II
PAPI
3000′ MAX

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **26L**

DA(H) **680′** (558′)

	ALS out
A, B	RVR 1500m
C	RVR 1800m
D	CMV 2400m

CHANGES: Minimums.

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EDDT/TXL
TEGEL

JEPPESEN
27 MAY 11 (16-4)

BERLIN, GERMANY
NDB Rwy 26R

D-ATIS	BREMEN Radar (APP) North	BREMEN Radar (APP) South	BERLIN Director (APP)	TEGEL Tower	Ground
112.3 125.9	119.62	126.42	136.1	124.52	121.75

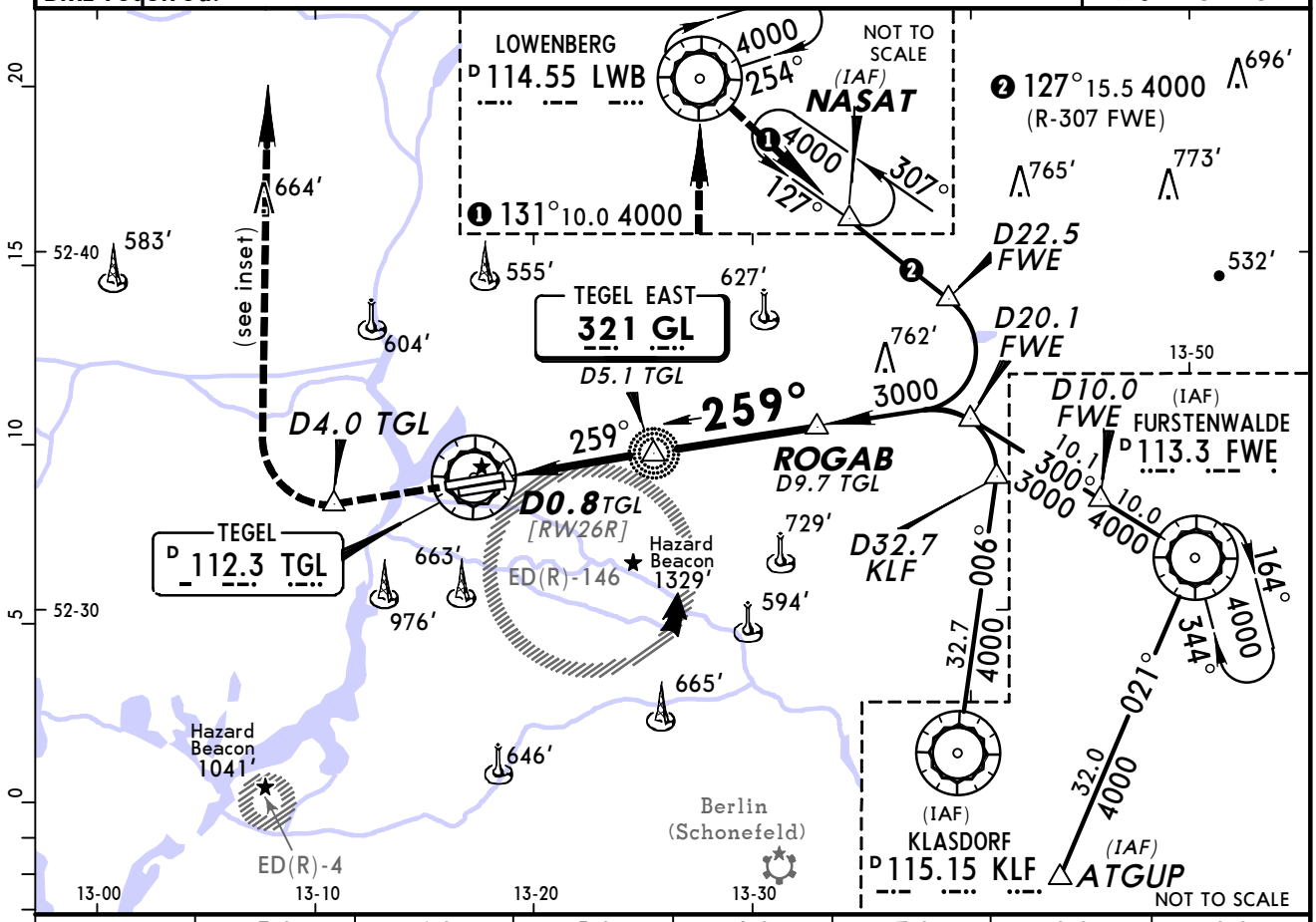
BRIEFING STRIP™

NDB GL	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
321	259°	ROGAB 3000′ (2883′)	670′ (553′)	Apt Elev 122′ RWY 117′

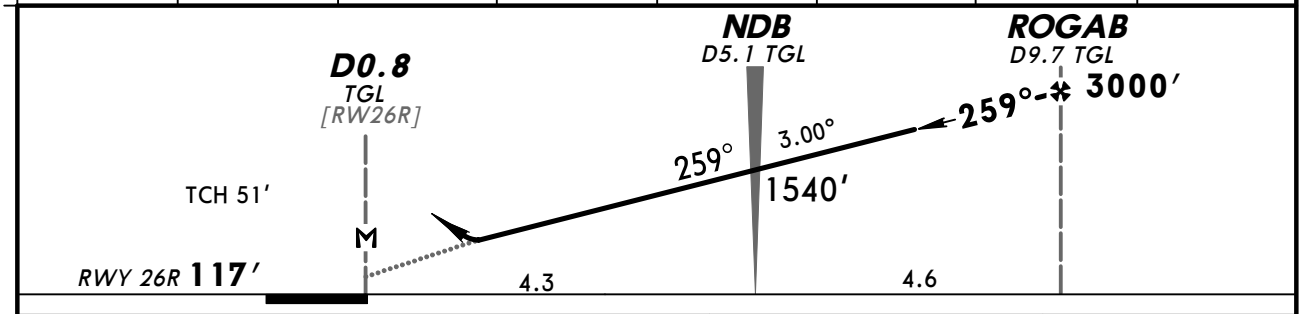
MISSED APCH: Climb on rwy track to MAX 3000′. At D4.0 WEST of TGL VOR climb to 4000′ and turn RIGHT via LWB VOR to NASAT.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2400′
MSA TGL VOR



TGL DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	870′	1190′	1510′	1830′	2150′	2470′	2780′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.8 TGL							

ALSF-II
REIL
PAPI

3000′ MAX

Standard STRAIGHT-IN LANDING RWY **26R**

DA(H) **670′** (553′)

ALS out

PANS OPS 4

A	RVR 1500m	
B		
C	RVR 1800m	CMV 2400m
D		

CHANGES: Minimums.

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General Information

Location: Hannover Deu
IATA Code: HAJ
Lat/Long: N52° 27.6' E009° 41.0'
Elevation: 183 ft

Airport Use: Public
Magnetic Variation: 1.8°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0613 Z
Sunset: 1655 Z,

Runway Information

Runway: 09C
Length x Width: 2559 ft x 74 ft
Surface Type: asphalt
TDZ-Elev: 178 ft
Displaced Threshold: 197 ft
Stopway: 558 ft

Runway: 09L
Length x Width: 12467 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 169 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 984 ft

Runway: 09R
Length x Width: 7677 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 172 ft
Lighting: Edge, ALS, Centerline, REIL

Runway: 27C
Length x Width: 2559 ft x 74 ft
Surface Type: asphalt
TDZ-Elev: 174 ft
Displaced Threshold: 525 ft
Stopway: 197 ft

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Runway: 27L
Length x Width: 7677 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 179 ft
Lighting: Edge, ALS, Centerline, REIL

Runway: 27R
Length x Width: 12467 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 169 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 984 ft

Communication Information

ATIS 136.575
Hannover Tower 120.4
Hannover Tower 120.175
Hannover Tower 37.495 Military
Hannover Ground Control 121.95
De-Icing Ramp/Taxi Control 135.225
De-Icing Ramp/Taxi Control 121.6 Secondary
Hannover Director Approach Control 119.6
Hannover Director Approach Control 25.972 Military

1. GENERAL

1.1. ATIS

*D-ATIS 136.57

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. NIGHT FLYING RESTRICTIONS

Between 2200-0559LT, aircraft exceeding the noise limits pursuant to ICAO Annex 16, Volume 1, Chapter 3 are not permitted to operate.
If any ACFT are to take-off or land between 2300-0559LT, a copy of the noise certificates shall be submitted in advance.
Between 2300-0559LT, only the following ACFT movements and ACFT are permitted:

1. Take-offs and landings of turbo-jet ACFT with noise certificate in accordance ICAO with Annex 16, Chapter 3 or 4 which are more than 8 EPNdB below the limits laid down in ICAO Annex 16, Volume 1, Chapter 3, and
   a) which are usually scheduled for the APT of Hannover, or
   b) which are used for night airmail service of a universal service provider as defined in the Postal Universal Service Ordinance (PUDLV) if the night flight is required to meet the quality standard in accordance with Article 2, item 3 of the PUDLV (service provider shall prove this in advance to the airport), or
   c) which are operated by air carriers whose main base and maintenance facilities are in Hannover.
2. Take-offs and landings of turbo-jet cargo ACFT with noise certificate in accordance ICAO with Annex 16, Chapter 3 or 4, and
   a) which are more than 8 EPNdB below the limits laid down in ICAO Annex 16, Volume 1, Chapter 3, or
   b) all jet ACFT up to 25000 KGS MTOW which are more than 5 EPNdB below the limits laid down in ICAO Annex 16, Volume 1, Chapter 3, as well as the following ACFT types:

A300	CANADAIR RJ
A310	DASH 8-400
A319	FOKKER 70/100
A320	GULFSTREAM IV/V
A321	LOCKHEED L1011 - take-off only
A330	DC 8-70 - series
A340	DC 10 - take-off only
BAe 146/AVRO RJ-series	DC 10-30 (all versions) - landing only
B717	MD 11
B727-100 re-engined with 3 tay engines	MD 80 (all versions) - landing only
B737-300/400/500/600/700/800	MD 90
B747-400	TUPOLEV 204
B757	
B767	
B777	

3. Landings of ACFT not exceeding the limits pursuant to ICAO Annex 16, Volume 1, Chapter 3, operated by air carriers whose main base and maintenance facilities are in Hannover.
4. Take-offs and landings of ACFT with different means of propulsion in commercial and corporate air traffic complying with the provisions of ICAO Annex 16, Volume 1, Chapters 3, 4, 5, 6, (-4 dBA), 8, 10 (-3 to -8 dBA) or 11 and/or Chapters III, IV 2.4, VII or X 2.4 of Noise Requirements for ACFT as well as landings of ACFT with different means of propulsion and noise certificate stationed at Hannover Airport in business air traffic.
5. Landings of delayed ACFT which are part of scheduled air services or regular air inclusive tours, which do not exceed the noise limits pursuant to ICAO Annex 16, Volume 1, Chapter 3 and which are scheduled to arrive at Hannover prior to 2300LT.
6. Landings of ACFT provably using the airport as alternate aerodrome for meteorological, technical or other safety reasons.

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1. GENERAL

7. Calibration flights conducted by DFS Deutsche Flugsicherung GmbH as far as necessary for maintaining flight safety.
8. Take-offs and landings in emergency cases.
9. Take-offs and landings in exceptional cases with special permission from the aviation supervision office of the "Niedersaechsisches Ministerium fuer Wirtschaft, Arbeit und Verkehr".

Subject to further restrictions of this provision, between 2200-0559LT take-offs and landings by ACFT as listed below are only permitted on the northern RWYs 09L/27R. Exceptions for urgent technical, meteorological or operational reasons are possible.

A300
A310
A330
A340
B727-100 re-engined with 3 tay engines
B737-200
B747-400
B757-300
B767
B777
and
propeller-driven ACFT with more than 5.7t MTOW.

LOCKHEED L1011
DC 8-70-series
DC 10
MD 11
MD 80-series
MD 90
TUPOLEV 154
TUPOLEV 204

1.2.2. LOCAL FLYING RESTRICTIONS

1. Arrivals and departures immediately following one another as well as circling flights for ACFT **over 5.7t MTOW** and for ACFT **up to 5.7t MTOW not complying** with the conditions of ICAO Annex 16, Volume I, Chapter 3, 4, 5, 6 (-4 dB [A]), 8, 10 (-3 to -8 dB [A]) or 11 pursuant to ICAO and/or LSL Chapters III, V, VI 2.4, VIII or X 2.4:
   Only permitted MON-FRI between 0600-2059LT and SAT between 0800-1259LT.
2. Arrivals and departures immediately following one another as well as circling flights for ACFT **up to 5.7t MTOW complying** with the conditions of ICAO Annex 16, Volume I, Chapter 3, 4, 5, 6 (-4 dB [A]), 8, 10 (-3 to -8 dB [A]) or 11 pursuant to ICAO and/or LSL Chapters III, V, VI 2.4, VIII or X 2.4:
   Only permitted MON-SAT between 0600-2059LT and SUN, HOL between 0800-2059LT.
3. Arrivals and departures immediately following one another, not represented at the APT by an ACFT operator, are subject to permission by the "Luftaufsicht" at Hannover APT.

1.2.3. RUN-UP TESTS

Run-up tests of jet engines shall be conducted exclusively in a noise suppression facility which is ready for operation.
If the noise suppression facility is not ready for operation, run-up tests of jet engines may be conducted only from 0600-2200LT. Between 2200-2400LT as well as between 0400-0600LT run-up tests of jet engines may, however, also be conducted outside the noise suppression facility which is not ready for operation if required for urgent maintenance due to safety reasons shortly before a take-off after landing.
This provision does not apply to idle test runs.

1.3. LOW VISIBILITY PROCEDURES

ACFT will be guided onto RWY by Follow-me car.
Enquiries via HANNOVER Ground.

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1. GENERAL

1.4. AUXILIARY POWER UNIT (APU)

To avoid additional noise and reduce further immissions, utilization of the APU shall be reduced to a minimum. This is the responsibility of the pilot.

The APU shall be operated only:
- to start the engines; 15 minutes prior to EOBT at the earliest
- for necessary maintenance work on the ACFT
- if the stationary or mobile ground equipment of the APT is not available or suitable for certain ACFT types.

In special cases, extended hours of operation for the APU may be granted by the APT duty officer (Tel : +49 511 977 1455).

1.5. TAXI PROCEDURES

When taxiing, ACFT shall maintain constant radio contact with control tower. Any requested frequency changes shall be made immediately.

To increase safety of RWYs RWY guard lights have been installed on both sides of CAT I holding positions of RWYs 09L/27R and 09R/27L, as well as of holding positions of RWY 09C/27C.

On aprons ACFT are permitted to taxi only at the indispensible minimums engine speed.

TWYs on the apron are ACFT stand taxilanes with reduced minimum separation distances between taxilane centerlines and stationary objects. The separation distances between taxilane centerline and the red obstacle limitation lines are:
- 156'/47.5m in the area of the parallel TWY between positions 4A thru 27 and 42 thru 61.
- 136'/41.5m in the area between positions 23 thru 42.
- 125'/38m in the area of positions 1 and 2.
- 85'/26m in the area of positions 12, 13 and 20.

The width of the taxilane in the area between positions 45 thru 60 is 279'/85m.

TWY P MAX wingspan 56 '/17m.
TWY O MAX wingspan 66 '/20m.
TWY Q MAX wingspan 118'/36m.

1.6. PARKING INFORMATION

1.6.1. GENERAL

On stands 1 thru 27 and 40 thru 61, except R-stands push-back required.

Stands 1 thru 20, except A-stands equipped with visual docking guidance system.
For stand graphic refer to 10-9 charts.

1.6.2. GENERAL AVIATION 1

All ACFT will be guided by Follow-me.
MAX wingspan 66 '/20m btn hangar 11, 12 and posn 72-75.
MAX wingspan 56 '/17m in front of hangar 13.
MAX wingspan 52 '/16m on other parts of apron.

1.6.3. GENERAL AVIATION 2

MAX wingspan 49 '/15m.

1.6.4. GENERAL AVIATION 3

MAX wingspan 118'/36m; ACFT with wingspan over 95'/29m will be towed.

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2. ARRIVAL

2.1. SPEED RESTRICTIONS

MAX 250 KT below FL 100 or as by ATC. Not applicable within airspace C.

2.2. NOISE ABATEMENT PROCEDURES

2.2.1. REVERSE THRUST

Between 2100-0600LT reverse thrust, other than idle thrust, shall only be used to an extent necessary for safety reasons.

2.3. CAT II/III OPERATIONS

RWY 09L/27R approved for CAT II/III operations, special aircrew and ACFT certification required.

2.4. OTHER INFORMATION

2.4.1. FUEL SAVING AND NOISE REDUCING ILS APPROACH PROCEDURES (CONTINOUS DESCENT APPROACH - CDA)

2.4.1.1. GENERAL

For the purpose of fuel-saving and noise abatement during approach the following approach procedure is announced. It may be requested by the pilot or offered by the controller. It can be conducted only in connection with an ILS approach.

2.4.1.2. PROCEDURE

ACFT will be guided by the approach control unit by means of radar vectoring and will be cleared for a continuous descent to the intermediate approach altitude in such a way that after reaching this intermediate approach altitude on the localizer course, about 1 NM will be left for intercepting the glide path in level flight. This intermediate approach segment will serve to reduce speed.
Intermediate approach altitude: 2000'. It is assumed that the continuous descent will be performed at a rate of 300 ft/NM (descent angle approx 3°),down to the cleared altitude.

If, for specific reasons (e.g. separation, airspace structure, obstacles), altitudes above the intermediate approach altitude have to be initially assigned, these restrictions will be lifted early enough to allow a continuous descent at a rate of 300 ft/NM.

Details about the distance from touchdown will be transmitted to the pilot together with the clearance for descent and usually at 20, 15 and 10 NM from touchdown. This should enable the pilot to correct the rate of descent as required.

In case of traffic situations allowing no CDA (e.g. approaches of aircraft with different performance data), pilots will be informed by the notice NO CDA POSSIBLE. In this case, approaches must be conducted according to the previous procedures.

2.4.1.3. NOISE ABATEMENT

On approaches in accordance with the CDA, pilots are also expected to use the approach techniques recommended for noise abatement in the vicinity of APTs (see AIR TRAFFIC CONTROL page GERMANY-1).

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3. DEPARTURE

3.1. DE-ICING

3.1.1. GENERAL

The de-icing of ACFT will take place on defined de-icing areas (DPs), exclusively. These areas are located at the Western part of the apron.
De-icing on other parking positions - with the exception of the regulation described below - is not permitted.

3.1.2. De-icing Areas

The special areas assigned for the de-icing of ACFT are designated DP1 and DP2 (see 10-9B). In exceptional cases, de-icing may take place on the positions located in between. The actual de-icing position will be assigned by the de-icing operator. The de-icing of jet-propelled ACFT will be carried out with running engines and switched off auxiliary power units (APU). The same regulation applies for ACFT types ATR 42/ 72 with applied propeller brakes.

3.1.3. De-icing

A de-icing operation shall be reported to the de-icing operator in good time (30min in advance prior to OFB/CTOT) under the phone number (0511)-9771415 however, when obtaining start-up clearance for the engines on frequency **121.95** , at the least.
The order of notifications has no influence on the actual de-icing sequence. This will be determined by ground control, exclusively.
After start-up clearance/push-back, ACFT will be guided by ground control to the immediate vicinity of the de-icing areas. The ACFT will then be guided by a Follow-me car to a vacant de-icing position.
After parking the ACFT on the de-icing area, the pilot will report on HANNOVER De-Icing **135.22** together with his flight number. After the de-icing process has been completed, the pilot in command shall report "ready to taxi" to HANNOVER Ground. If the engines have to be started up again, this shall be reported to ground control. During the de-icing process, the pilot shall maintain constant listening watch on the respective de-icing frequency. When the de-icing procedure has been completed, the de-icing code will be transmitted and the ACFT handed over by the de-icing operator to the ground controller.
Taxiing manoeuvres from the de-icing areas may only be carried out after express clearance by the ground controller and with the absolute minimum number of engine revolutions required, only.
After de-icing has taken place, the de-icing areas shall be vacated as quickly as possible after receiving taxi clearance.
Pre de-icing measures with water can be conducted on parking positions if notified in good time. This pre de-icing serves merely to guarantee safe taxiing to the de-icing pads. All other special services, such as the de-icing of the undercarriage or de-icing beneath the wings, will be conducted on the pads with engines switched off, only.
The Hands-on check will generally only be carried out by representatives of the air transport company concerned or by a crew member of the de-iced ACFT on the respective de-icing pad. A Hands-on check shall be requested by the crew through a handling agent, only. On instructions from the de-icing operator, an ACFT may be towed to another position for the hands-on check or planned for another de-icing position in the pre-planning stage already. If a hands-on check becomes necessary, the control tower shall be informed in time, but at the latest when requesting start-up clearance. The employees of FHG and AGS (de-icing personnel) will not carry out these checks.

3.2. TAXI PROCEDURES

ACFT may leave nose-in positions only by the aid of towing cars.
Reverse thrust or variable pitch propellers shall not be used.

Leaving positions 1 thru 23B, 27 and 40 thru 61 (except R stands) ACFT have to be pushed back.

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3. DEPARTURE

3.3. NOISE ABATEMENT PROCEDURES

For additional depiction refer to 10-4.

The starting points for the take-off runs of 3200m in length are located at the level of the eastern edge of RWY N for landing direction 27 and at the level of the western edge of RWY H for landing direction 09. The starting points located 300m in front of THR 09L for take-offs in an eastern direction and 300m in front of THR 27R for take-offs in a western direction may only be used by ACFT requiring a take-off run exceeding 3200m for the forthcoming take-off

3.4. OTHER INFORMATION

3.4.1. DATALINK DEPARTURE CLEARANCE (DCL)

DFS (Deutsche Flugsicherung GmbH) is offering start-up and enroute clearances using Datalink. The procedures have been described in an AIC.

Temporal parameters:

t_i 25 min prior to EOBT for unregulated flights.
30 min prior to CTOT for ATFM regulated flights.

t_t 11 min prior to EOBT for unregulated flights.
16 min prior to CTOT for ATFM regulated flights.

t_l 5 min

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BREMEN Radar (APP)	Apt Elev	Alt Set: hPa (IN on request)
131.32 118.05 118.15	183′	Trans level: By ATC Trans alt: 5000′

The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000′ above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500′). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only.
Altitudes in brackets apply between AIRAC date NOV and AIRAC date MAR in order to meet required obstacle clearance at cold temperatures.

SWEDEN ESAA FIR (G)
COPENHAGEN EKDK FIR (G)
BREMEN EDWW FIR
MUNICH EDMM FIR
LANGEN EDGG FIR

160NM
120NM
80NM
40NM

3500
ALTITUDE NOT PUBLISHED
3000
3500
2000 (2100)
2500 (2800)
2000
3300
1800
4200
4500
4100

CONTOUR INTERVALS
4000
2000

NIENBURG NIE VOR
WUNSTORF WUN NDB
CELLE CEL NDB
BRAUN-SCHWEIG BRU NDB
Hannover
BUCKEBURG BYC NDB
LEINE DLE VOR DME
HW NDB
HA NDB

2281′
4118′
2043′
3047′
3176′
2615′
2621′
2474′
3393′
2377′
2587′
2933′
2740′
3052′

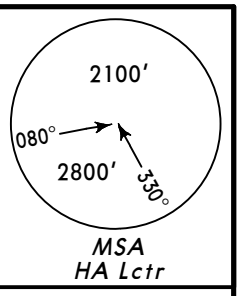
❸ 1900 (2200)
❹ 2500 (2600)
❺ 2800 (3000)
❻ 3000 (3100)
❼ 3600
❽ 2900
❾ 2100 (2400)
❿ 3400
⓫ 2000
⓬ 2000 (2200)

55-00
54-30
54-00
53-30
53-00
52-30
52-00
51-30
51-00
08-00
08-30
09-00
09-30
10-00
10-30
11-00
11-30
12-00
12-30

CHANGES: Sectors & altitudes revised & established.

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*D-ATIS	Apt Elev	
136.57 115.2	183′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′



DIRBO FOUR PAPA (DIRBO 4P) *[DIRB4P]*
ELBE EIGHT PAPA (LBE 8P)
RWYS 27L/R ARRIVALS

DIRBO FOUR ROMEO (DIRBO 4R) *[DIRB4R]*
ELBE SIX ROMEO (LBE 6R)
RWYS 09L/R ARRIVALS

DIRBO 4R: Clearance limit is CEL.
LBE 8P: Clearance limit is NIE.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

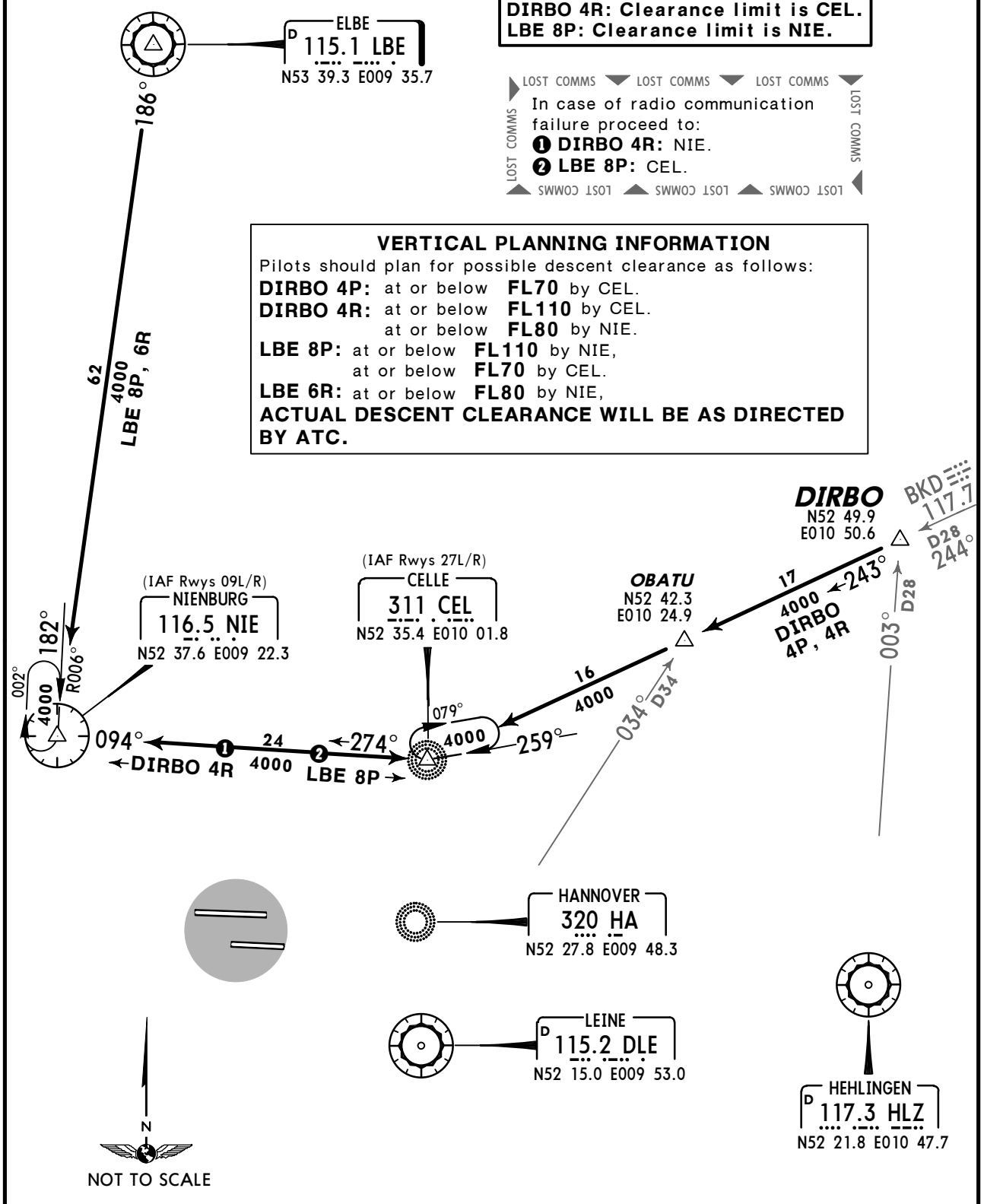
In case of radio communication failure proceed to:
❶ **DIRBO 4R:** NIE.
❷ **LBE 8P:** CEL.

LOST COMMS ▲ LOST COMMS ▲ LOST COMMS

VERTICAL PLANNING INFORMATION

Pilots should plan for possible descent clearance as follows:

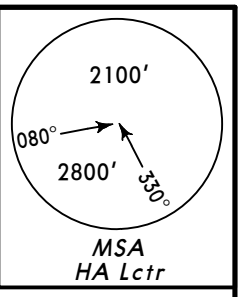
DIRBO 4P: at or below **FL70** by CEL.
DIRBO 4R: at or below **FL110** by CEL.
at or below **FL80** by NIE.
LBE 8P: at or below **FL110** by NIE,
at or below **FL70** by CEL.
LBE 6R: at or below **FL80** by NIE,
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.



CHANGES: Vertical planning information established.

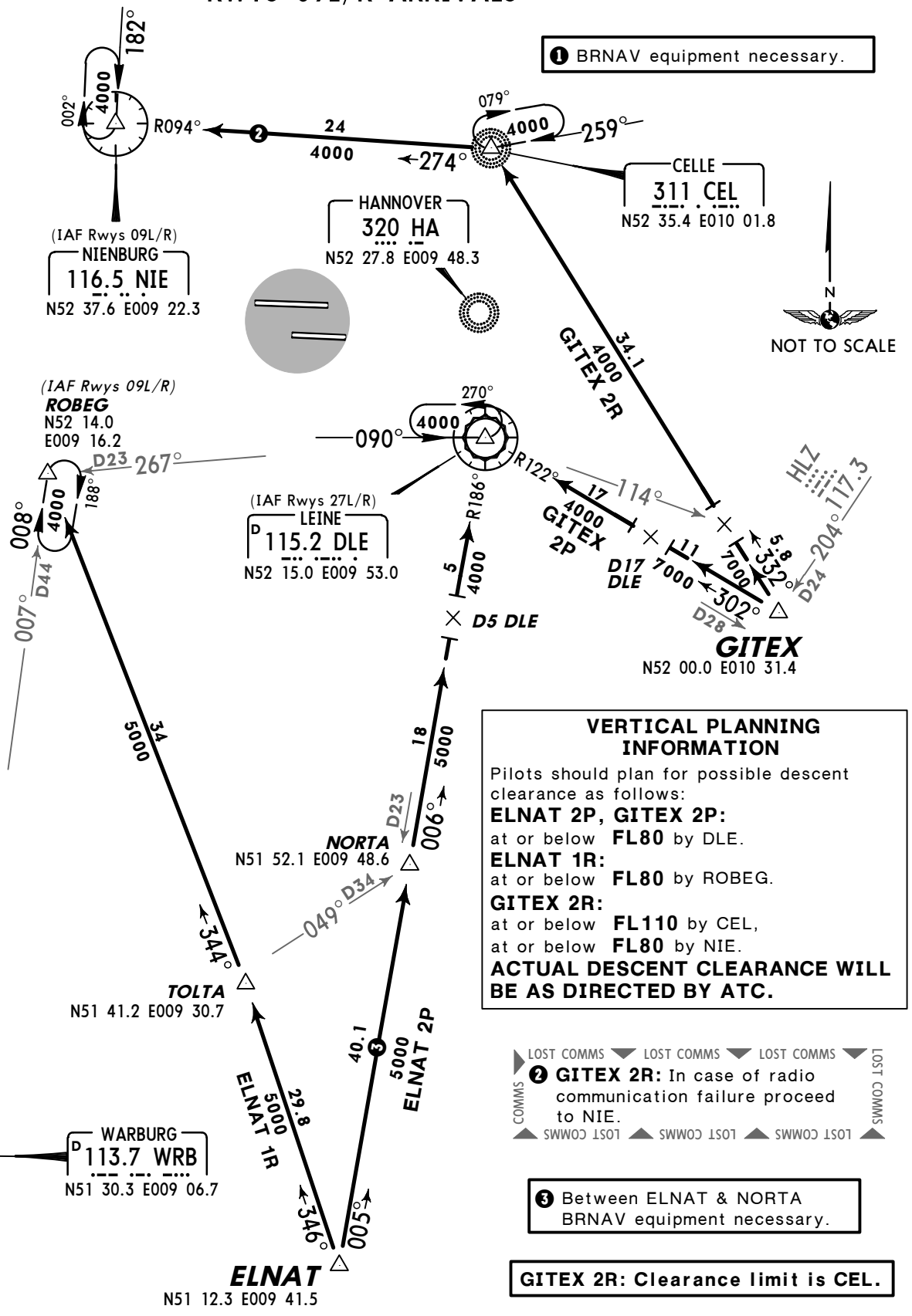
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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
136.57 115.2	183′	Trans level: By ATC Trans alt: 5000′



ELNAT TWO PAPA (ELNAT 2P) *[ELNA2P]*
GITEX TWO PAPA (GITEX 2P) *[GITE2P]*
RWYS 27L/R ARRIVALS

ELNAT ONE ROMEO (ELNAT 1R) *[ELNA1R]* ❶
GITEX TWO ROMEO (GITEX 2R) *[GITE2R]* ❶
RWYS 09L/R ARRIVALS



VERTICAL PLANNING INFORMATION

Pilots should plan for possible descent clearance as follows:

ELNAT 2P, GITEX 2P:
at or below **FL80** by DLE.

ELNAT 1R:
at or below **FL80** by ROBEG.

GITEX 2R:
at or below **FL110** by CEL,
at or below **FL80** by NIE.

ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS

❷ **GITEX 2R:** In case of radio communication failure proceed to NIE.

LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS

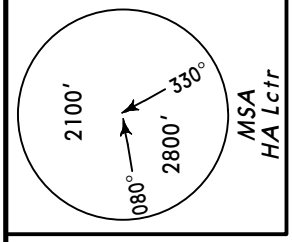
❸ Between ELNAT & NORTA BRNAV equipment necessary.

GITEX 2R: Clearance limit is CEL.

CHANGES: Vertical planning information estbld; SID GITEX 1R renumbered 2R.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
136.57 115.2	183′	Trans level: By ATC Trans alt: 5000′



HEHLINGEN FOUR PAPA (HLZ 4P)
OSNABRUCK SEVEN PAPA (OSN 7P)
RWYS 27L/R ARRIVALS

HEHLINGEN FOUR ROMEO (HLZ 4R)
OSNABRUCK FIVE ROMEO (OSN 5R)
RWYS 09L/R ARRIVALS

LOST COMMS
In case of radio communication failure proceed to:
❶ **HLZ 4R:** NIE.
❷ **OSN 7P:** CEL.

HLZ 4R: Clearance limit is CEL.
OSN 7P: Clearance limit is NIE.

(IAF Rwys 27L/R)
CELLE
311 CEL
N52 35.4 E010 01.8

HEHLINGEN
117.3 HLZ
N52 21.8 E010 47.7

LEINE
115.2 DLE
N52 15.0 E009 53.0

HANNOVER
320 HA
N52 27.8 E009 48.3

(IAF Rwys 09L/R)
NIENBURG
116.5 NIE
N52 37.6 E009 22.3

OSNABRUCK
114.3 OSN
N52 12.0 E008 17.1

VISKI
N52 33.8
E008 48.4

295°
31
4000
HLZ 4P, 4R
259°
079°
4000
274°
OSN 7P
24
4000
HLZ 4R
094°
182°
4000
002°
R258°
078°
21
4000
D44
295°
29
4000
OSN 7P, 5R
040°

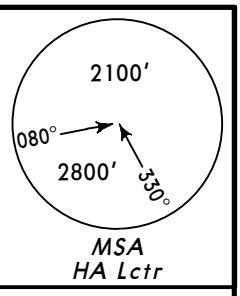
N
NOT TO SCALE

VERTICAL PLANNING INFORMATION
Pilots should plan for possible descent clearance as follows:
HLZ 4P: at or below **FL70** by CEL.
HLZ 4R: at or below **FL110** by CEL.
at or below **FL80** by NIE.
OSN 7P: at or below **FL110** by NIE,
at or below **FL70** by CEL.
OSN 5R: at or below **FL80** by NIE,
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

CHANGES: Vertical planning information established.

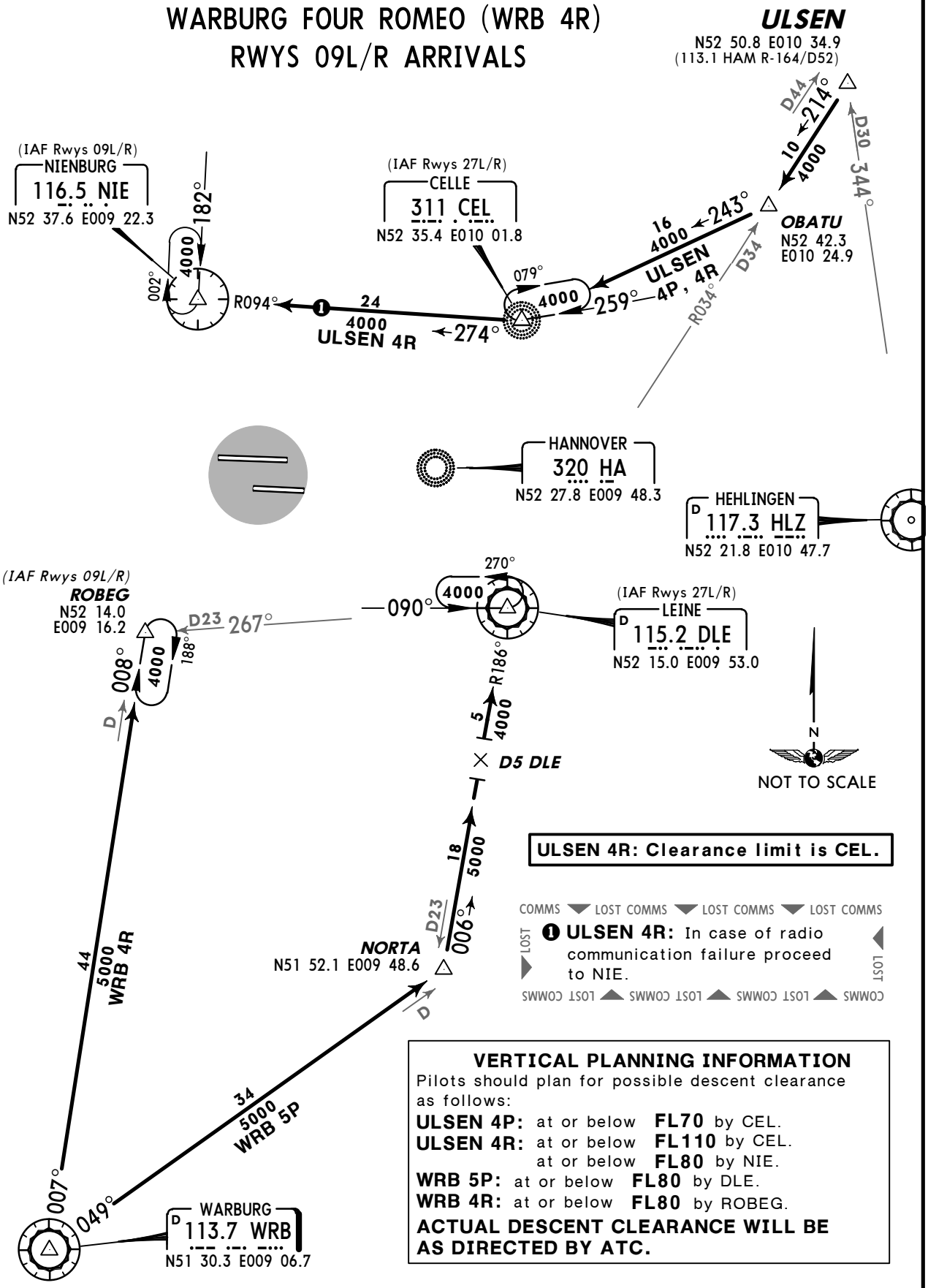
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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
136.57 115.2	183′	Trans level: By ATC Trans alt: 5000′



ULSEN FOUR PAPA (ULSEN 4P) *[ULSE4P]*
WARBURG FIVE PAPA (WRB 5P)
RWYS 27L/R ARRIVALS

ULSEN FOUR ROMEO (ULSEN 4R) *[ULSE4R]*
WARBURG FOUR ROMEO (WRB 4R)
RWYS 09L/R ARRIVALS



VERTICAL PLANNING INFORMATION

Pilots should plan for possible descent clearance as follows:

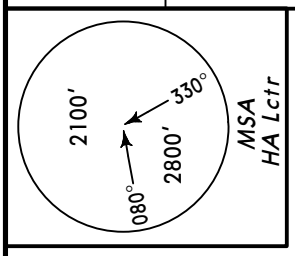
ULSEN 4P: at or below **FL70** by CEL.
ULSEN 4R: at or below **FL110** by CEL.
at or below **FL80** by NIE.
WRB 5P: at or below **FL80** by DLE.
WRB 4R: at or below **FL80** by ROBEG.

ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

CHANGES: Vertical planning information established.

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*D-ATIS	Apt Elev	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000′
136.57 115.2	183′	**1.** On downwind transition expect vectors to final. **2.** Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. **3.** Altitude assignments will be issued by ATC.



CEL Ø9L *[CEØ9L]*, CEL Ø9R *[CEØ9R]*
NIE Ø9L *[NIØ9L]*, NIE Ø9R *[NIØ9R]*
RWYS 09L/R
RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
BY ATC
FROM NORTH

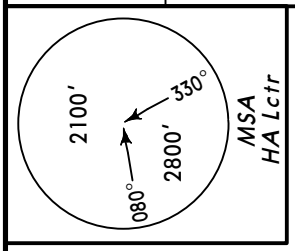
TRANSITION	RWY	ROUTING
CEL 09L	09L	CEL **(FL110-;** K250-) - DV460 (K220-) - DV465 - DV475 - DV472 - DESIM **(3000′+;** K170+).
CEL 09R	09R	CEL **(FL110-;** K250-) - DV460 (K220-) - DV465 - DV475 - DV472 - PIXEL **(3000′+;** K170+).
NIE 09L	09L	NIE **(FL80-;** K250-) - DV400 (K220-) - DV460 - DV465 - DV475 - DV472 - DESIM **(3000′+;** K170+).
NIE 09R	09R	NIE **(FL80-;** K250-) - DV400 (K220-) - DV460 - DV465 - DV475 - DV472 - PIXEL **(3000′+;** K170+).

CHANGES: ATIS; RNAV transitions completely revised.

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*D-ATIS	Apt Elev
136.57 115.2	183′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000′
1. On downwind transition expect vectors to final. **2.** Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. **3.** Altitude assignments will be issued by ATC.



CEL 27L *[CE27L]*, CEL 27R *[CE27R]*
NIE 27L *[NI27L]*, NIE 27R *[NI27R]*
RWYS 27L/R RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
BY ATC
FROM NORTH

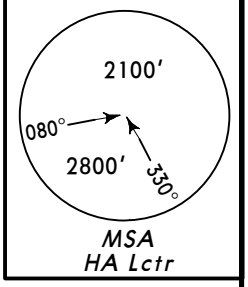
TRANSITION	RWY	ROUTING
CEL 27L	27L	CEL **(FL70-;** K250-) - DV500 - DV501 (K220-) - DV502 - DV565 - DV575 - DV572 - ODINI **(3000′+;** K170+).
CEL 27R	27R	CEL **(FL70-;** K250-) - DV500 - DV501 (K220-) - DV502 - DV565 - DV575 - DV572 - XAVER **(3000′+;** K170+).
NIE 27L	27L	NIE **(FL110-;** K250-) - DV502 (K220-) - DV565 - DV575 - DV572 - ODINI **(3000′+;** K170+).
NIE 27R	27R	NIE **(FL110-;** K250-) - DV502 (K220-) - DV565 - DV575 - DV572 - XAVER **(3000′+;** K170+).

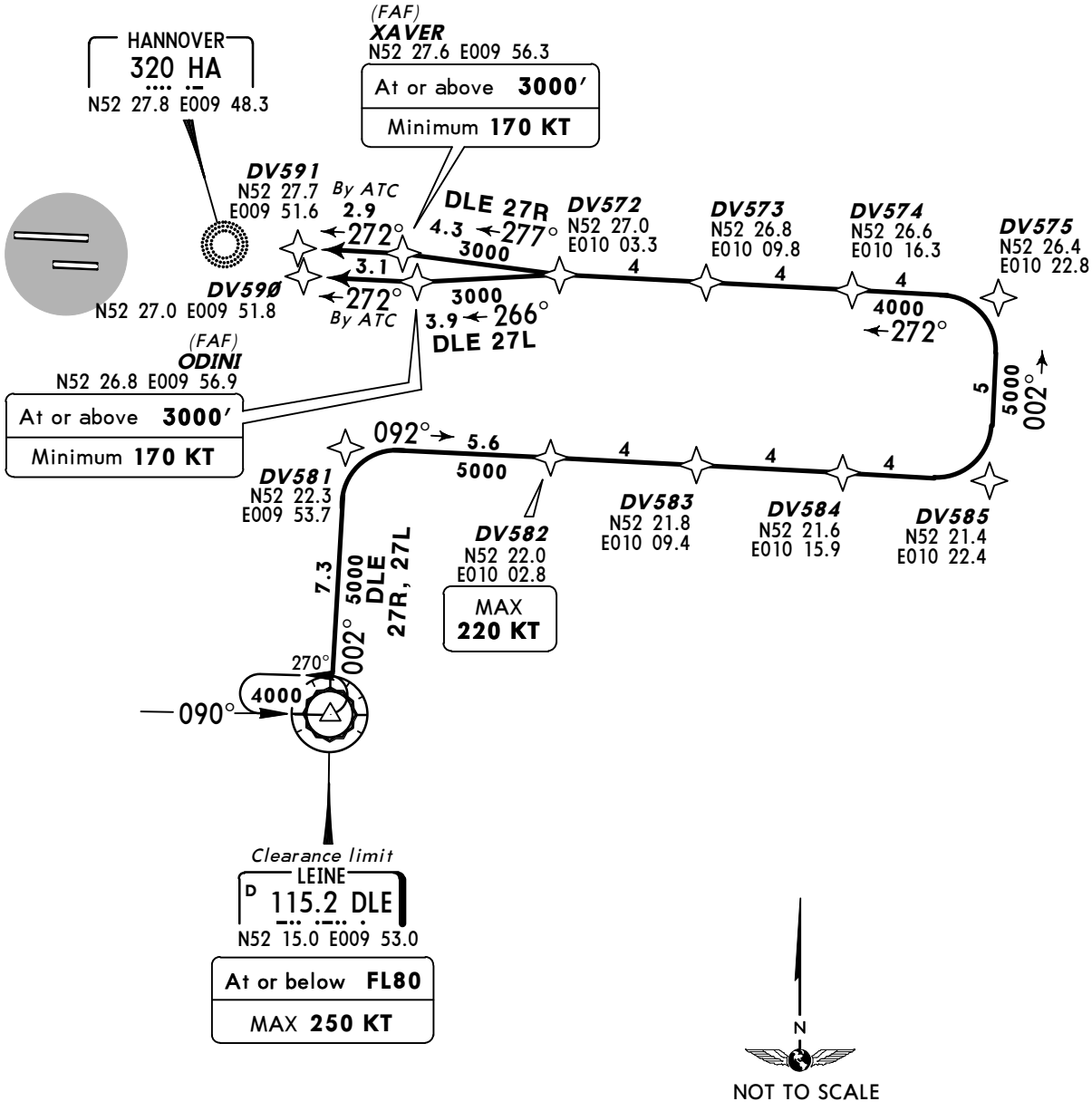
CHANGES: ATIS; RNAV transitions completely revised.

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*D-ATIS	Apt Elev	
136.57 115.2	183′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000′ **1.** On downwind transition expect vectors to final. **2.** Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. **3.** Altitude assignments will be issued by ATC.

DLE 27L *[DL27L]*, DLE 27R *[DL27R]*
RWYS 27L/R
RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
BY ATC
FROM SOUTH





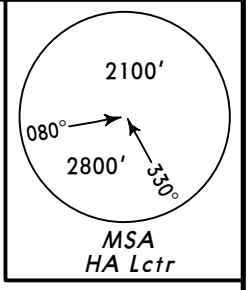
TRANSITION	RWY	ROUTING
DLE 27L	27L	DLE **(FL80-;** K250-) - DV581 - DV582 (K220-) - DV585 - DV575 - DV572 - ODINI **(3000′+;** K170+).
DLE 27R	27R	DLE **(FL80-;** K250-) - DV581 - DV582 (K220-) - DV585 - DV575 - DV572 - XAVER **(3000′+;** K170+).

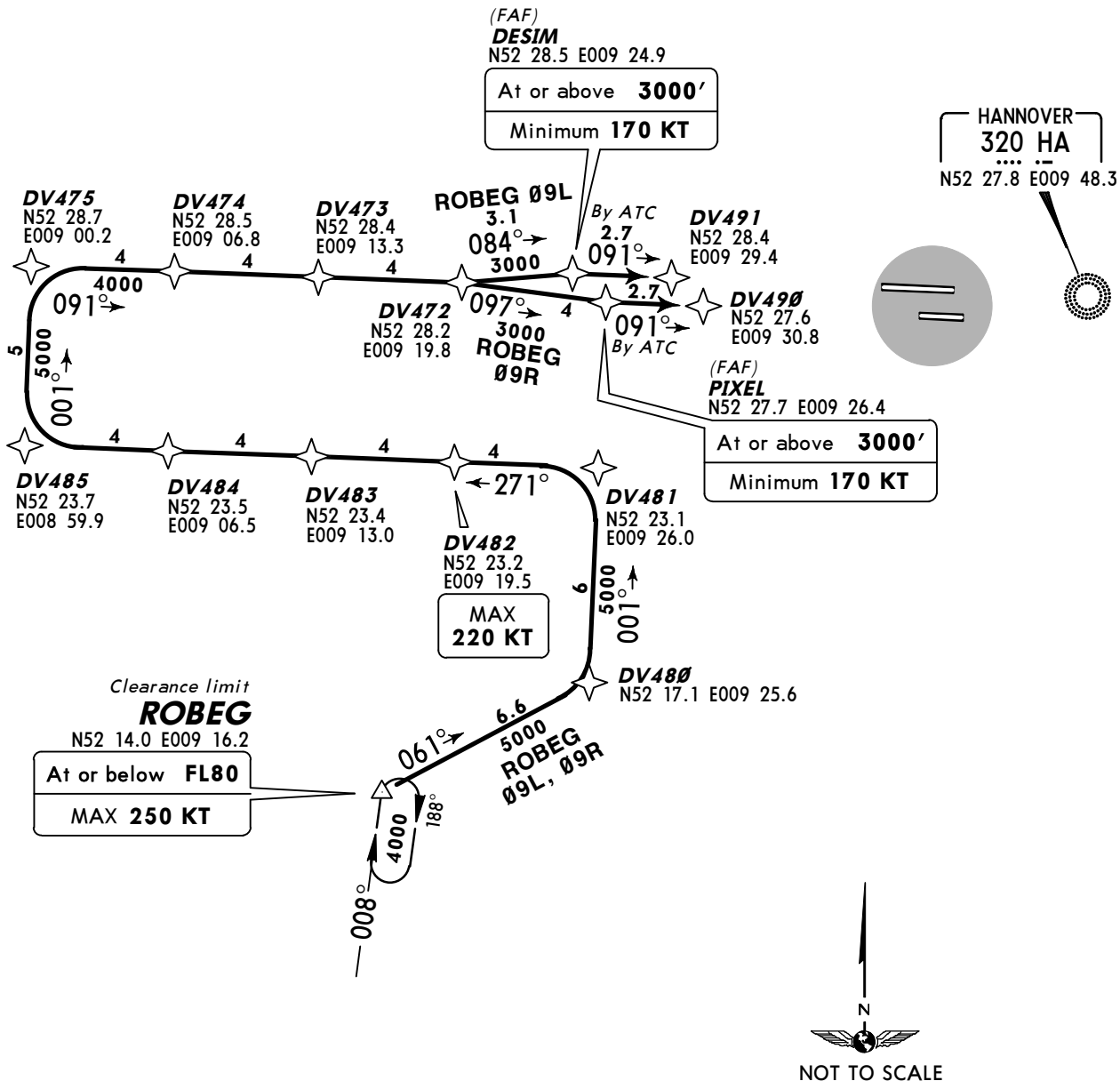
CHANGES: ATIS; transitions completely revised; chart redrawn.

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*D-ATIS	Apt Elev	
136.57 115.2	183′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000′ **1.** On downwind transition expect vectors to final. **2.** Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. **3.** Altitude assignments will be issued by ATC.

ROBEG Ø9L *[ROØ9L]*
ROBEG Ø9R *[ROØ9R]*
RWYS 09L/R
RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
BY ATC
FROM SOUTH





TRANSITION	RWY	ROUTING
ROBEG Ø9L	09L	ROBEG **(FL80-;** K250-) - DV480 - DV481 - DV482 (K220-) - DV485 - DV475 - DV472 - DESIM **(3000′+;** K170+).
ROBEG Ø9R	09R	ROBEG **(FL80-;** K250-) - DV480 - DV481 - DV482 (K220-) - DV485 - DV475 - DV472 - PIXEL **(3000′+;** K170+).

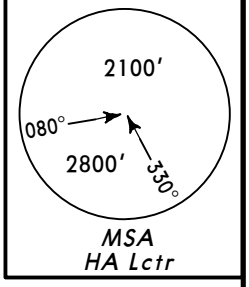
CHANGES: ATIS; transitions completely revised; chart redrawn.

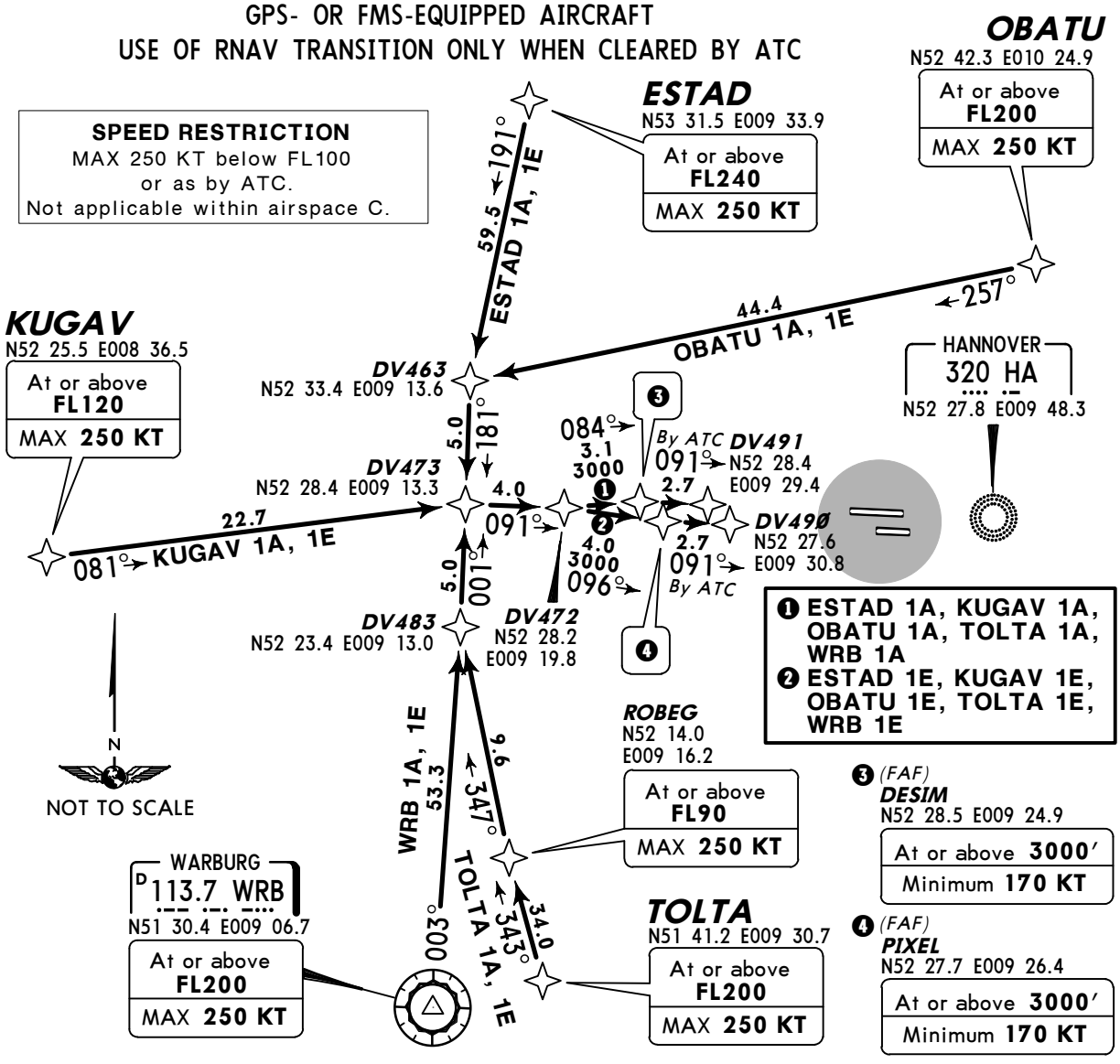
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*ATIS	Apt Elev	
136.57	183′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000′ When cleared for "Transition and Profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.

ESTAD 1A *[EST1A]*, ESTAD 1E *[EST1E]*
KUGAV 1A *[KUG1A]*, KUGAV 1E *[KUG1E]*
OBATU 1A *[OBA1A]*, OBATU 1E *[OBA1E]*
TOLTA 1A *[TOL1A]*, TOLTA 1E *[TOL1E]*
WRB 1A, WRB 1E
RWYS 09L/R RNAV TRANSITIONS

FLY THE TRANSITION AS CONTINUOUS DESCENT APPROACH (CDA)
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



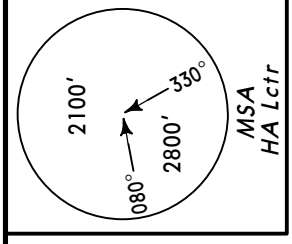


TRANSITION	RWY	ROUTING
ESTAD 1A	09L	ESTAD (FL240+; K250-) - DV463 - DV473 - DV472 - DESIM (3000′+; K170+).
ESTAD 1E	09R	ESTAD (FL240+; K250-) - DV463 - DV473 - DV472 - PIXEL (3000′+; K170+).
KUGAV 1A	09L	KUGAV (FL120+; K250-) - DV473 - DV472 - DESIM (3000′+; K170+).
KUGAV 1E	09R	KUGAV (FL120+; K250-) - DV473 - DV472 - PIXEL (3000′+; K170+).
OBATU 1A	09L	OBATU (FL200+; K250-) - DV463 - DV473 - DV472 - DESIM (3000′+; K170+).
OBATU 1E	09R	OBATU (FL200+; K250-) - DV463 - DV473 - DV472 - PIXEL (3000′+; K170+).
TOLTA 1A	09L	TOLTA (FL200+; K250-) - ROBEG (FL90+; K250-) - DV483 - DV473 - DV472 - DESIM (3000′+; K170+).
TOLTA 1E	09R	TOLTA (FL200+; K250-) - ROBEG (FL90+; K250-) - DV483 - DV473 - DV472 - PIXEL (3000′+; K170+).
WRB 1A	09L	WRB (FL200+; K250-) - DV483 - DV473 - DV472 - DESIM (3000′+; K170+).
WRB 1E	09R	WRB (FL200+; K250-) - DV483 - DV473 - DV472 - PIXEL (3000′+; K170+).

CHANGES: New chart.

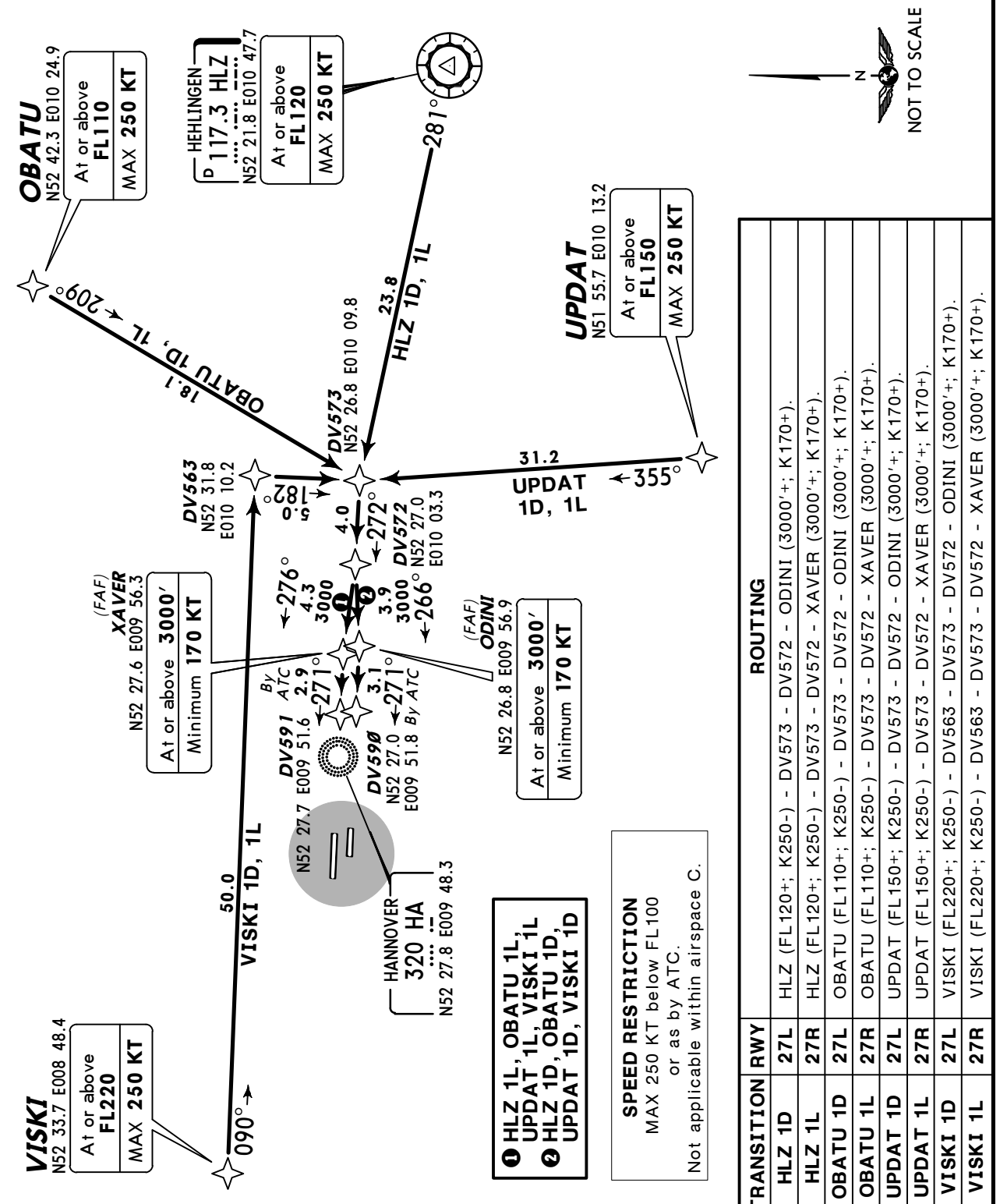
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*ATIS	Apt Elev	
136.57	183′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000′ When cleared for "Transition and Profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



HLZ 1D, HLZ 1L
OBATU 1D *[OBA1D]*, OBATU 1L *[OBA1L]*
UPDAT 1D *[UPD1D]*, UPDAT 1L *[UPD1L]*
VISKI 1D *[VIS1D]*, VISKI 1L *[VIS1L]*
RWYS 27L/R RNAV TRANSITIONS

FLY THE TRANSITION AS CONTINUOUS DESCENT APPROACH (CDA)
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC

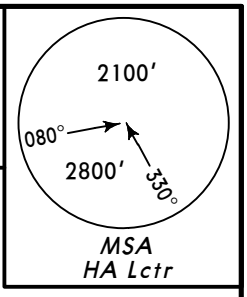


TRANSITION	RWY	ROUTING
HLZ 1D	27L	HLZ (FL120+; K250-) - DV573 - DV572 - ODINI (3000′+; K170+).
HLZ 1L	27R	HLZ (FL120+; K250-) - DV573 - DV572 - XAVER (3000′+; K170+).
OBATU 1D	27L	OBATU (FL110+; K250-) - DV573 - DV572 - ODINI (3000′+; K170+).
OBATU 1L	27R	OBATU (FL110+; K250-) - DV573 - DV572 - XAVER (3000′+; K170+).
UPDAT 1D	27L	UPDAT (FL150+; K250-) - DV573 - DV572 - ODINI (3000′+; K170+).
UPDAT 1L	27R	UPDAT (FL150+; K250-) - DV573 - DV572 - XAVER (3000′+; K170+).
VISKI 1D	27L	VISKI (FL220+; K250-) - DV563 - DV573 - DV572 - ODINI (3000′+; K170+).
VISKI 1L	27R	VISKI (FL220+; K250-) - DV563 - DV573 - DV572 - XAVER (3000′+; K170+).

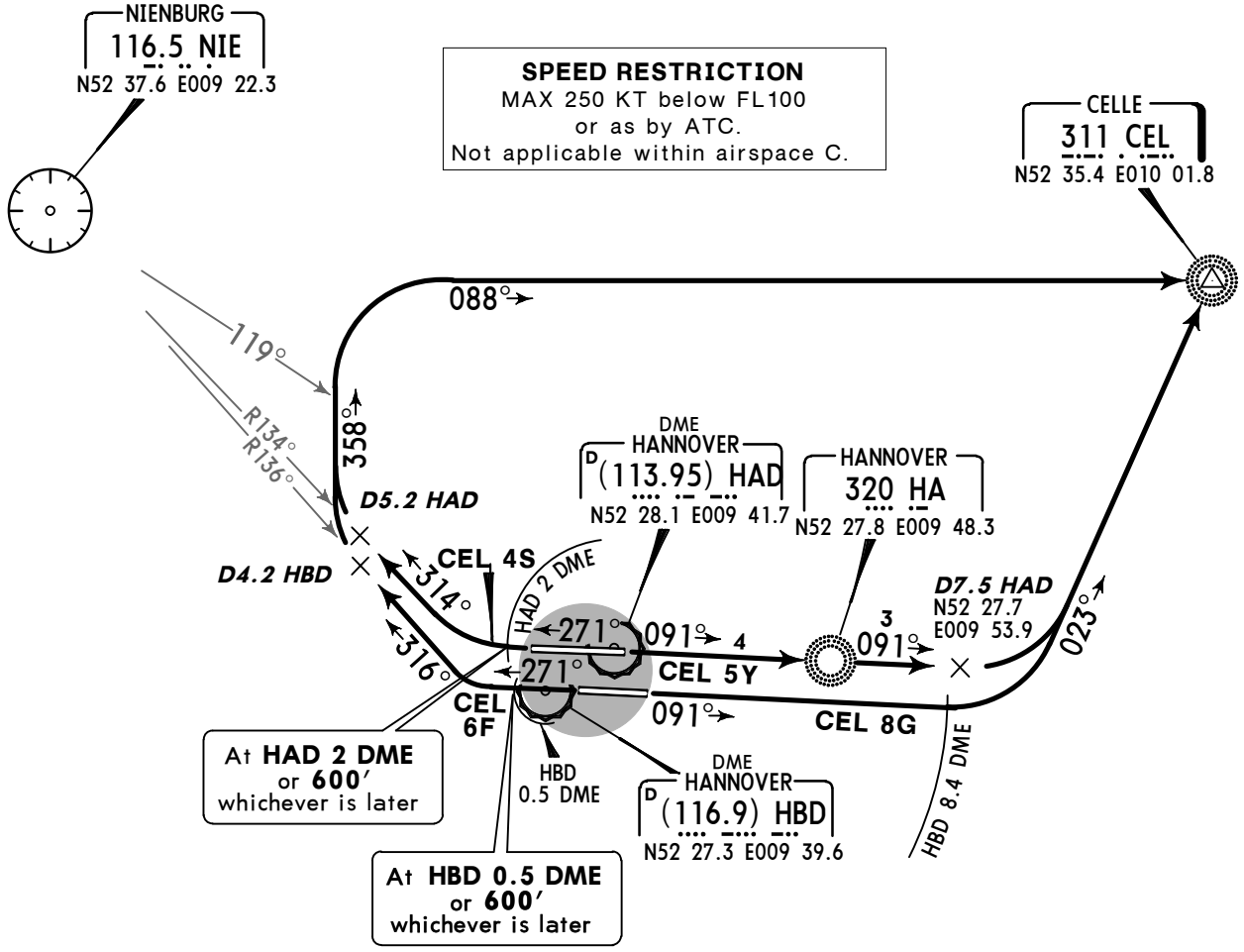
CHANGES: New chart.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
131.32	183′	



CELLE SIX FOXTROT (CEL 6F)
CELLE EIGHT GOLF (CEL 8G)
CELLE FOUR SIERRA (CEL 4S)
CELLE FIVE YANKEE (CEL 5Y)
RWYS 27L, 09R, 27R, 09L DEPARTURES



CEL 6F, 4S

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

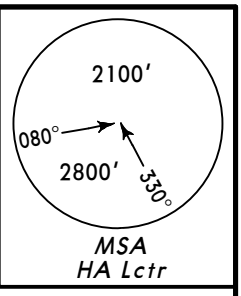
Initial climb clearance **4000′**

SID	RWY	ROUTING
CEL 6F	**27L**	Climb on runway track to 0.5 DME WEST of HBD or **600′,** whichever is later, turn RIGHT, intercept NIE R-136 inbound to D4.2 HBD, turn RIGHT, 358° track, when passing NIE R-119 turn RIGHT, intercept 088° bearing to CEL.
CEL 8G	**09R**	On runway track to HBD 8.4 DME, turn LEFT, intercept 023° bearing to CEL.
CEL 4S	**27R**	Climb on runway track to HAD 2 DME or **600′,** whichever is later, turn RIGHT, intercept NIE R-134 inbound to D5.2 HAD, turn RIGHT, 358° track, when passing NIE R-119 turn RIGHT, intercept 088° bearing to CEL.
CEL 5Y	**09L**	On runway track via HA to D7.5 HAD, turn LEFT, intercept 023° bearing to CEL.

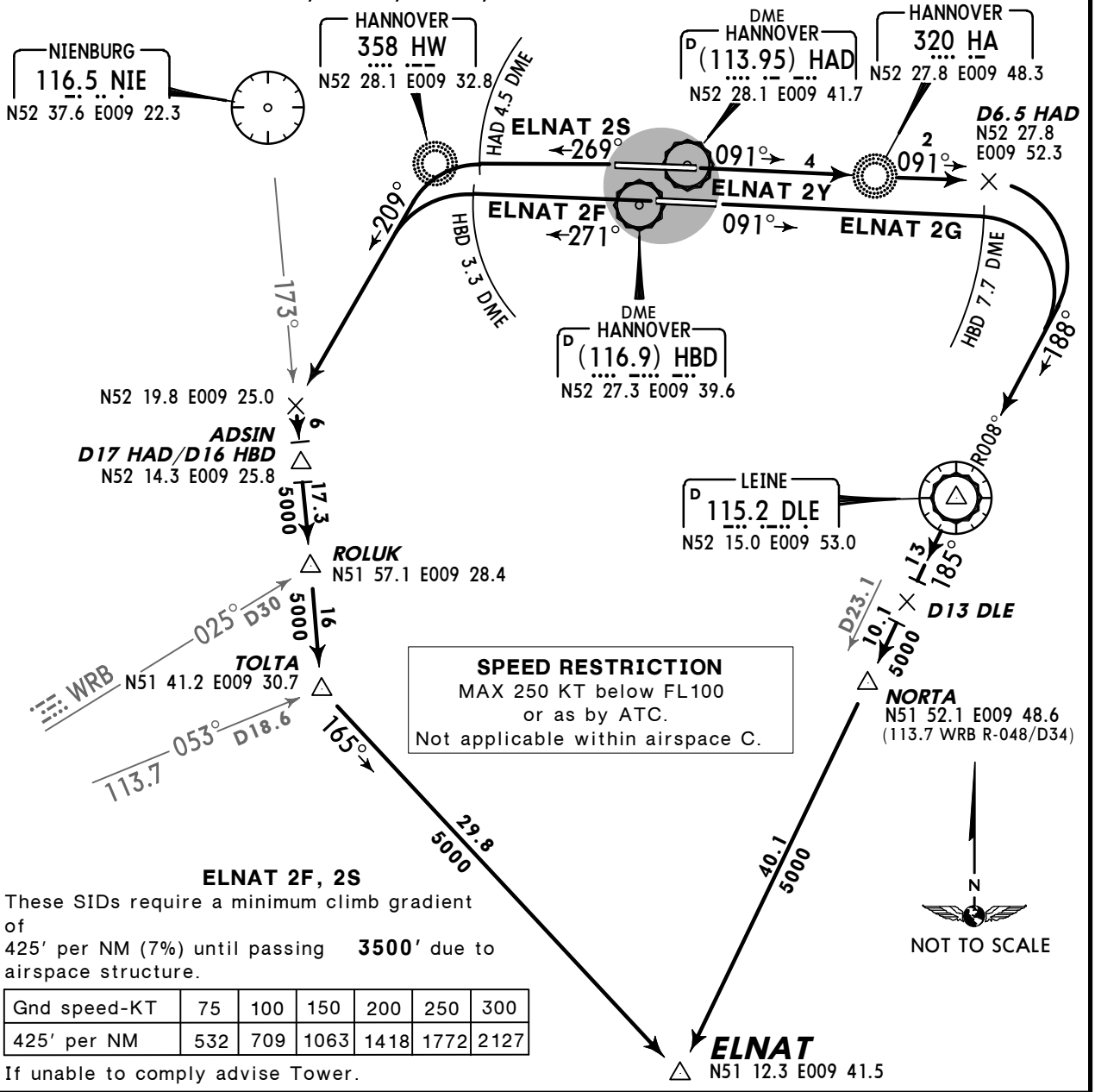
CHANGES: SIDs renumbered & revised.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
131.32	183′	



ELNAT TWO FOXTROT (ELNAT 2F)
ELNAT TWO GOLF (ELNAT 2G)
ELNAT TWO SIERRA (ELNAT 2S)
ELNAT TWO YANKEE (ELNAT 2Y)
RWYS 27L, 09R, 27R, 09L DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

ELNAT 2F, 2S

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

Initial climb clearance **4000′**

SID	RWY	ROUTING
ELNAT 2F	**27L**	On runway track to HBD 3.3 DME, turn LEFT, intercept 209° bearing from HW, intercept NIE R-173 via ADSIN and ROLUK to TOLTA ❶, 165° track to ELNAT.
ELNAT 2G	**09R**	On runway track to HBD 7.7 DME, turn RIGHT, intercept DLE R-008 inbound to DLE, DLE R-185 via NORTA ❷ to ELNAT.
ELNAT 2S	**27R**	Towards HW, at HAD 4.5 DME turn LEFT, intercept 209° bearing from HW, intercept NIE R-173 via ADSIN and ROLUK to TOLTA ❶, 165° track to ELNAT.
ELNAT 2Y	**09L**	On runway track via HA to D6.5 HAD, turn RIGHT, intercept DLE R-008 inbound to DLE, DLE R-185 via NORTA ❷ to ELNAT.

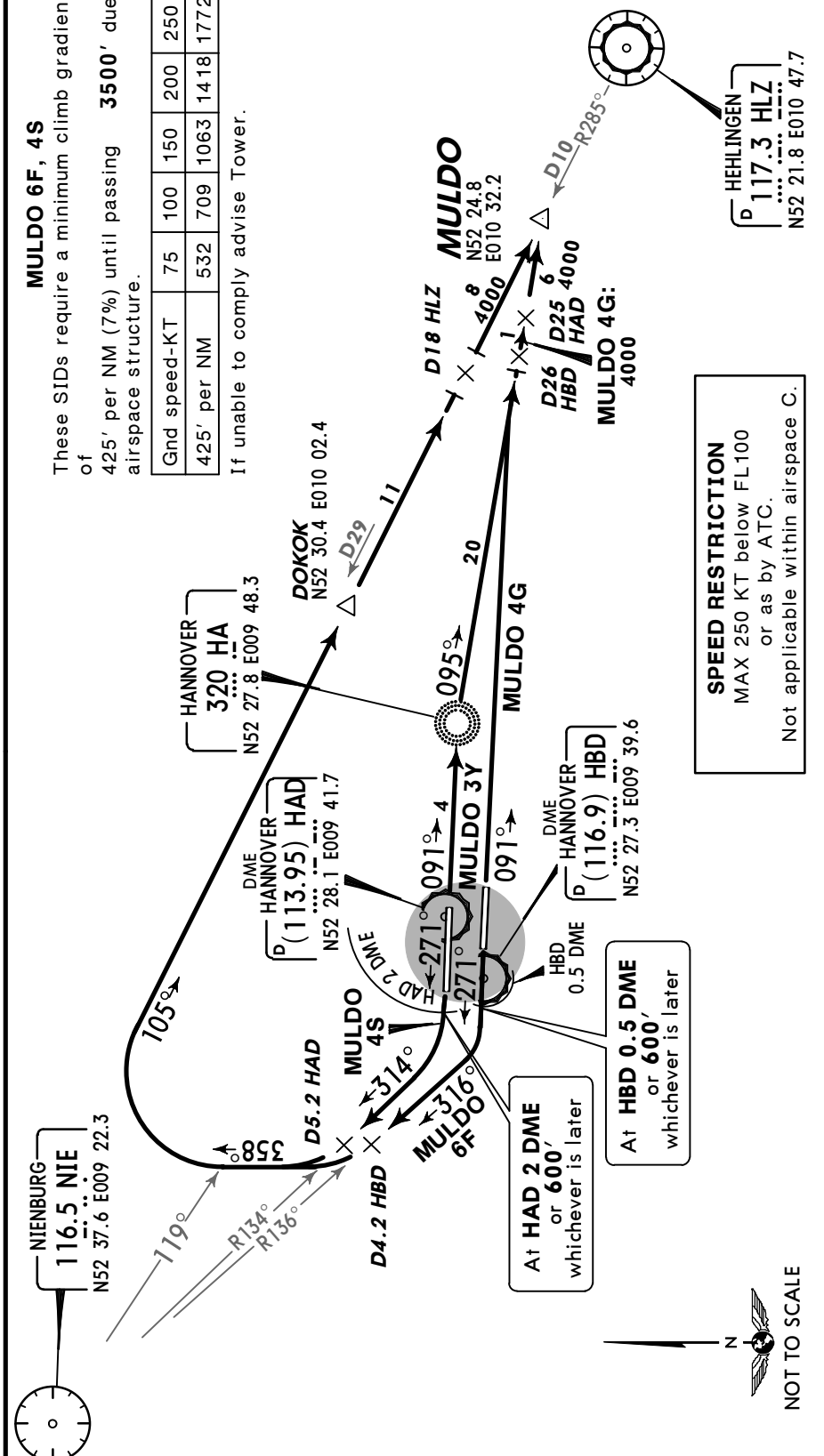
After TOLTA ❶ /NORTA ❷ BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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BREMEN Radar	Apt Elev	
131.32	183′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

MULDO SIX FOXTROT (MULDO 6F)
MULDO FOUR GOLF (MULDO 4G)
MULDO FOUR SIERRA (MULDO 4S)
MULDO THREE YANKEE (MULDO 3Y)
RWYS 27L, 09R, 27R, 09L DEPARTURES

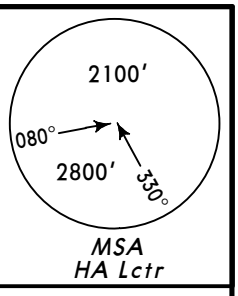


Initial climb clearance 4000′

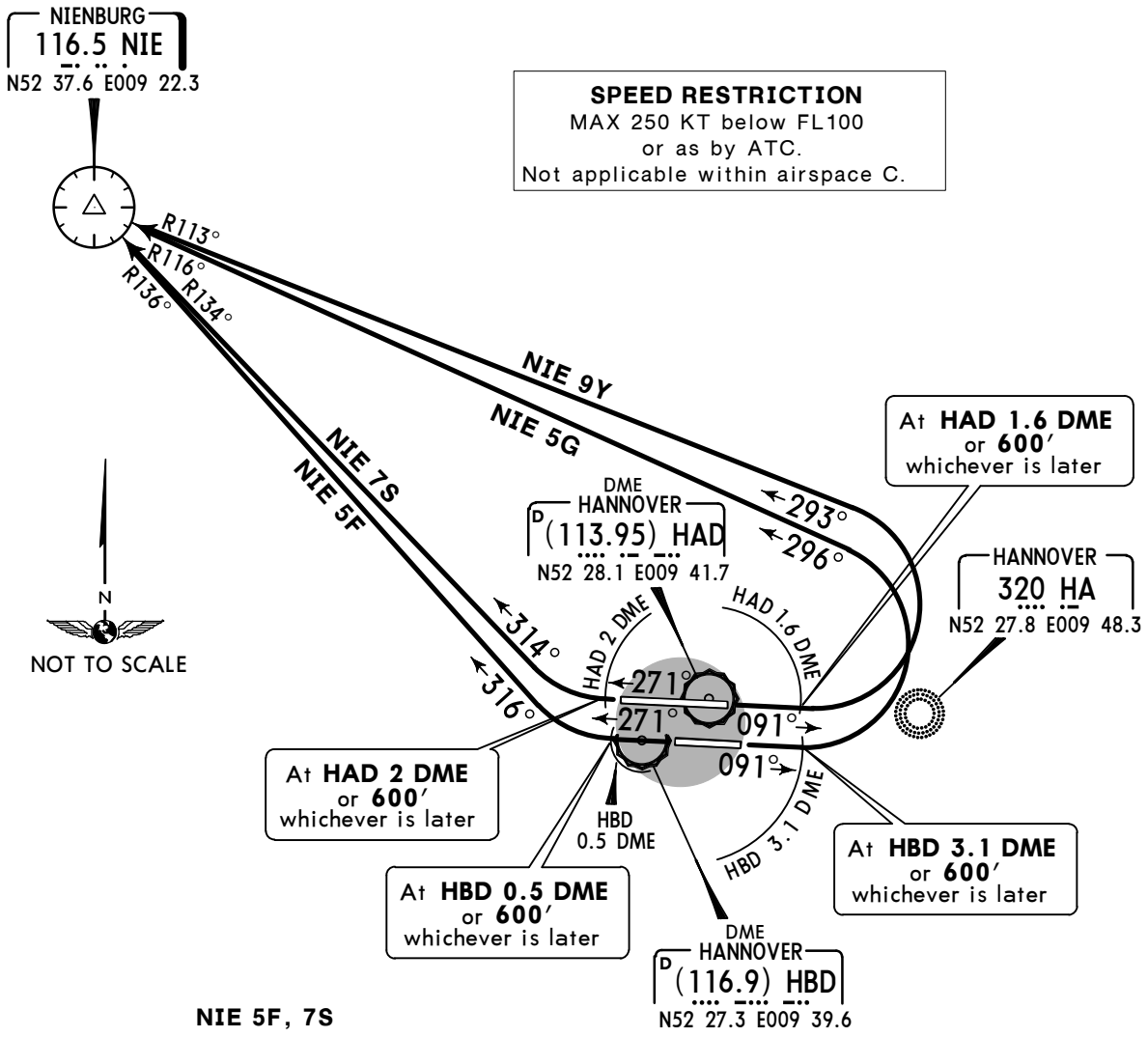
SID	RWY	ROUTING
MULDO 6F	27L	Climb on runway track to 0.5 DME WEST of HBD or 600′, whichever is later, turn RIGHT, intercept NIE R-136 inbound to D4.2 HBD, turn RIGHT, 358° track, when passing NIE R-119 turn RIGHT, intercept HLZ R-285 inbound via DOKOK to MULDO.
MULDO 4G	09R	On runway track, intercept 095° bearing from HA to MULDO.
MULDO 4S	27R	Climb on runway track to HAD 2 DME or 600′, whichever is later, turn RIGHT, intercept NIE R-134 inbound to D5.2 HAD, turn RIGHT, 358° track, when passing NIE R-119 turn RIGHT, intercept HLZ R-285 inbound via DOKOK to MULDO.
MULDO 3Y	09L	To HA, turn RIGHT, 095° bearing to MULDO.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
131.32	183′	



NIENBURG FIVE FOXTROT (NIE 5F)
NIENBURG FIVE GOLF (NIE 5G)
NIENBURG SEVEN SIERRA (NIE 7S)
NIENBURG NINE YANKEE (NIE 9Y)
RWYS 27L, 09R, 27R, 09L DEPARTURES



NIE 5F, 7S

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

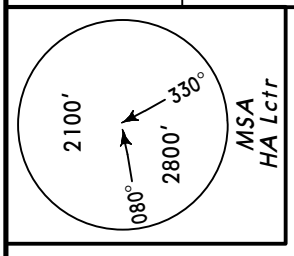
Initial climb clearance **4000′**

SID	RWY	ROUTING
NIE 5F	**27L**	Climb on runway track to 0.5 DME WEST of HBD or **600′,** whichever is later, turn RIGHT, intercept NIE R-136 inbound to NIE.
NIE 5G	**09R**	Climb on runway track to HBD 3.1 DME or **600′,** whichever is later, turn LEFT, intercept NIE R-116 inbound to NIE.
NIE 7S	**27R**	Climb on runway track to HAD 2 DME or **600′,** whichever is later, turn RIGHT, intercept NIE R-134 inbound to NIE.
NIE 9Y	**09L**	Climb on runway track to HAD 1.6 DME or **600′,** whichever is later, turn LEFT, intercept NIE R-113 inbound to NIE.

CHANGES: SIDs renumbered & revised; chart reindexed.

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BREMEN Radar 131.32	*Apt Elev* 183′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



OSNABRUCK FIVE FOXTROT (OSN 5F)
OSNABRUCK SIX GOLF (OSN 6G)
OSNABRUCK EIGHT SIERRA (OSN 8S)
OSNABRUCK NINE YANKEE (OSN 9Y)
RWYS 27L, 09R, 27R, 09L DEPARTURES

Initial climb clearance **4000′**

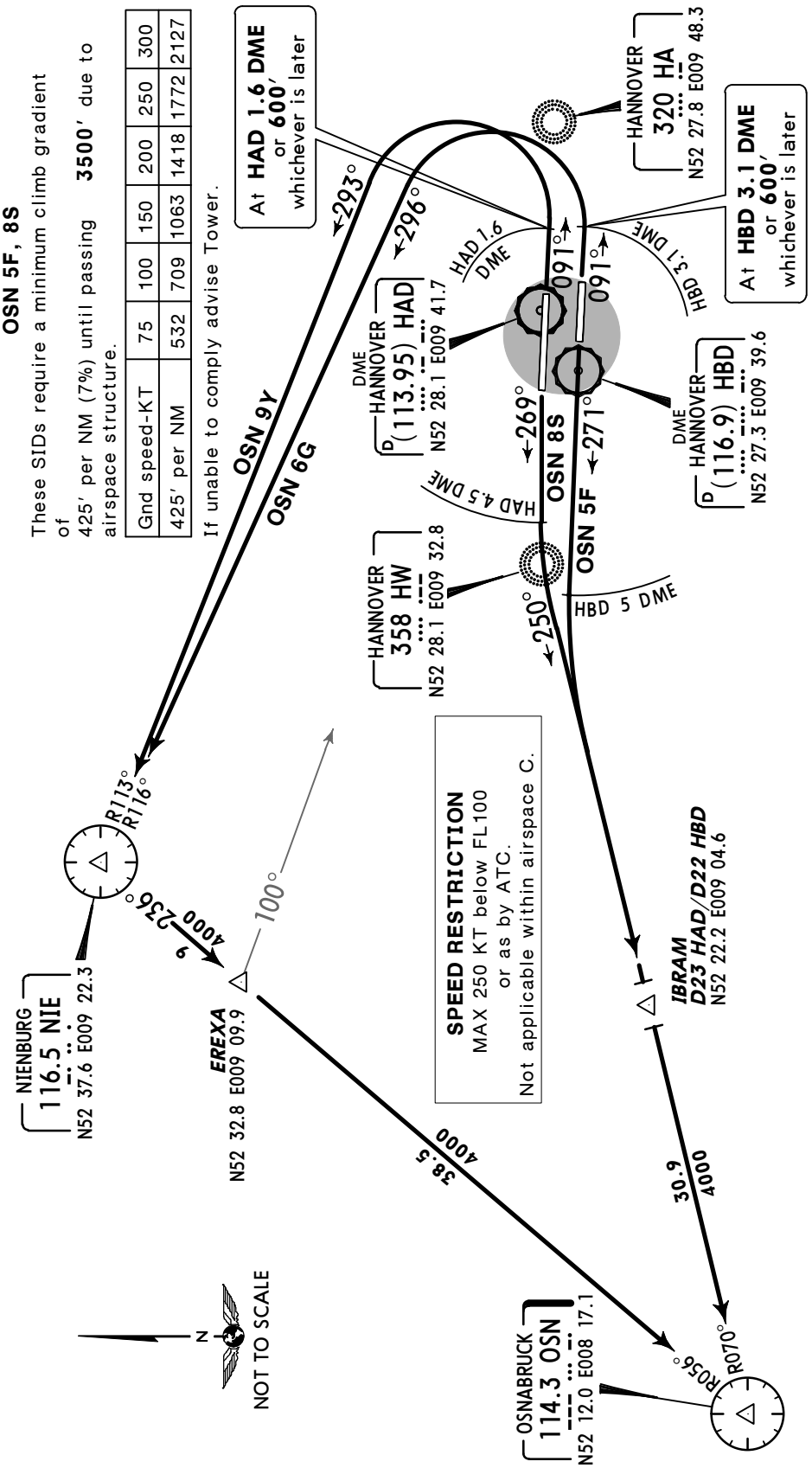
SID	RWY	ROUTING
OSN 5F	27L	On runway track to HBD 5 DME, turn LEFT, intercept OSN R-070 inbound (250° bearing from HW) via IBRAM to OSN.
OSN 6G	09R	Climb on runway track to HBD 3.1 DME or **600′**, whichever is later, turn LEFT, intercept NIE R-116 inbound to NIE, turn LEFT, NIE R-236 (OSN R-056 inbound) via EREXA to OSN.
OSN 8S	27R	Towards HW, at HAD 4.5 DME turn LEFT, intercept OSN R-070 inbound (250° bearing from HW) via IBRAM to OSN.
OSN 9Y	09L	Climb on runway track to HAD 1.6 DME or **600′**, whichever is later, turn LEFT, intercept NIE R-113 inbound to NIE, turn LEFT, NIE R-236 (OSN R-056 inbound) via EREXA to OSN.

OSN 5F, 8S

These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

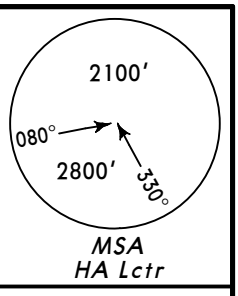
If unable to comply advise Tower.



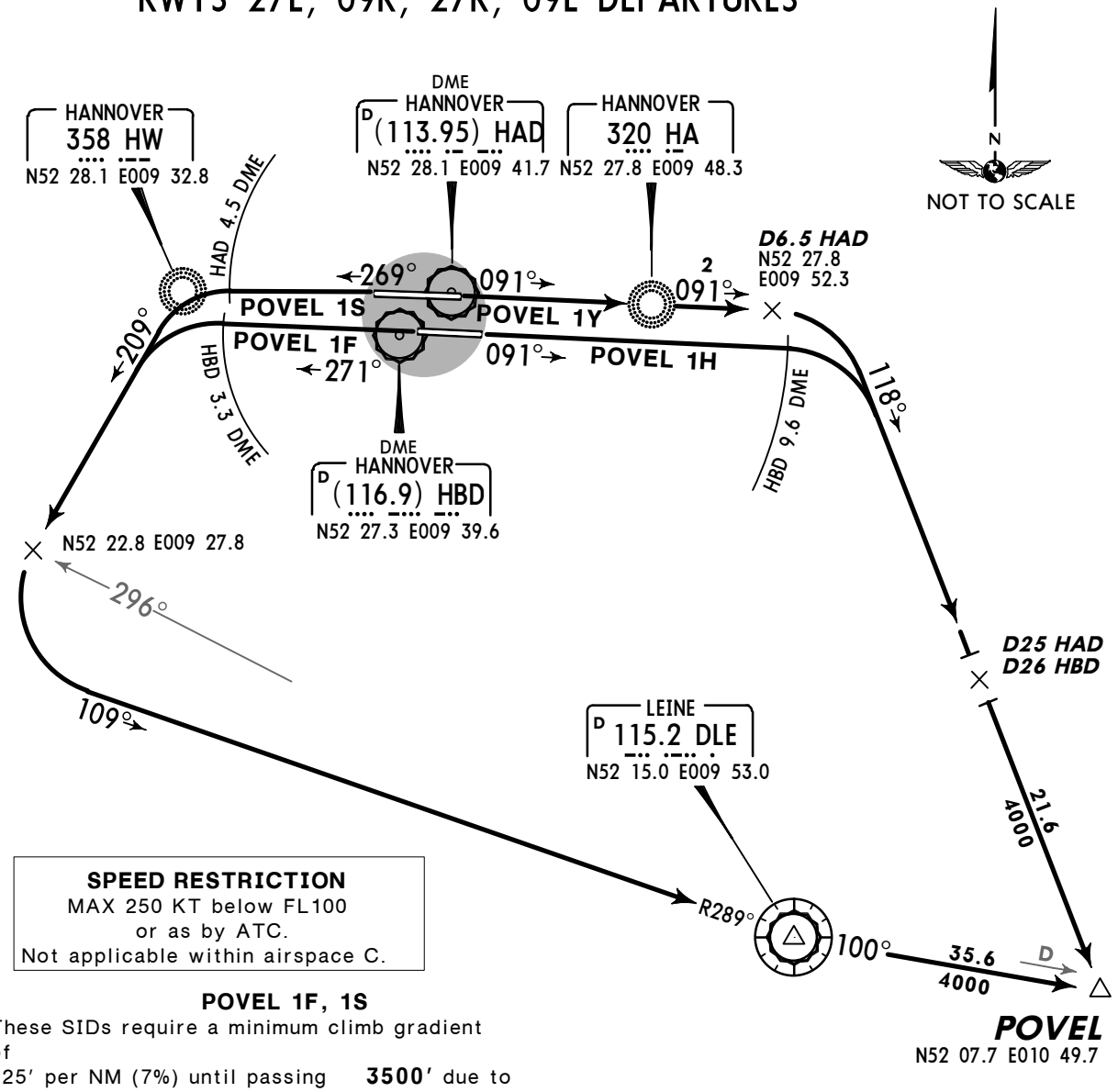
CHANGES: SIDs renumbered & revised; chart reindexed.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
131.32	183′	



POVEL ONE FOXTROT (POVEL 1F)
POVEL ONE HOTEL (POVEL 1H)
POVEL ONE SIERRA (POVEL 1S)
POVEL ONE YANKEE (POVEL 1Y)
RWYS 27L, 09R, 27R, 09L DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

POVEL 1F, 1S

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

Initial climb clearance **4000′**

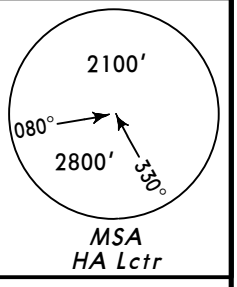
SID	RWY	ROUTING
POVEL 1F	**27L**	On runway track to HBD 3.3 DME, turn LEFT, intercept 209° bearing from HW, when passing DLE R-296 turn LEFT, intercept DLE R-289 inbound to DLE, turn LEFT, DLE R-100 to POVEL.
POVEL 1H	**09R**	On runway track to HBD 9.6 DME ❶, turn RIGHT, 118° track to POVEL.
POVEL 1S	**27R**	Towards HW, at HAD 4.5 DME turn LEFT, intercept 209° bearing from HW, when passing DLE R-296 turn LEFT, intercept DLE R-289 inbound to DLE, turn LEFT, DLE R-100 to POVEL.
POVEL 1Y	**09L**	On runway track via HA to D6.5 HAD ❷, turn RIGHT, 118° track to POVEL.

After HBD 9.6 DME ❶ /D6.5 HAD ❷ BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised; chart reindexed.

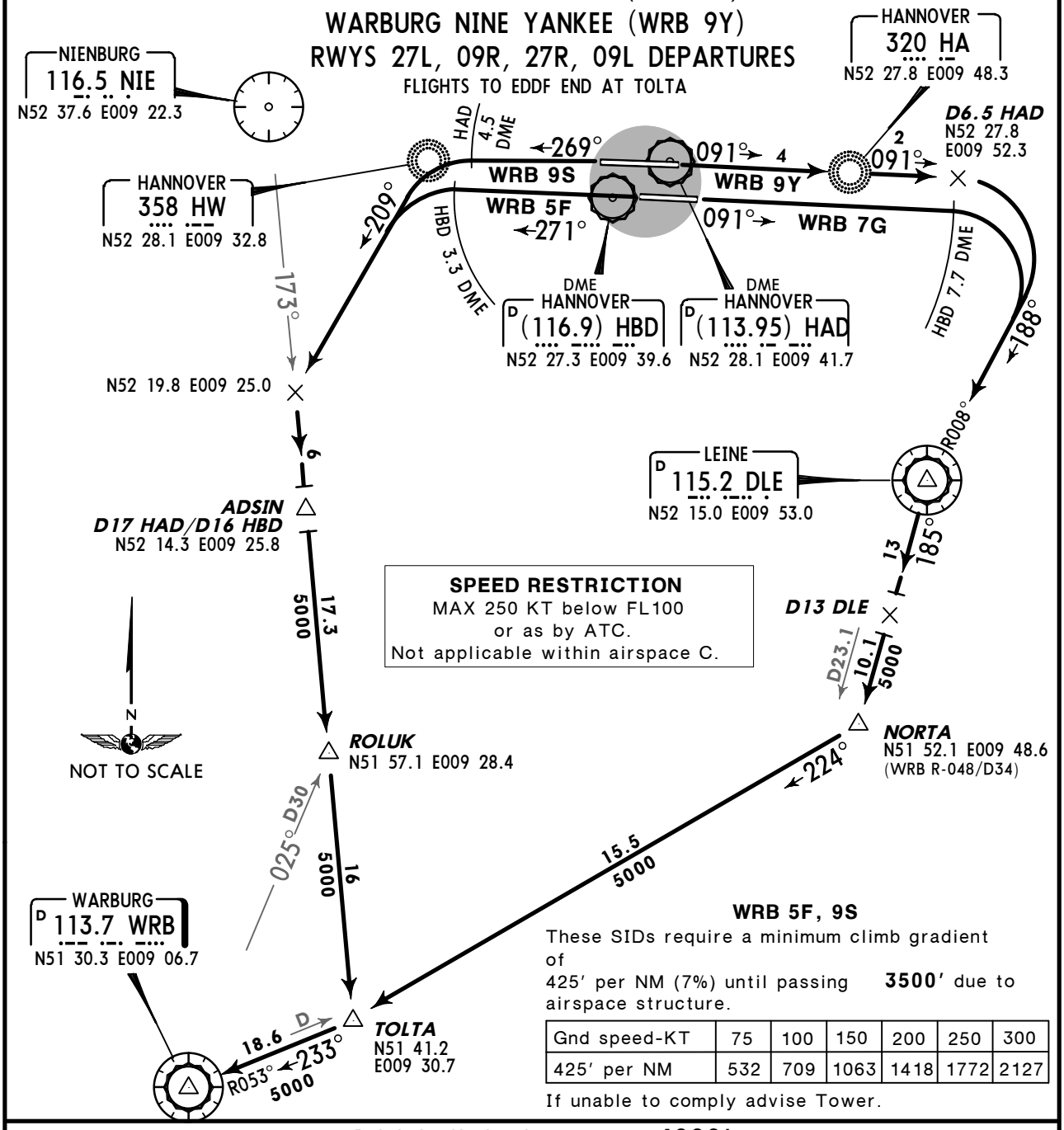
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BREMEN Radar	*Apt Elev*	
131.32	183′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



WARBURG FIVE FOXTROT (WRB 5F)
WARBURG SEVEN GOLF (WRB 7G)
WARBURG NINE SIERRA (WRB 9S)
WARBURG NINE YANKEE (WRB 9Y)
RWYS 27L, 09R, 27R, 09L DEPARTURES

FLIGHTS TO EDDF END AT TOLTA



WRB 5F, 9S

These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

Initial climb clearance **4000′**

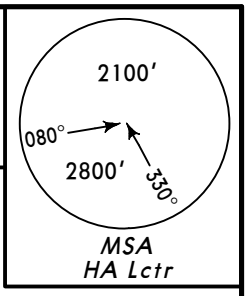
SID	RWY	ROUTING
WRB 5F	**27L**	On runway track to HBD 3.3 DME, turn LEFT, intercept 209° bearing from HW, intercept NIE R-173 via ADSIN and ROLUK to TOLTA, intercept WRB R-053 inbound to WRB.
WRB 7G	**09R**	On runway track to HBD 7.7 DME, turn RIGHT, intercept DLE R-008 inbound to DLE, DLE R-185 to NORTA ❶, 224° track to TOLTA, intercept WRB R-053 inbound to WRB.
WRB 9S	**27R**	Towards HW, at HAD 4.5 DME turn LEFT, intercept 209° bearing from HW, intercept NIE R-173 via ADSIN and ROLUK to TOLTA, intercept WRB R-053 inbound to WRB.
WRB 9Y	**09L**	On runway track via HA to D6.5 HAD, turn RIGHT, intercept DLE R-008 inbound to DLE, DLE R-185 to NORTA ❶, 224° track to TOLTA, intercept WRB R-053 inbound to WRB.

❶ After NORTA BRNAV equipment necessary.

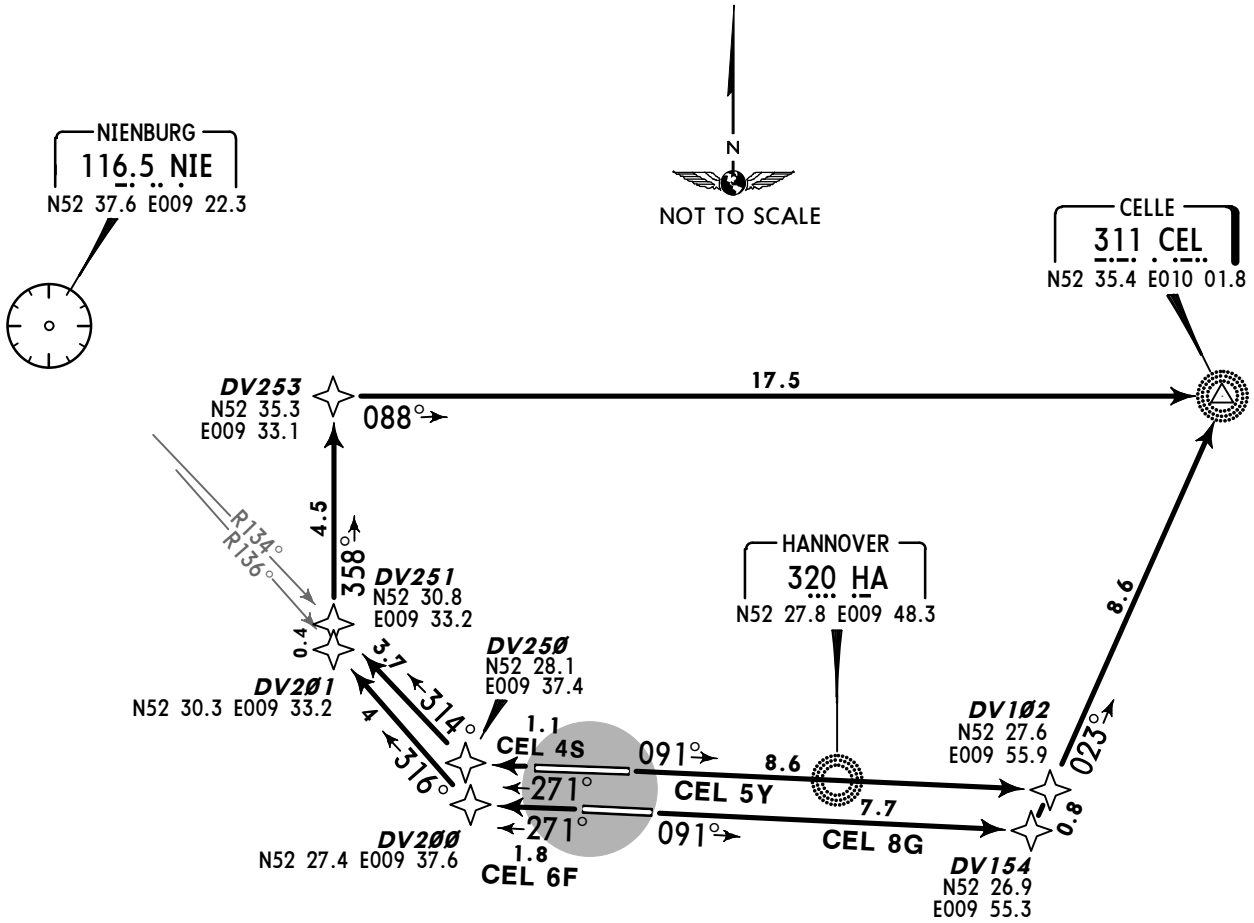
CHANGES: SIDs renumbered & revised.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
131.32	183′	



CELLE SIX FOXTROT (CEL 6F)
CELLE EIGHT GOLF (CEL 8G)
CELLE FOUR SIERRA (CEL 4S)
CELLE FIVE YANKEE (CEL 5Y)
RWYS 27L, 09R, 27R, 09L
RNAV DEPARTURES (OVERLAY 10-3)



CEL 6F, 4S

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

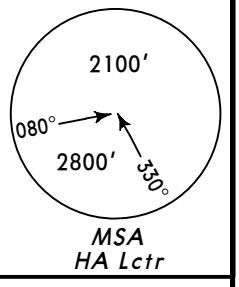
Initial climb clearance **4000′**

SID	RWY	ROUTING
CEL 6F	**27L**	**(600′+)** - DV200 - DV201 - DV253 - CEL.
CEL 8G	**09R**	**(600′+)** - DV154 - CEL.
CEL 4S	**27R**	**(600′+)** - DV250 - DV251 - DV253 - CEL.
CEL 5Y	**09L**	**(600′+)** - DV102 - CEL.

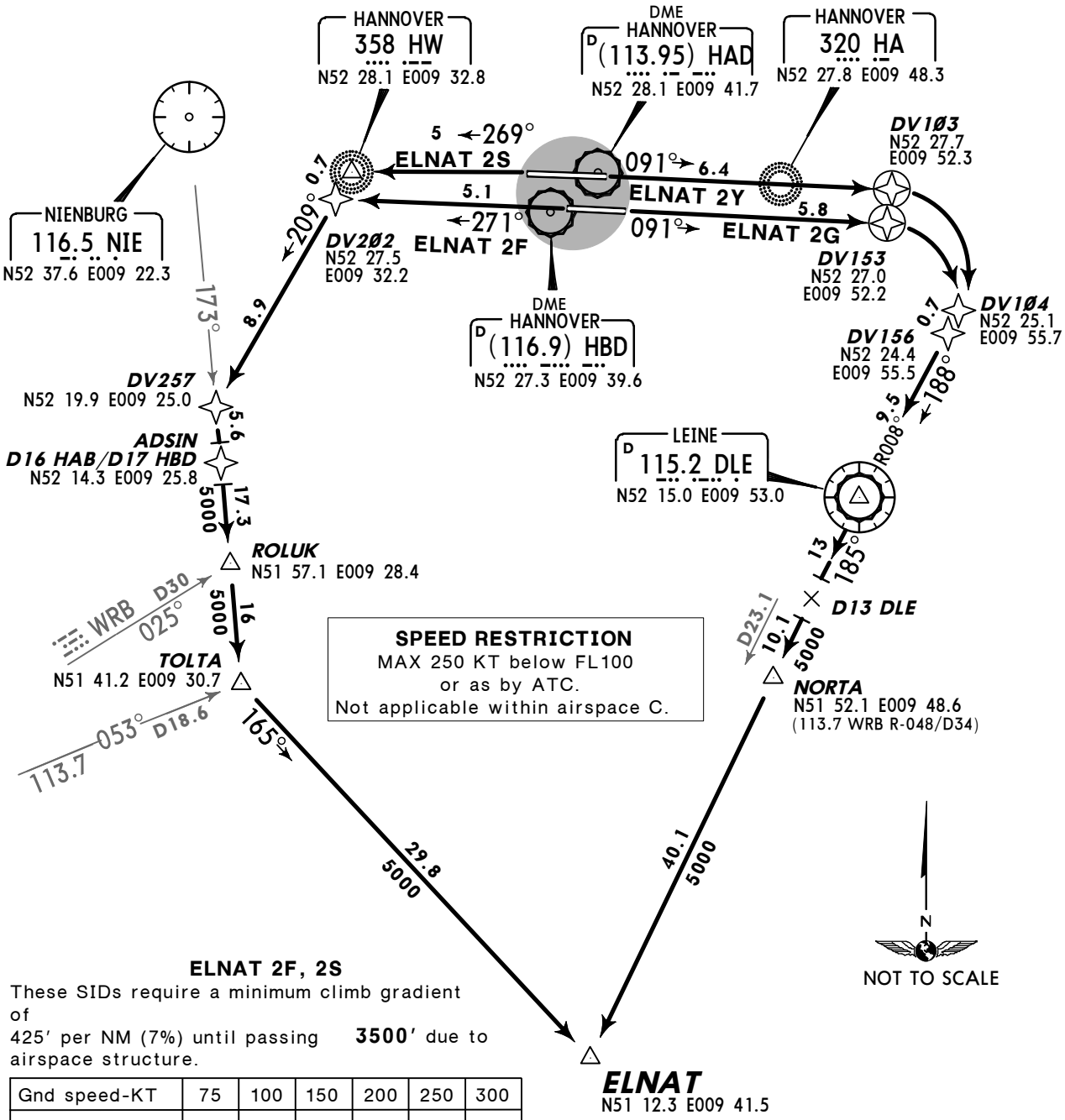
CHANGES: RNAV SIDs renumbered & revised.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
131.32	183′	



ELNAT TWO FOXTROT (ELNAT 2F) *[ELNA2F]*
ELNAT TWO GOLF (ELNAT 2G) *[ELNA2G]*
ELNAT TWO SIERRA (ELNAT 2S) *[ELNA2S]*
ELNAT TWO YANKEE (ELNAT 2Y) *[ELNA2Y]*
RWYS 27L, 09R, 27R, 09L
RNAV DEPARTURES (OVERLAY 10-3A)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

ELNAT 2F, 2S

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

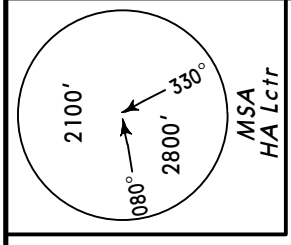
Initial climb clearance **4000′**

SID	RWY	ROUTING
ELNAT 2F	**27L**	**(600′+)** - DV202 - DV257 - ADSIN - ROLUK - TOLTA - ELNAT.
ELNAT 2G	**09R**	**(600′+)** - DV153 - DV156 - DLE - NORTA - ELNAT.
ELNAT 2S	**27R**	**(600′+)** - HW - DV257 - ADSIN - ROLUK - TOLTA - ELNAT.
ELNAT 2Y	**09L**	**(600′+)** - DV103 - DV104 - DLE - NORTA - ELNAT.

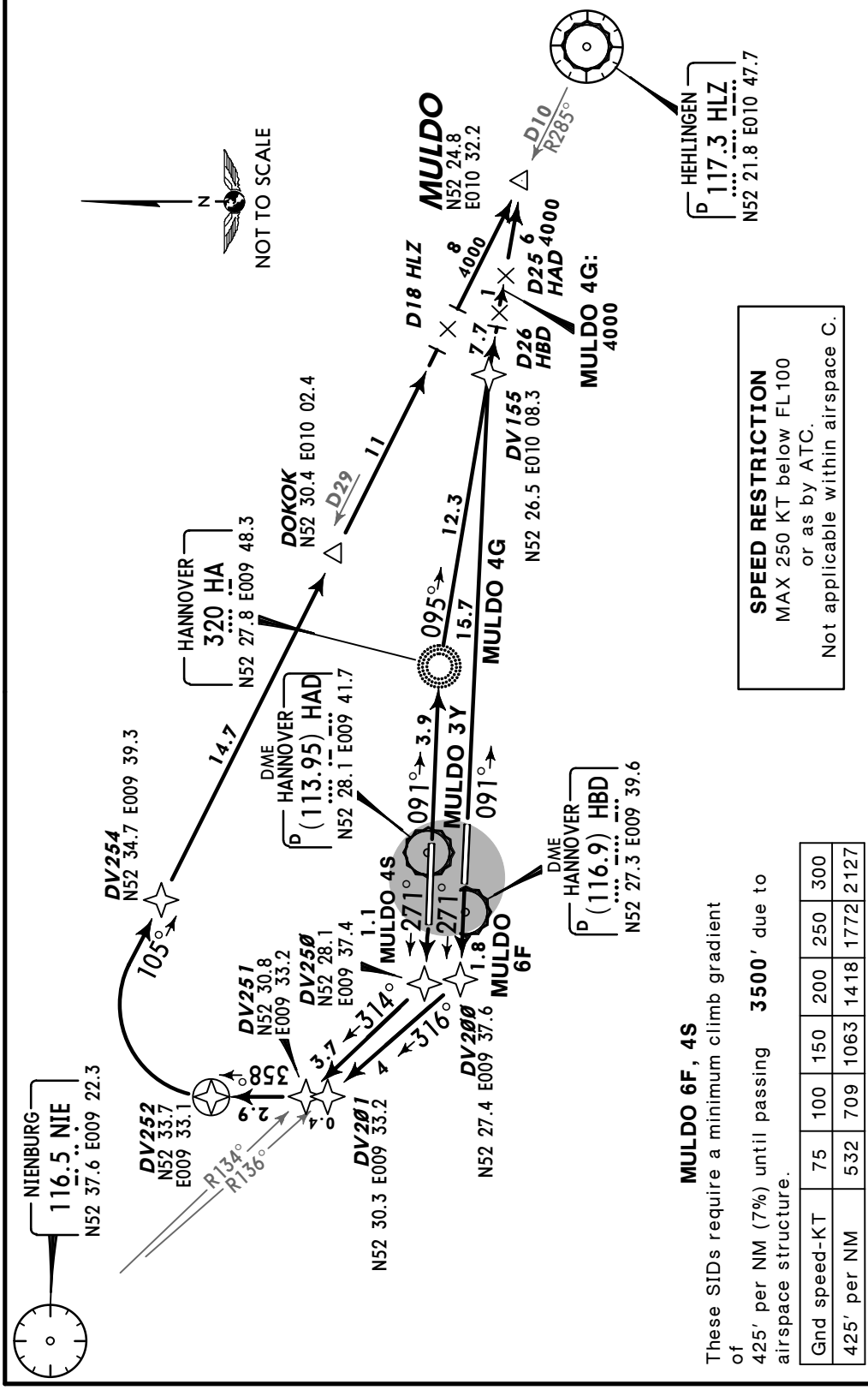
CHANGES: RNAV SIDs renumbered & revised.

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BREMEN Radar	Apt Elev	
131.32	183′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MULDO SIX FOXTROT (MULDO 6F) *[MULD6F]*
MULDO FOUR GOLF (MULDO 4G) *[MULD4G]*
MULDO FOUR SIERRA (MULDO 4S) *[MULD4S]*
MULDO THREE YANKEE (MULDO 3Y) *[MULD3Y]*
RWYS 27L, 09R, 27R, 09L
RNAV DEPARTURES (OVERLAY 10-3B)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

MULDO 6F, 4S
These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

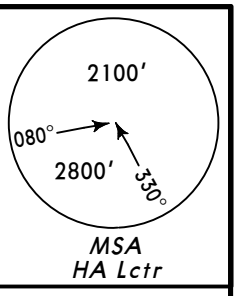
Initial climb clearance **4000′**

SID	RWY	ROUTING
MULDO 6F	27L	(600′+) - DV200 - DV201 - DV252 - DV254 - DOKOK - MULDO.
MULDO 4G	09R	(600′+) - DV155 - MULDO.
MULDO 4S	27R	(600′+) - DV250 - DV251 - DV252 - DV254 - DOKOK - MULDO.
MULDO 3Y	09L	(600′+) - HA - MULDO.

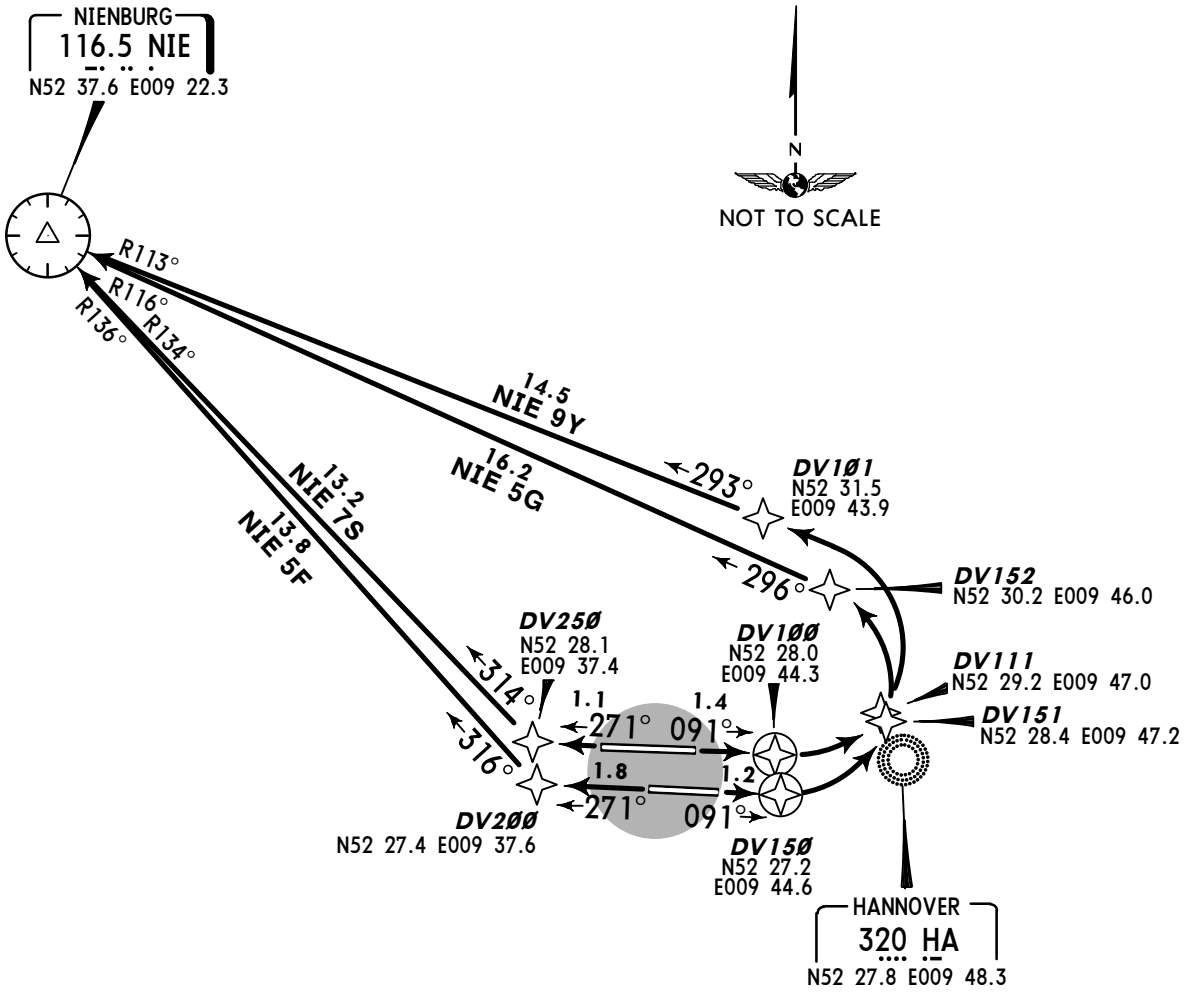
CHANGES: RNAV SIDs renumbered & revised; chart reindexed.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
131.32	183′	1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



NIENBURG FIVE FOXTROT (NIE 5F)
NIENBURG FIVE GOLF (NIE 5G)
NIENBURG SEVEN SIERRA (NIE 7S)
NIENBURG NINE YANKEE (NIE 9Y)
RWYS 27L, 09R, 27R, 09L
RNAV DEPARTURES (OVERLAY 10-3C)



NIE 5F, 7S

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

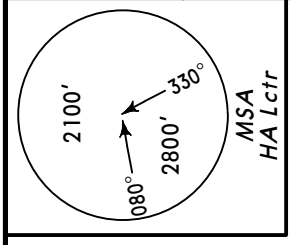
SID	RWY	ROUTING
NIE 5F	**27L**	**(600′+)** - DV200 - NIE.
NIE 5G	**09R**	**(600′+)** - DV150 - DV151 - DV152 - NIE.
NIE 7S	**27R**	**(600′+)** - DV250 - NIE.
NIE 9Y	**09L**	**(600′+)** - DV100 - DV111 - DV101 - NIE.

CHANGES: RNAV SIDs renumbered & revised; chart reindexed.

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BREMEN Radar	Apt Elev
131.32	183′

Trans level: By ATC Trans alt: 5000′
1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



OSNABRUCK FIVE FOXTROT (OSN 5F)
OSNABRUCK SIX GOLF (OSN 6G)
OSNABRUCK EIGHT SIERRA (OSN 8S)
OSNABRUCK NINE YANKEE (OSN 9Y)
RWYS 27L, 09R, 27R, 09L
RNAV DEPARTURES (OVERLAY 10-3D)

OSN 5F, 8S

These SIDs require a minimum climb gradient of 425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

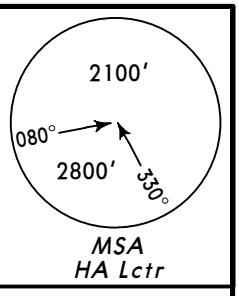
If unable to comply advise Tower.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

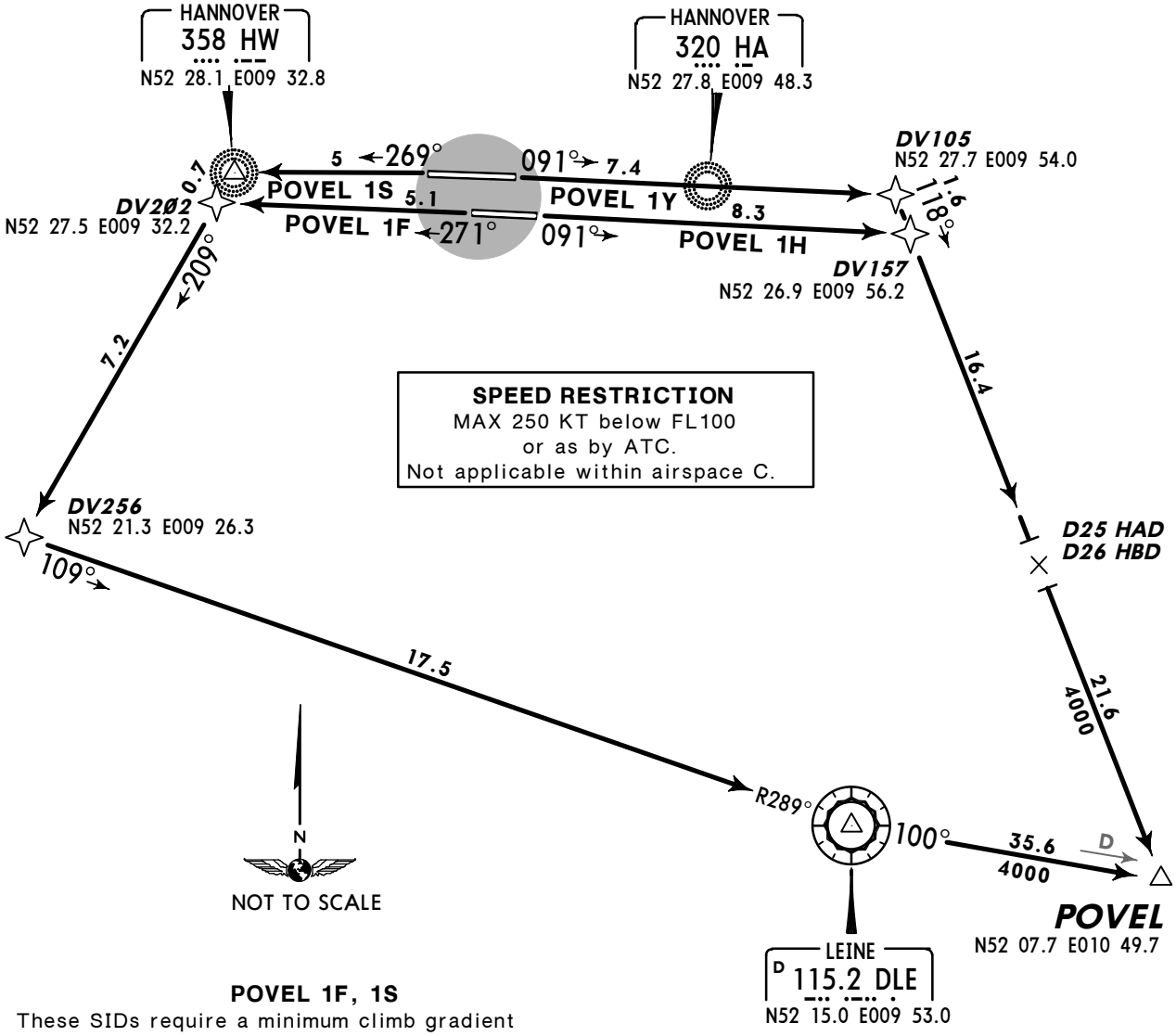
Initial climb clearance 4000′		
SID	**RWY**	**ROUTING**
OSN 5F	**27L**	**(600′+)** - DV203 - IBRAM - OSN.
OSN 6G	**09R**	**(600′+)** - DV150 - DV151 - DV152 - NIE - EREXA - OSN.
OSN 8S	**27R**	**(600′+)** - HW - IBRAM - OSN.
OSN 9Y	**09L**	**(600′+)** - DV100 - DV111 - DV101 - NIE - EREXA - OSN.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.
131.32	183′	



POVEL ONE FOXTROT (POVEL 1F)*[POVE1F]*
POVEL ONE HOTEL (POVEL 1H)*[POVE1H]*
POVEL ONE SIERRA (POVEL 1S)*[POVE1S]*
POVEL ONE YANKEE (POVEL 1Y)*[POVE1Y]*
RWYS 27L, 09R, 27R, 09L
RNAV DEPARTURES (OVERLAY 10-3E)



POVEL 1F, 1S

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

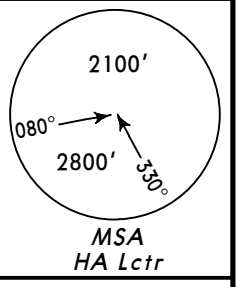
Initial climb clearance **4000′**

SID	RWY	ROUTING
POVEL 1F	**27L**	**(600′+)** - DV202 - DV256 - DLE - POVEL.
POVEL 1H	**09R**	**(600′+)** - DV157 - POVEL.
POVEL 1S	**27R**	**(600′+)** - HW - DV256 - DLE - POVEL.
POVEL 1Y	**09L**	**(600′+)** - DV105 - POVEL.

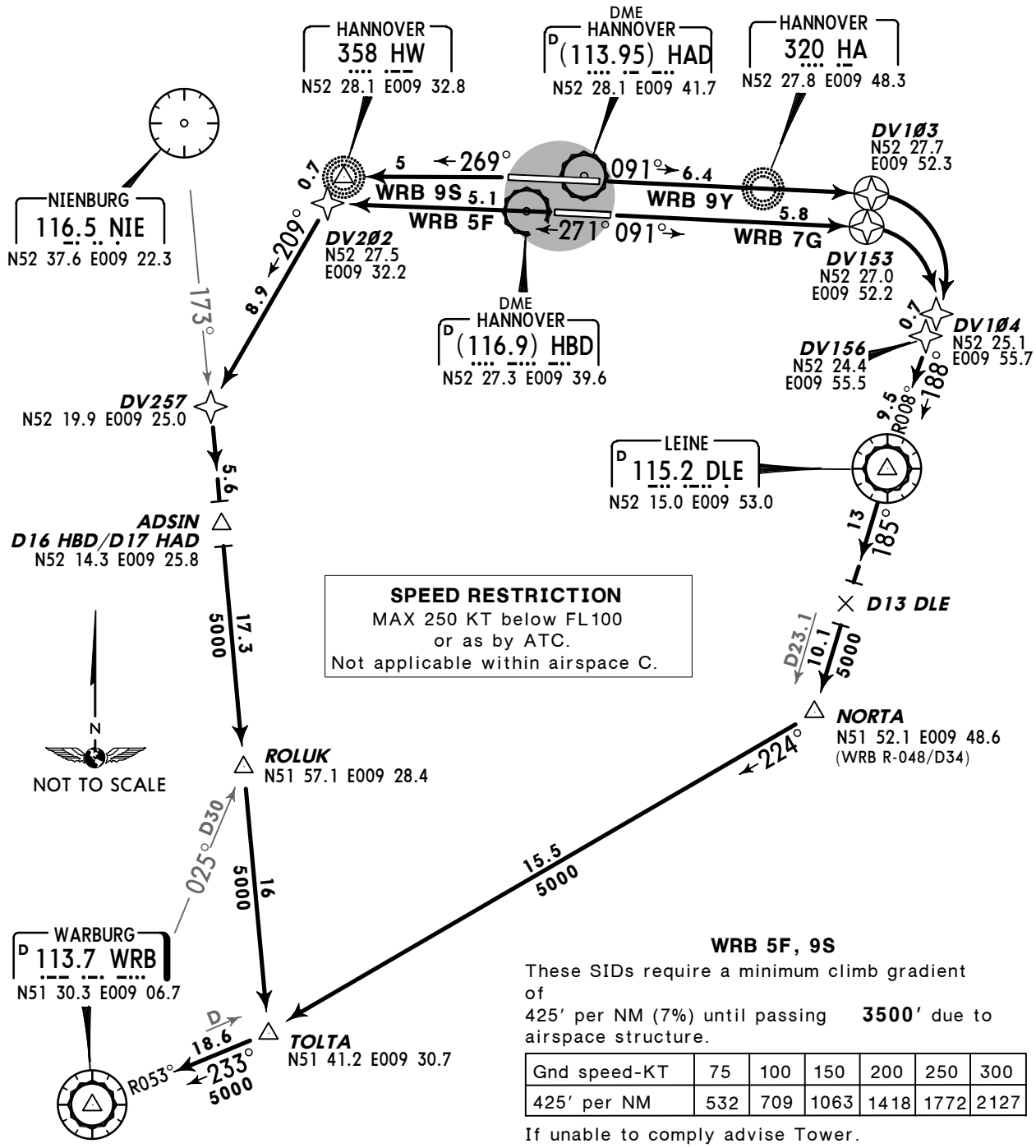
CHANGES: RNAV SIDs renumbered & revised; chart reindexed.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
131.32	183′	1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



WARBURG FIVE FOXTROT (WRB 5F)
WARBURG SEVEN GOLF (WRB 7G)
WARBURG NINE SIERRA (WRB 9S)
WARBURG NINE YANKEE (WRB 9Y)
RWYS 27L, 09R, 27R, 09L
RNAV DEPARTURES (OVERLAY 10-3F)
FLIGHTS TO EDDF END AT TOLTA



WRB 5F, 9S

These SIDs require a minimum climb gradient of
425′ per NM (7%) until passing **3500′** due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

If unable to comply advise Tower.

Initial climb clearance **4000′**

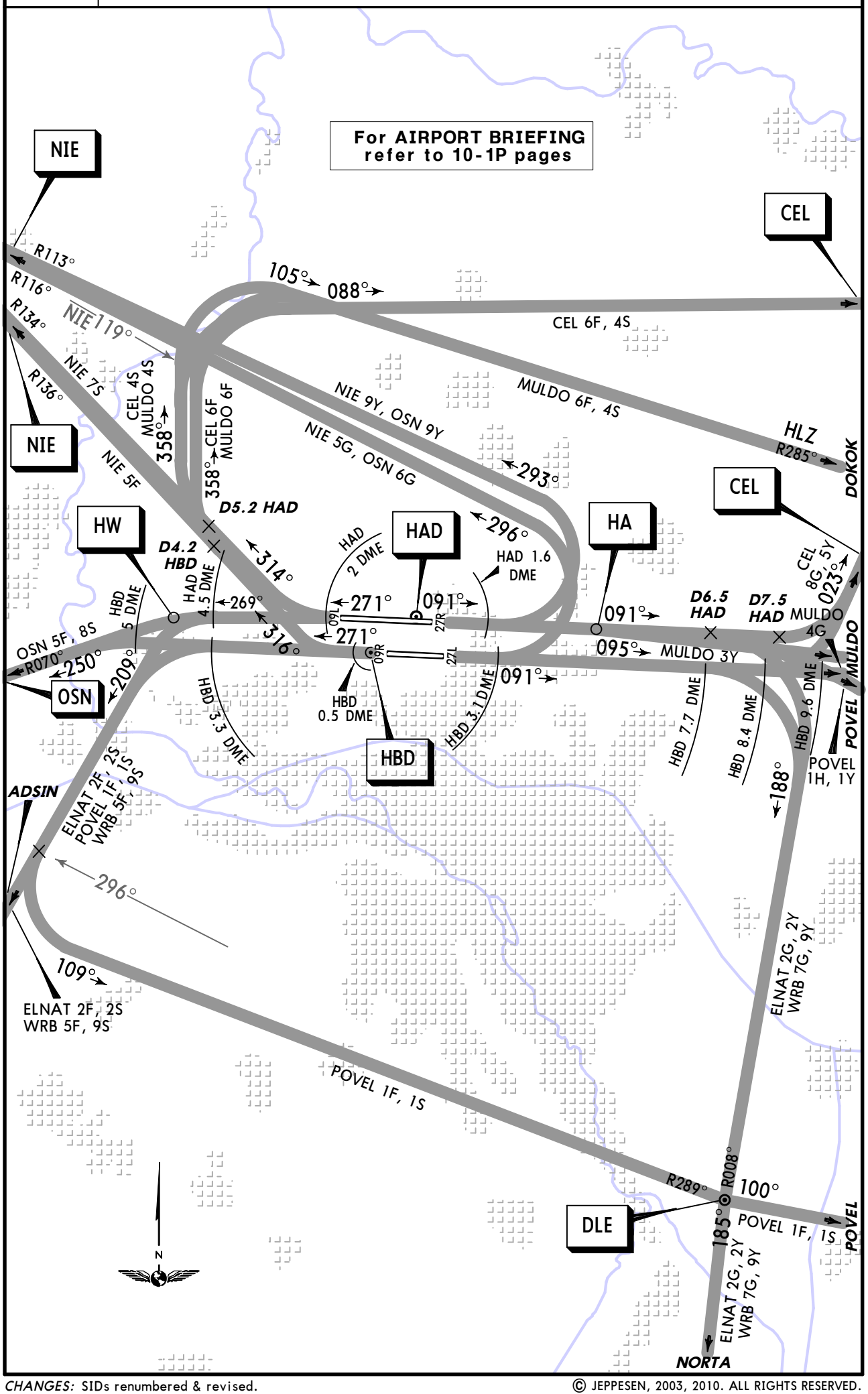
SID	RWY	ROUTING
WRB 5F	**27L**	**(600′+)** - DV202 - DV257 - ADSIN - ROLUK - TOLTA - WRB.
WRB 7G	**09R**	**(600′+)** - DV153 - DV156 - DLE - NORTA - TOLTA - WRB.
WRB 9S	**27R**	**(600′+)** - HW - DV257 - ADSIN - ROLUK - TOLTA - WRB.
WRB 9Y	**09L**	**(600′+)** - DV103 - DV104 - DLE - NORTA - TOLTA - WRB.

CHANGES: RNAV SIDs renumbered & revised.

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Apt Elev
183'

NOISE ABATEMENT



CHANGES: SIDs renumbered & revised.

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EDDV/HAJ

Apt Elev **183′**

N52 27.6 E009 41.0

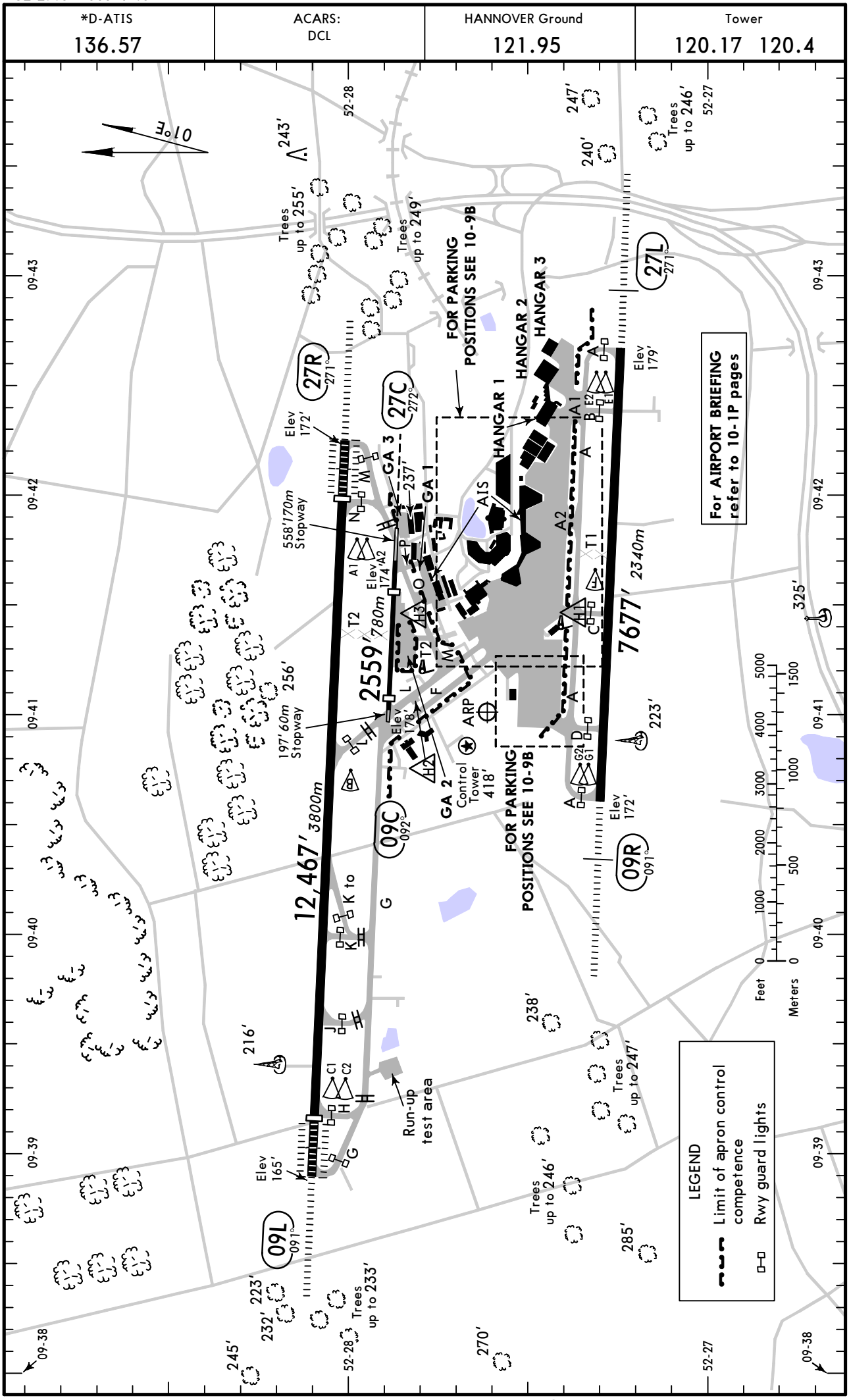
JEPPESEN

15 APR 11 (10-9)

HANNOVER, GERMANY

HANNOVER

*D-ATIS	ACARS: DCL	HANNOVER Ground	Tower
136.57		121.95	120.17 120.4



CHANGES: Twy designation.

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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
09L	HIRL CL *(15m)* ALSF-II TDZ REIL PAPI-L(3.0°) RVR	10,499′ *3200m*	9466′ *2885m*	❷	148′ *45m*
27R	HIRL CL *(15m)* ALSF-II TDZ REIL PAPI-L(3.0°) ❶ RVR		9527′ *2904m*		

❶ HST-Kto

❷ Additional 984′/300m starter extension available with PPO.
TAKE-OFF RUN AVAILABLE

RWY 09L:
From rwy head 10,499′(3200m)
twy J int 8858′(2700m)
twy K int 7382′(2250m)
twy L int 4331′(1320m)

RWY 27R:
From rwy head 10,499′(3200m)
twy L int 6234′(1900m)

09C		1804′ *550m*		❸ 2001′ *610m*	74′ *23m*
27C				❹ 2362′ *720m*	

❸ Includes paved swy West of thr 09C.

❹ Includes paved swy East of thr 27C.

09R	HIRL CL *(30m)* (White) HIALS SFL REIL PAPI-L ❺ RVR		6627′ *2020m*	❻	148′ *45m*
27L			6693′ *2040m*		

❺ angle 3.0°

❻ TAKE-OFF RUN AVAILABLE

RWY 09R:
From rwy head 7677′(2340m)
twy D int 6463′(1970m)
twy C int 4462′(1360m)

RWY 27L:
From rwy head 7677′(2340m)
twy B int 6693′(2040m)
twy C int 3281′(1000m)

Standard

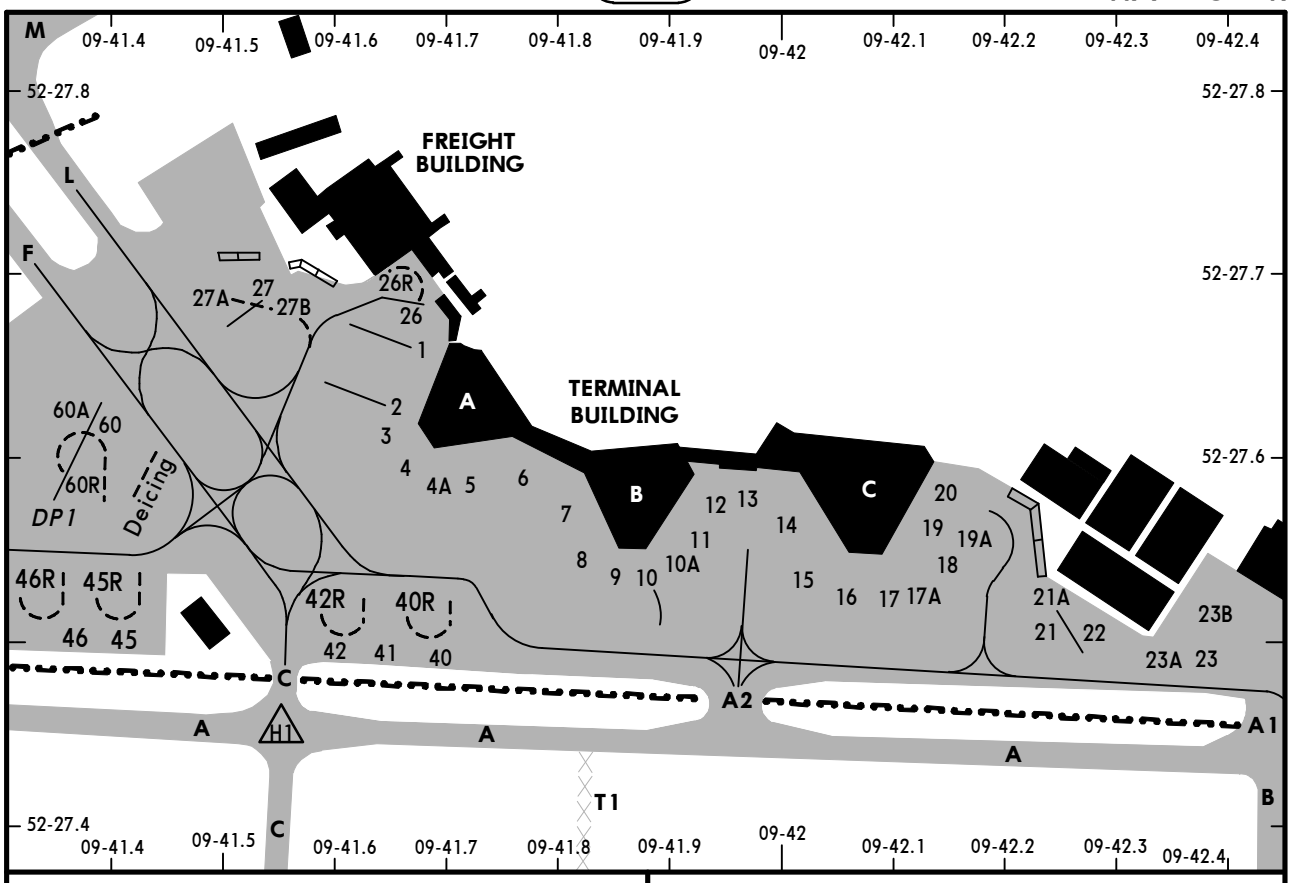
TAKE-OFF 1

	LVP must be in Force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: None.

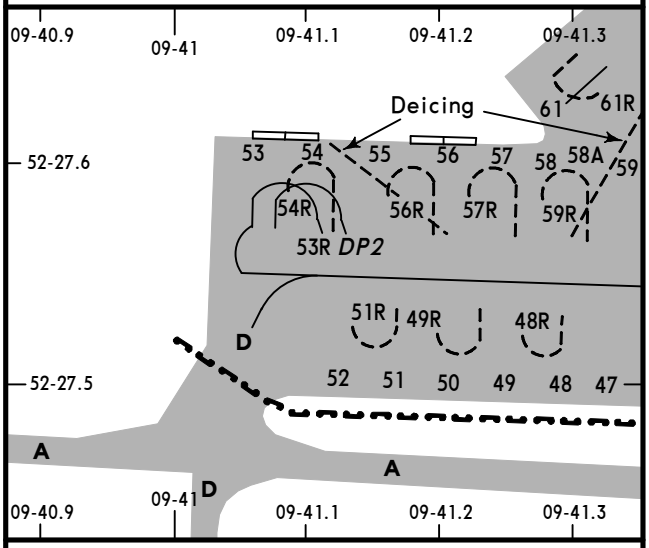
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INS COORDINATES

STAND No.	COORDINATES
1	N52 27.7 E009 41.7
2 thru 5	N52 27.6 E009 41.7
6, 7	N52 27.6 E009 41.8
8	N52 27.5 E009 41.8
9 thru 10A	N52 27.5 E009 41.9
11, 12	N52 27.6 E009 41.9
13, 14	N52 27.6 E009 42.0
15, 16	N52 27.5 E009 42.0
17 thru 18	N52 27.5 E009 42.1
19 thru 20	N52 27.6 E009 42.2
21, 21A	N52 27.5 E009 42.2
22	N52 27.5 E009 42.3
23 thru 23B	N52 27.5 E009 42.4
26, 26R	N52 27.6 E009 41.6
27, 27A	N52 27.6 E009 41.5
27B	N52 27.6 E009 41.4
40	N52 27.5 E009 41.6
40R	N52 27.4 E009 41.6
41, 42	N52 27.5 E009 41.6
42R	N52 27.4 E009 41.6
45	N52 27.5 E009 41.4
45R	N52 27.4 E009 41.3
46	N52 27.5 E009 41.4
46R	N52 27.4 E009 41.3
47, 48	N52 27.5 E009 41.3
48R	N52 27.4 E009 41.2
49	N52 27.5 E009 41.3
49R	N52 27.4 E009 41.1
50, 51	N52 27.5 E009 41.2
51R	N52 27.4 E009 41.1
52	N52 27.5 E009 41.1
53	N52 27.6 E009 41.0
53R	N52 27.5 E009 41.1
54	N52 27.6 E009 41.1
54R	N52 27.5 E009 41.0

LEGEND
- *DP1* Deicing stand
- **A2** Taxiway
- 8 Stand
- Limit of apron control competence
- Blast fence



INS COORDINATES

STAND No.	COORDINATES
55, 56	N52 27.6 E009 41.2
56R	N52 27.5 E009 41.1
57	N52 27.6 E009 41.3
57R	N52 27.5 E009 41.2
58 thru 59	N52 27.6 E009 41.3
59R	N52 27.5 E009 41.2
60, 60A	N52 27.6 E009 41.4
60R	N52 27.5 E009 41.3
61, 61R, DP1	N52 27.6 E009 41.3
DP2	N52 27.5 E009 41.1

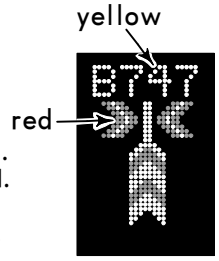
CHANGES: Apron.

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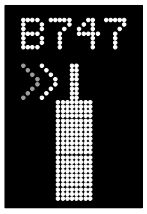
ADVANCED VISUAL DOCKING GUIDANCE SYSTEM (A-VDGS)

WARNING: Do not start docking procedure unless one of the routine docking process displays are shown or if a pilot is unsure about the indicated information.

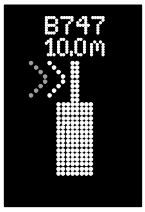
1. START OF DOCKING
The floating arrows indicate that the system is activated and in capture mode, searching for an approaching aircraft.
It shall be cheked, that the correct aircraft type is displayed.
The lead-in line shall be followed.
THE PILOT MUST NOT PROCEED BEYOND THE BRIDGE, UNLESS THE ARROWS HAVE BEEN SUSPENDED BY THE CLOSING RATE BAR.



2. TRACKING
When the aircraft has been caught by the laser, the floating arrow is replaced by the yellow center line indicator. A flashing red arrow indicates the direction to turn.
The vertical yellow arrow shows position in relation to center line.
This indicator gives correct position and azimuth guidance.



3. CLOSING RATE
The closing rate is the final countdown from 30m distance to the stop position.
A yellow vertical closing rate bar / center line indicator appears with thr digital countdown.



4. SLOW (DECREASE SPEED)
If the aircraft is approaching faster than the accepted speed, the system will show SLOW as a warning to the pilots.



5. STOP POSITION REACHED
When the correct stop position is reached, the display will show STOP with red lights.



6. DOCKING COMPLETED
When the aircraft has parked, OK will be displayed.



7. ON BLOCK TIME
On block time will be displayed in UTC-time.



8. CHOCK ON
CHOCK ON will be displayed, when the ground staff has put the chocks in front of and behind the main gear wheels and pressed the "Chocks on" button on the operator panel.
It disappears after 180 seconds.



DISPLAYED FORMS AT ABNORMAL CONDITIONS

Form:	Indication for:
Acft type	(preselected)
Display black with red lights	System breakdown - stop
Display complete black	Power failure - stop
ERROR	System error
ERR10	System error (communication error with system)
WAIT	Not allowed object within scanning range - stop
WAIT followed by GATE BLOCK	Not allowed object within scanning range when system starts - stand not usable
STOP	Emergency stop
STOP followed by ID FAIL	Identification failed - stop
STOP followed by TOO FAST	Docking system must be restarted or the docking procedure completed by manual guidance
STOP followed by SBU	Too far of center line within last 10' / 3m to stop position
STOP followed by OK	Not correct stop position is reached but within limits
STOP / ABORT	Docking is interrupted by gate operator
TOO FAR	Acft has overshot the stop position (more than 1m)

CHANGES: New system.

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STRAIGHT-IN RWY		A	B	C	D
09L	CAT 3A ILS	**RA 50′R200m**	**RA 50′R200m**	**RA 50′R200m**	**RA 50′R200m**
	CAT 2 ILS	**267′**(100′)	**267′**(100′)	**267′**(100′)	**267′**(100′)
		RA102′R300m	**RA102′R300m**	**RA102′R300m**	**RA102′R300m**
	ILS	**367′**(200′)	**367′**(200′)	**367′**(200′)	**367′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**590′**(423′)	**590′**(423′)	**590′**(423′)	**590′**(423′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**670′**(503′)	**670′**(503′)	**670′**(503′)	**670′**(503′)
	LNAV/VNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**700′**(533′)	**700′**(533′)	**700′**(533′)	**700′**(533′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**750′**(583′)	**750′**(583′)	**750′**(583′)	**750′**(583′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**670′**(503′)	**670′**(503′)	**670′**(503′)	**670′**(503′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
09R	ILS	**372′**(200′)	**372′**(200′)	**372′**(200′)	**372′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**580′**(408′)	**580′**(408′)	**580′**(408′)	**580′**(408′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**540′**(368′)	**540′**(368′)	**540′**(368′)	**540′**(368′)
	LNAV/VNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**670′**(498′)	**670′**(498′)	**670′**(498′)	**670′**(498′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**670′**(498′)	**670′**(498′)	**670′**(498′)	**670′**(498′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

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STRAIGHT-IN RWY		A	B	C	D
27L	ILS	**379**′(200′)	**379**′(200′)	**379**′(200′)	**379**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**580**′(401′)	**580**′(401′)	**580**′(401′)	**580**′(401′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**660**′(481′)	**660**′(481′)	**660**′(481′)	**660**′(481′)
	LNAV/VNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**670**′(491′)	**670**′(491′)	**670**′(491′)	**670**′(491′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**670**′(491′)	**670**′(491′)	**670**′(491′)	**670**′(491′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
27R	CAT 3A ILS	**RA 50′R200m**	**RA 50′R200m**	**RA 50′R200m**	**RA 50′R200m** ❶
	CAT 2 ILS	**269**′(100′)	**269**′(100′)	**269**′(100′)	**269**′(100′) ❷
		RA97′R300m	**RA97′R300m**	**RA97′R300m**	**RA97′R300m**
	ILS	**369**′(200′)	**369**′(200′)	**369**′(200′)	**369**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**590**′(421′)	**590**′(421′)	**590**′(421′)	**590**′(421′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**590**′(421′)	**590**′(421′)	**590**′(421′)	**590**′(421′)
	LNAV/VNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**670**′(501′)	**670**′(501′)	**670**′(501′)	**670**′(501′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**750**′(581′)	**750**′(581′)	**750**′(581′)	**750**′(581′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	SRE	**670**′(501′)	**670**′(501′)	**670**′(501′)	**670**′(501′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

❶ LACFT: NA

❷ LACFT: DA(H) 289′(120′), RA115′.

TAKE-OFF RWY 09L/R, 27L/R

	Rwys 09L, 27R LVP must be in Force Approved Operators HIRL, CL & mult. RVR req	Rwys 09L/R, 27L/R LVP must be in Force RL, CL & mult. RVR req	Rwys 09L/R, 27L/R LVP must be in Force RL & CL	All Rwys LVP must be in Force RCLM (DAY only) or RL	All Rwys RCLM (DAY only) or RL	All Rwys NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: Minimums.

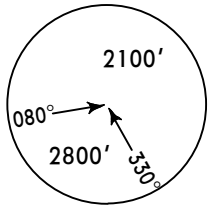
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*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57	131.32 118.05 118.15	119.6	120.17 120.4	121.95

BRIEFING STRIP™

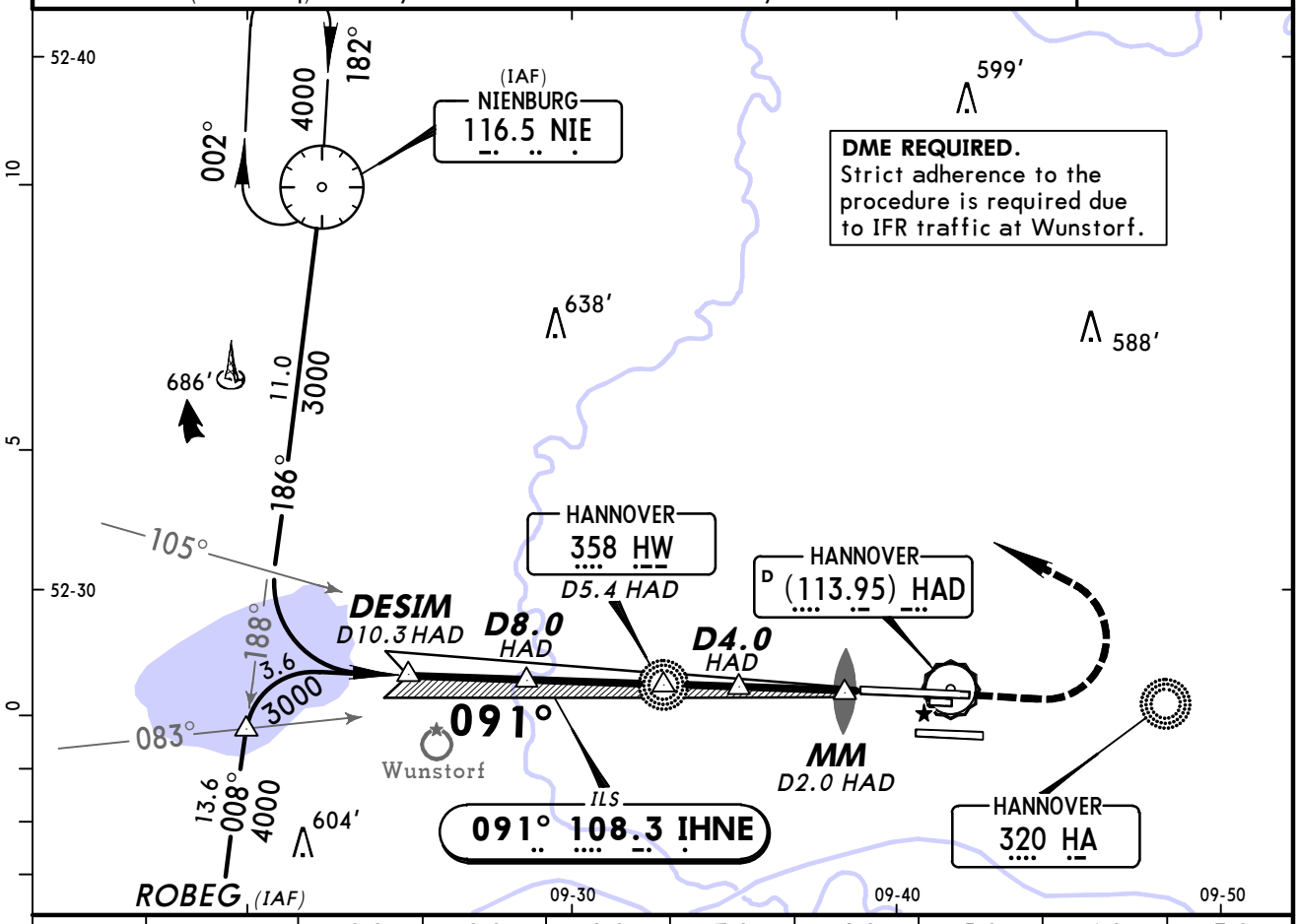
LOC	Final	GS	ILS	Apt Elev 183′
IHNE	Apch Crs	HW Lctr	DA(H)	RWY 167′
108.3	091°	1460′ (1293′)	367′ (200′)	

MISSED APCH: Turn LEFT as soon as practicable to VOR climbing to 4000′.

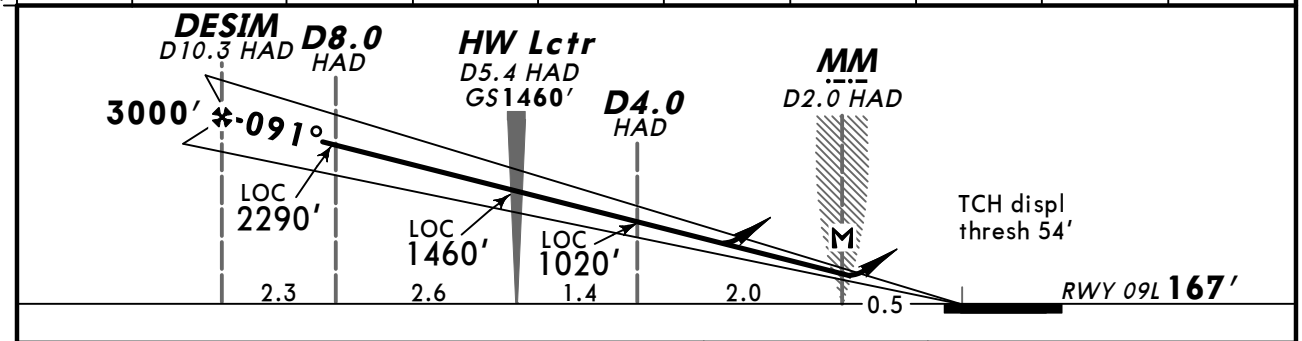


MSA HA Lctr

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′



LOC (GS out)	HAD DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	2930′	2610′	2300′	1980′	1660′	1340′	1020′	700′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/ D2.0 HAD						

ALSF-II
REIL
PAPI

4000′
LT

NIE
116.5

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **09L**

	ILS			LOC (GS out)	
	DA(H) 367′ (200′)			DA(H) 590′ (423′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1300m	RVR 1500m
B					
C					RVR 2000m
D					

CHANGES: ATIS. Minimums.

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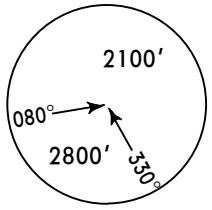
*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57	131.32 118.05 118.15	119.6	120.17 120.4	121.95

BRIEFING STRIP™

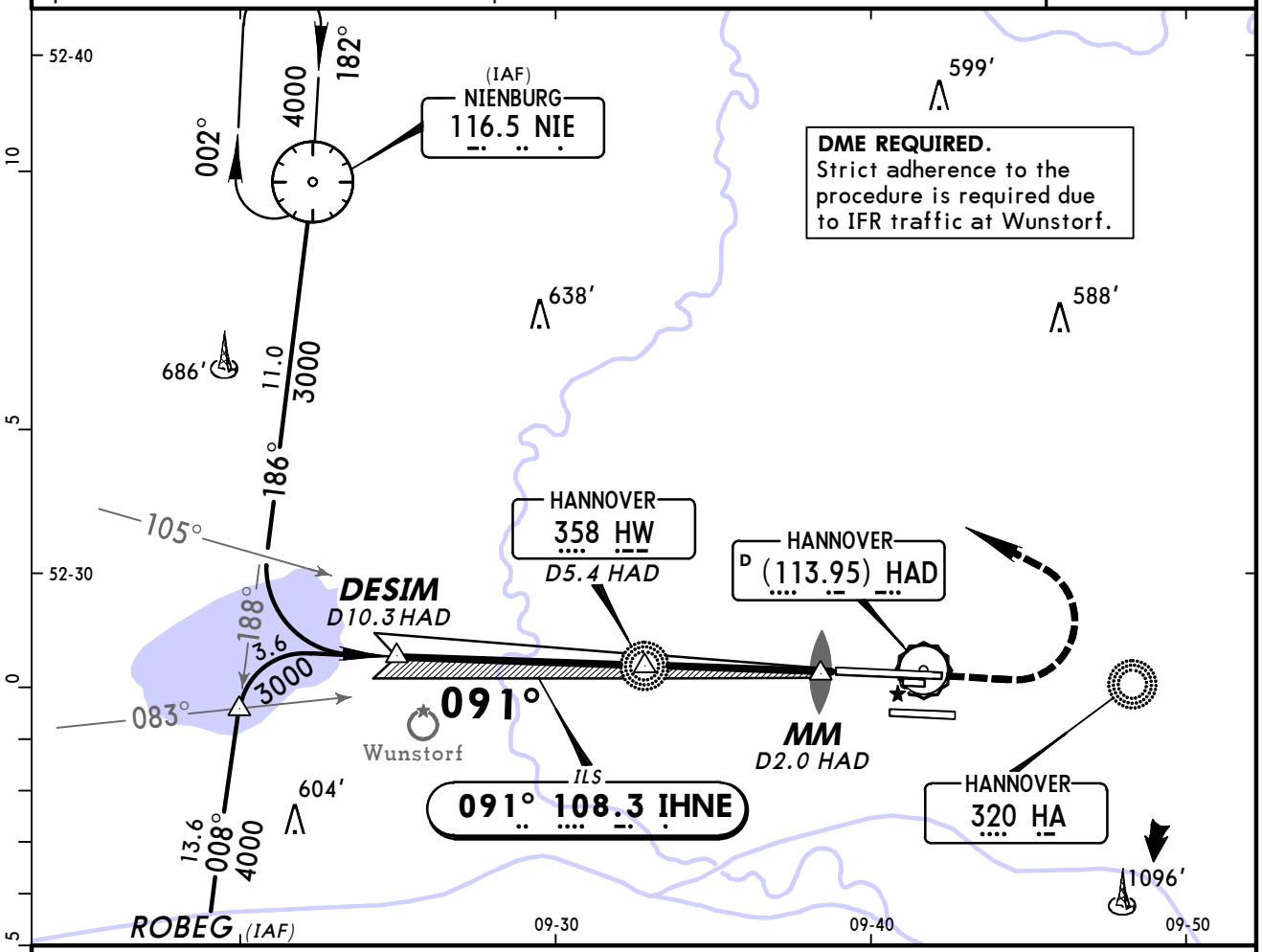
LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev 183′
IHNE	091°	HW Lctr	RA 102′	RWY 167′
108.3		1460′ (1293′)	DA(H) 267′ (100′)	

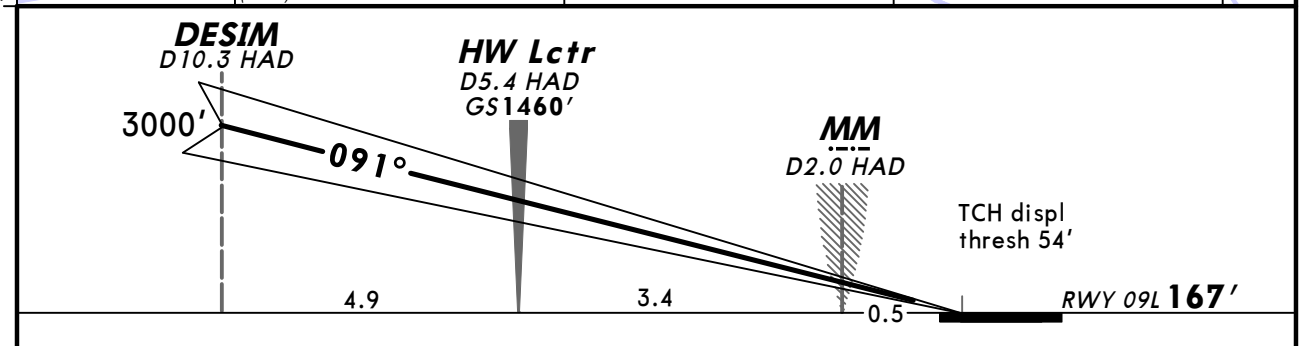
MISSED APCH: Turn LEFT as soon as practicable to VOR climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.



MSA HA Lctr





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

4000′
LT

NIE
116.5

PANS OPS 4

Standard

STRAIGHT-IN LANDING RWY **09L**

CAT II ILS

ABCD

RA 102′

DA(H) **267′** (100′)

RVR 300m 1

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

CHANGES: ATIS.

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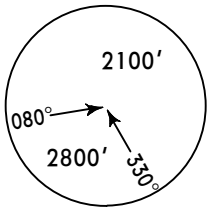
BRIEFING STRIP™

*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57 115.2	131.32 118.05 118.15	119.6	120.17 120.4	121.95

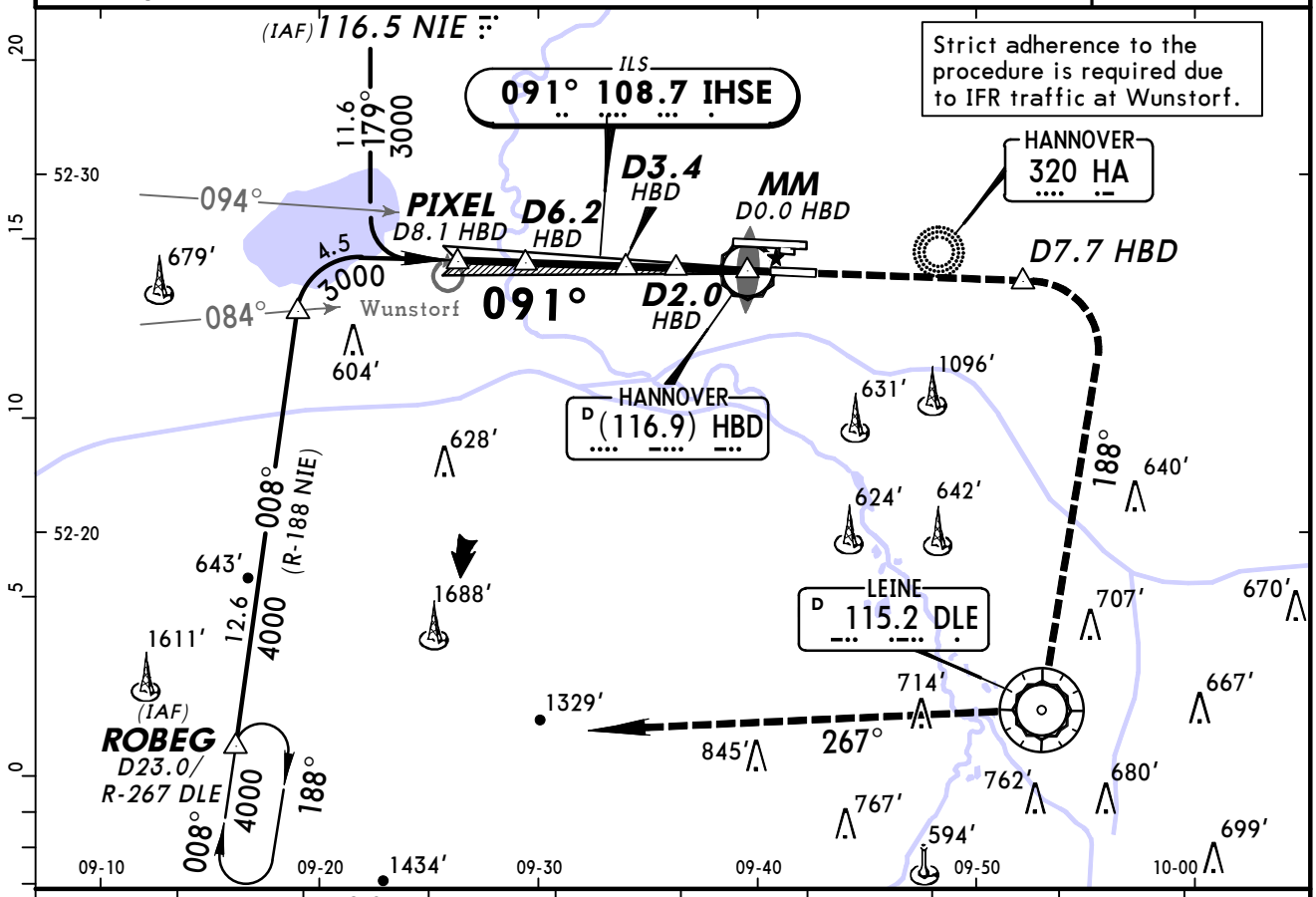
LOC	Final	GS	ILS	Apt Elev 183′
IHSE	Apch Crs	D3.4 HBD	DA(H)	RWY 172′
108.7	091°	1500′ (1328′)	372′ (200′)	

MISSED APCH: Climb STRAIGHT AHEAD to D7.7 HBD, then turn RIGHT on R-008 DLE inbound to DLE VOR, then turn RIGHT on R-267 DLE to ROBEG climbing to 4000′.

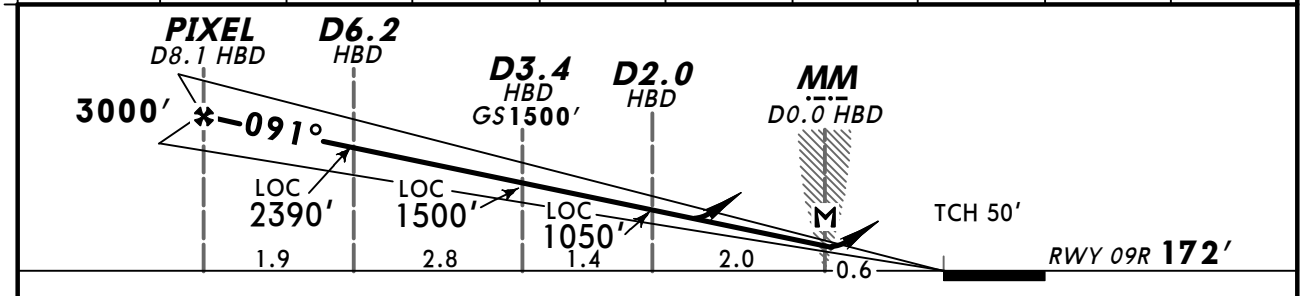
Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′
DME REQUIRED.



MSA HA Lctr



LOC (GS out)	HBD DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
	ALTITUDE	2970′	2650′	2330′	2010′	1690′	1370′	1050′	740′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/ D0.0 HBD						

HIALS
REIL
PAPI

D7.7 HBD

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **09R**

	ILS DA(H) 372′ (200′)			LOC (GS out) DA(H) 580′ (408′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C					RVR 1900m
D					

CHANGES: Tower frequency. Minimums.

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EDDV/HAJ
HANNOVER

JEPPESEN
20 MAR 09 (11-3)

HANNOVER, GERMANY
ILS or LOC Rwy 27L

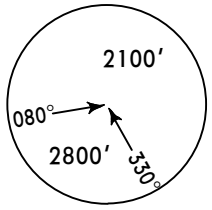
*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57 115.2	131.32 118.05 118.15	119.6	120.17 120.4	121.95

BRIEFING STRIP™

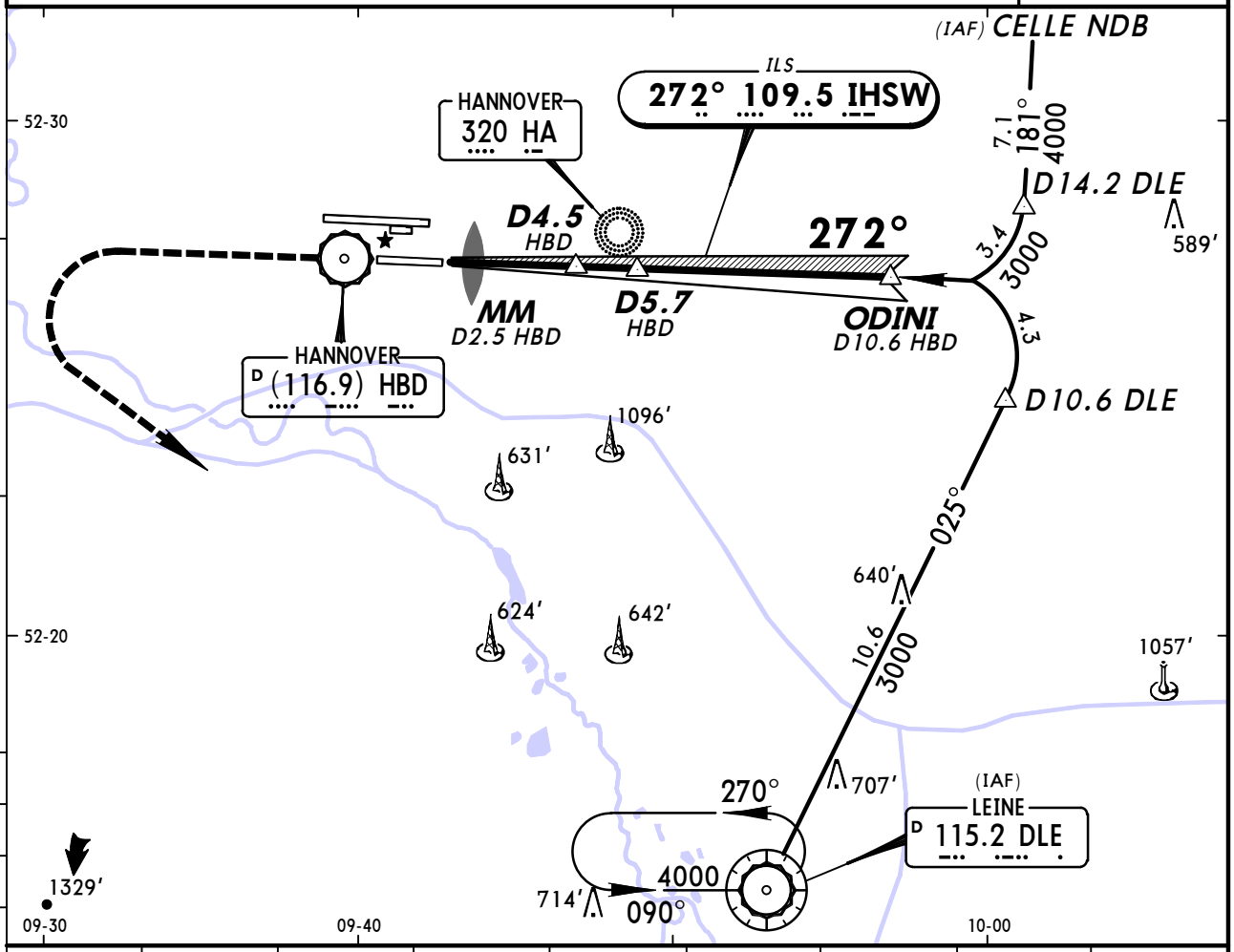
LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 183′
IHSW 109.5	272°	D5.7 HBD 1450′ (1271′)	379′ (200′)	RWY 179′

MISSED APCH: Climb STRAIGHT AHEAD to 1500′, then turn LEFT to VOR climbing to 4000′.

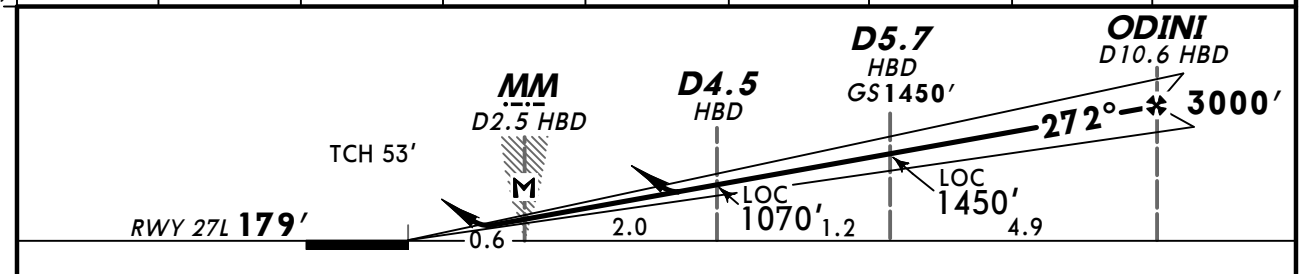
Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′
DME REQUIRED.



MSA HA Lctr



LOC (GS out)	HBD DME	4.0	5.0	6.0	7.0	8.0	9.0	10.0
	ALTITUDE	910′	1220′	1540′	1860′	2180′	2500′	2820′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/ D2.5 HBD						

HIALS
REIL
PAPI

1500′

Standard STRAIGHT-IN LANDING RWY **27L**

	ILS DA(H) 379′ (200′)			LOC (GS out) DA(H) 580′ (401′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C					RVR 1900m
D					

PANS OPS 4

CHANGES: Tower frequency. Minimums.

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EDDV/HAJ
HANNOVER

JEPPESEN
20 MAR 09 (11-4)

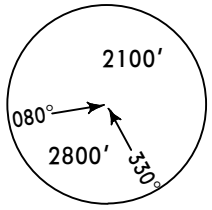
HANNOVER, GERMANY
ILS or LOC Rwy 27R

*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57 115.2	131.32 118.05 118.15	119.6	120.17 120.4	121.95

BRIEFING STRIP™

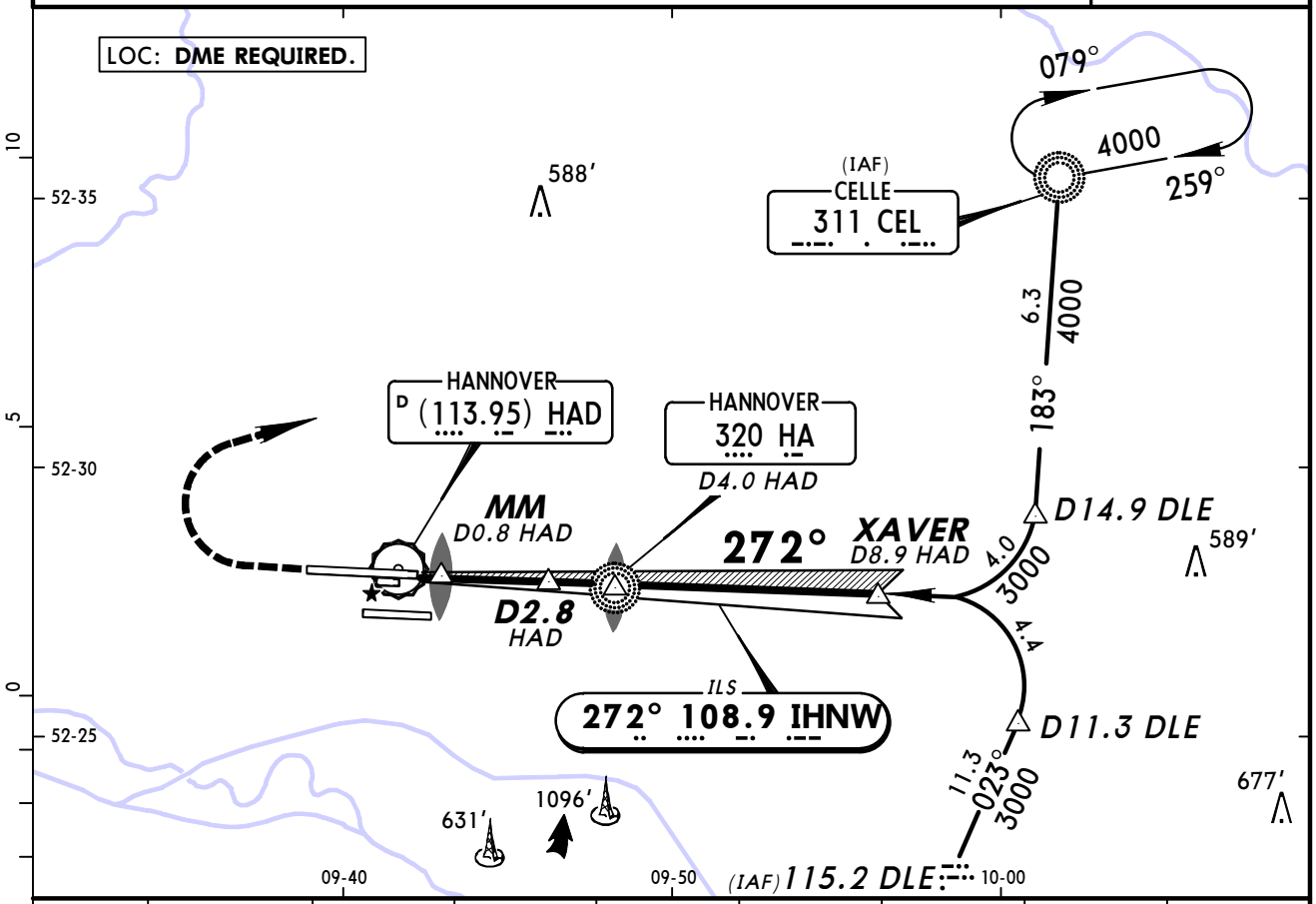
LOC	Final	GS	ILS	Apt Elev 183′
IHNW	Apch Crs	LOM	DA(H)	RWY 169′
108.9	272°	1430′ (1261′)	369′ (200′)	

MISSED APCH: Turn RIGHT as soon as practicable to CEL NDB climbing to 4000′.

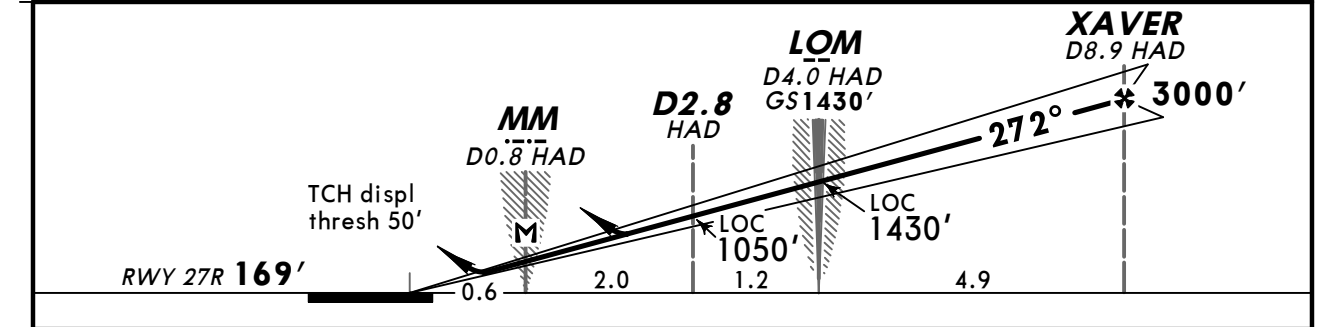


MSA HA Lctr

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′



LOC (GS out)	HAD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0
	ALTITUDE	800′	1120′	1430′	1750′	2070′	2390′	2710′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/ D0.8 HAD						

ALSF-II
REIL
PAPI

4000′
RT

CEL
311

Standard STRAIGHT-IN LANDING RWY **27R**

	ILS DA(H) 369′ (200′)			LOC (GS out) DA(H) 590′ (421′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1300m	RVR 1500m
B					
C					RVR 2000m
D					

PANS OPS 4

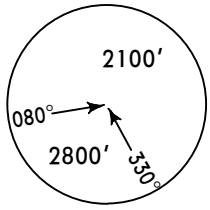
CHANGES: Tower frequency. Minimums.

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BRIEFING STRIP TM

*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57 115.2	131.32 118.05 118.15	119.6	120.17 120.4	121.95

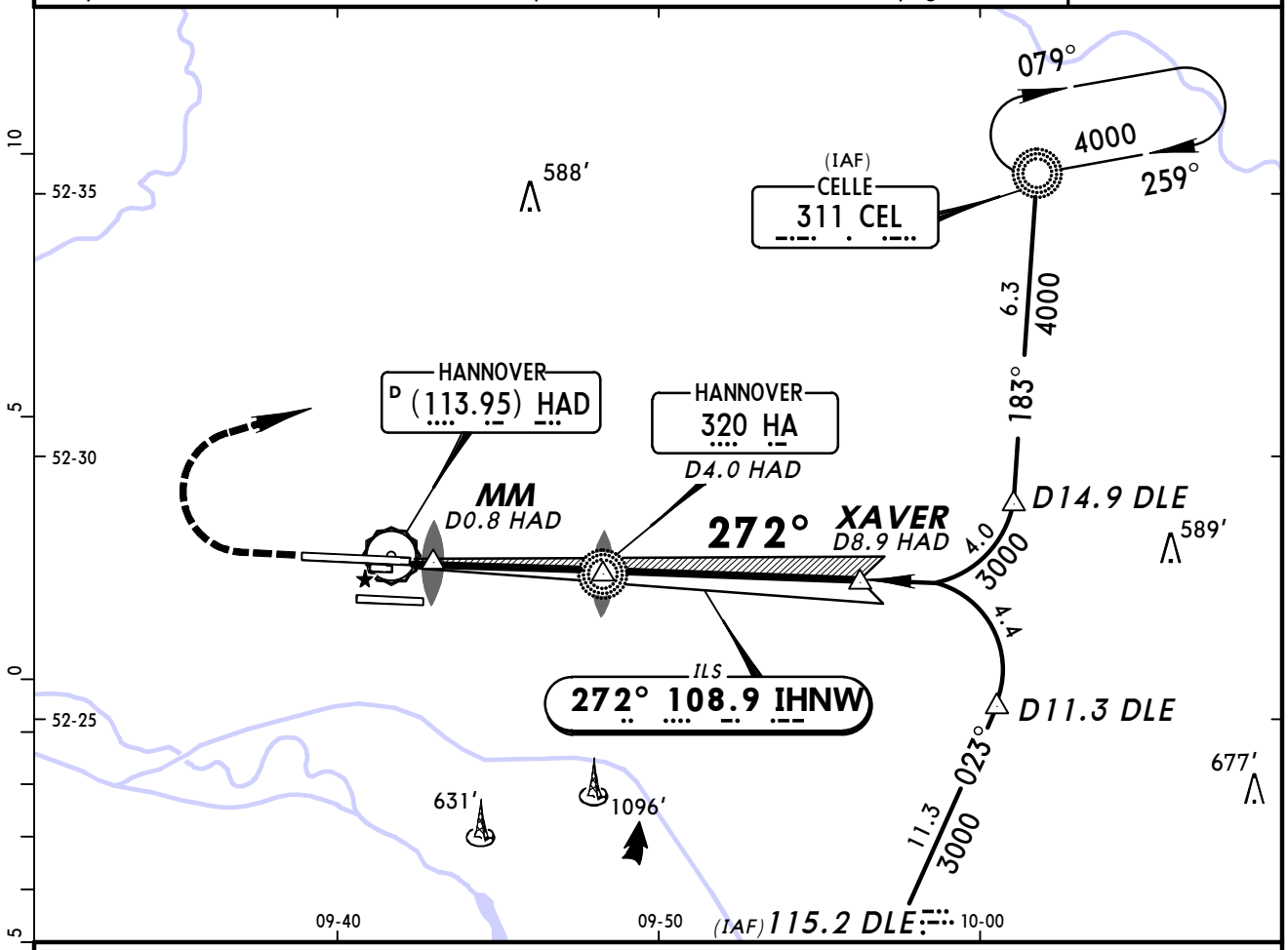
LOC	Final Apch Crs	GS	CAT II ILS RA/DA(H)	Apt Elev 183′
IHNW		LOM	Refer to Minimums	RWY 169′
108.9	272°	1430′ (1261′)		

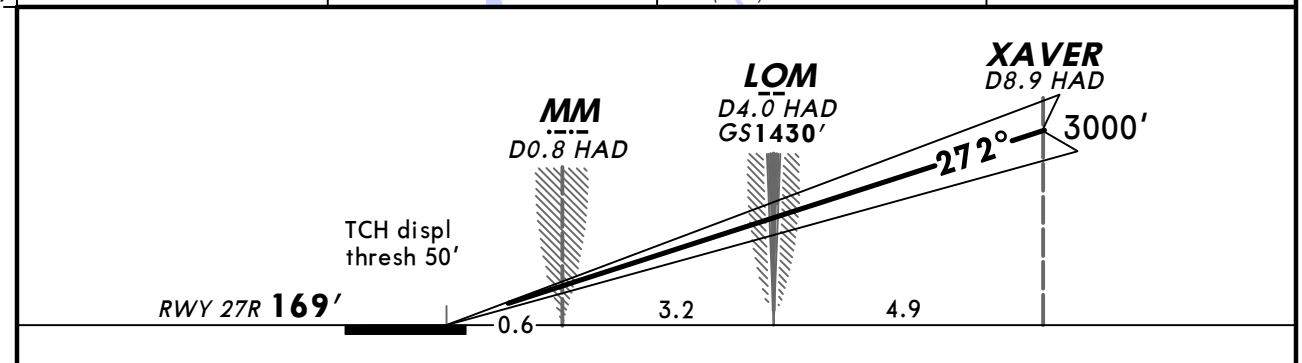


MSA HA Lctr

MISSED APCH: Turn RIGHT as soon as practicable to CEL NDB climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′
1. Special Aircrew & Acft Certification Required. 2. LACFT: See ATC State pages.





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

ALSF-II
REIL
PAPI

4000′
RT

CEL
311

Standard STRAIGHT-IN LANDING RWY **27R**

ABCD	LACFT
RA 97′	**RA 115′**
DA(H) **269′** (100′)	DA(H) **289′** (120′)

RVR 300m 1

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

PANS OPS 4

CHANGES: Tower frequency. Minimums.

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EDDV/HAJ
HANNOVER

JEPPESEN
13 NOV 09 (12-1) Eff 19 Nov

HANNOVER, GERMANY
RNAV (GPS) Rwy 09L

*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57	131.32 118.05 118.15	119.6	120.17 120.4	121.95

BRIEFING STRIP™

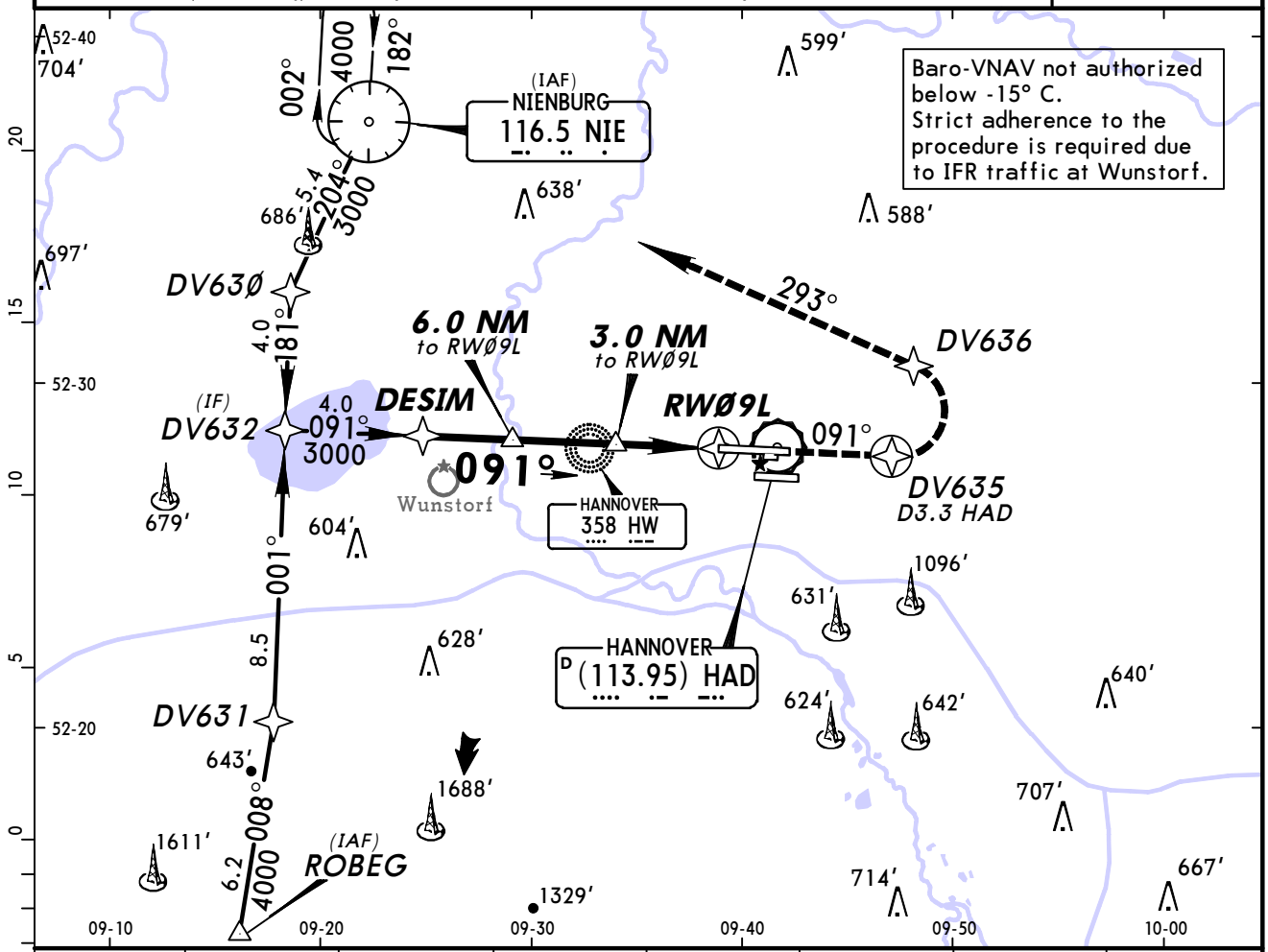
RNAV	Final Apch Crs	Minimum Alt DESIM	LNAV/VNAV DA(H)	Apt Elev 183′ RWY 167′
	091°	3000′ (2833′)	670′ (503′)	

MISSED APCH: Climb on track 091° to DV635/D3.3 HAD, turn LEFT via DV636 on track 293° to VOR climbing to 4000′.

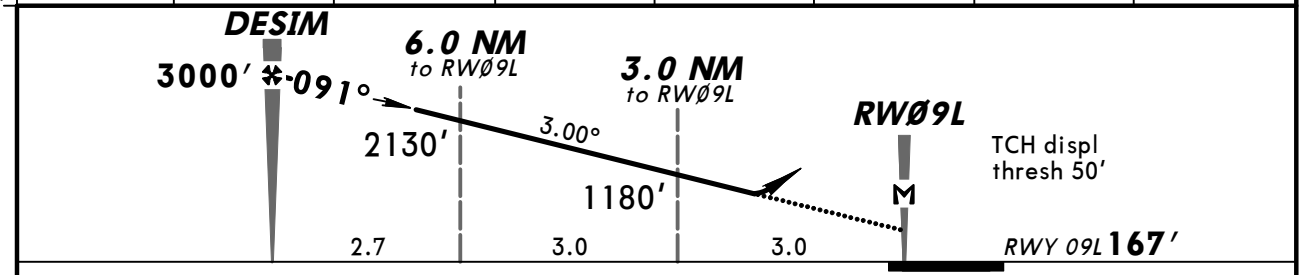
2800′

MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′



NM to RWØ9L	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2770′	2450′	2130′	1810′	1500′	1180′	860′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ9L							

ALSF-II
REIL
PAPI

DV635 | 4000′ LT | NIE 116.5

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **09L**

	LNAV/VNAV DA(H) 670′ (503′)		LNAV DA(H) 700′ (533′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1600m	CMV 2400m	RVR 1700m	CMV 2400m
D				

CHANGES: Note. Minimums.

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EDDV/HAJ
HANNOVER

JEPPESEN
13 NOV 09 (12-2) Eff 19 Nov

HANNOVER, GERMANY
RNAV (GPS) Rwy 09R

*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57	131.32 118.05 118.15	119.6	120.17 120.4	121.95

RNAV	Final Apch Crs	Minimum Alt PIXEL	LNAV/VNAV DA(H)	Apt Elev 183′ RWY 172′
	091°	3000′ (2828′)	540′ (368′)	

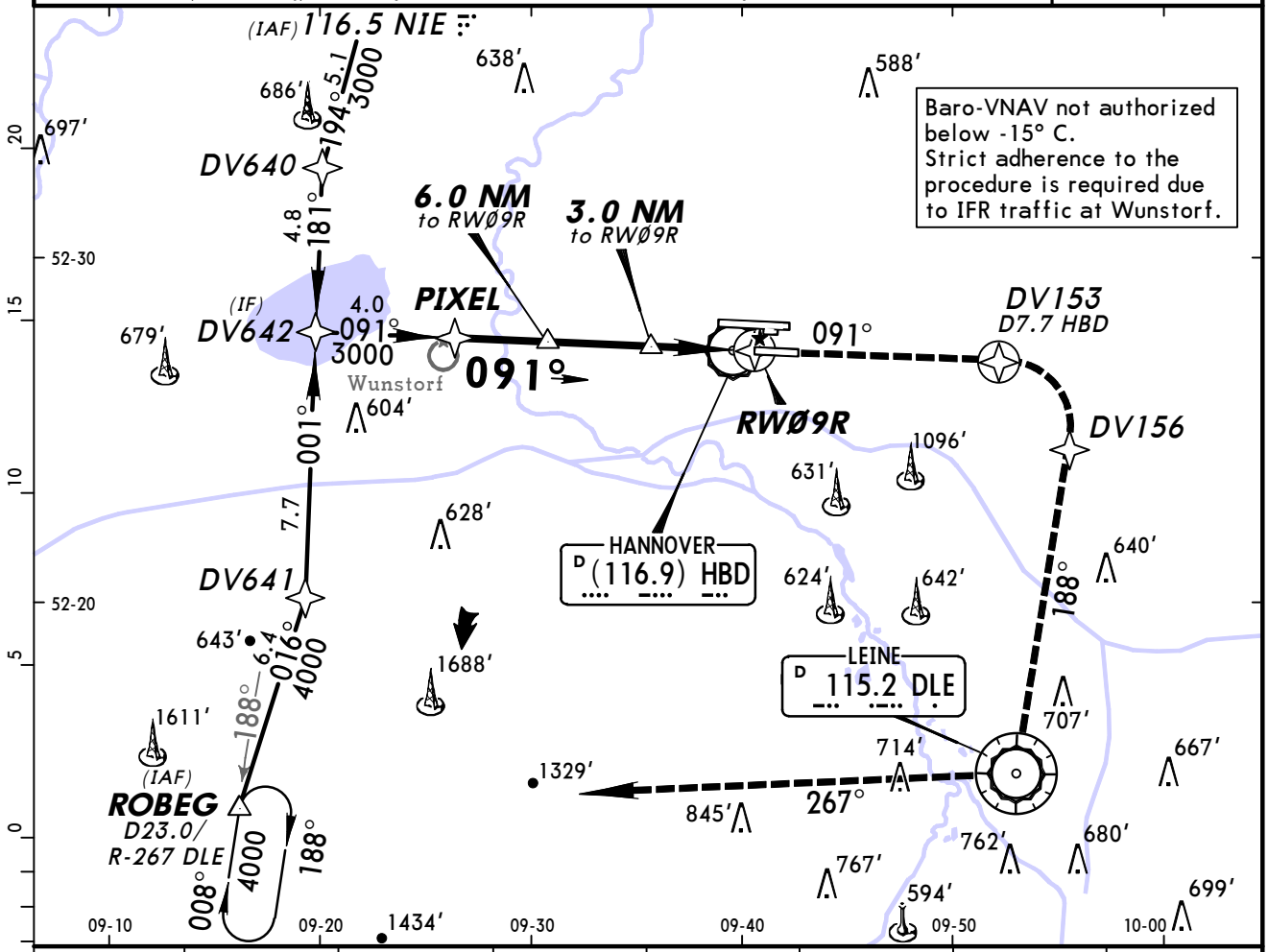
MISSED APCH: Climb onto 091° to DV153/D7.7 HBD, then turn RIGHT via DV156 on 188° to DLE VOR, then turn RIGHT on 267° to ROBEG climbing to 4000′.

2800′

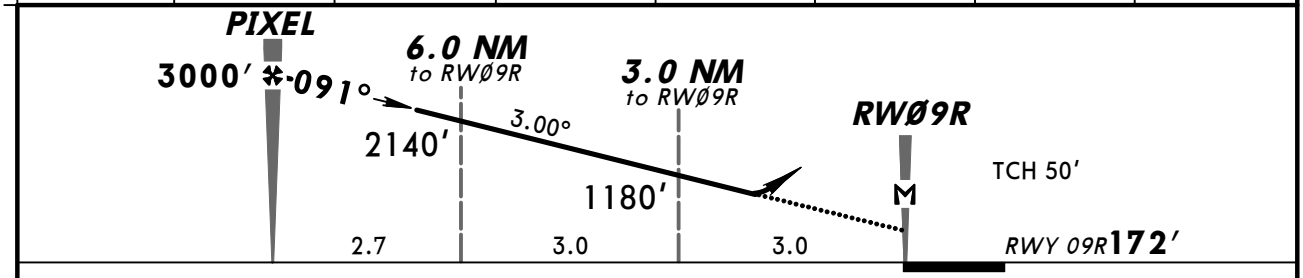
MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′

BRIEFING STRIP™



NM to RWØ9R	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2770′	2460′	2140′	1820′	1500′	1180′	860′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ9R							

HIALS
REIL
PAPI

DV153 ↑

188° RT

DLE 115.2

Standard STRAIGHT-IN LANDING RWY **09R**

	LNAV/VNAV DA(H) 540′ (368′)		LNAV DA(H) 670′ (498′)	
		ALS out		ALS out
A	RVR 1000m	RVR 1500m	RVR 1500m	
B				
C		RVR 1700m	RVR 1500m	CMV 2300m
D				

PANS OPS 4

CHANGES: Note. Minimums.

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EDDV/HAJ
HANNOVER

JEPPESEN
13 NOV 09 (12-3) Eff 19 Nov

HANNOVER, GERMANY
RNAV (GPS) Rwy 27L

*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57	131.32 118.05 118.15	119.6	120.17 120.4	121.95

BRIEFING STRIP™

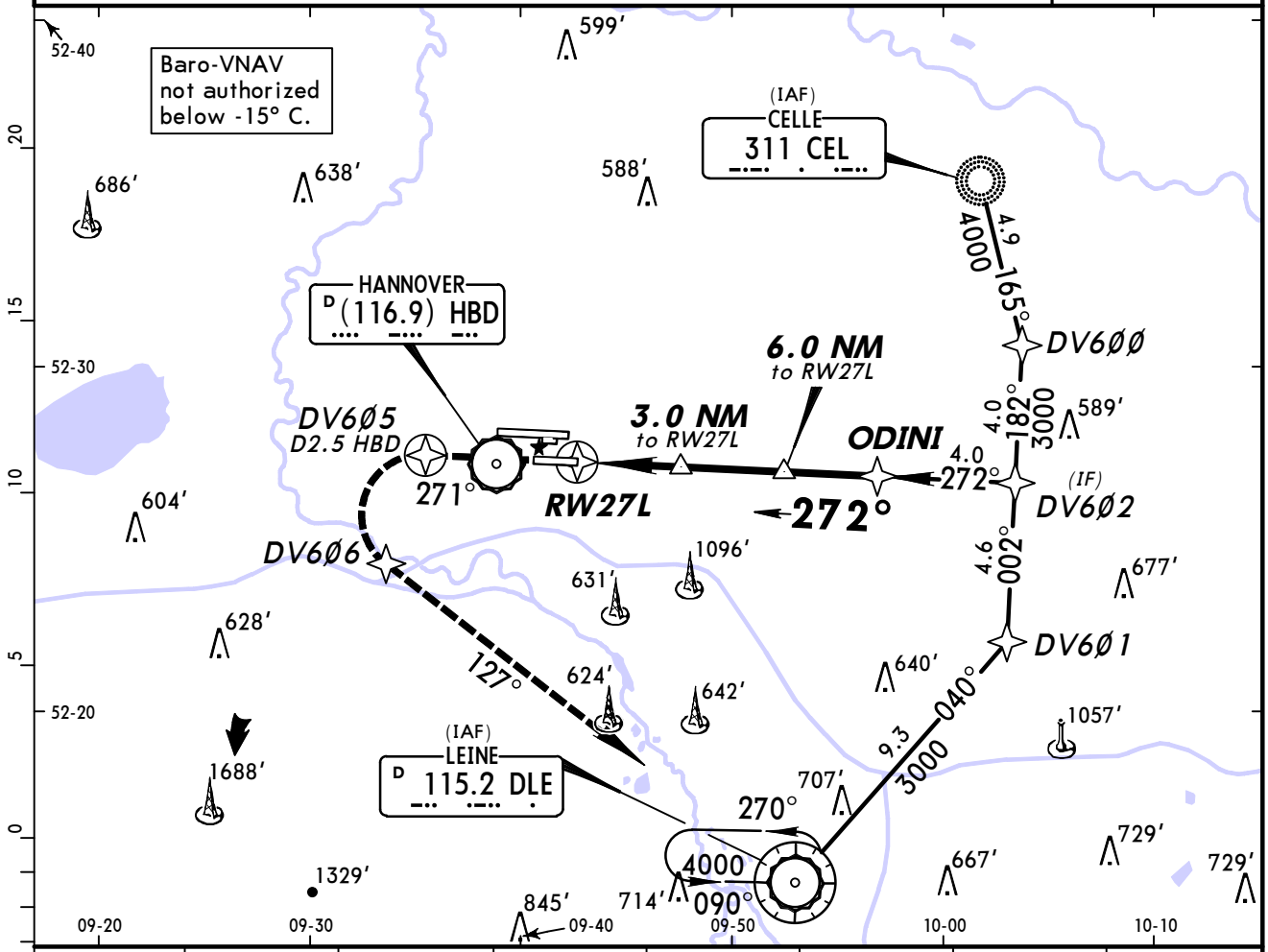
RNAV	Final Apch Crs **272°**	Minimum Alt **ODINI** **3000′** (2821′)	LNAV/VNAV DA(H) **660′** (481′)	Apt Elev 183′ RWY **179′**

MISSED APCH: Climb on track 271° to DV6Ø5/D2.5 HBD, turn LEFT via DV6Ø6 on track 127° to VOR climbing to 4000′.

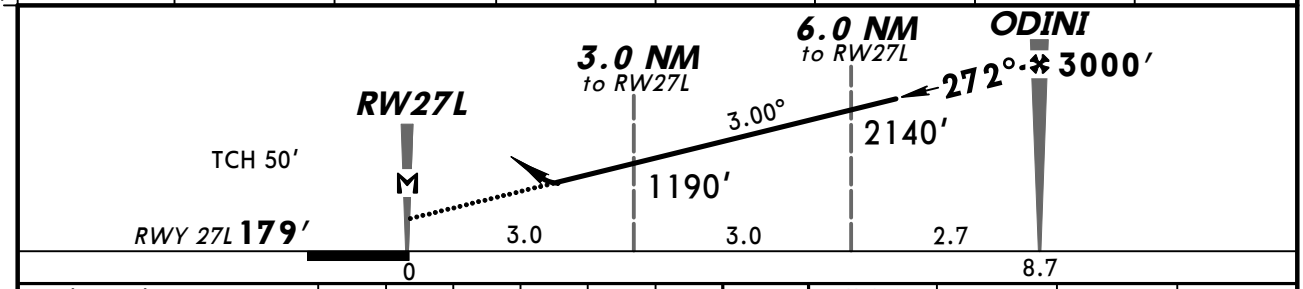
2800′

MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′



NM to RW27L	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	870′	1190′	1510′	1830′	2140′	2460′	2780′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW27L							

HIALS
REIL
PAPI

DV6Ø5 | 4000′ LT | DLE 115.2

Standard STRAIGHT-IN LANDING RWY **27L**

	LNAV/VNAV DA(H) **660′** (481′)		LNAV DA(H) **670′** (491′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1500m	CMV 2300m	RVR 1500m	CMV 2300m
D				

PANS OPS 4

CHANGES: Note. Minimums.

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EDDV/HAJ
HANNOVER

JEPPESEN
13 NOV 09 (12-4) Eff 19 Nov

HANNOVER, GERMANY
RNAV (GPS) Rwy 27R

*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57	131.32 118.05 118.15	119.6	120.17 120.4	121.95

BRIEFING STRIP™

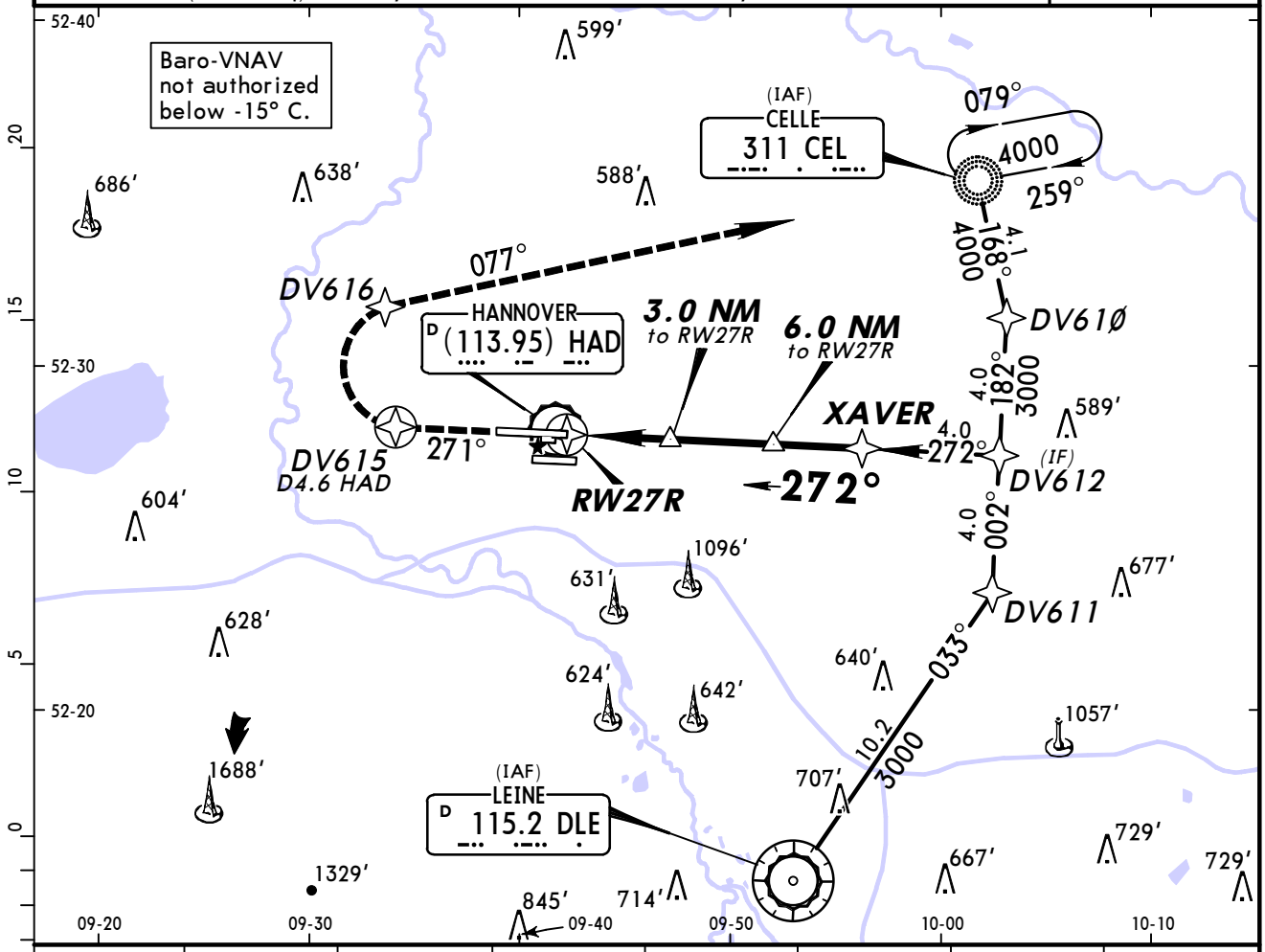
RNAV	Final Apch Crs	Minimum Alt XAVER	LNAV/VNAV DA(H)	Apt Elev 183′ RWY 169′
	272°	3000′ (2831′)	590′ (421′)	

MISSED APCH: Climb on track 271° to DV615/D4.6 HAD, turn RIGHT via DV616 on track 077° to NDB climbing to 4000′.

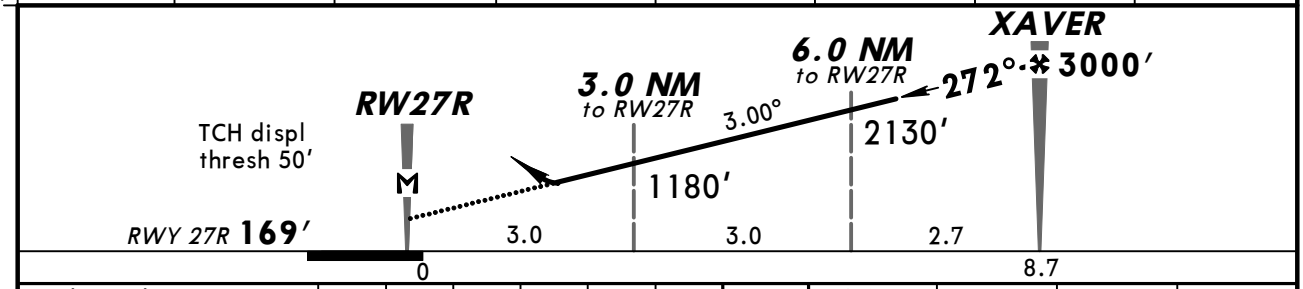
2800′

MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′



NM to RW27R	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	860′	1180′	1500′	1820′	2130′	2450′	2770′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW27R							

ALSF-II
REIL
PAPI

DV615 4000′ RT

CEL 311

Standard STRAIGHT-IN LANDING RWY **27R**

	LNAV/VNAV DA(H) 590′ (421′)		LNAV DA(H) 670′ (501′)	
		ALS out		ALS out
A	RVR 1300m	RVR 1500m	RVR 1500m	
B				
C		RVR 2000m	RVR 1600m	CMV 2400m
D				

PANS OPS 4

CHANGES: Note. Minimums.

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EDDV/HAJ
HANNOVER

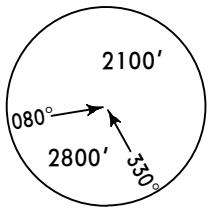
JEPPESEN
31 JUL 09 (16-1)

HANNOVER, GERMANY
NDB Rwy 09L

*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57	131.32 118.05 118.15	119.6	120.17 120.4	121.95

BRIEFING STRIP™

Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 183′
HW 358	089°	D10.3 3000′ (2833′)	750′ (583′)	RWY 167′

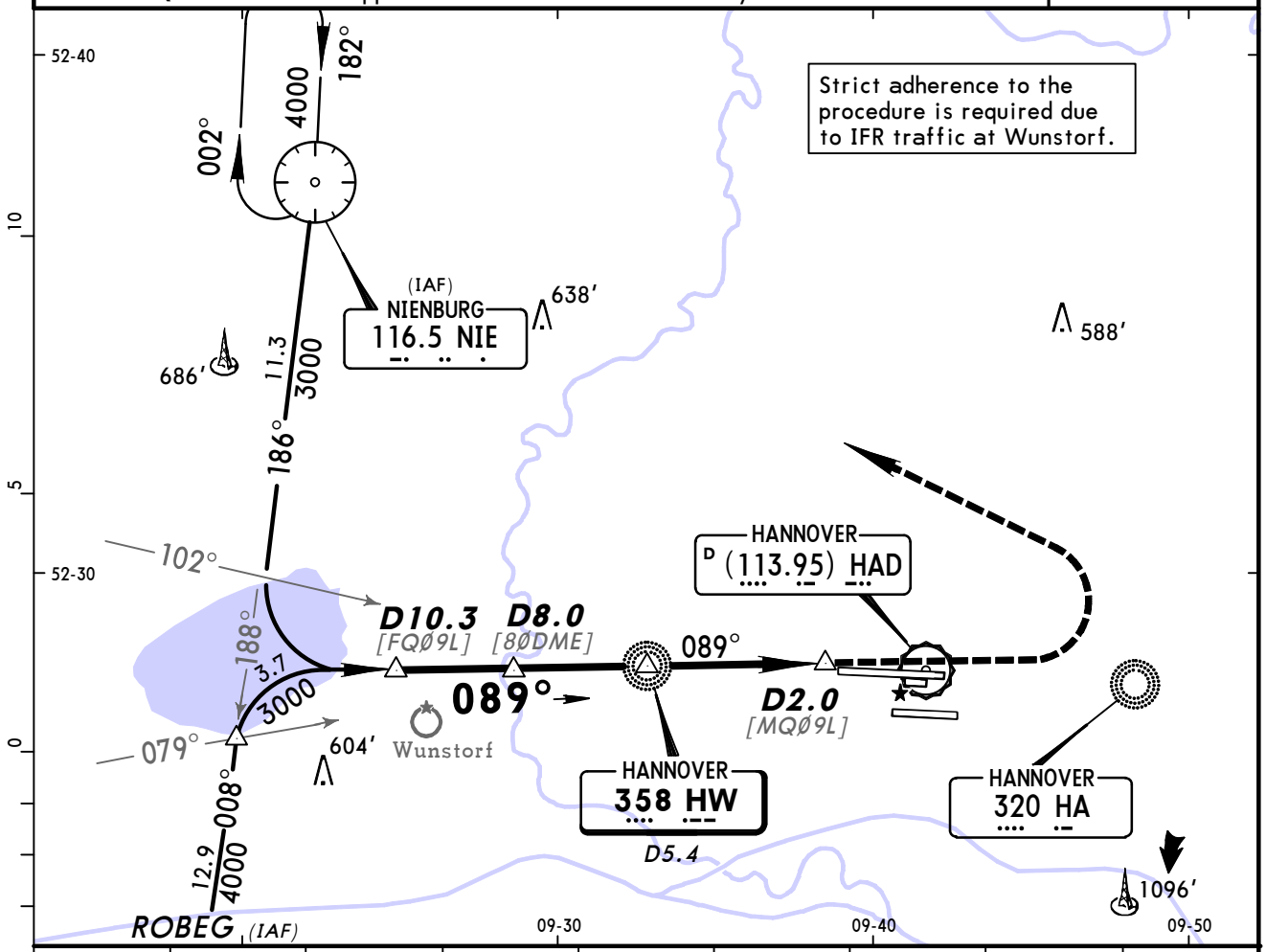


MSA HA Lctr

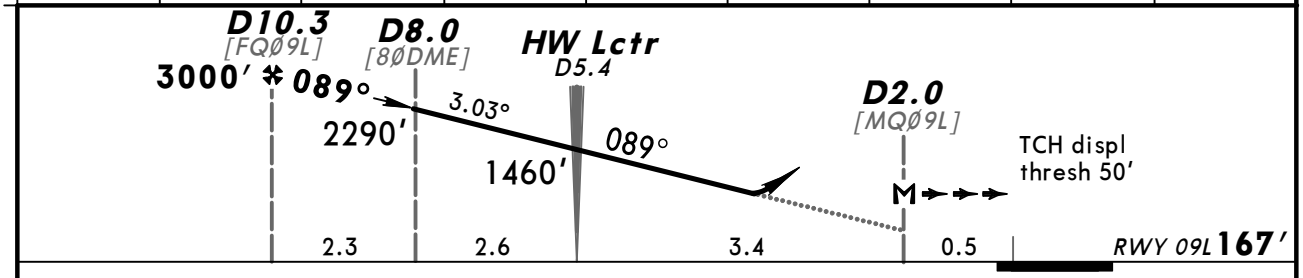
MISSED APCH: Turn LEFT as soon as practicable to VOR climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′

1. **DME REQUIRED.** 2. Final approach track offset 2.5° from rwy centerline.



HAD DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2930′	2610′	2290′	1970′	1650′	1340′	1020′	700′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.03°	375	482	536	643	750	858
MAP at D2.0							

ALSF-II
REIL
PAPI

4000′
LT

NIE
116.5

Standard STRAIGHT-IN LANDING RWY **09L**

DA(H) **750′** (583′)

		ALS out
A	RVR 1500m	
B		
C	RVR 2000m	CMV 2400m
D		

PANS OPS 4

CHANGES: ATIS. Minimums.

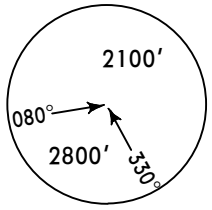
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BRIEFING STRIP TM

*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57	131.32 118.05 118.15	119.6	120.17 120.4	121.95

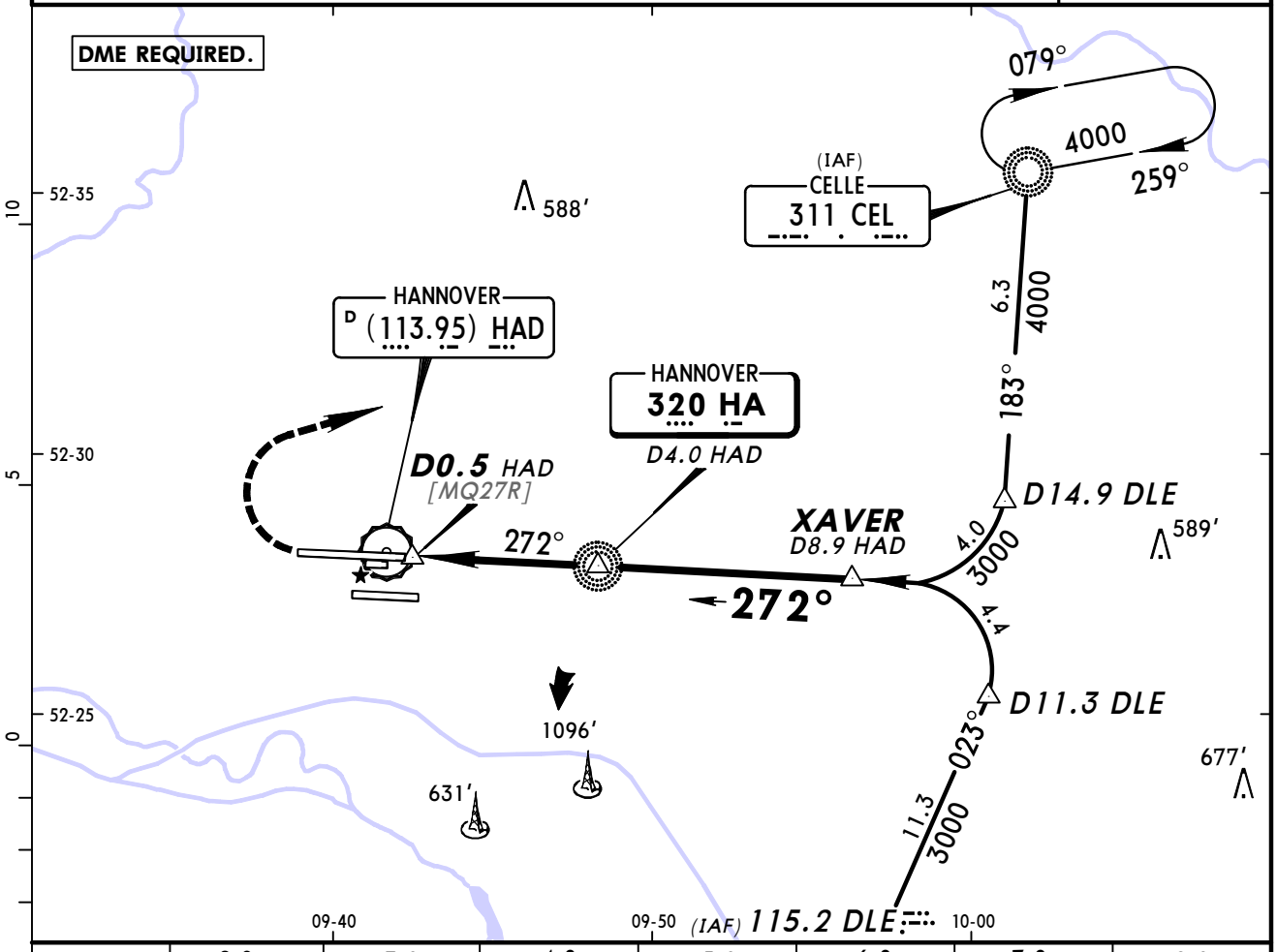
Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 183′
HA 320	272°	XAVER 3000′ (2831′)	750′ (581′)	RWY 169′

MISSED APCH: Turn RIGHT as soon as practicable to CEL NDB climbing to 4000′.

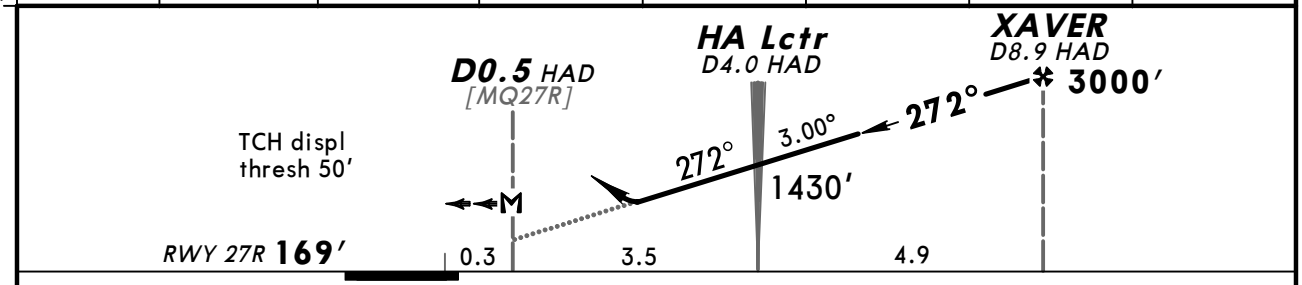


MSA HA Lctr

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000′



HAD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	800′	1120′	1430′	1750′	2070′	2390′	2710′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
MAP at D0.5 HAD							

ALSF-II
REIL
PAPI

4000′
RT

CEL
311

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **27R**

DA(H) **750′** (581′)

	ALS out
A	RVR 1500m
B	
C	RVR 2000m / CMV 2400m
D	

CHANGES: ATIS. Minimums.

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BRIEFING STRIP ™

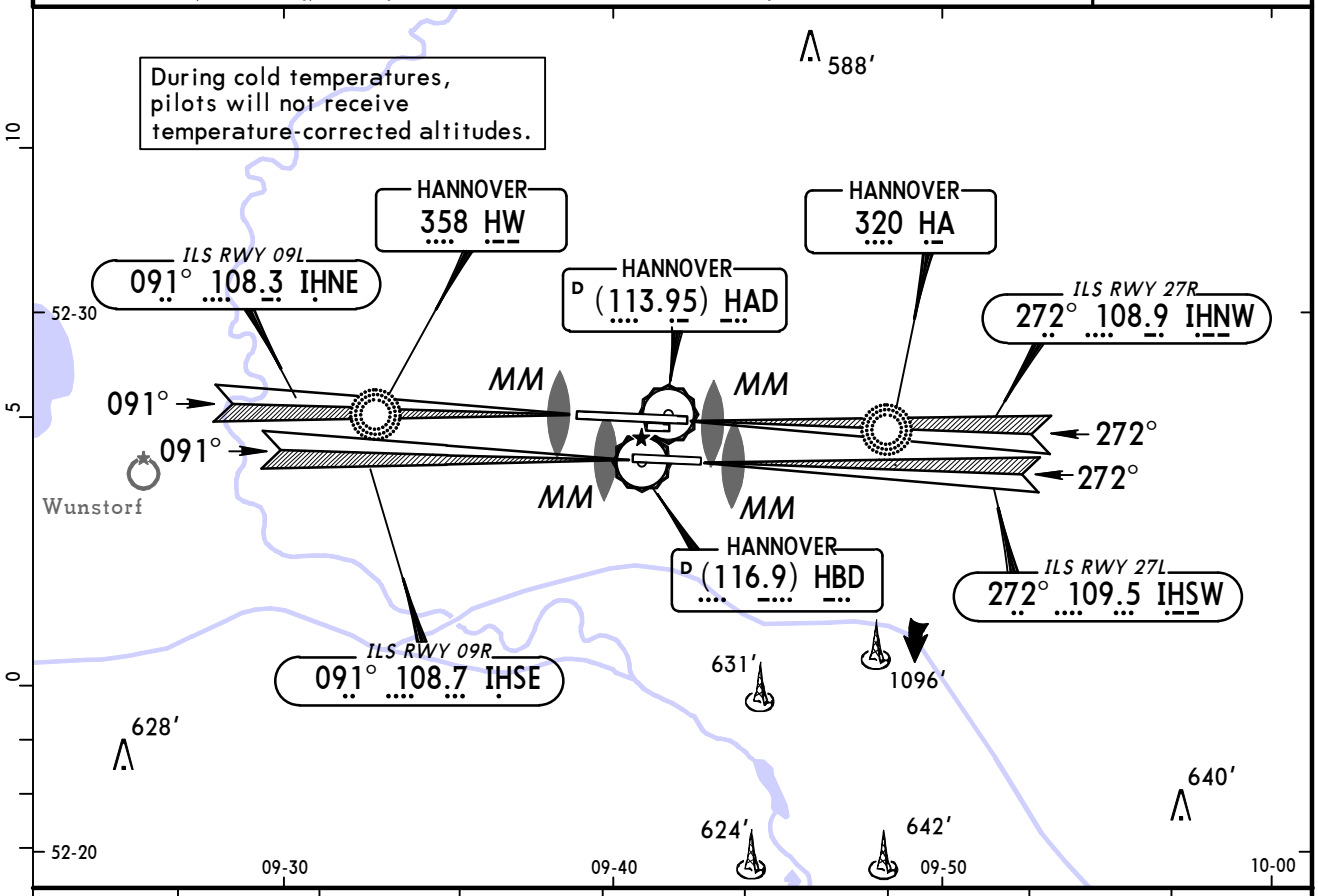
*D-ATIS	BREMEN Radar (APP)	HANNOVER Director (APP)	HANNOVER Tower	Ground
136.57	131.32	119.6	120.17 120.4	121.95

RADAR	Final Apch Crs By ATC	Minimum Alt See table below	DA(H) Refer to Minimums	Apt Elev 183′ RWY -See below

No MSA published

MISSED APCH: Climb STRAIGHT AHEAD to 4000′.

Alt Set: hPa (IN on req) Apt Elev: 7 hPa Trans level: By ATC Trans alt: 5000′



RADAR FIX	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	3300′	3000′	2700′	2400′	2100′	1800′	1500′	1200′

Minimum Alt/NM	10.0 FAF	5.0	4.0
SRE 09L, SRE 09R	3300′	—	1400′
SRE 27L, SRE 27R	3300′	1400′	—

RWY	09L	09R	27L	27R
ELEV	167′	172′	179′	169′

Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	2.83°	350	451	501	601	701	801
MAP at THR							

Lighting-Refer to Airport Chart

4000′

Standard STRAIGHT-IN LANDING

PANS OPS 4

	SRE 09L DA(H) 670′ (503′)		SRE 09R DA(H) 670′ (498′)		SRE 27L DA(H) 670′ (491′)		SRE 27R DA(H) 670′ (501′)	
		ALS out		ALS out		ALS out		ALS out
A B C D	RVR 1600m	CMV 2400m	RVR 1500m	CMV 2300m	RVR 1500m	CMV 2300m	RVR 1600m	CMV 2400m

CHANGES: Communications. Minimum altitudes.

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General Information

Location: Bremen Deu
IATA Code: BRE
Lat/Long: N53° 02.8' E008° 47.2'
Elevation: 14 ft

Airport Use: Public
Magnetic Variation: 1.5°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0618 Z
Sunset: 1658 Z,

Runway Information

Runway: 09
Length x Width: 6693 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 13 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Runway: 23
Length x Width: 2297 ft x 75 ft
Surface Type: asphalt
TDZ-Elev: 13 ft
Stopway: 197 ft

Runway: 27
Length x Width: 6693 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 14 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ

Communication Information

ATIS 132.375
Bremen Tower 134.825
Bremen Tower 120.325
Bremen Tower 37.835 Military
Bremen Ground Control 121.75

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Bremen Radar Approach Control 37.752 TCA Military
Bremen Radar Approach Control 125.65 TCA

1. GENERAL

1.1. ATIS

D-ATIS 132.37

1.2. NOISE ABATEMENT PROCEDURES

For additional depiction refer to 10-4.

1.2.1. LOCAL FLYING RESTRICTIONS

Between 2200-0700LT take-offs and landings are not permitted.

Exceptions:

- ACFT at least complying with ICAO Annex 16, Chapter 3 until 2230LT;
- Two Landings until 2300LT or delayed landings until 2400LT, both of ACFT at least complying with ICAO Annex 16, chapter 3, whose operators are ACFT operating agencies with their main maintenance facilities at Bremen APT, recognized by the approving authorities as 'Home Carrier';
- ACFT at least complying with ICAO Annex 16, Chapter 3, between 0600-0700LT;
- ACFT operated in the night airmail service;
- ACFT using Bremen APT as emergency and alternate APT for meteorological, technical or other safety reasons;
- ACFT using Bremen APT on a mission in disasters or rendering medical assistance;
- Flight checks conducted by the DFS.

Deviating from these regulations, the 'Senator fuer Wirtschaft und Haefen' may grant exceptions in justified cases, especially to avoid considerable disturbance to air traffic or in cases of special public interest.

1.2.2. REVERSE THRUST

Reverse thrust other than idle thrust shall only be used to an extent necessary for safety reasons.

1.2.3. RUN-UP TESTS

Engine run-ups are subject to approval by the APT operator and shall be announced to apron control, phone 0421/5595-241/243. ATC clearance does not replace approval by the aeronautical authority/Luftaufsicht.

Engine run-ups are permitted only on the positions allocated for this purpose.

Idle test runs are not affected by this regulation.

Positions allocated for engine run-ups:

- Ramp 2 for ACFT up to 5700 KGS MPW. When using the run-up positions, TWY B shall not be affected by propeller turbulence;
- Subsidiary RWY 23, south of the compensating area for all ACFT.

Engine run-ups are only permitted MON-FRI 0630-2200LT and SAT 0700-1300LT and 1500-1700LT.

Between 0530-0630LT engine run-ups are only permitted in case a scheduled departure between 0630-0730LT is imminent, and a test run for safety reasons must be carried out shortly before take-off.

On Sundays and public holidays engine run-ups are permitted only in substantiated individual cases between 0900-1200LT and between 1500-1900LT if

- an approved take-off is imminent
- a test run is necessary for safety reasons

and

- the prospective take-off is absolutely necessary to avoid considerable disturbances in the operational proceedings of the ACFT operating agency.

1.3. TAXI PROCEDURES

Northern ACFT stand taxilane (GAP 1) and TWY G between TWY C and stand 10A MAX wingspan 171'/52m.

TWY H and Southern ACFT stand taxilane (GAP 2) MAX wingspan 118'/36m.

TWY L MAX wingspan 102'/31m.

Apron 2 between TWY A and stand 17 MAX wingspan 98'/30m.

TWY K MAX wingspan 79'/24m.

1.4. PARKING INFORMATION

On stands 01 thru 09 push-back required.

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2. ARRIVAL

2.1. CAT II/III OPERATIONS

RWY 09/27 approved for CAT II/III operations, special aircrew and ACFT certification required.

2.2. TAXI PROCEDURES

JET ACFT of more than 20mt AUW, landing on RWY 27, shall leave RWY via TWY A unless otherwise instructed.

3. DEPARTURE

3.1. OTHER INFORMATION

3.1.1. TAKE-OFF RWY 23

RWY 23 available for ACFT up to 5700kg MTOM for take-offs under VFR at DAY via departure routes SIERRA and WHISKEY. ACFT will be cleared by Ground to taxi to RWY 23 via intersection D for departures via SIERRA and WHISKEY (appropriate winds assumed). If necessary request departures from RWY 27 and/or via NOVEMBER or LIMA.

3.1.2. DATALINK DEPARTURE CLEARANCE (DCL)

DFS (Deutsche Flugsicherung GmbH) is offering start-up and enroute clearances using Datalink.

The following time parameters apply:

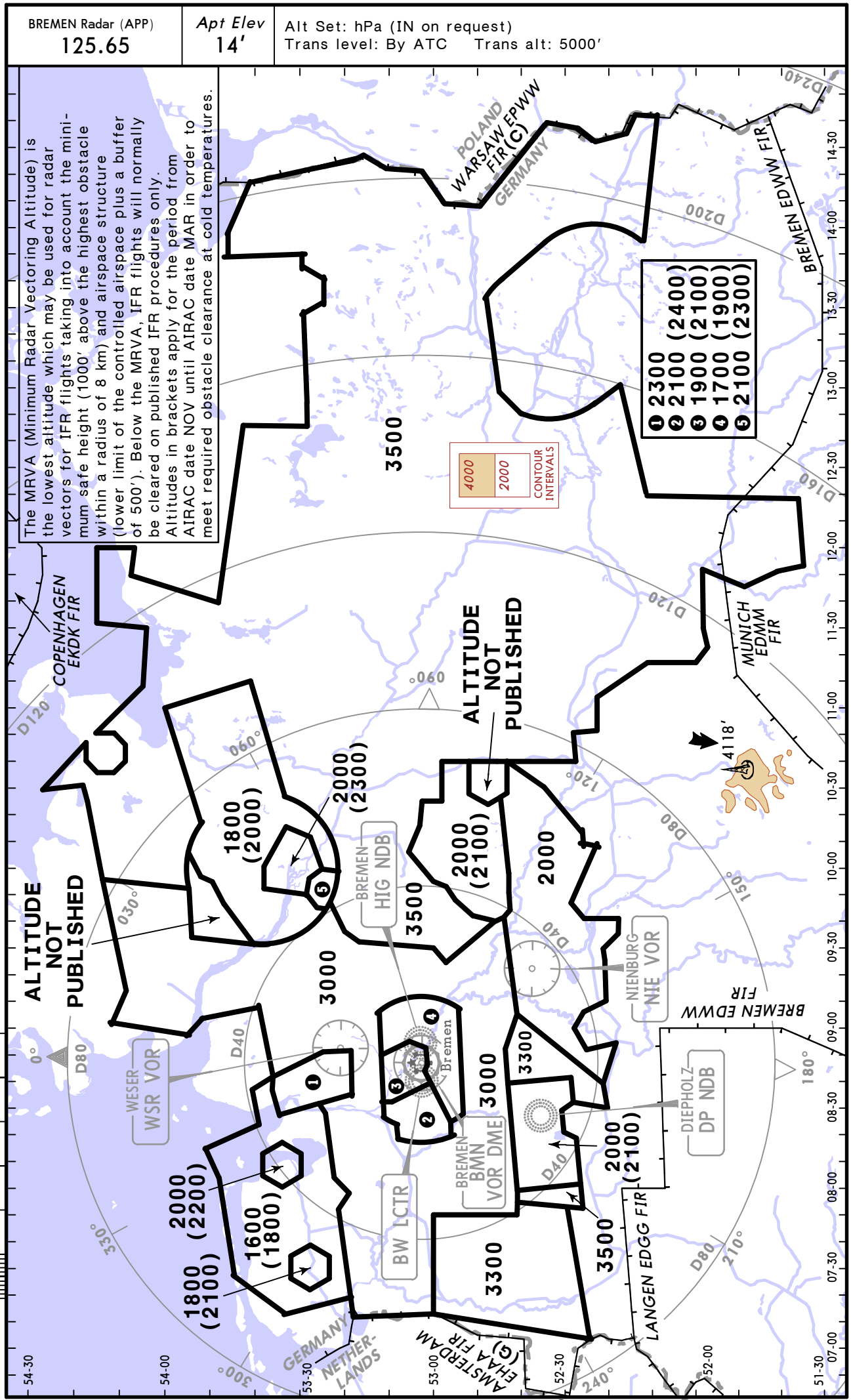
t_i 25 min prior to EOBT for unregulated flights.
30 min prior to CTOT for ATFM regulated flights.

t_t 11 min prior to EOBT for unregulated flights.
16 min prior to CTOT for ATFM regulated flights.

t_l 5 min

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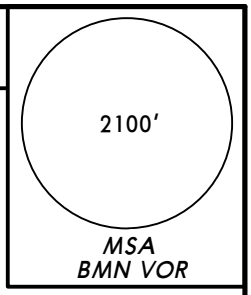
BREMEN Radar (APP) 125.65	Apt Elev 14′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′



CHANGES: Sectors & altitudes.

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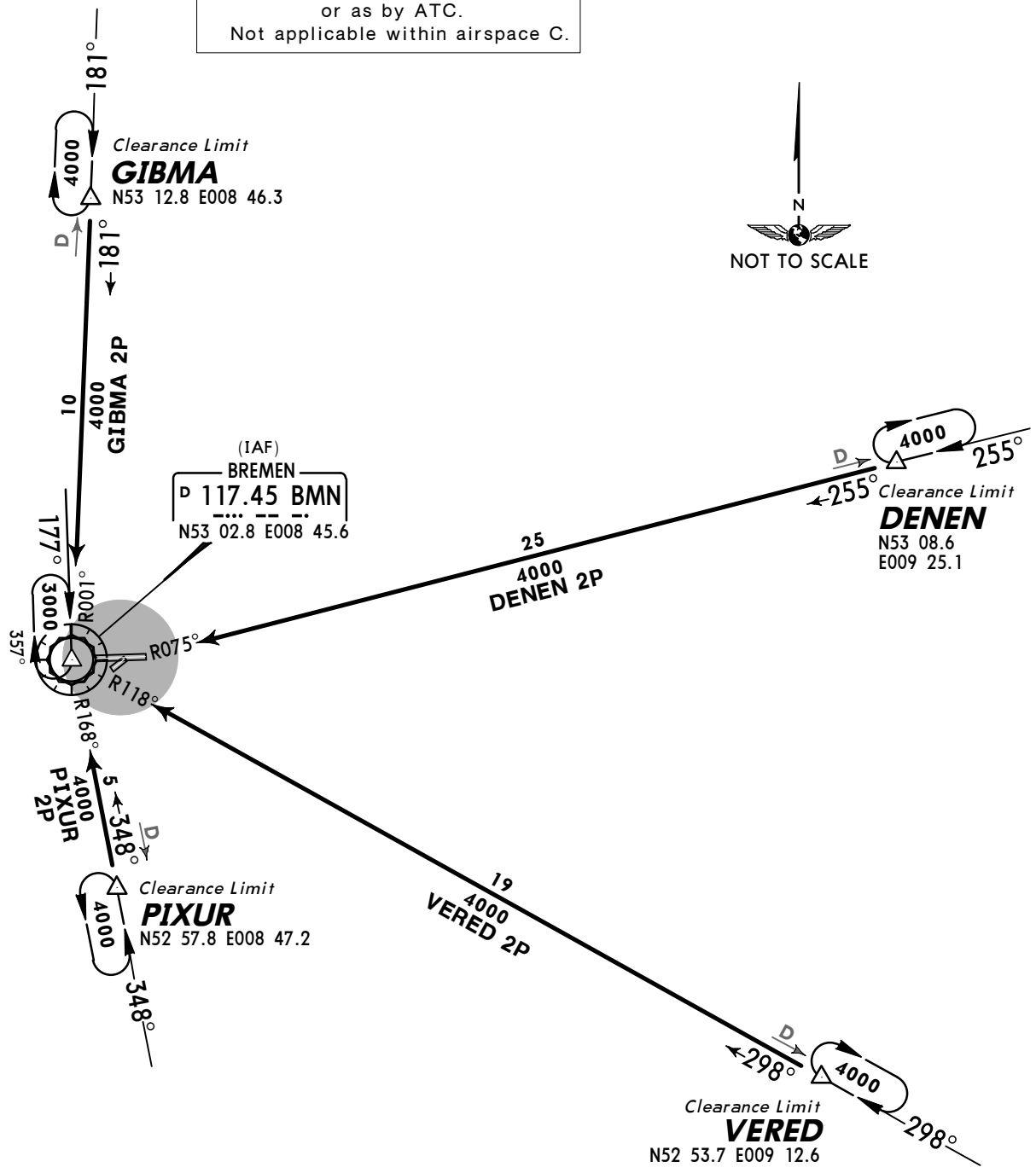
D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
132.37	14′	Trans level: By ATC Trans alt: 5000′



DENEN TWO PAPA (DENEN 2P) *[DENE2P]*
GIBMA TWO PAPA (GIBMA 2P) *[GIBM2P]*
PIXUR TWO PAPA (PIXUR 2P) *[PIXU2P]*
VERED TWO PAPA (VERED 2P) *[VERE2P]*
RWYS 09, 27 ARRIVALS

BRNAV AND NON-RNAV AIRCRAFT EXPECT
RADAR VECTORS TO FINAL APPROACH
GPS/FMS-AIRCRAFT EXPECT RESPECTIVE
TRANSITION ON CHARTS 10-2B - 10-2E

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



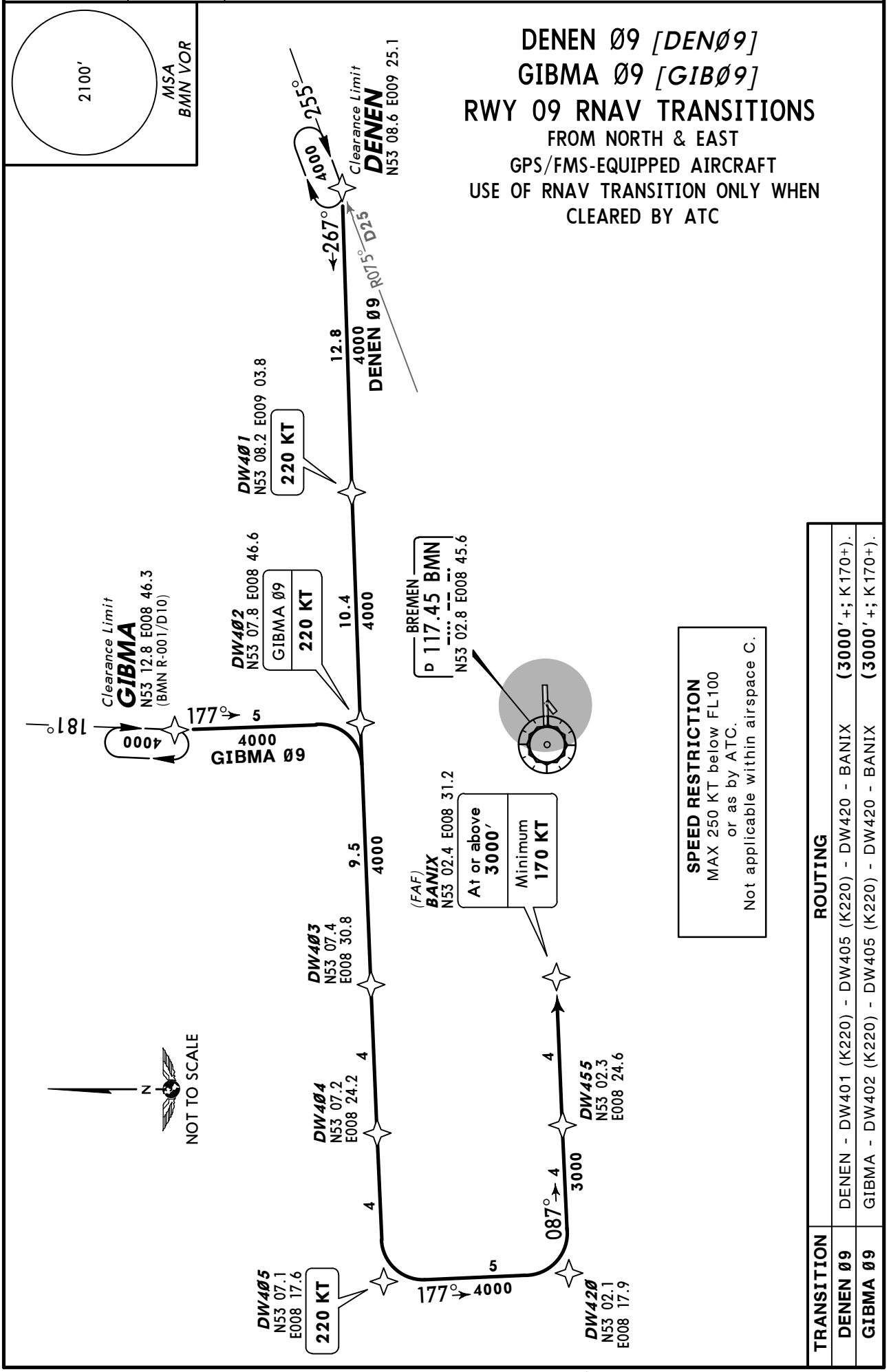
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D-ATIS	Apt Elev
132.37	14′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.

DENEN Ø9 *[DENØ9]*
GIBMA Ø9 *[GIBØ9]*
RWY 09 RNAV TRANSITIONS

FROM NORTH & EAST
GPS/FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

TRANSITION	ROUTING
DENEN Ø9	DENEN - DW401 (K220) - DW405 (K220) - DW420 - BANIX (3000′+; K170+).
GIBMA Ø9	GIBMA - DW402 (K220) - DW405 (K220) - DW420 - BANIX (3000′+; K170+).

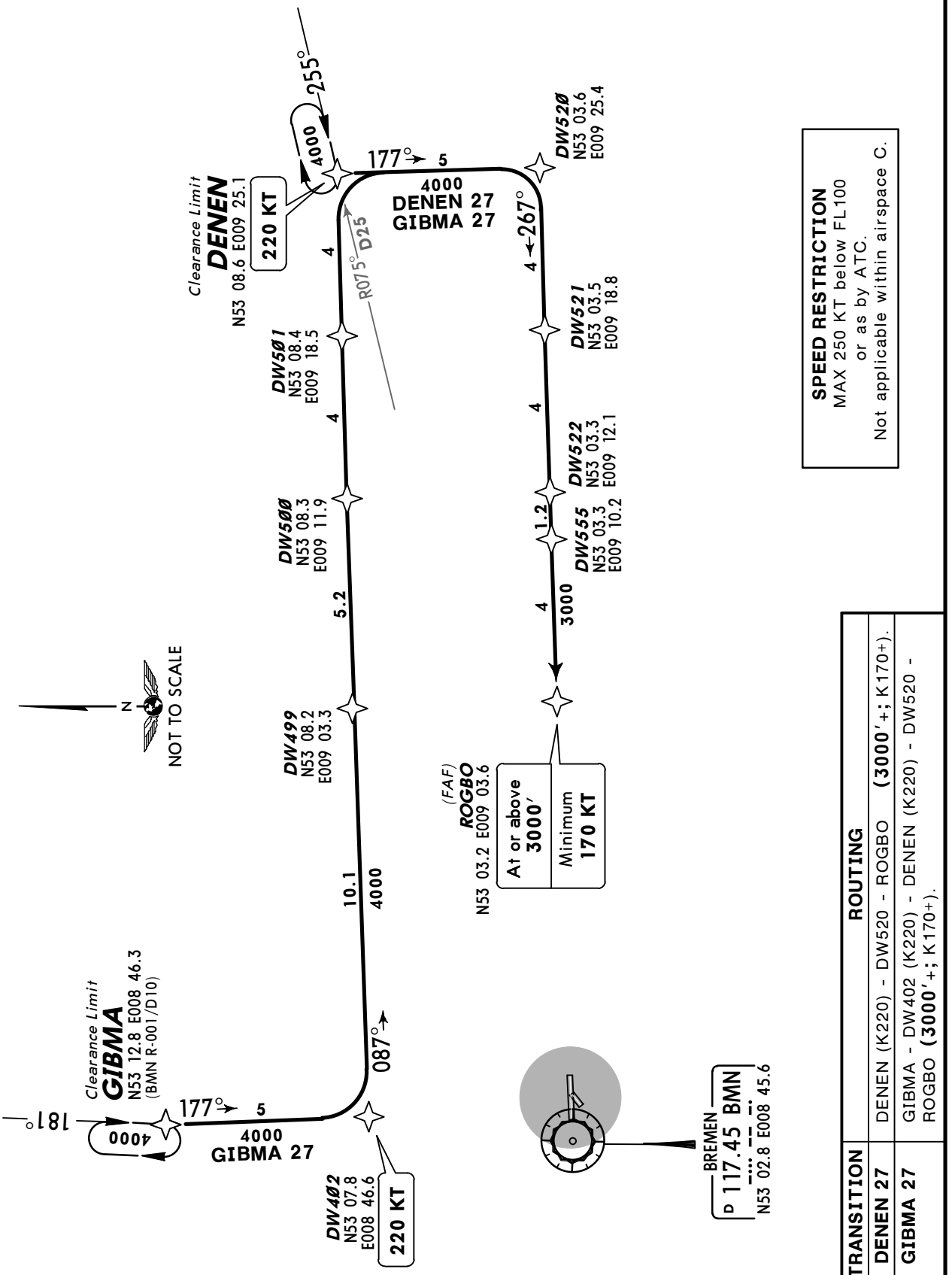
CHANGES: Crossing at BANIX revised; DW421 renamed DW455; BMN coordinates.

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D-ATIS	Apt Elev	
132.37	14′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.

2100′
MSA
BMN VOR

DENEN 27 *[DEN27]*, GIBMA 27 *[GIB27]*
RWY 27 RNAV TRANSITIONS
FROM NORTH & EAST
GPS/FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



TRANSITION	ROUTING
DENEN 27	DENEN (K220) - DW520 - ROGBO (3000′+; K170+).
GIBMA 27	GIBMA - DW402 (K220) - DENEN (K220) - DW520 - ROGBO (3000′+; K170+).

CHANGES: RNAV transitions revised.

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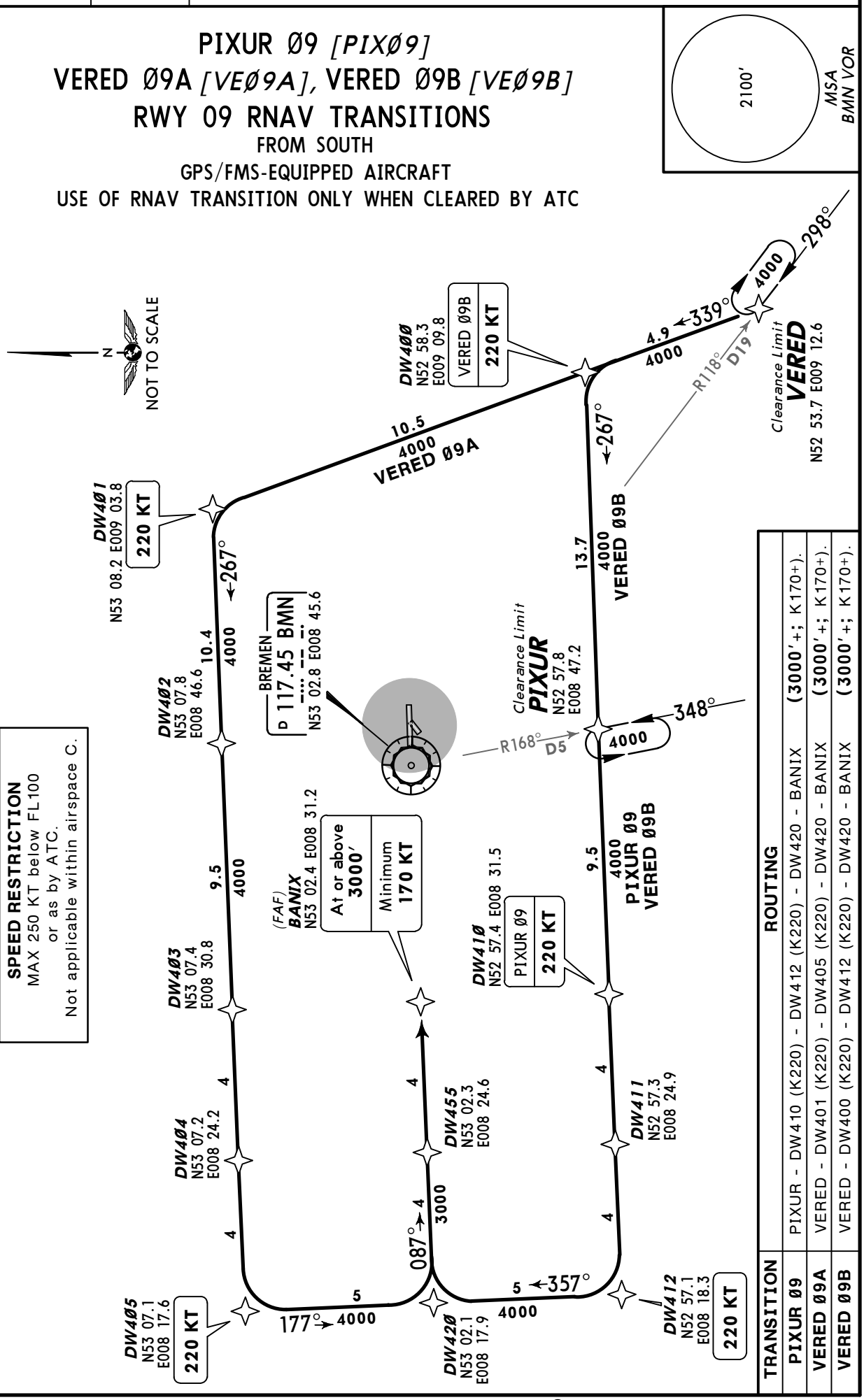
D-ATIS	Apt Elev	
132.37	14′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.

PIXUR Ø9 *[PIXØ9]*
VERED Ø9A *[VEØ9A]*, VERED Ø9B *[VEØ9B]*
RWY 09 RNAV TRANSITIONS

FROM SOUTH

GPS/FMS-EQUIPPED AIRCRAFT

USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



TRANSITION	ROUTING
PIXUR Ø9	PIXUR - DW41Ø (K22Ø) - DW412 (K22Ø) - DW42Ø - BANIX (3ØØØ′+; K17Ø+).
VERED Ø9A	VERED - DW4Ø1 (K22Ø) - DW4Ø5 (K22Ø) - DW42Ø - BANIX (3ØØØ′+; K17Ø+).
VERED Ø9B	VERED - DWØØ (K22Ø) - DW412 (K22Ø) - DW42Ø - BANIX (3ØØØ′+; K17Ø+).

CHANGES: RNAV transitions revised.

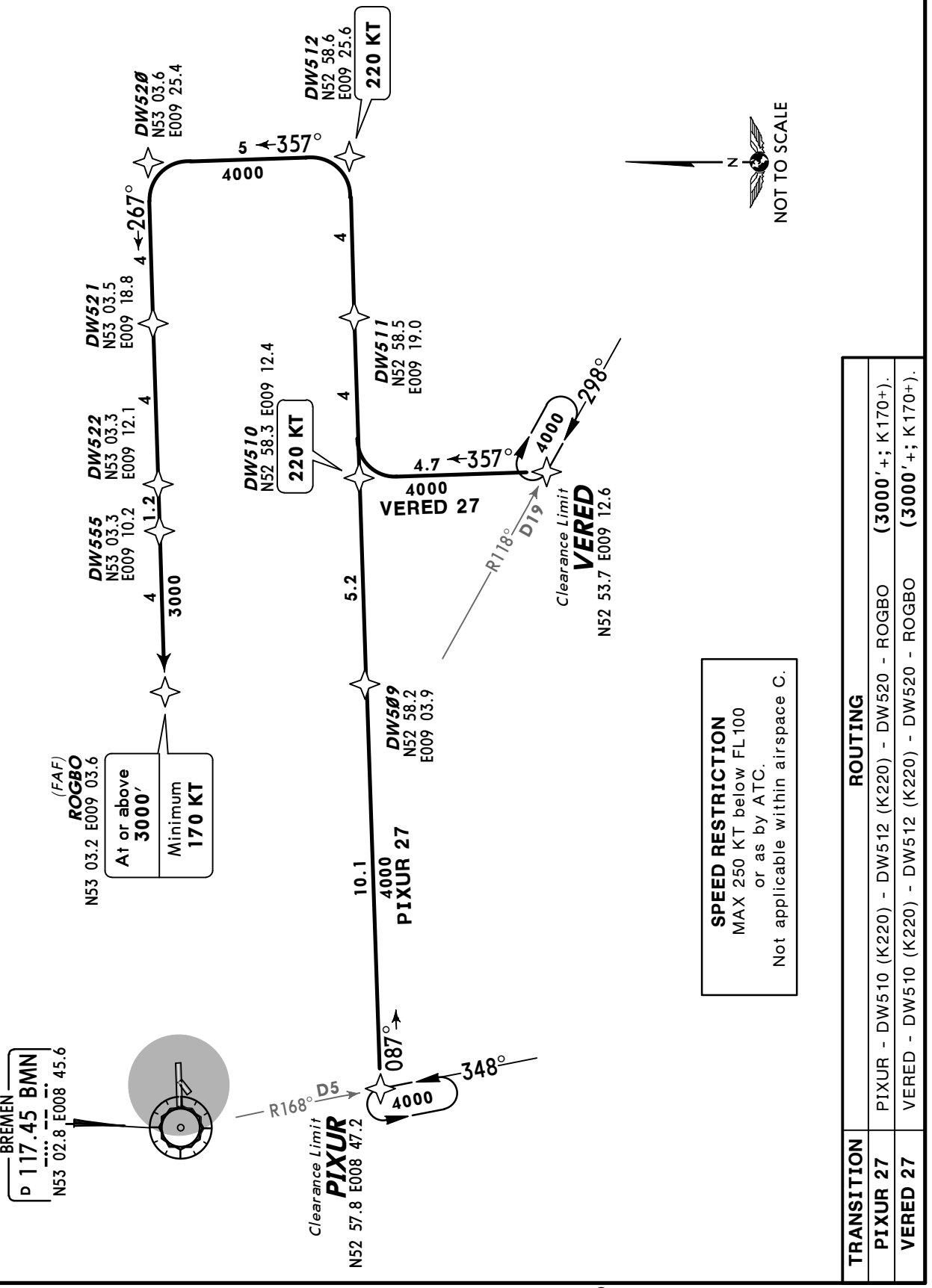
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D-ATIS	Apt Elev
132.37	14′

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′
1. On downwind expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.

MSA
BMN VOR
2100′

PIXUR 27 *[PIX27]*, VERED 27 *[VER27]*
RWY 27 RNAV TRANSITIONS
FROM SOUTH
GPS/FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

TRANSITION	ROUTING
PIXUR 27	PIXUR - DW510 (K220) - DW512 (K220) - DW520 - ROGBO (3000′+; K170+).
VERED 27	VERED - DW510 (K220) - DW512 (K220) - DW520 - ROGBO (3000′+; K170+).

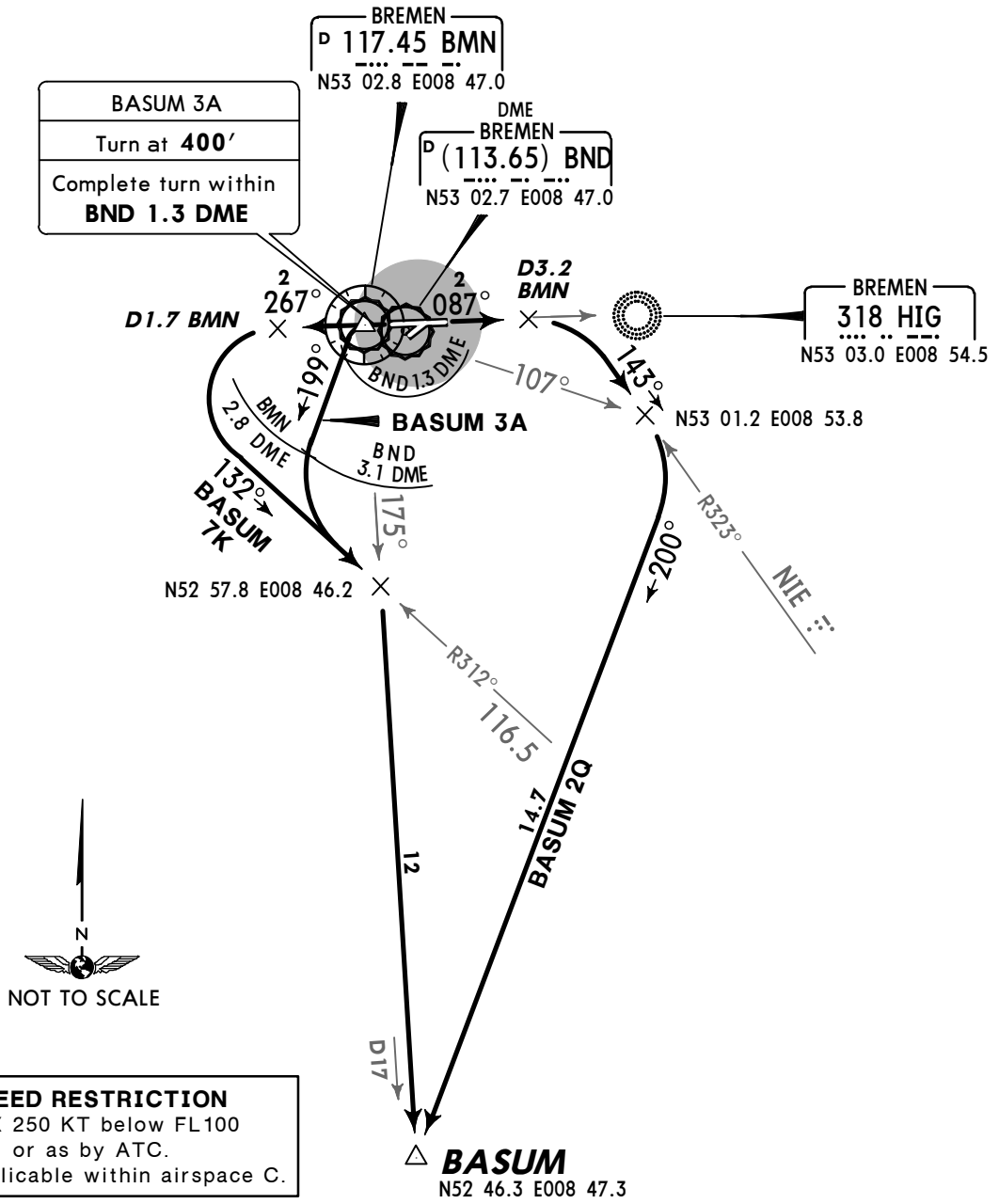
CHANGES: RNAV transitions revised.

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BREMEN Radar (APP) 125.65	Apt Elev 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

2100′
MSA
BMN VOR

BASUM THREE ALFA (BASUM 3A)
BASUM SEVEN KILO (BASUM 7K)
BASUM TWO QUEBEC (BASUM 2Q)
RWYS 27, 09 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	RWY	ROUTING
BASUM 3A ❶	**27**	Climb straight ahead to **400′,** turn LEFT, complete turn within BND 1.3 DME, 199° track to BMN 2.8 DME (BND 3.1 DME), turn LEFT, intercept NIE R-312 inbound, intercept BMN R-175 to BASUM.
BASUM 7K		Climb straight ahead to BMN, BMN R-267 to D1.7 BMN, turn LEFT, intercept NIE R-312 inbound, intercept BMN R-175 to BASUM.
BASUM 2Q	**09**	Intercept 087° bearing towards HIG (BMN R-087), at D3.2 BMN turn RIGHT, intercept NIE R-323 inbound, when passing BMN R-107 ❷ turn RIGHT, 200° track to BASUM.

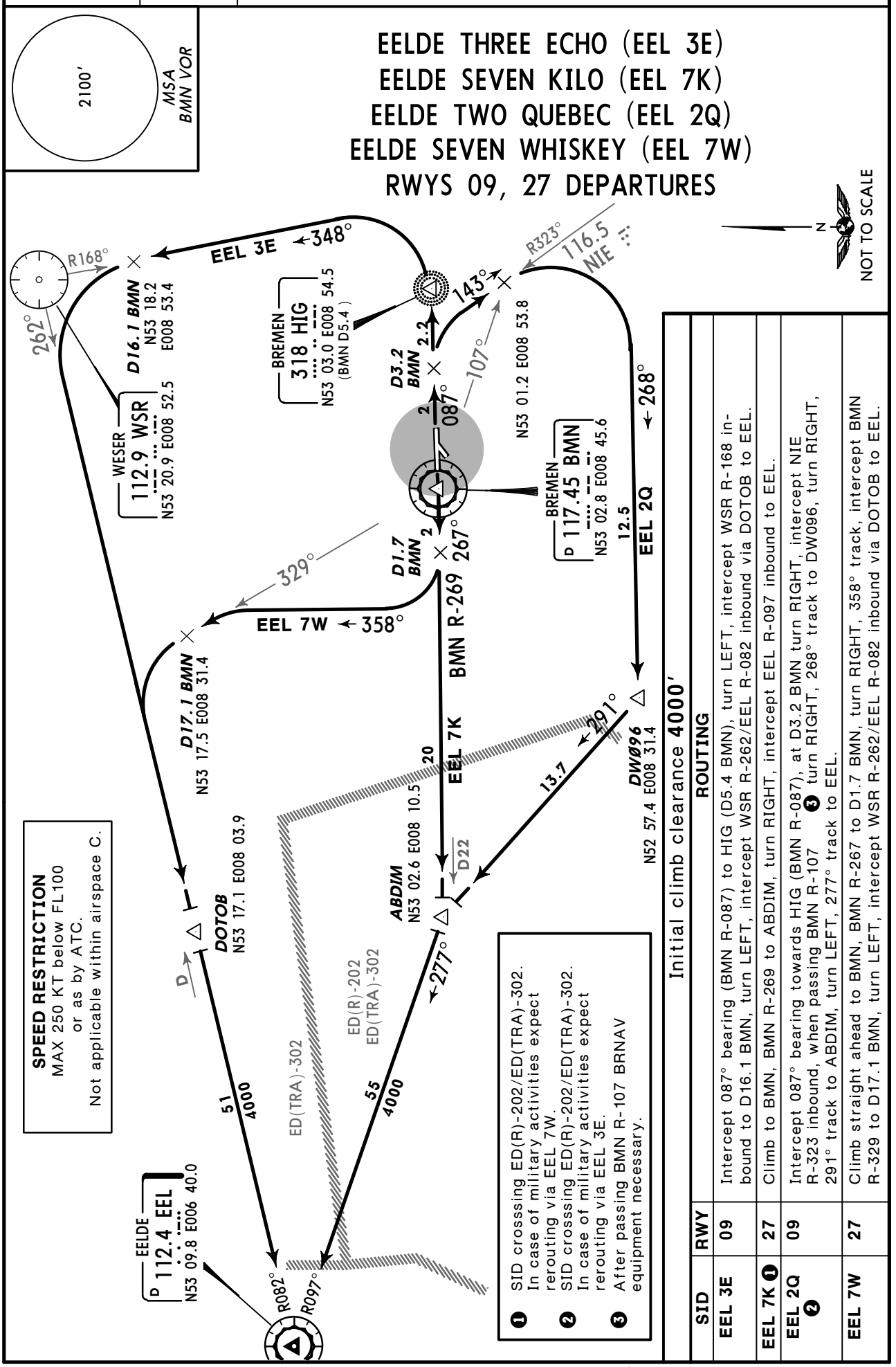
❶ If unable to comply, file BASUM 7K. ❷ After passing BMN R-107 BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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BREMEN Radar (APP) 125.65	Apt Elev 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

EELDE THREE ECHO (EEL 3E)
EELDE SEVEN KILO (EEL 7K)
EELDE TWO QUEBEC (EEL 2Q)
EELDE SEVEN WHISKEY (EEL 7W)
RWYS 09, 27 DEPARTURES



Initial climb clearance 4000′

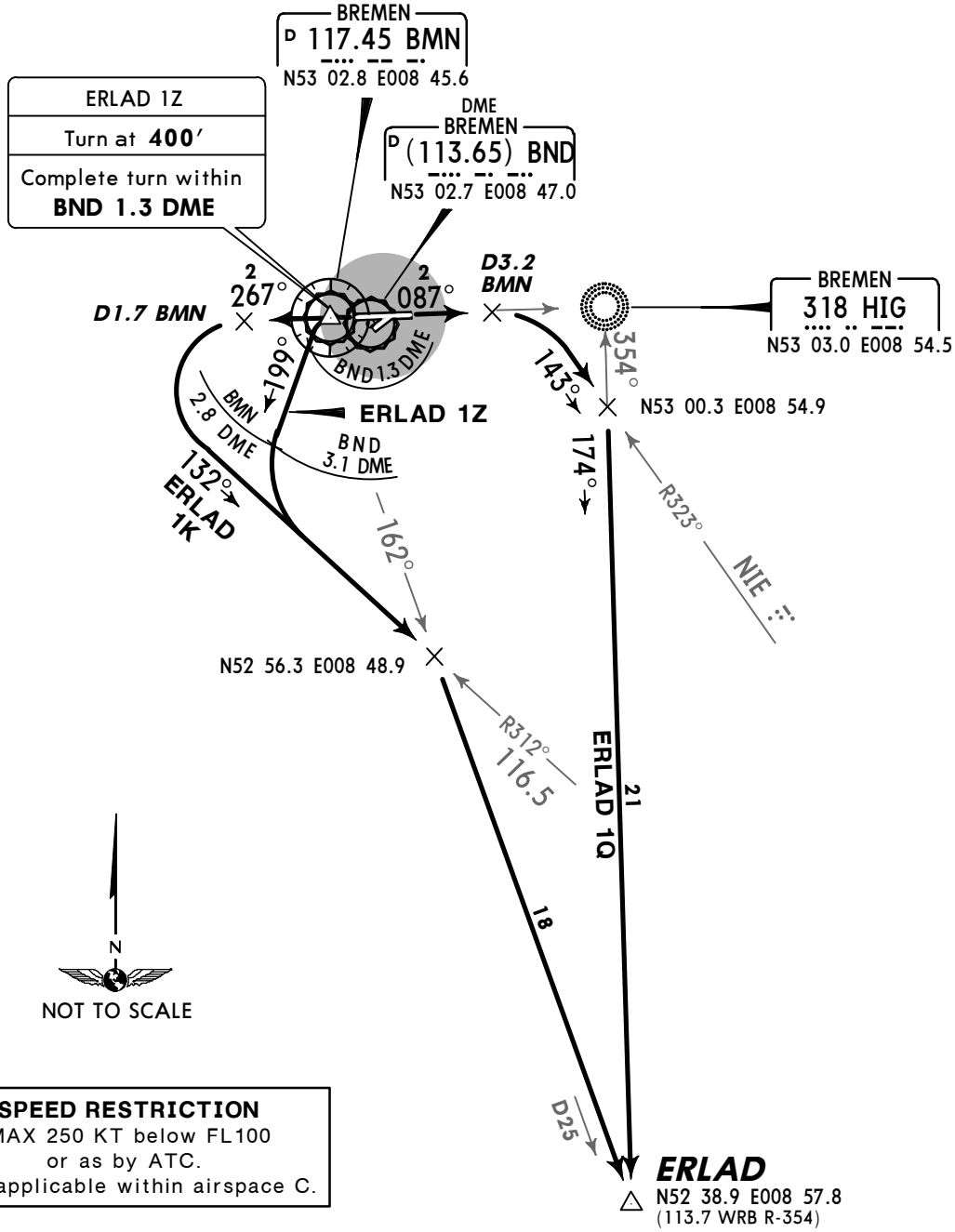
SID	RWY	ROUTING
EEL 3E	09	Intercept 087° bearing (BMN R-087) to HIG (D5.4 BMN), turn LEFT, intercept WSR R-168 inbound to D16.1 BMN, turn LEFT, intercept WSR R-262/EEL R-082 inbound via DOTOB to EEL.
EEL 7K ❶	27	Climb to BMN, BMN R-269 to ABDIM, turn RIGHT, intercept EEL R-097 inbound to EEL.
EEL 2Q ❷	09	Intercept 087° bearing towards HIG (BMN R-087), at D3.2 BMN turn RIGHT, intercept NIE R-323 inbound, when passing BMN R-107 ❸ turn RIGHT, 268° track to DW096, turn RIGHT, 291° track to ABDIM, turn LEFT, 277° track to EEL.
EEL 7W	27	Climb straight ahead to BMN, BMN R-267 to D1.7 BMN, turn RIGHT, 358° track, intercept BMN R-329 to D17.1 BMN, turn LEFT, intercept WSR R-262/EEL R-082 inbound via DOTOB to EEL.

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BREMEN Radar (APP) 125.65	Apt Elev 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

2100′
MSA
BMN VOR

ERLAD ONE KILO (ERLAD 1K)
ERLAD ONE QUEBEC (ERLAD 1Q)
ERLAD ONE ZULU (ERLAD 1Z)
RWYS 27, 09 DEPARTURES



Initial climb clearance **4000′**

SID	RWY	ROUTING
ERLAD 1K	**27**	Climb straight ahead to BMN, BMN R-267 to D1.7 BMN, turn LEFT, intercept NIE R-312 inbound, intercept BMN R-162 to ERLAD.
ERLAD 1Q	**09**	Intercept 087° bearing towards HIG (BMN R-087), at D3.2 BMN turn RIGHT, intercept NIE R-323 inbound, intercept 174° bearing from HIG/WRB R-354 inbound to ERLAD.
ERLAD 1Z ❶	**27**	Climb straight ahead to **400′,** turn LEFT, complete turn within BND 1.3 DME, 199° track to BMN 2.8 DME (BND 3.1 DME), turn LEFT, intercept NIE R-312 inbound, intercept BMN R-162 to ERLAD.

❶ If unable to comply, file ERLAD 1K.

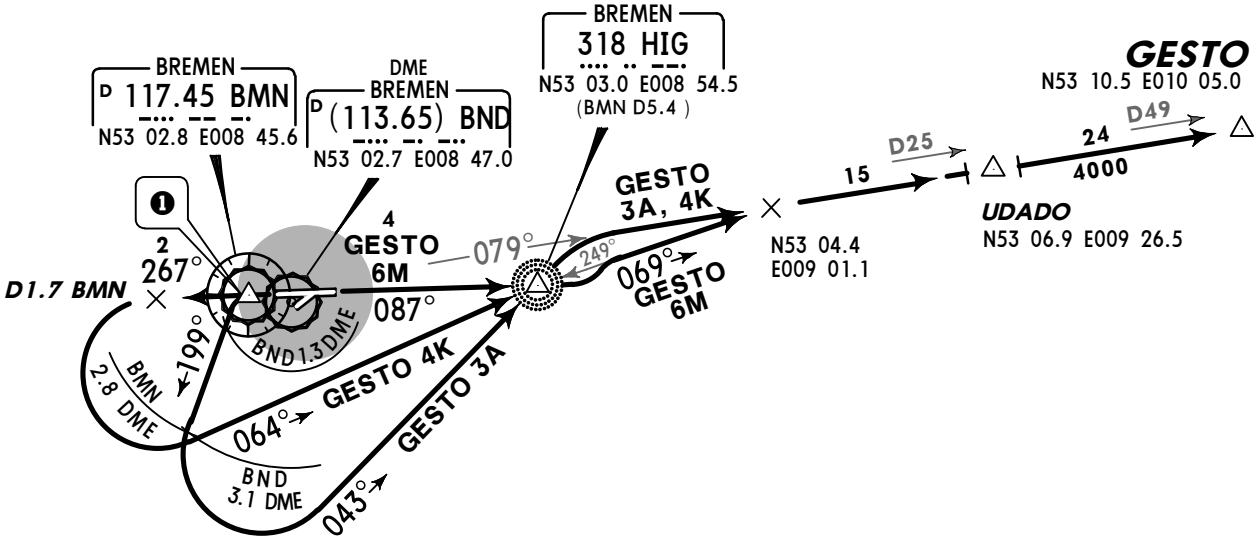
CHANGES: WRB SIDs replaced by ERLAD SIDs; chart reindexed.

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BREMEN Radar (APP) 125.65	Apt Elev 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

2100′
MSA
BMN VOR

GESTO THREE ALFA (GESTO 3A)
GESTO FOUR KILO (GESTO 4K)
GESTO SIX MIKE (GESTO 6M)
RWYS 27, 09 DEPARTURES



❶

GESTO 3A
Turn at **400′**
Complete turn within **BND 1.3 DME**

N
NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	RWY	ROUTING
GESTO 3A ❷	**27**	Climb straight ahead to **400′,** turn LEFT, complete turn within BND 1.3 DME, 199° track to BMN 2.8 DME (BND 3.1 DME), turn LEFT, intercept 043° bearing to HIG, turn RIGHT, intercept BMN R-079 via UDADO to GESTO.
GESTO 4K		Climb straight ahead to BMN, BMN R-267 to D1.7 BMN, turn LEFT, intercept 064° bearing to HIG, intercept BMN R-079 via UDADO to GESTO.
GESTO 6M	**09**	Intercept 087° bearing (BMN R-087) to HIG (D5.4 BMN), turn LEFT, intercept 069° bearing from HIG, intercept BMN R-079 via UDADO to GESTO.

❷ If unable to comply, file GESTO 4K.

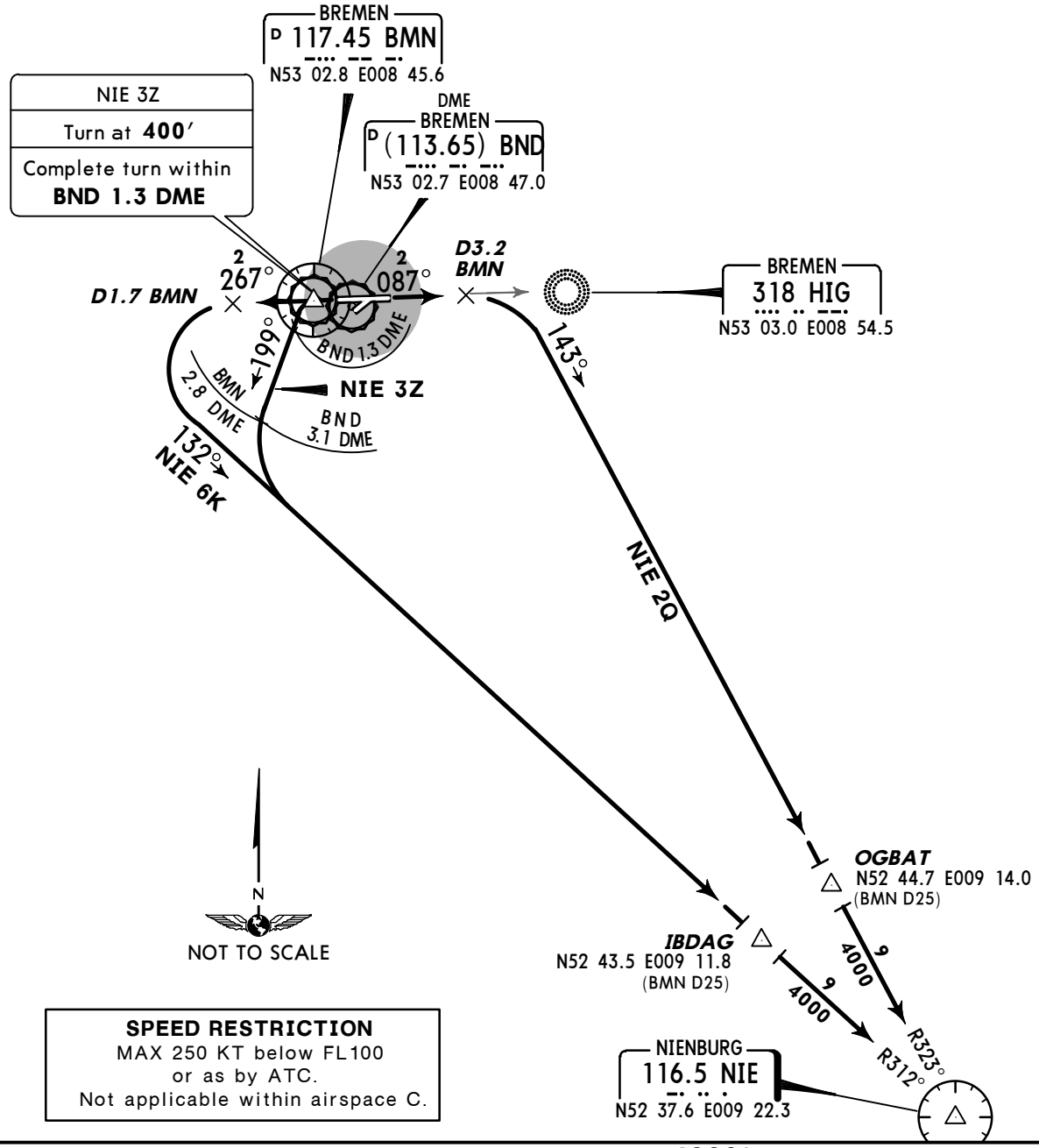
CHANGES: SIDs renumbered & revised; chart reindexed.

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2100′ MSA BMN VOR	BREMEN Radar (APP) 125.65	Apt Elev 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

NIENBURG SIX KILO (NIE 6K)
NIENBURG TWO QUEBEC (NIE 2Q)
NIENBURG THREE ZULU (NIE 3Z)
RWYS 27, 09 DEPARTURES

NO ACCESS TO AIRWAYS N850/UL126
EXCEPT WITH REQUESTED FL BELOW FL110



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	RWY	ROUTING
NIE 6K	**27**	Climb straight ahead to BMN, BMN R-267 to D1.7 BMN, turn LEFT, intercept NIE R-312 inbound via IBDAG to NIE.
NIE 2Q	**09**	Intercept 087° bearing towards HIG (BMN R-087), at D3.2 BMN turn RIGHT, intercept NIE R-323 inbound via OGBAT to NIE.
NIE 3Z ❶	**27**	Climb straight ahead to **400′,** turn LEFT, complete turn within BND 1.3 DME, 199° track to BMN 2.8 DME (BND 3.1 DME), turn LEFT, intercept NIE R-312 inbound via IBDAG to NIE.

❶ If unable to comply, file NIE 6K.

CHANGES: SIDs renumbered & revised; chart reindexed.

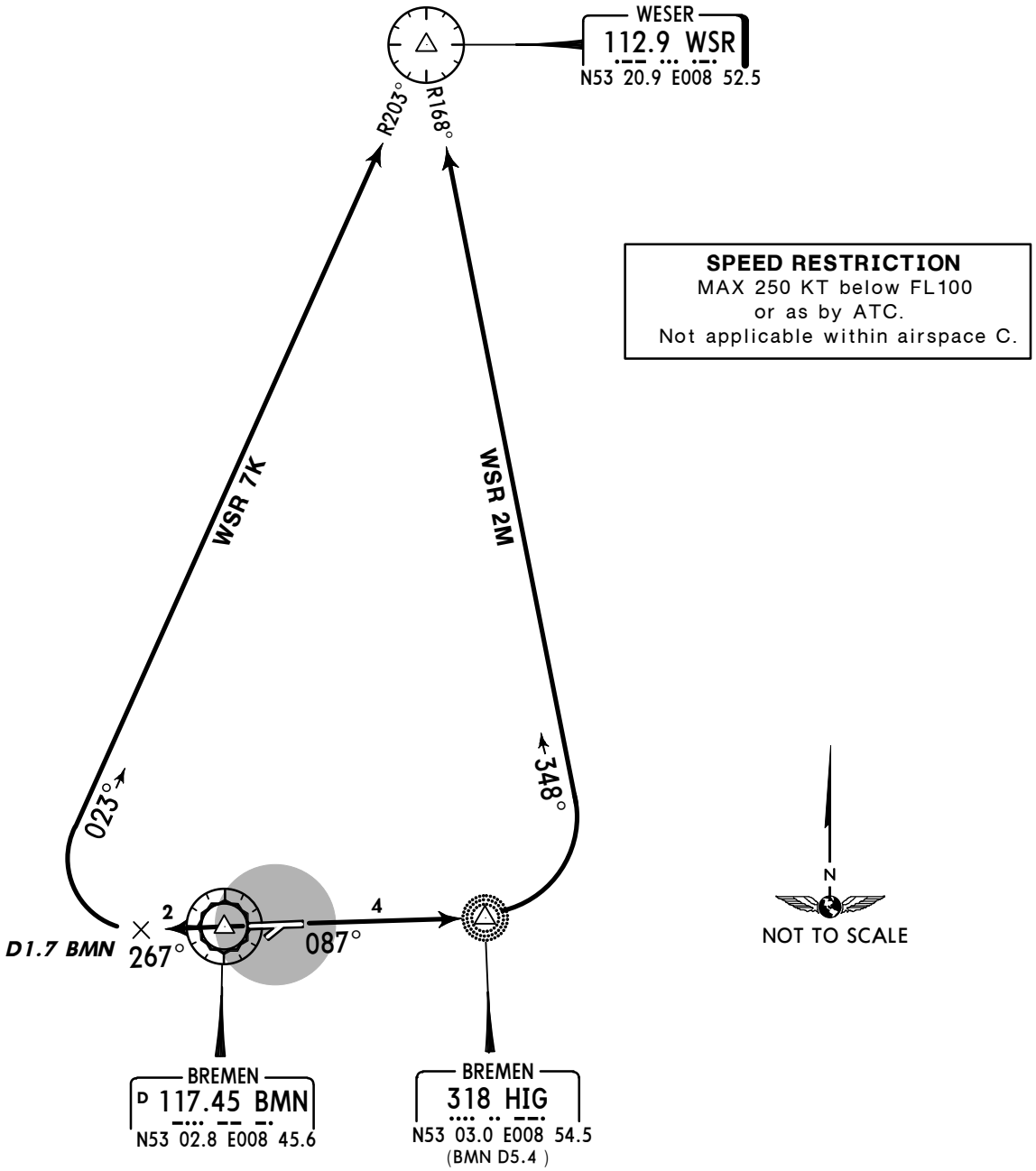
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BREMEN Radar (APP) 125.65	*Apt Elev* 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

2100′
MSA
BMN VOR

WESER SEVEN KILO (WSR 7K)
WESER TWO MIKE (WSR 2M)
RWYS 27, 09 DEPARTURES

NO ACCESS TO AIRWAYS (U)N125 - DOBAK
EXCEPT FOR DESTINATIONS EDWE AND EDWI



Initial climb clearance **4000′**

SID	RWY	ROUTING
WSR 7K	**27**	Climb straight ahead to BMN, BMN R-267 to D1.7 BMN, turn RIGHT, intercept WSR R-203 inbound to WSR.
WSR 2M	**09**	Intercept 087° bearing (BMN R-087) to HIG (D5.4 BMN), turn LEFT, intercept WSR R-168 inbound to WSR.

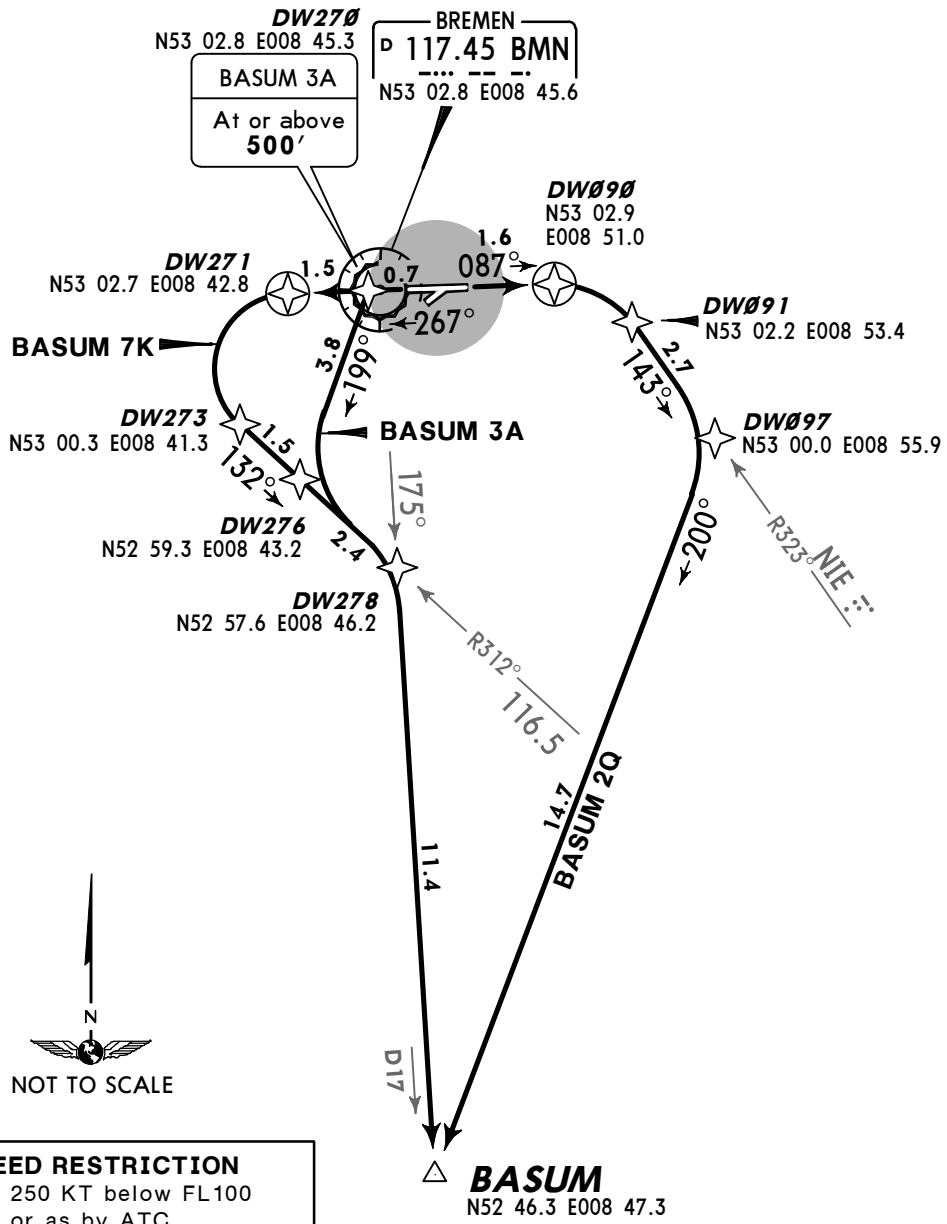
CHANGES: SIDs renumbered & revised.

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BREMEN Radar (APP) 125.65	Apt Elev 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

2100′
MSA
BMN VOR

BASUM THREE ALFA (BASUM 3A) *[BASU3A]*
BASUM SEVEN KILO (BASUM 7K) *[BASU7K]*
BASUM TWO QUEBEC (BASUM 2Q) *[BASU2Q]*
RWYS 27, 09 RNAV DEPARTURES (OVERLAY 10-3)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	RWY	ROUTING
BASUM 3A ❶	**27**	DW270 **(500′+) -** DW276 - DW278 - BASUM.
BASUM 7K		**(500′+) -** DW271 - DW273 - DW278 - BASUM.
BASUM 2Q	**09**	**(500′+) -** DW090 - DW091 - DW097 - BASUM.

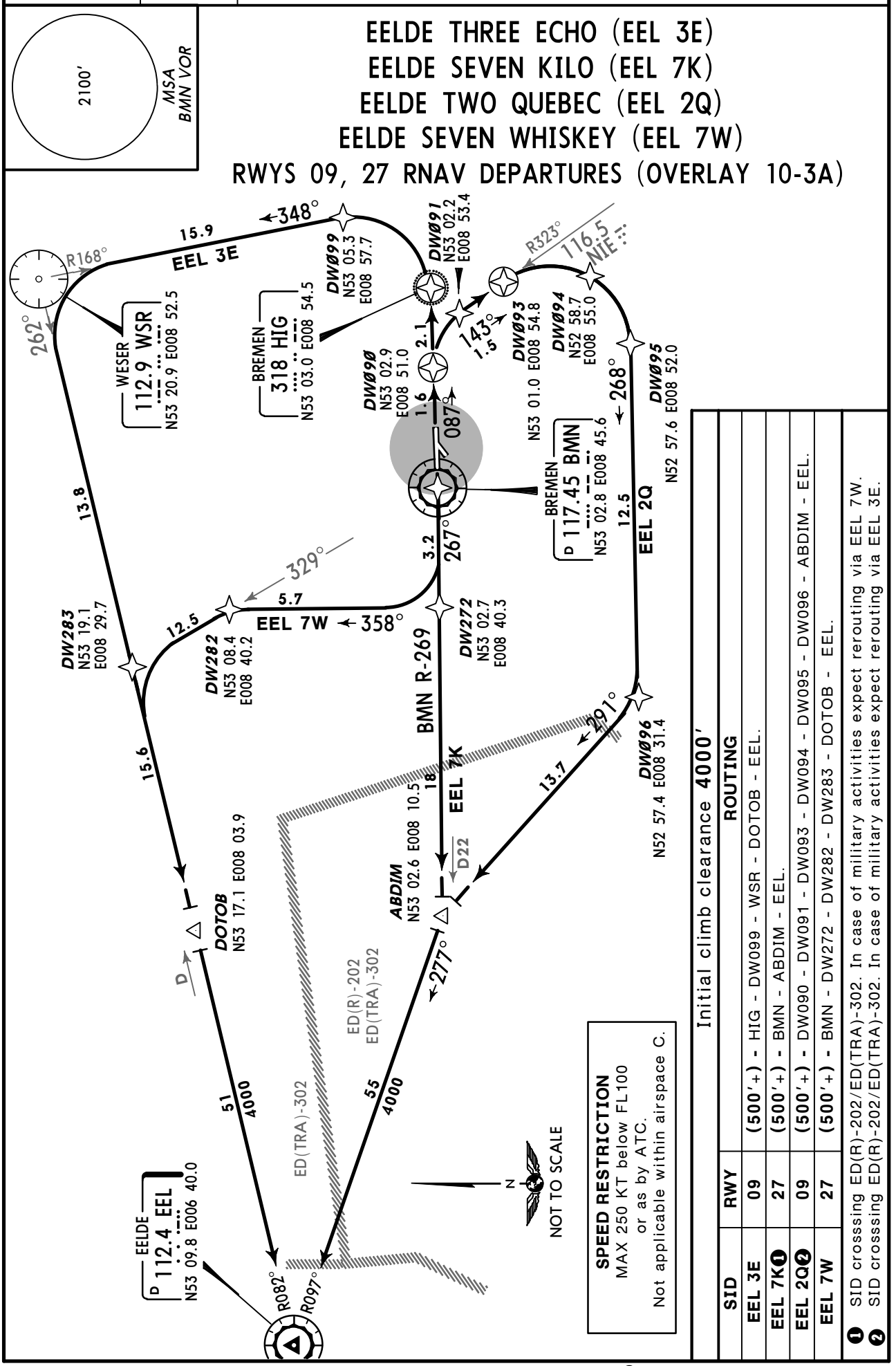
❶ If unable to comply, file BASUM 7K.

CHANGES: RNAV SIDs renumbered & revised.

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BREMEN Radar (APP) 125.65	*Apt Elev* 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

EELDE THREE ECHO (EEL 3E)
EELDE SEVEN KILO (EEL 7K)
EELDE TWO QUEBEC (EEL 2Q)
EELDE SEVEN WHISKEY (EEL 7W)
RWYS 09, 27 RNAV DEPARTURES (OVERLAY 10-3A)



Initial climb clearance **4000′**

SID	RWY	ROUTING
EEL 3E	09	(500′+) - HIG - DW099 - WSR - DOTOB - EEL.
EEL 7K❶	27	(500′+) - BMN - ABDIM - EEL.
EEL 2Q❷	09	(500′+) - DW090 - DW091 - DW093 - DW094 - DW095 - DW096 - ABDIM - EEL.
EEL 7W	27	(500′+) - BMN - DW272 - DW282 - DW283 - DOTOB - EEL.

❶ SID crosssing ED(R)-202/ED(TRA)-302. In case of military activities expect rerouting via EEL 7W.
❷ SID crosssing ED(R)-202/ED(TRA)-302. In case of military activities expect rerouting via EEL 3E.

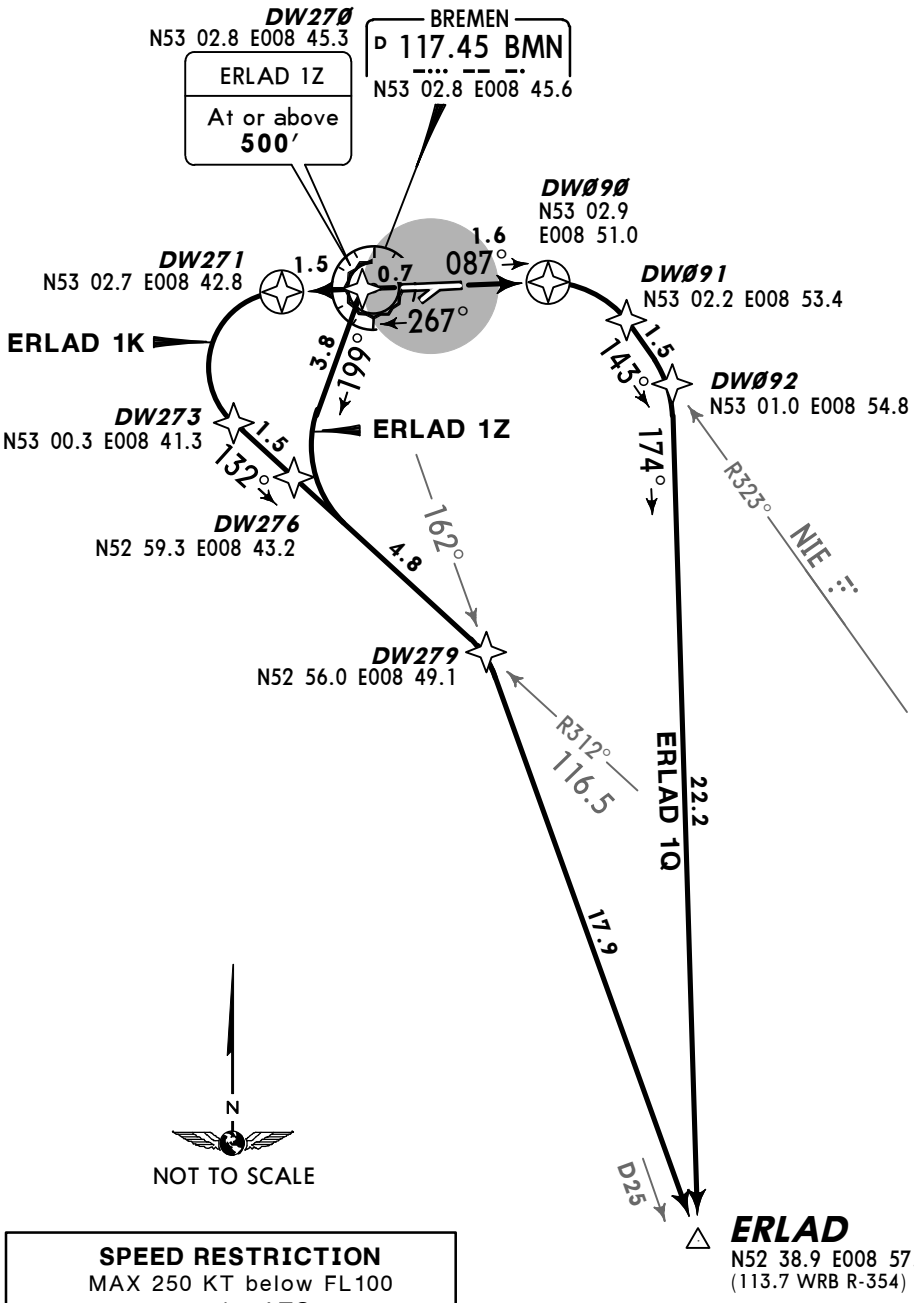
CHANGES: RNAV SIDs renumbered & revised.

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BREMEN Radar (APP) 125.65	Apt Elev 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

2100′
MSA
BMN VOR

ERLAD ONE KILO (ERLAD 1K) *[ERLA1K]*
ERLAD ONE QUEBEC (ERLAD 1Q) *[ERLA1Q]*
ERLAD ONE ZULU (ERLAD 1Z) *[ERLA1Z]*
RWYS 27, 09 RNAV DEPARTURES (OVERLAY 10-3B)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	RWY	ROUTING
ERLAD 1K	**27**	**(500′+) -** DW271 - DW273 - DW279 - ERLAD.
ERLAD 1Q	**09**	**(500′+) -** DW090 - DW091 - DW092 - ERLAD.
ERLAD 1Z ❶	**27**	DW270 **(500′+) -** DW276 - DW279 - ERLAD.

❶ If unable to comply, file ERLAD 1K.

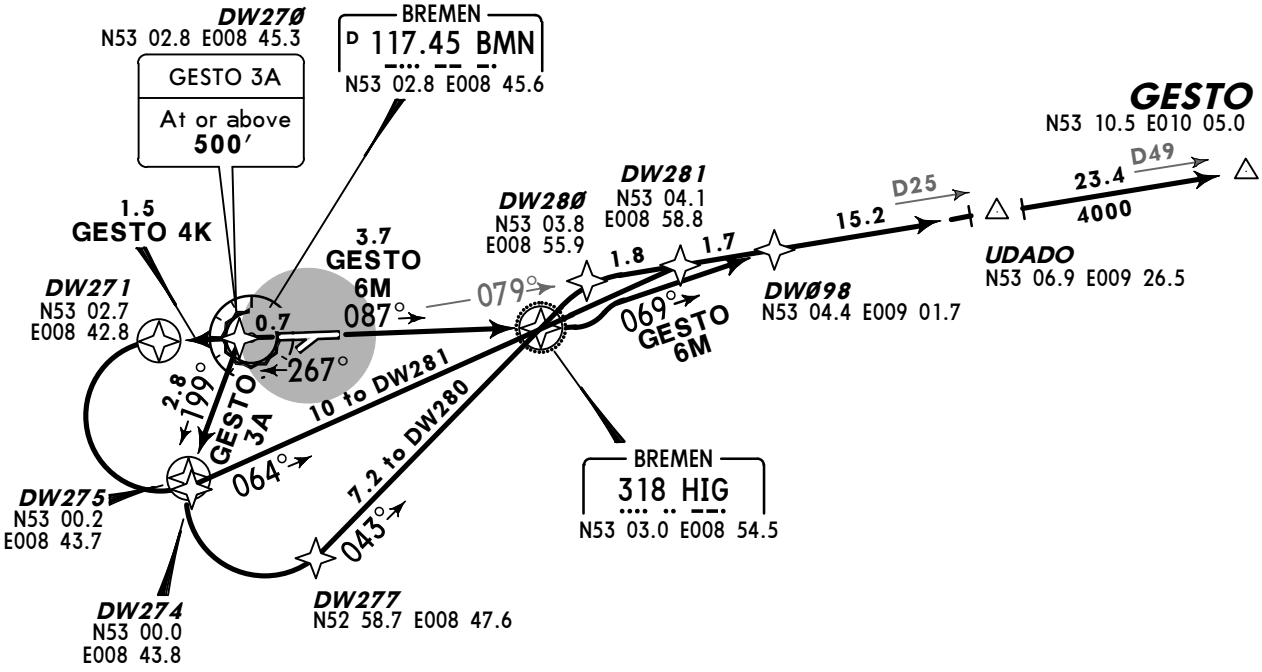
CHANGES: WRB RNAV SIDs replaced by ERLAD RNAV SIDs; chart reindexed.

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BREMEN Radar (APP) 125.65	Apt Elev 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

2100′
MSA
BMN VOR

GESTO THREE ALFA (GESTO 3A) *[GEST3A]*
GESTO FOUR KILO (GESTO 4K) *[GEST4K]*
GESTO SIX MIKE (GESTO 6M) *[GEST6M]*
RWYS 27, 09 RNAV DEPARTURES (OVERLAY 10-3C)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	RWY	ROUTING
GESTO 3A ❶	27	DW270 **(500′+) -** DW275 - DW277 - DW280 - UDADO - GESTO.
GESTO 4K		**(500′+) -** DW271 - DW274 - DW281 - UDADO - GESTO.
GESTO 6M	09	**(500′+) -** HIG - DW098 - UDADO - GESTO.

❶ If unable to comply, file GESTO 4K.

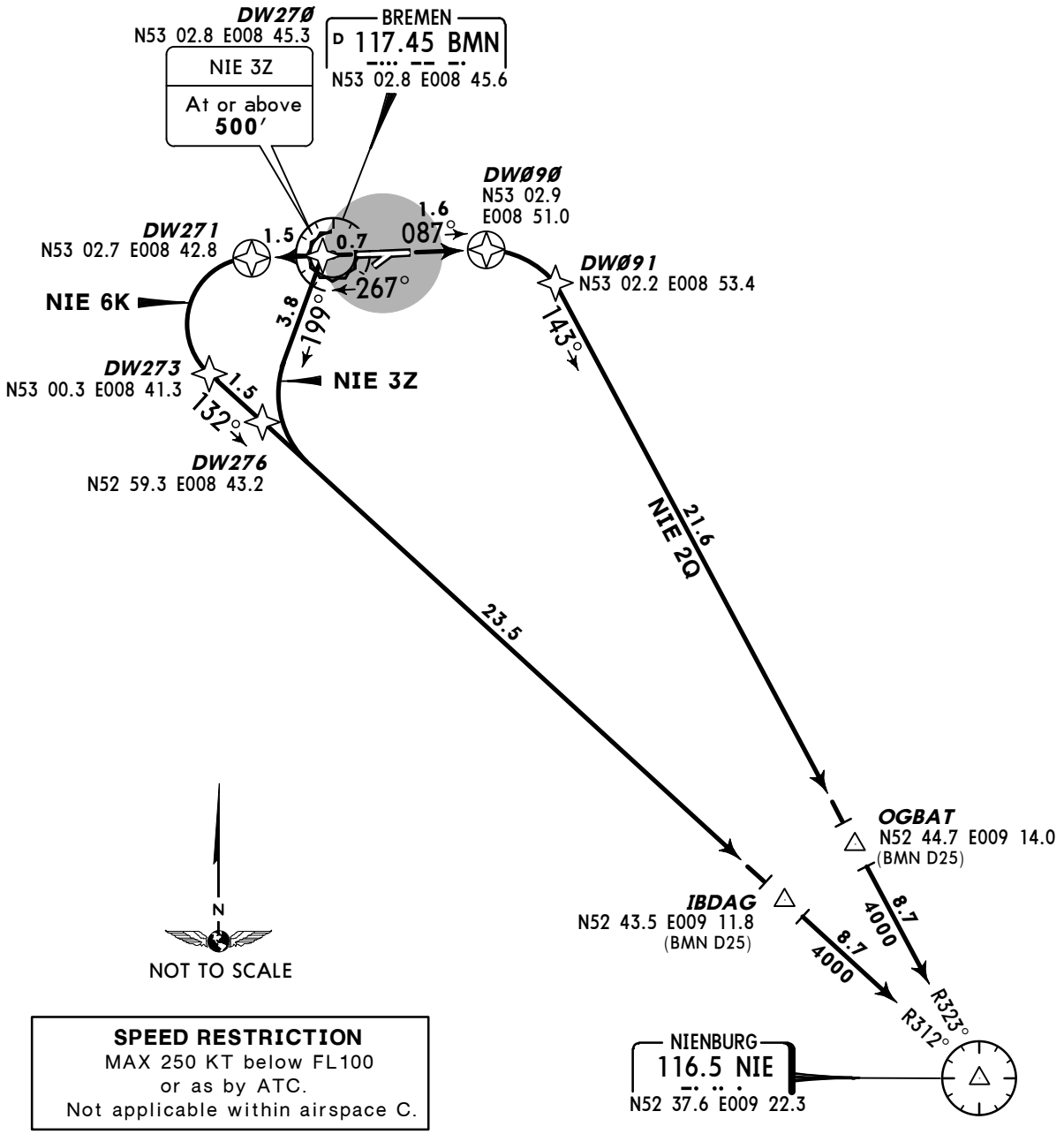
CHANGES: RNAV SIDs renumbered & revised; chart reindexed.

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BREMEN Radar (APP) 125.65	*Apt Elev* 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

2100′
MSA
BMN VOR

NIENBURG SIX KILO (NIE 6K)
NIENBURG TWO QUEBEC (NIE 2Q)
NIENBURG THREE ZULU (NIE 3Z)
RWYS 27, 09 RNAV DEPARTURES (OVERLAY 10-3D)
NO ACCESS TO AIRWAYS N850/UL126 EXCEPT WITH REQUESTED FL BELOW FL110



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **4000′**

SID	RWY	ROUTING
NIE 6K	**27**	**(500′+) -** DW271 - DW273 - IBDAG - NIE.
NIE 2Q	**09**	**(500′+) -** DW090 - DW091 - OGBAT - NIE.
NIE 3Z ❶	**27**	DW270 **(500′+) -** DW276 - IBDAG - NIE.

❶ If unable to comply, file NIE 6K.

CHANGES: RNAV SIDs renumbered & revised; chart reindexed.

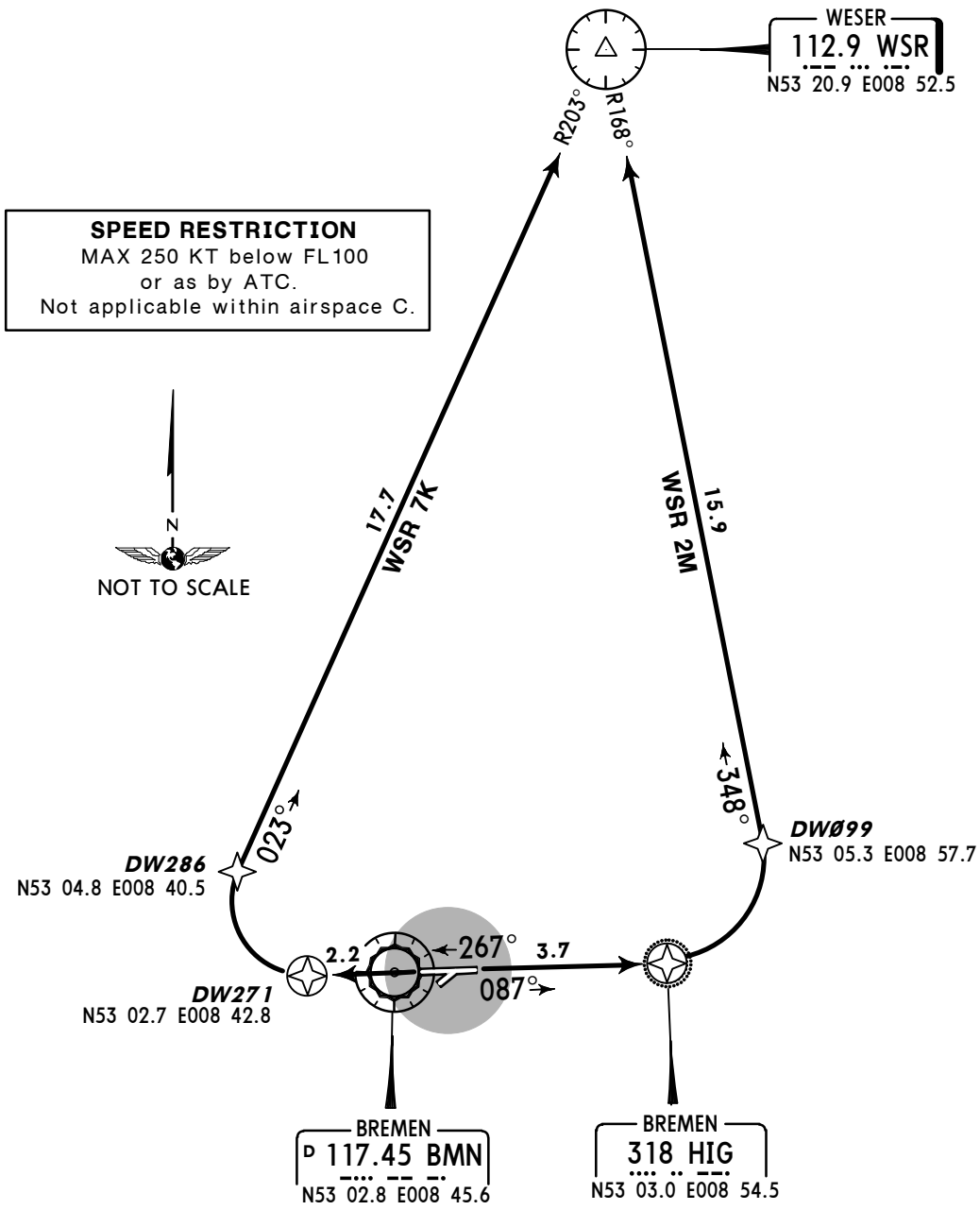
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BREMEN Radar (APP) 125.65	*Apt Elev* 14′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 09: EXPECT close-in obstacles.

2100′
MSA
BMN VOR

WESER SEVEN KILO (WSR 7K)
WESER TWO MIKE (WSR 2M)
RWYS 27, 09 RNAV DEPARTURES (OVERLAY 10-3E)

NO ACCESS TO AIRWAYS (U)N125 - DOBAK
EXCEPT FOR DESTINATIONS EDWE AND EDWI



Initial climb clearance **4000′**

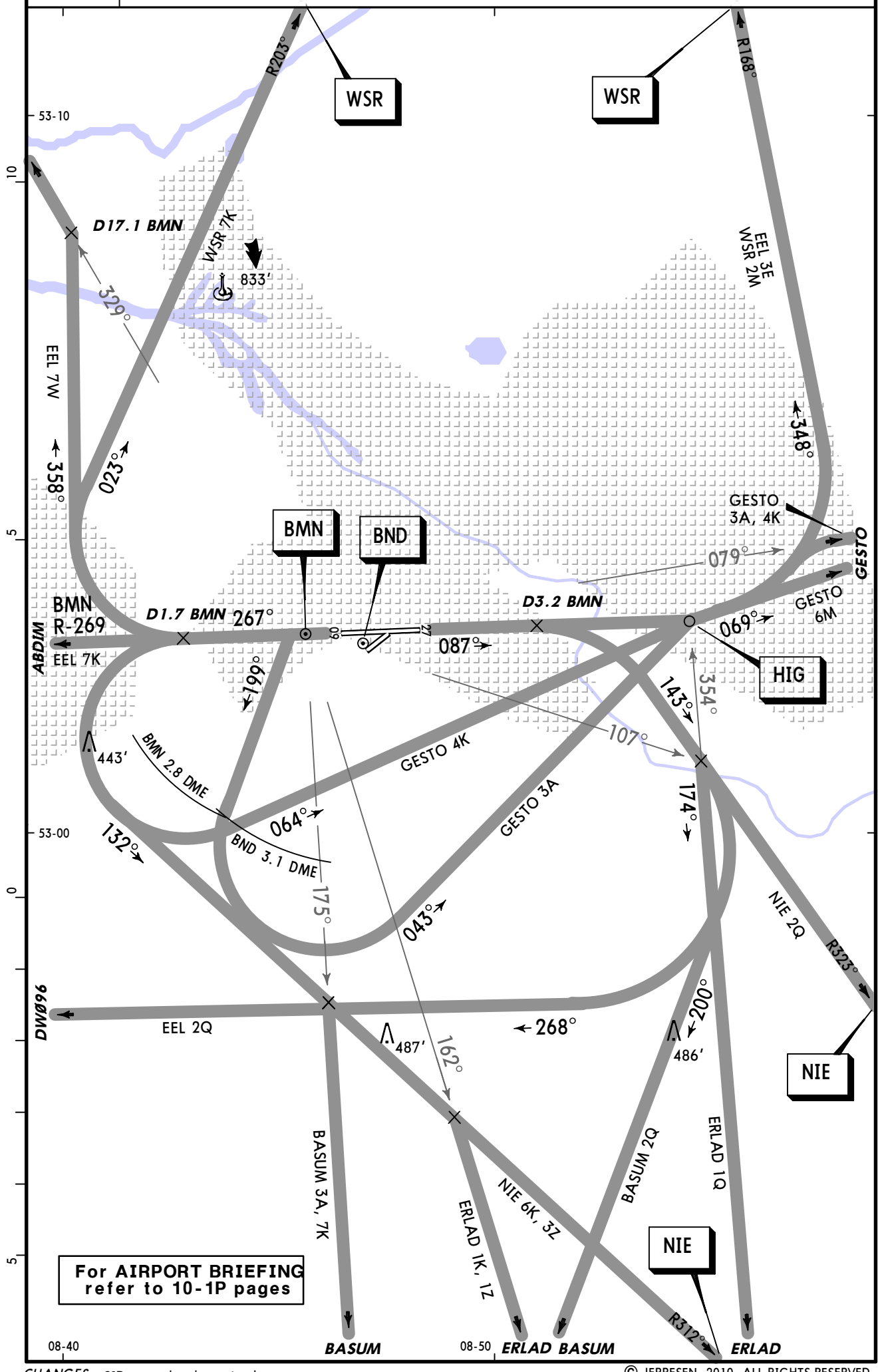
SID	RWY	ROUTING
WSR 7K	**27**	**(500′+) -** DW271 - DW286 - WSR.
WSR 2M	**09**	**(500′+) -** HIG - DW099 - WSR.

CHANGES: RNAV SIDs renumbered & revised.

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Apt Elev
14'

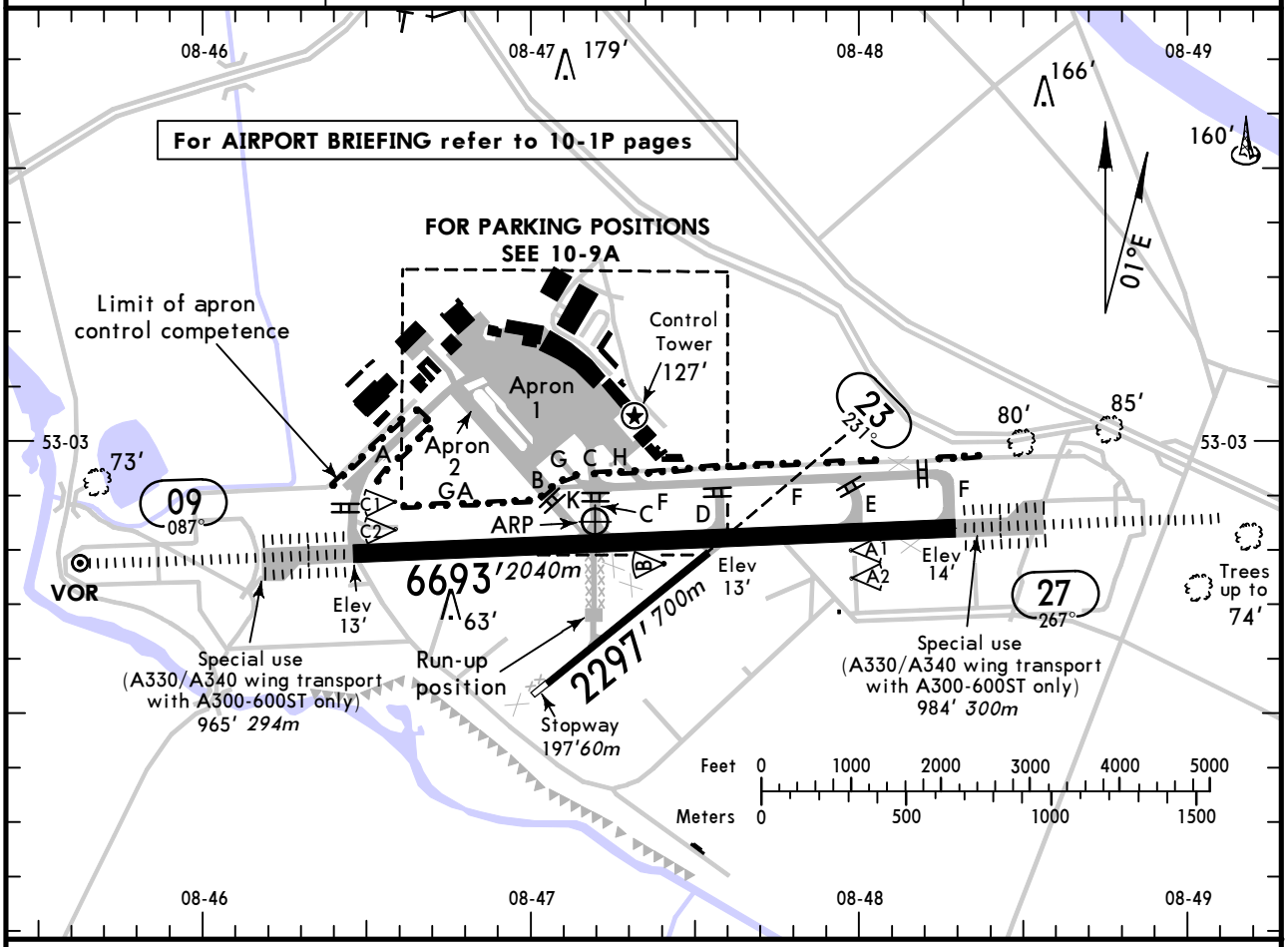
NOISE ABATEMENT



CHANGES: SIDs completely revised.

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D-ATIS	ACARS:	BREMEN Ground	Tower	
132.37	DCL	121.75	120.32	134.82



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
09 27	HIRL CL ❶ ALSF-II REIL TDZ PAPI-L (3.0°) RVR	6673′ 2034m	5633′ 1717m 5728′ 1746m	❷	148′ 45m
23		NA			75′ 23m

❶ spacing 15m, 47W, 10R & W, 10R

❷ TAKE-OFF RUN AVAILABLE

RWY 09:

From twy A int	6673′ (2034m)
twy B/C int	3740′ (1140m)
twy D int	2461′ (750m)

RWY 27:

From twy F int	6673′ (2034m)
twy E int	5282′ (1610m)
twy D int	3839′ (1170m)
twy B/C int	2461′ (750m)

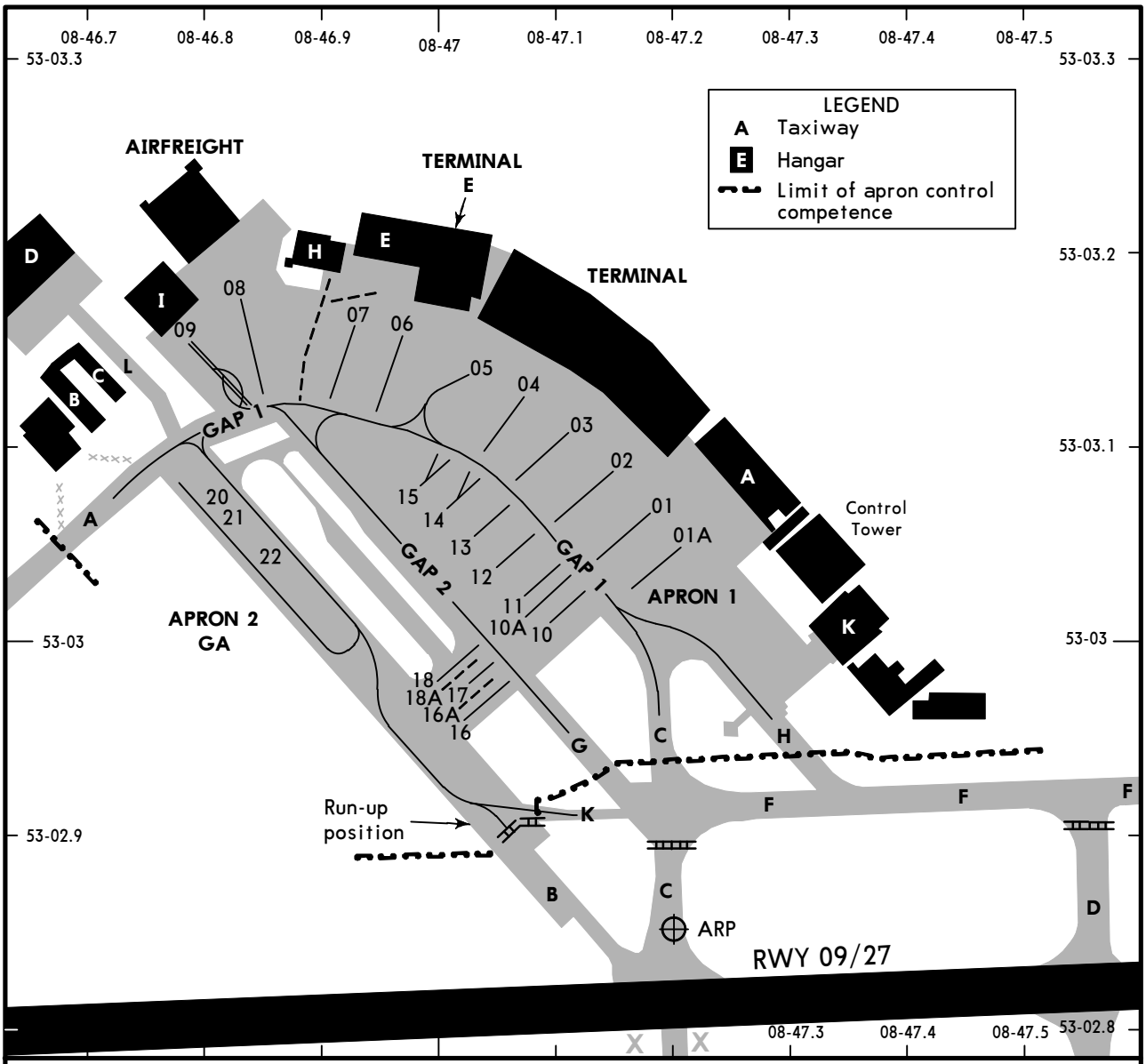
Standard TAKE-OFF ❶

	LVP must be in force: Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	125m	150m	200m	250m	400m	500m
D	150m	200m	250m	300m		

❶ Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: VOR position. Run-up position added.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
01, 01A	N53 03.1 E008 47.2	09	N53 03.3 E008 47.1
02, 03	N53 03.2 E008 47.2	10 thru 13	N53 03.1 E008 47.1
04	N53 03.2 E008 47.1	14, 15	N53 03.2 E008 47.0
05, 06	N53 03.2 E008 47.0	16 thru 18A	N53 03.0 E008 47.0
07	N53 03.2 E008 46.9	20 thru 22	N53 03.1 E008 46.9
08	N53 03.3 E008 46.8		

CHANGES: Parking stands. Coordinates.

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STRAIGHT-IN RWY		A	B	C	D
09	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**113′**(100′)	**113′**(100′)	**113′**(100′)	**113′**(100′)
		RA 99′ R300m	**RA 99′ R300m**	**RA 99′ R300m**	**RA 99′ R300m**
	ILS	**213′**(200′)	**213′**(200′)	**213′**(200′)	**213′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**470′**(457′)	**470′**(457′)	**470′**(457′)	**470′**(457′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**410′**(397′)	**410′**(397′)	**410′**(397′)	**410′**(397′)
	LNAV/VNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**440′**(427′)	**440′**(427′)	**440′**(427′)	**440′**(427′)
	LNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	GLS	**213′**(200′)	**213′**(200′)	**213′**(200′)	**213′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	VOR	**550′**(537′)	**550′**(537′)	**550′**(537′)	**550′**(537′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
27	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**114′**(100′)	**114′**(100′)	**114′**(100′)	**114′**(100′)
		RA 99′ R300m	**RA 99′ R300m**	**RA 99′ R300m**	**RA 99′ R300m**
	ILS	**214′**(200′)	**214′**(200′)	**214′**(200′)	**214′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**470′**(456′)	**470′**(456′)	**470′**(456′)	**470′**(456′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**400′**(386′)	**400′**(386′)	**400′**(386′)	**400′**(386′)
	LNAV/VNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV	**440′**(426′)	**440′**(426′)	**440′**(426′)	**440′**(426′)
	LNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	GLS	**214′**(200′)	**214′**(200′)	**214′**(200′)	**214′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	VOR	**480′**(466′)	**480′**(466′)	**480′**(466′)	**480′**(466′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

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TAKE-OFF RWY 09, 27

	Approved Operators	LVP must be in Force				
	HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

TAKE-OFF RWY 23

	LVP must be in Force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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BREMEN, GERMANY

BREMEN

STRAIGHT-IN RWY		DA(H) / MDA(H)	RVR (ALS/ALS out)
09	CAT 2 ILS	113′ (100′)	RA 99′ - 300m
	ILS	213′ (200′)	500m / 1000m
	LOC	470′ (457′)	1000m / 1000m
	RNAV (LNAV/VNAV)	410′ (397′)	800m / 1000m
	RNAV (LNAV)	440′ (427′)	800m / 1000m
	GLS	213′ (200′)	500m / 1000m
	VOR	550′ (537′)	1000m / 1000m
27	CAT 2 ILS	114′ (100′)	RA 99′ - 300m
	ILS	214′ (200′)	500m / 1000m
	LOC	470′ (456′)	1000m / 1000m
	RNAV (LNAV/VNAV)	400′ (386′)	800m / 1000m
	RNAV (LNAV)	440′ (426′)	800m / 1000m
	GLS	214′ (200′)	500m / 1000m
	VOR	480′ (466′)	1000m / 1000m

TAKE-OFF RWY 09, 23, 27

LVP must be in Force ❶				
RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
150m	200m	200m	250m ❷	800m

❶ Without LVP 400m are stipulated.

❷ Or rejected take-off distance whichever is the greater.

CHANGES: GLS added.

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EDDW/BRE
BREMEN

JEPPESEN
17 SEP 10 (11-1) Eff 23 Sep

BREMEN, GERMANY
ILS or LOC Rwy 09

D-ATIS	BREMEN Radar (APP)	BREMEN Tower		Ground
132.37	125.65	120.32	134.82	121.75

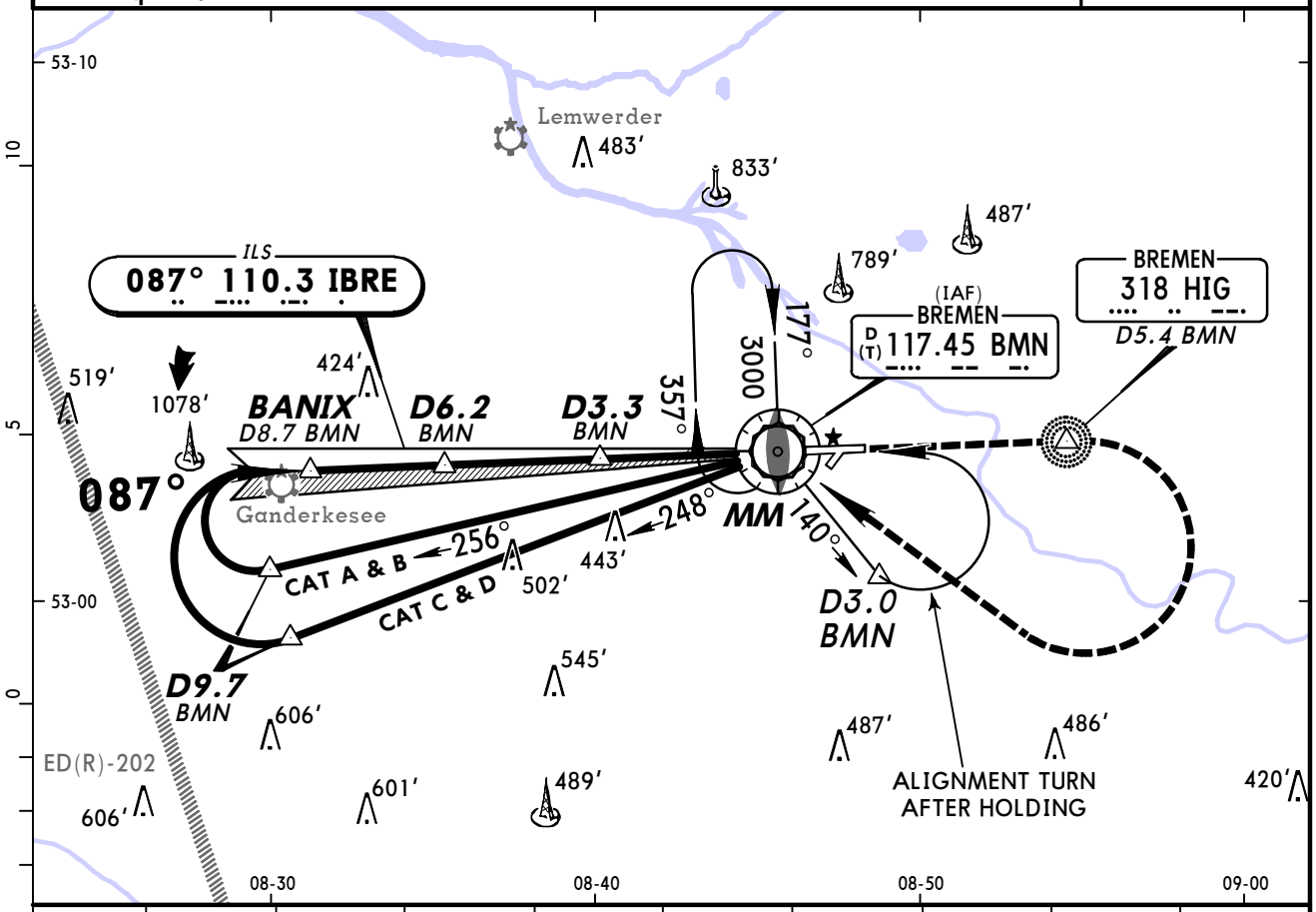
BRIEFING STRIP™

LOC	Final Apch Crs	GS	ILS	Apt Elev 14′
IBRE		D3.3 BMN	DA(H)	RWY 13′
110.3	087°	1280′ (1267′)	213′ (200′)	

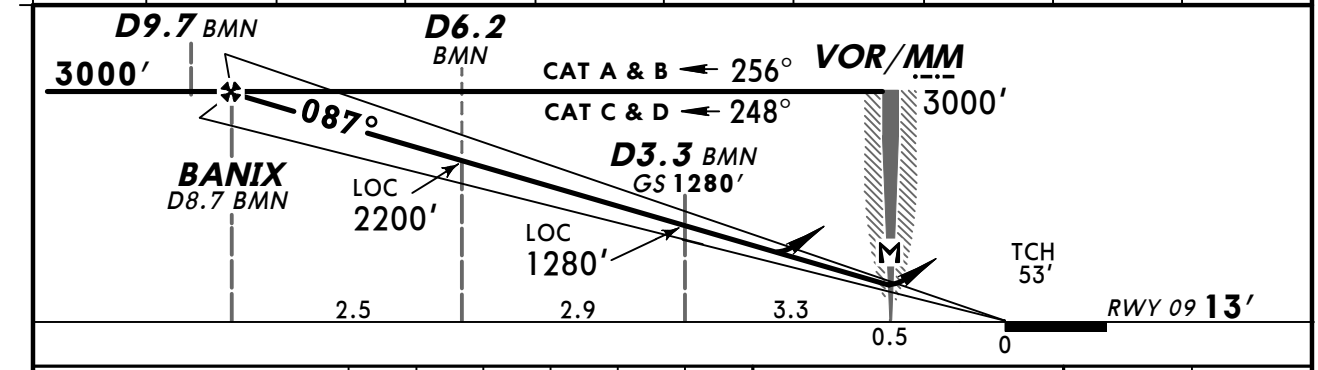
MISSED APCH: Climb STRAIGHT AHEAD to NDB, then turn RIGHT to VOR climbing to 3000′.

Alt Set: hPa(IN on req) Rwy Elev: 0 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2100′
MSA BMN VOR



LOC (GS out)	BMN DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
	ALTITUDE	2780′	2460′	2140′	1820′	1500′	1190′	870′	550′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	377	485	539	647	755	862
MAP at VOR/MM							

ALSF-II
REIL
PAPI

HIG
318

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **09**

	ILS DA(H) 213′ (200′)			LOC (GS out) DA(H) 470′ (457′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

CHANGES: Procedure.

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EDDW/BRE
BREMEN

17 SEP 10
Eff 23 Sep

JEPPESEN
11-1A

BREMEN, GERMANY
CAT II ILS Rwy 09

D-ATIS	BREMEN Radar (APP)	BREMEN Tower		Ground
132.37	125.65	120.32	134.82	121.75

BRIEFING STRIP™

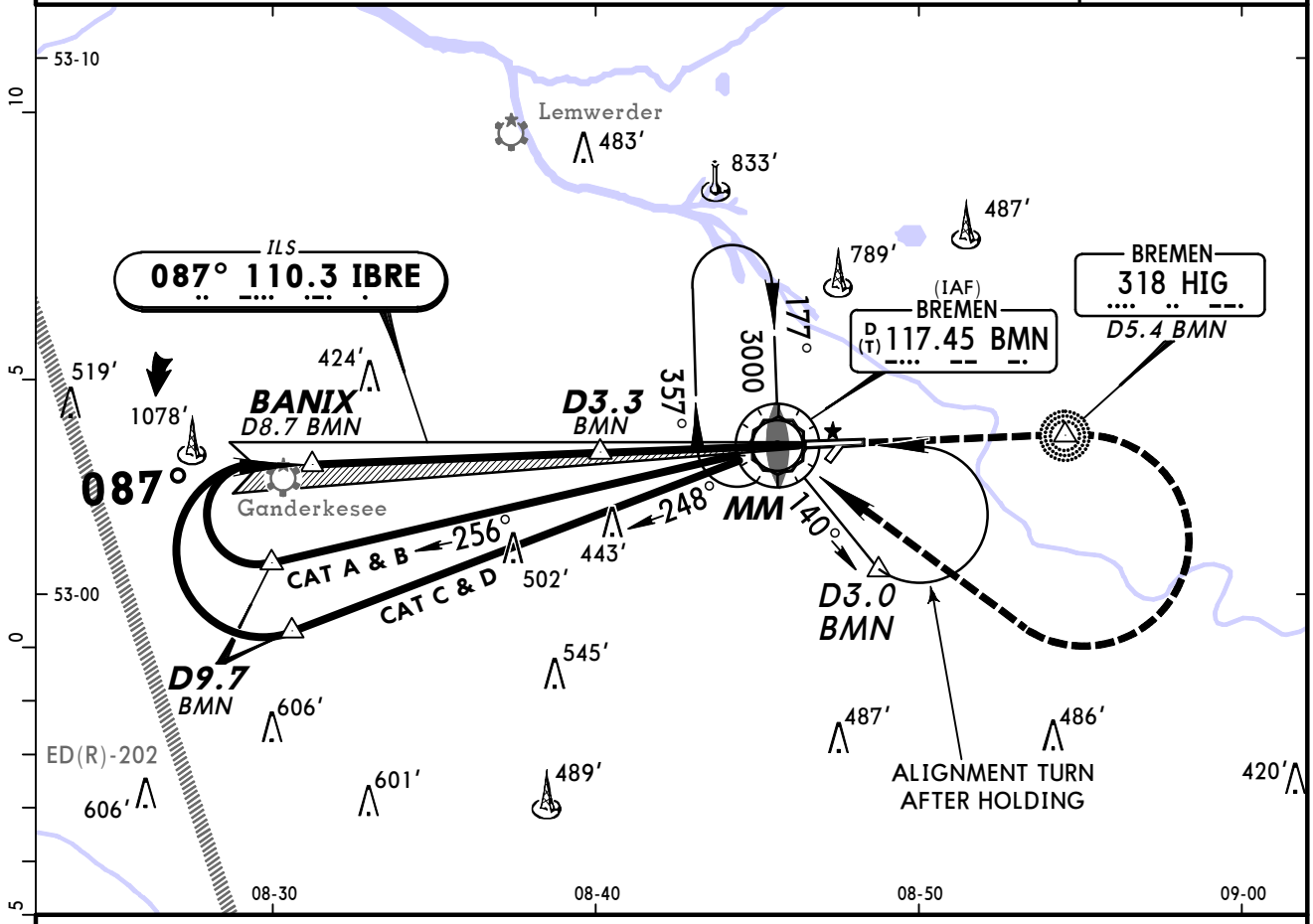
LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev 14′
IBRE		D3.3 BMN	RA 99′ DA(H)	RWY 13′
110.3	087°	1280′ (1267′)	113′ (100′)	

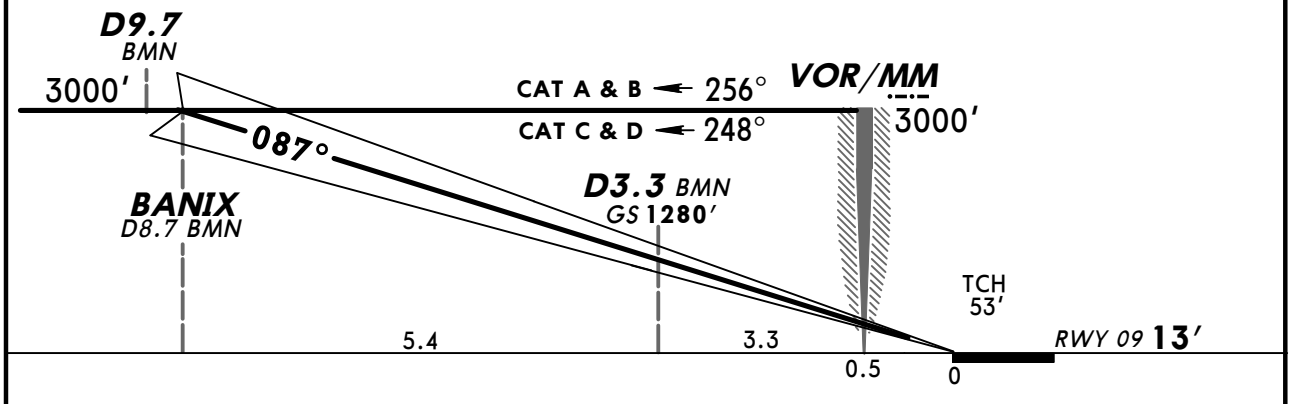
MISSED APCH: Climb STRAIGHT AHEAD to NDB, then turn RIGHT to VOR climbing to 3000′.

Alt Set: hPa(IN on req) Rwy Elev: 0 hPa Trans level: By ATC Trans alt: 5000′

1. **DME required.** 2. Special Aircrew & Acft Certification Required.

2100′
MSA BMN VOR





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

HIG
318

PANS OPS 4

Standard

STRAIGHT-IN LANDING RWY **09**
CAT II ILS

ABCD
RA 99′
DA(H) **113′** (100′)

RVR 300m 1

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

CHANGES: Procedure.

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EDDW/BRE
BREMEN

JEPPESEN
17 SEP 10 (11-2) Eff 23 Sep

BREMEN, GERMANY
ILS or LOC Rwy 27

D-ATIS	BREMEN Radar (APP)	BREMEN Tower		Ground
132.37	125.65	120.32	134.82	121.75

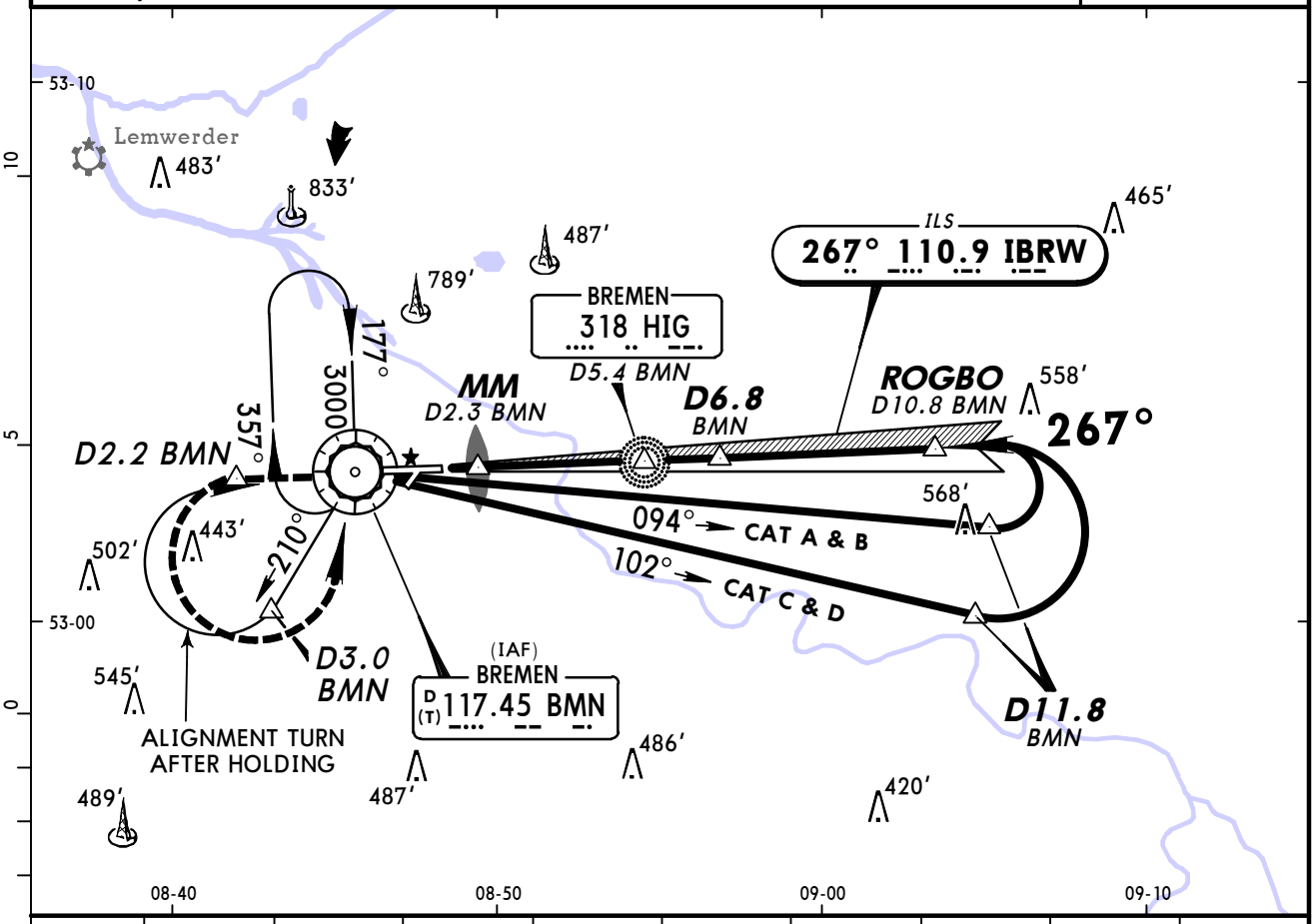
BRIEFING STRIP™

LOC	Final	GS	ILS	Apt Elev 14′
IBRW	Apch Crs	NDB	DA(H)	RWY 14′
110.9	267°	1280′ (1266′)	214′ (200′)	

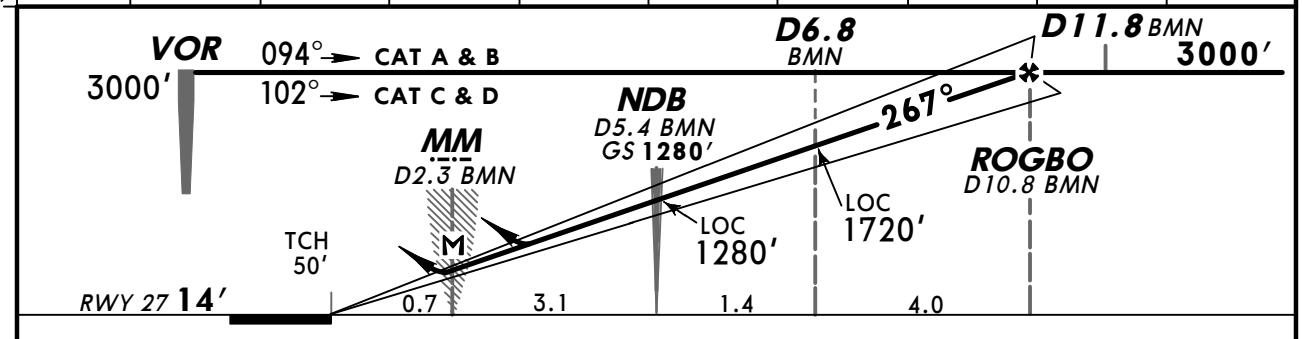
MISSED APCH: Climb STRAIGHT AHEAD to D2.2 BMN, then turn LEFT to VOR climbing to 3000′.

Alt Set: hPa(IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2100′
MSA BMN VOR



LOC (GS out)	BMN DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
	ALTITUDE	510′	830′	1150′	1470′	1790′	2110′	2430′	2740′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D2.3 BMN						

ALSF-II
REIL
PAPI

D2.2 BMN

Standard STRAIGHT-IN LANDING RWY **27**

	ILS DA(H) 214′ (200′)			LOC (GS out) DA(H) 470′ (456′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

PANS OPS 4

CHANGES: Procedure.

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EDDW/BRE
BREMEN

JEPPESEN
17 SEP 10
Eff 23 Sep
11-2A

BREMEN, GERMANY
CAT II ILS Rwy 27

D-ATIS	BREMEN Radar (APP)	BREMEN Tower		Ground
132.37	125.65	120.32	134.82	121.75

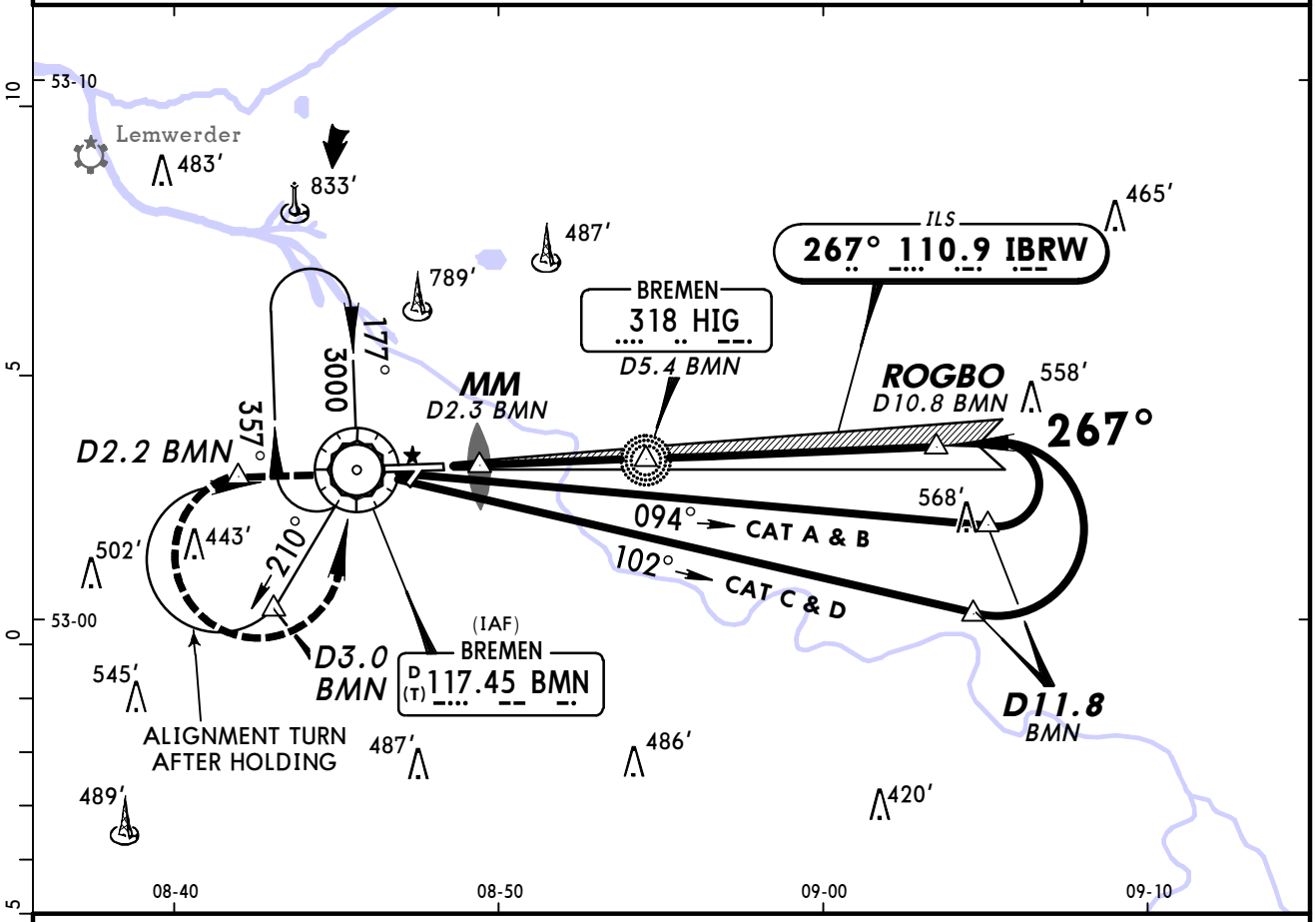
BRIEFING STRIP™

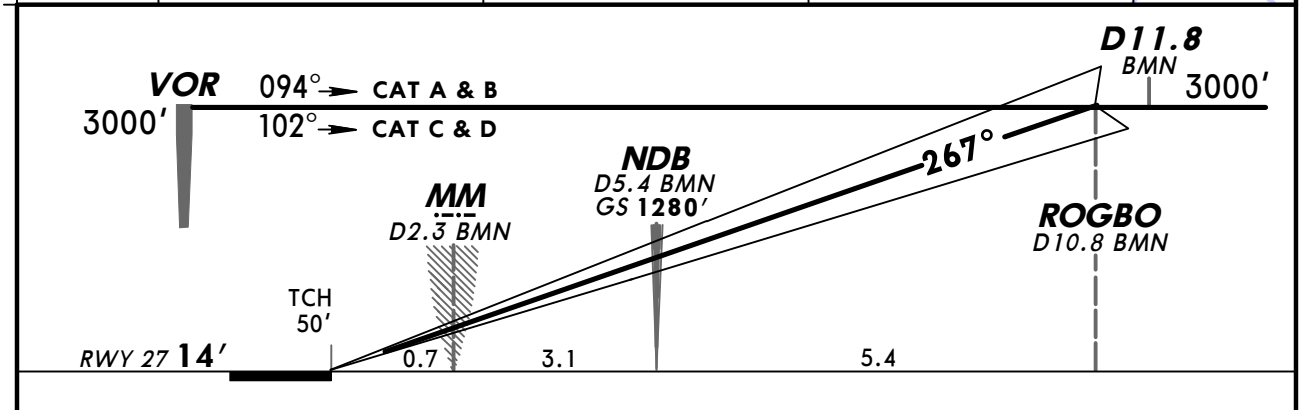
LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev 14′
IBRW	267°	NDB 1280′ (1266′)	RA 99′ DA(H) 114′ (100′)	RWY 14′

MISSED APCH: Climb STRAIGHT AHEAD to D2.2 BMN, then turn LEFT to VOR climbing to 3000′.

Alt Set: hPa(IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′
1. **DME required.** 2. Special Aircrew & Acft Certification Required.

2100′
MSA BMN VOR





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

D2.2 BMN

PANS OPS 4

Standard

STRAIGHT-IN LANDING RWY **27**
CAT II ILS

ABCD

RA 99′
DA(H) **114′** (100′)

RVR *300m* **1**

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

CHANGES: Procedure.

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BRIEFING STRIP™

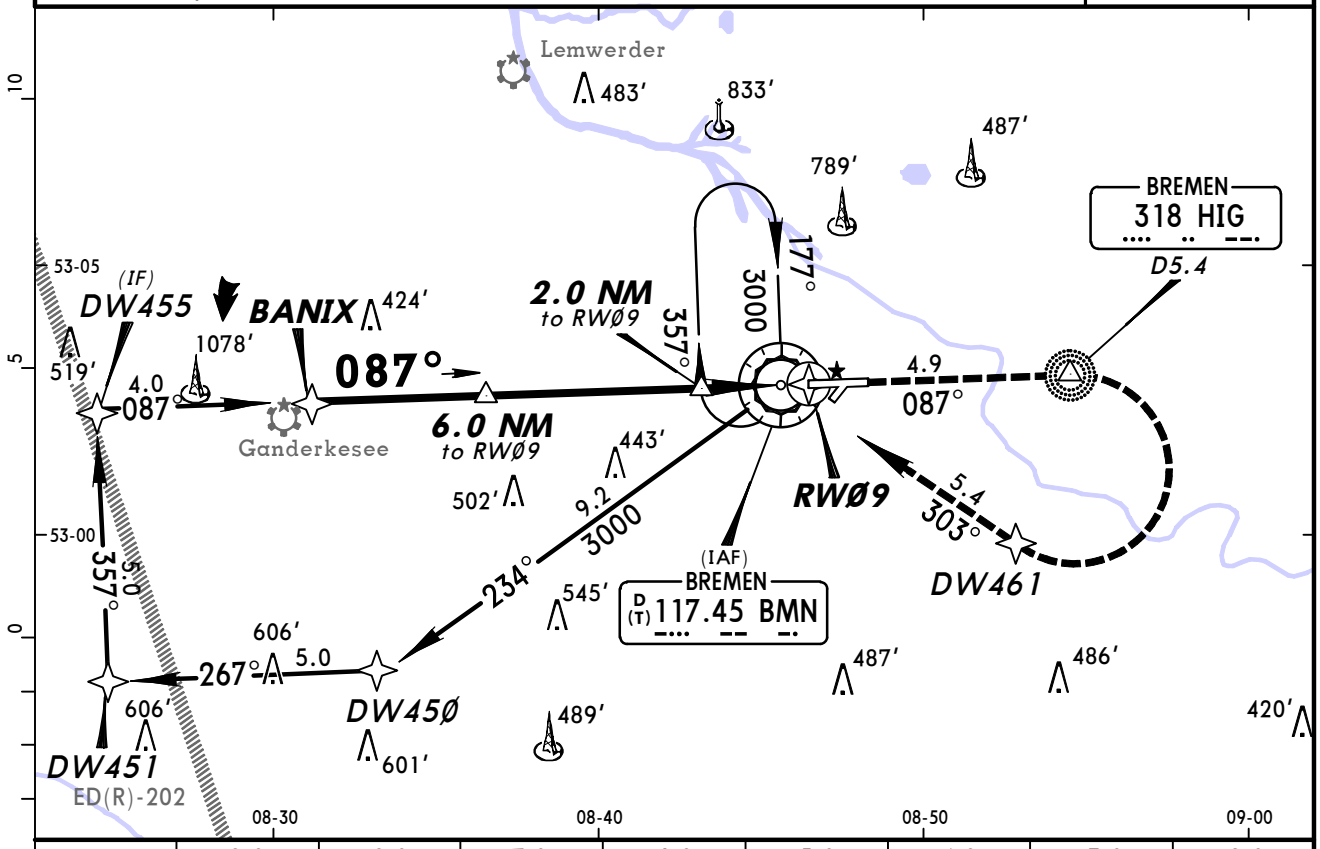
D-ATIS	BREMEN Radar (APP)	BREMEN Tower		Ground
132.37	125.65	120.32	134.82	121.75

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	087°	BANIX 3000′ (2987′)	410′ (397′)	Apt Elev 14′ RWY 13′

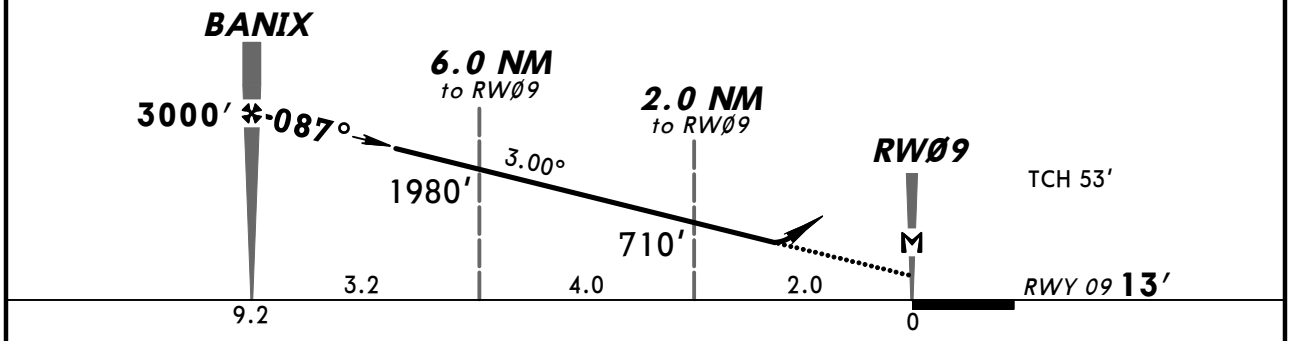
MISSED APCH RNAV: Climb on 087° to NDB, then turn RIGHT via DW461 onto 303° to VOR climbing to 3000′.
NON- RNAV: Climb STRAIGHT AHEAD to NDB, then turn RIGHT to VOR climbing to 3000′.

Alt Set: hPa(IN on req) Rwy Elev: 0 hPa Trans level: By ATC Trans alt: 5000′
Baro-VNAV operations not authorized below -15°C.

2100′
MSA
ARP



DIST to RWØ9	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2940′	2620′	2300′	1980′	1660′	1340′	1030′	710′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RWØ9							

ALSF-II
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **09**

	LNAV/VNAV DA(H) 410′ (397′)		LNAV DA(H) 440′ (427′)	
		ALS out		ALS out
A	RVR 1100m	RVR 1500m	RVR 1300m	RVR 1500m
B				
C		RVR 1800m		RVR 2000m
D				

CHANGES: Procedure.

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EDDW/BRE
BREMEN

JEPPESEN
17 SEP 10 (12-2) Eff 23 Sep

BREMEN, GERMANY
RNAV (GPS) Rwy 27

D-ATIS	BREMEN Radar (APP)	BREMEN Tower		Ground
132.37	125.65	120.32	134.82	121.75

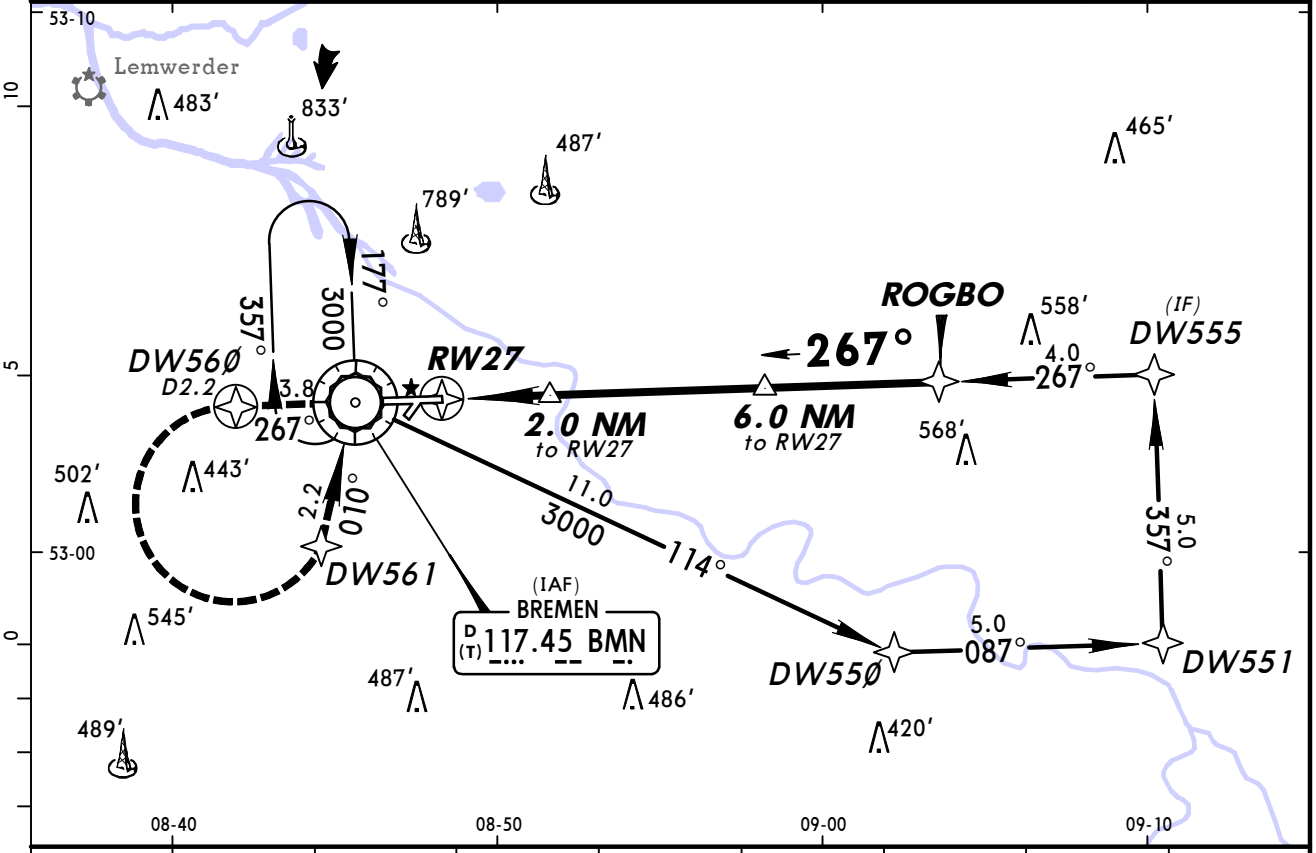
RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	267°	ROGBO 3000′ (2986′)	400′ (386′)	Apt Elev 14′ RWY 14′

MISSED APCH RNAV: Climb on 267° to DW56Ø, then turn LEFT via DW561 onto 010° to VOR climbing to 3000′.
NON-RNAV: Climb STRAIGHT AHEAD to D2.2, then turn LEFT to VOR climbing to 3000′.

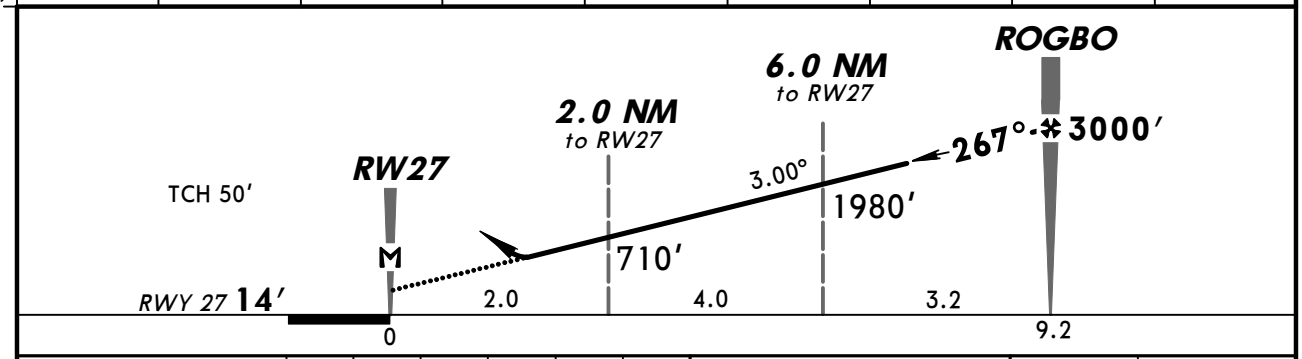
Alt Set: hPa(IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′
Baro-VNAV operations not authorized below -15°C.

2100′
MSA
ARP

BRIEFING STRIP™



DIST to RW27	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	710′	1020′	1340′	1660′	1980′	2300′	2620′	2930′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW27							

ALSF-II
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **27**

	LNAV/VNAV DA(H) 400′ (386′)		LNAV DA(H) 440′ (426′)	
		ALS out		ALS out
A	RVR 1100m	RVR 1500m	RVR 1300m	RVR 1500m
B				
C		RVR 1800m		RVR 2000m
D				

CHANGES: Procedure.

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D-ATIS	BREMEN Radar (APP)	*BREMEN Tower		*Ground
132.37	125.65	120.32	134.82	121.75

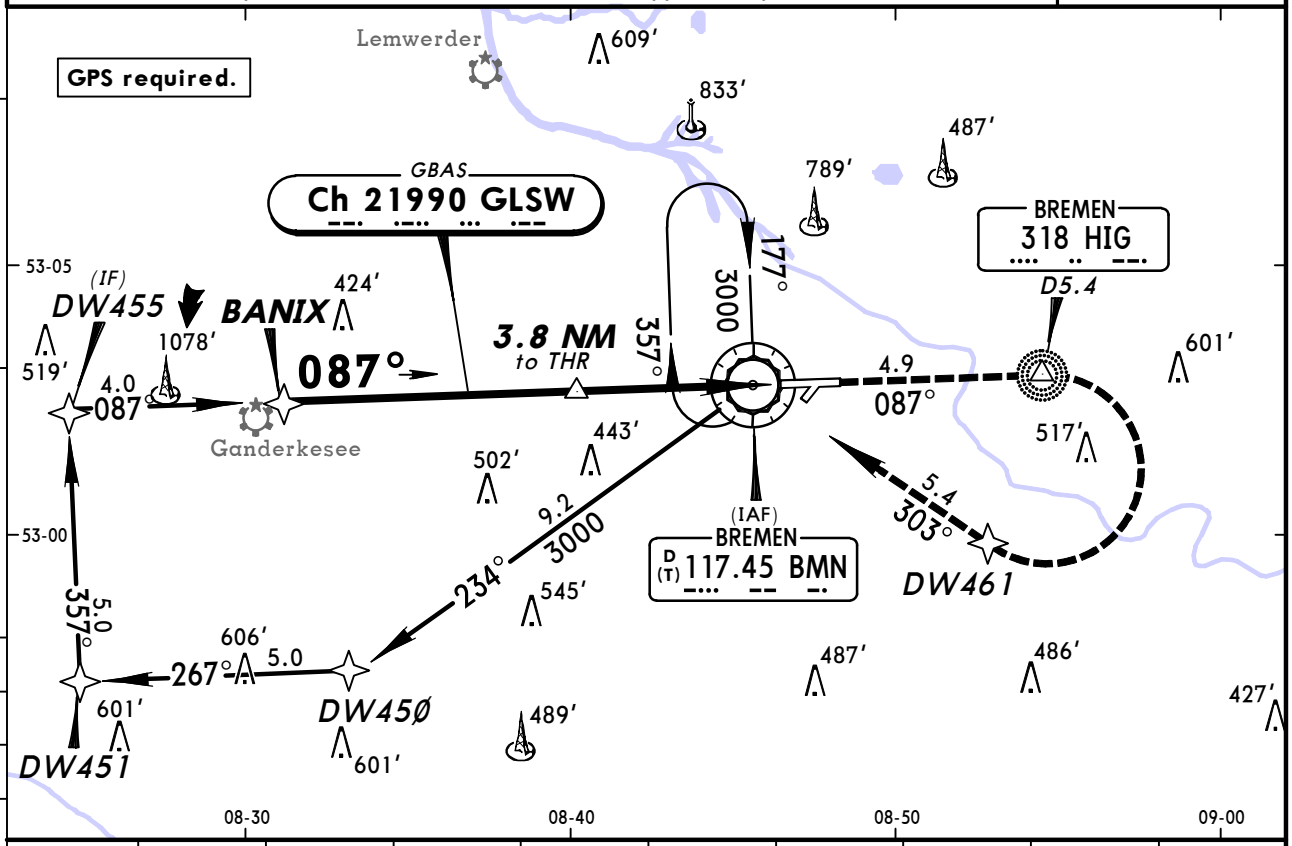
BRIEFING STRIP™

GBAS	Final Apch Crs	Minimum Alt	GLS DA(H)	Apt Elev 14′
Ch 21990 GLSW	**087°**	**BANIX 3000′** (2987′)	**213′** (200′)	RWY **13′**

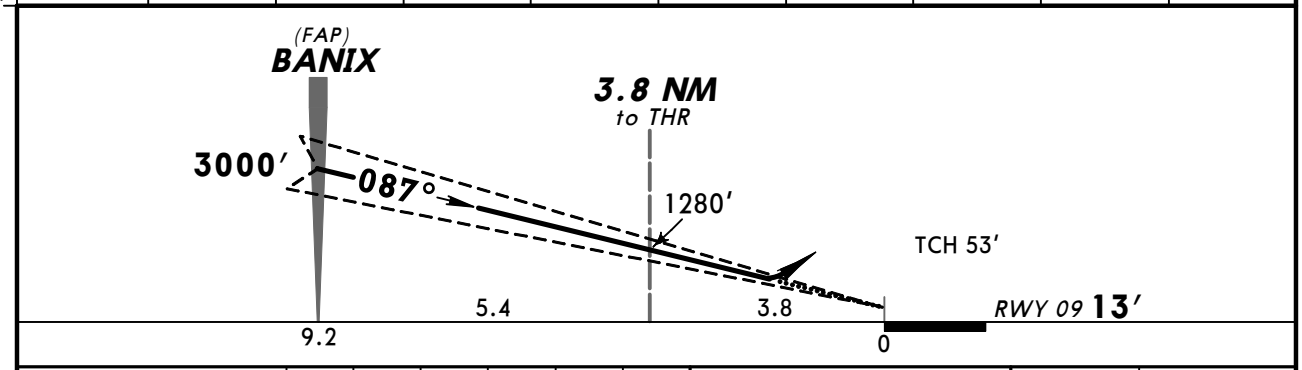
MISSED APCH RNAV: Climb on 087° to NDB, then turn RIGHT via DW461 onto 303° to VOR climbing to 3000′.
NON- RNAV: Climb STRAIGHT AHEAD to NDB, then turn RIGHT to VOR climbing to 3000′.

Alt Set: hPa(IN on req) Rwy Elev: 0 hPa Trans level: By ATC Trans alt: 5000′
Aircraft must be capable and certified for GLS CAT I approach operations.

2100′
MSA
ARP



DIST to THR	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
ALTITUDE	2940′	2620′	2300′	1980′	1660′	1340′	1030′	710′	390′



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

ALSF-II
REIL
PAPI

Refer to Missed Apch above

Standard

STRAIGHT-IN LANDING RWY **09**
GLS
DA(H) **213′** (200′)

PANS OPS 5

	FULL	Limited	ALS out
A	RVR 550m	RVR 750m	RVR 1200m
B			
C			
D			

CHANGES: New procedure.

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EDDW/BRE
BREMEN

JEPPESEN
17 FEB 12 (12-41)

BREMEN, GERMANY
GLS Rwy 27

D-ATIS	BREMEN Radar (APP)	*BREMEN Tower		*Ground
132.37	125.65	120.32	134.82	121.75

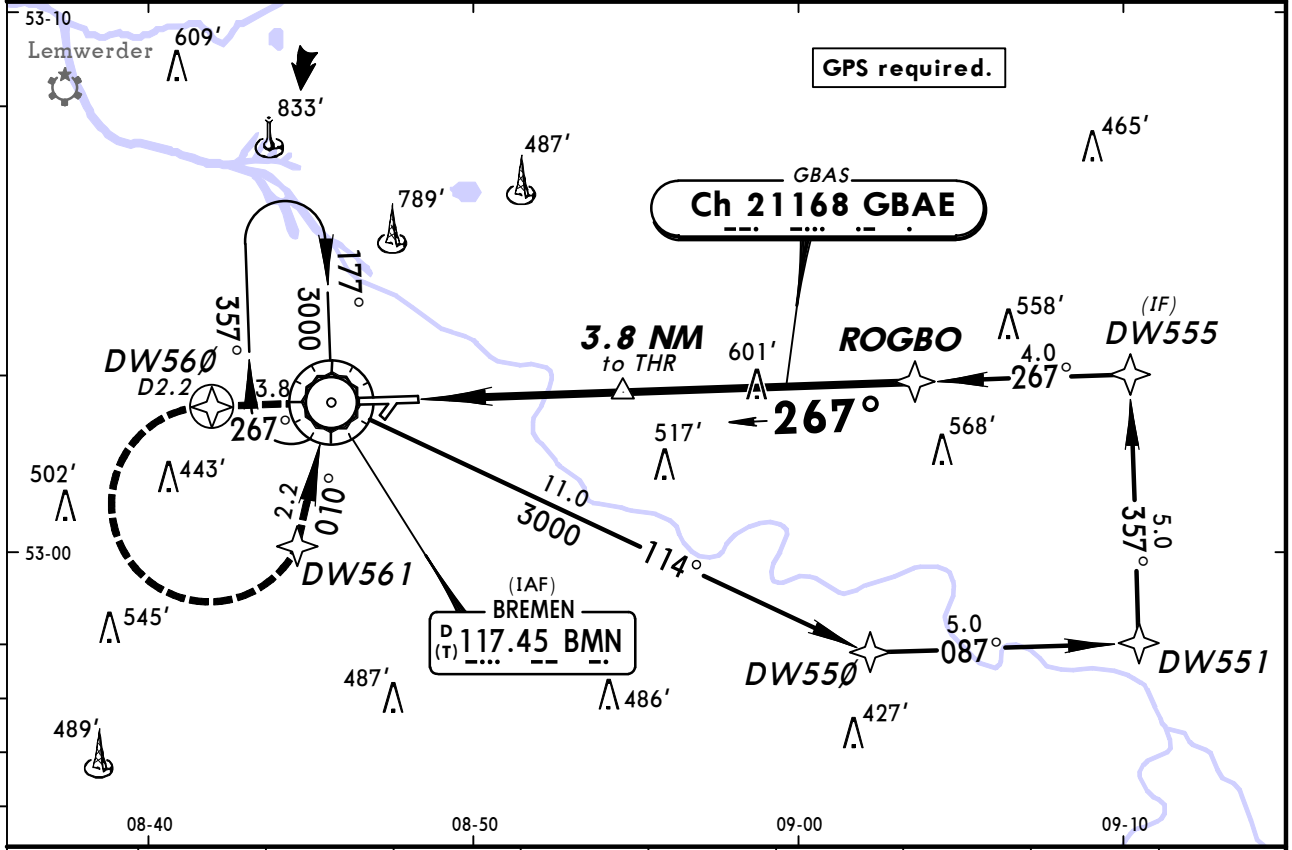
BRIEFING STRIP ™

GBAS	Final Apch Crs	Minimum Alt	GLS DA(H)	Apt Elev 14′
Ch 21168 GBAE	267°	ROGBO 3000′ (2986′)	214′ (200′)	RWY 14′

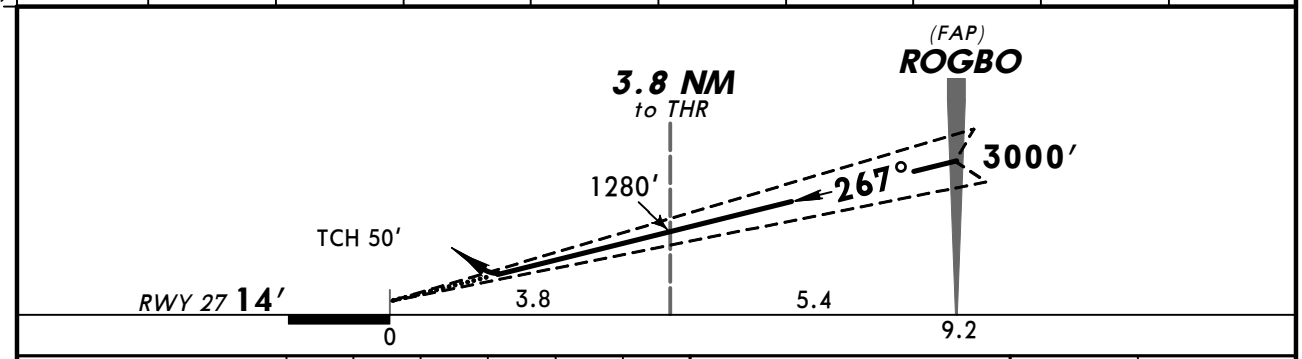
MISSED APCH RNAV: Climb on 267° to DW56Ø, then turn LEFT via DW561 onto 010° to VOR climbing to 3000′.
NON-RNAV: Climb STRAIGHT AHEAD to D2.2, then turn LEFT to VOR climbing to 3000′.

Alt Set: hPa(IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′
Aircraft must be capable and certified for GLS CAT I approach operations.

2100′
MSA
ARP



DIST to THR	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	390′	710′	1020′	1340′	1660′	1980′	2300′	2620′	2930′



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

ALSF-II
REIL
PAPI

Refer to Missed Apch above

Standard

STRAIGHT-IN LANDING RWY **27**
GLS
DA(H) **214′** (200′)

	FULL	Limited	ALS out
A	RVR 550m	RVR 750m	RVR 1200m
B			
C			
D			

PANS OPS 5

CHANGES: New procedure.

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EDDW/BRE
BREMEN

JEPPESEN
17 SEP 10 (13-1) Eff 23 Sep

BREMEN, GERMANY
VOR Rwy 09

D-ATIS	BREMEN Radar (APP)	BREMEN Tower		Ground
132.37	125.65	120.32	134.82	121.75

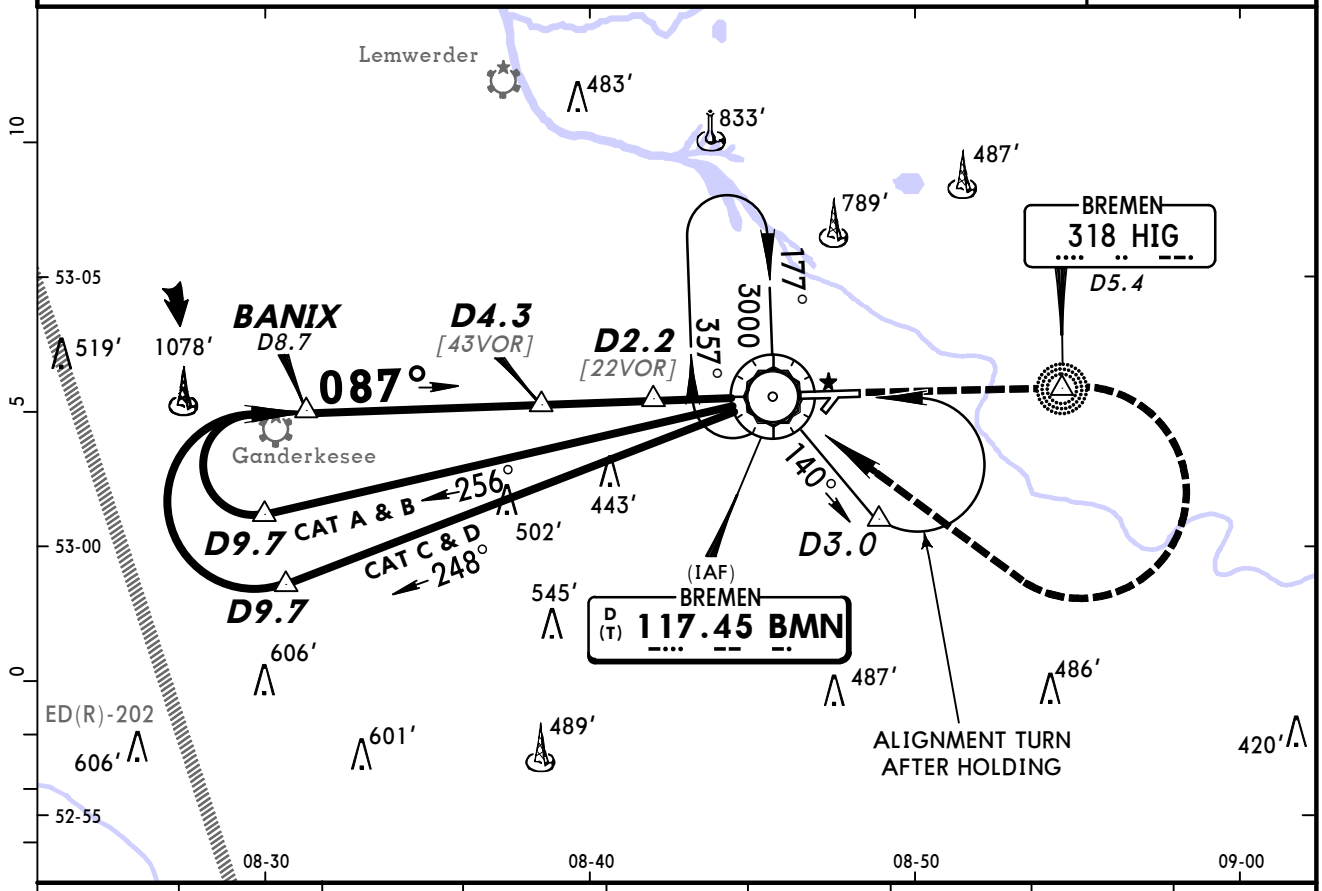
BRIEFING STRIP™

VOR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 14′
BMN 117.45	087°	BANIX 3000′ (2987′)	550′ (537′)	RWY 13′

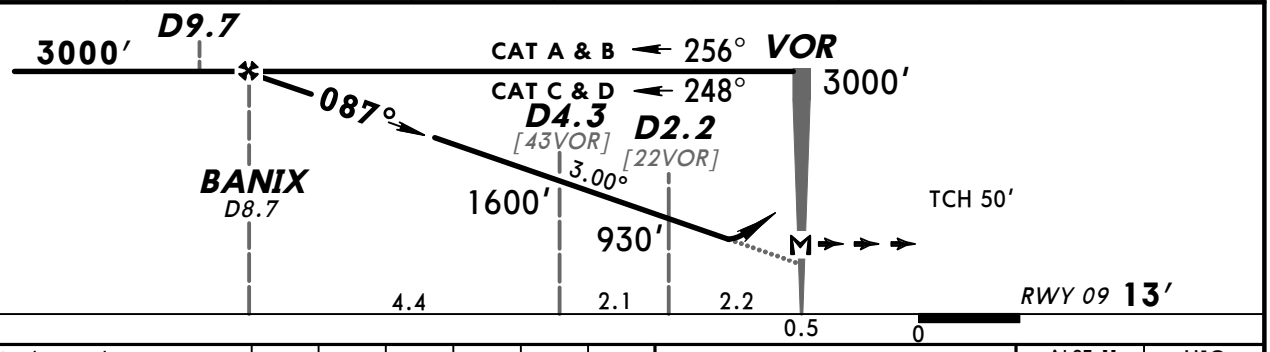
MISSED APCH: Climb STRAIGHT AHEAD to NDB, then turn RIGHT to VOR climbing to 3000′.

Alt Set: hPa (IN on req) Rwy Elev: 0 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2100′
MSA BMN VOR



BMN DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
ALTITUDE	2780′	2460′	2140′	1820′	1500′	1190′	870′	550′



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

ALSF-II
REIL
PAPI
HIG 318

Standard STRAIGHT-IN LANDING RWY **09**

DA(H) **550′** (537′)

	ALS out
A, B	RVR 1500m
C	RVR 1700m
D	CMV 2400m

PANS OPS 4

CHANGES: Procedure. Minimums.

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D-ATIS	BREMEN Radar (APP)	BREMEN Tower		Ground
132.37	125.65	120.32	134.82	121.75

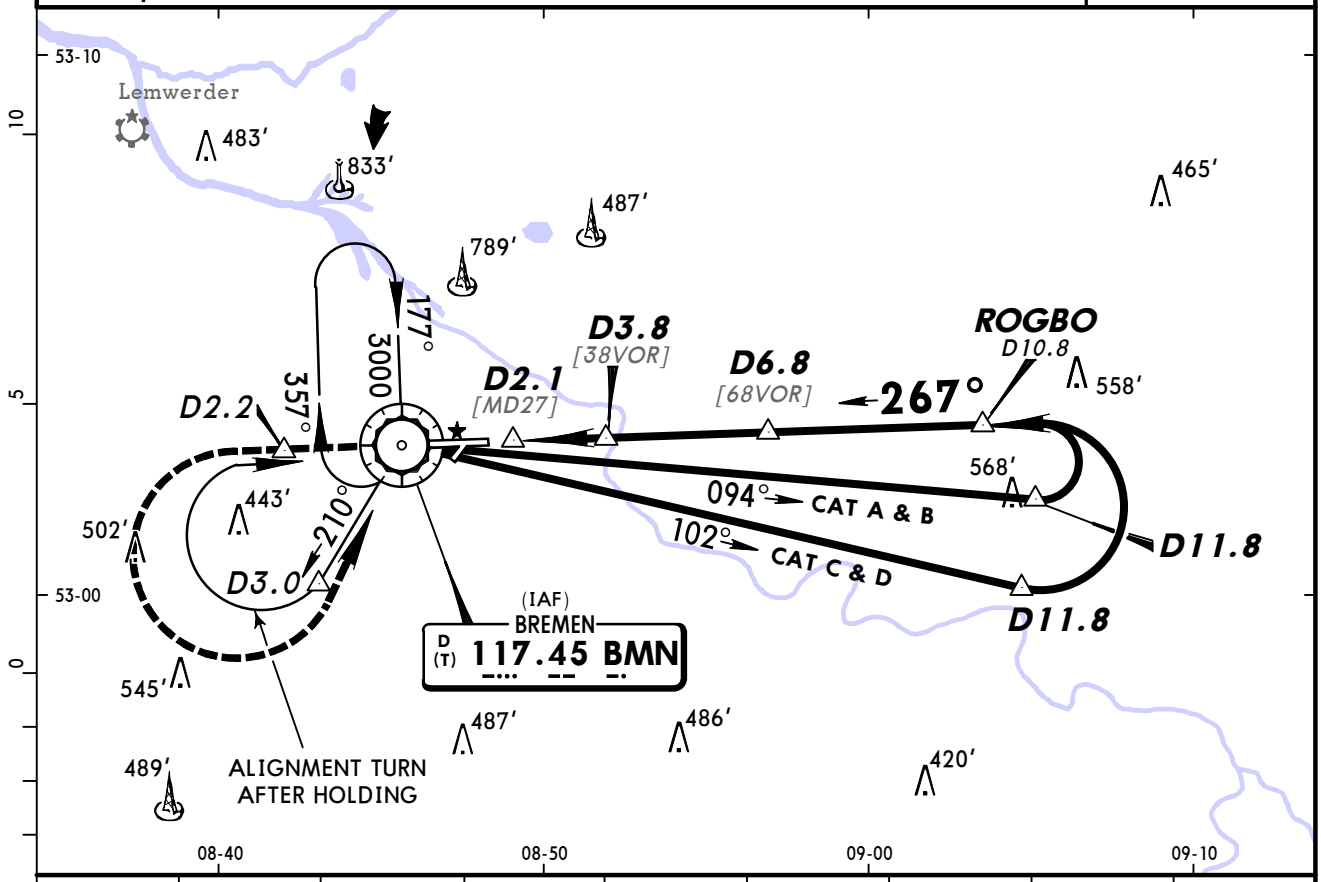
VOR BMN 117.45	Final Apch Crs 267°	Minimum Alt ROGBO 3000′ (2986′)	DA(H) 480′ (466′)	Apt Elev 14′ RWY 14′

MISSED APCH: Climb STRAIGHT AHEAD to D2.2, then turn LEFT to VOR climbing to 3000′.

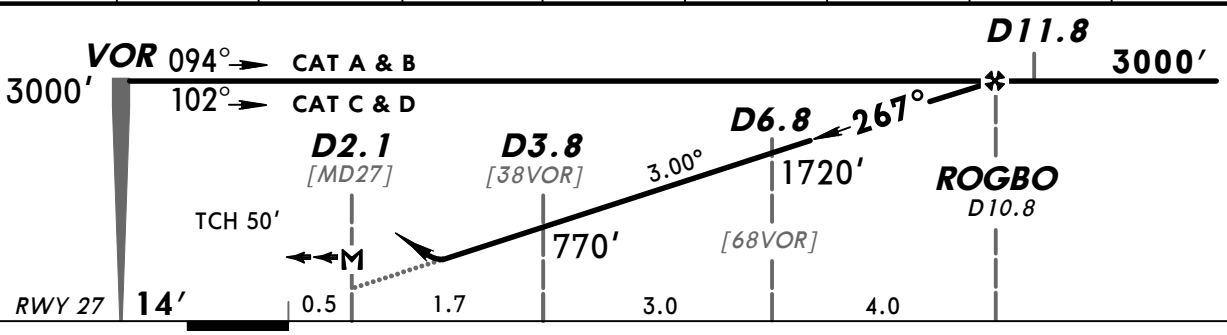
Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2100′
MSA BMN VOR

BRIEFING STRIP™



BMN DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	510′	830′	1150′	1470′	1790′	2110′	2430′	2740′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D2.1							

ALSF-II
REIL
PAPI

D2.2

Standard STRAIGHT-IN LANDING RWY **27**

DA(H) **480′** (466′)

		ALS out
A	RVR *1500m*	
B		
C	RVR *1500m*	CMV *2200m*
D		

PANS OPS 4

CHANGES: Procedure. Minimums.

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General Information

Location: Frankfurt-Hahn Deu
IATA Code: HHN
Lat/Long: N49° 56.9' E007° 15.8'
Elevation: 1649 ft

Airport Use: Public
Magnetic Variation: 1.1°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0619 Z
Sunset: 1708 Z,

Runway Information

Runway: 03
Length x Width: 12467 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 1649 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 3461 ft

Runway: 21
Length x Width: 12467 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 1595 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 984 ft

Communication Information

ATIS 136.35
Hahn Tower 120.9 Secondary
Hahn Tower 119.65
Hahn Tower 27.91
Hahn Ground Control 121.975
Langen Radar Approach Control 125.6
Langen Radar Approach Control 37.57 Military

1. GENERAL

1.1. ATIS

ATIS 136.35

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. NIGHTTIME RESTRICTIONS

Take-offs and landings between 2200-0600LT are only allowed:

- with jet ACFT which are noise certificated according to ICAO Annex 16, Vol 1, Chapter 3
- with propeller-driven ACFT which are noise certificated according to ICAO Annex 16, Vol 1, Chapter 3, 5, 6 or 10 and/or LSL, Chapter III, V, VI or X (published by the Federal Office of Civil Aviation (LBA) on January 1st 1991, BAnz, No 54a).

Exempted from restrictions stated above are:

- landings of ACFT provably approaching Frankfurt-Hahn as alternate aerodrome for meteorological, technical or other safety reasons.
- take-offs and landings of ACFT on a mission in disasters or rendering medical assistance
- take-offs and landings which are permitted by the "Landesbetrieb Strassen und Verkehr Rheinland-Pfalz, Referat Luftverkehr" in substantiated individual cases to avoid serious disturbance to air traffic or for other compelling reasons in cases of special public interest.

1.2.2. REVERSE THRUST

When landing, reverse thrust other than idle thrust, may only be used as far as necessary for safety reasons.

1.2.3. RUN-UP TESTS

Engine test-runs may not be conducted on Sun and Hol H24, Mon-Fri 2200-0600LT. Exceptions may be applied for from the APT operator in justified individual cases.

1.3. LOW VISIBILITY PROCEDURES

During CAT II or IIIA all-weather operations and/or LVTO, ACFT are permitted to taxi only on TWYs C, E and F up to stop bar CAT II/III and on TWYs A between B1 and C, B1 and B2 up to stop bar Stop 1 - unaided and with operating centerline lights. Taxiing movements on ramps and on TWYs without centerline lighting are only permitted with a preceding Follow-me car.

1.4. TAXI PROCEDURES

TWY A between TWYs D and E MAX wingspan less than 118'/36m.
Taxi with CAUTION on TWY A between Apron 2 and 3 when wet.
TWY D not usable for ACFT exceeding 14t MTOW.
ACFT are permitted to taxi on the apron only at the indispensable minimum engine speed when taxiing into ACFT stands.
ACFT are not allowed to increase engine power considerable beyond IDLE motion speed.

1.5. PARKING INFORMATION

To avoid incidents on Apron 2, wheel chocks shall be used while parking due to steep slope. Wheelchocks are available on the East side of Apron 2.
On stands A1, A4, B1 and B4 push-back required.

1.6. OTHER INFORMATION

DANGER: Possible wake turbulence.

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2. ARRIVAL

2.1. CAT II/III OPERATIONS

RWY 21 approved for CAT II/III operations, special aircrew and ACFT certification required.

3. DEPARTURE

3.1. DE-ICING

De-Icing of ACFT is possible on ramps 3 and 4 only.

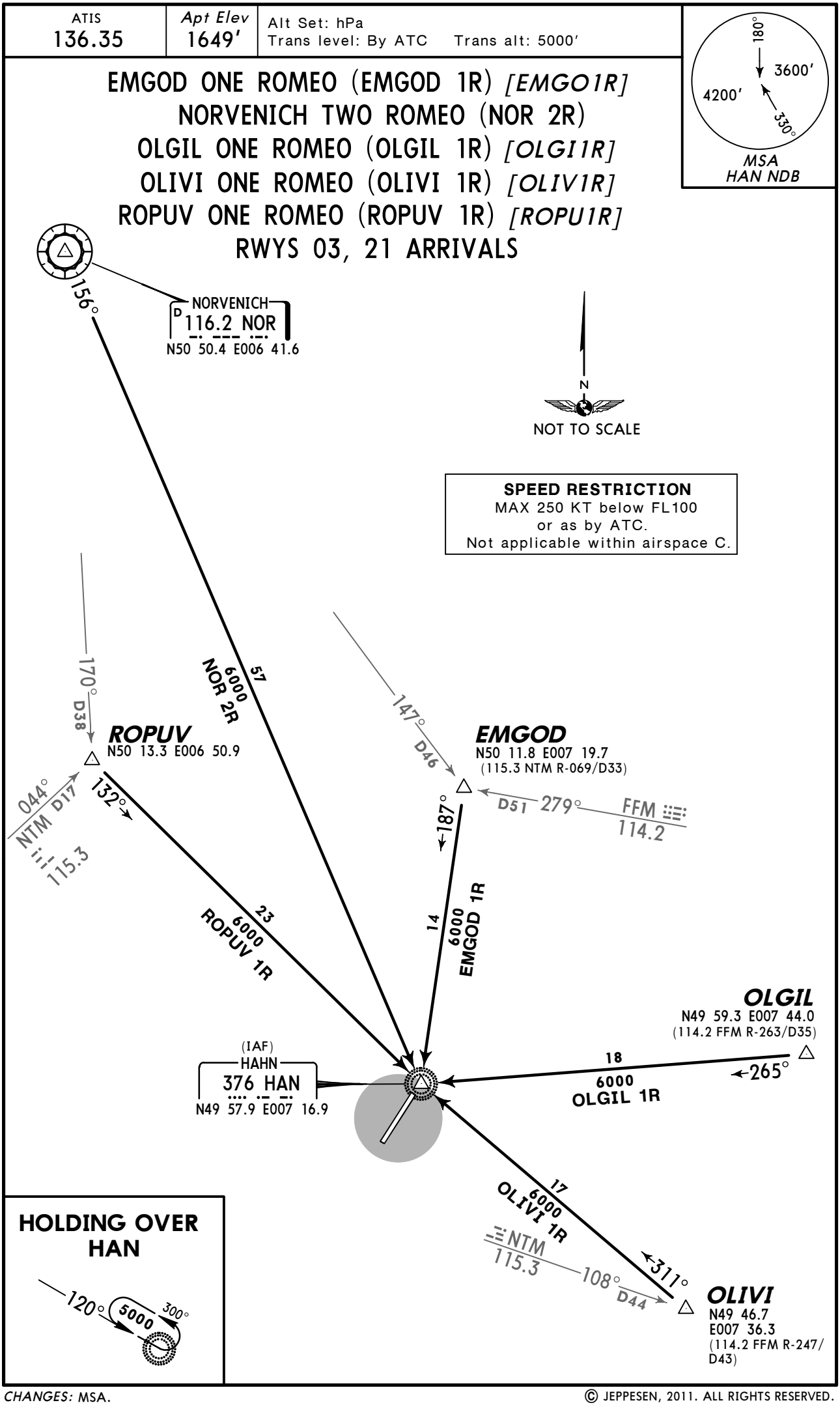
3.2. RWY OPERATIONS

RWY 21 intersection take-off via TWY E shall be used whenever within performance parameters.

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ATIS	Apt Elev	Alt Set: hPa Trans level: By ATC Trans alt: 5000′
136.35	1649′	

EMGOD ONE ROMEO (EMGOD 1R) *[EMGO1R]*
NORVENICH TWO ROMEO (NOR 2R)
OLGIL ONE ROMEO (OLGIL 1R) *[OLGI1R]*
OLIVI ONE ROMEO (OLIVI 1R) *[OLIV1R]*
ROPUV ONE ROMEO (ROPUV 1R) *[ROPU1R]*
RWYS 03, 21 ARRIVALS



CHANGES: MSA.

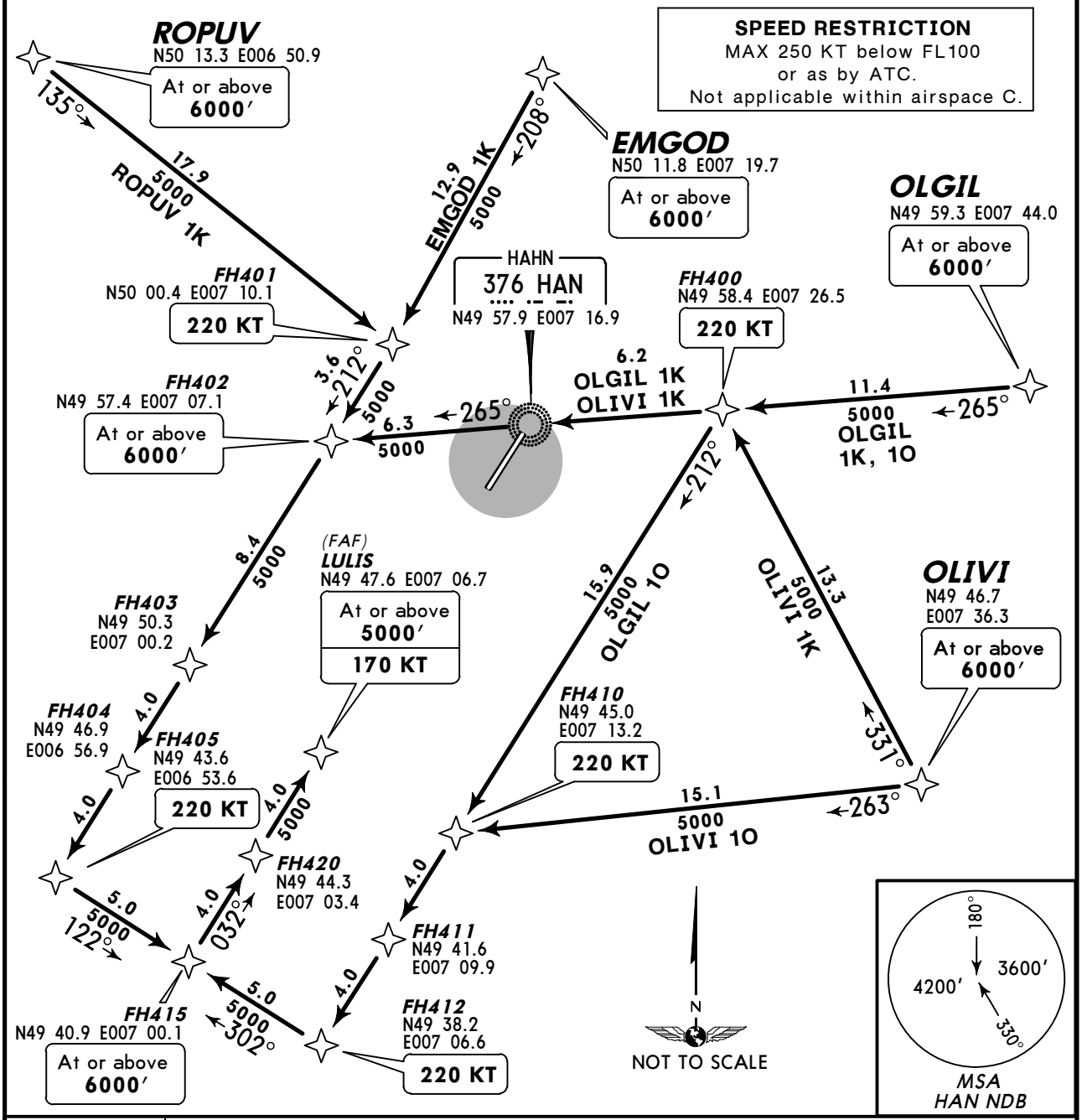
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ATIS	Apt Elev	
136.35	1649′	Alt Set: hPa Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions and altitudes on Transition are always mandatory, unless cancelled by ATC.

EMGOD 1K *[EMGO1K]*, OLGIL 1K *[OLGI1K]*, OLGIL 1O *[OLGI1O]* OLIVI 1K *[OLIV1K]*, OLIVI 1O *[OLIV1O]*, ROPUV 1K *[ROPU1K]* RWY 03 RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT

USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



TRANSITION	ROUTING
EMGOD 1K	EMGOD (6000′+) - FH401 (K220) - FH402 (6000′+) - FH405 (K220) - FH415 (6000′+) - LULIS (5000′+; K170).
OLGIL 1K	OLGIL (6000′+) - FH400 (K220) - FH402 (6000′+) - FH405 (K220) - FH415 (6000′+) - LULIS (5000′+; K170).
OLGIL 1O	OLGIL (6000′+) - FH400 (K220) - FH410 (K220) - FH412 (K220) - FH415 (6000′+) - LULIS (5000′+; K170).
OLIVI 1K	OLIVI (6000′+) - FH400 (K220) - FH402 (6000′+) - FH405 (K220) - FH415 (6000′+) - LULIS (5000′+; K170).
OLIVI 1O	OLIVI (6000′+) - FH410 (K220) - FH412 (K220) - FH415 (6000′+) - LULIS (5000′+; K170).
ROPUV 1K	ROPUV (6000′+) - FH401 (K220) - FH402 (6000′+) - FH405 (K220) - FH415 (6000+) - LULIS (5000+; K170).

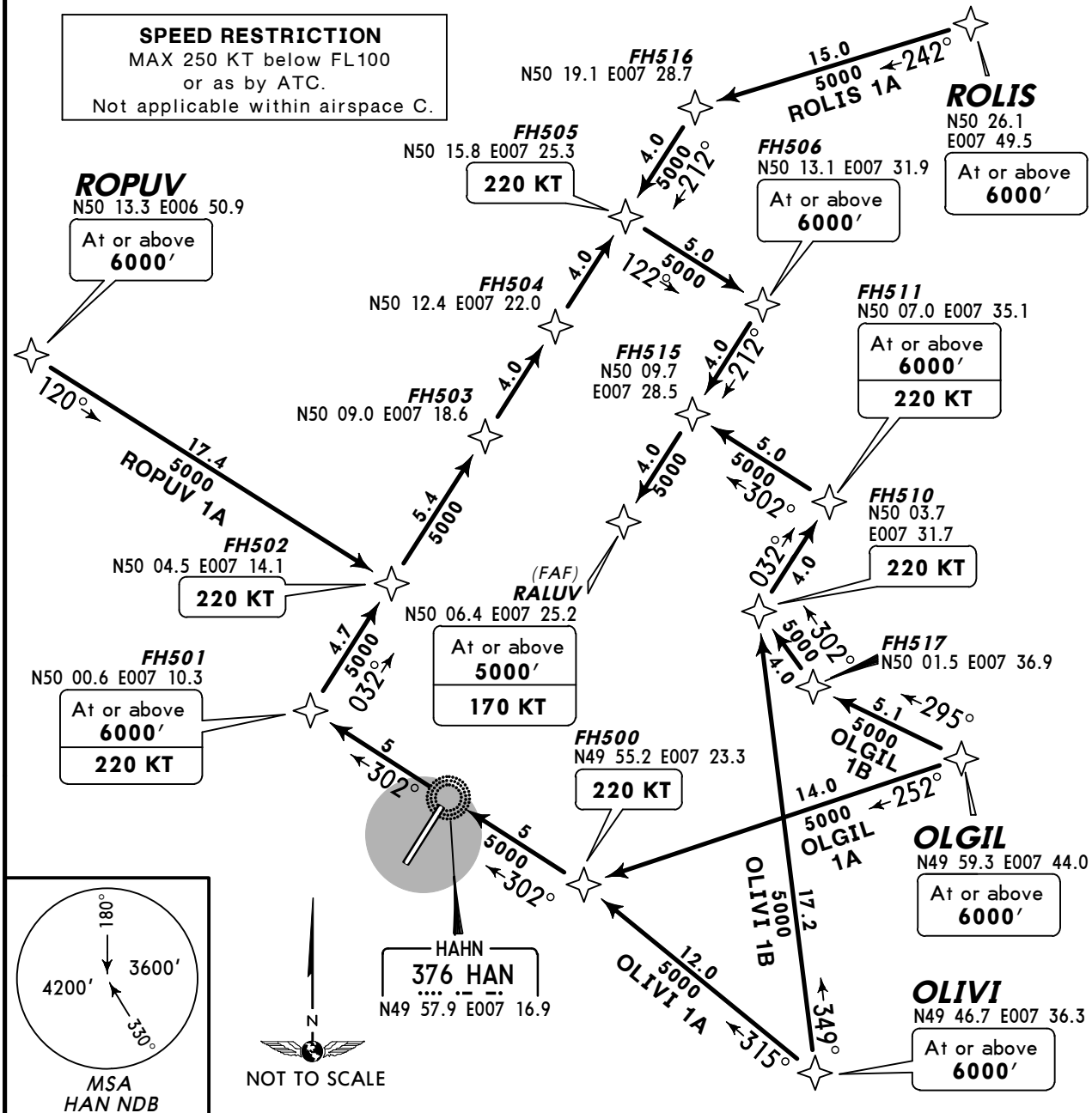
CHANGES: MSA.

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ATIS	Apt Elev	
136.35	1649′	Alt Set: hPa Trans level: By ATC Trans alt: 5000′ 1. On downwind expect vectors to final. 2. Speed restrictions and altitudes on Transition are always mandatory, unless cancelled by ATC.

OLGIL 1A *[OLGI1A]*, OLGIL 1B *[OLGI1B]*, OLIVI 1A *[OLIV1A]* OLIVI 1B *[OLIV1B]*, ROLIS 1A *[ROLI1A]*, ROPUV 1A *[ROPU1A]* RWY 21 RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC

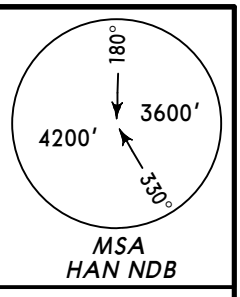


TRANSITION	ROUTING
OLGIL 1A	OLGIL (6000′+) - FH500 (K220) - FH501 (6000′+; K220) - FH502 (K220) - FH505 (K220) - FH506 (6000′+) - RALUV (5000′+; K170).
OLGIL 1B	OLGIL (6000′+) - FH517 - FH510 (K220) - FH511 (6000′+; K220) - FH515 - RALUV (5000′+; K170).
OLIVI 1A	OLIVI (6000′+) - FH500 (K220) - FH501 (6000′+; K220) - FH502 (K220) - FH505 (K220) - FH506 (6000′+) - RALUV (5000′+; K170).
OLIVI 1B	OLIVI (6000′+) - FH510 (K220) - FH511 (6000′+; K220) - FH515 - RALUV (5000′+; K170).
ROLIS 1A	ROLIS (6000′+) - FH516 - FH505 (K220) - FH506 (6000′+) - RALUV (5000′+; K170).
ROPUV 1A	ROPUV (6000+) - FH502 (K220) - FH505 (K220) - FH506 (6000′+) - RALUV (5000+′; K170).

CHANGES: MSA.

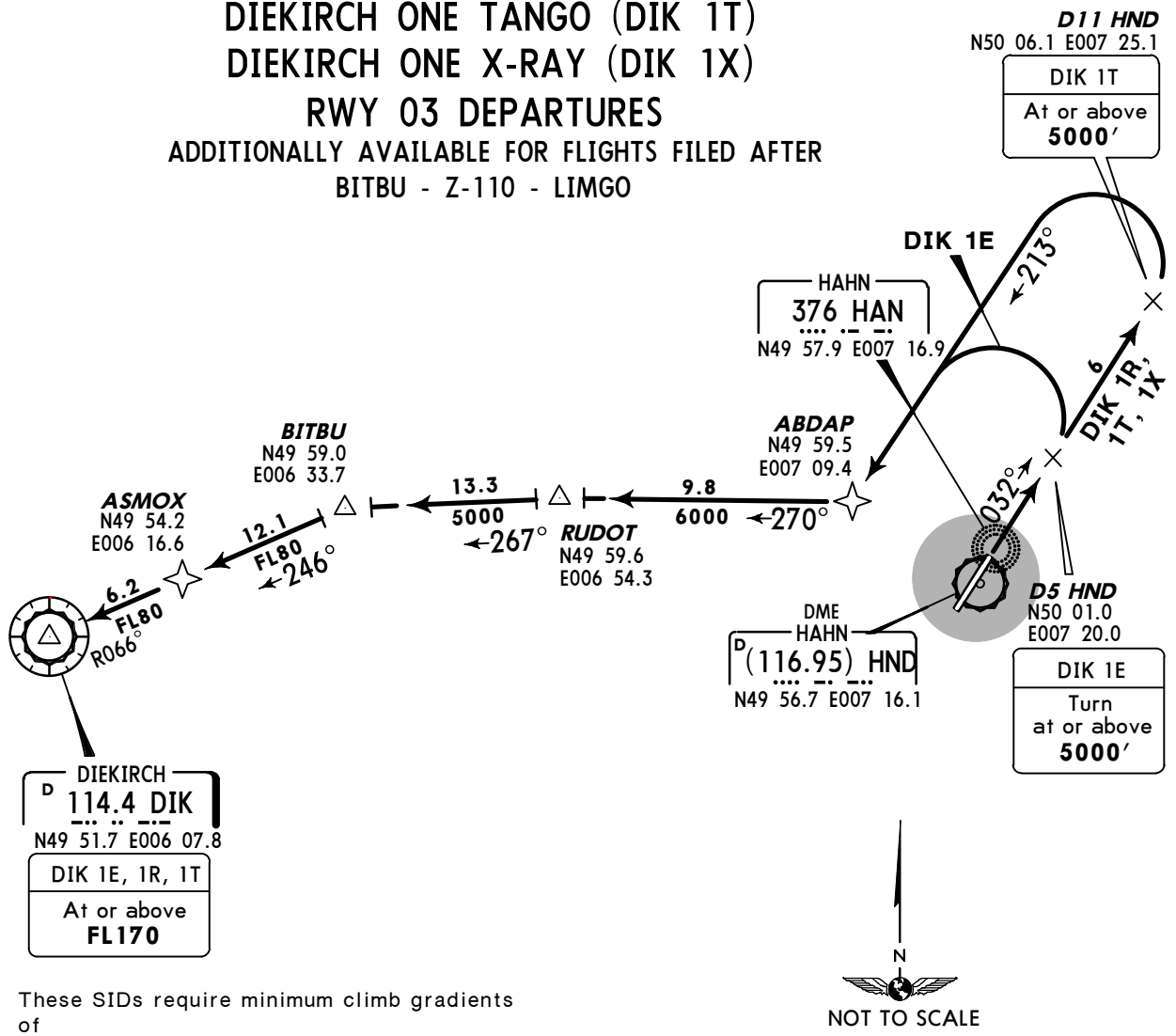
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LANGEN Radar	Apt Elev	Trans level: By ATC Trans alt: 5000′
125.6	1649′	1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



DIEKIRCH ONE ECHO (DIK 1E)
DIEKIRCH ONE ROMEO (DIK 1R)
DIEKIRCH ONE TANGO (DIK 1T)
DIEKIRCH ONE X-RAY (DIK 1X)
RWY 03 DEPARTURES

ADDITIONALLY AVAILABLE FOR FLIGHTS FILED AFTER
BITBU - Z-110 - LIMGO



These SIDs require minimum climb gradients of

DIK 1E

820′ per NM (13.5%) until passing 5000′ due to airspace structure.

DIK 1T

334′ per NM (5.5%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
820′ per NM	1025	1367	2051	2734	3418	4101
334′ per NM	418	557	835	1114	1392	1671

If unable to comply inform ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

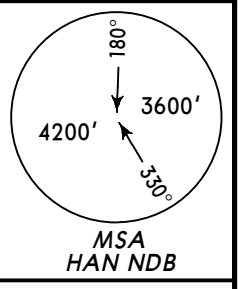
SID	ROUTING
DIK 1E ❶	Intercept 032° bearing from HAN to D5 HND ❷, turn LEFT, 213° track to ABDAP, turn RIGHT, 270° track to RUDOT, turn LEFT, 267° track to BITBU, turn LEFT, 246° track via ASMOX to DIK.
DIK 1R ❸ **DIK 1T** ❺ **DIK 1X**	Intercept 032° bearing from HAN to D11 HND ❹, turn LEFT, 213° track to ABDAP, turn RIGHT, 270° track to RUDOT, turn LEFT, 267° track to BITBU, turn LEFT, 246° track via ASMOX to DIK.

❶ If unable to cross D5 HND at or above 5000′ and DIK at or above FL170 request DIK 1T.
BRNAV equipment necessary after: ❷ D5 HND/ ❹ D11 HND.
❸ If unable to cross DIK at or above FL170 request DIK 1X.
❺ If unable to cross D11 HND at or above 5000′ and DIK at or above FL170 request DIK 1R.

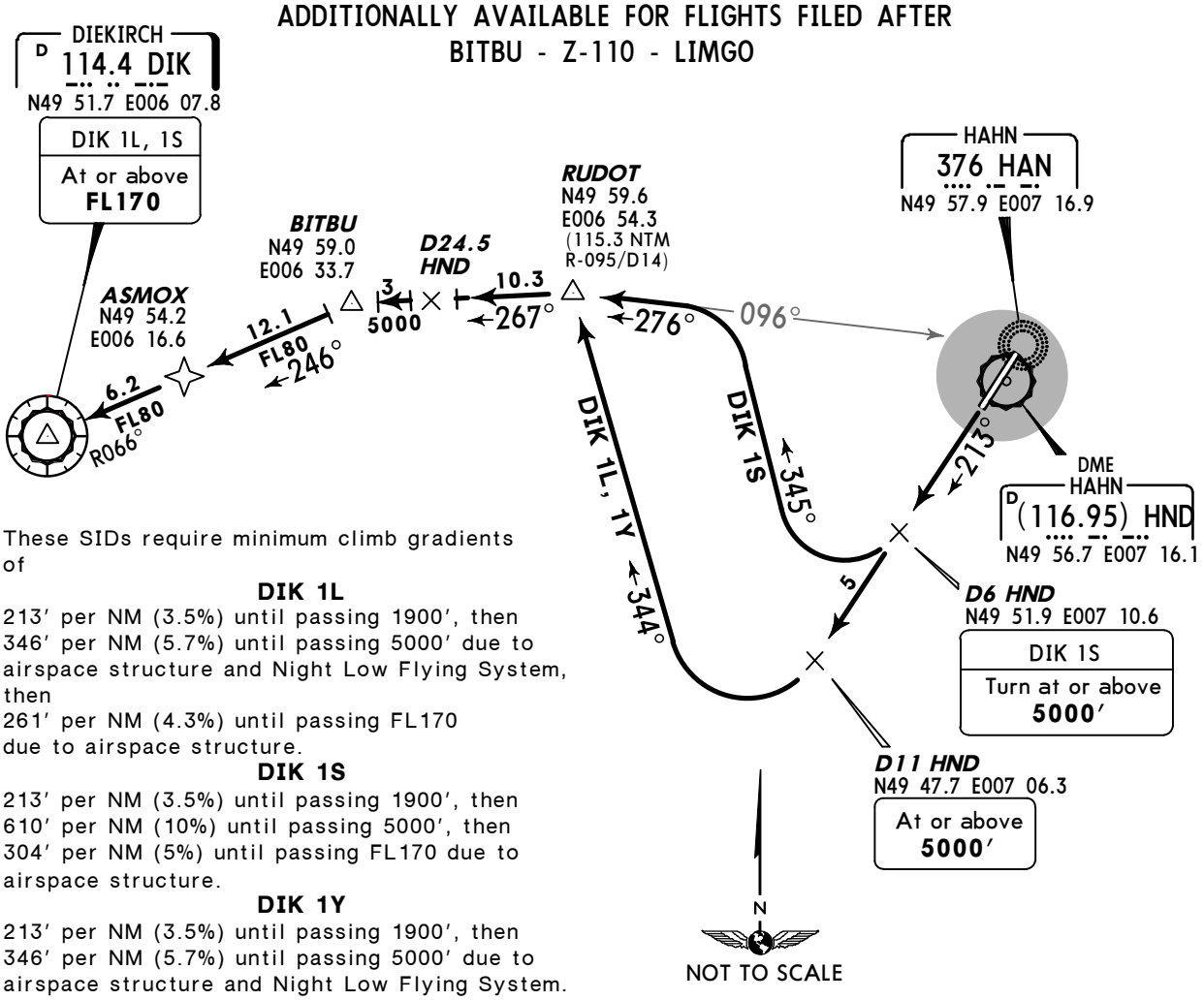
CHANGES: MSA.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.
125.6	1649′	



DIEKIRCH ONE LIMA (DIK 1L)
DIEKIRCH ONE SIERRA (DIK 1S)
DIEKIRCH ONE YANKEE (DIK 1Y)
RWY 21 DEPARTURES
ADDITIONALLY AVAILABLE FOR FLIGHTS FILED AFTER BITBU - Z-110 - LIMGO



These SIDs require minimum climb gradients of

DIK 1L

213′ per NM (3.5%) until passing 1900′, then
346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System, then
261′ per NM (4.3%) until passing FL170 due to airspace structure.

DIK 1S

213′ per NM (3.5%) until passing 1900′, then
610′ per NM (10%) until passing 5000′, then
304′ per NM (5%) until passing FL170 due to airspace structure.

DIK 1Y

213′ per NM (3.5%) until passing 1900′, then
346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
346′ per NM	433	577	866	1155	1443	1732
304′ per NM	380	506	760	1013	1266	1519
261′ per NM	327	435	653	871	1089	1306
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

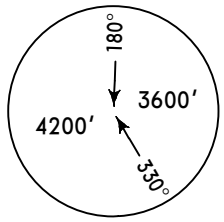
SID	ROUTING
DIK 1L ❶ **DIK 1Y**	Intercept 213° bearing from HAN to D11 HND ❷, turn RIGHT, 344° track to RUDOT, turn LEFT, 267° track to BITBU, turn LEFT, 246° track via ASMOX to DIK.
DIK 1S ❸❹	Intercept 213° bearing from HAN to D6 HND, turn RIGHT, 345° track, intercept 276° bearing from HAN to RUDOT ❺, turn LEFT, 267° track to BITBU, turn LEFT, 246° track via ASMOX to DIK.

❶ If unable to cross DIK at or above FL170 request DIK 1Y.
BRNAV equipment necessary after: ❷ D11 HND/ ❺ RUDOT.
❸ If unable to cross D6 HND at or above 5000′ and DIK at or above FL170 request DIK 1L.
❹ Not to be used during activity of Night Low Flying System.

CHANGES: MSA.

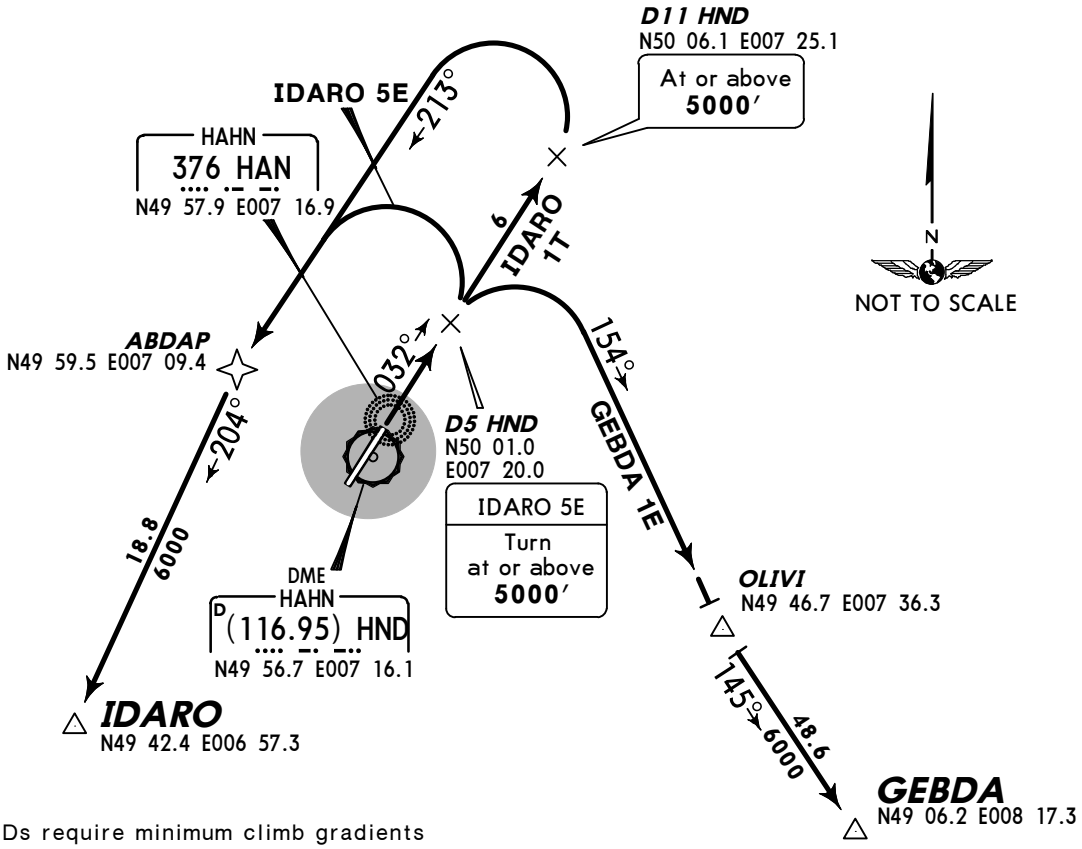
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LANGEN Radar	Apt Elev	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
125.6	1649′	



MSA
HAN NDB

GEBDA ONE ECHO (GEBDA 1E)
IDARO FIVE ECHO (IDARO 5E)
IDARO ONE TANGO (IDARO 1T)
RWY 03 DEPARTURES



These SIDs require minimum climb gradients of

IDARO 5E

820′ per NM (13.5%) until passing 5000′ due to airspace structure.

IDARO 1T

334′ per NM (5.5%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
820′ per NM	1025	1367	2051	2734	3418	4101
334′ per NM	418	557	835	1114	1392	1671

If unable to comply inform ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

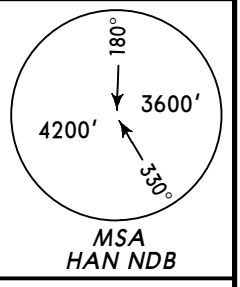
SID	ROUTING
GEBDA 1E ❶	Intercept 032° bearing from HAN to D5 HND ❷, turn RIGHT, 154° track to OLIVI, turn LEFT, 145° track to GEBDA.
IDARO 5E ❸	Intercept 032° bearing from HAN to D5 HND ❷, turn LEFT, 213° track to ABDAP, turn LEFT, 204° track to IDARO.
IDARO 1T ❺	Intercept 032° bearing from HAN to D11 HND ❹, turn LEFT, 213° track to ABDAP, turn LEFT, 204° track to IDARO.

❶ Available between FRI 1800LT-MON 0800LT. Outside these times assigned by ATC only.
After D5 HND ❷ /D11 HND ❹ BRNAV equipment necessary.
❸ If unable to cross D5 HND at or above 5000′ request IDARO 1T.
❺ If unable to cross D11 HND at or above 5000′ request alternate departure instructions by ATC.

CHANGES: MSA.

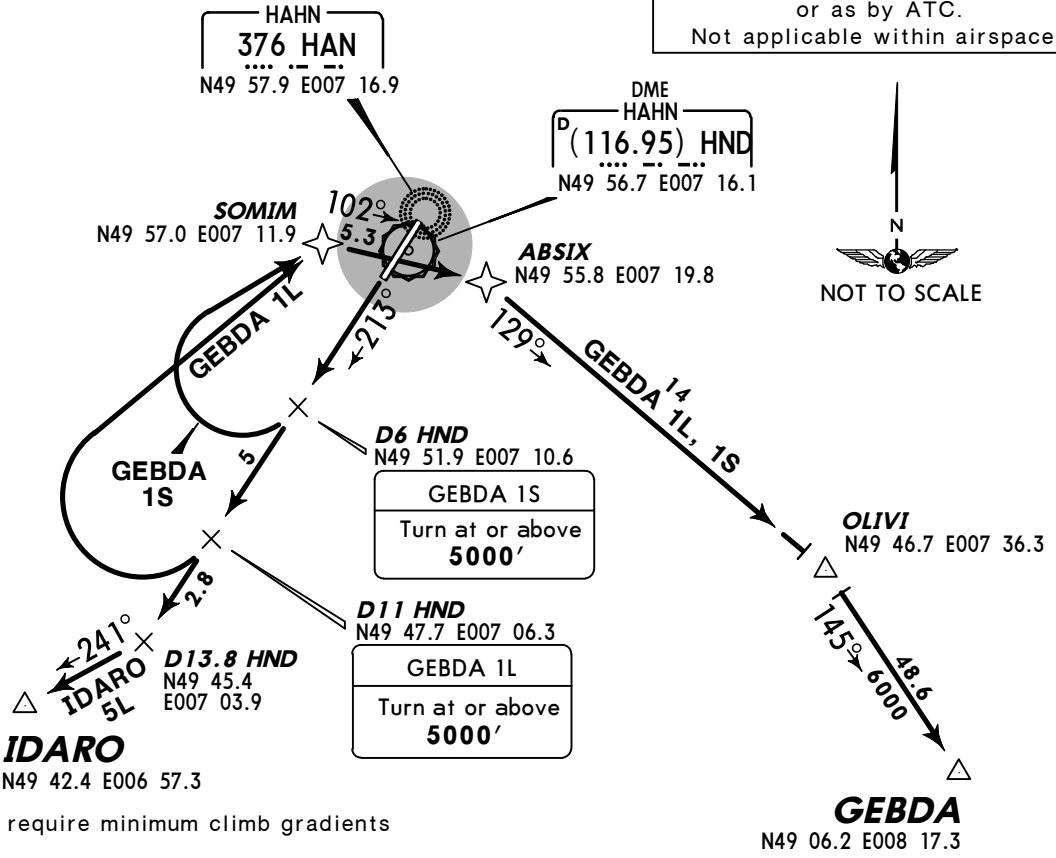
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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.
125.6	1649′	



GEBDA ONE LIMA (GEBDA 1L)
GEBDA ONE SIERRA (GEBDA 1S)
IDARO FIVE LIMA (IDARO 5L)
RWY 21 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

GEBDA 1L
213′ per NM (3.5%) until passing 1900′, then 346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System.

GEBDA 1S
213′ per NM (3.5%) until passing 1900′, then 610′ per NM (10%) until passing 5000′ due to airspace structure.

IDARO 5L
213′ per NM (3.5%) until passing 1900′, then 255′ per NM (4.2%) until passing 4900′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
346′ per NM	433	577	866	1155	1443	1732
255′ per NM	319	425	638	851	1063	1276
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.

Initial climb clearance **5000′**

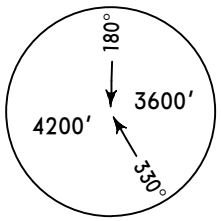
SID	ROUTING
GEBDA 1L ❶	Intercept 213° bearing from HAN to D11 HND ❷, turn RIGHT to SOMIM, turn RIGHT, 102° track to ABSIX, turn RIGHT, 129° track to OLIVI, turn RIGHT, 145° track to GEBDA.
GEBDA 1S ❶❸❼	Intercept 213° bearing from HAN to D6 HND ❹, turn RIGHT to SOMIM, turn RIGHT, 102° track to ABSIX, turn RIGHT, 129° track to OLIVI, turn RIGHT, 145° track to GEBDA.
IDARO 5L ❺	Intercept 213° bearing from HAN to D13.8 HND ❻, turn RIGHT, 241° track to IDARO.

❶ Available between FRI 1800LT-MON 0800LT. Outside these times assigned by ATC only.
BRNAV equipment necessary after: ❷ D11 HND/ ❹ D6 HND/ ❻ D13.8 HND.
❸ Not to be used during activity of Night Low Flying System.
❺ Only for flights via airway G-21.
❼ If unable to cross D6 HND at or above 5000′ request GEBDA 1L.

CHANGES: MSA.

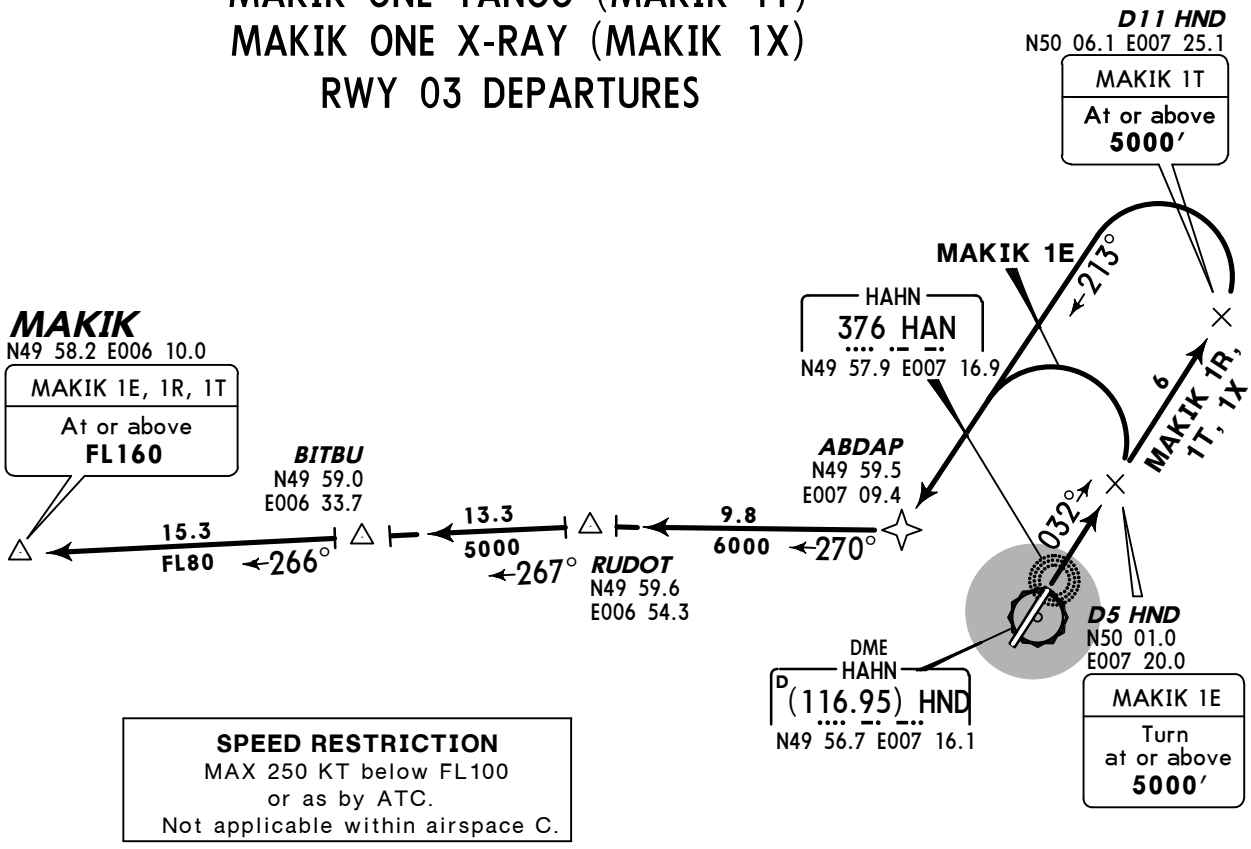
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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
125.6	1649′	



MSA
HAN NDB

MAKIK ONE ECHO (MAKIK 1E)
MAKIK ONE ROMEO (MAKIK 1R)
MAKIK ONE TANGO (MAKIK 1T)
MAKIK ONE X-RAY (MAKIK 1X)
RWY 03 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of

MAKIK 1E

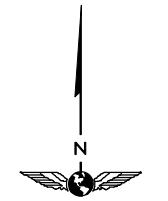
820′ per NM (13.5%) until passing 5000′ due to airspace structure.

MAKIK 1T

334′ per NM (5.5%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
820′ per NM	1025	1367	2051	2734	3418	4101
334′ per NM	418	557	835	1114	1392	1671

If unable to comply inform ATC.



NOT TO SCALE

Initial climb clearance **5000′**

SID	ROUTING
MAKIK 1E ❶	Intercept 032° bearing from HAN to D5 HND ❷, turn LEFT, 213° track to ABDAP, turn RIGHT, 270° track to RUDOT, turn LEFT, 267° track to BITBU, turn LEFT, 266° track to MAKIK.
MAKIK 1R ❸ **MAKIK 1T** ❺ **MAKIK 1X**	Intercept 032° bearing from HAN to D11 HND ❹, turn LEFT, 213° track to ABDAP, turn RIGHT, 270° track to RUDOT, turn LEFT, 267° track to BITBU, turn LEFT, 266° track to MAKIK.

❶ If unable to cross D5 HND at or above 5000′ and MAKIK at or above FL160 request MAKIK 1T.

BRNAV equipment necessary after: ❷ D5 HND/ ❹ D11 HND.

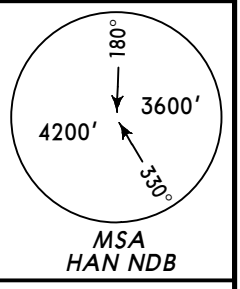
❸ If unable to cross MAKIK at or above FL160 request MAKIK 1X.

❺ If unable to cross D11 HND at or above 5000′ and MAKIK at or above FL160 request MAKIK 1R.

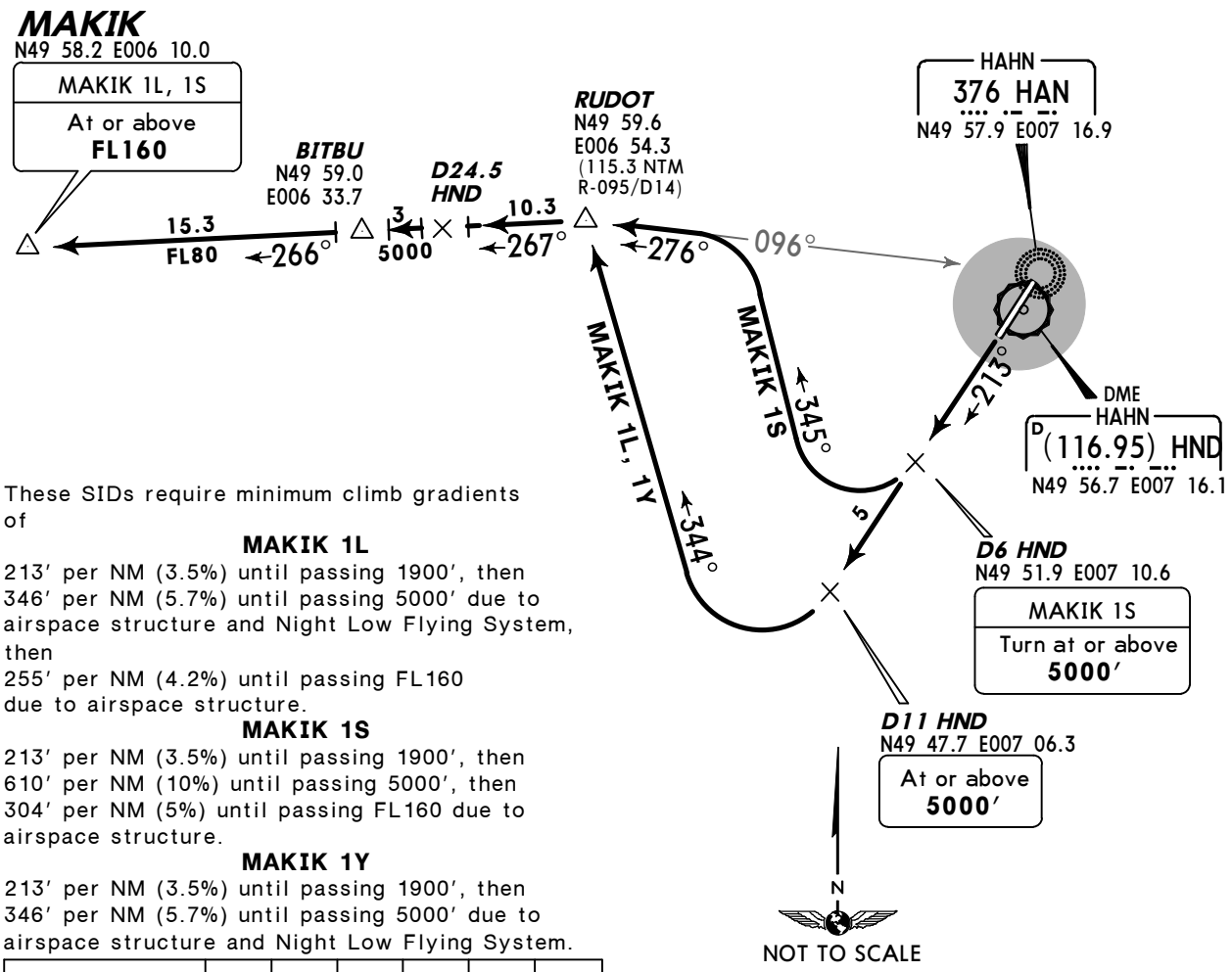
CHANGES: MSA.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.
125.6	1649′	



MAKIK ONE LIMA (MAKIK 1L)
MAKIK ONE SIERRA (MAKIK 1S)
MAKIK ONE YANKEE (MAKIK 1Y)
RWY 21 DEPARTURES



These SIDs require minimum climb gradients of

MAKIK 1L

213′ per NM (3.5%) until passing 1900′, then
346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System, then
255′ per NM (4.2%) until passing FL160 due to airspace structure.

MAKIK 1S

213′ per NM (3.5%) until passing 1900′, then
610′ per NM (10%) until passing 5000′, then
304′ per NM (5%) until passing FL160 due to airspace structure.

MAKIK 1Y

213′ per NM (3.5%) until passing 1900′, then
346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
346′ per NM	433	577	866	1155	1443	1732
304′ per NM	380	506	760	1013	1266	1519
255′ per NM	319	425	638	851	1063	1276
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

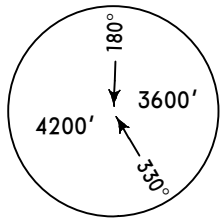
SID	ROUTING
MAKIK 1L ❶ **MAKIK 1Y**	Intercept 213° bearing from HAN to D11 HND ❷, turn RIGHT, 344° track to RUDOT, turn LEFT, 267° track to BITBU, turn LEFT, 266° track to MAKIK.
MAKIK 1S ❸❹	Intercept 213° bearing from HAN to D6 HND , turn RIGHT, 345° track, intercept 276° bearing from HAN to RUDOT , ❺urn LEFT, 267° track to BITBU, turn LEFT, 266° track to MAKIK.

❶ If unable to cross MAKIK at or above FL160 request MAKIK 1Y.
BRNAV equipment necessary after: ❷ D11 HND/ ❺ RUDOT.
❸ If unable to cross D6 HND at or above 5000′ and MAKIK at or above FL160 request MAKIK 1L.
❹ Not to be used during activity of Night Low Flying System.

CHANGES: MSA.

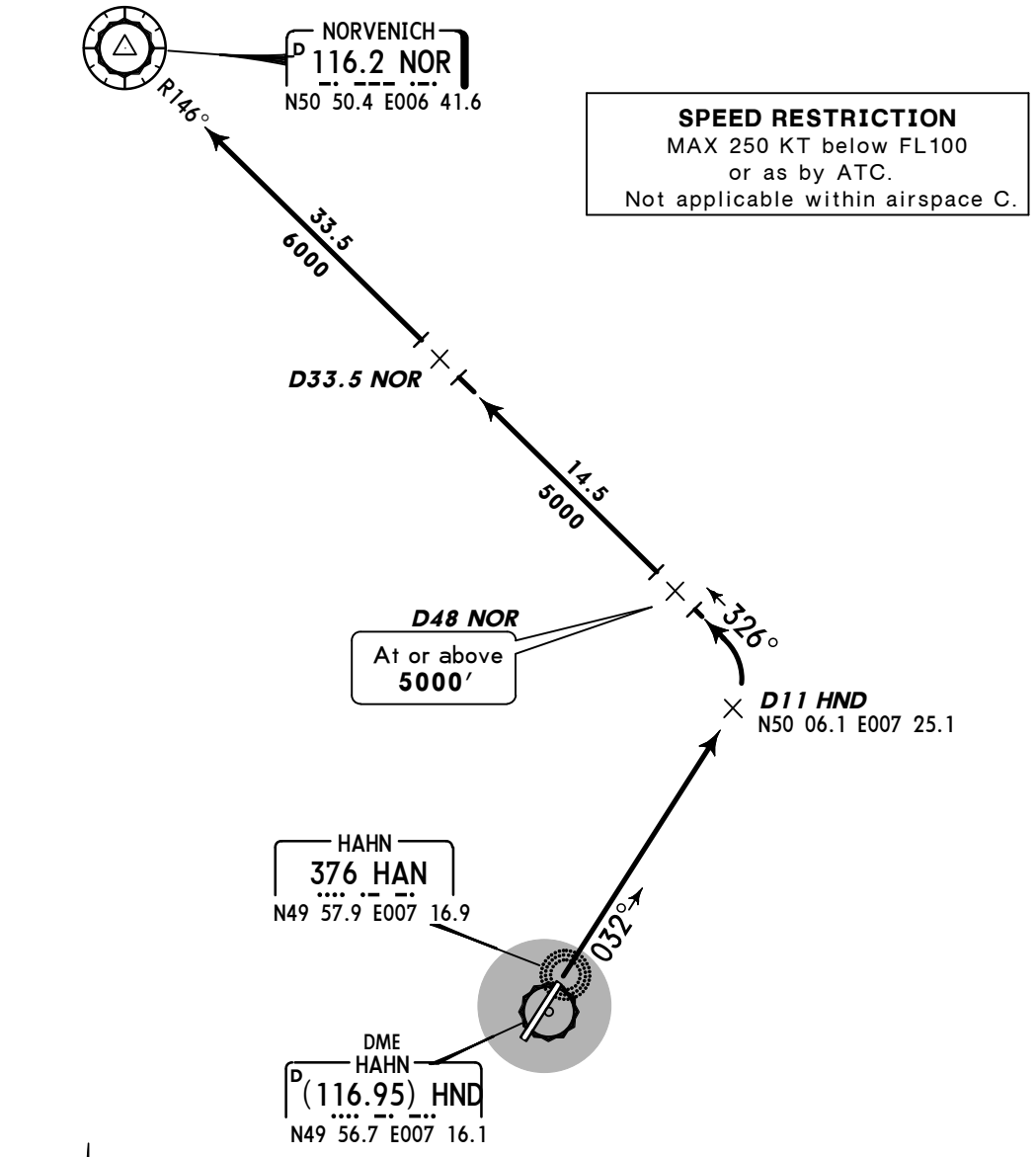
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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
125.6	1649′	



MSA
HAN NDB

NORVENICH FIVE GOLF (NOR 5G)
RWY 03 DEPARTURE
BY ATC
NOT TO BE FILED IN FLIGHT PLAN
NOT TO BE USED DURING ACTIVITY OF NIGHT LOW FLYING SYSTEM



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

This SID requires a minimum climb gradient of
225′ per NM (3.7%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
225′ per NM	281	375	562	749	937	1124

If unable to comply inform ATC.

Initial climb clearance **5000′**

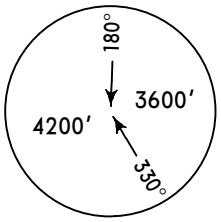
ROUTING

Intercept 032° bearing from HAN to D11 HND, turn LEFT, intercept NOR R-146 inbound to NOR.

CHANGES: MSA.

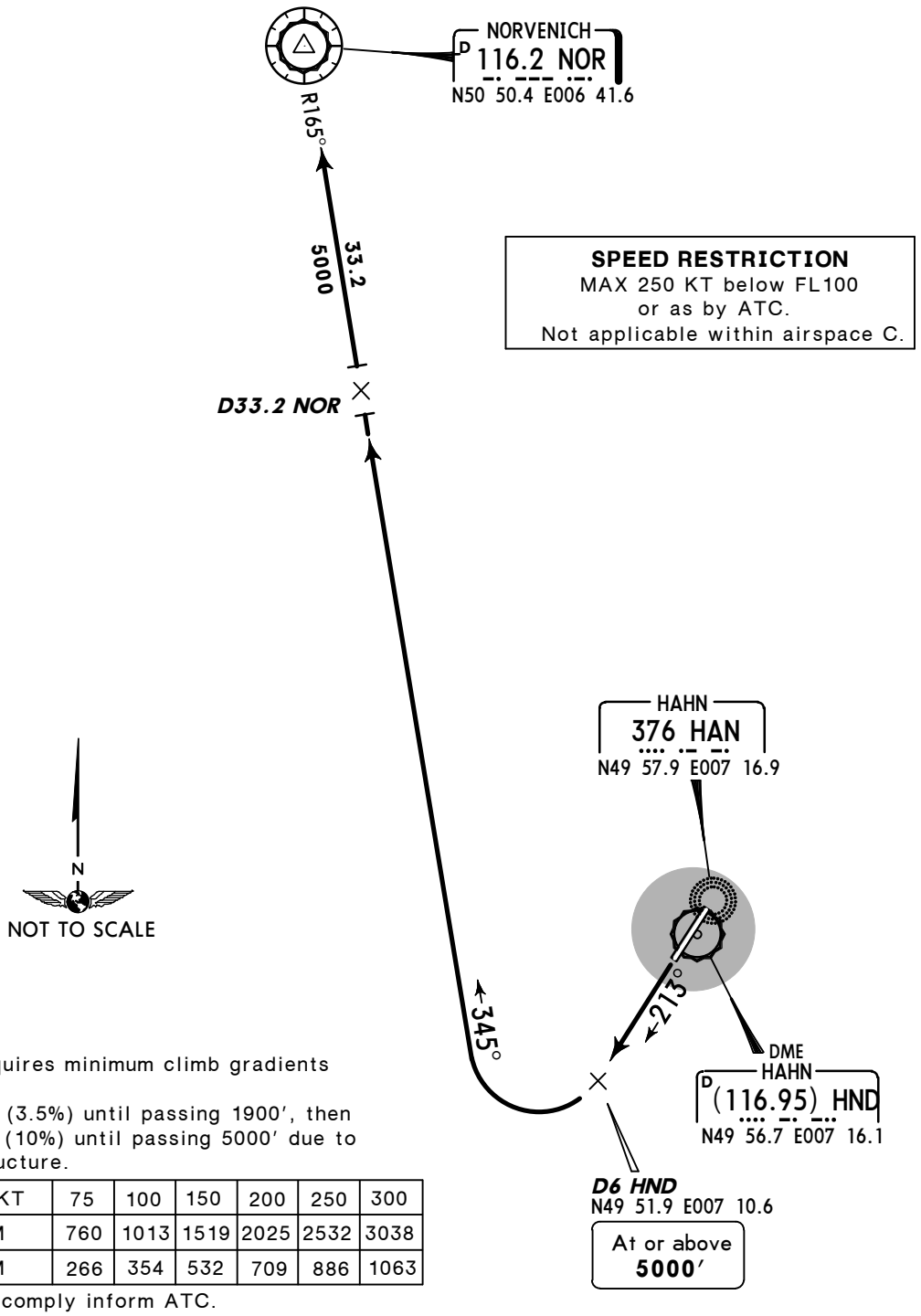
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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.
125.6	1649′	



MSA
HAN NDB

NORVENICH FOUR SIERRA (NOR 4S)
RWY 21 DEPARTURE
BY ATC
NOT TO BE FILED IN FLIGHT PLAN
NOT TO BE USED DURING ACTIVITY OF NIGHT LOW FLYING SYSTEM



This SID requires minimum climb gradients of
213′ per NM (3.5%) until passing 1900′, then
610′ per NM (10%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.

Initial climb clearance **5000′**

ROUTING

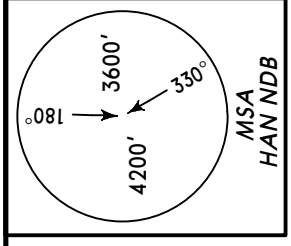
Intercept 213° bearing from HAN to D6 HND ❶, turn RIGHT, intercept NOR R-165 inbound to NOR.

❶ After D6 HND BRNAV equipment necessary.

CHANGES: MSA.

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LANGEN Radar	Apt Elev	Trans level: By ATC Trans alt: 5000′
125.6	1649′	1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



RIDSU ONE ECHO (RIDSU 1E)
RIDSU ONE TANGO (RIDSU 1T)
RWY 03 DEPARTURES

ONLY AVAILABLE FOR FLIGHTS VIA DONAB AT OR ABOVE FL120
IF UNABLE TO COMPLY REQUEST ALTERNATE DEPARTURE INSTRUCTIONS BY ATC

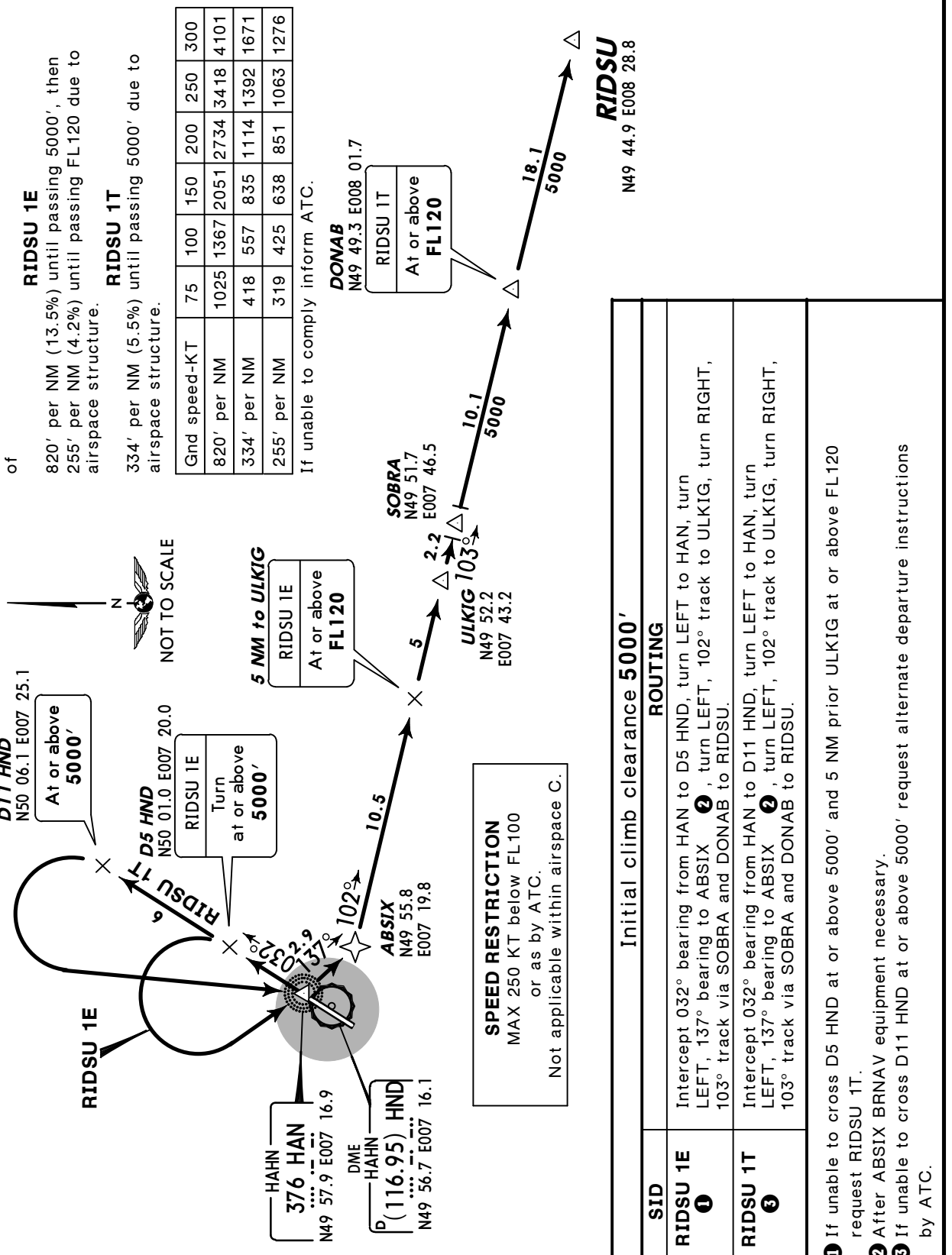
These SIDs require minimum climb gradients of

RIDSU 1E
820′ per NM (13.5%) until passing 5000′, then 255′ per NM (4.2%) until passing FL120 due to airspace structure.

RIDSU 1T
334′ per NM (5.5%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
820′ per NM	1025	1367	2051	2734	3418	4101
334′ per NM	418	557	835	1114	1392	1671
255′ per NM	319	425	638	851	1063	1276

If unable to comply inform ATC.



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

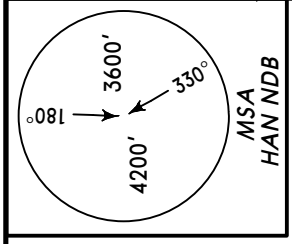
SID	ROUTING
RIDSU 1E ❶	Intercept 032° bearing from HAN to D5 HND, turn LEFT to HAN, turn LEFT, 137° bearing to ABSIX ❷, turn LEFT, 102° track to ULKIG, turn RIGHT, 103° track via SOBRA and DONAB to RIDSU.
RIDSU 1T ❸	Intercept 032° bearing from HAN to D11 HND, turn LEFT to HAN, turn LEFT, 137° bearing to ABSIX ❷, turn LEFT, 102° track to ULKIG, turn RIGHT, 103° track via SOBRA and DONAB to RIDSU.

❶ If unable to cross D5 HND at or above 5000′ and 5 NM prior ULKIG at or above FL120 request RIDSU 1T.
❷ After ABSIX BRNAV equipment necessary.
❸ If unable to cross D11 HND at or above 5000′ request alternate departure instructions by ATC.

CHANGES: MSA.

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LANGEN Radar	Apt Elev	
125.6	1649′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.



RIDSU ONE LIMA (RIDSU 1L)
RIDSU ONE SIERRA (RIDSU 1S)
RWY 21 DEPARTURES

ONLY AVAILABLE FOR FLIGHTS VIA DONAB AT OR ABOVE FL120
IF UNABLE TO COMPLY REQUEST ALTERNATE
DEPARTURE INSTRUCTIONS BY ATC

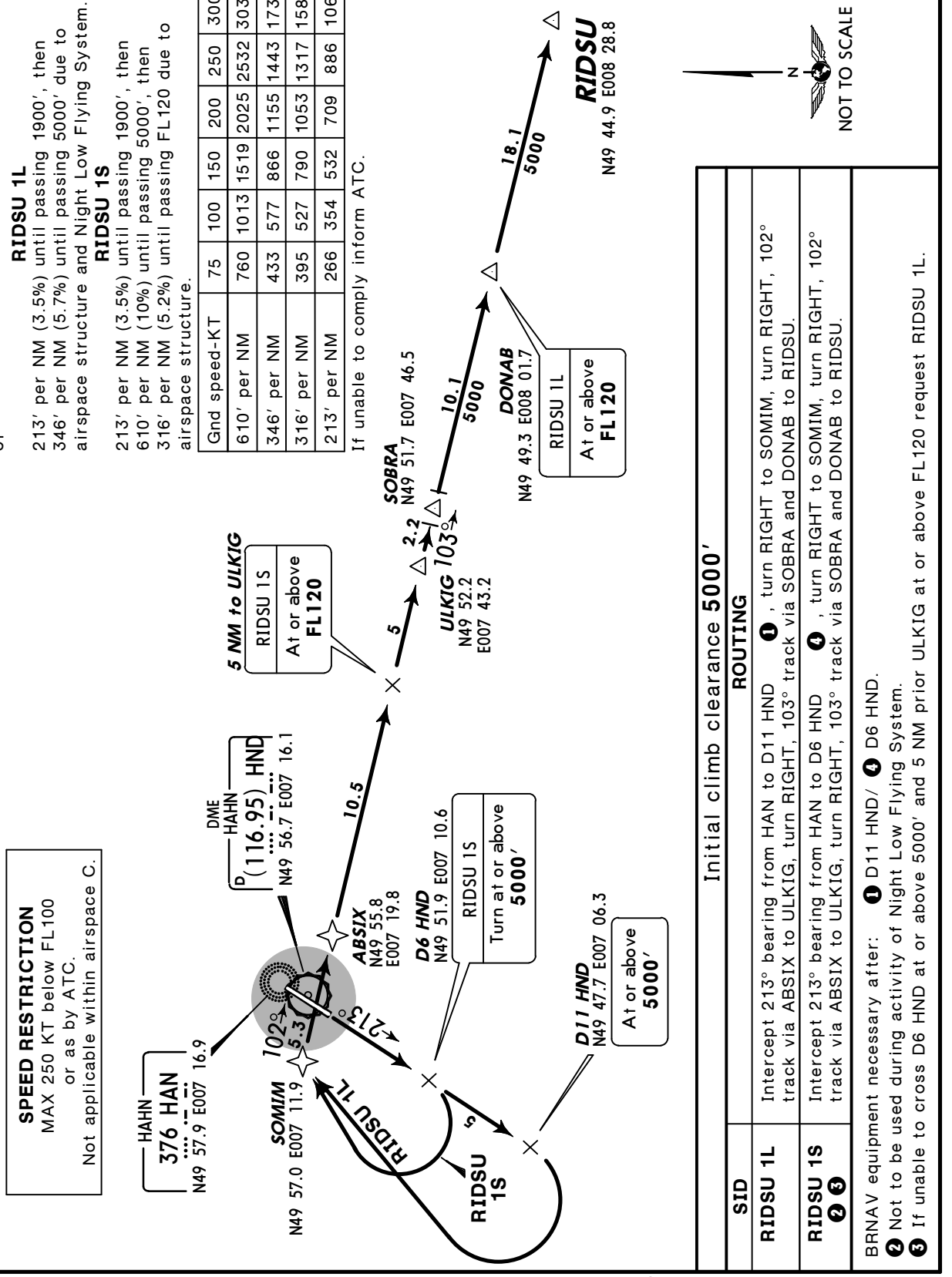
These SIDs require minimum climb gradients of

RIDSU 1L
213′ per NM (3.5%) until passing 1900′, then 346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System.

RIDSU 1S
213′ per NM (3.5%) until passing 1900′, then 610′ per NM (10%) until passing 5000′, then 316′ per NM (5.2%) until passing FL120 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
346′ per NM	433	577	866	1155	1443	1732
316′ per NM	395	527	790	1053	1317	1580
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.



Initial climb clearance **5000′**

SID	ROUTING
RIDSU 1L	Intercept 213° bearing from HAN to D11 HND ❶, turn RIGHT to SOMIM, turn RIGHT, 102° track via ABSIX to ULKIG, turn RIGHT, 103° track via SOBRA and DONAB to RIDSU.
RIDSU 1S ❷ ❸	Intercept 213° bearing from HAN to D6 HND ❹, turn RIGHT to SOMIM, turn RIGHT, 102° track via ABSIX to ULKIG, turn RIGHT, 103° track via SOBRA and DONAB to RIDSU.

BRNAV equipment necessary after: ❶ D11 HND/ ❹ D6 HND.
❷ Not to be used during activity of Night Low Flying System.
❸ If unable to cross D6 HND at or above 5000′ and 5 NM prior ULKIG at or above FL120 request RIDSU 1L.

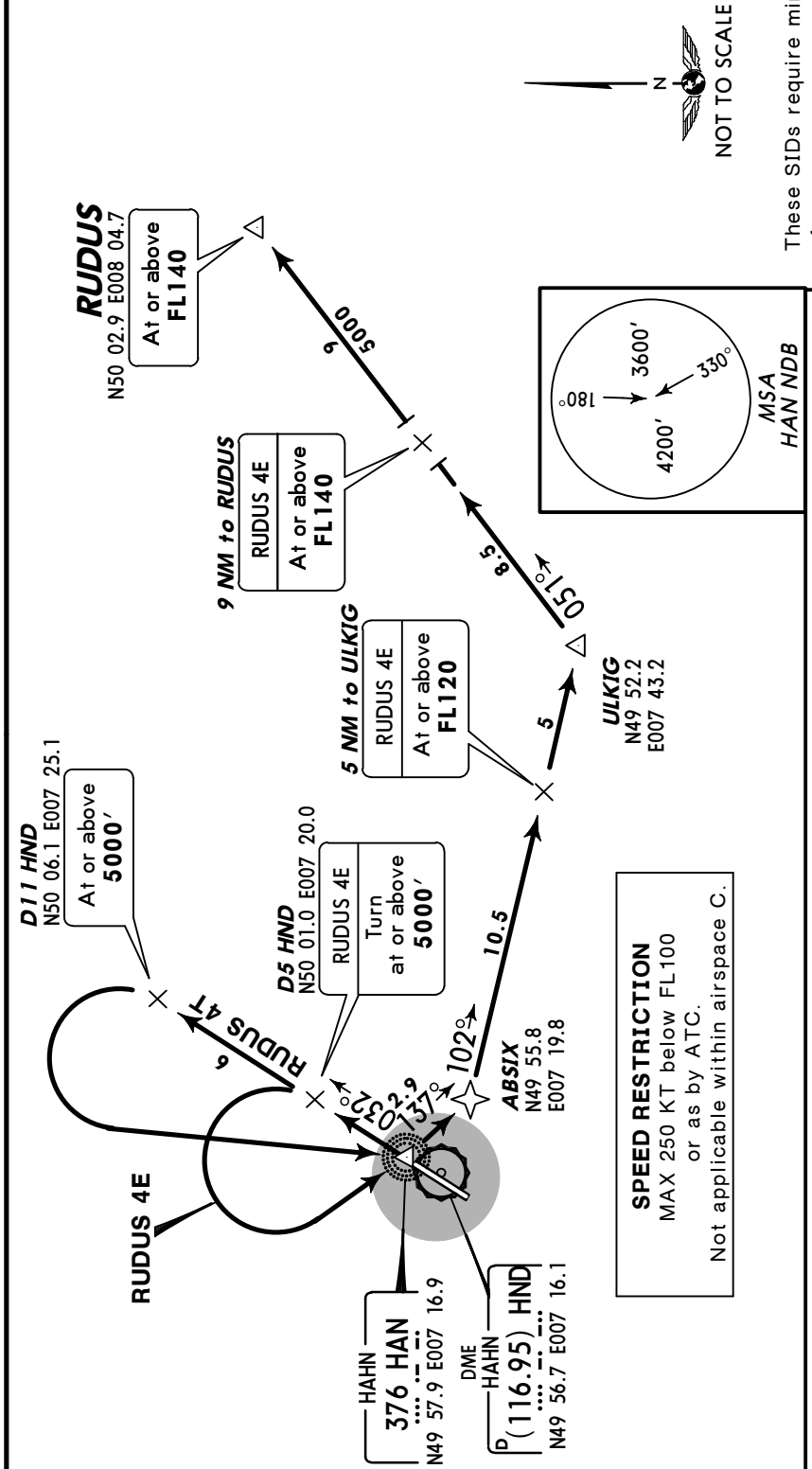
CHANGES: MSA.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
125.6	1649′	1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

RUDUS FOUR ECHO (RUDUS 4E)
RUDUS FOUR TANGO (RUDUS 4T)
RWY 03 DEPARTURES

ONLY AVAILABLE FOR FLIGHTS VIA RUDUS AT OR ABOVE FL140
IF UNABLE TO COMPLY REQUEST ALTERNATE DEPARTURE INSTRUCTIONS BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of

RUDUS 4E
820′ per NM (13.5%) until passing 5000′, then 255′ per NM (4.2%) until passing FL120 due to airspace structure.

RUDUS 4T
334′ per NM (5.5%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
820′ per NM	1025	1367	2051	2734	3418	4101
334′ per NM	418	557	835	1114	1392	1671
255′ per NM	319	425	638	851	1063	1276

If unable to comply inform ATC.

Initial climb clearance **5000′**

SID	ROUTING
RUDUS 4E ❶	Intercept 032° bearing from HAN to D5 HND, turn LEFT to HAN, turn LEFT, 137° bearing to ABSIX ❷, turn LEFT, 102° track to ULKIG, turn LEFT, 051° track to RUDUS.
RUDUS 4T ❸	Intercept 032° bearing from HAN to D11 HND, turn LEFT to HAN, turn LEFT, 137° bearing to ABSIX ❷, turn LEFT, 102° track to ULKIG, turn LEFT, 051° track to RUDUS.

❶ If unable to cross D5 HND at or above 5000′ and 5 NM prior ULKIG at or above FL120 and 9 NM prior RUDUS at or above FL140 request RUDUS 4T.
❷ After ABSIX BRNAV equipment necessary.
❸ If unable to cross D11 HND at or above 5000′ request alternate departure instructions by ATC.

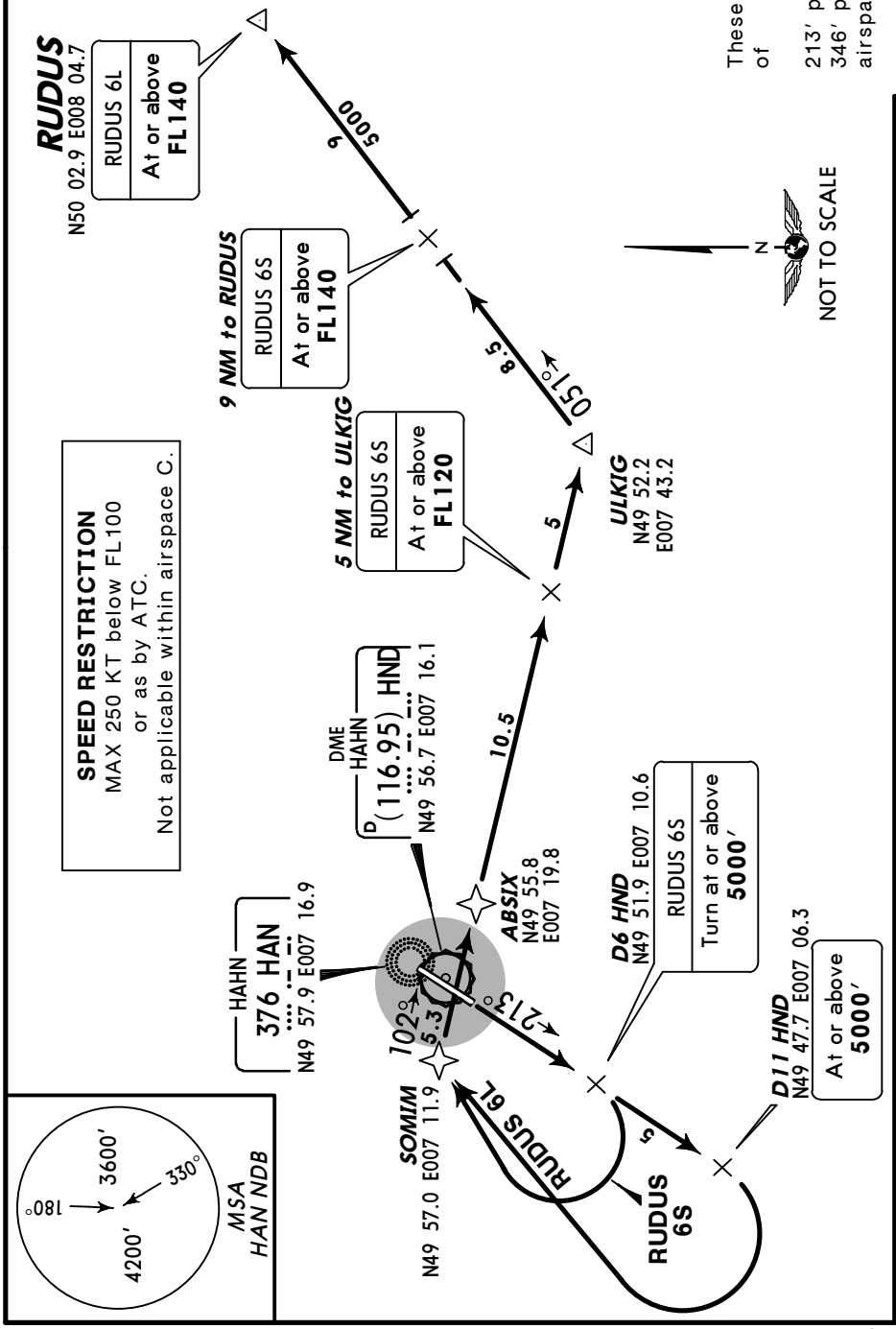
CHANGES: MSA.

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LANGEN Radar	*Apt Elev*	
125.6	1649′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

RUDUS SIX LIMA (RUDUS 6L)
RUDUS SIX SIERRA (RUDUS 6S)
RWY 21 DEPARTURES

ONLY AVAILABLE FOR FLIGHTS VIA RUDUS AT OR ABOVE FL140
IF UNABLE TO COMPLY REQUEST ALTERNATE DEPARTURE INSTRUCTIONS BY ATC



These SIDs require minimum climb gradients of

RUDUS 6L
213′ per NM (3.5%) until passing 1900′, then
346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System.

RUDUS 6S
213′ per NM (3.5%) until passing 1900′, then
610′ per NM (10%) until passing 5000′, then
316′ per NM (5.2%) until passing FL120 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
346′ per NM	433	577	866	1155	1443	1732
316′ per NM	395	527	790	1053	1317	1580
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.

Initial climb clearance **5000′**

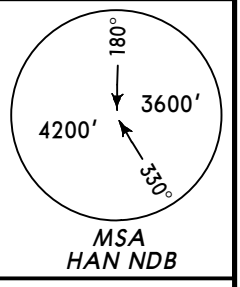
SID	ROUTING
RUDUS 6L	Intercept 213° bearing from HAN to D11 HND ❶, turn RIGHT to SOMIM, turn RIGHT, 102° track via ABSIX to ULKIG, turn LEFT, 051° track to RUDUS.
RUDUS 6S ❷ ❸	Intercept 213° bearing from HAN to D6 HND ❹, turn RIGHT to SOMIM, turn RIGHT, 102° track via ABSIX to ULKIG, turn LEFT, 051° track to RUDUS.

After D11 HND ❶ /D6 HND ❹ BRNAV equipment necessary.
❷ Not to be used during activity of Night Low Flying System.
❸ If unable to cross D6 HND at or above 5000′ and 5 NM prior ULKIG at or above FL120 and 9 NM prior RUDUS at or above FL140 request RUDUS 6L.

CHANGES: MSA.

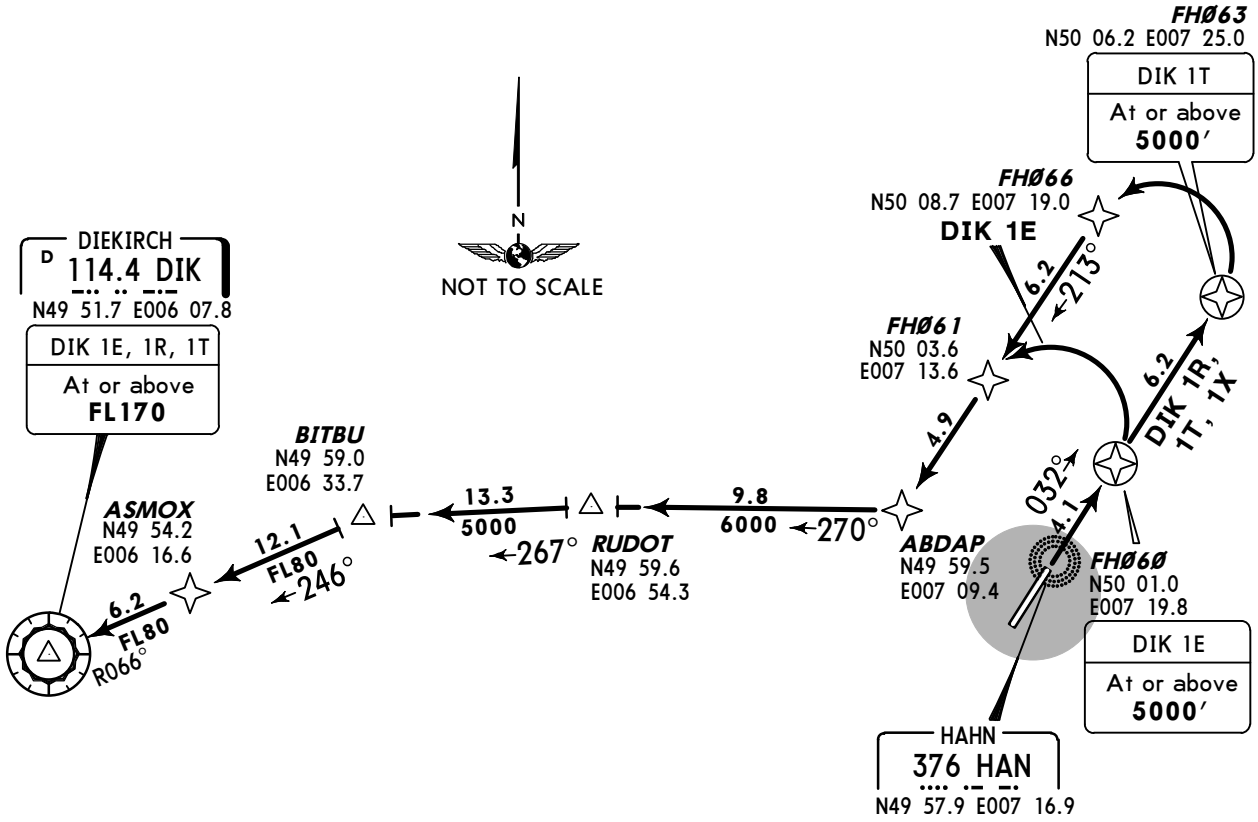
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LANGEN Radar	Apt Elev	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
125.6	1649′	



DIEKIRCH ONE ECHO (DIK 1E)
DIEKIRCH ONE ROMEO (DIK 1R)
DIEKIRCH ONE TANGO (DIK 1T)
DIEKIRCH ONE X-RAY (DIK 1X)
RWY 03 RNAV DEPARTURES (OVERLAY 20-3)

ADDITIONALLY AVAILABLE FOR FLIGHTS FILED AFTER
BITBU - Z-110 - LIMGO



These SIDs require minimum climb gradients of

DIK 1E

820′ per NM (13.5%) until passing 5000′ due to airspace structure.

DIK 1T

334′ per NM (5.5%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
820′ per NM	1025	1367	2051	2734	3418	4101
334′ per NM	418	557	835	1114	1392	1671

If unable to comply inform ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

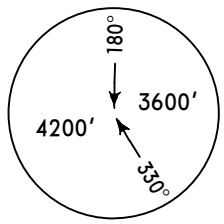
SID	ROUTING
DIK 1E ❶	(2100′+) - FH060 (5000′+) - FH061 - ABDAP - RUDOT - BITBU - ASMOX - DIK (FL170+).
DIK 1R ❷	(2100′+) - FH063 - FH066 - ABDAP - RUDOT - BITBU - ASMOX - DIK (FL170+).
DIK 1T ❸	(2100′+) - FH063 (5000′+) - FH066 - ABDAP - RUDOT - BITBU - ASMOX - DIK (FL170+).
DIK 1X	(2100′+) - FH063 - FH066 - ABDAP - RUDOT - BITBU - ASMOX - DIK.

❶ If unable to cross FH060 at or above 5000′ and DIK at or above FL170 request DIK 1T.
❷ If unable to cross DIK at or above FL170 request DIK 1X.
❸ If unable to cross FH063 at or above 5000′ and DIK at or above FL170 request DIK 1R.

CHANGES: MSA.

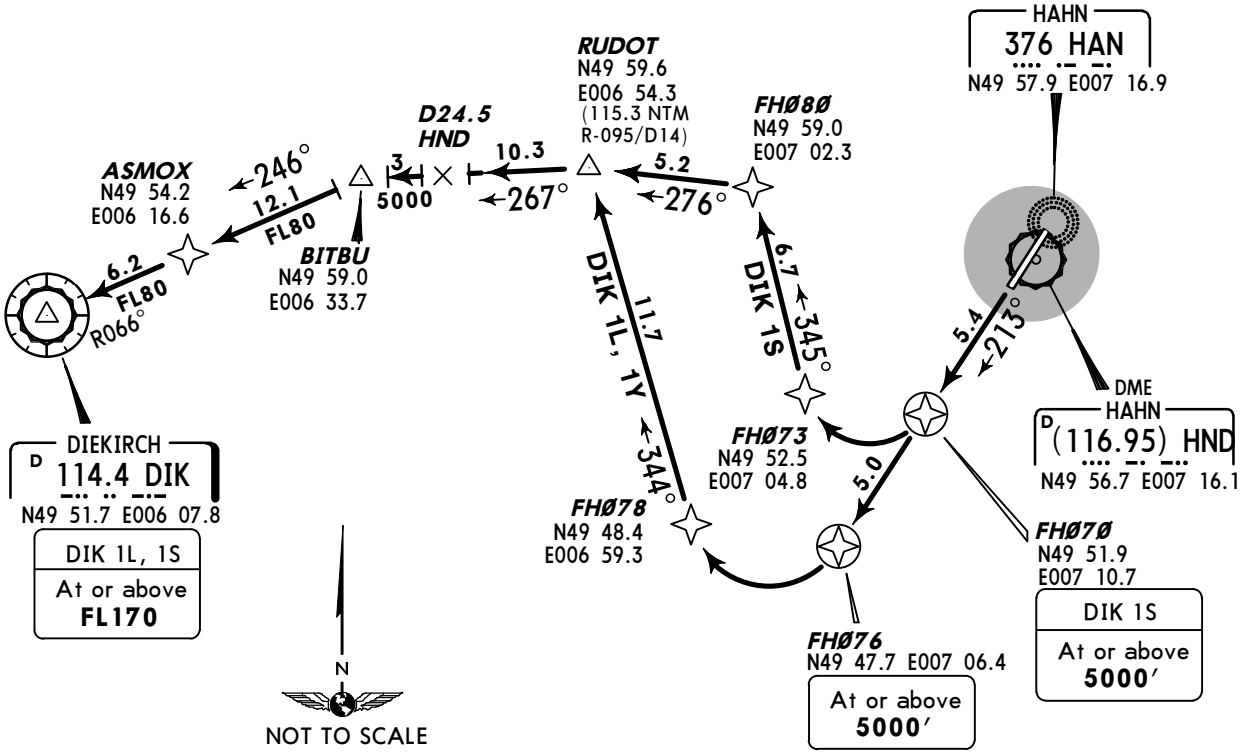
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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.
125.6	1649′	



DIEKIRCH ONE LIMA (DIK 1L)
DIEKIRCH ONE SIERRA (DIK 1S)
DIEKIRCH ONE YANKEE (DIK 1Y)
RWY 21 RNAV DEPARTURES (OVERLAY 20-3A)

ADDITIONALLY AVAILABLE FOR FLIGHTS FILED AFTER
BITBU - Z-110 - LIMGO



These SIDs require minimum climb gradients of

DIK 1L
213′ per NM (3.5%) until passing 1900′, then 346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System, then 261′ per NM (4.3%) until passing FL170 due to airspace structure.

DIK 1S
213′ per NM (3.5%) until passing 1900′, then 610′ per NM (10%) until passing 5000′, then 304′ per NM (5%) until passing FL170 due to airspace structure.

DIK 1Y
213′ per NM (3.5%) until passing 1900′, then 346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
346′ per NM	433	577	866	1155	1443	1732
304′ per NM	380	506	760	1013	1266	1519
261′ per NM	327	435	653	871	1089	1306
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.

Initial climb clearance **5000′**

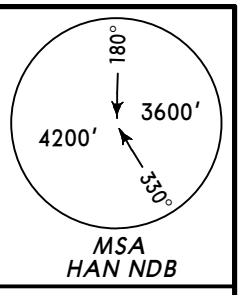
SID	ROUTING
DIK 1L ❶	(2100′+) - FH076 (5000′+) - FH078 - RUDOT - BITBU - ASMOX - DIK (FL170+).
DIK 1S ❷❸	(2100′+) - FH070 (5000′+) - FH073 - FH080 - RUDOT - BITBU - ASMOX - DIK (FL170+).
DIK 1Y	(2100′+) - FH076 (5000′+) - FH078 - RUDOT - BITBU - ASMOX - DIK.

❶ If unable to cross DIK at or above FL170 request DIK 1Y.
❷ If unable to cross FH070 at or above 5000′ and DIK at or above FL170 request DIK 1L.
❸ Not to be used during activity of Night Low Flying System.

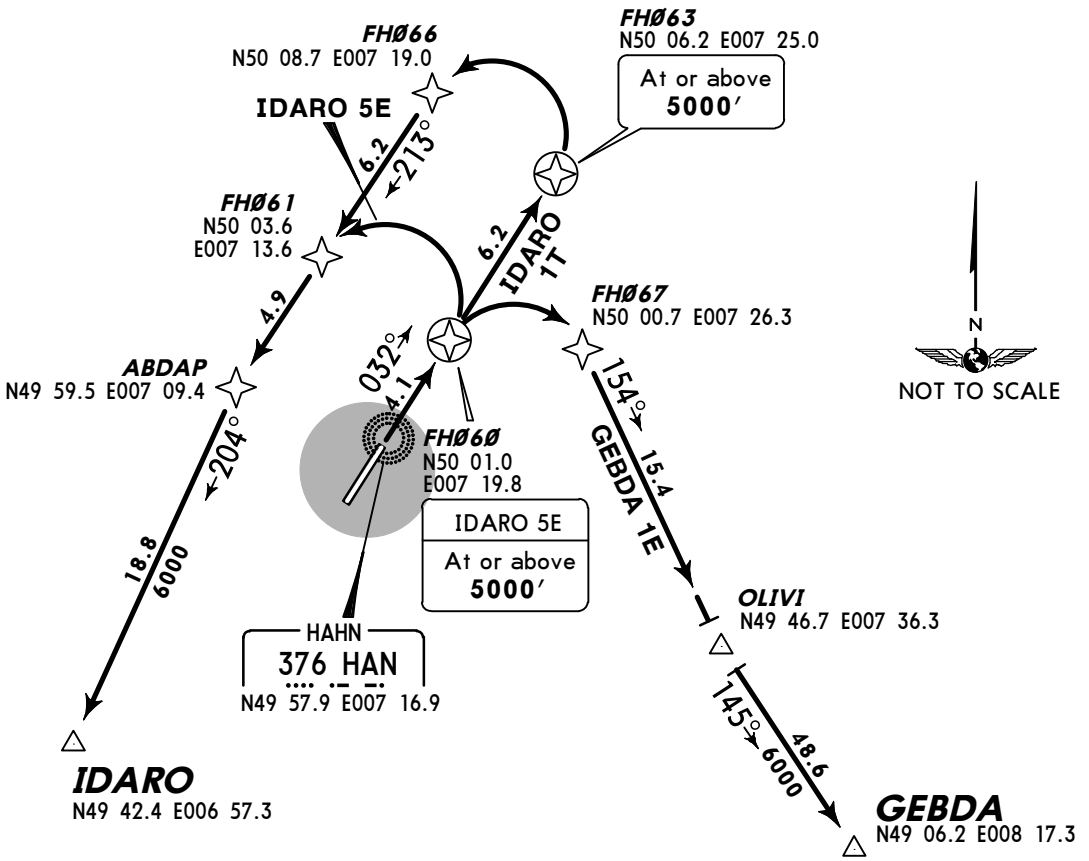
CHANGES: MSA.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
125.6	1649′	



GEBDA ONE ECHO (GEBDA 1E)*[GEBD1E]*
IDARO FIVE ECHO (IDARO 5E)*[IDAR5E]*
IDARO ONE TANGO (IDARO 1T)*[IDAR1T]*
RWY 03 RNAV DEPARTURES (OVERLAY 20-3B)



These SIDs require minimum climb gradients of

IDARO 5E

820′ per NM (13.5%) until passing 5000′ due to airspace structure.

IDARO 1T

334′ per NM (5.5%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
820′ per NM	1025	1367	2051	2734	3418	4101
334′ per NM	418	557	835	1114	1392	1671

If unable to comply inform ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

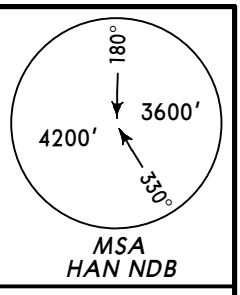
SID	ROUTING
GEBDA 1E ❶	(2100′+) - FH060 - FH067 - OLIVI - GEBDA.
IDARO 5E ❷	(2100′+) - FH060 (5000′+) - FH061 - ABDAP - IDARO.
IDARO 1T ❸	(2100′+) - FH063 (5000′+) - FH066 - ABDAP - IDARO.

❶ Available between FRI 1800LT-MON 0800LT. Outside these times assigned by ATC only.
❷ If unable to cross FH060 at or above 5000′ request IDARO 1T.
❸ If unable to cross FH063 at or above 5000′ request alternate departure instructions by ATC.

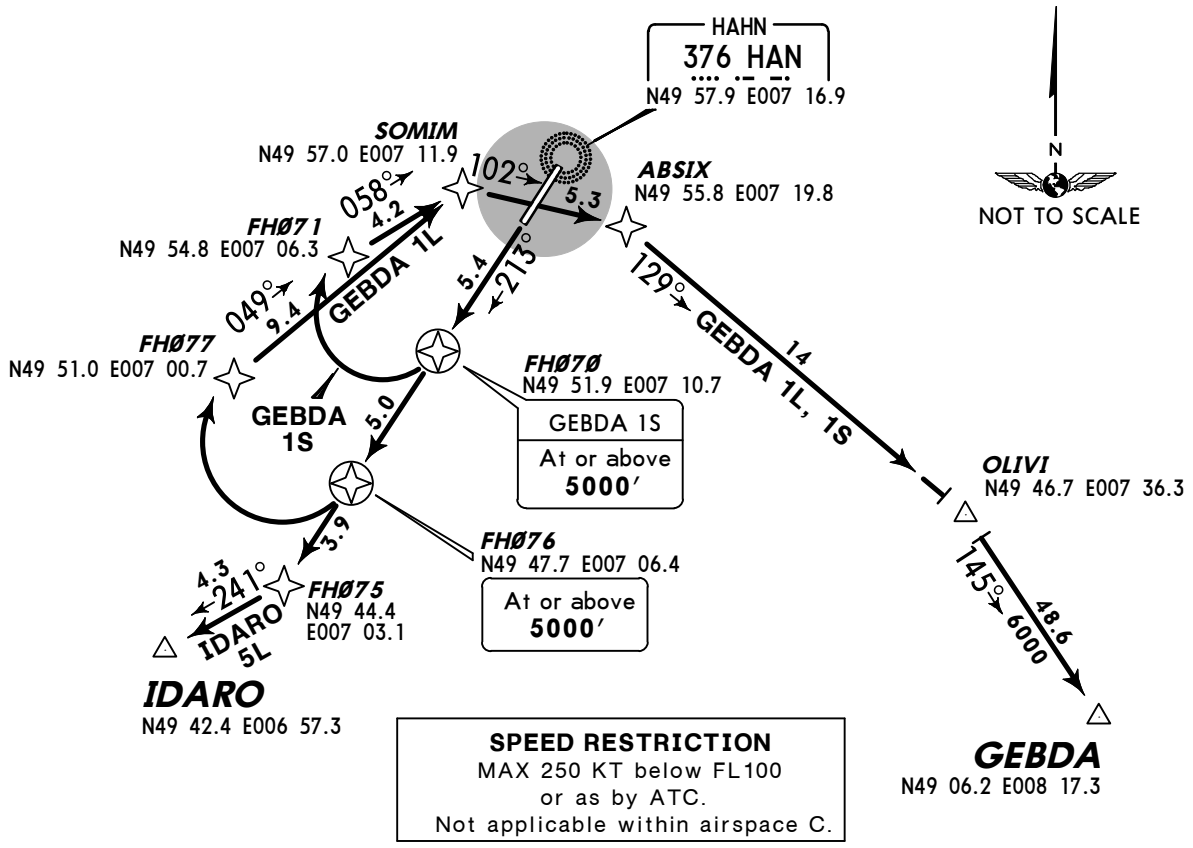
CHANGES: MSA.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.
125.6	1649′	



GEBDA ONE LIMA (GEBDA 1L)*[GEBD1L]*
GEBDA ONE SIERRA (GEBDA 1S)*[GEBD1S]*
IDARO FIVE LIMA (IDARO 5L)*[IDAR5L]*
RWY 21 RNAV DEPARTURES (OVERLAY 20-3C)



These SIDs require minimum climb gradients of

GEBDA 1L

213′ per NM (3.5%) until passing 1900′, then 346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System.

GEBDA 1S

213′ per NM (3.5%) until passing 1900′, then 610′ per NM (10%) until passing 5000′ due to airspace structure.

IDARO 5L

213′ per NM (3.5%) until passing 1900′, then 255′ per NM (4.2%) until passing 4900′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
346′ per NM	433	577	866	1155	1443	1732
255′ per NM	319	425	638	851	1063	1276
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.

Initial climb clearance **5000′**

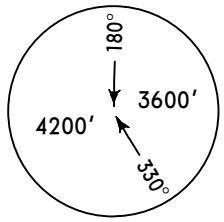
SID	ROUTING
GEBDA 1L ❶	(2100′+) - FH076 (5000′+) - FH077 - SOMIM - ABSIX - OLIVI - GEBDA.
GEBDA 1S ❶❷❹	(2100′+) - FH070 (5000′+) - FH071 - SOMIM - ABSIX - OLIVI - GEBDA.
IDARO 5L ❸	(2100′+) - FH075 - IDARO.

❶ Available between FRI 1800LT-MON 0800LT. Outside these times assigned by ATC only.
❷ Not to be used during activity of Night Low Flying System.
❸ Only for flights via airway G-21.
❹ If unable to cross FH070 at or above 5000′ request GEBDA 1L.

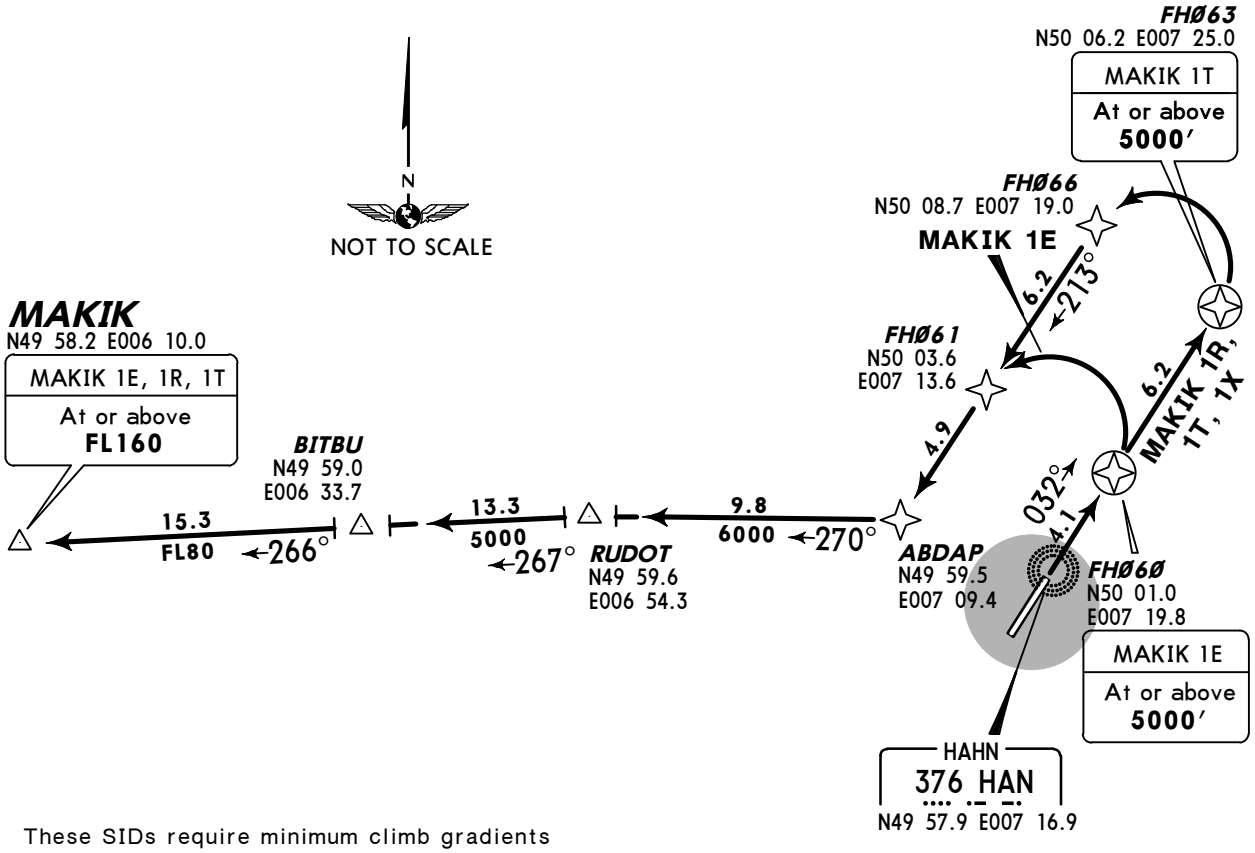
CHANGES: MSA.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
125.6	1649′	



MAKIK ONE ECHO (MAKIK 1E)*[MAKI1E]*
MAKIK ONE ROMEO (MAKIK 1R)*[MAKI1R]*
MAKIK ONE TANGO (MAKIK 1T)*[MAKI1T]*
MAKIK ONE X-RAY (MAKIK 1X)*[MAKI1X]*
RWY 03 RNAV DEPARTURES (OVERLAY 20-3D)



These SIDs require minimum climb gradients of

MAKIK 1E

820′ per NM (13.5%) until passing 5000′ due to airspace structure.

MAKIK 1T

334′ per NM (5.5%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
820′ per NM	1025	1367	2051	2734	3418	4101
334′ per NM	418	557	835	1114	1392	1671

If unable to comply inform ATC.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	ROUTING
MAKIK 1E ❶	(2100′+) - FH060 (5000′+) - FH061 - ABDAP - RUDOT - BITBU - MAKIK (FL160+).
MAKIK 1R ❷	(2100′+) - FH063 - FH066 - ABDAP - RUDOT - BITBU - MAKIK (FL160+).
MAKIK 1T ❸	(2100′+) - FH063 (5000′+) - FH066 - ABDAP - RUDOT - BITBU - MAKIK (FL160+).
MAKIK 1X	(2100′+) - FH063 - FH066 - ABDAP - RUDOT - BITBU - MAKIK.

❶ If unable to cross FH060 at or above 5000′ and MAKIK at or above FL160 request MAKIK 1T.

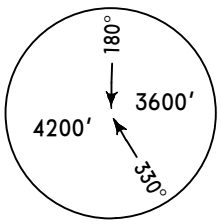
❷ If unable to cross MAKIK at or above FL160 request MAKIK 1X.

❸ If unable to cross FH063 at or above 5000′ and MAKIK at or above FL160 request MAKIK 1R.

CHANGES: MSA.

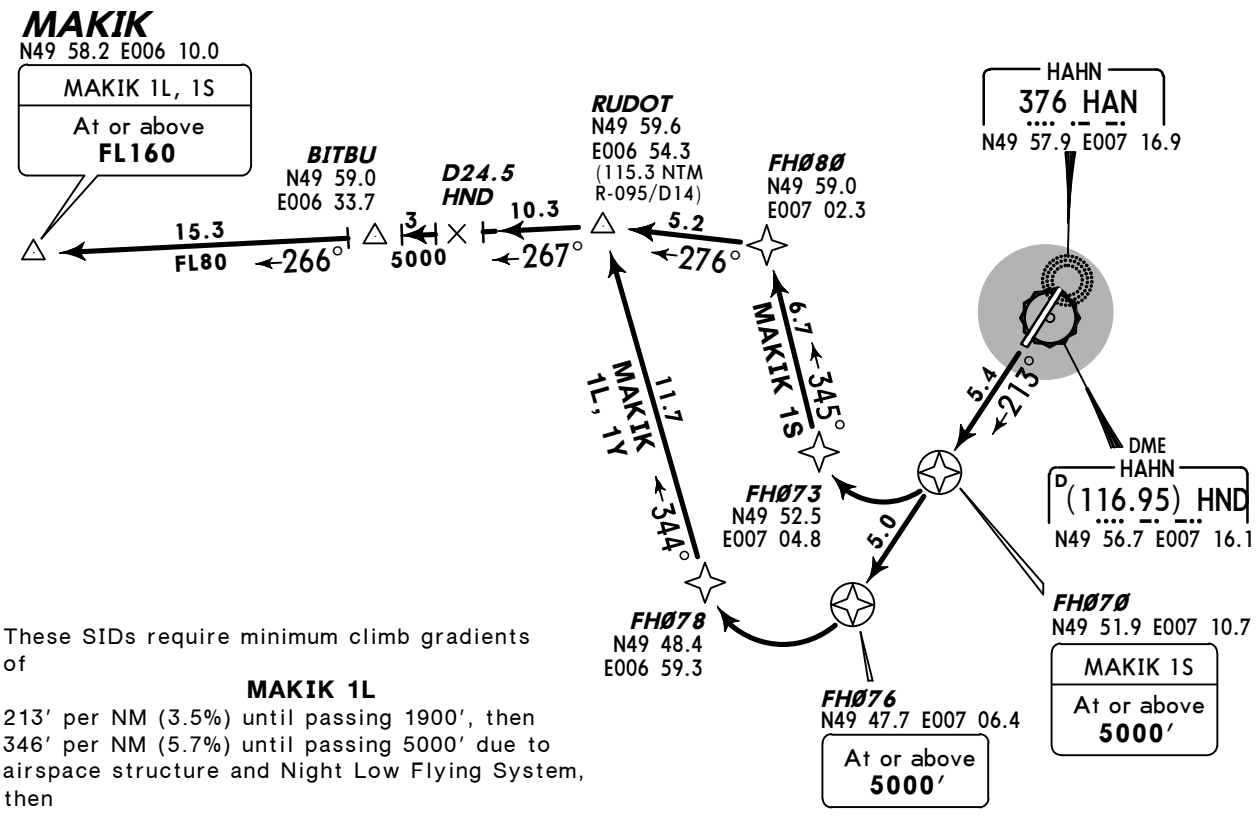
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LANGEN Radar 125.6	*Apt Elev* 1649′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.



MSA
HAN NDB

MAKIK ONE LIMA (MAKIK 1L)*[MAKI1L]*
MAKIK ONE SIERRA (MAKIK 1S)*[MAKI1S]*
MAKIK ONE YANKEE (MAKIK 1Y)*[MAKI1Y]*
RWY 21 RNAV DEPARTURES (OVERLAY 20-3E)



These SIDs require minimum climb gradients of

MAKIK 1L

213′ per NM (3.5%) until passing 1900′, then
346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System, then
255′ per NM (4.2%) until passing FL160 due to airspace structure.

MAKIK 1S

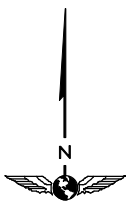
213′ per NM (3.5%) until passing 1900′, then
610′ per NM (10%) until passing 5000′, then
304′ per NM (5%) until passing FL160 due to airspace structure.

MAKIK 1Y

213′ per NM (3.5%) until passing 1900′, then
346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
346′ per NM	433	577	866	1155	1443	1732
304′ per NM	380	506	760	1013	1266	1519
255′ per NM	319	425	638	851	1063	1276
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.



NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

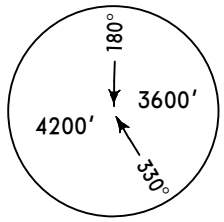
SID	ROUTING
MAKIK 1L❶	(2100′+) - FH076 (5000′+) - FH078 - RUDOT - BITBU - MAKIK (FL160+).
MAKIK 1S❷❸	(2100′+) - FH070 (5000′+) - FH073 - FH080 - RUDOT - BITBU - MAKIK (FL160+).
MAKIK 1Y	(2100′+) - FH076 (5000′+) - FH078 - RUDOT - BITBU - MAKIK.

❶ If unable to cross MAKIK at or above FL160 request MAKIK 1Y.
❷ If unable to cross FH070 at or above 5000′ and MAKIK at or above FL160 request MAKIK 1L.
❸ Not to be used during activity of Night Low Flying System.

CHANGES: MSA.

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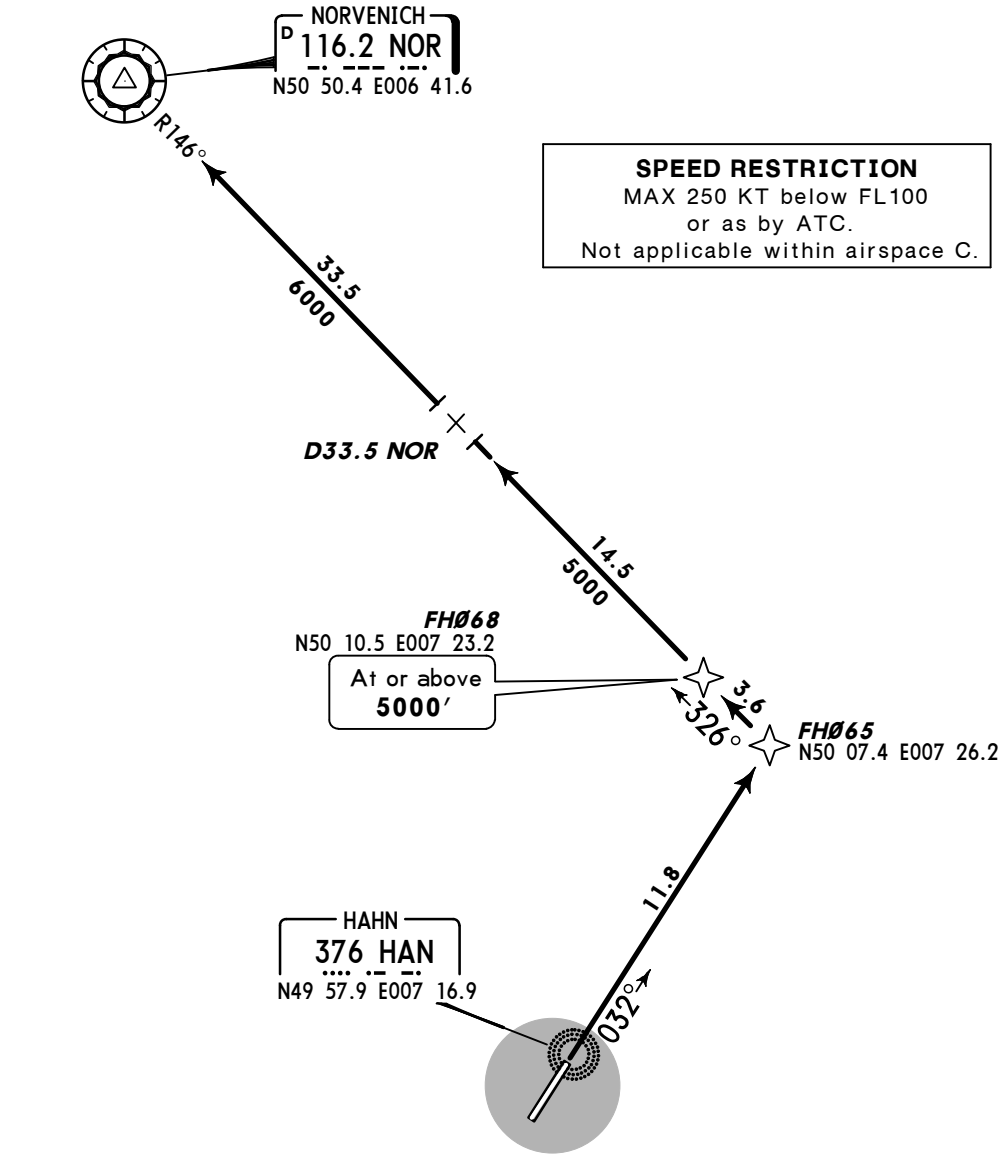
LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
125.6	1649′	



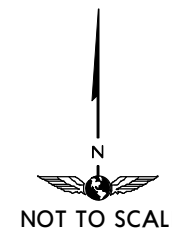
MSA
HAN NDB

NORVENICH FIVE GOLF (NOR 5G)
RWY 03 RNAV DEPARTURE (OVERLAY 20-3F)

BY ATC
NOT TO BE FILED IN FLIGHT PLAN
NOT TO BE USED DURING ACTIVITY OF NIGHT LOW FLYING SYSTEM



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



This SID requires a minimum climb gradient of
225′ per NM (3.7%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
225′ per NM	281	235	562	749	937	1124

If unable to comply inform ATC.

Initial climb clearance **5000′**

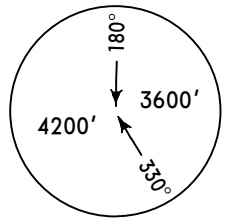
ROUTING

(2100+) - FH065 - FH068 (5000′+) - NOR.

CHANGES: MSA.

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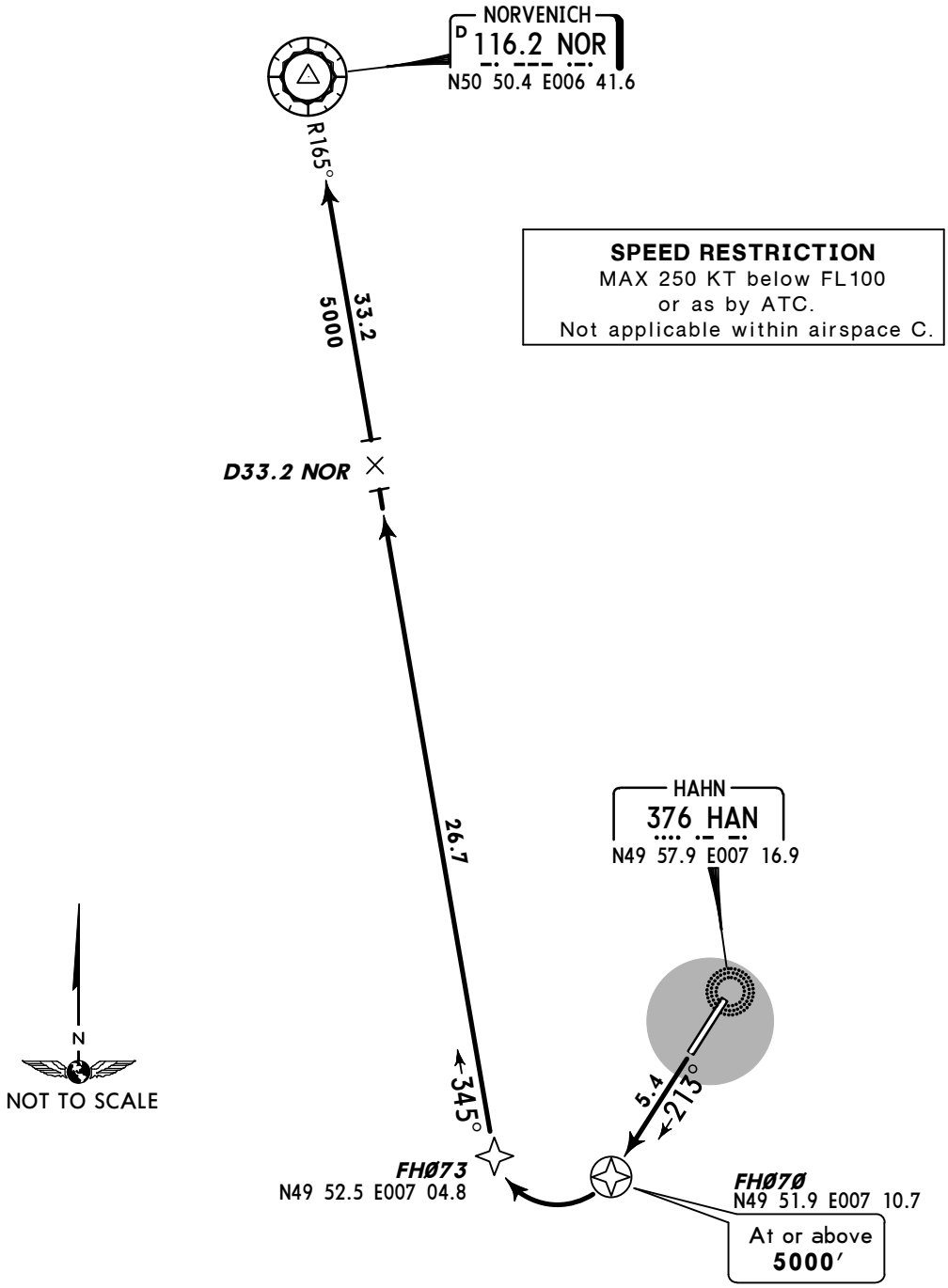
LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.
125.6	1649′	



MSA
HAN NDB

NORVENICH FOUR SIERRA (NOR 4S)
RWY 21 RNAV DEPARTURE (OVERLAY 20-3G)

BY ATC
NOT TO BE FILED IN FLIGHT PLAN
NOT TO BE USED DURING ACTIVITY OF NIGHT LOW FLYING SYSTEM



This SID requires minimum climb gradients of
213′ per NM (3.5%) until passing 1900′, then
610′ per NM (10%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.

Initial climb clearance **5000′**

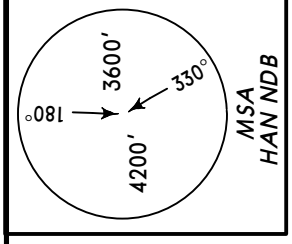
ROUTING

(2100′+) - FH070 (5000′+) - FH073 - NOR.

CHANGES: MSA.

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LANGEN Radar	Apt Elev	
125.6	1649′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.



RIDSU ONE ECHO (RIDSU 1E) *[RIDS1E]*
RIDSU ONE TANGO (RIDSU 1T) *[RIDS1T]*
RWY 03 RNAV DEPARTURES (OVERLAY 20-3H)

ONLY AVAILABLE FOR FLIGHTS VIA DONAB AT OR ABOVE FL120
IF UNABLE TO COMPLY REQUEST ALTERNATE
DEPARTURE INSTRUCTIONS BY ATC

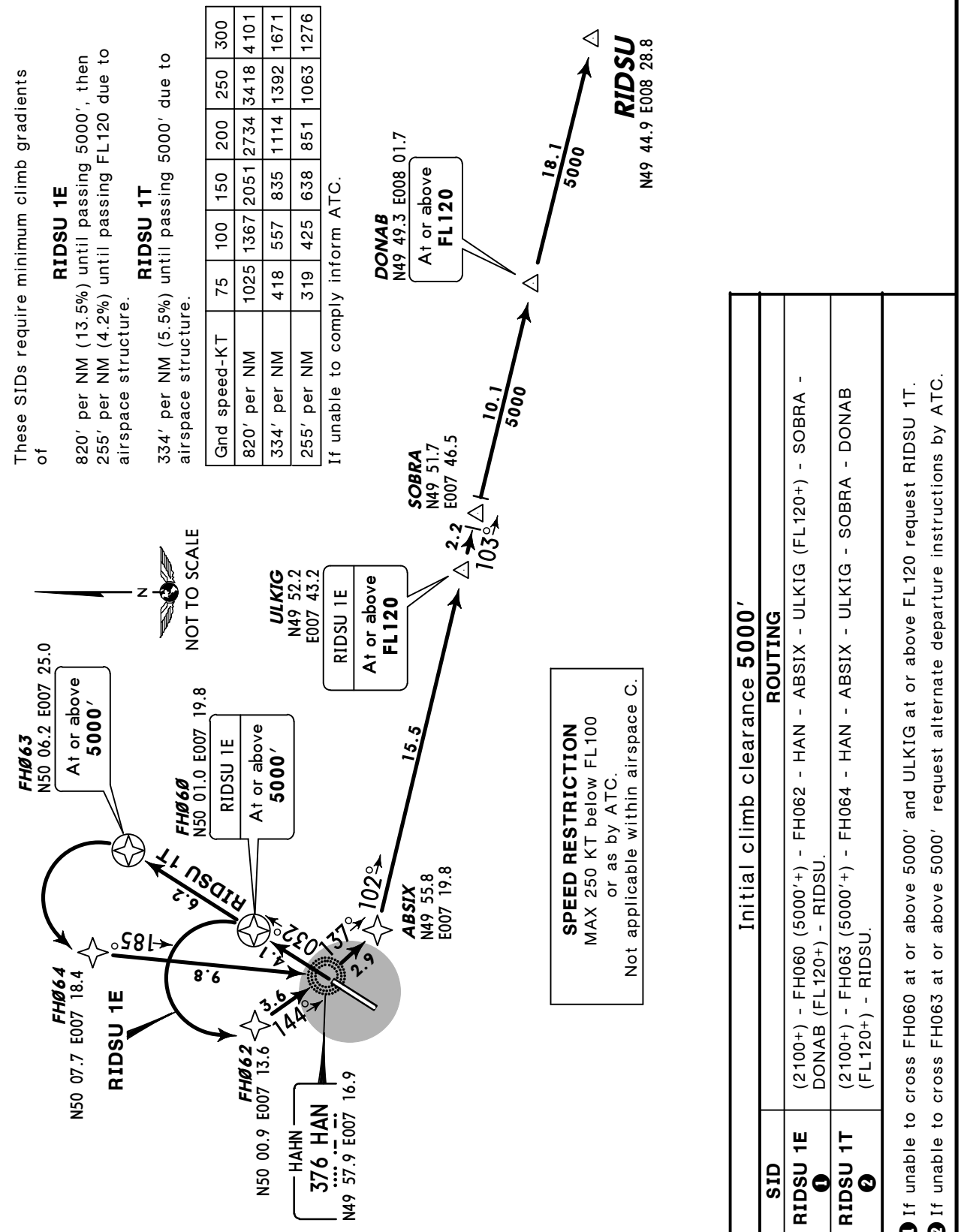
These SIDs require minimum climb gradients of

RIDSU 1E
820′ per NM (13.5%) until passing 5000′, then 255′ per NM (4.2%) until passing FL120 due to airspace structure.

RIDSU 1T
334′ per NM (5.5%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
820′ per NM	1025	1367	2051	2734	3418	4101
334′ per NM	418	557	835	1114	1392	1671
255′ per NM	319	425	638	851	1063	1276

If unable to comply inform ATC.



Initial climb clearance **5000′**

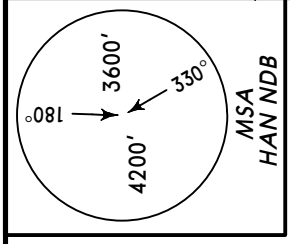
SID	ROUTING
RIDSU 1E ❶	(2100+) - FH060 (5000′+) - FH062 - HAN - ABSIX - ULKIG (FL120+) - SOBRA - DONAB (FL120+) - RIDSU.
RIDSU 1T ❷	(2100+) - FH063 (5000′+) - FH064 - HAN - ABSIX - ULKIG - SOBRA - DONAB (FL120+) - RIDSU.

❶ If unable to cross FH060 at or above 5000′ and ULKIG at or above FL120 request RIDSU 1T.
❷ If unable to cross FH063 at or above 5000′ request alternate departure instructions by ATC.

CHANGES: MSA.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
125.6	1649′	1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.



RIDSU ONE LIMA (RIDSU 1L) *[RIDS1L]*
RIDSU ONE SIERRA (RIDSU 1S) *[RIDS1S]*
RWY 21 RNAV DEPARTURES (OVERLAY 20-3J)

ONLY AVAILABLE FOR FLIGHTS VIA DONAB AT OR ABOVE FL120.
IF UNABLE TO COMPLY REQUEST ALTERNATE DEPARTURE INSTRUCTIONS BY ATC

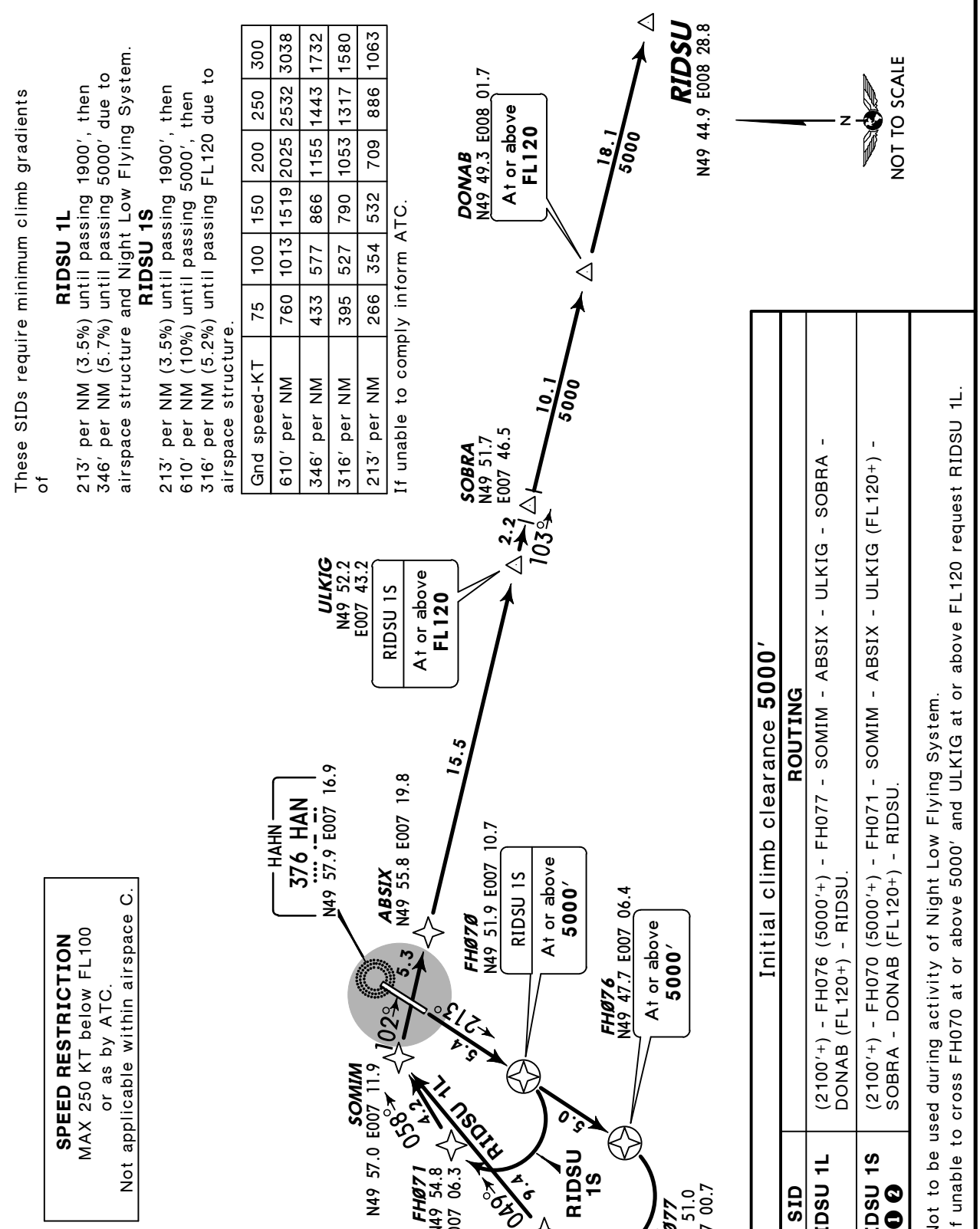
These SIDs require minimum climb gradients of

RIDSU 1L
213′ per NM (3.5%) until passing 1900′, then 346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System.

RIDSU 1S
213′ per NM (3.5%) until passing 1900′, then 610′ per NM (10%) until passing 5000′, then 316′ per NM (5.2%) until passing FL120 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
346′ per NM	433	577	866	1155	1443	1732
316′ per NM	395	527	790	1053	1317	1580
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.



Initial climb clearance **5000′**

SID	ROUTING
RIDSU 1L	(2100′+) - FH076 (5000′+) - FH077 - SOMIM - ABSIX - ULKIG - SOBRA - DONAB (FL120+) - RIDSU.
RIDSU 1S ❶❷	(2100′+) - FH070 (5000′+) - FH071 - SOMIM - ABSIX - ULKIG (FL120+) - SOBRA - DONAB (FL120+) - RIDSU.

❶ Not to be used during activity of Night Low Flying System.
❷ If unable to cross FH070 at or above 5000′ and ULKIG at or above FL120 request RIDSU 1L.

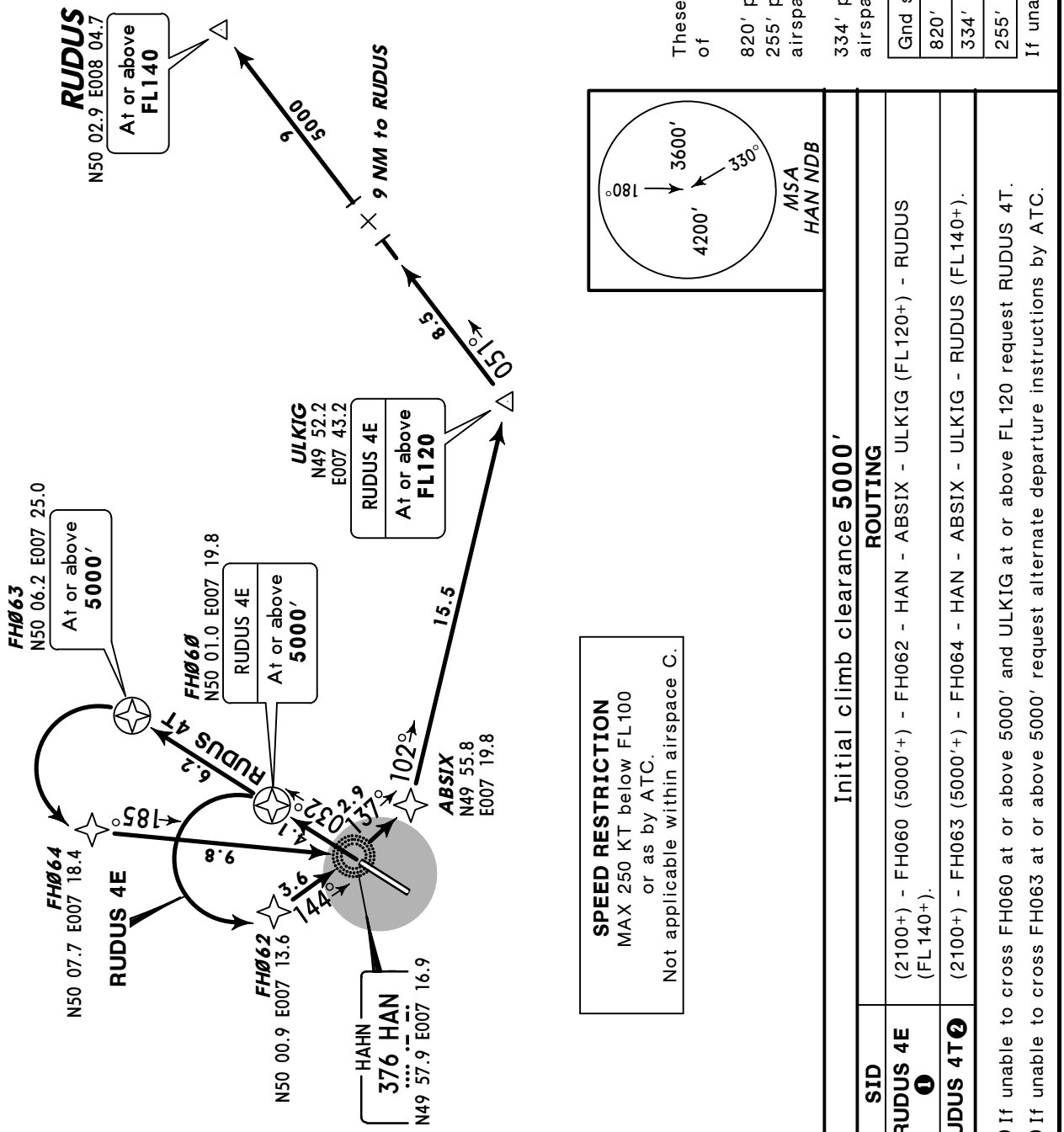
CHANGES: MSA.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
125.6	1649′	1. Contact LANGEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

RUDUS FOUR ECHO (RUDUS 4E) *[RUDU4E]*
RUDUS FOUR TANGO (RUDUS 4T) *[RUDU4T]*
RWY 03 RNAV DEPARTURES
(OVERLAY 20-3K)

ONLY AVAILABLE FOR FLIGHTS VIA RUDUS AT OR ABOVE FL140
IF UNABLE TO COMPLY REQUEST ALTERNATE DEPARTURE INSTRUCTIONS BY ATC



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require minimum climb gradients of

RUDUS 4E
820′ per NM (13.5%) until passing 5000′, then 255′ per NM (4.2%) until passing FL120 due to airspace structure.

RUDUS 4T
334′ per NM (5.5%) until passing 5000′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
820′ per NM	1025	1367	2051	2734	3418	4101
334′ per NM	418	557	835	1114	1392	1671
255′ per NM	319	425	638	851	1063	1276

If unable to comply inform ATC.

SID	Initial climb clearance **5000′** ROUTING
RUDUS 4E ❶	(2100+) - FH060 (5000′+) - FH062 - HAN - ABSIX - ULKIG (FL120+) - RUDUS (FL140+).
RUDUS 4T ❷	(2100+) - FH063 (5000′+) - FH064 - HAN - ABSIX - ULKIG - RUDUS (FL140+).

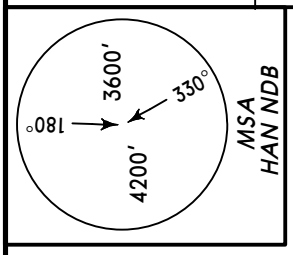
❶ If unable to cross FH060 at or above 5000′ and ULKIG at or above FL120 request RUDUS 4T.
❷ If unable to cross FH063 at or above 5000′ request alternate departure instructions by ATC.

CHANGES: MSA.

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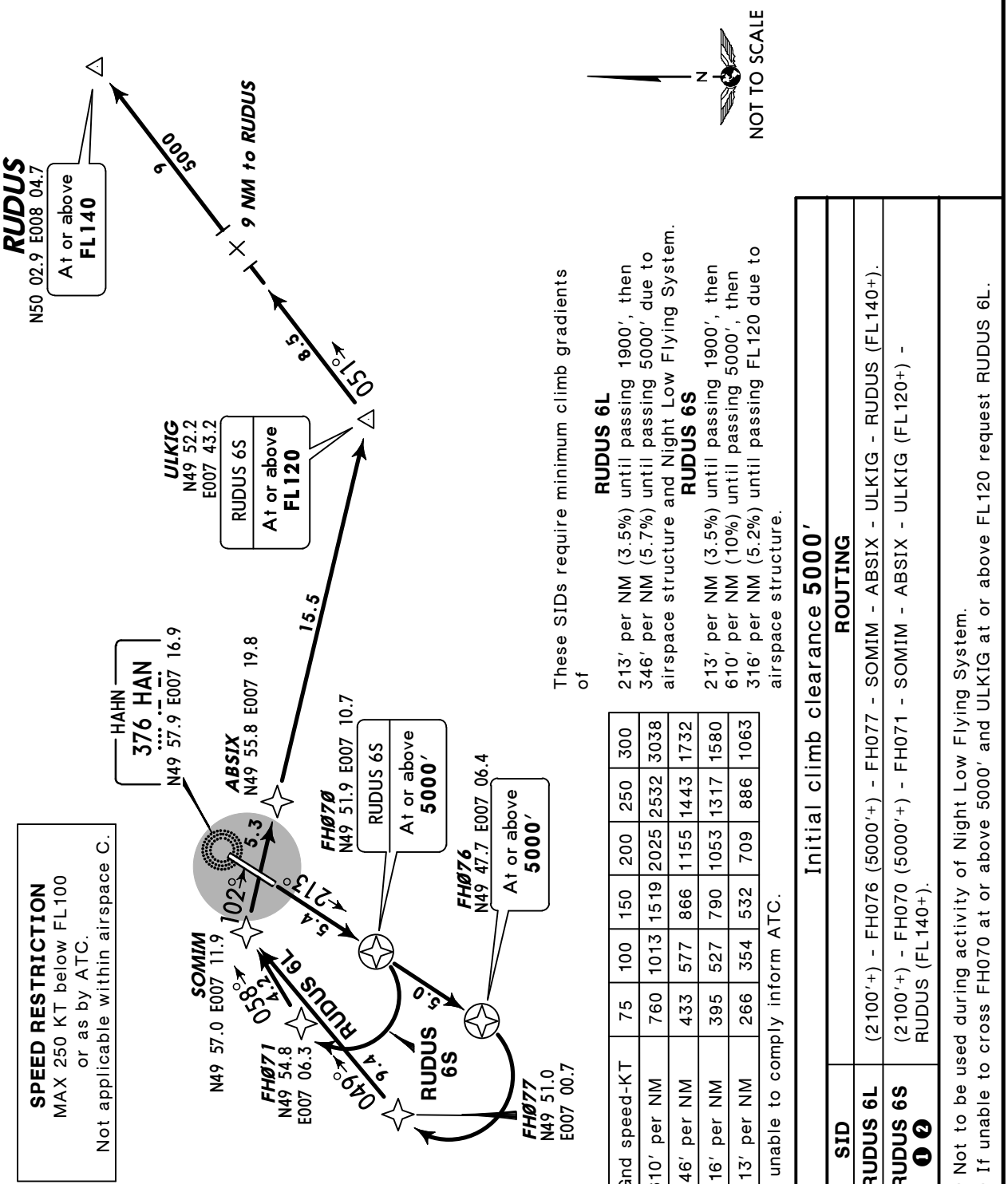
LANGEN Radar	Apt Elev
125.6	1649′

Trans level: By ATC Trans alt: 5000′
1. Contact LANGEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. EXPECT close-in obstacles.



RUDUS SIX LIMA (RUDUS 6L) *[RUDU6L]*
RUDUS SIX SIERRA (RUDUS 6S) *[RUDU6S]*
RWY 21 RNAV DEPARTURES
(OVERLAY 20-3L)

ONLY AVAILABLE FOR FLIGHTS VIA RUDUS AT OR ABOVE FL140.
IF UNABLE TO COMPLY REQUEST ALTERNATE DEPARTURE INSTRUCTIONS BY ATC



These SIDs require minimum climb gradients of

RUDUS 6L
213′ per NM (3.5%) until passing 1900′, then
346′ per NM (5.7%) until passing 5000′ due to airspace structure and Night Low Flying System.

RUDUS 6S
213′ per NM (3.5%) until passing 1900′, then
610′ per NM (10%) until passing 5000′, then
316′ per NM (5.2%) until passing FL120 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
610′ per NM	760	1013	1519	2025	2532	3038
346′ per NM	433	577	866	1155	1443	1732
316′ per NM	395	527	790	1053	1317	1580
213′ per NM	266	354	532	709	886	1063

If unable to comply inform ATC.

Initial climb clearance **5000′**

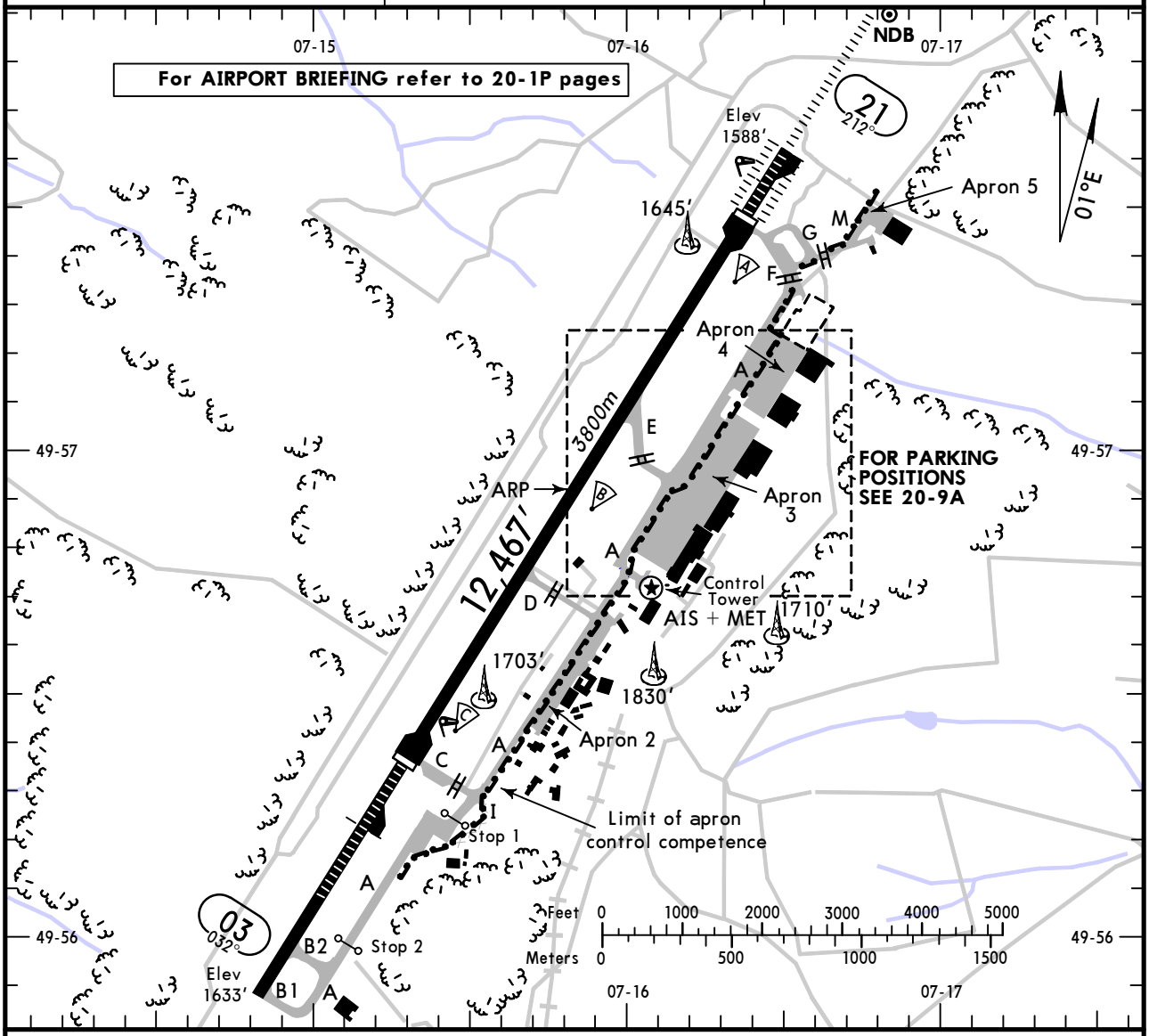
SID	ROUTING
RUDUS 6L	(2100′+) - FH076 (5000′+) - FH077 - SOMIM - ABSIX - ULKIG - RUDUS (FL140+).
RUDUS 6S ❶ ❷	(2100′+) - FH070 (5000′+) - FH071 - SOMIM - ABSIX - ULKIG (FL120+) - RUDUS (FL140+).

❶ Not to be used during activity of Night Low Flying System.
❷ If unable to cross FH070 at or above 5000′ and ULKIG at or above FL120 request RUDUS 6L.

CHANGES: MSA.

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ATIS	*HAHN Ground	Tower
136.35	121.97	119.65



ADDITIONAL RUNWAY INFORMATION

RWY			USABLE LENGTHS LANDING BEYOND Threshold	USABLE LENGTHS LANDING BEYOND Glide Slope	TAKE-OFF	WIDTH
03	HIRL CL HIALS SFL REIL PAPI-L(3.0°)	RVR	9006′ *2745m*	7877′ *2401m*	❶	148′ *45m*
21	HIRL CL ALSF-II TDZ REIL PAPI-L(3.0°)	RVR	11,483′ *3500m*	10,416′ *3175m*		

❶ TAKE-OFF RUN AVAILABLE

RWY 03:
From rwy head 11,483′ (3500m)
twy C int 8022′ (2445m)
twy D int 5003′ (1525m)

RWY 21:
From rwy head 12,467′ (3800m)
twy F int 11,483′ (3500m)
twy E int 8858′ (2700m)
twy D int 5906′ (1800m)

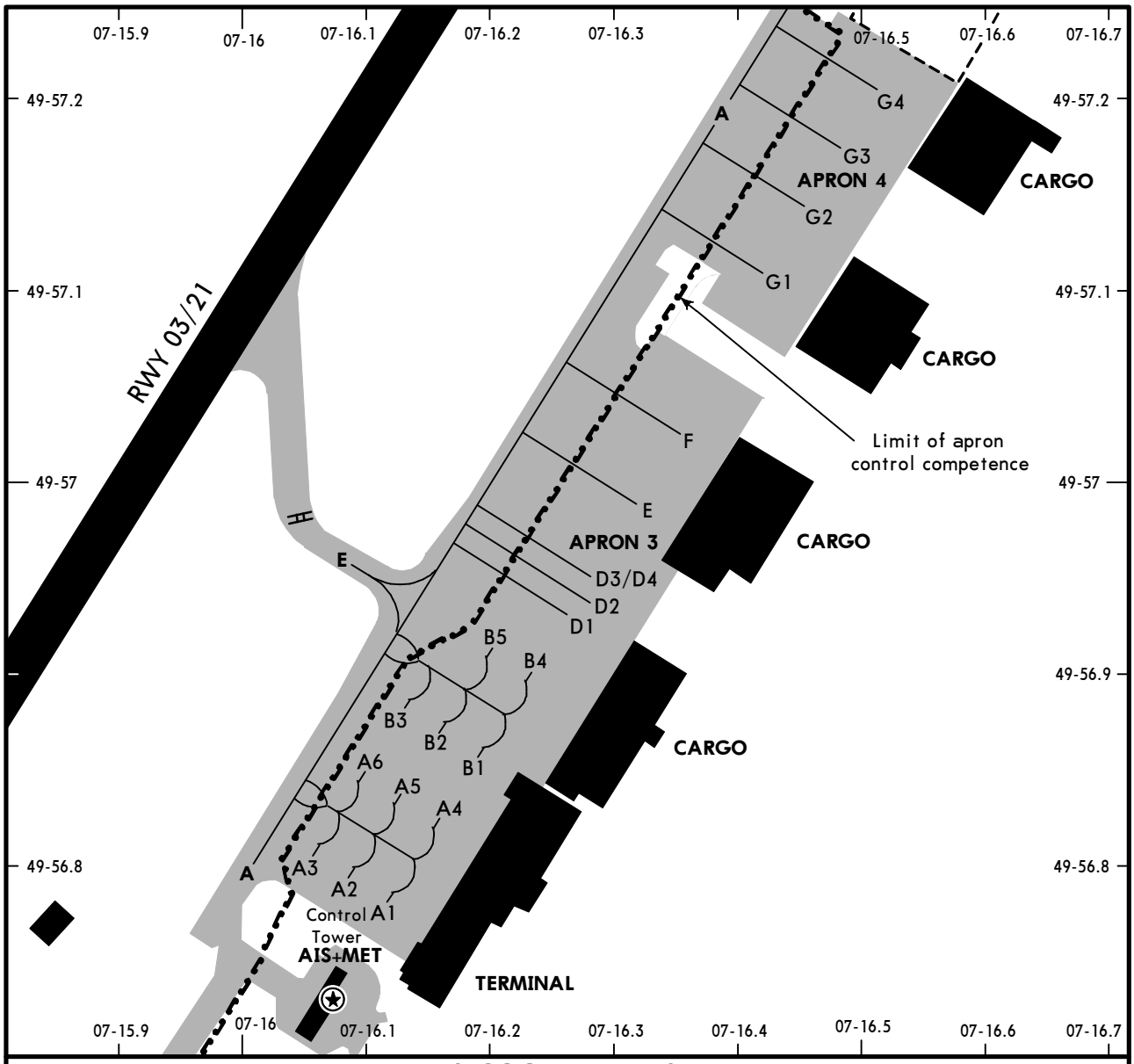
Standard TAKE-OFF ❶

	LVP must be in Force: Approved Operators HIRL, CL & mult. RVR req	LVP must be in Force: RL, CL & mult. RVR req	LVP must be in Force: RL & CL	LVP must be in Force: RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

❶ Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: Usable lengths.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
A1 thru A3	N49 56.8 E007 16.1	G1	N49 57.1 E007 16.4
A4	N49 56.8 E007 16.2	G2	N49 57.1 E007 16.5
A5	N49 56.8 E007 16.1	G3, G4	N49 57.2 E007 16.5
A6	N49 56.9 E007 16.1		
B1, B2	N49 56.9 E007 16.2		
B3	N49 56.9 E007 16.1		
B4, B5	N49 56.9 E007 16.2		
D1 thru D4	N49 56.9 E007 16.3		
E	N49 57.0 E007 16.3		
F	N49 57.0 E007 16.4		

CHANGES: Apron.

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FRANKFURT-HAHN, GERMANY

FRANKFURT-HAHN

STRAIGHT-IN RWY		A	B	C	D
03	ILS	**1849**′(200′)	**1849**′(200′)	**1849**′(200′)	**1849**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**2070**′(421′)	**2070**′(421′)	**2070**′(421′)	**2070**′(421′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**2100**′(451′)	**2100**′(451′)	**2100**′(451′)	**2100**′(451′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
21	CAT 2 ILS	**1695**′(100′)	**1695**′(100′)	**1695**′(100′)	**1695**′(100′)
		RA107′R300m	**RA107′R300m**	**RA107′R300m**	**RA107′R300m**
	ILS	**1795**′(200′)	**1795**′(200′)	**1795**′(200′)	**1795**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**2000**′(405′)	**2000**′(405′)	**2000**′(405′)	**2000**′(405′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**2000**′(405′)	**2000**′(405′)	**2000**′(405′)	**2000**′(405′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m

TAKE-OFF RWY 03, 21

	Approved Operators	**LVP must be in Force**					
	HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: New chart.

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EDFH/HHN
FRANKFURT-HAHN

JEPPESEN 5 AUG 11 (21-1)

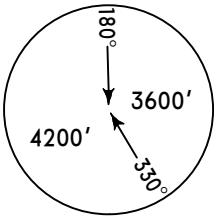
FRANKFURT-HAHN, GERMANY
ILS or LOC Rwy 03

ATIS	LANGEN Radar (APP)	HAHN Tower	*Ground
136.35	125.6	119.65	121.97

LOC IHAE	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev 1649′
109.3	032°	2950′ (1301′)	1849′ (200′)	RWY 1649′

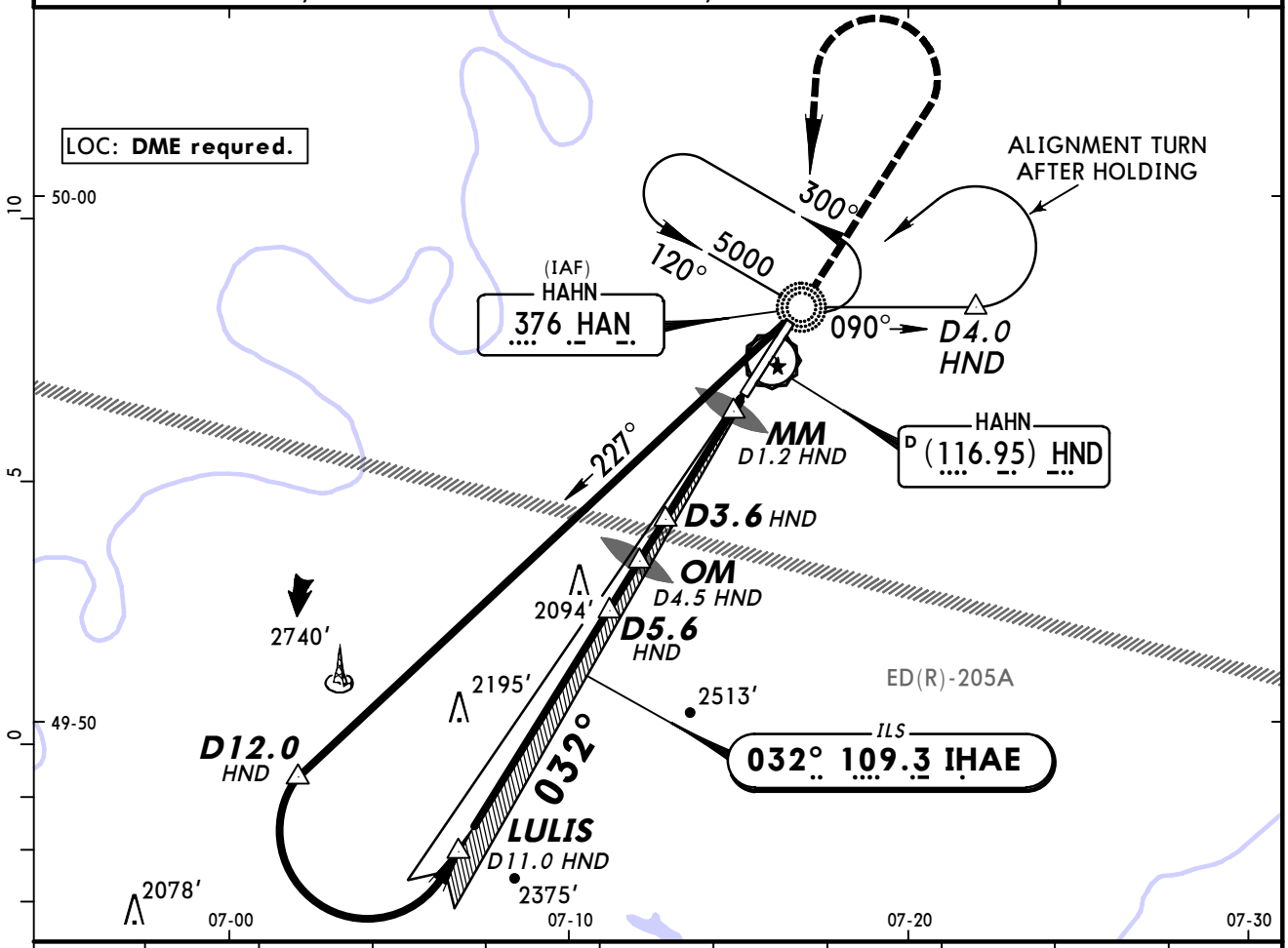
MISSED APCH: Climb STRAIGHT AHEAD to 5000′, then turn LEFT to NDB.

Alt Set: hPa | Rwy Elev: 59 hPa | Trans level: By ATC | Trans alt: 5000′

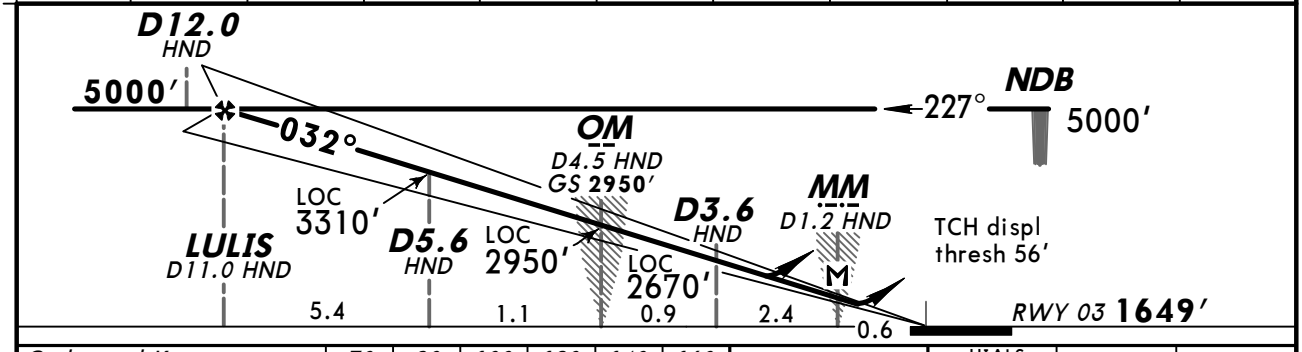


MSA HAN NDB

BRIEFING STRIP™



LOC (GS out)	HND DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	4700′	4380′	4070′	3750′	3430′	3110′	2790′	2470′	2160′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.2 HND						

HIALS | REIL | PAPI

5000′

HAN 376 LT

Standard STRAIGHT-IN LANDING RWY 03

	ILS DA(H) 1849′ (200′)			LOC (GS out) DA(H) 2070′ (421′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1300m	RVR 1500m
B					
C					RVR 2000m
D					

PANS OPS 4

CHANGES: MSA. Recommended alt. TCH.

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EDFH/HHN
FRANKFURT-HAHN

JEPPESEN FRANKFURT-HAHN, GERMANY

5 AUG 11 (21-2)

ILS or LOC Rwy 21

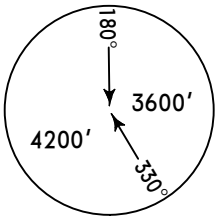
BRIEFING STRIP TM

ATIS	LANGEN Radar (APP)	HAHN Tower	*Ground
136.35	125.6	119.65	121.97

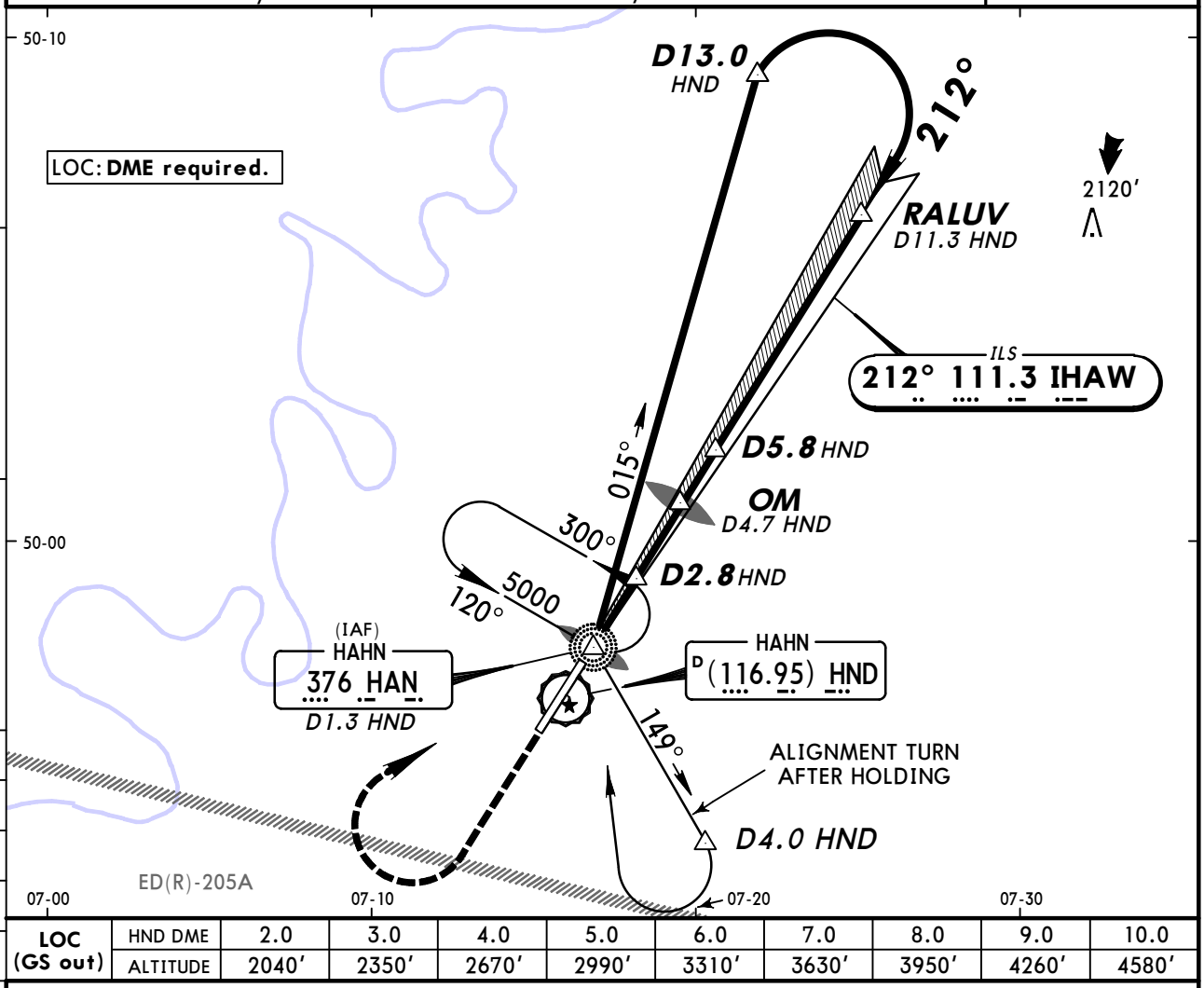
LOC IHAW	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev 1649′
111.3	212°	2900′ (1305′)	1795′ (200′)	RWY 1595′

MISSED APCH: Climb STRAIGHT AHEAD to 5000′, then turn RIGHT to NDB.

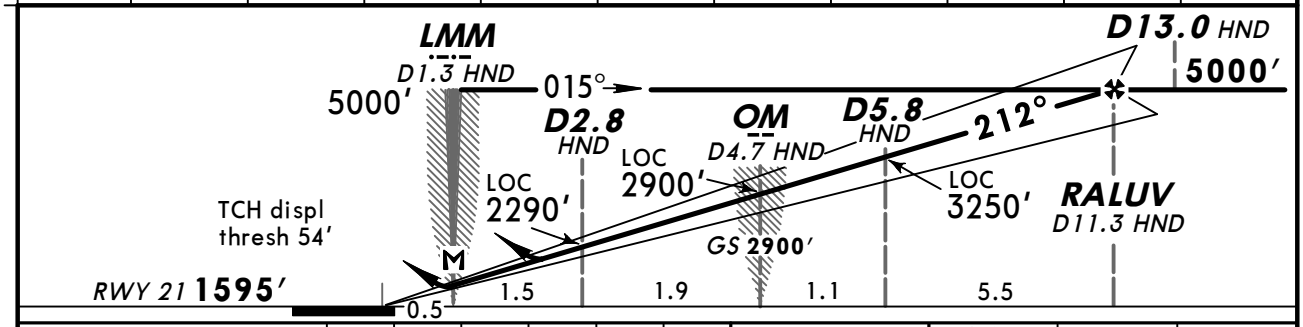
Alt Set: hPa | Rwy Elev: 57 hPa | Trans level: By ATC | Trans alt: 5000′



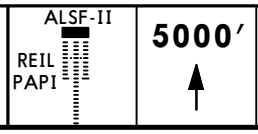
MSA HAN NDB



LOC (GS out)	HND DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
	ALTITUDE	2040′	2350′	2670′	2990′	3310′	3630′	3950′	4260′	4580′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at LMM/D1.3 HND						



5000′

HAN 376 RT

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 21

	ILS DA(H) 1795′ (200′)			LOC (GS out) DA(H) 2010′ (415′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C					RVR 1900m
D					

CHANGES: MSA. Bearings. Recommended alt. TCH. Minimums.

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FRANKFURT-HAHN

JEPPESEN
5 AUG 11 (21-2A)

FRANKFURT-HAHN, GERMANY
CAT II/III ILS Rwy 21

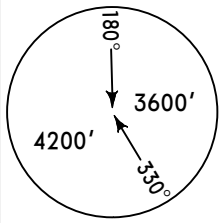
BRIEFING STRIP TM

ATIS	LANGEN Radar (APP)	HAHN Tower	*Ground
136.35	125.6	119.65	121.97

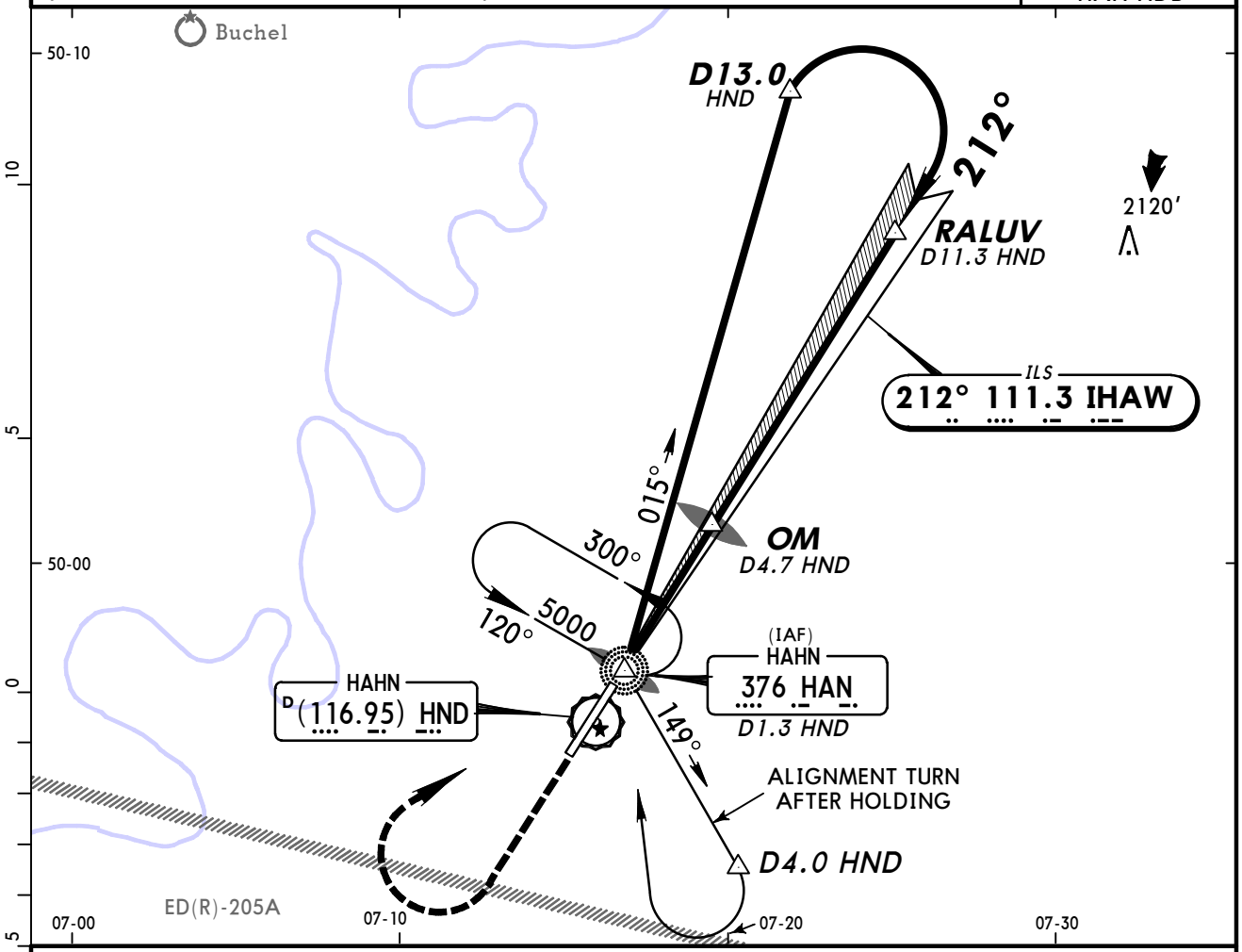
LOC IHAW 111.3	Final Apch Crs 212°	GS OM 2900′ (1305′)	CAT II & IIIA ILS Refer to Minimums	Apt Elev 1649′ RWY 1595′

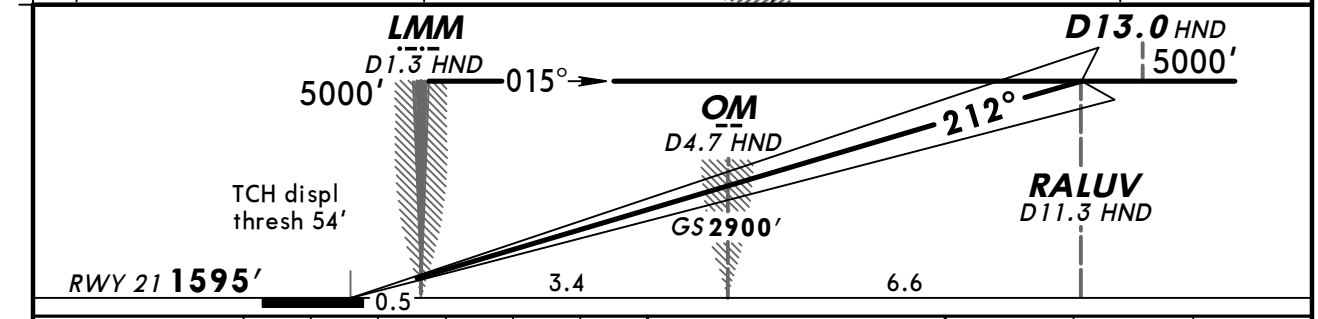
MISSED APCH: Climb STRAIGHT AHEAD to 5000′, then turn RIGHT to NDB.

Alt Set: hPa Rwy Elev: 57 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.



MSA
HAN NDB





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	485	539	647	755	862

ALSF-II
REIL
PAPI

5000′

HAN 376 RT

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **21**

CAT IIIA ILS	CAT II ILS
DH **50′**	ABCD **RA 107′** DA(H) **1695′** (100′)
RVR 200m	RVR 300m 1

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

CHANGES: MSA. Bearings. TCH. Minimums.

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EDFH/HHN
FRANKFURT-HAHN

JEPPESEN 5 AUG 11 (26-1)

FRANKFURT-HAHN, GERMANY
NDB Rwy 03

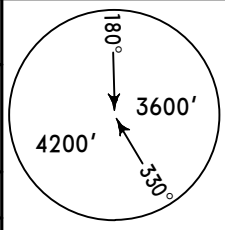
BRIEFING STRIP TM

ATIS	LANGEN Radar (APP)	HAHN Tower	*Ground
136.35	125.6	119.65	121.97

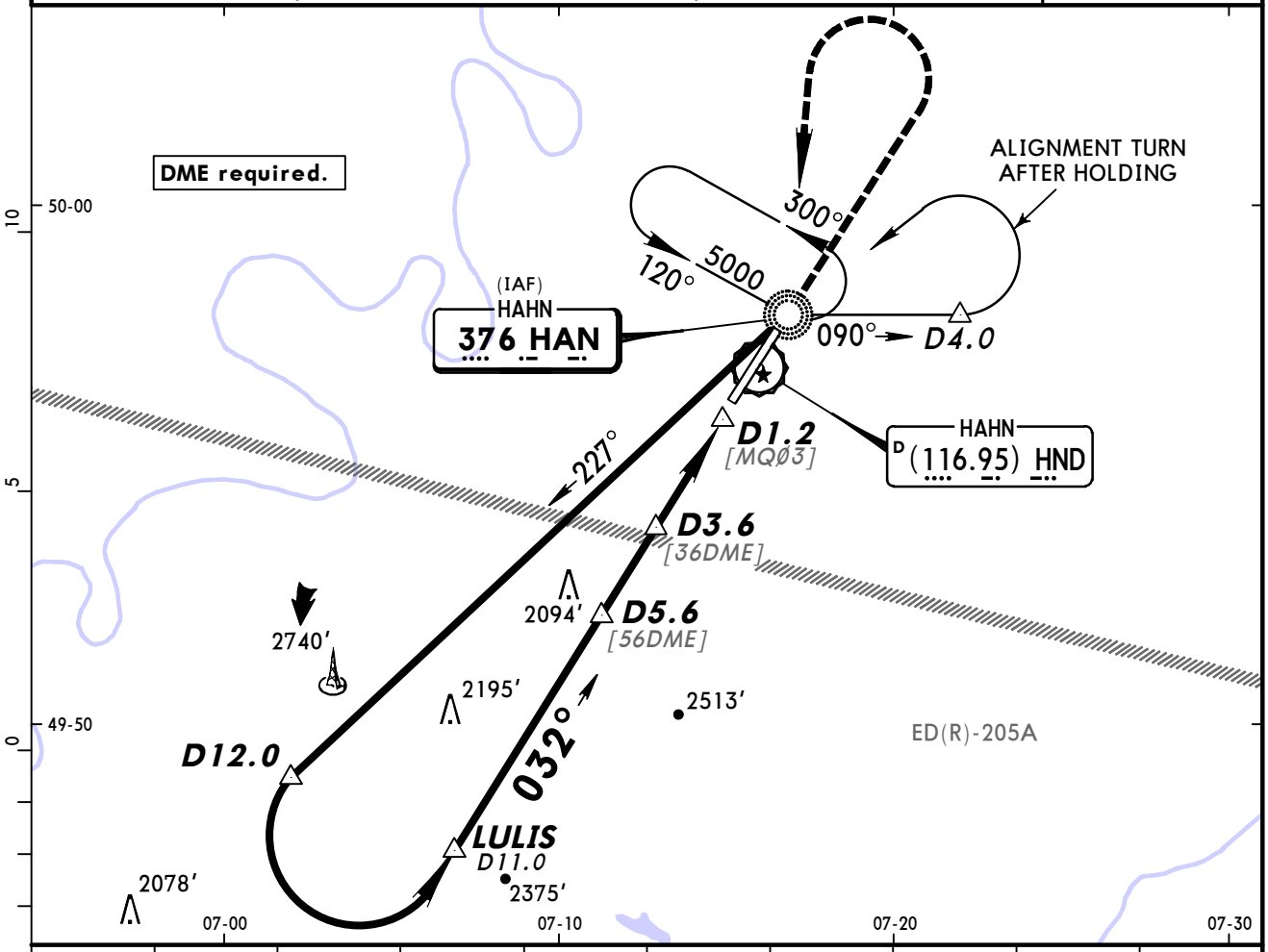
NDB	Final	Minimum Alt	DA(H)	Apt Elev 1649′
HAN	Apch Crs	LULIS	2100′ (451′)	RWY 1649′
376	032°	5000′ (3351′)		

MISSED APCH: Climb STRAIGHT AHEAD to 5000′, then turn LEFT to NDB.

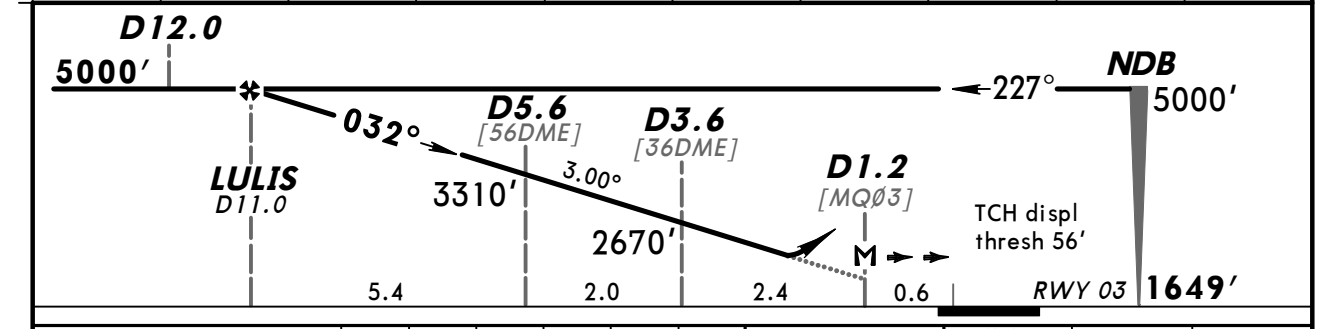
Alt Set: hPa | Rwy Elev: 59 hPa | Trans level: By ATC | Trans alt: 5000′



MSA HAN NDB



HND DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	4700′	4380′	4070′	3750′	3430′	3110′	2790′	2470′	2150′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.2							

HIALS
REIL
PAPI

5000′

HAN
376
LT

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **03**

DA(H) **2100′** (451′)

		ALS out
A	RVR 1400m	RVR 1500m
B		
C		CMV 2100m
D		

CHANGES: MSA. Recommended alt. Descent angle. TCH.

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EDFH/HHN
FRANKFURT-HAHN

5 AUG 11 (26-2)

JEPPESEN FRANKFURT-HAHN, GERMANY
NDB Rwy 21

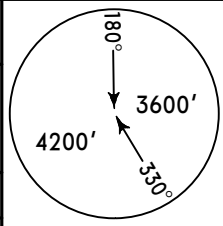
BRIEFING STRIP TM

ATIS	LANGEN Radar (APP)	HAHN Tower	*Ground
136.35	125.6	119.65	121.97

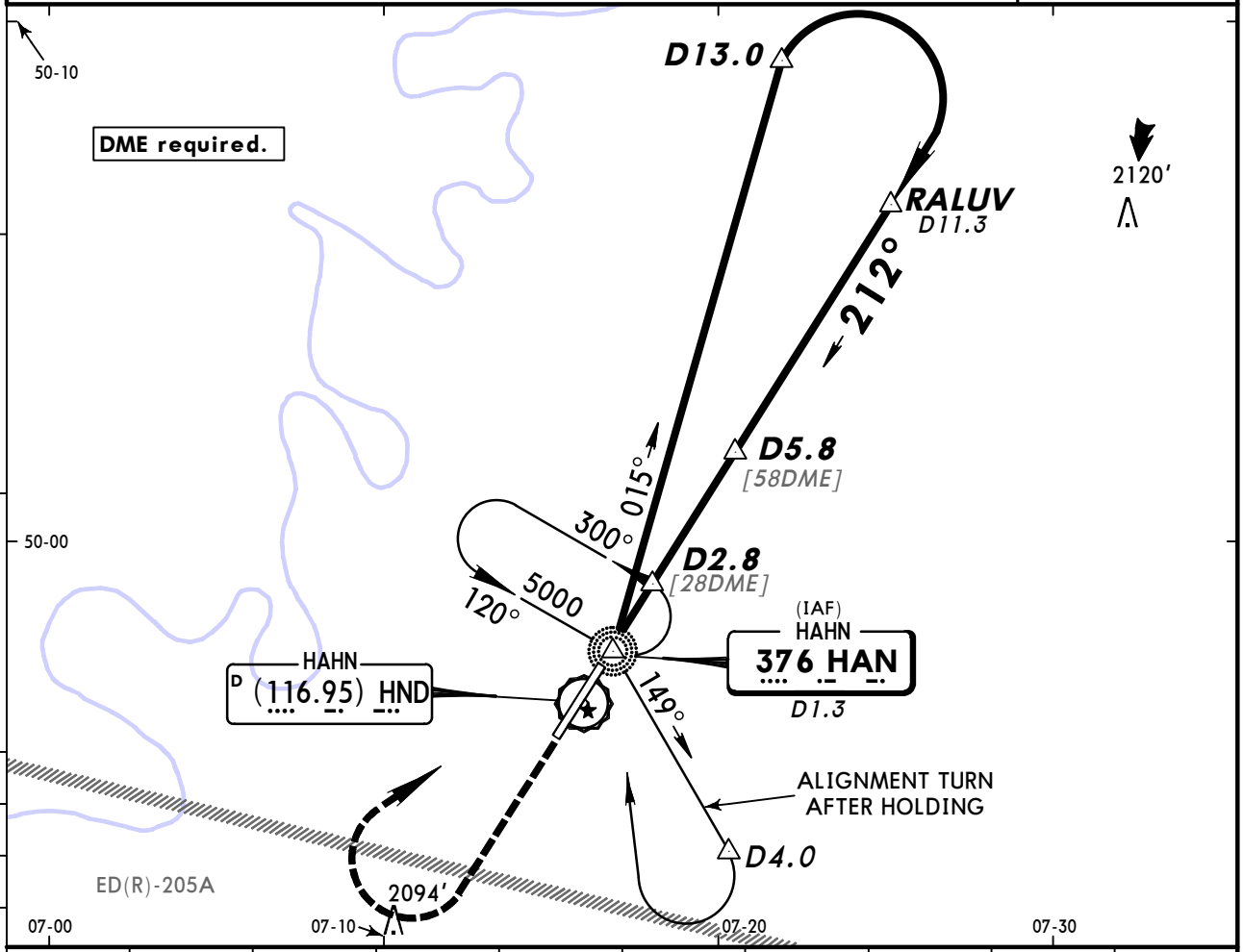
NDB	Final	Minimum Alt	DA(H)	Apt Elev 1649′
HAN	Apch Crs	RALUV	2010′ (415′)	RWY 1595′
376	212°	5000′ (3405′)		

MISSED APCH: Climb STRAIGHT AHEAD to 5000′, then turn RIGHT to NDB.

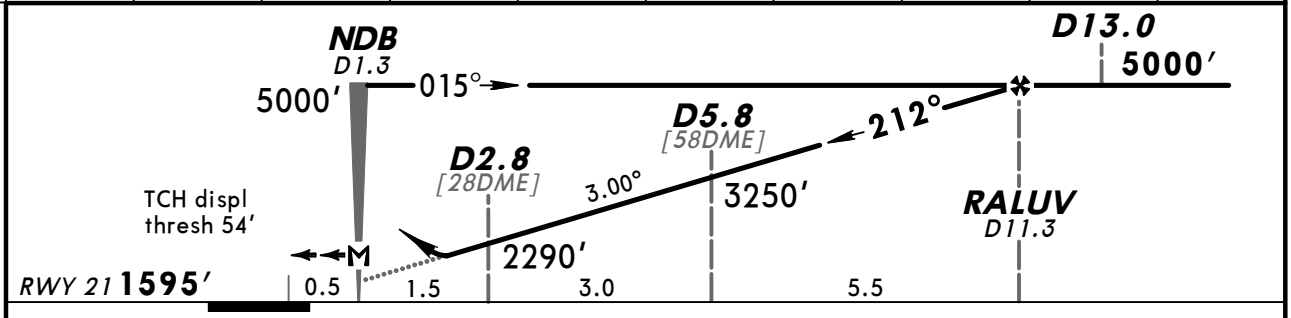
Alt Set: hPa | Rwy Elev: 57 hPa | Trans level: By ATC | Trans alt: 5000′



MSA HAN NDB



HND DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	2030′	2350′	2670′	2990′	3310′	3620′	3940′	4260′	4580′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at NDB/D1.3							

ALSF-II
REIL
PAPI

5000′

HAN
376
RT

Standard STRAIGHT-IN LANDING RWY **21**

DA(H) **2010′** (415′)

		ALS out
A	RVR 1200m	RVR 1500m
B		
C		RVR 1900m
D		

PANS OPS 4

CHANGES: MSA. Bearings. TCH. Minimums.

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General Information

Location: Hamburg Deu
IATA Code: XFW
Lat/Long: N53° 32.0' E009° 49.9'
Elevation: 21 ft

Airport Use: Public
Magnetic Variation: 1.8°E

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

Sunrise: 0614 Z
Sunset: 1653 Z,

Runway Information

Runway: 05
Length x Width: 10443 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 15 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 2156 ft

Runway: 23
Length x Width: 10443 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 15 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 2182 ft

Communication Information

Finkenwerder Tower 123.25
Finkenwerder Tower 25.915
Finkenwerder Apron Ramp/Taxi Control 121.65

Apt Elev 21'

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000'

BOGMU ONE ALFA (BOGMU 1A) [BOGM1A]
NOLGO ONE ALFA (NOLGO 1A) [NOLG1A]
RARUP ONE ALFA (RARUP 1A) [RARU1A]
RIBSO TWO ALFA (RIBSO 2A) [RIBS2A]
RWYS 05, 23 ARRIVALS

MSA HAM VOR 2100'

LUBECK 110.6 LUB N53 56.4 E010 40.1

HAMBURG 113.1 HAM N53 41.1 E010 12.3

ELBE 115.1 LBE N53 39.3 E009 35.7

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Clearance Limit **BOGMU** N53 58.8 E010 17.3

Clearance Limit **RARUP** N53 38.5 E010 40.6

Clearance Limit **NOLGO** N53 23.8 E010 08.3

Clearance Limit **RIBSO** N53 48.8 E009 20.4

TOPRA N53 50.0 E009 32.6

(IAF)

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

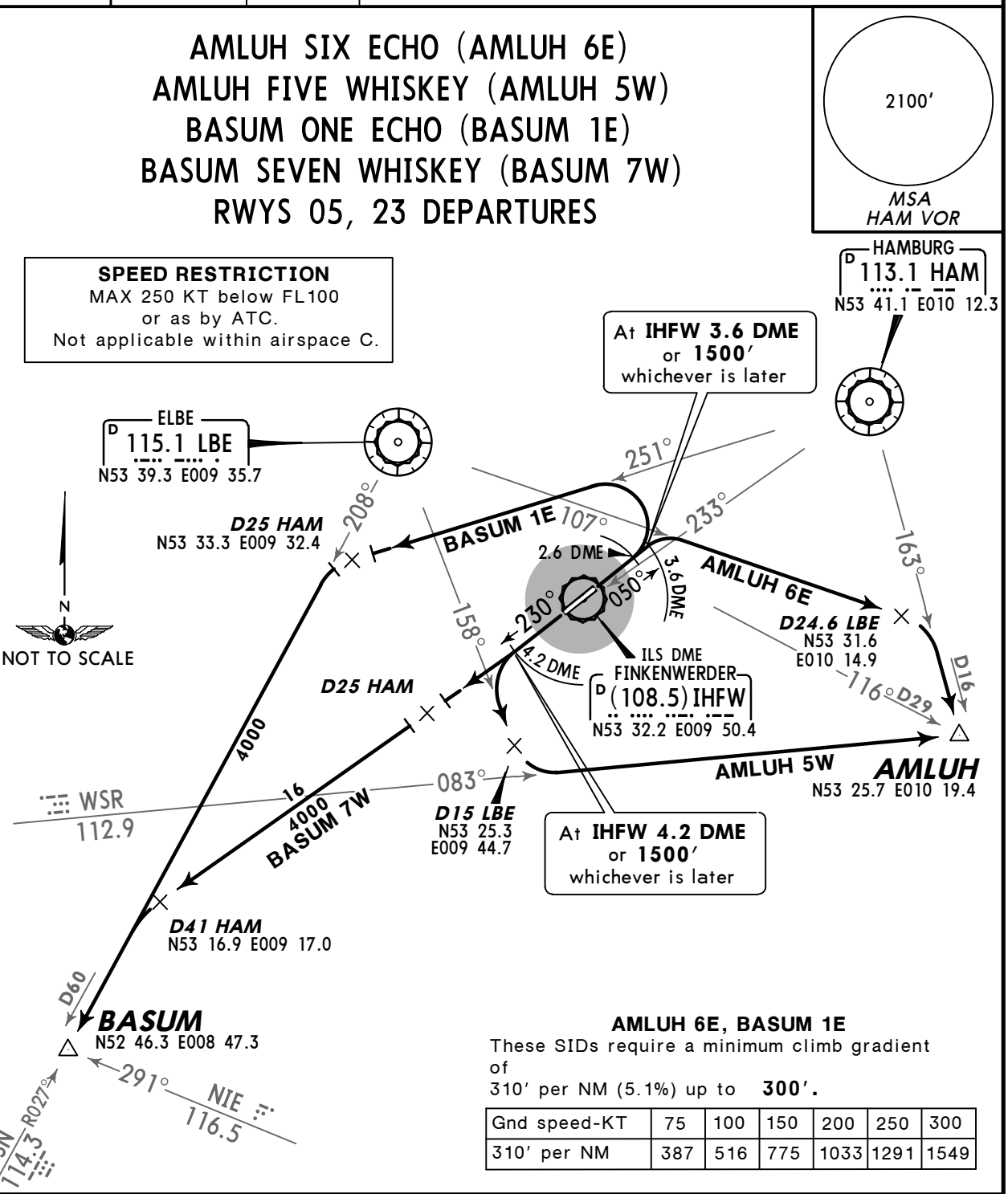
Proceed from RARUP or NOLGO via HAM to LBE,
from RIBSO via TOPRA to LBE,
from BOGMU direct LBE for standard approach.

NOT TO SCALE

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BREMEN Radar		Apt Elev	
AMLUH 6E, 5W	BASUM 1E, 7W	21′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. Minimum ground visibility required: 800m (Rwy 05)/400m (Rwy 23). 4. EXPECT close-in obstacles.
136.67	134.25		

AMLUH SIX ECHO (AMLUH 6E)
AMLUH FIVE WHISKEY (AMLUH 5W)
BASUM ONE ECHO (BASUM 1E)
BASUM SEVEN WHISKEY (BASUM 7W)
RWYS 05, 23 DEPARTURES



AMLUH 6E, BASUM 1E

These SIDs require a minimum climb gradient of
310′ per NM (5.1%) up to **300′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

SID	RWY	ROUTING
AMLUH 6E	**05**	Climb on 050° track to IHFW 3.6 DME or **1500′,** whichever is later, turn RIGHT, intercept LBE R-107 to D24.6 LBE, turn RIGHT, intercept HAM R-163 to AMLUH.
AMLUH 5W	**23**	Climb on 230° track to IHFW 4.2 DME or **1500′,** whichever is later, turn LEFT, intercept LBE R-158 to D15 LBE, turn LEFT, intercept WSR R-083 to AMLUH.
BASUM 1E ❶	**05**	050° track to IHFW 2.6 DME, turn LEFT, intercept HAM R-251 to D25 HAM, turn LEFT, intercept LBE R-208 to BASUM.
BASUM 7W ❶	**23**	Climb on 230° track to IHFW 4.2 DME or **1500′,** whichever is later, turn RIGHT, intercept HAM R-233 to D41 HAM, turn LEFT, intercept LBE R-208 to BASUM.

❶ Mandatory for flights via **R 15 / UM 170** - OSN.

CHANGES: SIDs renumbered.

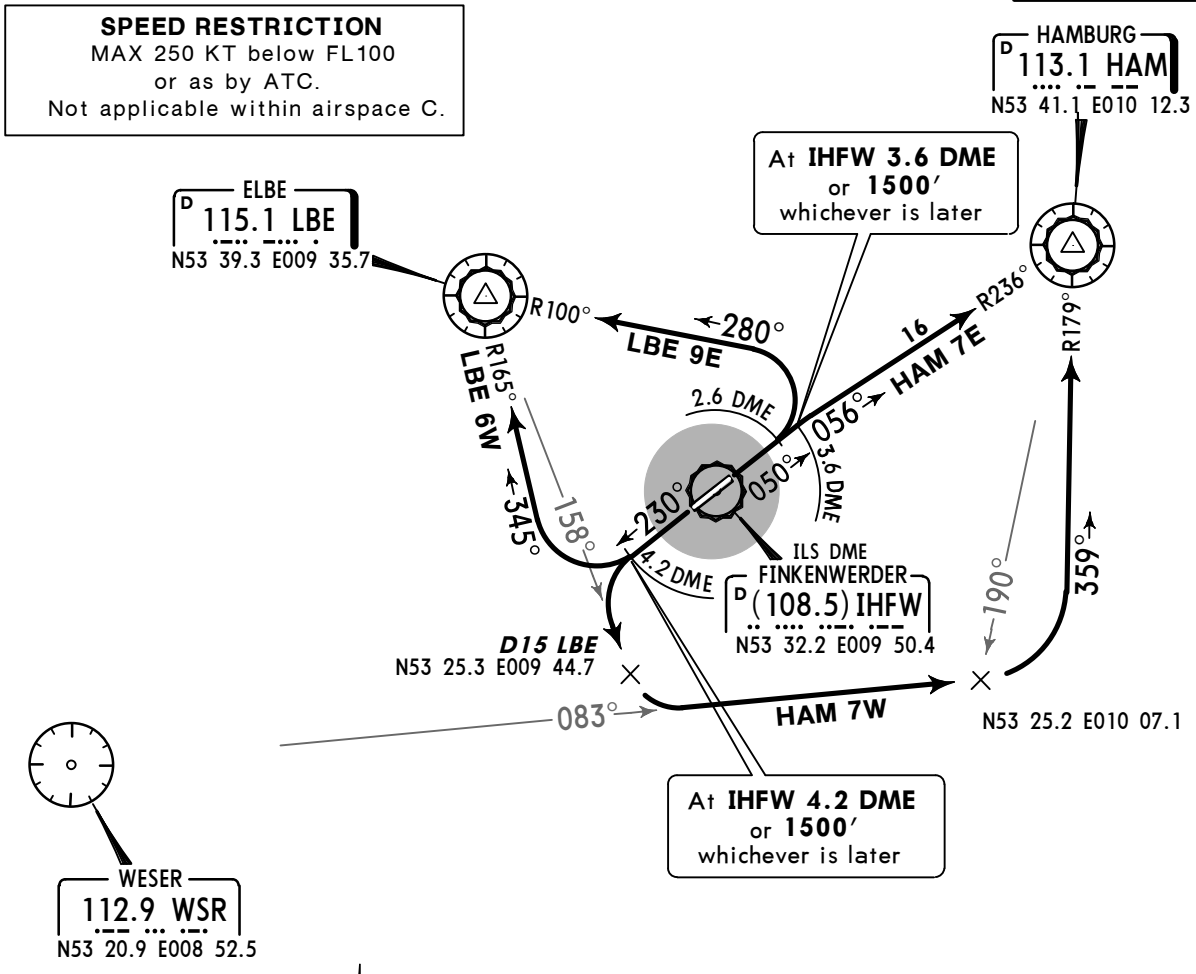
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BREMEN Radar		Apt Elev	
HAM 7E, 7W	LBE 9E, 6W	21′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. Minimum ground visibility required: 800m (Rwy 05)/ 400m (Rwy 23). 4. EXPECT close-in obstacles.
136.67	134.25		

ELBE NINE ECHO (LBE 9E)
ELBE SIX WHISKEY (LBE 6W)
HAMBURG SEVEN ECHO (HAM 7E)
HAMBURG SEVEN WHISKEY (HAM 7W)
RWYS 05, 23 DEPARTURES

2100′
MSA
HAM VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



HAM 7E, LBE 9E
These SIDs require a minimum climb gradient of
310′ per NM (5.1%) up to **300′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

SID	RWY	ROUTING
LBE 9E	**05**	050° track to IHFW 2.6 DME, turn LEFT, intercept LBE R-100 inbound to LBE.
LBE 6W	**23**	Climb on 230° track to IHFW 4.2 DME or **1500′,** whichever is later, turn RIGHT, intercept LBE R-165 inbound to LBE.
HAM 7E	**05**	Climb on 050° track to IHFW 3.6 DME or **1500′,** whichever is later, turn RIGHT, intercept HAM R-236 inbound to HAM.
HAM 7W	**23**	Climb on 230° track to IHFW 4.2 DME or **1500′,** whichever is later, turn LEFT, intercept LBE R-158 to D15 LBE, turn LEFT, intercept WSR R-083, when passing HAM R-190 turn LEFT, intercept HAM R-179 inbound to HAM.

CHANGES: SID HAM 6W renumbered 7W.

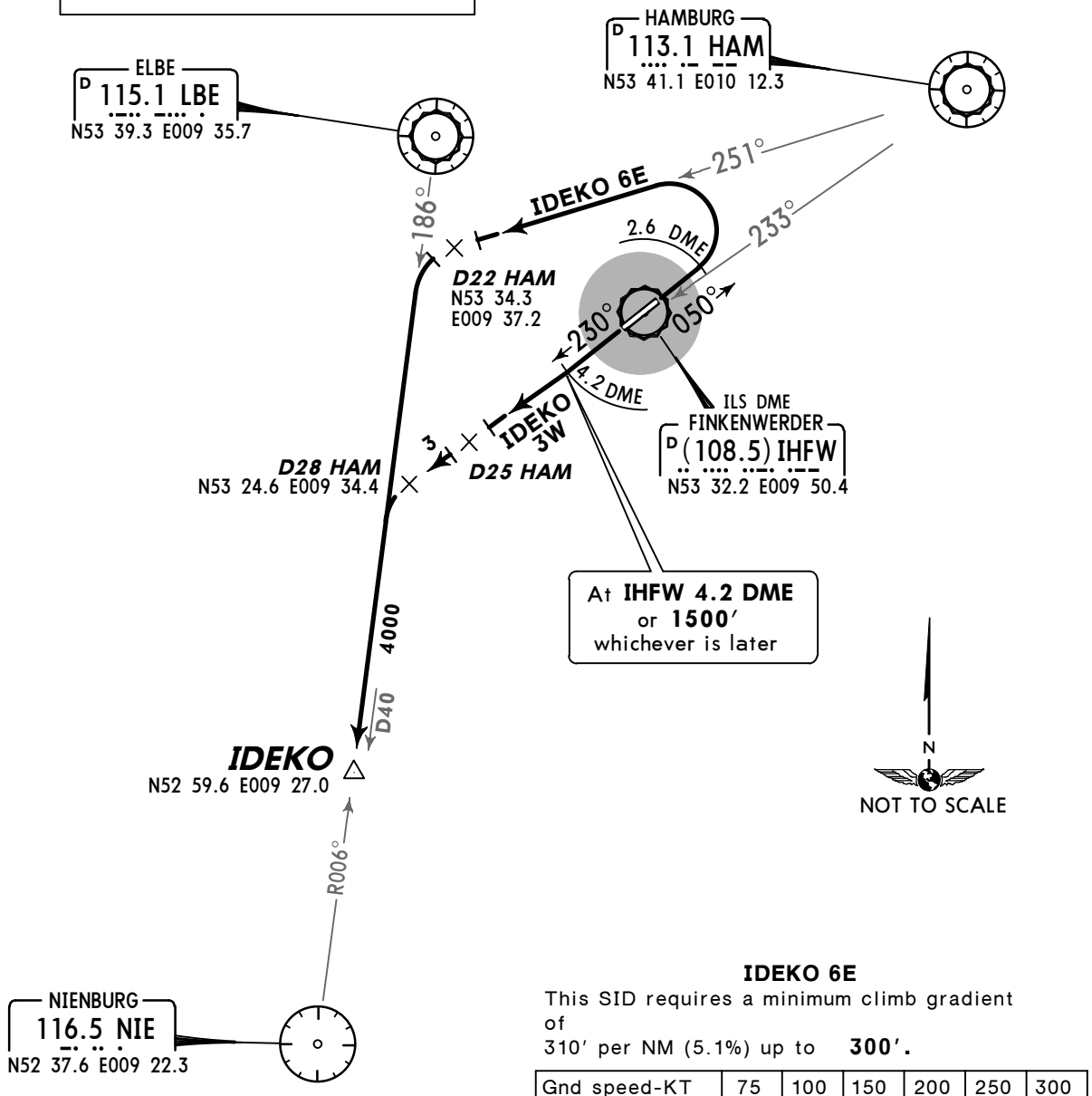
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BREMEN Radar 134.25	*Apt Elev* 21′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. Minimum ground visibility required: 800m (Rwy 05)/400m (Rwy 23). 4. EXPECT close-in obstacles.

IDEKO SIX ECHO (IDEKO 6E)
IDEKO THREE WHISKEY (IDEKO 3W)
RWYS 05, 23 DEPARTURES
MANDATORY FOR FLIGHTS VIA AIRWAYS N 850 & Y 900 - TIMEN - UL 126

2100′
MSA
HAM VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



IDEKO 6E
This SID requires a minimum climb gradient of
310′ per NM (5.1%) up to **300′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

SID	RWY	ROUTING
IDEKO 6E	**05**	050° track to IHFW 2.6 DME, turn LEFT, intercept HAM R-251 to D22 HAM, turn LEFT, intercept LBE R-186 (NIE R-006 inbound) to IDEKO.
IDEKO 3W	**23**	Climb on 230° track to IHFW 4.2 DME or **1500′,** whichever is later, turn RIGHT, intercept HAM R-233 to D28 HAM, turn LEFT, intercept LBE R-186 (NIE R-006 inbound) to IDEKO.

CHANGES: SID IDEKO 5E renumbered 6E.

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BREMEN Radar 136.67	*Apt Elev* 21′

Trans level: By ATC Trans alt: 5000′
1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. Minimum ground visibility required: 800m (Rwy 05)/400m (Rwy 23).
4. EXPECT close-in obstacles.

RAMAR ONE ECHO (RAMAR 1E)
RAMAR ONE WHISKEY (RAMAR 1W)
RWYS 05, 23 DEPARTURES

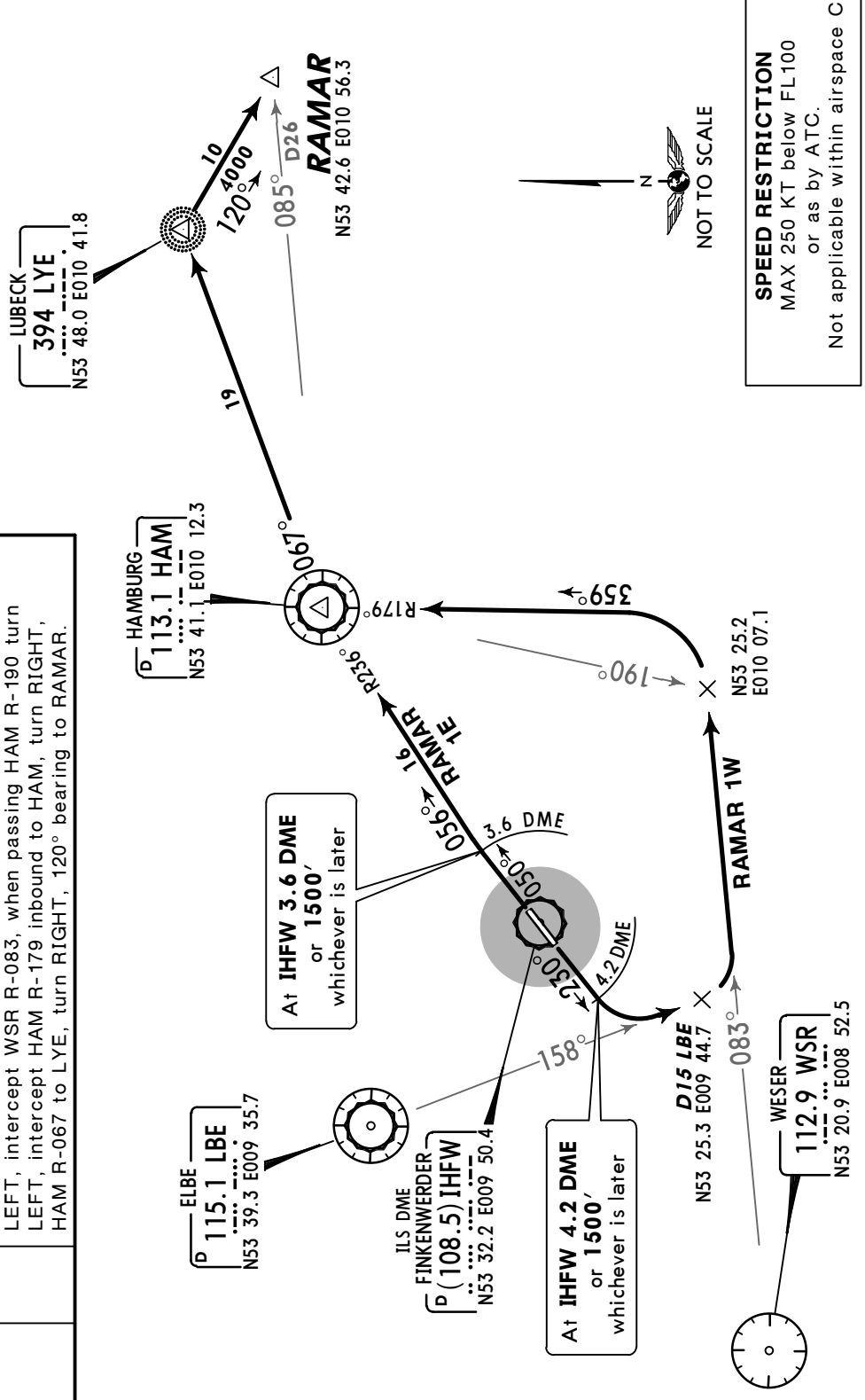
2100′ *MSA HAM VOR*

RAMAR 1E
This SID requires a minimum climb gradient of 310′ per NM (5.1%) up to **300′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

SID	RWY	ROUTING
RAMAR 1E	05	Climb on 050° track to IHFW 3.6 DME or **1500′**, whichever is later, turn RIGHT, intercept HAM R-236 inbound to HAM, turn RIGHT, HAM R-067 to LYE, turn RIGHT, 120° bearing to RAMAR.
RAMAR 1W	23	Climb on 230° track to IHFW 4.2 DME or **1500′**, whichever is later, turn LEFT, intercept LBE R-158 to D15 LBE, turn LEFT, intercept WSR R-083, when passing HAM R-190 turn LEFT, intercept HAM R-179 inbound to HAM, turn RIGHT, HAM R-067 to LYE, turn RIGHT, 120° bearing to RAMAR.

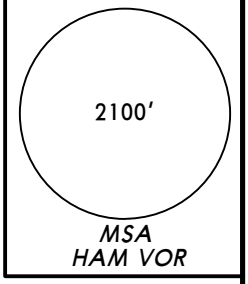


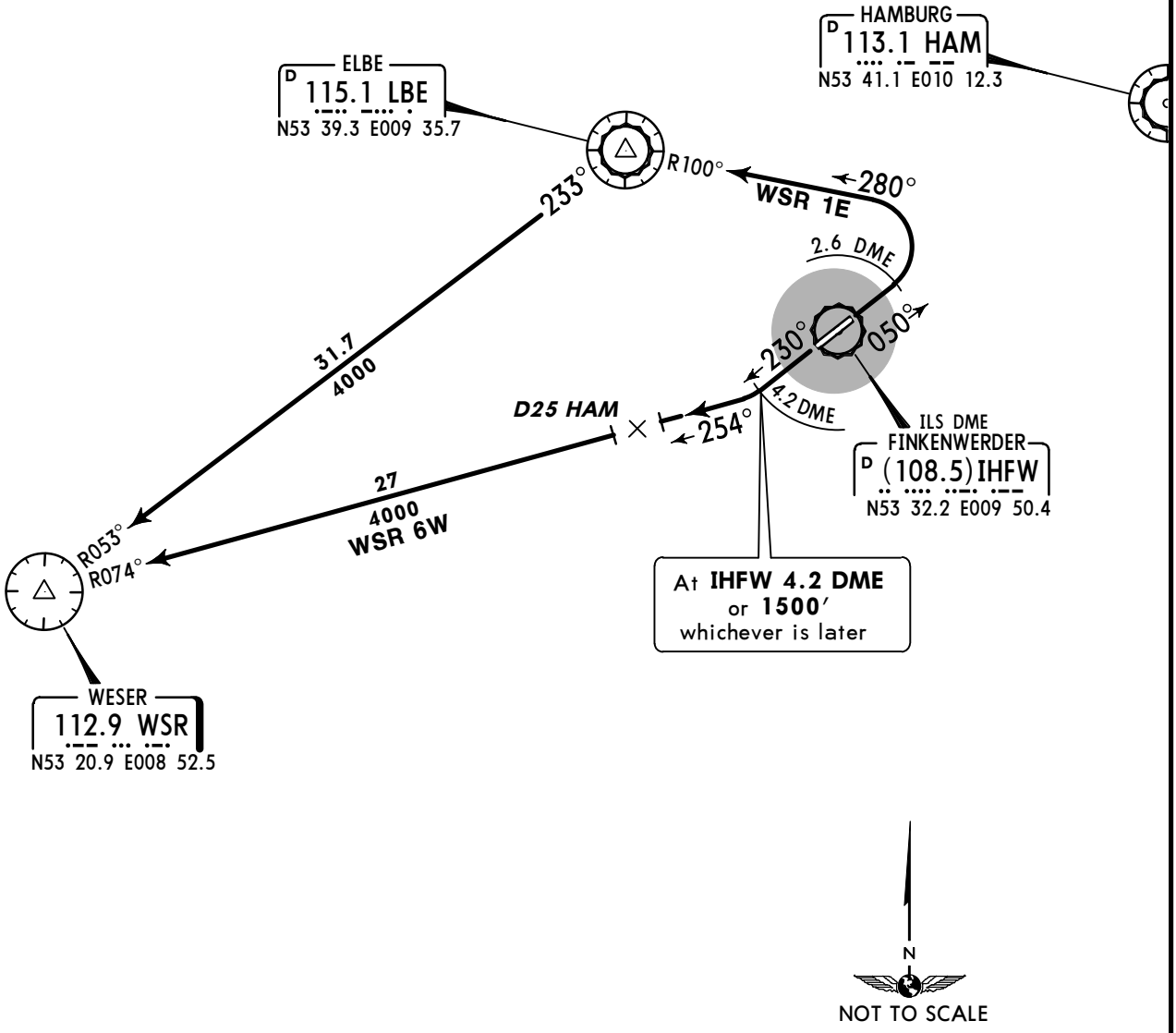
CHANGES: RAMAR SIDs established; SIDs transferred.

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BREMEN Radar 134.25	*Apt Elev* 21′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. Minimum ground visibility required: 800m (Rwy 05)/400m (Rwy 23). 4. EXPECT close-in obstacles.

WESER ONE ECHO (WSR 1E)
WESER SIX WHISKEY (WSR 6W)
RWYS 05, 23 DEPARTURES
MANDATORY FOR FLIGHTS VIA AIRWAYS N 125/UN 125 - EEL





WSR 1E

This SID requires a minimum climb gradient of
310′ per NM (5.1%) up to **300′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
WSR 1E	**05**	050° track to IHFW 2.6 DME, turn LEFT, intercept LBE R-100 inbound to LBE, turn LEFT, LBE R-233 (WSR R-053 inbound) to WSR.
WSR 6W	**23**	Climb on 230° track to IHFW 4.2 DME or **1500′,** whichever is later, turn RIGHT, intercept WSR R-074 inbound to WSR.

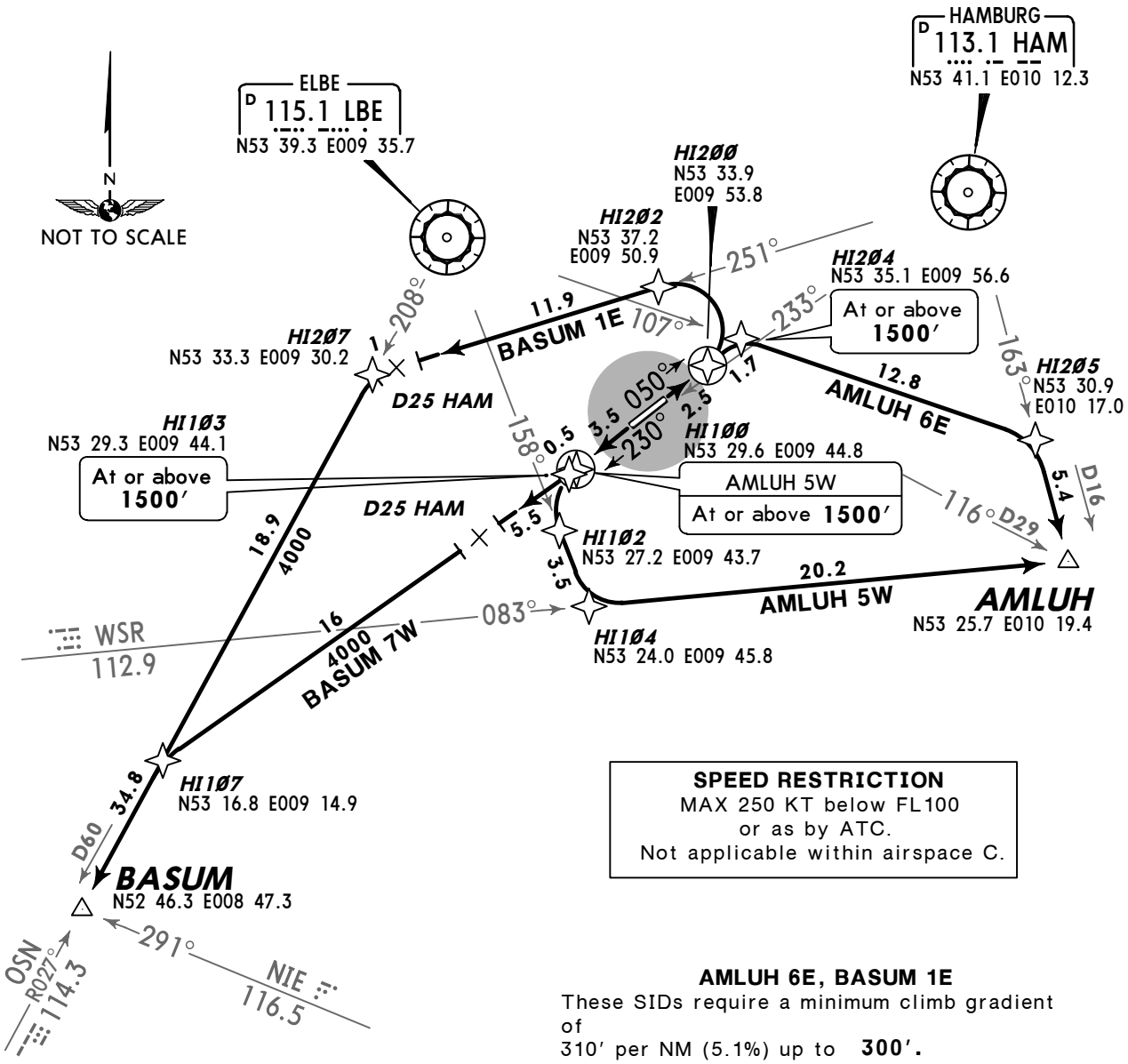
CHANGES: SID WSR 9E renumbered 1E; chart reindexed.

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BREMEN Radar		Apt Elev	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. Minimum ground visibility required: 800m (Rwy 05)/ 400m (Rwy 23). 4. EXPECT close-in obstacles.
AMLUH 6E, 5W	BASUM 1E, 7W	21′	
136.67	134.25		

AMLUH SIX ECHO (AMLUH 6E) *[AMLU6E]*
AMLUH FIVE WHISKEY (AMLUH 5W) *[AMLU5W]*
BASUM ONE ECHO (BASUM 1E) *[BASU1E]*
BASUM SEVEN WHISKEY (BASUM 7W) *[BASU7W]*
RWYS 05, 23 RNAV DEPARTURES (OVERLAY 20-3)

2100′
MSA
HAM VOR



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

AMLUH 6E, BASUM 1E
These SIDs require a minimum climb gradient of
310′ per NM (5.1%) up to **300′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

SID	RWY	ROUTING
AMLUH 6E	**05**	**(500′+)** - HI204 **(1500′+)** - HI205 - AMLUH.
AMLUH 5W	**23**	**(500′+)** - HI100 **(1500′+)** - HI102 - HI104 - AMLUH.
BASUM 1E ❶	**05**	**(500′+)** - HI200 - HI202 - HI207 - BASUM.
BASUM 7W ❶	**23**	**(500′+)** - HI103 **(1500′+)** - HI107 - BASUM.

❶ Mandatory for flights via airways **R 15** / **UM 170** - OSN.

CHANGES: RNAV SIDs renumbered; chart reindexed.

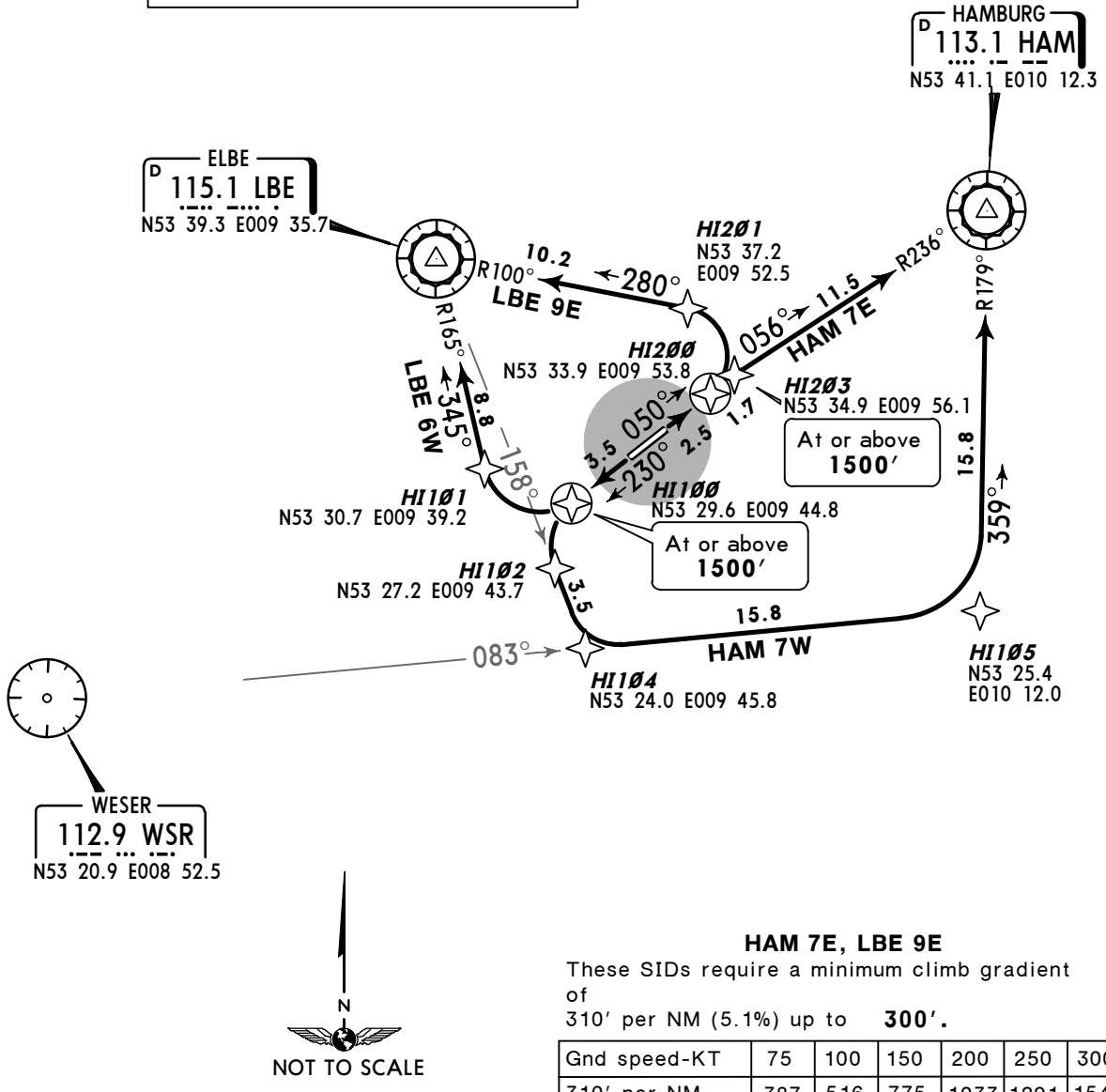
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BREMEN Radar		Apt Elev	
HAM 7E, 7W	LBE 9E, 6W	21′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. Minimum ground visibility required: 800m (Rwy 05)/ 400m (Rwy 23). 4. EXPECT close-in obstacles.
136.67	134.25		

ELBE NINE ECHO (LBE 9E)
ELBE SIX WHISKEY (LBE 6W)
HAMBURG SEVEN ECHO (HAM 7E)
HAMBURG SEVEN WHISKEY (HAM 7W)
RWYS 05, 23 RNAV DEPARTURES (OVERLAY 20-3A)

2100′
MSA
HAM VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



HAM 7E, LBE 9E
These SIDs require a minimum climb gradient of
310′ per NM (5.1%) up to **300′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

SID	RWY	ROUTING
LBE 9E	**05**	**(500′+)** - HI200 - HI201 - LBE.
LBE 6W	**23**	**(500′+)** - HI100 **(1500′+)** - HI101 - LBE.
HAM 7E	**05**	**(500′+)** - HI203 **(1500′+)** - HAM.
HAM 7W	**23**	**(500′+)** - HI100 **(1500′+)** - HI102 - HI104 - HI105 - HAM.

CHANGES: RNAV SID HAM 6W renumbered 7W; chart reindexed.

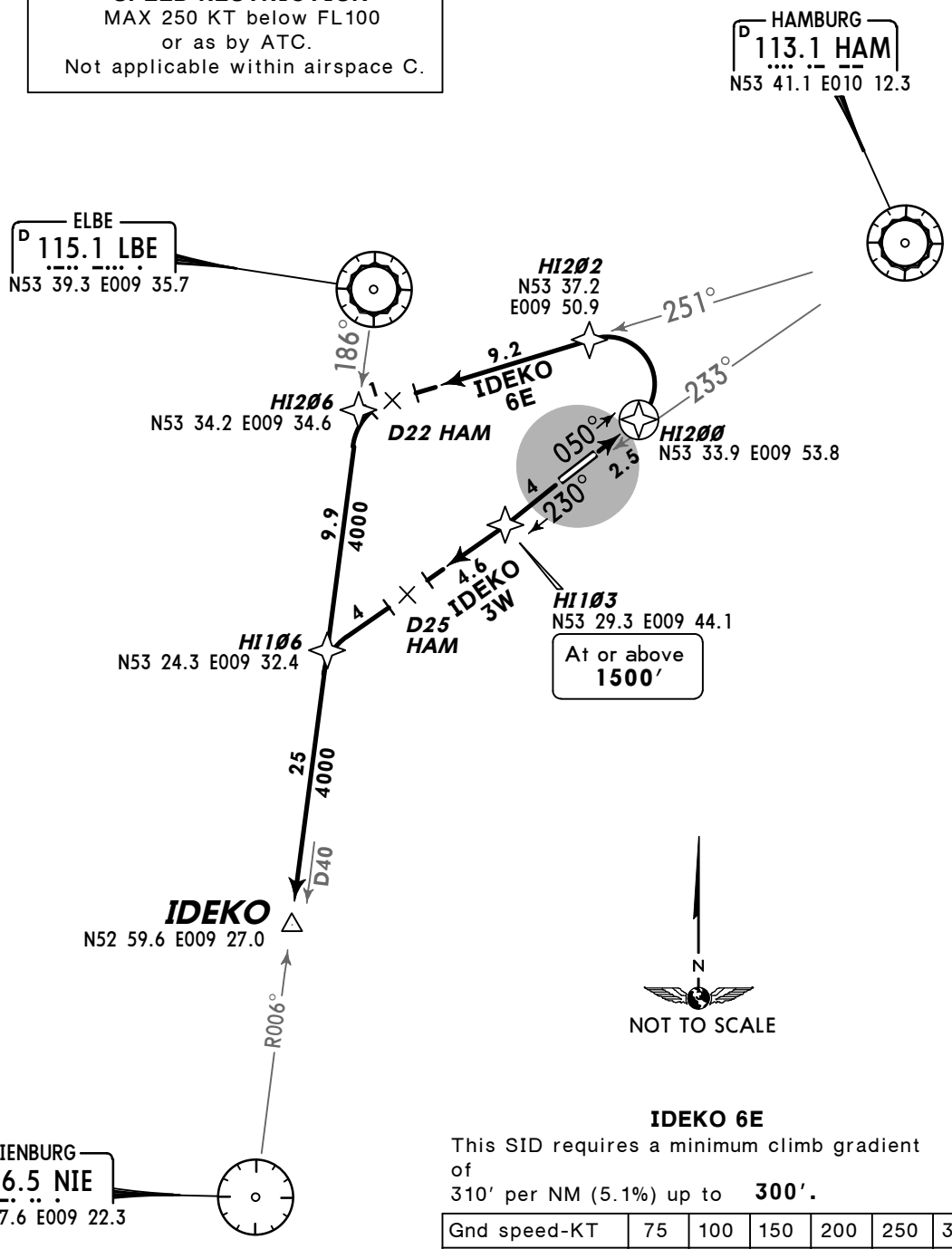
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BREMEN Radar 134.25	*Apt Elev* 21′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. Minimum ground visibility required: 800m (Rwy 05)/400m (Rwy 23). 4. EXPECT close-in obstacles.

IDEKO SIX ECHO (IDEKO 6E) *[IDEK6E]*
IDEKO THREE WHISKEY (IDEKO 3W) *[IDEK3W]*
RWYS 05, 23 RNAV DEPARTURES (OVERLAY 20-3B)
MANDATORY FOR FLIGHTS VIA AIRWAYS N 850 &
Y 900 - TIMEN - UL 126

2100′
MSA
HAM VOR

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



IDEKO 6E
This SID requires a minimum climb gradient of
310′ per NM (5.1%) up to **300′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

Initial climb clearance **5000′**

SID	RWY	ROUTING
IDEKO 6E	**05**	**(500′+)** - HI200 - HI202 - HI206 - IDEKO.
IDEKO 3W	**23**	**(500′+)** - HI103 **(1500′+)** - HI106 - IDEKO.

CHANGES: RNAV SID IDEKO 5E renumbered 6E; chart reindexed.

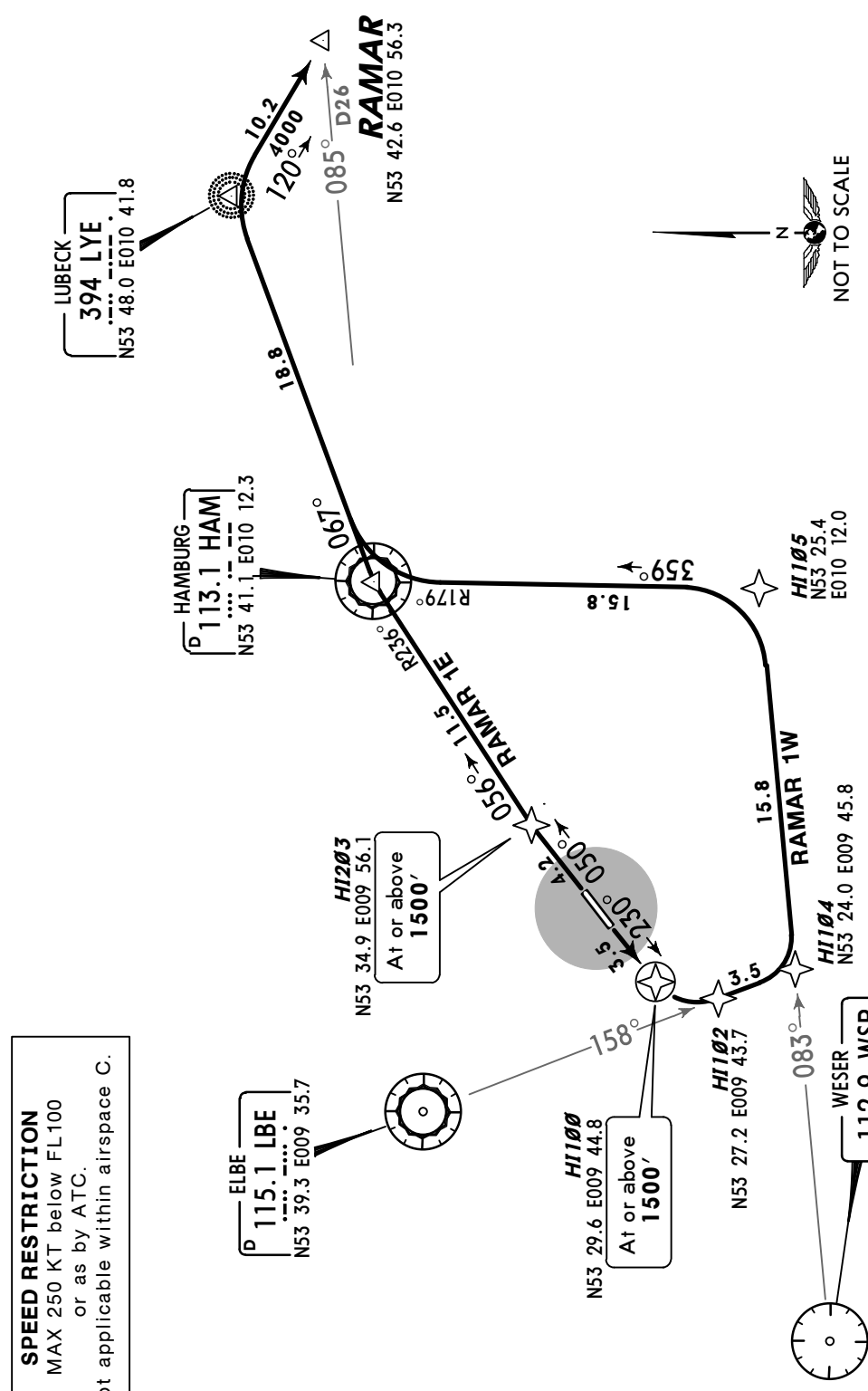
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BREMEN Radar 136.67	*Apt Elev* 21′

Trans level: By ATC Trans alt: 5000′
1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.
3. Minimum ground visibility required: 800m (Rwy 05)/400m (Rwy 23).
4. EXPECT close-in obstacles.

2100′ *MSA HAM VOR*

RAMAR ONE ECHO (RAMAR 1E)
RAMAR ONE WHISKEY (RAMAR 1W)
RWYS 05, 23 RNAV DEPARTURES (OVERLAY 20-3C)



RAMAR 1E

This SID requires a minimum climb gradient of 310′ per NM (5.1%) up to **300′**.

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

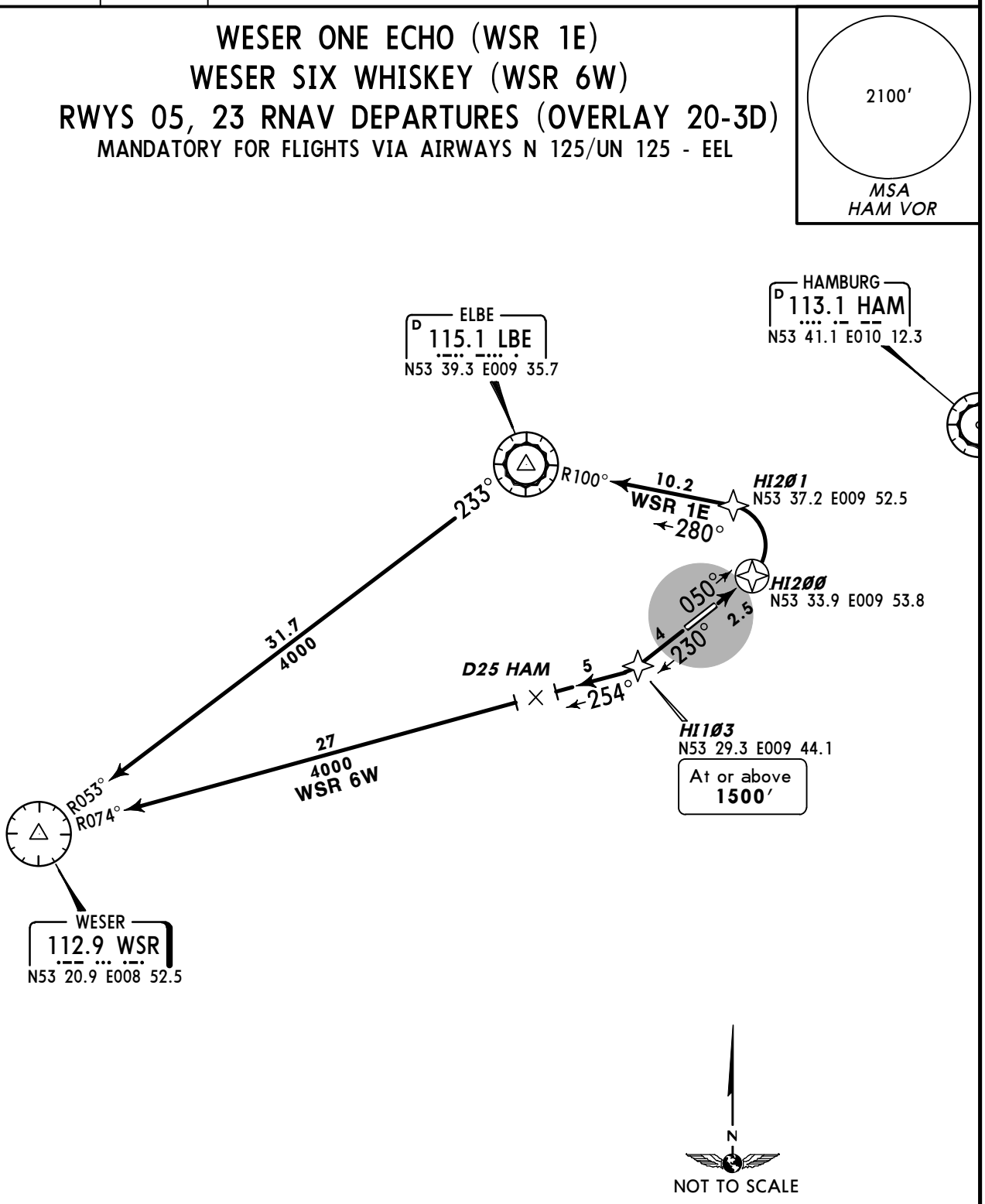
SID	RWY	ROUTING
RAMAR 1E	05	(500′+) - HI203 (1500′+) - HAM - LYE - RAMAR.
RAMAR 1W	23	(500′+) - HI100 (1500′+) - HI102 - HI104 - HI105 - HAM - LYE - RAMAR.

CHANGES: New chart.

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BREMEN Radar 134.25	*Apt Elev* 21′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory. 3. Minimum ground visibility required: 800m (Rwy 05)/400m (Rwy 23). 4. EXPECT close-in obstacles.

WESER ONE ECHO (WSR 1E)
WESER SIX WHISKEY (WSR 6W)
RWYS 05, 23 RNAV DEPARTURES (OVERLAY 20-3D)
MANDATORY FOR FLIGHTS VIA AIRWAYS N 125/UN 125 - EEL



WSR 1E

This SID requires a minimum climb gradient of
310′ per NM (5.1%) up to **300′.**

Gnd speed-KT	75	100	150	200	250	300
310′ per NM	387	516	775	1033	1291	1549

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

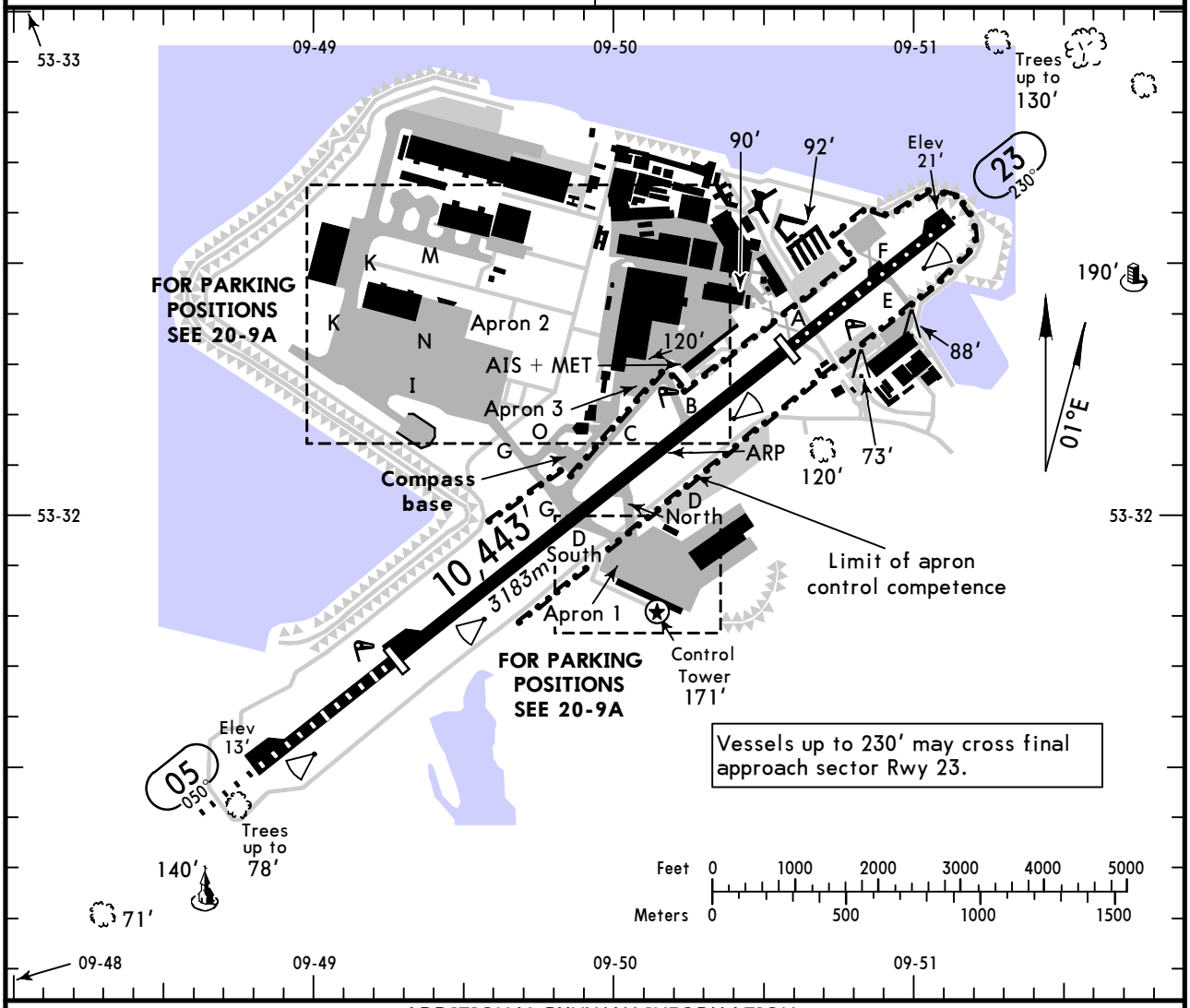
Initial climb clearance **5000′**

SID	RWY	ROUTING
WSR 1E	**05**	**(500′+)** - HI200 - HI201 - LBE - WSR.
WSR 6W	**23**	**(500′+)** - HI103 **(1500′+)** - WSR.

CHANGES: New chart.

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FINKENWERDER Apron	Tower
121.65X	123.25X



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF ❸	WIDTH
05 ❶ 23	HIRL CL *(30m)* HIALS SFL REIL PAPI-L ❷ RVR	8287′ *2526m* 8261′ *2518m*	6716′ *2047m* 7321′ *2231m*	❹	148′ *45m*

❶ Aquaplaning effect on asphalt part of rwy.

❷ angle 3.0°

❸ TAKE-OFF RUN AVAILABLE FOR ACFT Code F (A380) (due to jet blast take-off position is displaced 689′/210m rwy inbound)
Rwy 05: 9754′ (2973m)
Rwy 23: 8940′ (2725m)

❹ TAKE-OFF RUN AVAILABLE

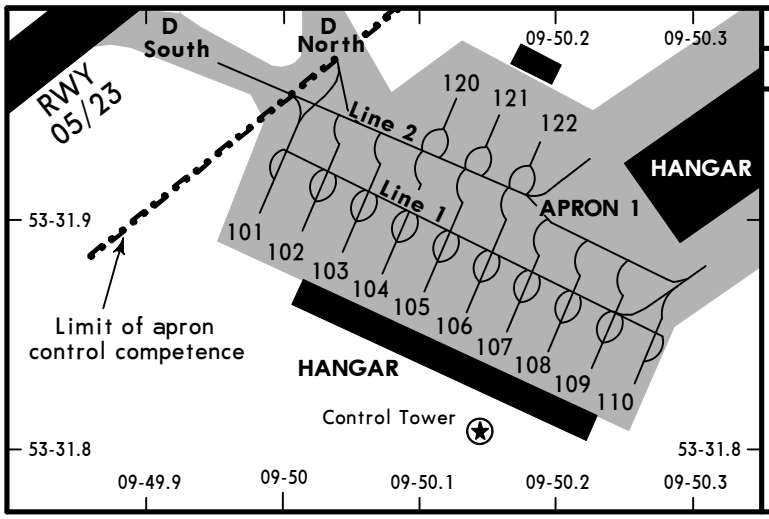
RWY 05:		RWY 23:	
From rwy head	10,443′(3183m)	From rwy head	9629′(2935m)
rwy turn pad North	8333′(2540m)	twy E int	8907′(2715m)
twy G int	5610′(1710m)	twy B int	5955′(1815m)
twy D South int	5577′(1700m)	twy D North int	4823′(1470m)

Standard TAKE-OFF

	Rwy 05	Rwy 23	
		RCLM (DAY only) or RL	NIL (DAY only)
A B C D	*800m*	*400m*	*500m*

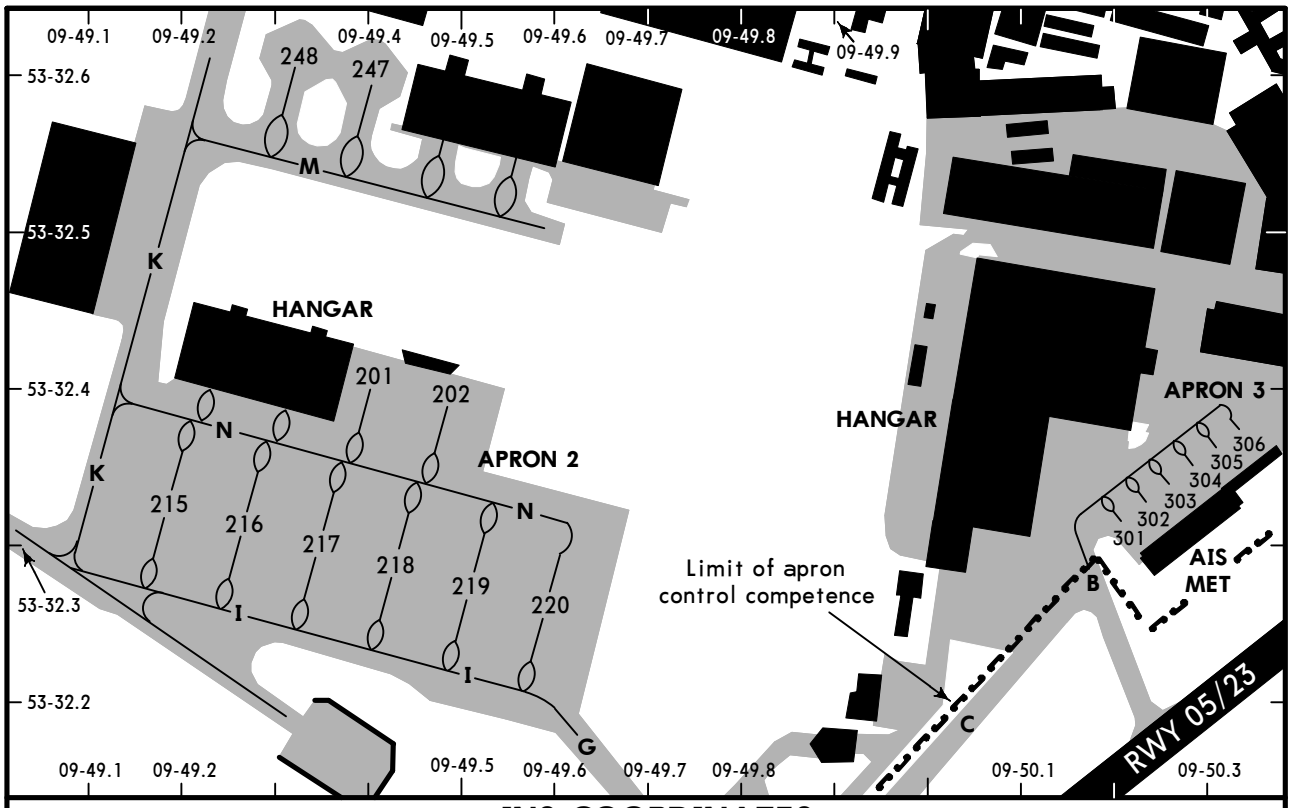
CHANGES: Apron extended.

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INS COORDINATES

STAND No.	COORDINATES
	APRON 1
101 thru 103	N53 31.9 E009 50.0
104 thru 106	N53 31.9 E009 50.1
107 thru 110	N53 31.8 E009 50.2



INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
	APRON 2		**APRON 3**
201	N53 32.4 E009 49.4	301, 302	N53 32.3 E009 50.2
202	N53 32.4 E009 49.5	303, 304	N53 32.3 E009 50.3
215, 216	N53 32.3 E009 49.2	305, 306	N53 32.4 E009 50.3
217	N53 32.3 E009 49.3		
218	N53 32.3 E009 49.4		
219	N53 32.3 E009 49.5		
220	N53 32.3 E009 49.6		
247	N53 32.6 E009 49.4		
248	N53 32.6 E009 49.3		

CHANGES: Stands 247 and 248 added. Taxi guidance lines.

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EDHI/XFW FINKENWERDER

JEPPESEN 23 DEC 11 (21-1)

HAMBURG (FINKENWERDER), GERMANY
ILS or LOC Rwy 05

HAMBURG Director (APP/R)		BREMEN Radar		HAMBURG-FINKENWERDER Tower
118.2	124.62	134.25	136.67	123.25X

BRIEFING STRIP™

LOC IHFE	Final Apch Crs	GS OM	ILS DA(H) Refer to Minimums	Apt Elev / RWY
110.7	050°	1250′ (1235′)		Apt Elev 21′ / RWY 15′

MISSED APCH: Climb STRAIGHT AHEAD to D3.7 IHFW, then turn RIGHT direct to HAM VOR climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′
LOC: **DME required.**

2100′
MSA HAM VOR

NOT TO SCALE

(IAF) ELBE D 115.1 LBE

In case of radio comm failure proceed from HAM VOR to LBE VOR.

HAMBURG D 113.1 HAM

MHA 3000

53-40 112° 4000 112° 442′ Alignment turn after holding

D4.0 LBE

292° 770′ ED(R)-2

8.0 191° 4000

D8.0 LBE

4.5 3000 to ERLEK

D12.5 LBE

050°

ERLEK D10.1 IHFW

OM D4.5 IHFW

D3.4 IHFW

MM D1.4 IHFW

D3.7 IHFW

Hamburg

189° 009°

511′ 983′ 529′ 988′ 670′ 516′ 562′

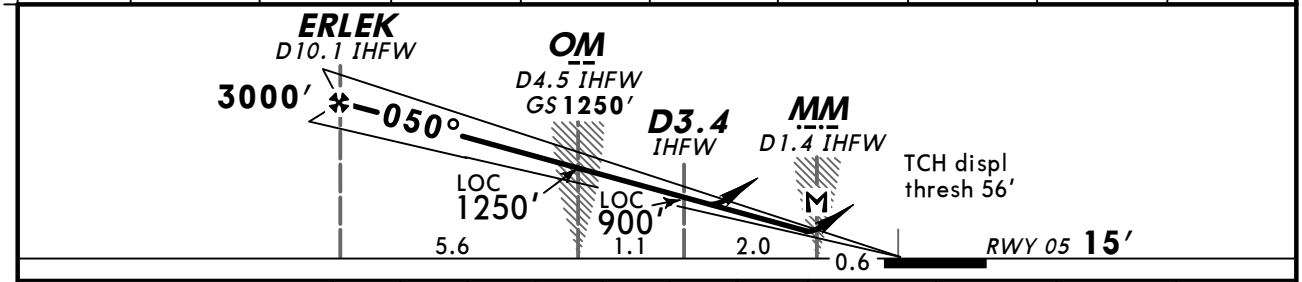
ILS DME Rwy 23 108.5 IHFW

ILS 050° 110.7 IHFE

53-30

09-30 09-50 10-00

LOC (GS out)	IHFW DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	2690′	2370′	2050′	1730′	1410′	1100′	780′	460′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	372	478	531	637	743	849
MAP at MM/D1.4 IHFW						

HIALS REIL PAPI

D3.7 IHFW

4000′ RT

HAM 113.1

Standard STRAIGHT-IN LANDING RWY **05**

ILS
DA(H) A: **215′** (200′) C: **230′** (215′)
B: **220′** (205′) D: **240′** (225′)

LOC (GS out)
DA(H) **420′** (405′)

CIRCLE-TO-LAND
Not authorized
Southeast of aerodrome

	FULL/Limited	ALS out		ALS out
A	1000m	1200m	1200m	1500m
B				
C				1900m
D				

Max Kts	MDA(H)	VIS
100	590′ (569′)	1500m 1
135	730′ (709′)	1600m 1
180	910′ (889′)	2400m
205	910′ (889′)	3600m

PANS OPS 4

1 TO RWY 23: VIS 2000m.

CHANGES: Minimums.

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EDHI/XFW FINKENWERDER

JEPPESEN 23 DEC 11 (21-2)

HAMBURG (FINKENWERDER), GERMANY

ILS or LOC Rwy 23

HAMBURG Director (APP/R)		BREMEN Radar		HAMBURG-FINKENWERDER Tower
118.2	124.62	134.25	136.67	123.25X

BRIEFING STRIP™

LOC IHFW	Final Apch Crs	GS D3.7 IHFW	ILS DA(H)	Apt Elev 21′
108.5	230°	1190′ (1175′)	Refer to Minimums	RWY 15′

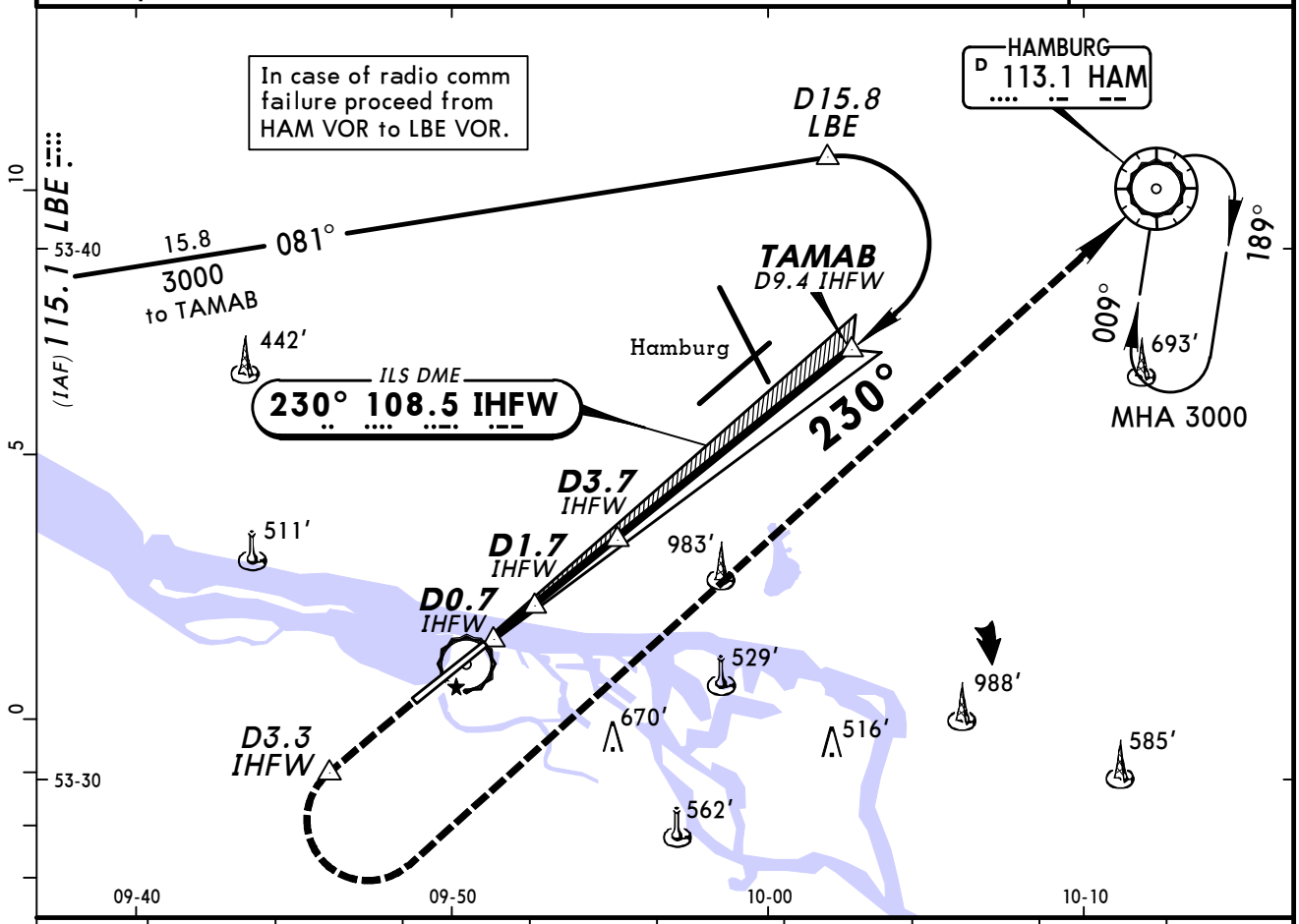
MISSED APCH: Climb STRAIGHT AHEAD to D3.3 IHFW, then turn LEFT direct to HAM VOR climbing to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′

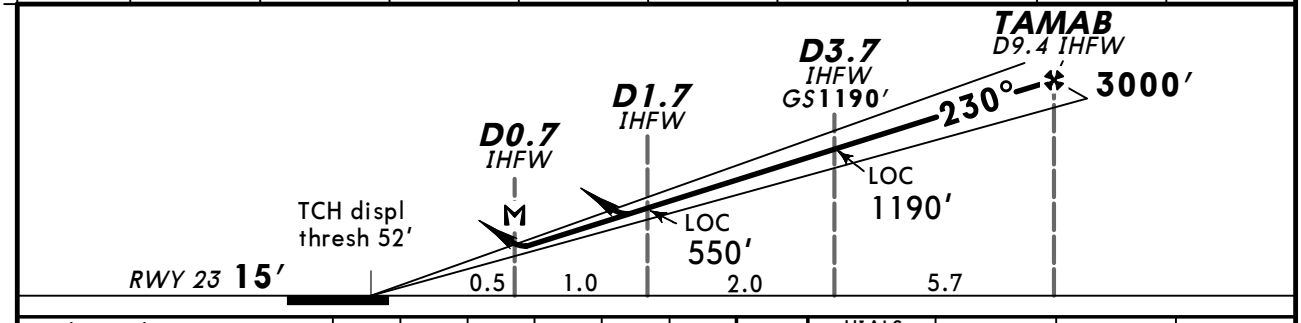
DME required.

2100′

MSA HAM VOR



LOC (GS out)	IHFW DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	650′	960′	1280′	1600′	1920′	2240′	2560′	2870′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent angle	3.00°	372	478	531	637	743	849
MAP at D0.7 IHFW							

HIALS
REIL
PAPI

D3.3 IHFW

4000′ LT

HAM 113.1

Standard STRAIGHT-IN LANDING RWY 23

ILS DA(H)	LOC (GS out) DA(H)
A: 251′ (236′) C: 271′ (256′)	450′ (435′)
B: 261′ (246′) D: 281′ (266′)	

CIRCLE-TO-LAND

Not authorized Southeast of aerodrome

	FULL/Limited	ALS out		ALS out	Max Kts	MDA(H)	VIS
A	1000m	1200m	1300m	1500m	100	590′ (569′)	1500m
B		1300m			135	730′ (709′)	1600m
C				2000m	180	910′ (889′)	2400m
D					205	910′ (889′)	3600m

PANS OPS 4

CHANGES: Minimums.

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EDHI/XFW FINKENWERDER

JEPPESEN 23 DEC 11 (22-1)

HAMBURG (FINKENWERDER), GERMANY
RNAV (GPS) Rwy 05

HAMBURG Director (APP/R)		BREMEN Radar		HAMBURG-FINKENWERDER Tower
118.2	124.62	134.25	136.67	123.25X

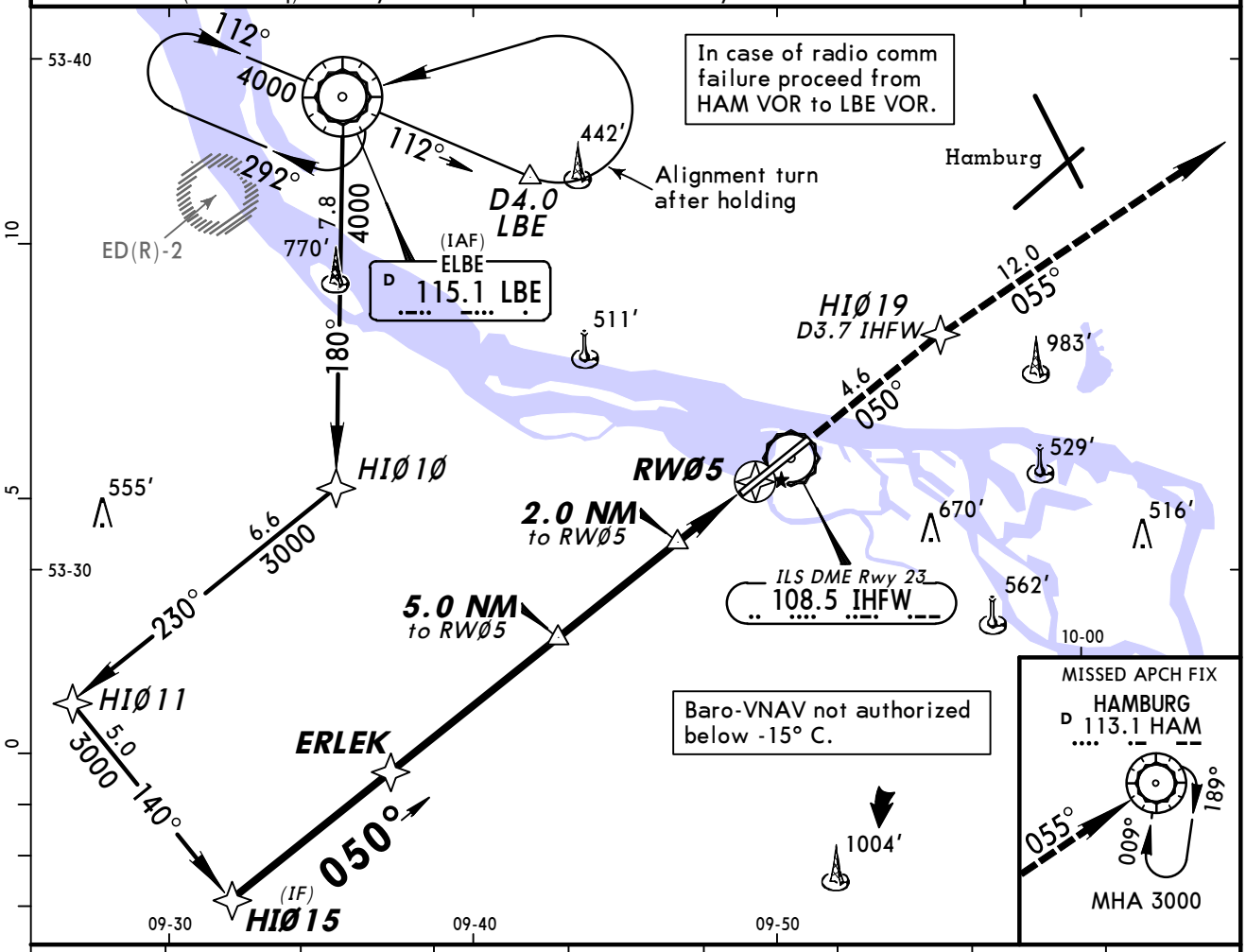
RNAV	Final Apch Crs 050°	Minimum Alt ERLEK 3000′ (2985′)	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev 21′ RWY 15′

MISSED APCH: RNAV: Climb on 050° to HIØ19, then turn RIGHT on 055° to HAM VOR climbing to 4000′.
NON-RNAV: Climb STRAIGHT AHEAD to D3.7 IHFW, then turn RIGHT direct HAM VOR climbing to 4000′.

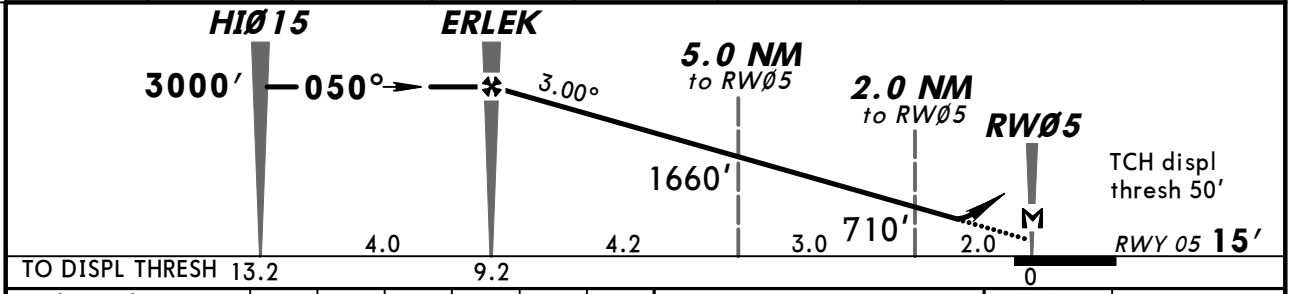
Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′

2000′ MSA ARP

BRIEFING STRIP™



DIST to RWØ5	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2940′	2620′	2300′	1980′	1660′	1340′	1030′	710′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at RWØ5						

HIALS
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **05**

DA(H)	LNAV/VNAV		LNAV	
	A: **340′** (325′) BCD: **390′** (375′)		DA(H) **490′** (475′)	
		ALS out		ALS out
A	1000m	1500m	1500m	
B				
C		1700m	1500m	2200m
D				

CIRCLE-TO-LAND
Not authorized
Southeast of aerodrome

Max Kts	MDA(H)	VIS
100	590′ (569′)	1500m 1
135	730′ (709′)	1600m 1
180	910′ (889′)	2400m
205	910′ (889′)	3600m

1 TO RWY 23: VIS 2000m.

PANS OPS 4

CHANGES: Minimums.

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EDHI/XFW FINKENWERDER

JEPPESEN 23 DEC 11 (22-2)

HAMBURG (FINKENWERDER), GERMANY
RNAV (GPS) Rwy 23

HAMBURG Director (APP/R)		BREMEN Radar		HAMBURG-FINKENWERDER Tower
118.2	124.62	134.25	136.67	123.25X

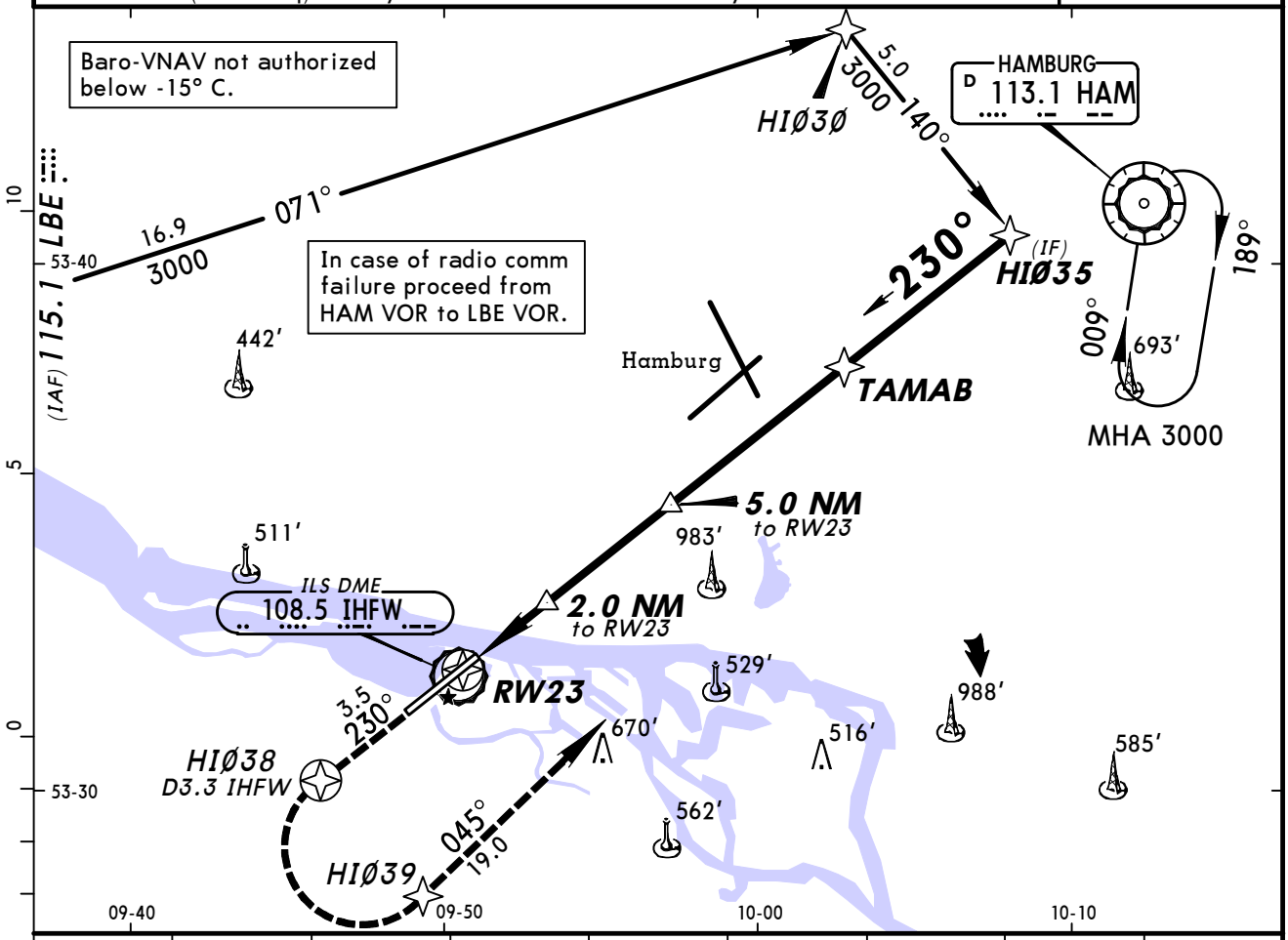
RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	230°	TAMAB 3000′ (2985′)	450′ (435′)	Apt Elev 21′ / RWY 15′

MISSED APCH: RNAV: Climb on 230° to HIØ38, then turn LEFT via HIØ39 on 045° to HAM VOR climbing to 4000′.
NON-RNAV: Climb STRAIGHT AHEAD to D3.3 IHFW, then turn LEFT direct HAM VOR climbing to 4000′.

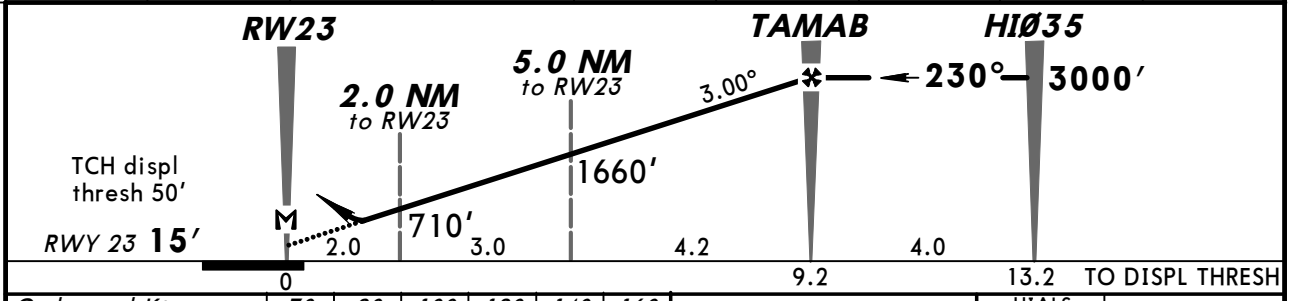
Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000′

2000′ MSA ARP

BRIEFING STRIP™



DIST to RW23	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	710′	1030′	1340′	1660′	1980′	2300′	2620′	2940′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at RW23						

HIALS
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 23

	LNAV/VNAV DA(H) 450′ (435′)		LNAV DA(H) 450′ (435′)	
		ALS out		ALS out
A	1300m	1500m	1300m	1500m
B				
C		2000m		2000m
D				

CIRCLE-TO-LAND
Not authorized Southeast of aerodrome

Max Kts	MDA(H)	VIS
100	590′ (569′)	1500m
135	730′ (709′)	1600m
180	910′ (889′)	2400m
205	910′ (889′)	3600m

CHANGES: Minimums.

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EDHI/XFW FINKENWERDER

JEPPESEN 23 DEC 11 (28-1)

HAMBURG (FINKENWERDER), GERMANY SRA All Rwys

HAMBURG Director (APP/R)		BREMEN Radar		HAMBURG-FINKENWERDER Tower
118.2	124.62	134.25	136.67	123.25X

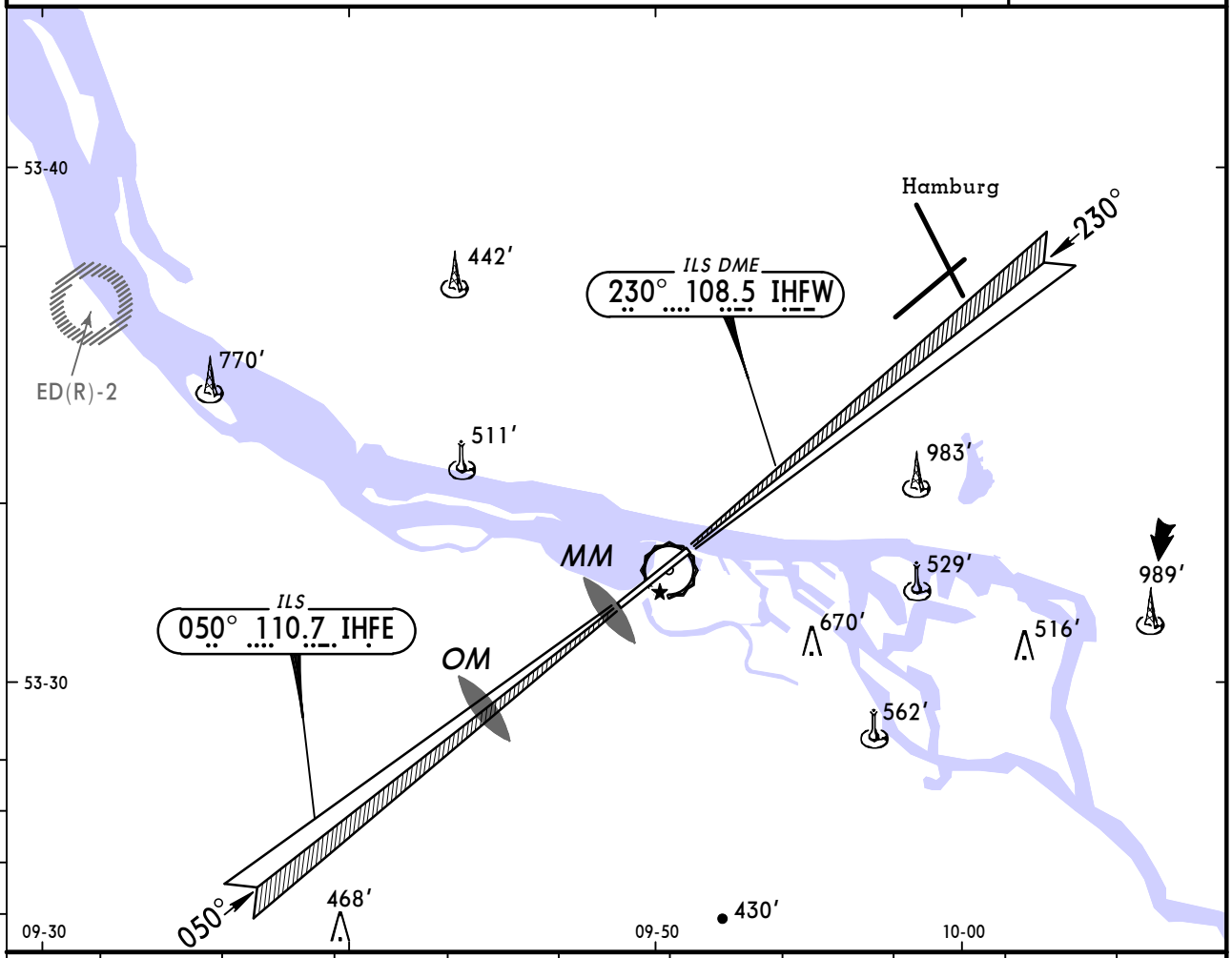
RADAR	Final Apch Crs By ATC	Minimum Alt See table below	MDA(H) Refer to Minimums	Apt Elev 21′ RWY 05 15′ RWY 23 15′

No MSA published

MISSED APCH: Climb STRAIGHT AHEAD to 4000′.

Alt Set: hPa (IN on req) Apt Elev: 1 hPa Trans level: By ATC Trans alt: 5000′

BRIEFING STRIP™



RWY 05/23	RADAR FIX	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3100′	2800′	2500′	2200′	1900′	1600′	1300′	1000′	700′

Minimum Alt/NM	10.0 FAF
SRA 05/23	3100′

								Lighting - Refer to Airport Chart	4000′
MAP at displaced thresholds									

Standard STRAIGHT-IN LANDING

	SRA 05		SRA 23	
	MDA(H) 490′ (475′)		MDA(H) 580′ (565′)	
		ALS out		ALS out
A, B	1700m	2400m	2100m	2800m
C, D	1900m	2600m	2300m	3000m

PANS OPS 4

CHANGES: Minimums.

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General Information

Location: Lubeck Deu
IATA Code: LBC
Lat/Long: N53° 48.3' E010° 43.2'
Elevation: 53 ft

Airport Use: Public
Magnetic Variation: 2.1°E

Fuel Types: 100 Octane (LL), Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0611 Z
Sunset: 1649 Z,

Runway Information

Runway: 07
Length x Width: 6896 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 53 ft
Lighting: Edge, ALS, REIL
Displaced Threshold: 984 ft

Runway: 25
Length x Width: 6896 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 47 ft
Lighting: Edge, ALS, REIL

Communication Information

ATIS 119.925
Lubeck Tower 128.7 At or below 4000 ft Out to 25 mi.
Lubeck Ground Control 121.775
Lubeck Information 128.7 AFIS

*ATIS	Apt Elev
119.92	53′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′

1. B-RNAV and Non-RNAV equipped aircraft expect radar vectors to final approach.
2. GPS/FMS equipped aircraft expect RNAV TRANSITIONs BOGMU 07/25, NOLGO 07/25 or RARUP 07/25 to final.

BOGMU ONE LIMA (BOGMU 1L) *[BOGM1L]*
NOLGO ONE LIMA (NOLGO 1L) *[NOLG1L]*
RARUP ONE LIMA (RARUP 1L) *[RARU1L]*
RWYS 07, 25 ARRIVALS

1800′
MSA
LYE Lctr
within 15 NM

BOGMU
N53 58.8 E010 17.3

098°
14
4000
BOGMU 1L
R278°
165°
4000
R178°
345°
R208°

LBE 115.1
050° D31

LUBECK
110.6 LUB
N53 56.4 E010 40.1

HOLDING OVER BOGMU

11
4000
230°
230°
BOGMU
3.5
4000
D31
LBE R050°
D27.5 LBE
N53 56.3
E010 12.0

LUBECK
394 LYE
N53 48.0 E010 41.8

4000
RARUP 1L
18

HAMBURG
113.1 HAM
N53 41.1 E010 12.3

38
4000
NOLGO 1L

358°
R098° D17
4000
278°

RARUP
N53 38.5 E010 40.6

D18 R187°
028°
4000
NOLGO
N53 23.8
E010 08.3
007°

N
NOT TO SCALE

Clearance limits are BOGMU, NOLGO and RARUP.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
In case of radio communication failure proceed to LUB for standard approach.
LOST COMMS

CHANGES: STARs completely revised.

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1800′

MSA
LYE Lctr
within 15 NM

*ATIS	Apt Elev
119.92	53′

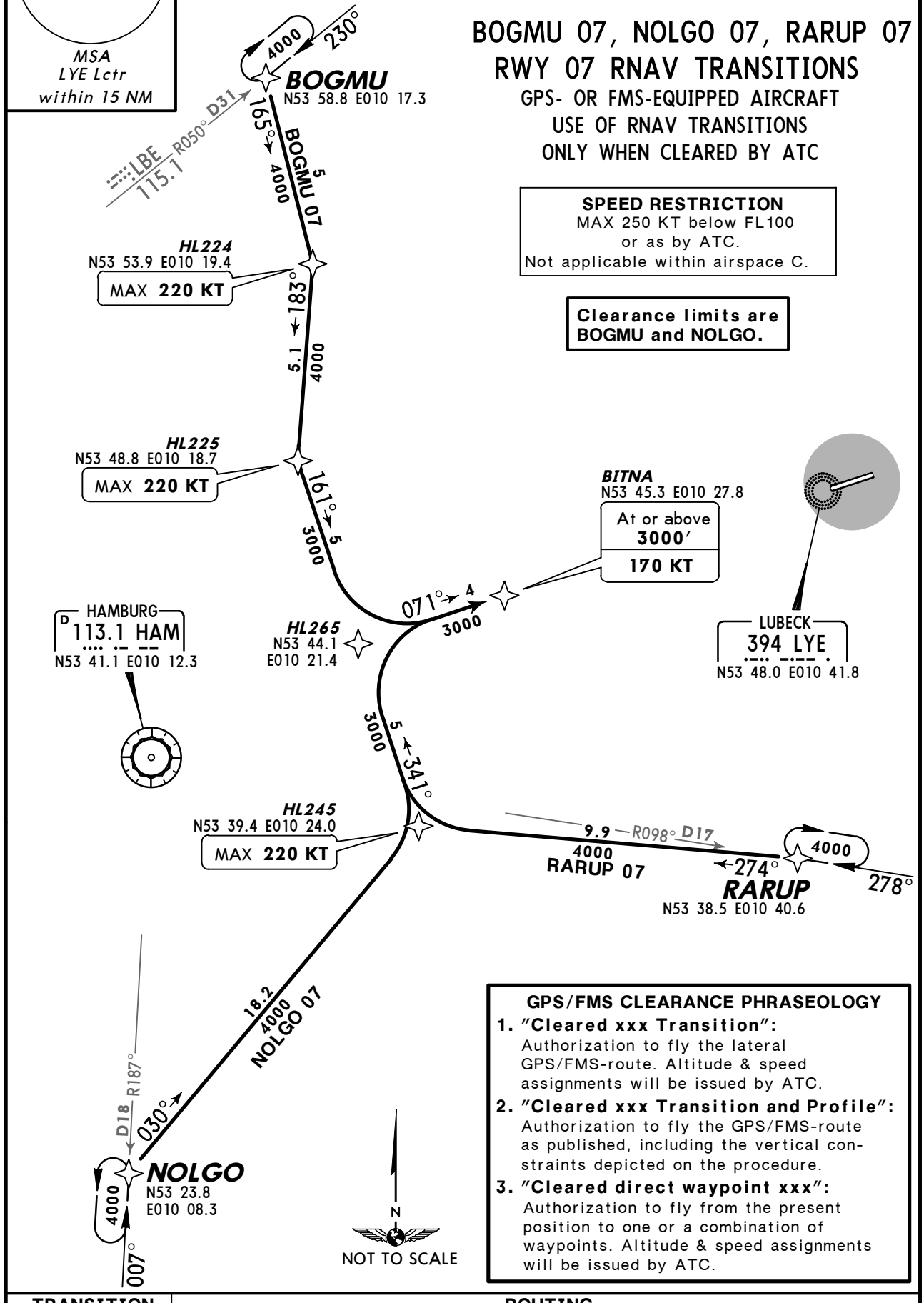
Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. On downwind transition expect vectors to final.
2. Speed restrictions on transition are always mandatory, unless cancelled by ATC.

BOGMU 07, NOLGO 07, RARUP 07
RWY 07 RNAV TRANSITIONS

GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS
ONLY WHEN CLEARED BY ATC

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Clearance limits are BOGMU and NOLGO.



GPS/FMS CLEARANCE PHRASEOLOGY

1. **"Cleared xxx Transition":** Authorization to fly the lateral GPS/FMS-route. Altitude & speed assignments will be issued by ATC.
2. **"Cleared xxx Transition and Profile":** Authorization to fly the GPS/FMS-route as published, including the vertical constraints depicted on the procedure.
3. **"Cleared direct waypoint xxx":** Authorization to fly from the present position to one or a combination of waypoints. Altitude & speed assignments will be issued by ATC.

TRANSITION	ROUTING
BOGMU 07	BOGMU - HL224 (K220-) - HL225 (K220-) - HL265 - BITNA **(3000+;** K170).
NOLGO 07	NOLGO - HL245 (K220-) - HL265 - BITNA **(3000+;** K170).
RARUP 07	RARUP - HL245 (K220-) - HL265 - BITNA **(3000+;** K170).

CHANGES: RNAV Transitions completely revised.

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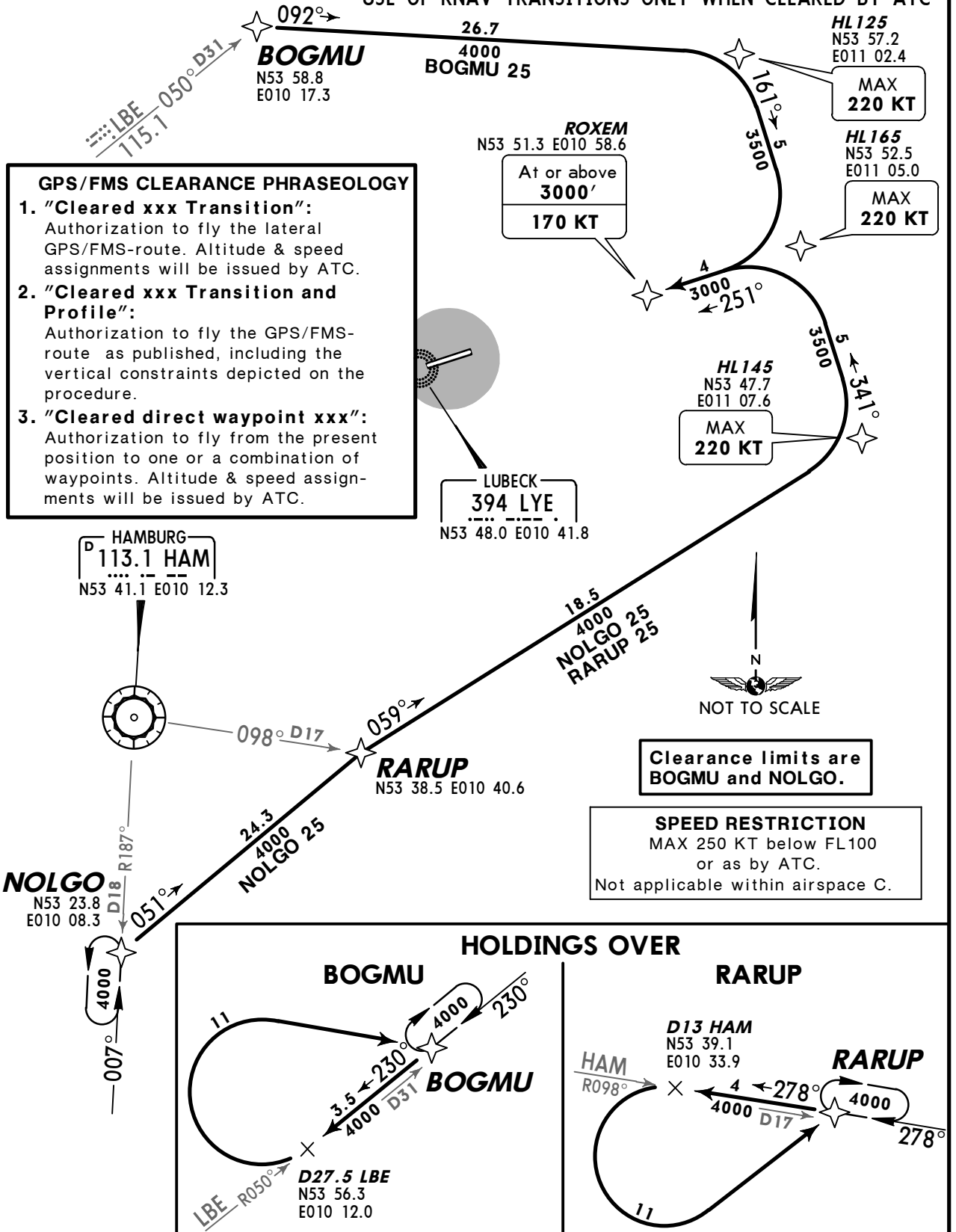
1800′

MSA
LYE Lctr
within 15 NM

*ATIS	Apt Elev
119.92	53′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
1. On downwind transition expect vectors to final.
2. Speed restrictions on transition are always mandatory, unless cancelled by ATC.

BOGMU 25, NOLGO 25, RARUP 25
RWY 25 RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
USE OF RNAV TRANSITIONS ONLY WHEN CLEARED BY ATC



GPS/FMS CLEARANCE PHRASEOLOGY

1. **"Cleared xxx Transition":**
   Authorization to fly the lateral GPS/FMS-route. Altitude & speed assignments will be issued by ATC.
2. **"Cleared xxx Transition and Profile":**
   Authorization to fly the GPS/FMS-route as published, including the vertical constraints depicted on the procedure.
3. **"Cleared direct waypoint xxx":**
   Authorization to fly from the present position to one or a combination of waypoints. Altitude & speed assignments will be issued by ATC.

Clearance limits are BOGMU and NOLGO.

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

HOLDINGS OVER

TRANSITION	ROUTING
BOGMU 25	BOGMU - HL125 (K220-) - HL165 (K220-) - ROXEM **(3000+;** K170).
NOLGO 25	NOLGO - RARUP - HL145 (K220-) - HL165 (K220-) - ROXEM **(3000+;** K170).
RARUP 25	RARUP - HL145 (K220-) - HL165 (K220-) - ROXEM **(3000+;** K170).

CHANGES: RNAV Transitions completely revised.

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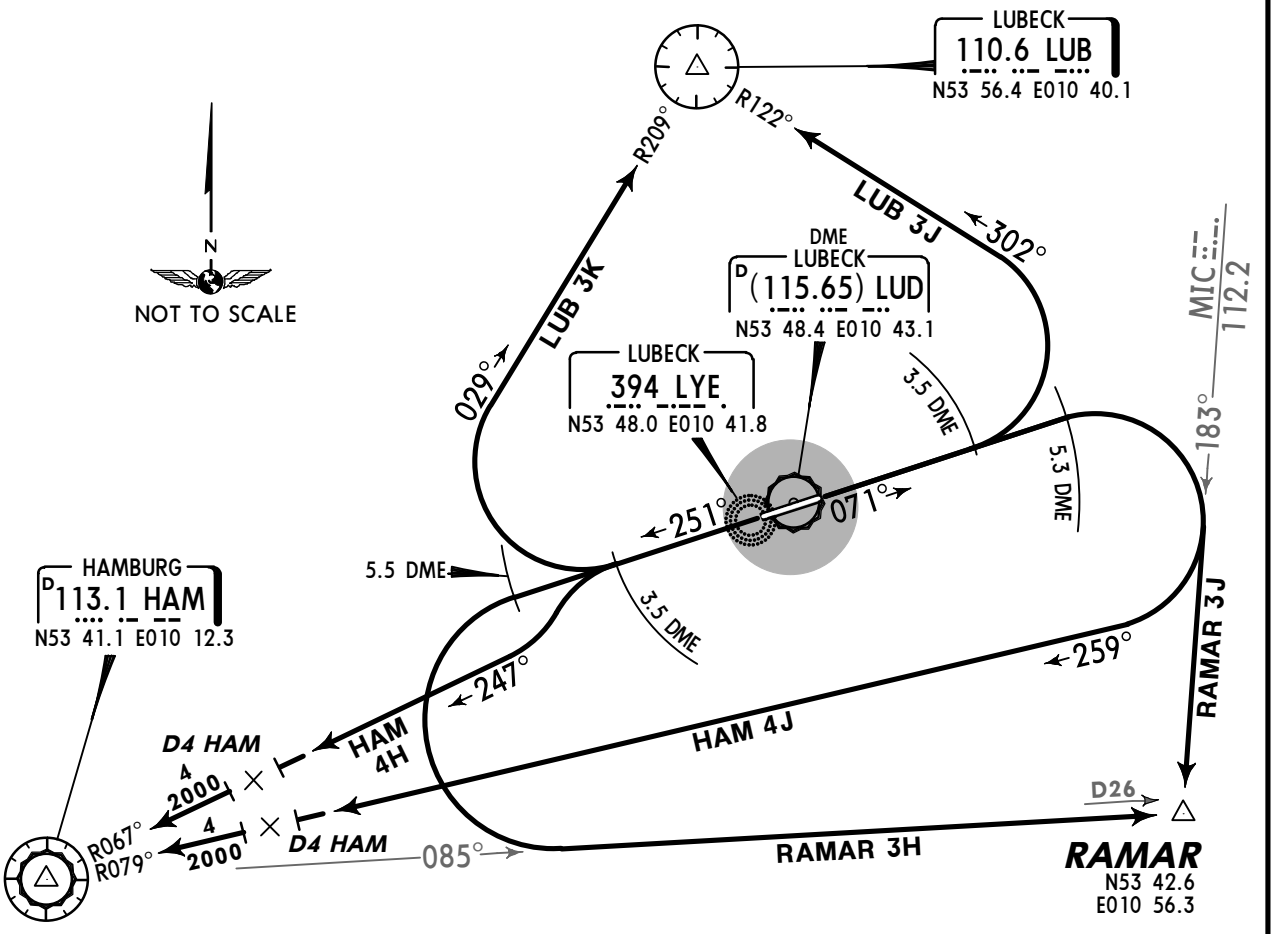
BREMEN Radar 136.67	*Apt Elev* 53′	Trans level: By ATC Trans alt: 5000′ **1.** Contact BREMEN Radar immediately after take-off. **2.** EXPECT close-in obstacles. **3.** Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

1800′

MSA
LYE Lctr
within 15 NM

HAMBURG FOUR HOTEL (HAM 4H)
HAMBURG FOUR JULIETT (HAM 4J)
LUBECK THREE JULIETT (LUB 3J)
LUBECK THREE KILO (LUB 3K)
RAMAR THREE HOTEL (RAMAR 3H)
RAMAR THREE JULIETT (RAMAR 3J)
RWYS 25, 07 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

SID	RWY	ROUTING
HAM 4H	**25**	To LYE, 251° bearing to LUD 3.5 DME, turn LEFT, intercept HAM R-067 inbound to HAM.
HAM 4J	**07**	On 071° bearing from LYE to LUD 5.3 DME, turn RIGHT, intercept HAM R-079 inbound to HAM.
LUB 3J		On 071° bearing from LYE to LUD 3.5 DME, turn LEFT, intercept LUB R-122 inbound to LUB.
LUB 3K	**25**	To LYE, 251° bearing to LUD 3.5 DME, turn RIGHT, intercept LUB R-209 inbound to LUB.
RAMAR 3H		To LYE, 251° bearing to LUD 5.5 DME, turn LEFT, intercept HAM R-085 to RAMAR.
RAMAR 3J	**07**	On 071° bearing from LYE to LUD 5.3 DME, turn RIGHT, intercept MIC R-183 to RAMAR.

CHANGES: Communication.

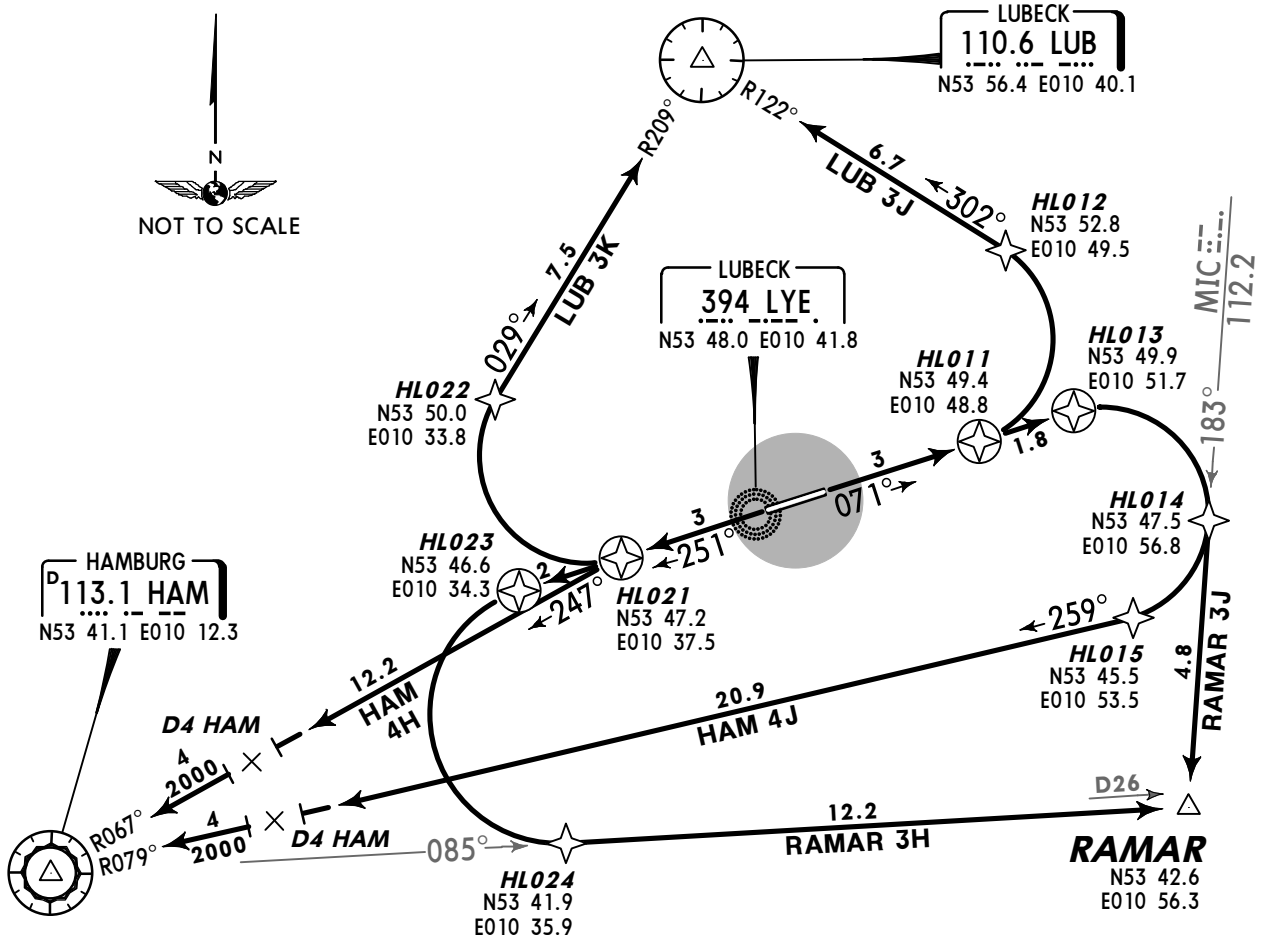
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BREMEN Radar 136.67	*Apt Elev* 53′	Trans level: By ATC Trans alt: 5000′ **1.** Contact BREMEN Radar immediately after take-off. **2.** EXPECT close-in obstacles. **3.** Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

1800′
MSA
LYE Lctr
within 15 NM

HAMBURG FOUR HOTEL (HAM 4H)
HAMBURG FOUR JULIETT (HAM 4J)
LUBECK THREE JULIETT (LUB 3J)
LUBECK THREE KILO (LUB 3K)
RAMAR THREE HOTEL (RAMAR 3H) *[RAMA3H]*
RAMAR THREE JULIETT (RAMAR 3J) *[RAMA3J]*
RWYS 25, 07 RNAV DEPARTURES (OVERLAY 10-3)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



Initial climb clearance **5000′**

SID	RWY	ROUTING
HAM 4H	**25**	**(500′+)** - HL021 - HAM.
HAM 4J	**07**	**(500′+)** - HL013 - HL015 - HAM.
LUB 3J		**(500′+)** - HL011 - HL012 - LUB.
LUB 3K	**25**	**(500′+)** - HL021 - HL022 - LUB.
RAMAR 3H		**(500′+)** - HL023 - HL024 - RAMAR.
RAMAR 3J	**07**	**(500′+)** - HL013 - HL014 - RAMAR.

CHANGES: Communication.

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EDHL/LBC

Apt Elev **53′**

N53 48.3 E010 43.2

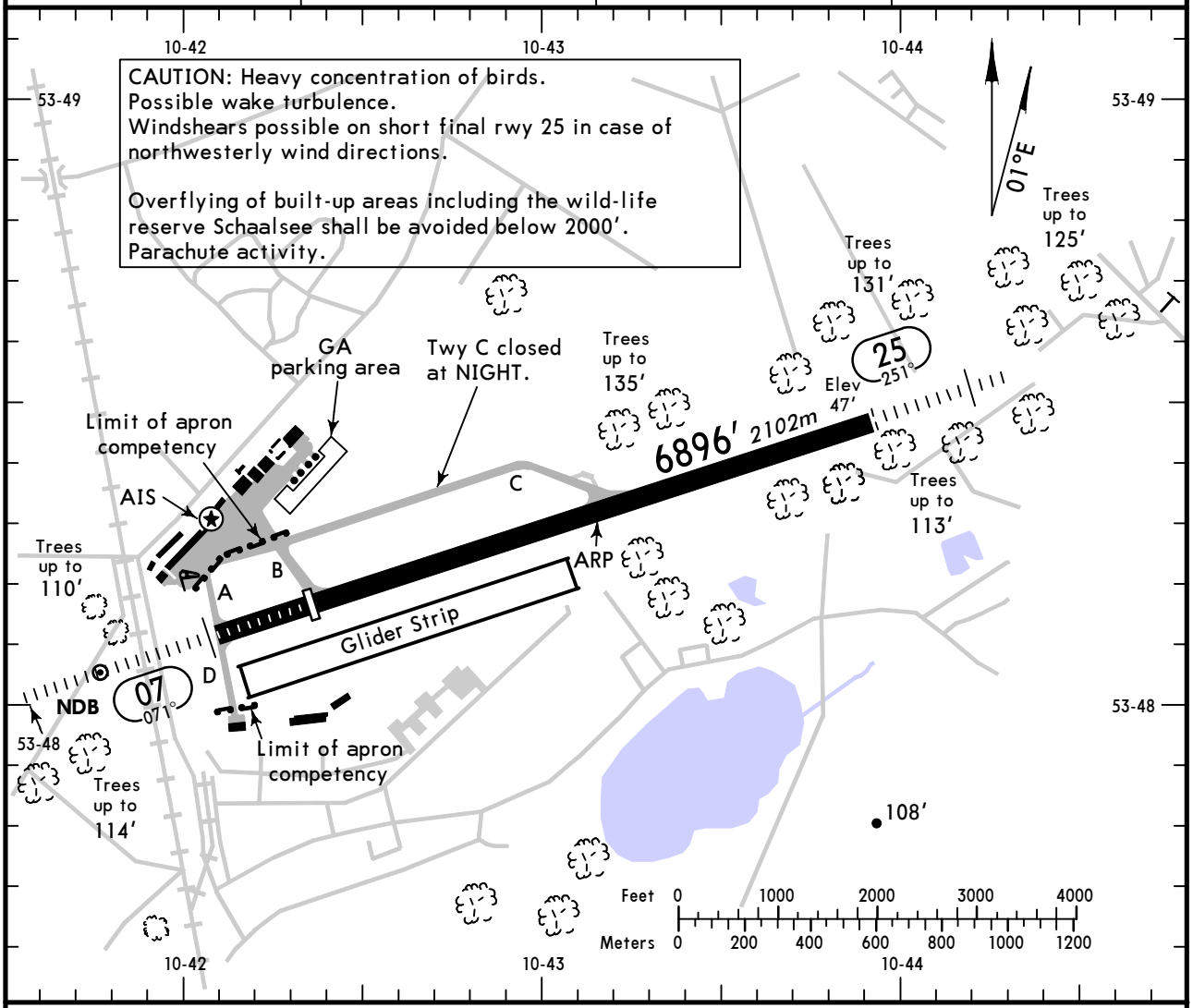
JEPPESEN

17 APR 09 (10-9)

LUBECK, GERMANY

BLANKENSEE

*ATIS	*LUBECK Ground	*Tower	*LUBECK Info (outside TWR hr)
119.92	121.77	128.7	128.7



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
07 25	HIRL HIALS REIL PAPI-L (angle 3.0°)	5912′ *1802m*	4974′ *1516m* 5948′ *1813m*	❶	197′ *60m*

❶ TAKE-OFF RUN AVAILABLE

RWY 07:
From rwy head 6896′ (2102m)
twy B int 5830′ (1777m)

RWY 25:
From rwy head 6896′ (2102m)
twy C int 4035′ (1230m)

Standard TAKE-OFF **1**

	LVP must be in Force	All Rwys	
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

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

CHANGES: Notes. Minimums.

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LUBECK, GERMANY
BLANKENSEE

STRAIGHT-IN RWY		A	B	C	D
07	ILS	**253**′(200′)	**253**′(200′)	**254**′(201′)	**263**′(210′)
		R550m	**R550m**	**R600m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**500**′(447′)	**500**′(447′)	**500**′(447′)	**500**′(447′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**600**′(547′)	**600**′(547′)	**600**′(547′)	**600**′(547′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
25	ILS	**269**′(222′)	**279**′(232′)	**289**′(242′)	**298**′(251′)
		R700m	**R700m**	**R700m**	**R800m**
	ALS out	R1000m	R1000m	R1000m	R1200m
	LOC	**490**′(443′)	**490**′(443′)	**490**′(443′)	**490**′(443′)
		R1200m	**R1300m**	**R1400m**	**R1600m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**590**′(543′)	**590**′(543′)	**590**′(543′)	**590**′(543′)
		R1400m	**R1500m**	**R1600m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m

TAKE-OFF RWY 07, 25

	LVP must be in force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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EDHL/LBC
BLANKENSEE

JEPPESEN
17 SEP 10 (11-1)

LUBECK, GERMANY
ILS or LOC Rwy 07

*ATIS	BREMEN Radar	*LUBECK Tower (within 25 NM up to 4000')	*LUBECK Info (outside TWR hr)	*Ground
119.92	136.67	128.7	128.7	121.77

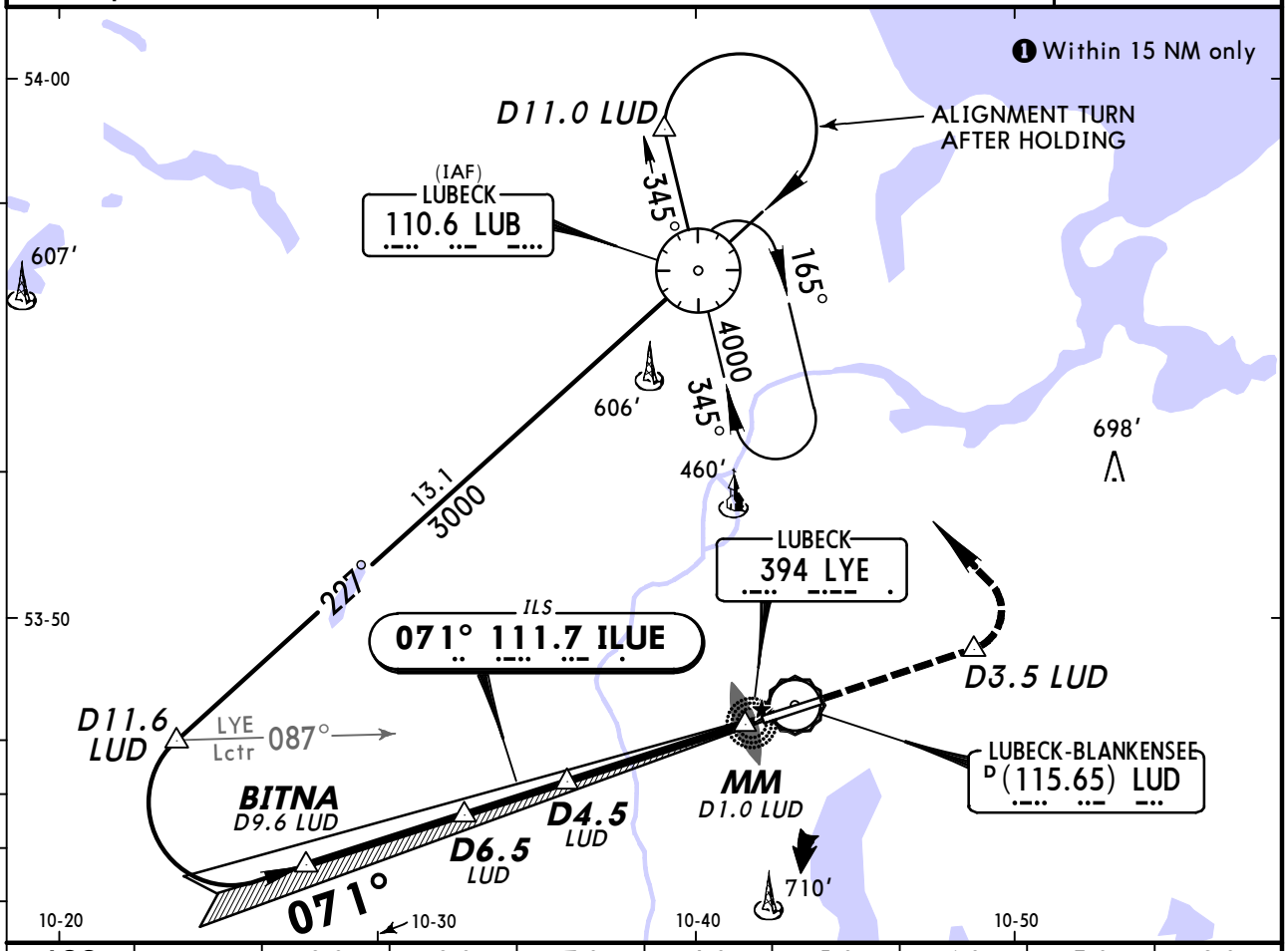
BRIEFING STRIP

LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 53'
ILUE	071°	D4.5 LUD	Refer to Minimums	RWY 53'
111.7		1380' (1327')		

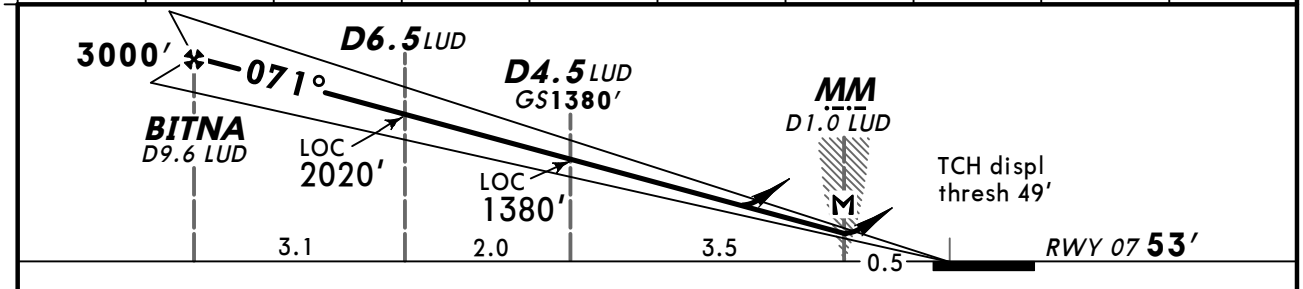
MISSED APCH: Climb STRAIGHT AHEAD to D3.5 LUD, then turn LEFT to VOR climbing to 4000'.

Alt Set: hPa (IN on req) Rwy Elev: 2 hPa Trans level: By ATC Trans alt: 5000'
DME required.

1800'❶
MSA
LYE Lctr



LOC (GS out)	LUD DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	2810'	2490'	2180'	1860'	1540'	1220'	900'	580'



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.0 LUD						

HIALS
REIL
PAPI

D3.5 LUD

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **07**

	ILS			LOC (GS out)	
	DA(H) AB: 253' (200') C: 254' (201') D: 263' (210')			DA(H) 500' (447')	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

CHANGES: Minimums.

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EDHL/LBC
BLANKENSEE

JEPPESEN
17 SEP 10 (11-2)

LUBECK, GERMANY
ILS or LOC Rwy 25

*ATIS	BREMEN Radar	*LUBECK Tower (within 25 NM up to 4000')	*LUBECK Info (outside TWR hr)	*Ground
119.92	136.67	128.7	128.7	121.77

BRIEFING STRIP™

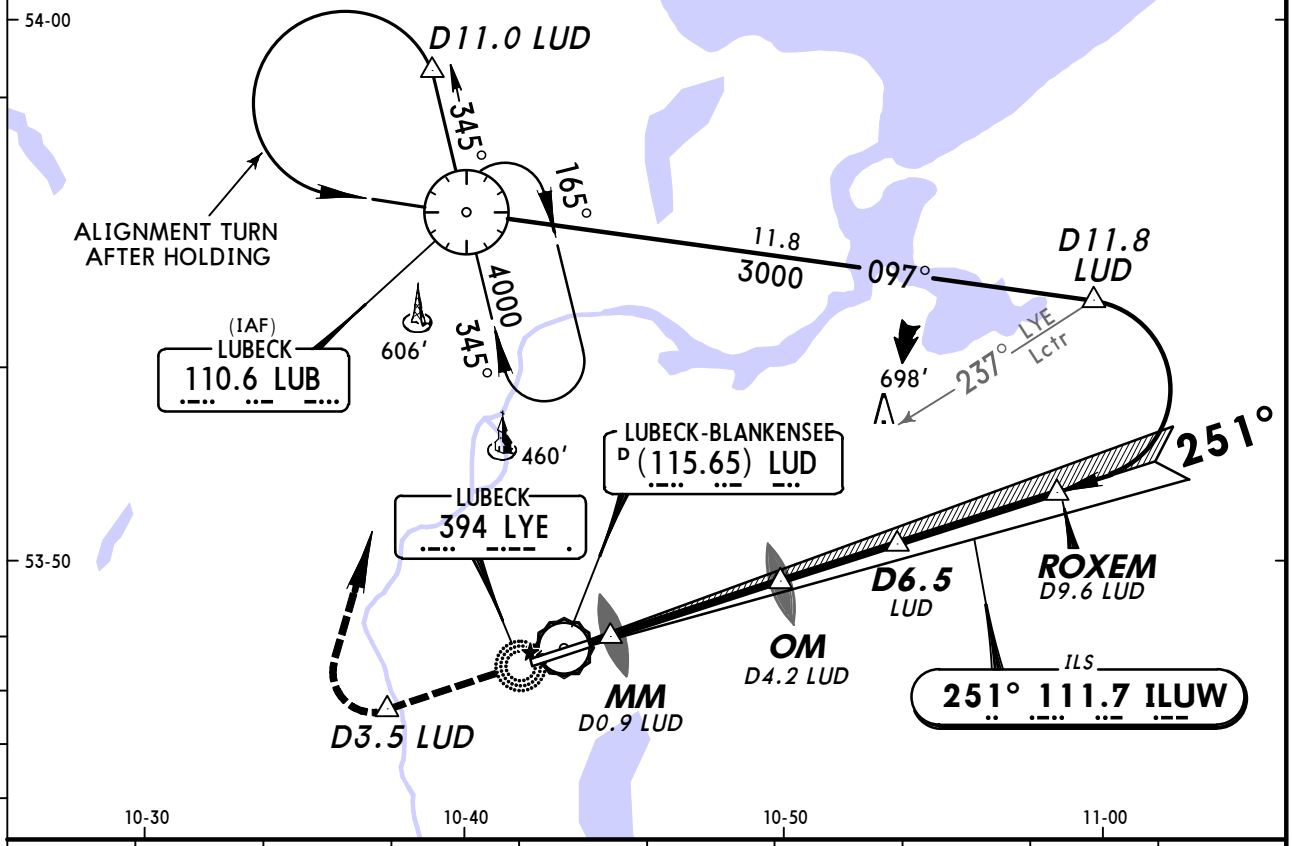
LOC	Final	GS	ILS	Apt Elev 53'
ILUW	Apch Crs	OM	DA(H)	RWY 47'
111.7	251°	1280' (1233')	Refer to Minimums	

MISSED APCH: Climb STRAIGHT AHEAD to D3.5 LUD, then turn RIGHT to VOR climbing to 4000'.

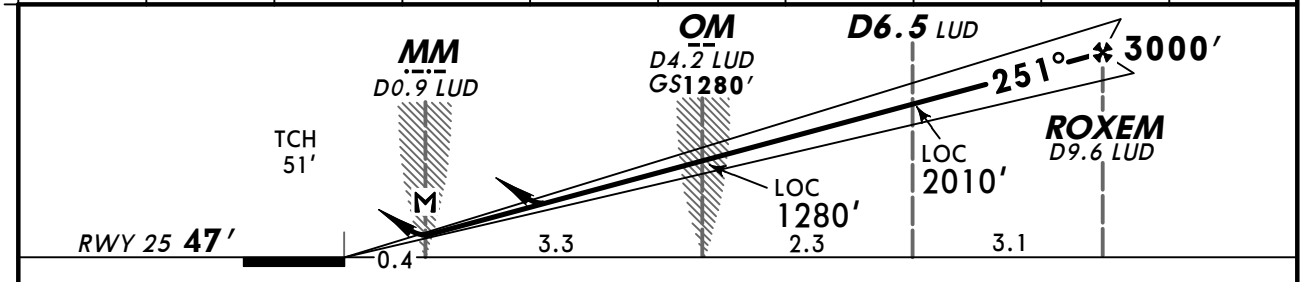
Alt Set: hPa (IN on req) Rwy Elev: 2 hPa Trans level: By ATC Trans alt: 5000'
1. LOC: **DME required.** 2. WARNING: Windshears possible on short final rwy 25 in case of northwesterly wind directions.

1800' ❶
MSA
LYE Lctr

❶ Within 15 NM only



LOC (GS out)									
	LUD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	580'	900'	1220'	1540'	1850'	2170'	2490'	2810'



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	377	484	538	646	753	861
MAP at MM/D0.9 LUD						

HIALS
REIL
PAPI

D3.5 LUD

Standard STRAIGHT-IN LANDING RWY 25

ILS
DA(H) A: **269'** (222') C: **289'** (242')
B: **279'** (232') D: **298'** (251')

LOC (GS out)
DA(H) **490'** (443')

	FULL/Limited	ALS out		ALS out
A	RVR 800m	RVR 1200m	RVR 1500m	
B				
C		RVR 1300m	RVR 1700m	CMV 2100m
D				

PANS OPS 4

CHANGES: Minimums.

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*ATIS	BREMEN Radar	*LUBECK Tower (within 25 NM up to 4000')	*LUBECK Info (outside TWR hr)	*Ground
119.92	136.67	128.7	128.7	121.77

BRIEFING STRIP™

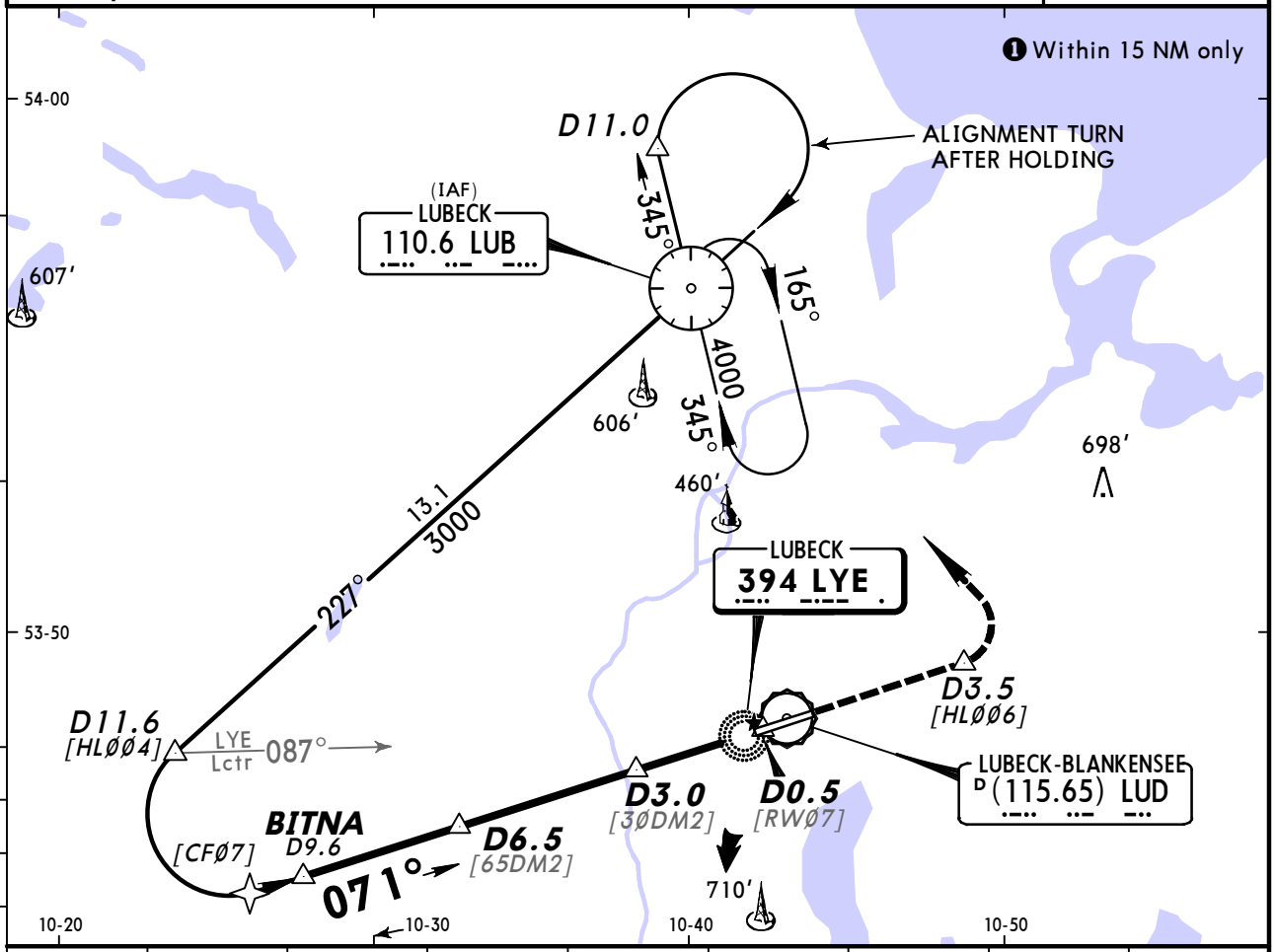
Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 53'
LYE 394	071°	BITNA 3000' (2947')	600' (547')	RWY 53'

MISSED APCH: Climb STRAIGHT AHEAD to D3.5, then turn LEFT to VOR climbing to 4000'.

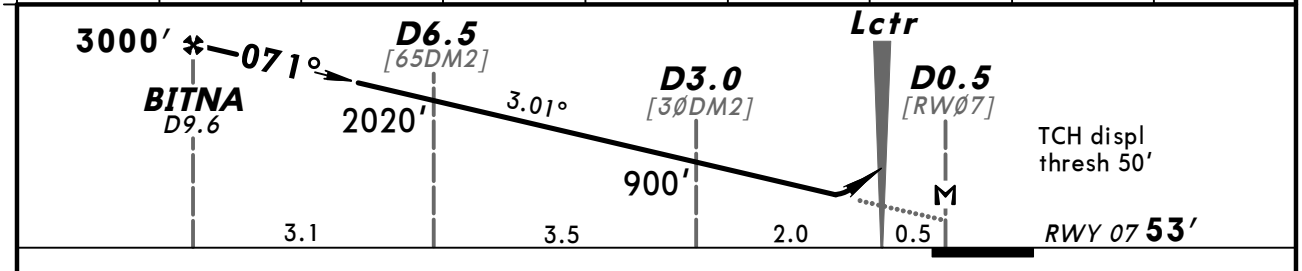
Alt Set: hPa (IN on req) Rwy Elev: 2 hPa Trans level: By ATC Trans alt: 5000'
DME required.

1800'❶
MSA
LYE Lctr

❶ Within 15 NM only



LUD DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2810'	2500'	2180'	1860'	1540'	1220'	900'	590'



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.01°	373	479	532	639	745	852
MAP at D0.5							

HIALS
REIL
PAPI

D3.5

Standard STRAIGHT-IN LANDING RWY **07**

DA(H) **600'** (547')

	ALS out
A B	RVR *1500m*
C D	RVR *1800m* / CMV *2400m*

PANS OPS 4

CHANGES: Minimums.

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BRIEFING STRIP™

*ATIS	BREMEN Radar	*LUBECK Tower (within 25 NM up to 4000')	*LUBECK Info (outside TWR hr)	*Ground
119.92	136.67	128.7	128.7	121.77

Lctr	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 53'
LYE		ROXEM		
394	251°	3000' (2953')	590' (543')	RWY 47'

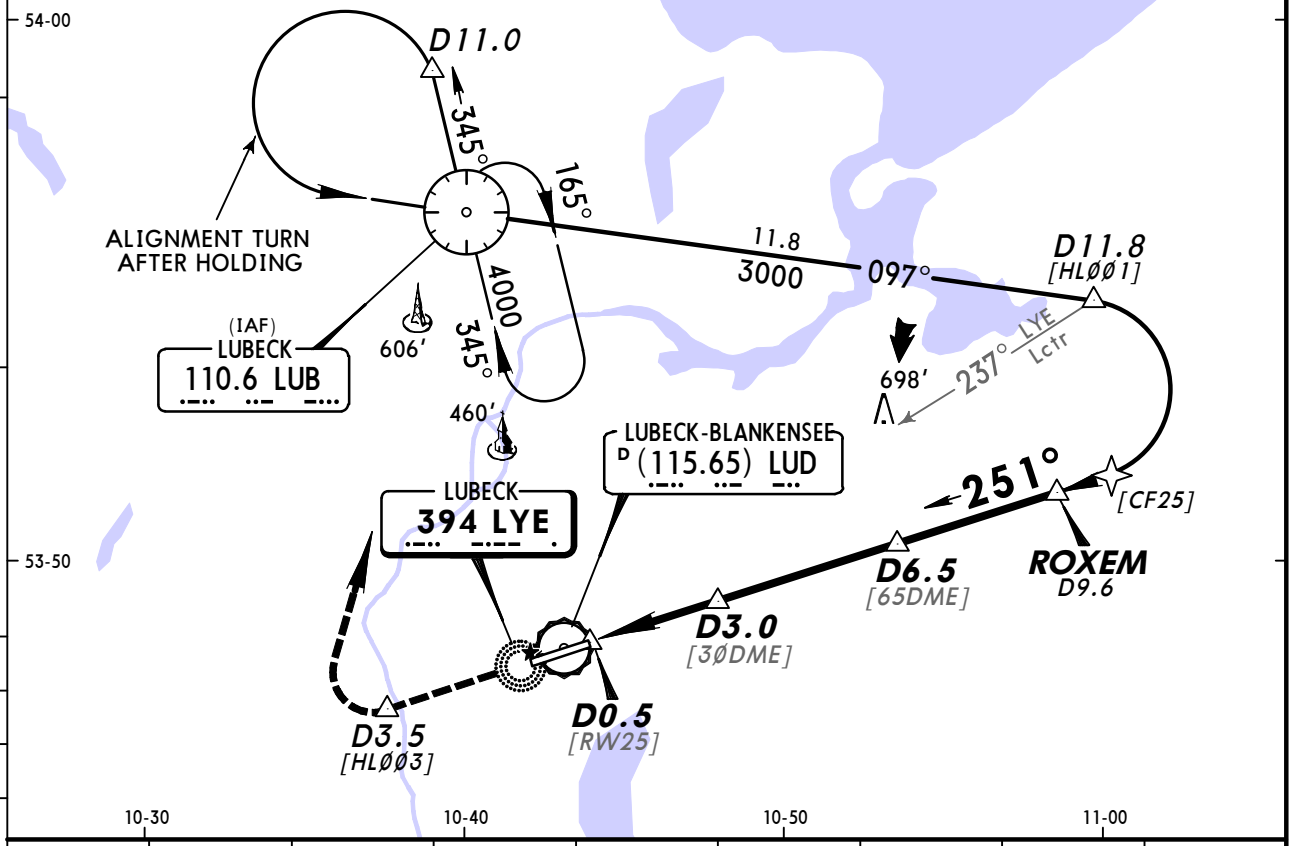
MISSED APCH: Climb STRAIGHT AHEAD to D3.5, then turn RIGHT to VOR climbing to 4000'.

Alt Set: hPa (IN on req) Rwy Elev: 2 hPa Trans level: By ATC Trans alt: 5000'

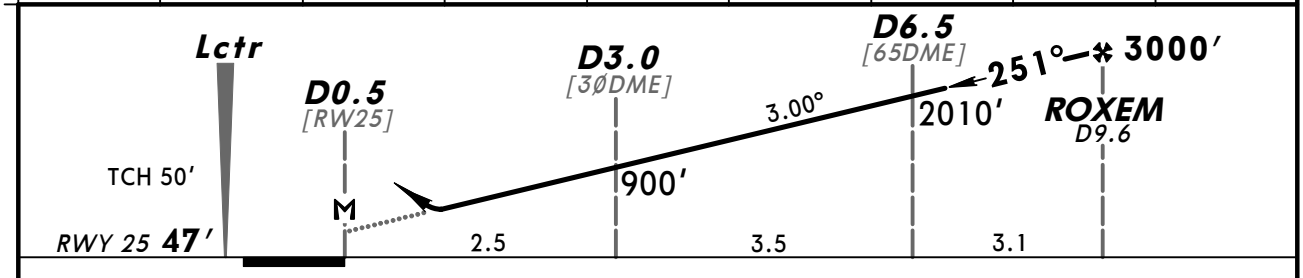
1. **DME required.** 2. WARNING: Windshears possible on short final rwy 25 in case of northwesterly wind directions.

1800' ❶
MSA
LYE Lctr

❶ Within 15 NM only



LUD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	580'	900'	1220'	1530'	1850'	2170'	2490'	2810'



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
MAP at D0.5							

HIALS
REIL
PAPI

D3.5

Standard STRAIGHT-IN LANDING RWY **25**

DA(H) **590'** (543')

		ALS out
A	RVR 1500m	
B		
C	CMV 2100m	CMV 2400m
D		

PANS OPS 4

CHANGES: Minimums.

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General Information

Location: Memmingen Deu
IATA Code: FMM
Lat/Long: N47° 59.3' E010° 14.4'
Elevation: 2078 ft

Airport Use: Public
Magnetic Variation: 2.0°E

Fuel Types: 100 Octane (LL), Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: No
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0605 Z
Sunset: 1659 Z,

Runway Information

Runway: 06
Length x Width: 7877 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 2078 ft
Lighting: Edge, ALS
Stopway: 905 ft

Runway: 24
Length x Width: 7877 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 2052 ft
Lighting: Edge, ALS
Stopway: 656 ft

Communication Information

ATIS 118.85
Memmingen Ground Tower 121.675
Memmingen Tower 126.85 At or below 3000 ft Out to 15 mi.

MUNICH Radar	Apt Elev	
129.45	2078′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. Rwy 24: EXPECT close-in obstacles.

LUPOL ONE GOLF (LUPOL 1G) *[LUPO1G]*
MILKA ONE ALFA (MILKA 1A) *[MILK1A]*
MILKA ONE BRAVO (MILKA 1B) *[MILK1B]*
RWYS 06, 24 RNAV DEPARTURES
RNAV (GPS)

8300′
MSA
ARP
applicable over German territory only

Initial climb clearance **FL70**

SID	RWY	ROUTING
LUPOL 1G	06	(2500′+) - JA062 (3000′+) - JA068 (K220-) - LUPOL.
MILKA 1A	24	(2500′+) - JA243 - ROREM - MILKA.
MILKA 1B	06	(2500′+) - JA062 - JA069 - JA243 - ROREM - MILKA.

JAØ68
N48 05.9 E010 20.6
MAX **220 KT**
BANK **20°**

JAØ62
N48 02.0 E010 21.0
LUPOL 1G
At or above **3000′**

JAØ69
N47 57.9 E010 23.3

JA243
N47 55.4 E010 04.6

LUPOL
N48 13.1 E009 54.7

ROREM
N47 53.5 E009 50.5

MILKA
N47 50.3
E009 37.5

297°
18.8
LUPOL 1G
4.5
057°
237°
7.0
MILKA 1A
257°
12.8
MILKA 1B
9.7
248°
9.3
6000

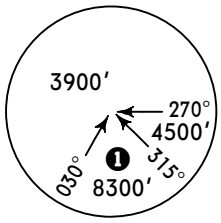
N
NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below
FL100 or as by ATC.
Not applicable within airspace C.

CHANGES: New procedures at this airport (SIDs transferred).

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MUNICH Radar	Apt Elev	
129.45	2078′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. Rwy 24: EXPECT close-in obstacles.

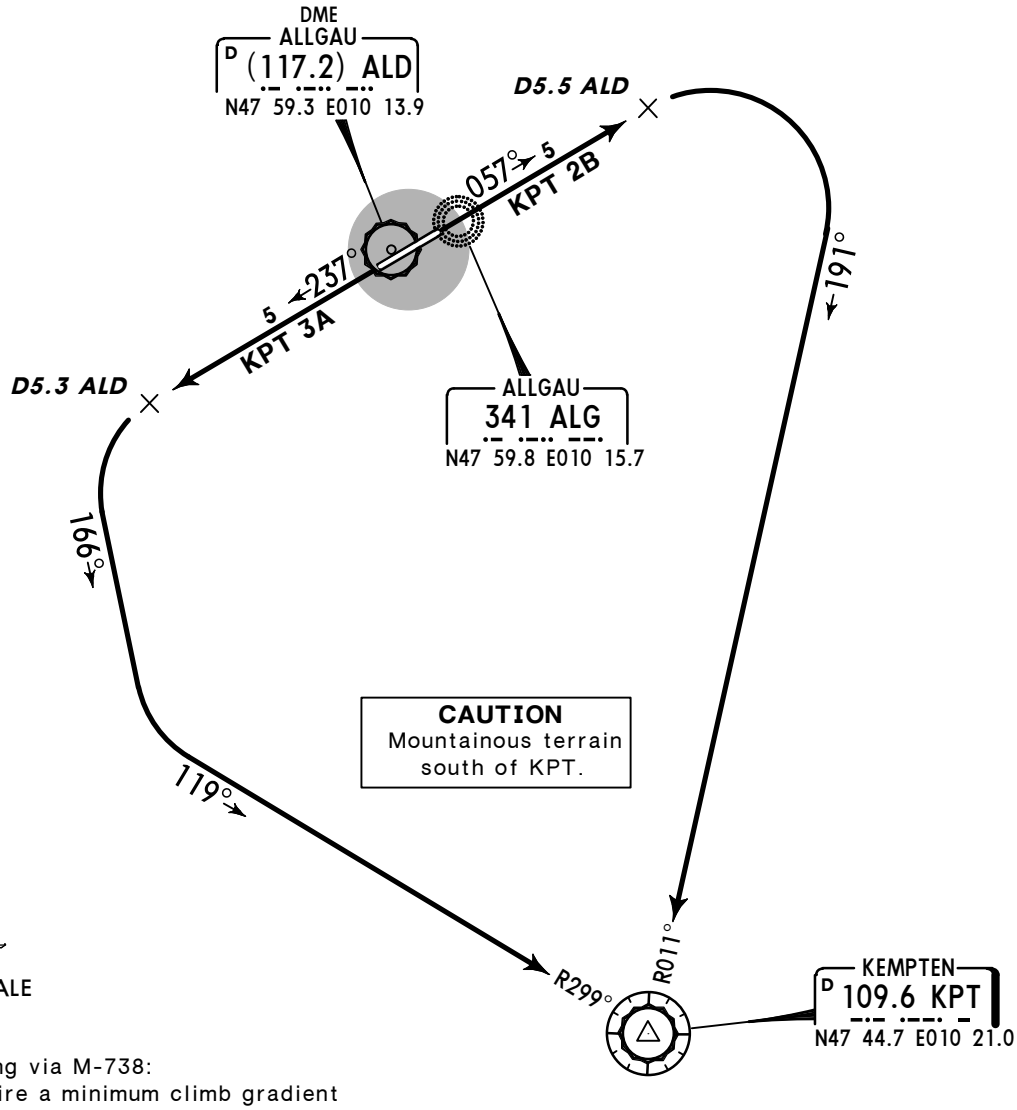


MSA
ALG NDB
1 4900′
within 15 NM
applicable over
German territory only

KEMPTEN THREE ALFA (KPT 3A)
KEMPTEN TWO BRAVO (KPT 2B)
RWYS 24, 06 DEPARTURES

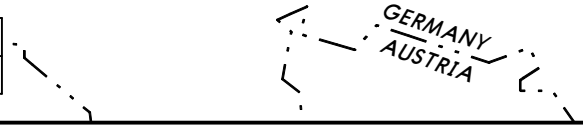
NOT TO BE USED DURING ACTIVITY OF NIGHT LOW FLYING SYSTEM
EXPECT RE-ROUTING BY ATC

SPEED RESTRICTION
MAX 250 KT below
FL100 or as by ATC.
Not applicable within airspace C.



Flights continuing via M-738:
these SIDs require a minimum climb gradient of
298′ per NM (4.9%) until reaching KPT.

Gnd speed-KT	75	100	150	200	250	300
298′ per NM	372	496	744	992	1241	1489



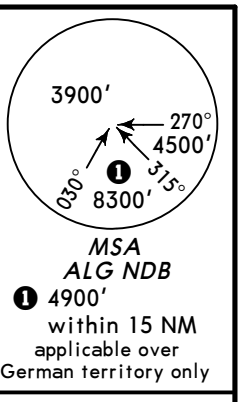
Initial climb clearance **FL70**

SID	RWY	ROUTING
KPT 3A	**24**	On 237° bearing from ALG to D5.3 ALD, turn LEFT, 166° track, intercept KPT R-299 inbound to KPT.
KPT 2B	**06**	On 057° bearing via ALG to D5.5 ALD, turn RIGHT, intercept KPT R-011 inbound to KPT.

CHANGES: SIDs renumbered, revised & transferred; chart reindexed.

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MUNICH Radar	Apt Elev	Trans level: By ATC Trans alt: 5000′
129.45	2078′	1. Contact MUNICH Radar immediately after take-off. 2. Rwy 24: EXPECT close-in obstacles.



MSA
ALG NDB
❶ 4900′
within 15 NM
applicable over
German territory only

LUPOL FOUR ALFA (LUPOL 4A)
LUPOL THREE BRAVO (LUPOL 3B)
RWYS 24, 06 DEPARTURES

LUPOL
N48 13.1
E009 54.7

D33 326°
11.8
12
D6.2 ALD
At or above
FL70

NORGU
N48 01.6 E009 58.5
At or above
FL70

2.9
346°
1.1
JA245
N47 58.8
E009 59.4
D19.1 KPT
N47 57.7
E010 00.2

1
311°
❷
057°
5
LUPOL 3B
D5.5 ALD
237°
5
LUPOL 4A
D5.3 ALD
312°

N
NOT TO SCALE

ALLGAU
341 ALG
N47 59.8 E010 15.7

DME
ALLGAU
D (117.2) ALD
N47 59.3 E010 13.9

KEMPTEN
D 109.6 KPT
N47 44.7 E010 21.0

❷ Usable only up to 15 NM from ALG.

SPEED RESTRICTION
MAX 250 KT below
FL100 or as by ATC.
Not applicable within airspace C.

LUPOL 4A
This SID requires a minimum climb gradient of
352′ per NM (5.8%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
352′ per NM	441	587	881	1175	1468	1762

GERMANY
AUSTRIA

Initial climb clearance **FL70**

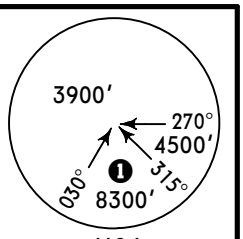
SID	RWY	ROUTING
LUPOL 4A	**24**	On 237° bearing from ALG to D5.3 ALD, turn RIGHT, intercept KPT R-312 to D19.1 KPT ❸, turn RIGHT, 346° track via NORGU to LUPOL.
LUPOL 3B	**06**	On 057° bearing via ALG to D5.5 ALD, turn RIGHT to ALG, turn RIGHT, 311° bearing to LUPOL.

❸ After D19.1 KPT BRNAV equipment necessary. If unable to comply request alternate routing by ATC.

CHANGES: SIDs renumbered, revised & transferred; chart reindexed.

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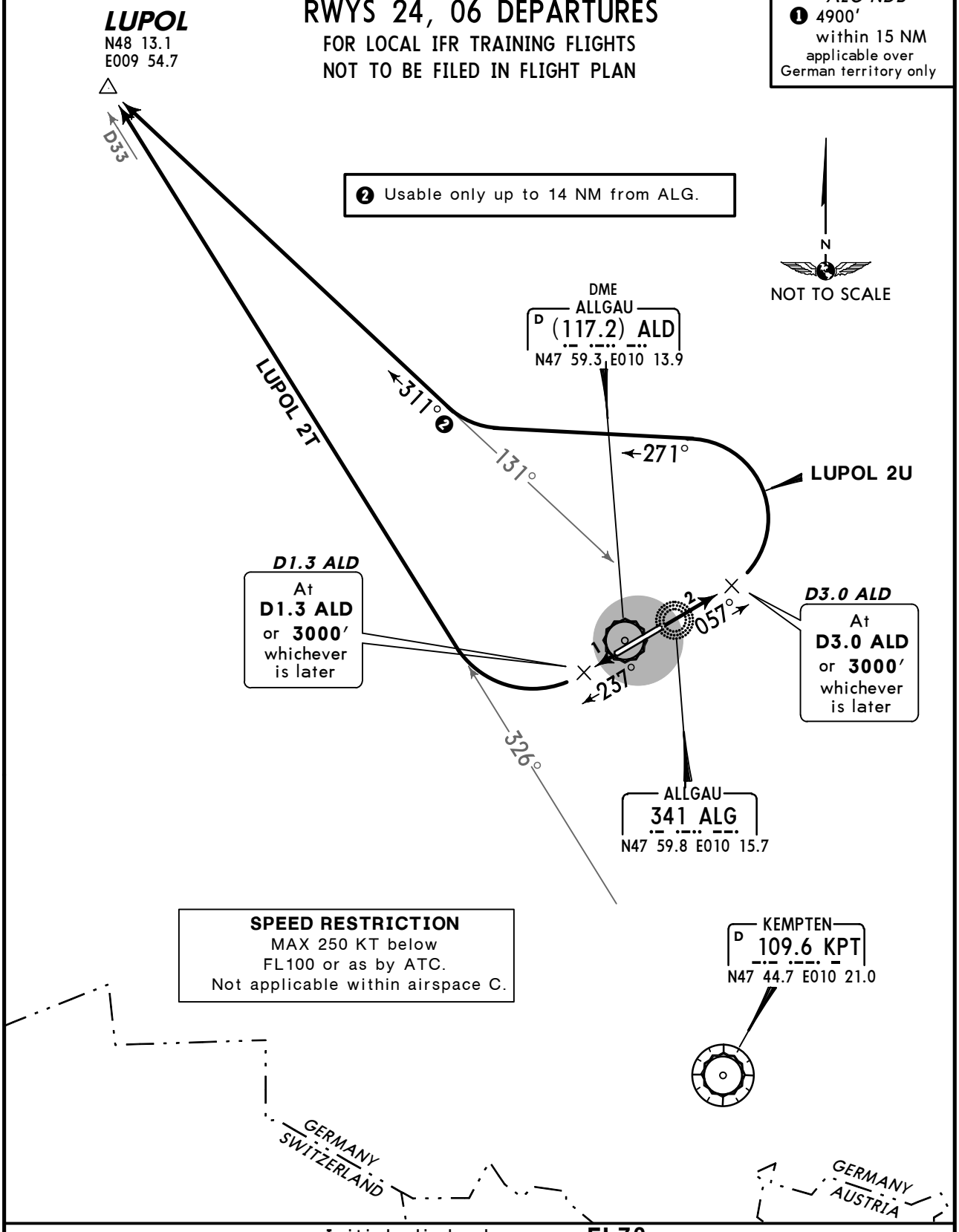
MUNICH Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
129.45	2078′	1. Contact MUNICH Radar immediately after take-off. 2. Rwy 24: EXPECT close-in obstacles.



MSA
ALG NDB
❶ 4900′
within 15 NM
applicable over
German territory only

LUPOL TWO TANGO (LUPOL 2T)
LUPOL TWO UNIFORM (LUPOL 2U)
RWYS 24, 06 DEPARTURES

FOR LOCAL IFR TRAINING FLIGHTS
NOT TO BE FILED IN FLIGHT PLAN



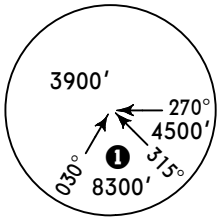
Initial climb clearance **FL70**

SID	RWY	ROUTING
LUPOL 2T	**24**	On 237° bearing from ALG to D1.3 ALD or 3000′, whichever is later, turn RIGHT, intercept KPT R-326 to LUPOL.
LUPOL 2U	**06**	On 057° bearing via ALG to D3.0 ALD or 3000′, whichever is later, turn LEFT, 271° track, intercept 311° bearing from ALG to LUPOL.

CHANGES: SIDs renumbered, revised & transferred; chart reindexed.

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MUNICH Radar	Apt Elev	
129.45	2078′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. Rwy 24: EXPECT close-in obstacles.

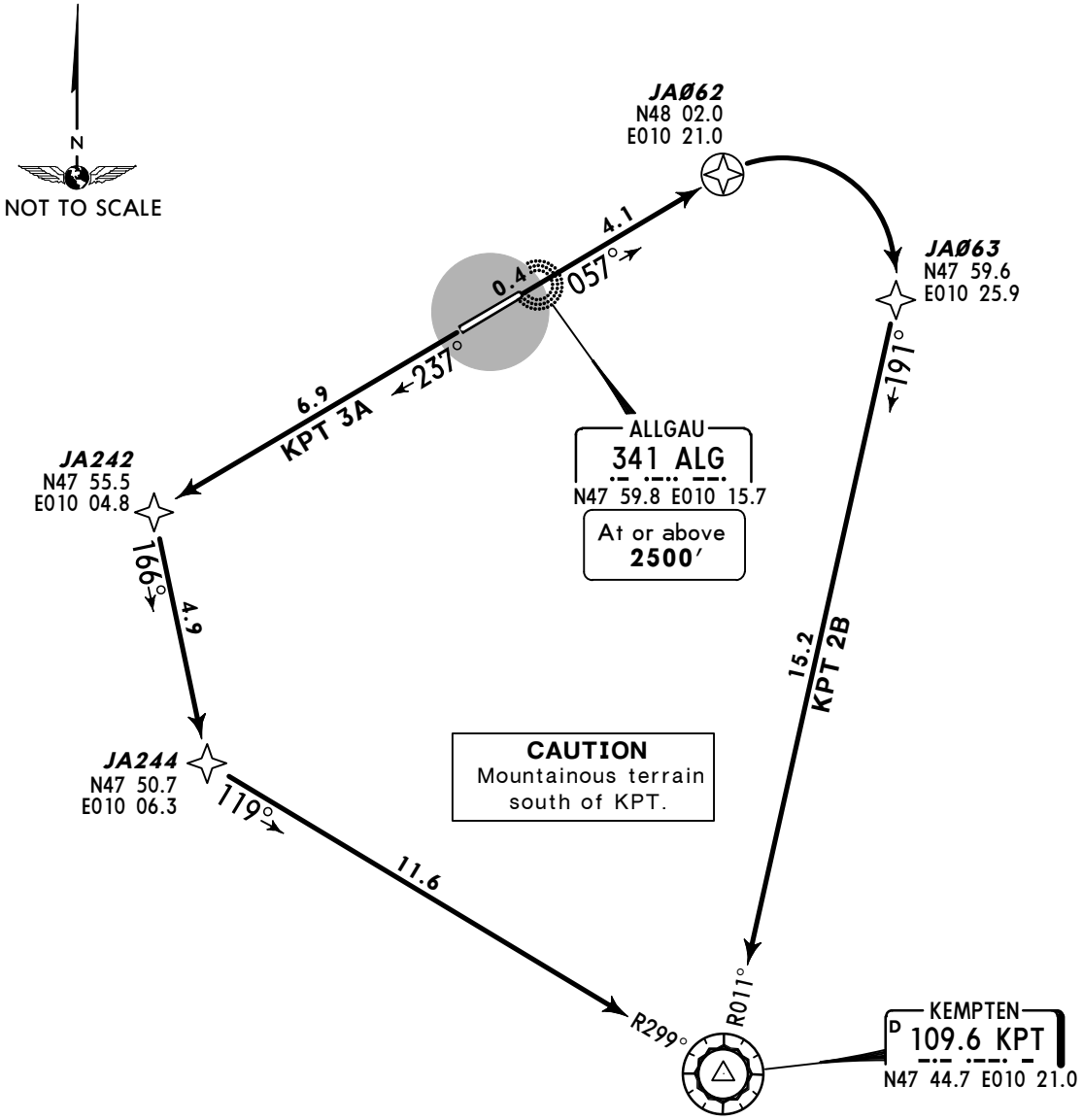


MSA
ALG NDB
❶ 4900′
within 15 NM
applicable over
German territory only

KEMPTEN THREE ALFA (KPT 3A)
KEMPTEN TWO BRAVO (KPT 2B)
RWYS 24, 06 RNAV DEPARTURES (OVERLAY 10-3B)

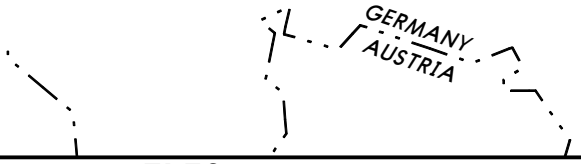
NOT TO BE USED DURING ACTIVITY OF NIGHT LOW FLYING SYSTEM
EXPECT RE-ROUTING BY ATC

SPEED RESTRICTION
MAX 250 KT below
FL100 or as by ATC.
Not applicable within airspace C.



Flights continuing via M-738:
these SIDs require a minimum climb gradient of
298′ per NM (4.9%) until reaching KPT.

Gnd speed-KT	75	100	150	200	250	300
298′ per NM	372	496	744	992	1241	1489



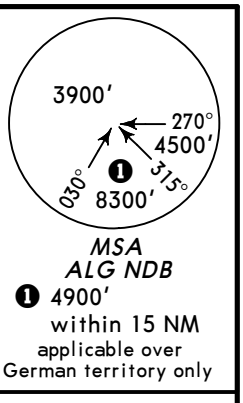
Initial climb clearance **FL70**

SID	RWY	ROUTING
KPT 3A	**24**	(2500′+) - JA242 - JA244 - KPT.
KPT 2B	**06**	ALG (2500′+) - JA062 - JA063 - KPT.

CHANGES: RNAV SIDs renumbered, revised & transferred; chart reindexed.

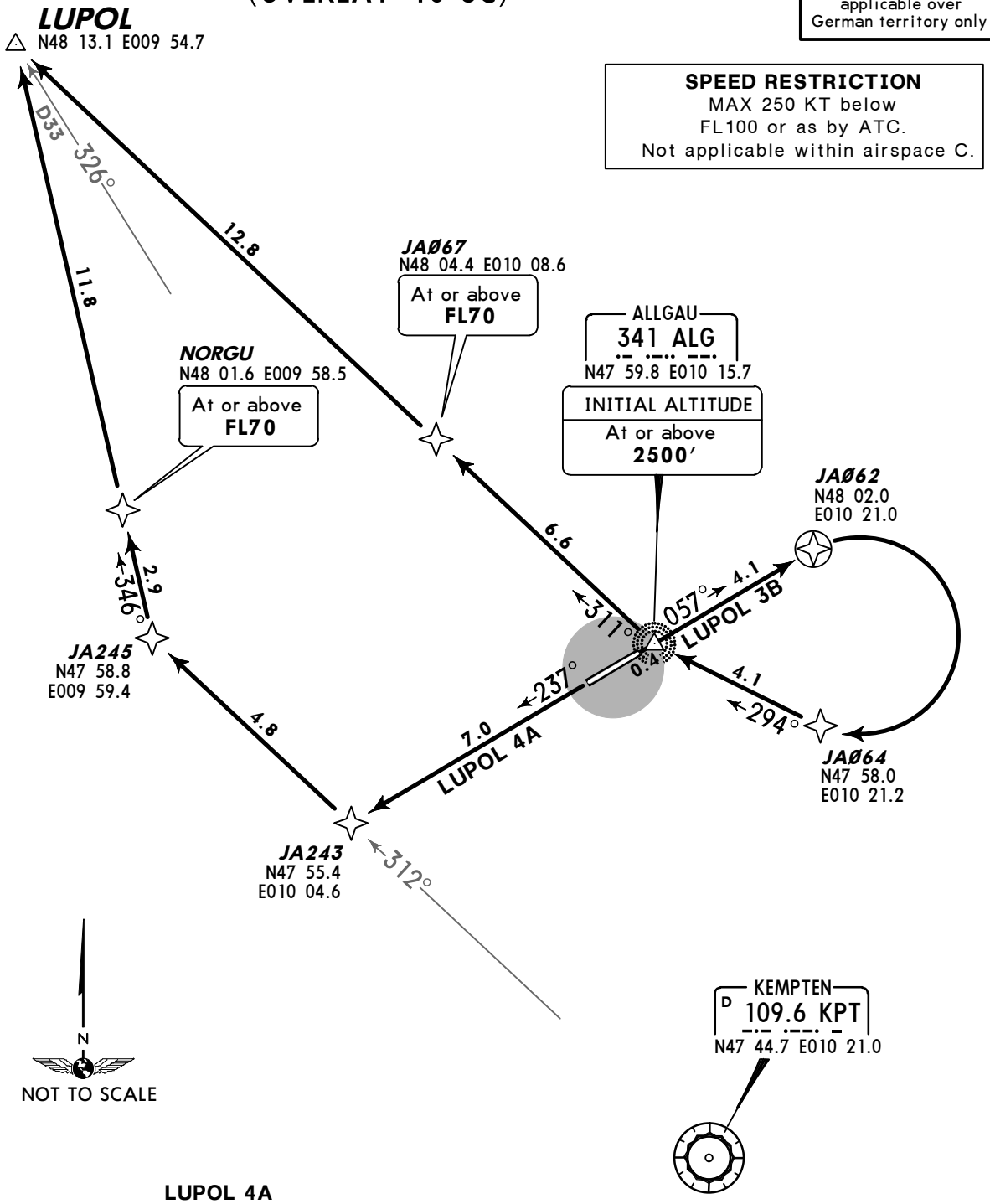
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MUNICH Radar 129.45	*Apt Elev* 2078′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. Rwy 24: EXPECT close-in obstacles.



MSA
ALG NDB
❶ 4900′
within 15 NM
applicable over
German territory only

LUPOL FOUR ALFA (LUPOL 4A) *[LUPO4A]*
LUPOL THREE BRAVO (LUPOL 3B) *[LUPO3B]*
RWYS 24, 06 RNAV DEPARTURES
(OVERLAY 10-3C)



LUPOL 4A

This SID requires a minimum climb gradient of
352′ per NM (5.8%) due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
352′ per NM	441	587	881	1175	1468	1762



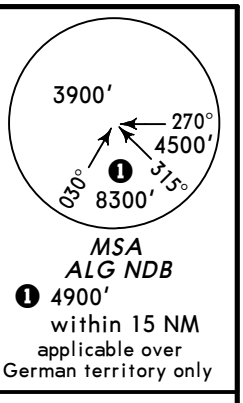
Initial climb clearance **FL70**

SID	RWY	ROUTING
LUPOL 4A	**24**	(2500′+) - JA243 - JA245 - NORGU (FL70+) - LUPOL.
LUPOL 3B	**06**	ALG (2500′+) - JA062 - JA064 - ALG - JA067 (FL70+) - LUPOL.

CHANGES: New chart (RNAV SIDs renumbered, revised & transferred).

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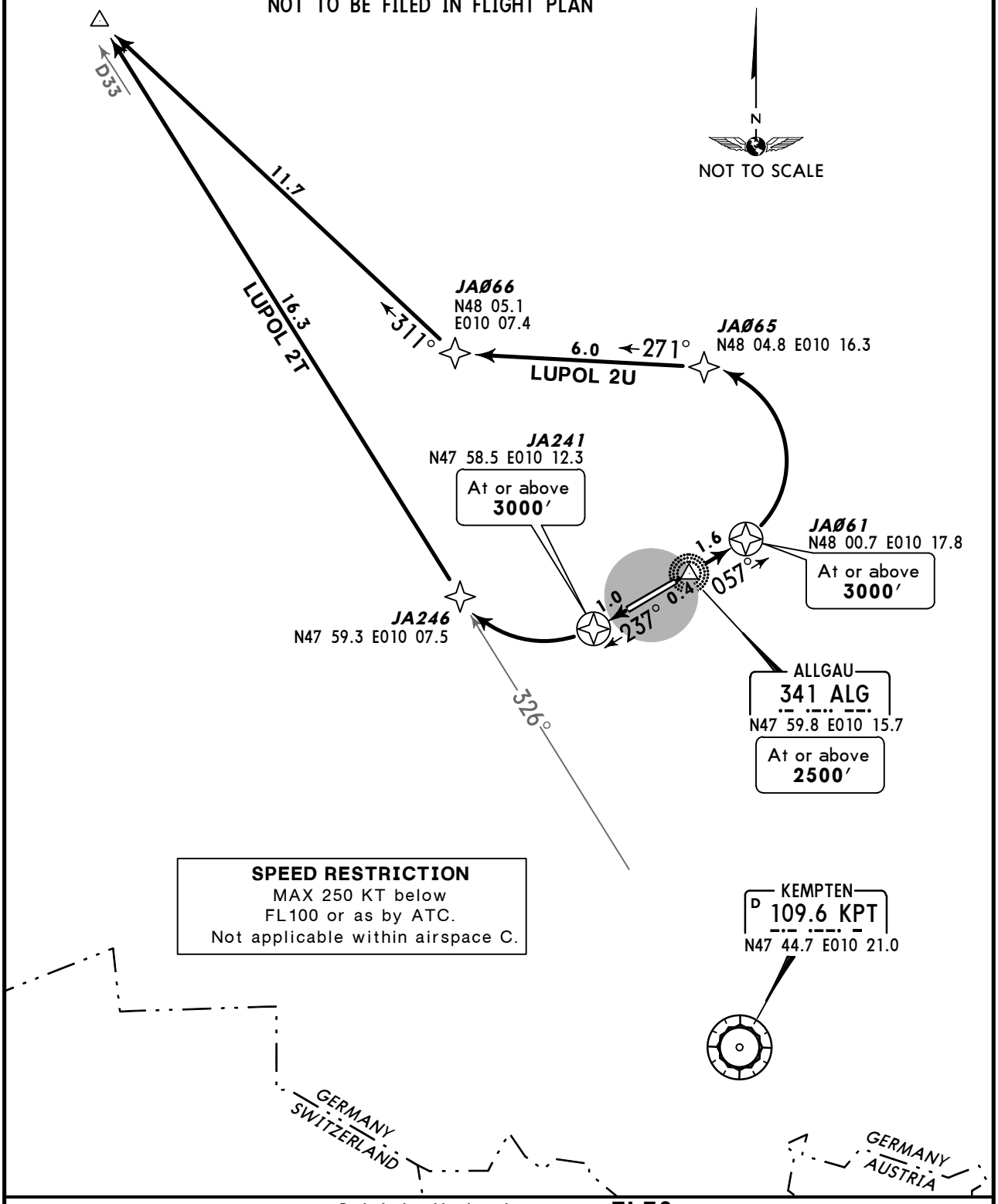
MUNICH Radar 129.45	*Apt Elev* 2078′	Trans level: By ATC Trans alt: 5000′ 1. Contact MUNICH Radar immediately after take-off. 2. Rwy 24: EXPECT close-in obstacles.



MSA
ALG NDB
❶ 4900′
within 15 NM
applicable over
German territory only

LUPOL TWO TANGO (LUPOL 2T) *[LUPO2T]*
LUPOL TWO UNIFORM (LUPOL 2U) *[LUPO2U]*
RWYS 24, 06 RNAV DEPARTURES
(OVERLAY 10-3D)

FOR LOCAL IFR TRAINING FLIGHTS
NOT TO BE FILED IN FLIGHT PLAN



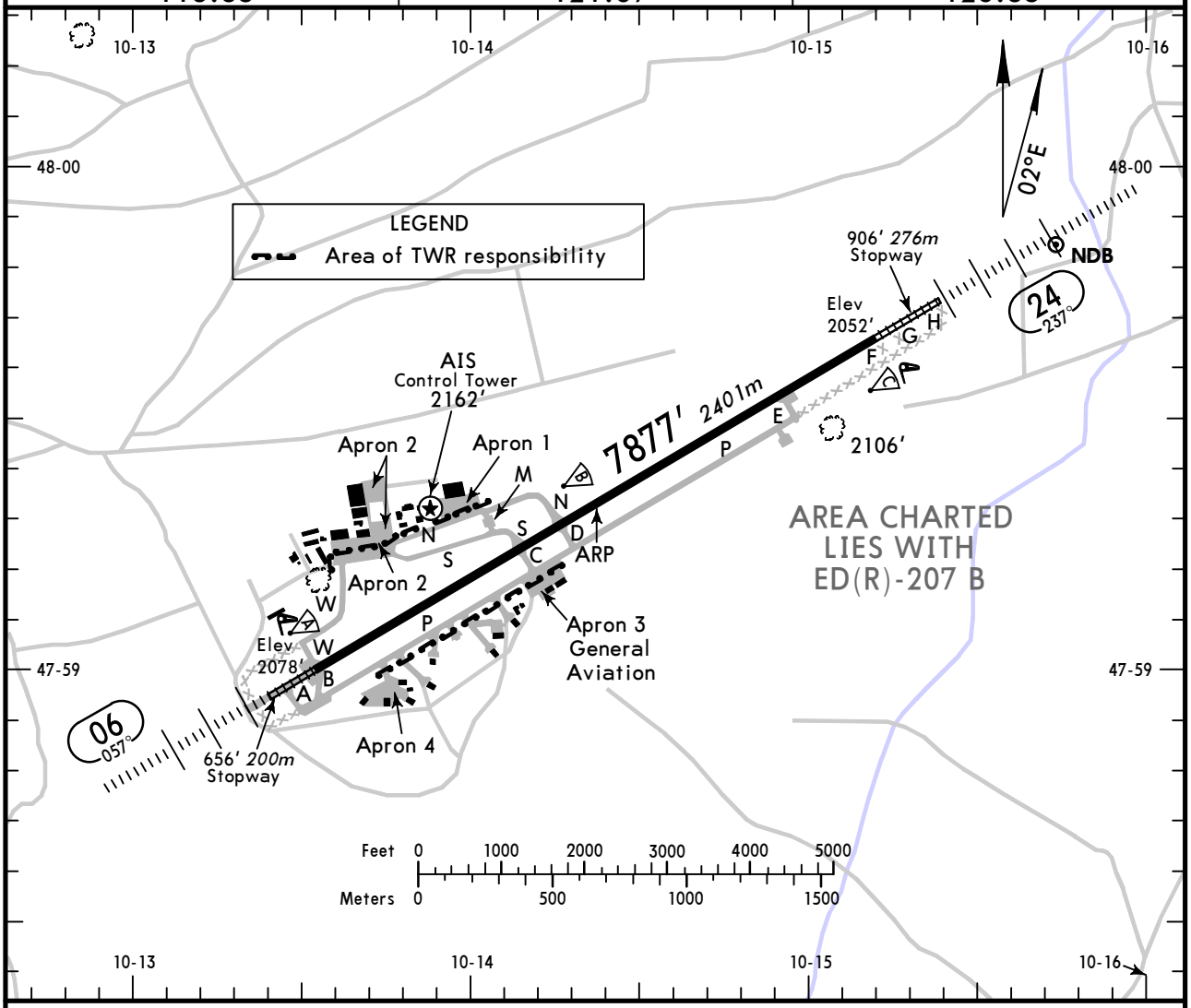
Initial climb clearance **FL70**

SID	RWY	ROUTING
LUPOL 2T	**24**	(2500′+) - JA241 (3000′+) - JA246 - LUPOL.
LUPOL 2U	**06**	ALG (2500′+) - JA061 (3000′+) - JA065 - JA066 - LUPOL.

CHANGES: New chart (RNAV SIDs renumbered, revised & transferred).

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*ATIS	*MEMMINGEN Ground	*Tower Within 25 NM up to 4000′ AAL
118.85	121.67	126.85



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
06 24	HIRL *(60m)* HIALS PAPI-L (angle 3.0°) RVR		6905′ *2105m*	❶	98′ *30m*

❶ TAKE-OFF RUN AVAILABLE

RWY 06:

From rwy head	7877′ (2401m)
twy C int	5003′ (1525m)
twy S int	5003′ (1525m)
twy N int	4429′ (1350m)
twy D int	4413′ (1345m)

RWY 24:

From rwy head	7877′ (2401m)
twy E int	6644′ (2025m)
twy N int	3510′ (1070m)
twy D int	3494′ (1065m)
twy C int	2904′ (885m)
twy S int	2904′ (885m)

Standard TAKE-OFF **1**

	LVP must be in force RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

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

CHANGES: Variation. Rwy bearings. Usable lengths.

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MEMMINGEN, GERMANY

MEMMINGEN

STRAIGHT-IN RWY		A	B	C	D
06	RNAV (GPS)	**2380**′(302′)	**2380**′(302′)	**2380**′(302′)	**2390**′(312′)
	LNAV/VNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (GPS)	**2530**′(452′)	**2530**′(452′)	**2530**′(452′)	**2530**′(452′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**2640**′(562′)	**2640**′(562′)	**2640**′(562′)	**2640**′(562′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
24	ILS	**2252**′(200′)	**2252**′(200′)	**2252**′(200′)	**2252**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**2500**′(448′)	**2500**′(448′)	**2500**′(448′)	**2500**′(448′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (GPS)	**2500**′(448′)	**2500**′(448′)	**2500**′(448′)	**2500**′(448′)
	LNAV/VNAV	**R900m**	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (GPS)	**2520**′(468′)	**2520**′(468′)	**2520**′(468′)	**2520**′(468′)
	LNAV	**R1000m**	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**2630**′(578′)	**2630**′(578′)	**2630**′(578′)	**2630**′(578′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

CIRCLE-TO-LAND	100 KT	135 KT	180 KT	205 KT
Not authorized Northwest of airport	**2550**′(472′)❶❷	**2690**′(612′)	**2940**′(862′)	**2990**′(912′)
	V1500m	V1600m	V2400m	V3600m

❶ After NDB 06: 2640′ (562′).
❷ After NDB 24: 2630′ (552′).

TAKE-OFF RWY 06, 24

	LVP must be in force RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

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EDJA/FMM
MEMMINGEN

JEPPESEN 22 JUL 11 (11-1) Eff 28 Jul

MEMMINGEN, GERMANY
ILS or LOC Rwy 24

*ATIS	MUNCHEN Radar (APP)	*MEMMINGEN Tower	*Ground
118.85	129.45	126.85 Within 25 NM up to 4000' AAL	121.67

BRIEFING STRIP

LOC IAMW	Final Apch Crs	GS OGROB	ILS DA(H)	Apt Elev / RWY
110.1	237°	4000' (1948')	2252' (200')	2078' / 2052'

MISSED APCH: Climb on track 237° to D1.3 ALD or 3000', whichever is later, then turn RIGHT to intercept R-326 KPT to LUPOL climbing to FL70.

Alt Set: hPa (IN on req) Rwy Elev: 73 hPa Trans level: By ATC Trans alt: 5000'

3900' 270° 4500' 315° 030° 8300' ❶

MSA ALG NDB ❷

❶ Within 15 NM 4900'
❷ German territory only

DME required.

146° 326° (IAF) LUPOL D33.0 KPT MIM FL 70

326° 13.1 FL70 KPT VOR 131°

D5.8 ALD 6.2 5000

ILS DME 237° 110.1 IAMW

OGROB D6.1 IAMW 237° ❸ 4000

D2.7 IAMW 7.6 082° 5000 D8.9 ALD 4000 4.9 D17.9 KPT

326° D1.3 ALD

(IAF) ALLGAU 341 ALG D0.6 IAMW D13.0 KPT 016°

ALLGAU D (117.2) ALD

CAUTION: Mountainous terrain South of KPT VOR.

ED(R)-207 B

During activation of Night Low Flying System (NLFS) expect profile constraints and apch from North only.

2566' 09-50 10-00 2596' 3057' 13.0 5000 10-20 10-30 2998' 2884' 2563' 2504' 47-50 3265' 10-10

ALLGAU HOLDING

Alignment turn after holding 057° FL 70 237° ALG NDB 237° D3.0 ALD

(IAF) KEMPTEN 109.6 KPT 070° 7000 250° D3.0 KPT 250° Alignment turn after holding

NOT TO SCALE

LOC (GS out)	IAMW DME	2.0	3.0	4.0	5.0	6.0
	ALTITUDE	2690'	3010'	3320'	3640'	3960'

OGROB D6.1 IAMW

NDB D0.6 IAMW

D2.7 IAMW 237° 4000'

TCH 57' M LOC 2910' 3.4

RWY 24 2052' 0.4 2.1

Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	377	484	538	646	753	861
MAP at NDB/D0.6 IAMW						

HIALS PAPI 237°

D1.3 ALD whichever is later 3000'

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 24

	ILS DA(H) 2252' (200')			LOC (GS out) DA(H) 2500' (448')	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

CIRCLE-TO-LAND
Not authorized Northwest of airport

Max Kts	MDA(H)	VIS
100	2550' (472')	1500m
135	2690' (612')	1600m
180	2940' (862')	2400m
205	2990' (912')	3600m

CHANGES: Bearings. Arrival altitudes. Holding added.

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EDJA/FMM MEMMINGEN

JEPPESEN 22 JUL 11 (12-1) Eff 28 Jul

MEMMINGEN, GERMANY RNAV (GPS) Rwy 06

*ATIS	MUNCHEN Radar (APP)	*MEMMINGEN Tower	*Ground
118.85	129.45	126.85 Within 25 NM up to 4000' AAL	121.67

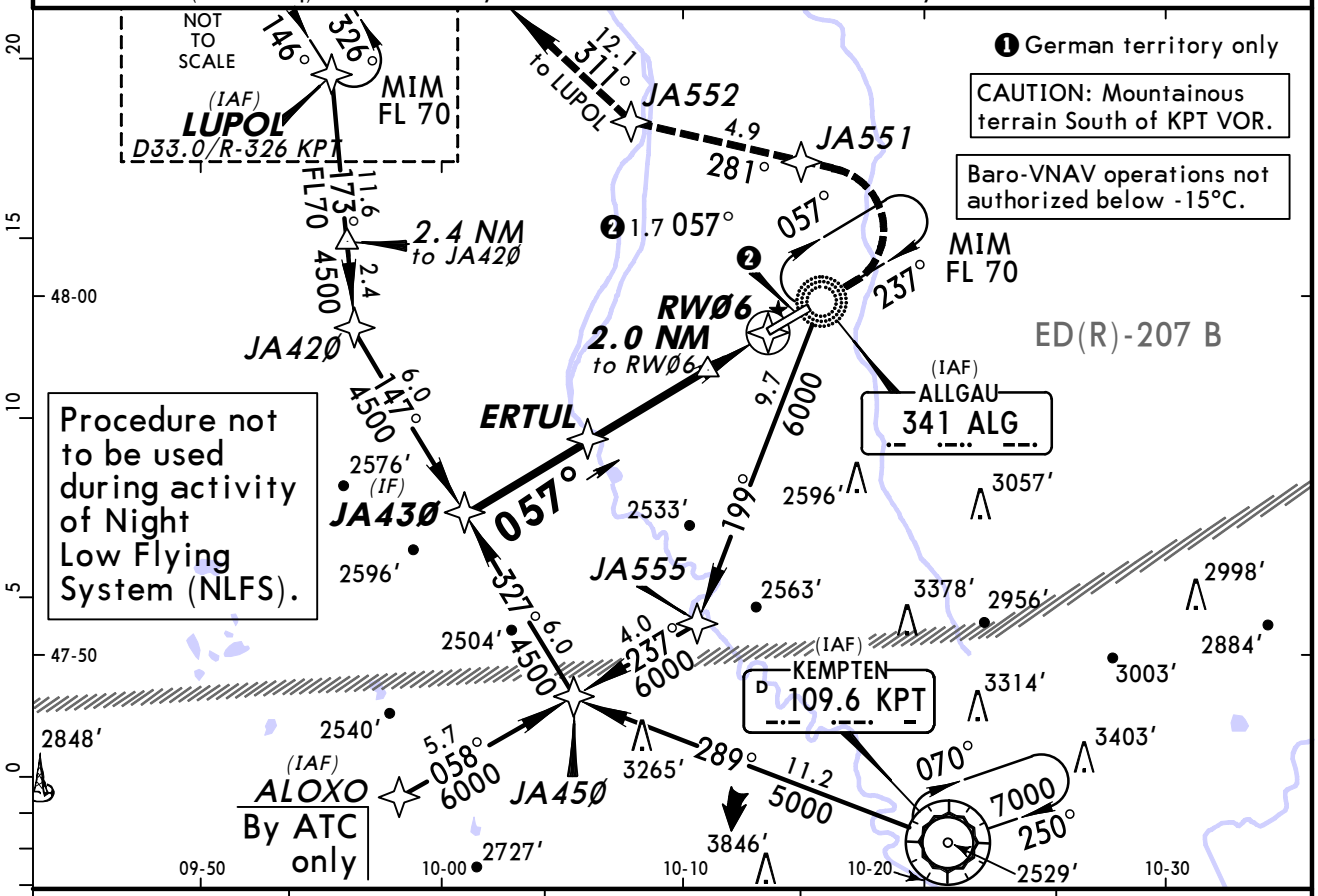
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	057°	ERTUL 4000' (1922')	Refer to Minimums	2078' / 2078'

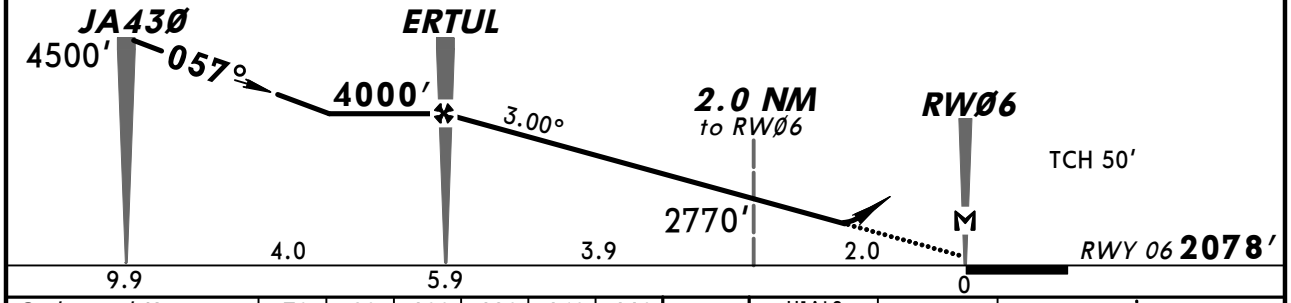
MISSED APCH RNAV: Climb on track 057° to NDB or 3000', whichever is later, turn LEFT via JA551 on track 281° to JA552. Then turn RIGHT on track 311° to LUPOL climbing to FL 70.
NON-RNAV: Climb on track 057° to NDB or 3000', whichever is later, turn LEFT to intercept track 311° to LUPOL climbing to FL 70.

8300'
MSA ARP❶

Alt Set: hPa (IN on req) | Rwy Elev: 74 hPa | Trans level: By ATC | Trans alt: 5000'



DIST to RWØ6	5.0	4.0	3.0	2.0
ALTITUDE	3730'	3410'	3090'	2770'



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at RWØ6						

HIALS | PAPI | 057° | ALG 341 wichever is later 3000'

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **06**

	LNAV/VNAV DA(H)		LNAV DA(H)	
	ABC: 2378' (300') D: 2388' (310')	ALS out	2530' (452')	ALS out
A	RVR 750m	RVR 1400m	RVR 1400m	RVR 1500m
B				
C				CMV 2100m
D				

CIRCLE-TO-LAND
Not authorized Northwest of airport

Max Kts	MDA(H)	VIS
100	2550' (472')	1500m
135	2690' (612')	1600m
180	2940' (862')	2400m
205	2990' (912')	3600m

CHANGES: Bearings. Arrivals. Holding added.

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EDJA/FMM
MEMMINGEN

JEPPESEN
22 JUL 11 (12-2) Eff 28 Jul

MEMMINGEN, GERMANY
RNAV (GPS) Rwy 24

*ATIS	MUNCHEN Radar (APP)	*MEMMINGEN Tower	*Ground
118.85	129.45	126.85 Within 25 NM up to 4000' AAL	121.67

BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	237°	OGROB 4000' (1948')	2502' (450')	2078' / RWY 2052'

MISSED APCH RNAV: Climb on track 237° to JA531 or 3000', whichever is later, turn RIGHT via JA532 on track 326° to LUPOL climbing to FL 70.
NON-RNAV: Climb on track 237° to D1.3 ALD or 3000', whichever is later, turn RIGHT to intercept R-326 KPT to LUPOL climbing to FL 70.

8300'
MSA ARP❶

Alt Set: hPa (IN on req) | Rwy Elev: 73 hPa | Trans level: By ATC | Trans alt: 5000'

During activation of Night Low Flying System (NLFS) expect profile constraints and apch from North only.

❶ German territory only

CAUTION: Mountainous terrain South of KPT VOR.

(IAF) LUPOL D33.0 KPT
146° 326° MIM FL 70
326° VOR KPT 13.3 FL70 128°
ED(R)-207 B
JA428
JA426 4.0 5000 6.0 4500 147°
6.6 057° 5000
JA424
(IAF) ALLGAU 341 ALG
(IF) JA438
237° OGROB
327° 6.0 4500
16.3 326°
❷ 2.2 237°
2.0 NM to RW24
RW24
8.2 105° 5000
4.0 5000
JA458
JA456
JA532
JA531 D1.3 ALD
D ALLGAU (117.2) ALD
6.6 057° 5000
3057'
JA454
2533'
❹ 058° 5.7 6000
057°
2563'
3378'
2956'
10.5 6000
2504'
ALOXO (IAF)❸
❹ JA450
3265'
❸By ATC only
350° 6.5 5000
3314'
KPT VOR

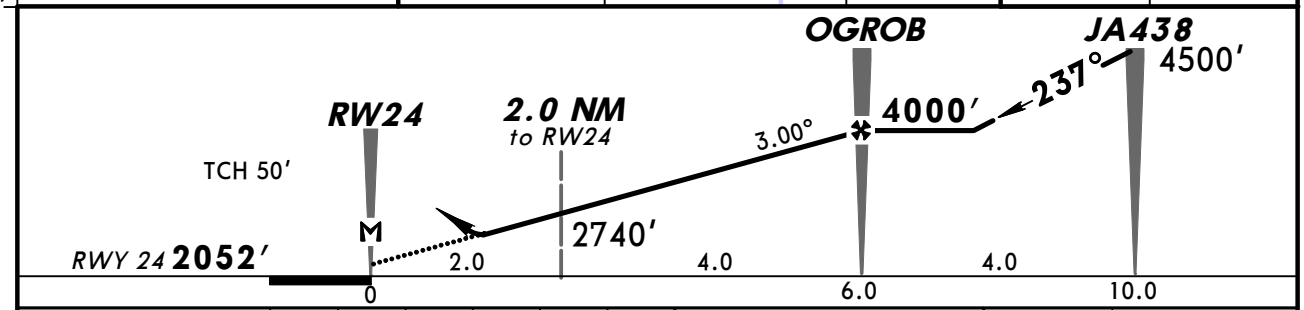
09-50 / 48-10 / 48-00 / 10-00 / 47-50 / 10-30 / 10-10

ALLGAU HOLDING
Alignment turn after holding
057° FL 70 237°
237° ALG NDB
D3.0ALD

D3.0 KPT
070° 7000 250°
250°
(IAF) D KEMPTEN 109.6 KPT
Alignment turn after holding

Baro-VNAV operations not authorized below -15°C.

RECOMMENDED ALTITUDES	
DIST to RW24	ALTITUDE
5.0	3700'
4.0	3380'
3.0	3060'
2.0	2740'



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
MAP at RW24							

HIALS
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 24

	LNAV/VNAV DA(H) 2502' (450')		LNAV DA(H) 2520' (468')	
		ALS out		ALS out
A	RVR 1400m	RVR 1500m	RVR 1500m	RVR 1500m
B				
C		CMV 2100m		CMV 2200m
D				

CIRCLE-TO-LAND
Not authorized Northwest of airport

Max Kts	MDA(H)	VIS
100	2550' (472')	1500m
135	2690' (612')	1600m
180	2940' (862')	2400m
205	2990' (912')	3600m

CHANGES: Bearings. Arrivals. Holding added.

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EDJA/FMM
MEMMINGEN

JEPPESEN
22 JUL 11 (16-1) Eff 28 Jul

MEMMINGEN, GERMANY
NDB Rwy 06

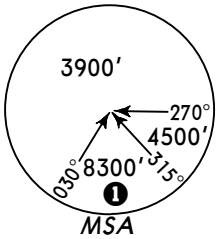
*ATIS	MUNCHEN Radar (APP)	*MEMMINGEN Tower	*Ground
118.85	129.45	126.85 Within 25 NM up to 4000' AAL	121.67

BRIEFING STRIP ™

NDB ALG	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
341	057°	ERTUL 4000' (1922')	2640' (562')	Apt Elev 2078' / RWY 2078'

MISSED APCH: Climb on track 057° to NDB or 3000', whichever is later, then turn LEFT to intercept track 311° from NDB to LUPOL climbing to FL 70.

Alt Set: hPa (IN on req) Rwy Elev: 74 hPa Trans level: By ATC Trans alt: 5000'
1. DME required. 2. CAUTION: Mountainous terrain South of KPT VOR.



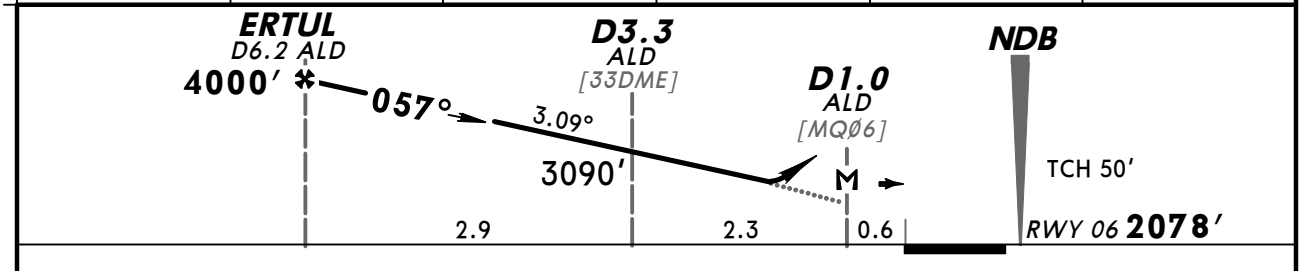
MSA
ALG NDB❷

❶ Within 15 NM 4900'
❷ German territory only

Procedure not to be used during activity of Night Low Flying System (NLFS).

(IAF) LUPOL D33.0 KPT
146° 326° FL 70
326° KPT VOR
13.1 FL70 131°
311°
D5.8 ALD
6.2 5000 057°
MIM FL 70
237°
(IAF) ALLGAU 341 ALG
D1.0 ALD [MQØ6]
D3.3 ALD [33DME]
ERTUL D6.2 ALD
ALLGAU D (117.2) ALD
218°
057°
9.6 5000
D8.4 ALD
D14.0 KPT
D12.2 KPT
12.2 5000 300°
070°
7000
250°
(IAF) KEMPTEN 109.6 KPT D
NOT TO SCALE
ED(R)-207 B
❸ 1.8 4000
❹ 4000
2566' 2576' 2596' 2533' 2596' 3057' 2563' 3378' 2956' 2998' 3003' 3403' 2504' 2487' 2540' 2530'
48-10 48-00 47-50
09-50 10-00 10-10 10-20 10-30
20 15 10 5 0 5

ALD DME	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3950'	3630'	3310'	2990'	2680'



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.09°	383	492	547	656	765	875
MAP at D1.0 ALD						

HIALS
PAPI
057°
ALG 341 wichever is later 3000'

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **06**

DA(H) **2640'** (562')

	ALS out
A	RVR 1500m
B	
C	RVR 1900m / CMV 2400m
D	

CIRCLE-TO-LAND
Not authorized
Northwest of airport

Max Kts	MDA(H)	VIS
100	2640' (562')	1500m
135	2690' (612')	1600m
180	2940' (862')	2400m
205	2990' (912')	3600m

CHANGES: Bearings. Arrival altitudes. Holding added.

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EDJA/FMM
MEMMINGEN

JEPPESEN
22 JUL 11 (16-2) Eff 28 Jul

MEMMINGEN, GERMANY
NDB Rwy 24

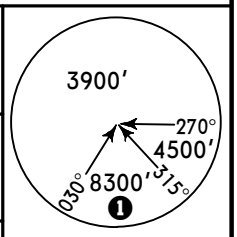
*ATIS	MUNCHEN Radar (APP)	*MEMMINGEN Tower	*Ground
118.85	129.45	126.85 Within 25 NM up to 4000' AAL	121.67

BRIEFING STRIP™

NDB ALG	Final Apch Crs	Minimum Alt OGROB	DA(H)	Apt Elev 2078'
341	237°	4000' (1948')	2630' (578')	RWY 2052'

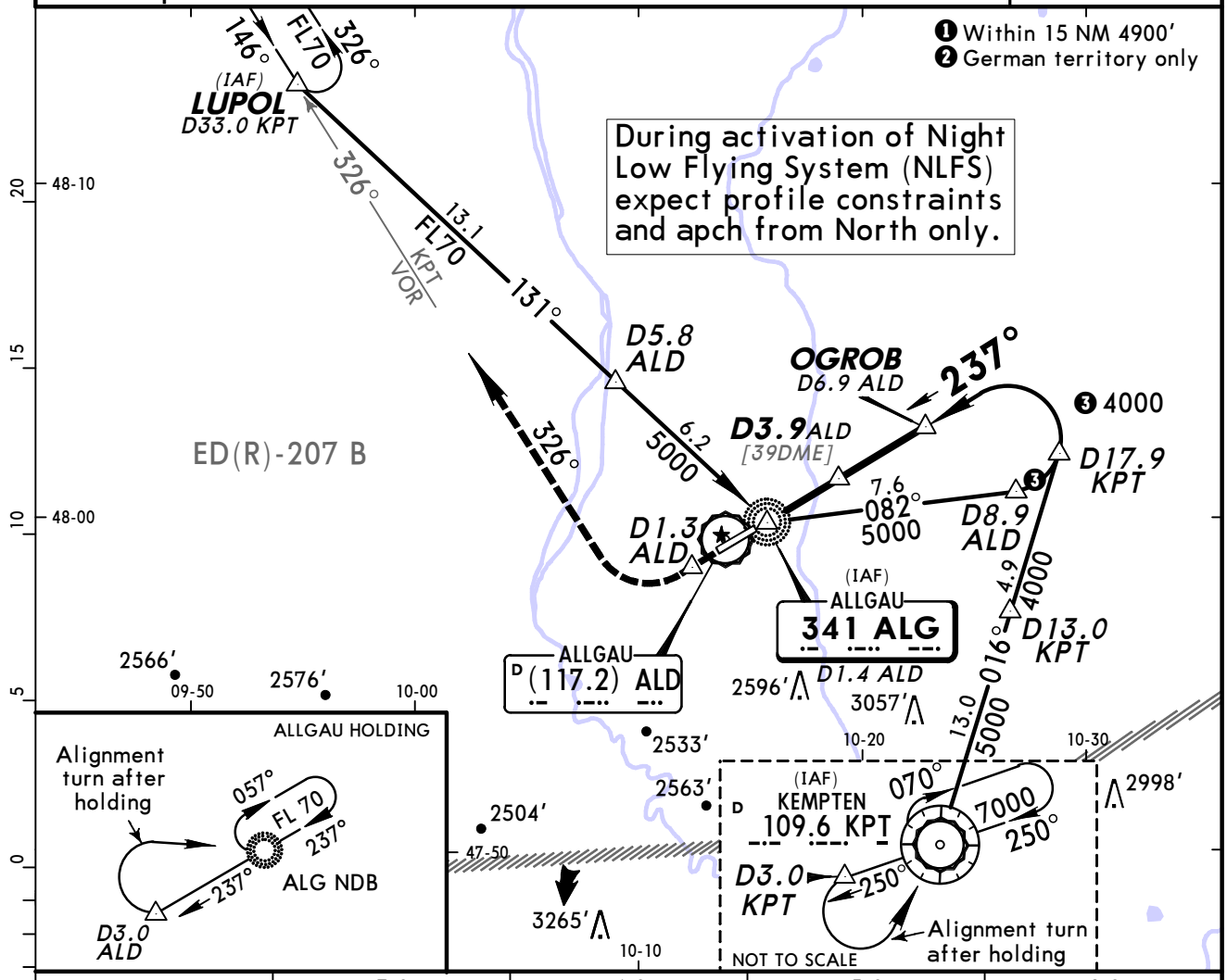
MISSED APCH: Climb on track 237° to D1.3 ALD or 3000', whichever is later, then turn RIGHT to intercept R-326 KPT to LUPOL climbing to FL70.

Alt Set: hPa (IN on req) Rwy Elev: 73 hPa Trans level: By ATC Trans alt: 5000'
1. DME required. 2. CAUTION: Mountainous terrain South of KPT VOR.

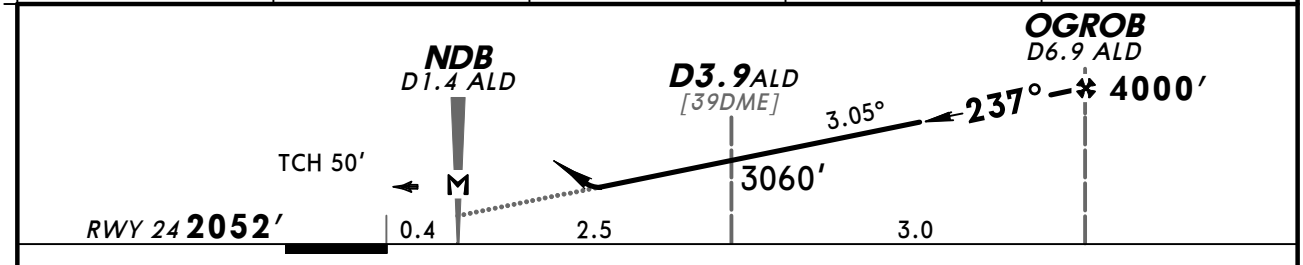


MSA ALG NDB❷

❶ Within 15 NM 4900'
❷ German territory only



ALD DME	3.0	4.0	5.0	6.0
ALTITUDE	2780'	3090'	3410'	3730'



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.05°	378	486	540	648	755	863
MAP at NDB/D1.4 ALD						

HIALS
PAPI
237°
D1.3 ALD whichever is later 3000'

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 24

DA(H) 2630' (578')

	ALS out
A	RVR 1500m
B	
C	RVR 1900m / CMV 2400m
D	

CIRCLE-TO-LAND
Not authorized
Northwest of airport

Max Kts	MDA(H)	VIS
100	2660' (582')	1500m
135	2690' (612')	1600m
180	2940' (862')	2400m
205	2990' (912')	3600m

CHANGES: Bearings. Arrival altitudes. Holding added.

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General Information

Location: Paderborn/Lippstadt Deu
IATA Code: PAD
Lat/Long: N51° 36.8' E008° 37.0'
Elevation: 699 ft

Airport Use: Public
Magnetic Variation: 1.5°E

Fuel Types: 100 Octane (LL), Mogas, Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0616 Z
Sunset: 1701 Z,

Runway Information

Runway: 06
Length x Width: 7152 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 699 ft
Lighting: Edge, ALS, Centerline, REIL

Runway: 24
Length x Width: 7152 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 674 ft
Lighting: Edge, ALS, Centerline, REIL

Communication Information

ATIS 125.725
Paderborn Tower 133.375 At or below 4000 ft Out to 25 mi.
Paderborn Ground Control 121.925

*ATIS	Apt Elev
125.72	699′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′

MSA PAD NDB
145° 2500′ 065° 4200′ 330° 3300′

EXOBA TWO HOTEL (EXOBA 2H) *[EXOB2H]*
PADBA THREE HOTEL (PADBA 3H) *[PADB3H]* ❶
PELUN TWO HOTEL (PELUN 2H) *[PELU2H]*
WARBURG FIVE HOTEL (WRB 5H)
RWYS 06, 24 ARRIVALS

(IAF Rwy 24)
WARBURG
D 113.7 WRB
N51 30.3 E009 06.7

(IAF)
PADERBORN-LIPPSTADT
354 PAD
N51 37.4 E008 38.4

DME
PADERBORN-LIPPSTADT
D (108.5) PAD
N51 36.6 E008 37.1

GERMINGHAUSEN
D 115.4 GMH
N51 10.2 E007 53.5

EXOBA
N51 46.0 E008 19.6

TULDO
N51 31.5 E008 19.8

PELUN
N51 12.1 E008 31.6

PADBA
N51 18.7 E007 40.7

291° 6 5000 WRB 5H
090°
125° 8 4000 EXOBA 2H
13 3000 D13.5 PAD
D6.9 PAD 7 3000
D10.1 PAD 11 3000
PELUN 2H 6000 15
008° D29 229°
084° D24
13.0 3000
036° D27
090° D12 315°
PADBA 3H ❶ 6000 27.6

N
NOT TO SCALE

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ B-RNAV equipment necessary.

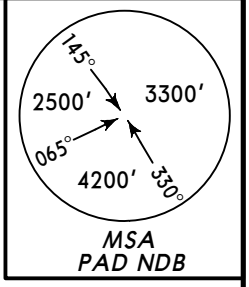
HOLDING OVER PAD
236° 3000 056°

CHANGES: STARs renumbered & revised; PAD DME relocated.

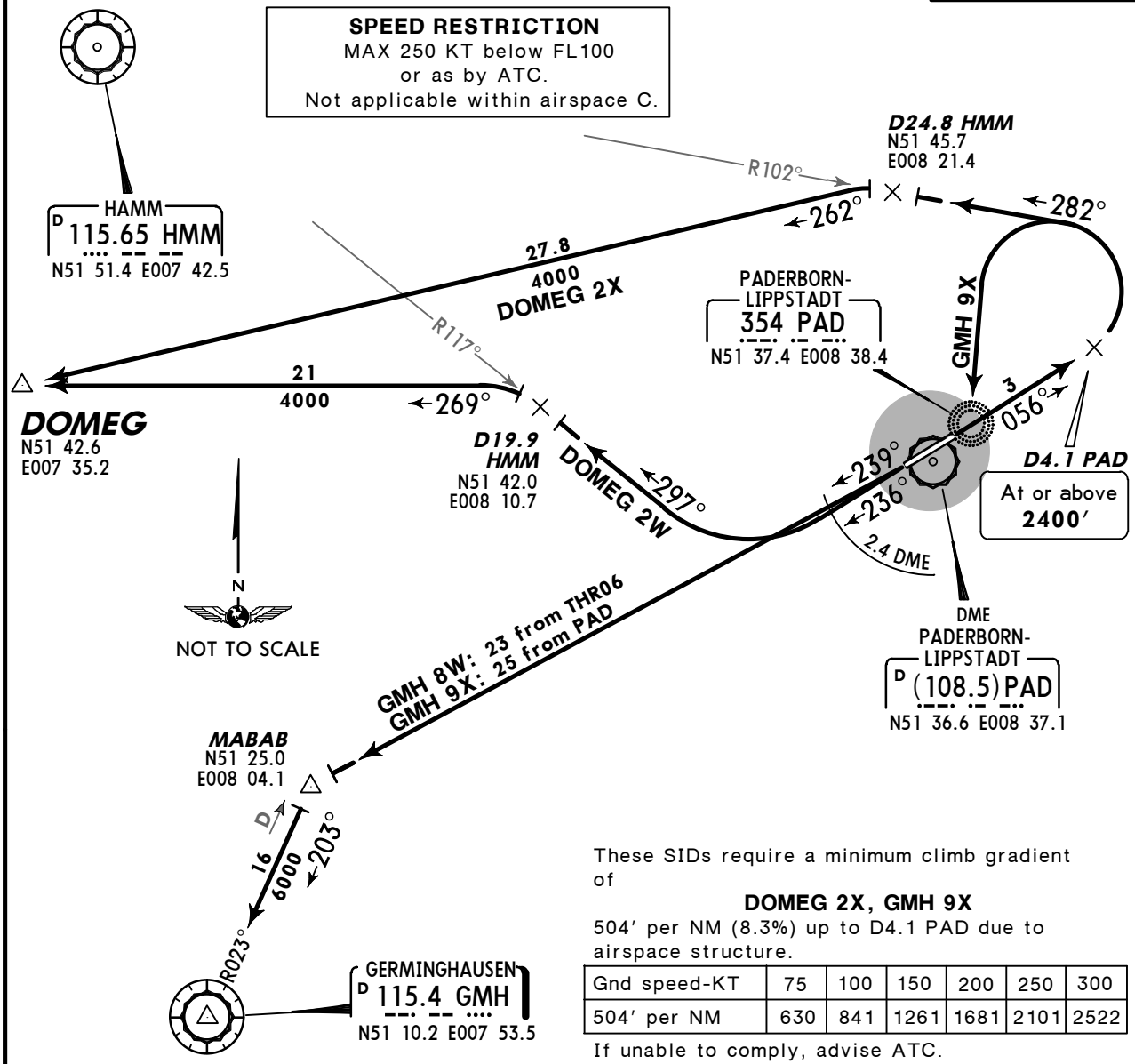
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LANGEN Radar 125.22	*Apt Elev* 699′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. EXPECT close-in obstacles. 3. No Radar contact at or below 2000′. 4. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory. 5. Runway 06: CAUTION - EXPECT VFR traffic up to 1900′.

DOMEG TWO WHISKEY (DOMEG 2W)
DOMEG TWO X-RAY (DOMEG 2X)
GERMINGHAUSEN EIGHT WHISKEY (GMH 8W)
GERMINGHAUSEN NINE X-RAY (GMH 9X)
RWYS 24, 06 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require a minimum climb gradient of

DOMEG 2X, GMH 9X

504′ per NM (8.3%) up to D4.1 PAD due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522

If unable to comply, advise ATC.

Initial climb clearance **5000′**

SID	RWY	ROUTING
DOMEG 2W	**24**	On 236° track to PAD 2.4 DME, turn RIGHT, intercept HMM R-117 inbound to D19.9 HMM ❷, turn LEFT, 269° track to DOMEG.
DOMEG 2X	**06**	On 056° bearing from PAD to D4.1 PAD, turn LEFT, intercept HMM R-102 inbound to D24.8 HMM ❷, turn LEFT, 262° track to DOMEG.
GMH 8W ❶	**24**	On 239° bearing from PAD to MABAB, turn LEFT, intercept GMH R-023 inbound to GMH.
GMH 9X ❶	**06**	On 056° bearing from PAD to D4.1 PAD, turn LEFT to PAD NDB, 239° bearing to MABAB, turn LEFT, intercept GMH R-023 inbound to GMH.

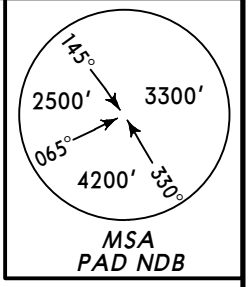
❶ For flights with destination EDDK and Y flight plans and for flights intending to proceed via airway Z-841.
❷ After D19.9 HMM/D24.8 HMM BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised; PAD DME relocated.

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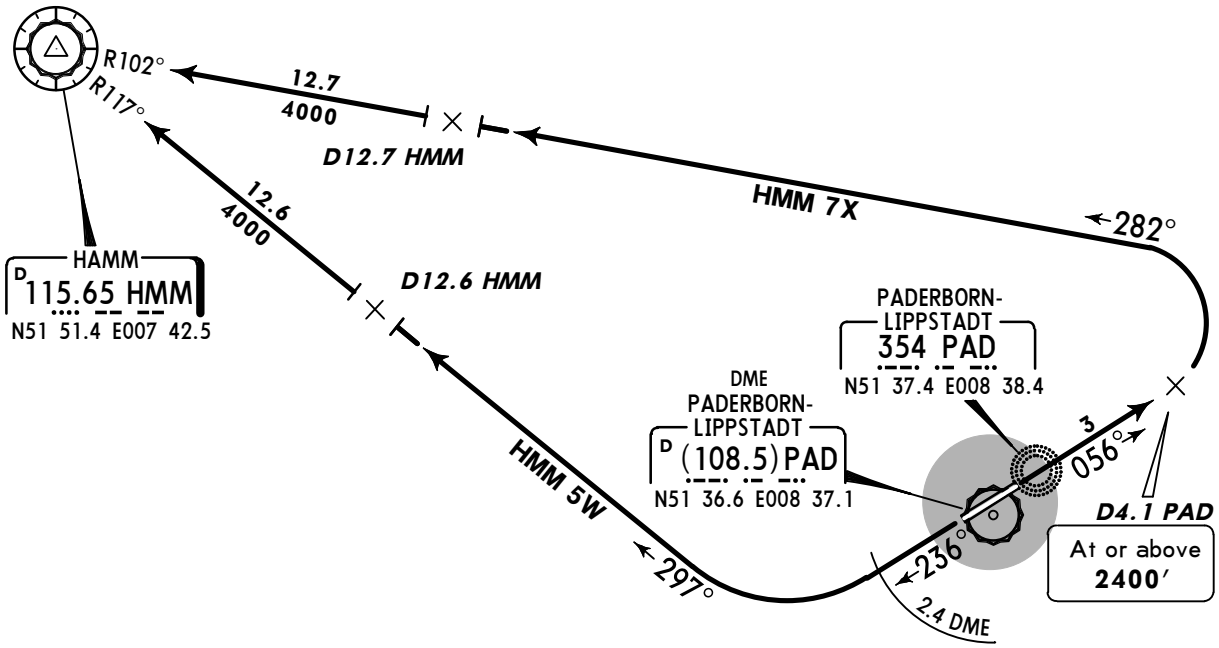
LANGEN Radar 125.22	*Apt Elev* 699′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. EXPECT close-in obstacles. 3. No Radar contact at or below 2000′. 4. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory. 5. Runway 06: CAUTION - EXPECT VFR traffic up to 1900′.

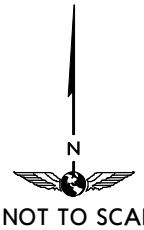
HAMM FIVE WHISKEY (HMM 5W)
HAMM SEVEN X-RAY (HMM 7X)
RWYS 24, 06 DEPARTURES



MSA
PAD NDB

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





NOT TO SCALE

HMM 7X
This SID requires a minimum climb gradient of
504′ per NM (8.3%) up to D4.1 PAD due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522

If unable to comply, advise ATC.

Initial climb clearance **5000′**

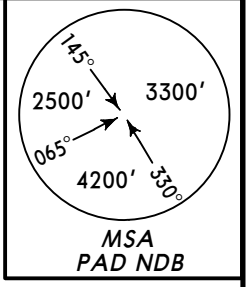
SID	RWY	ROUTING
HMM 5W	**24**	On 236° track to PAD 2.4 DME, turn RIGHT, intercept HMM R-117 inbound to HMM.
HMM 7X	**06**	On 056° bearing from PAD to D4.1 PAD, turn LEFT, intercept HMM R-102 inbound to HMM.

CHANGES: SIDs renumbered & revised; PAD DME relocated.

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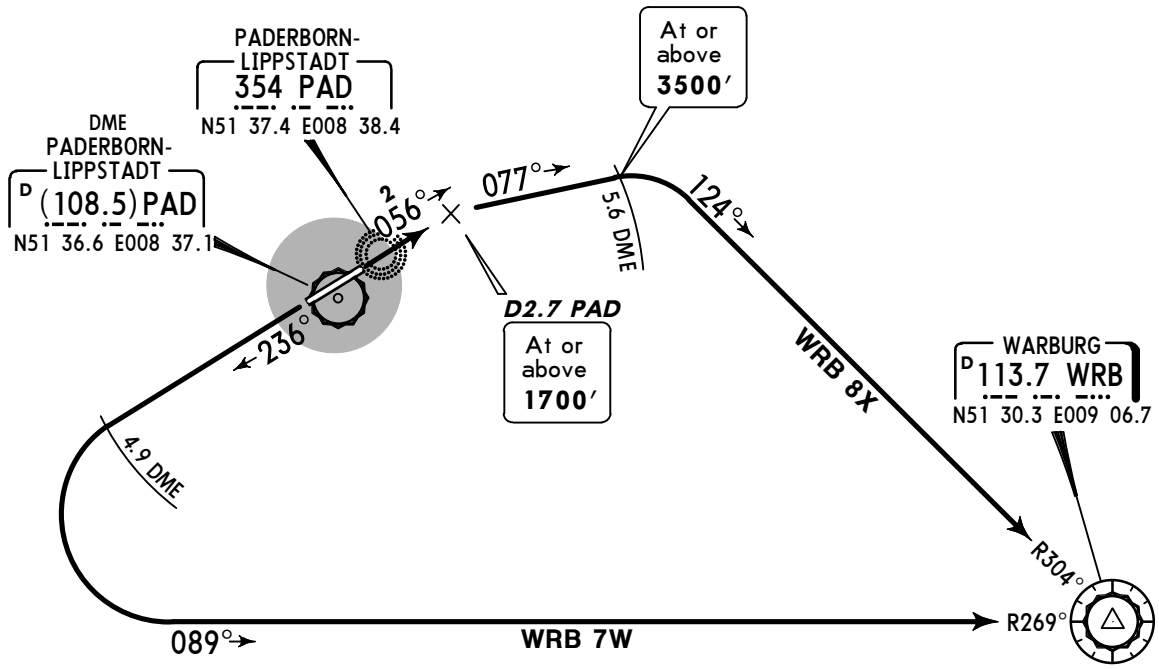
LANGEN Radar 125.22	*Apt Elev* 699′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. EXPECT close-in obstacles. 3. No Radar contact at or below 2000′. 4. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory. 5. Runway 06: CAUTION - EXPECT VFR traffic up to 1900′.

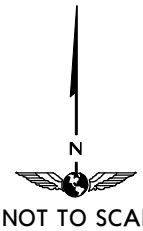
WARBURG SEVEN WHISKEY (WRB 7W)
WARBURG EIGHT X-RAY (WRB 8X)
RWYS 24, 06 DEPARTURES



MSA
PAD NDB

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





NOT TO SCALE

WRB 8X

This SID requires a minimum climb gradient of
504′ per NM (8.3%) up to PAD 5.6 DME due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522

If unable to comply, advise ATC.

Initial climb clearance **5000′**

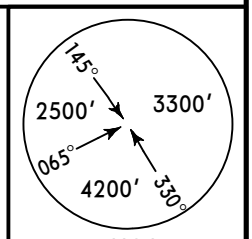
SID	RWY	ROUTING
WRB 7W	**24**	On 236° track to PAD 4.9 DME, turn LEFT, intercept WRB R-269 inbound to WRB.
WRB 8X	**06**	On 056° bearing from PAD to D2.7 PAD, turn RIGHT, 077° track to PAD 5.6 DME, turn RIGHT, intercept WRB R-304 inbound to WRB.

CHANGES: SIDs renumbered & revised; PAD DME relocated.

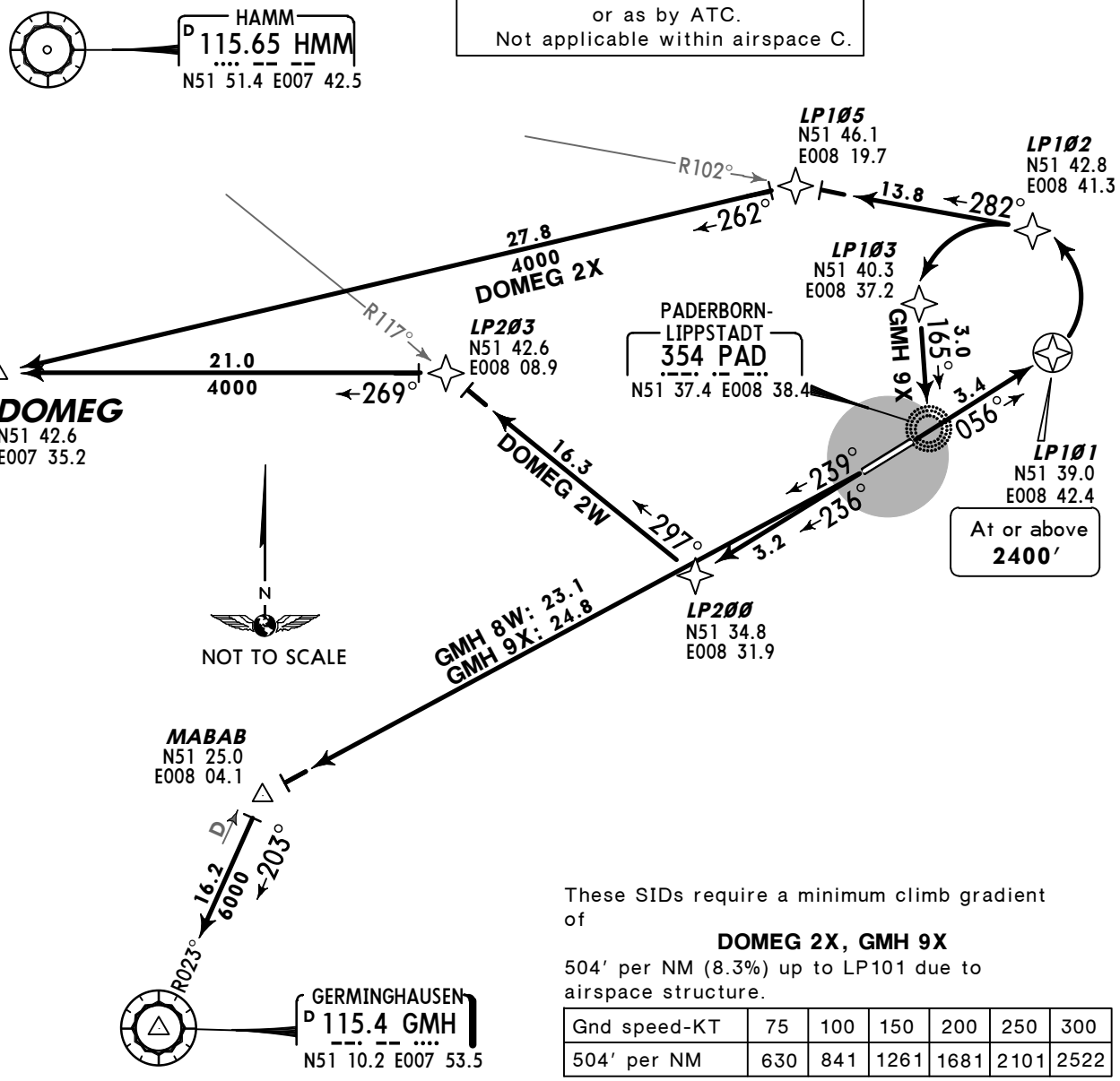
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LANGEN Radar 125.22	*Apt Elev* 699′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. EXPECT close-in obstacles. 3. No Radar contact at or below 2000′. 4. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory. 5. Runway 06: CAUTION - EXPECT VFR traffic up to 1900′.

DOMEG TWO WHISKEY (DOMEG 2W) *[DOME2W]*
DOMEG TWO X-RAY (DOMEG 2X) *[DOME2X]*
GERMINGHAUSEN EIGHT WHISKEY (GMH 8W)
GERMINGHAUSEN NINE X-RAY (GMH 9X)
RWYS 24, 06 RNAV DEPARTURES (OVERLAY 10-3)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require a minimum climb gradient of

DOMEG 2X, GMH 9X

504′ per NM (8.3%) up to LP101 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522

If unable to comply, advise ATC.

Initial climb clearance **5000′**

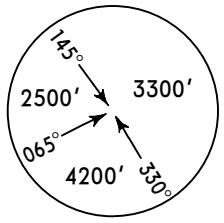
SID	RWY	ROUTING
DOMEG 2W	**24**	(1100′+) - LP200 - LP203 - DOMEG.
DOMEG 2X	**06**	(1100′+) - LP101 (2400′+) - LP102 - LP105 - DOMEG.
GMH 8W ❶	**24**	(1100′+) - MABAB - GMH.
GMH 9X ❶	**06**	(1100′+) - LP101 (2400′+) - LP103 - PAD - MABAB - GMH.

❶ For flights with destination EDDK and Y flight plans and for flights intending to proceed via airway Z-841.

CHANGES: RNAV SIDs renumbered & revised.

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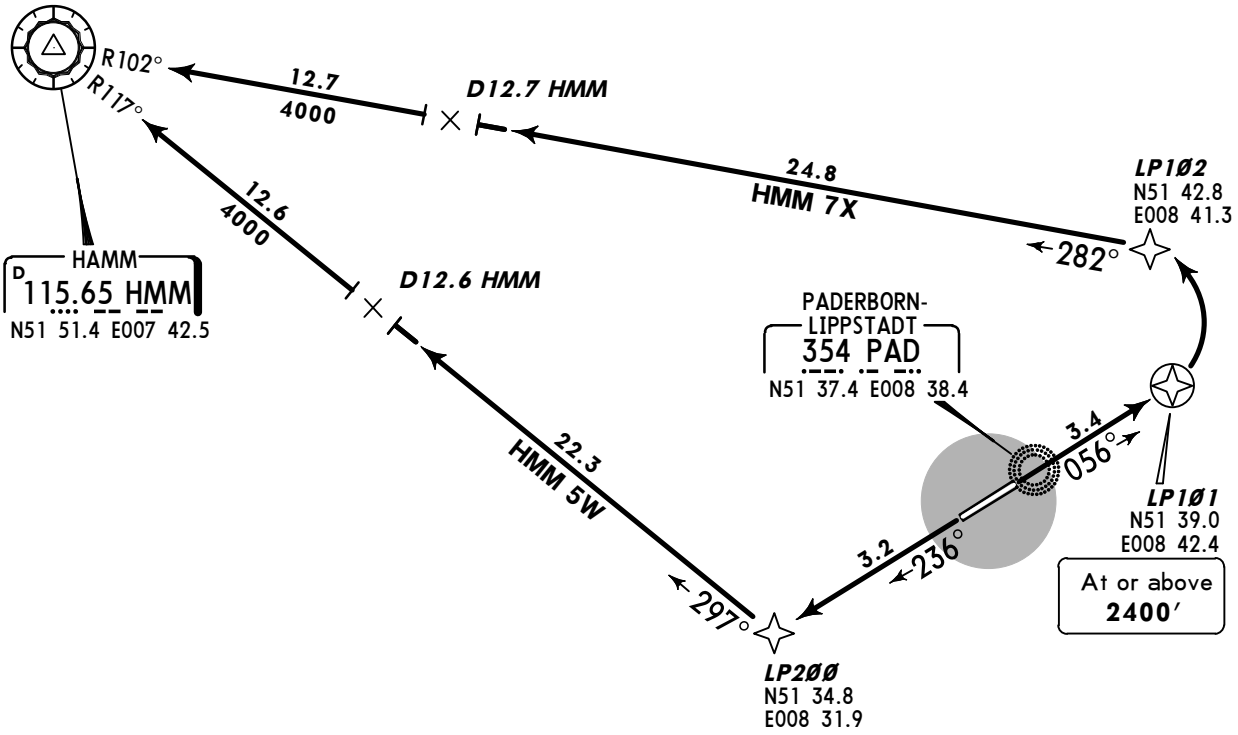
LANGEN Radar 125.22	*Apt Elev* 699′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. EXPECT close-in obstacles. 3. No Radar contact at or below 2000′. 4. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory. 5. Runway 06: CAUTION - EXPECT VFR traffic up to 1900′.

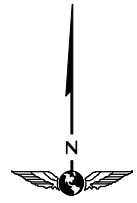


MSA
PAD NDB

HAMM FIVE WHISKEY (HMM 5W)
HAMM SEVEN X-RAY (HMM 7X)
RWYS 24, 06 RNAV DEPARTURES (OVERLAY 10-3A)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





NOT TO SCALE

HMM 7X
This SID requires a minimum climb gradient of
504′ per NM (8.3%) up to LP101 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522

If unable to comply, advise ATC.

Initial climb clearance **5000′**

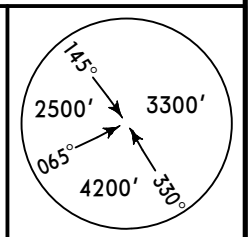
SID	RWY	ROUTING
HMM 5W	**24**	(1100′+) - LP200 - HMM.
HMM 7X	**06**	(1100′+) - LP101 (2400′+) - LP102 - HMM.

CHANGES: RNAV SIDs renumbered & revised.

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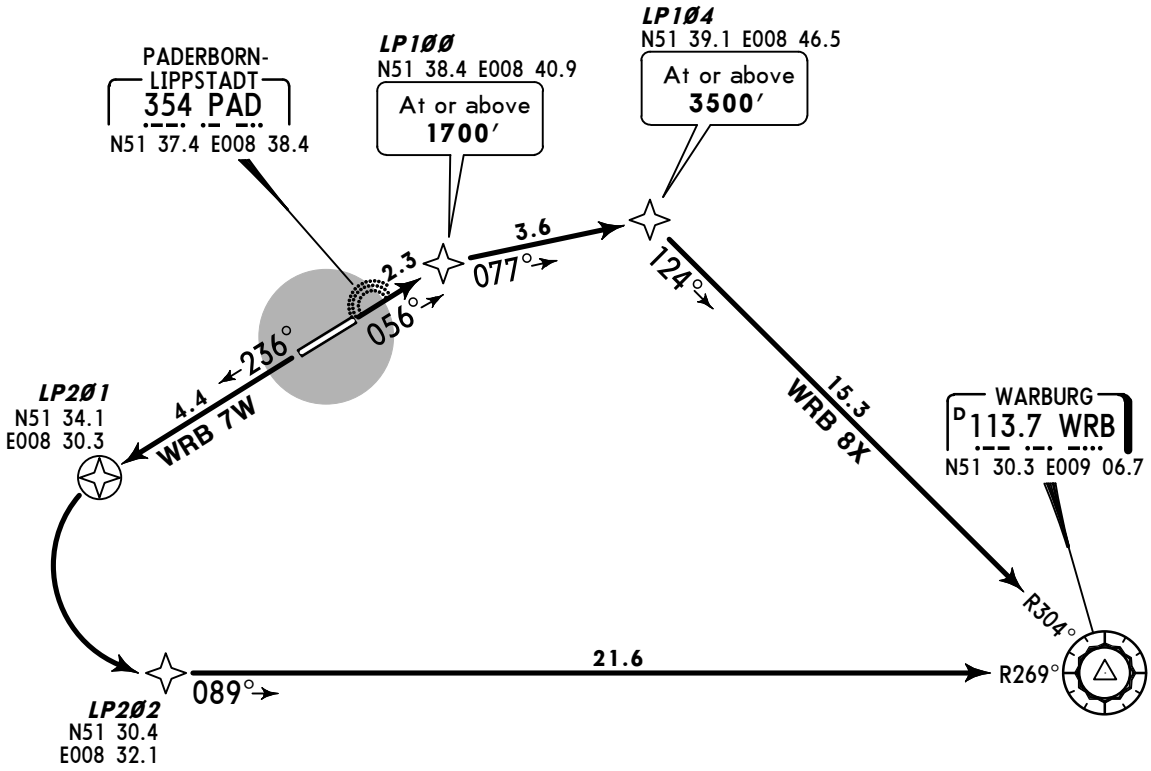
LANGEN Radar 125.22	*Apt Elev* 699′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. EXPECT close-in obstacles. 3. No Radar contact at or below 2000′. 4. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory. 5. Runway 06: CAUTION - EXPECT VFR traffic up to 1900′.

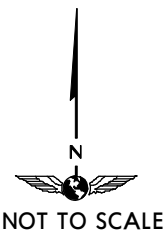
WARBURG SEVEN WHISKEY (WRB 7W)
WARBURG EIGHT X-RAY (WRB 8X)
RWYS 24, 06 RNAV DEPARTURES (OVERLAY 10-3B)



MSA
PAD NDB

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





WRB 8X
This SID requires a minimum climb gradient of
504′ per NM (8.3%) up to LP104 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
504′ per NM	630	841	1261	1681	2101	2522

If unable to comply, advise ATC.

Initial climb clearance **5000′**

SID	RWY	ROUTING
WRB 7W	**24**	(1100′+) - LP201 - LP202 - WRB.
WRB 8X	**06**	(1100′+) - LP100 (1700′+) - LP104 (3500′+) - WRB.

CHANGES: RNAV SIDs renumbered & revised.

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EDLP/PAD

Apt Elev **699′**

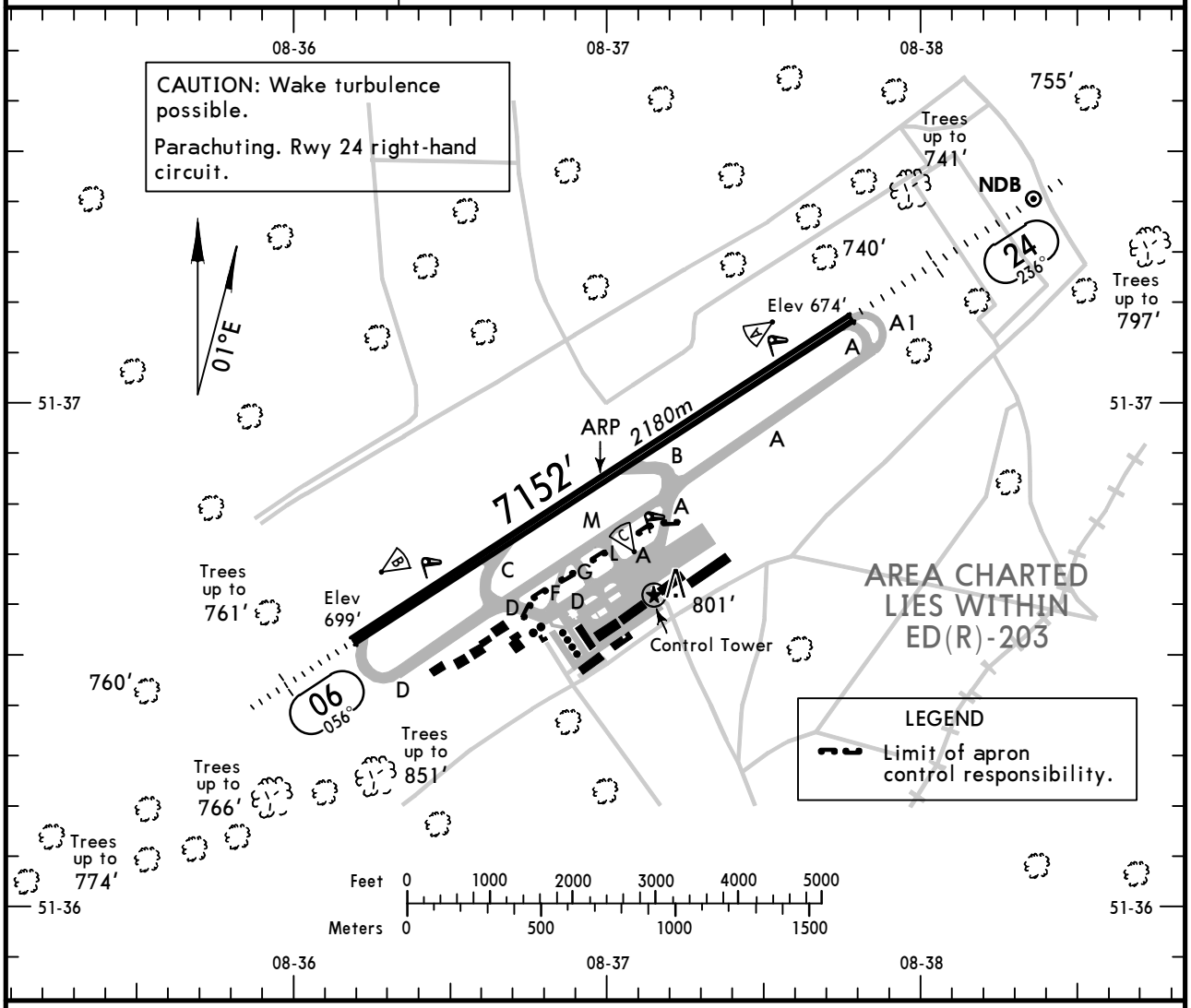
N51 36.8 E008 37.0

23 OCT 09 (10-9)

JEPPESEN PADERBORN/LIPPSTADT, GERMANY

PADERBORN/LIPPSTADT

*ATIS	*PADERBORN Ground	*Tower
125.72	121.92	133.37



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
06 24	HIRL CL *(15m)* HIALS SFL REIL PAPI-L(3.0°) RVR		6061′ *1847m* 6180′ *1884m*	❶	148′ *45m*

❶ TAKE-OFF RUN AVAILABLE

RWY 06:
From rwy head 7152′ (2180m)
twy C int 5282′ (1610m)

RWY 24:
From rwy head 7152′ (2180m)
twy B int 4068′ (1240m)

Standard TAKE-OFF **1**

All Rwys

LVP must be in Force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: Usable lengths. Minimums.

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PADERBORN/LIPPSTADT, GERMANY

PADERBORN/LIPPSTADT

STRAIGHT-IN RWY		A	B	C	D
06	ILS	**899**′ (200′)	**899**′ (200′)	**899**′ (200′)	**899**′ (200′)
		R700m	**R700m**	**R700m**	**R700m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1150**′(451′)	**1150**′(451′)	**1150**′(451′)	**1150**′(451′)
		R1400m	**R1500m**	**R1600m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV	**1190**′(491′)	**1190**′(491′)	**1190**′(491′)	**1190**′(491′)
		R1400m	**R1500m**	**R1600m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m
24	ILS	**874**′ (200′)	**874**′ (200′)	**874**′ (200′)	**874**′ (200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1130**′(456′)	**1130**′(456′)	**1130**′(456′)	**1130**′(456′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	RNAV (LNAV/VNAV)	**1040**′(366′)	**1050**′(376′)	**1050**′(376′)	**1050**′(376′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**1110**′(436′)	**1110**′(436′)	**1110**′(436′)	**1110**′(436′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m

CIRCLE-TO-LAND ❶❷	100 KT	135 KT	180 KT	205 KT
	1250′(551′)	**1250**′(551′)	**1670**′(971′)	**1670**′(971′)
	V1500m	V1600m	V2400m	V3600m

❶ Not authorized South of airport.

❷ After RNAV: NOT APPLICABLE.

TAKE-OFF RWY 06, 24

	All Rwys LVP must be in Force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

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EDLP/PAD
PADERBORN/LIPPSTADT

JEPPESEN (11-1) 1 JUL 11

PADERBORN/LIPPSTADT, GERMANY
ILS or LOC Rwy 06

*ATIS	LANGEN Radar(APP)	*PADERBORN Tower	*Ground
125.72	125.22	133.37	121.92

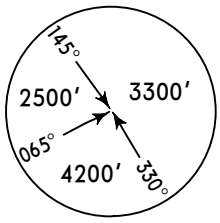
BRIEFING STRIP™

LOC IPLE	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev 699′
111.7	056°	2030′ (1331′)	899′ (200′)	RWY 699′

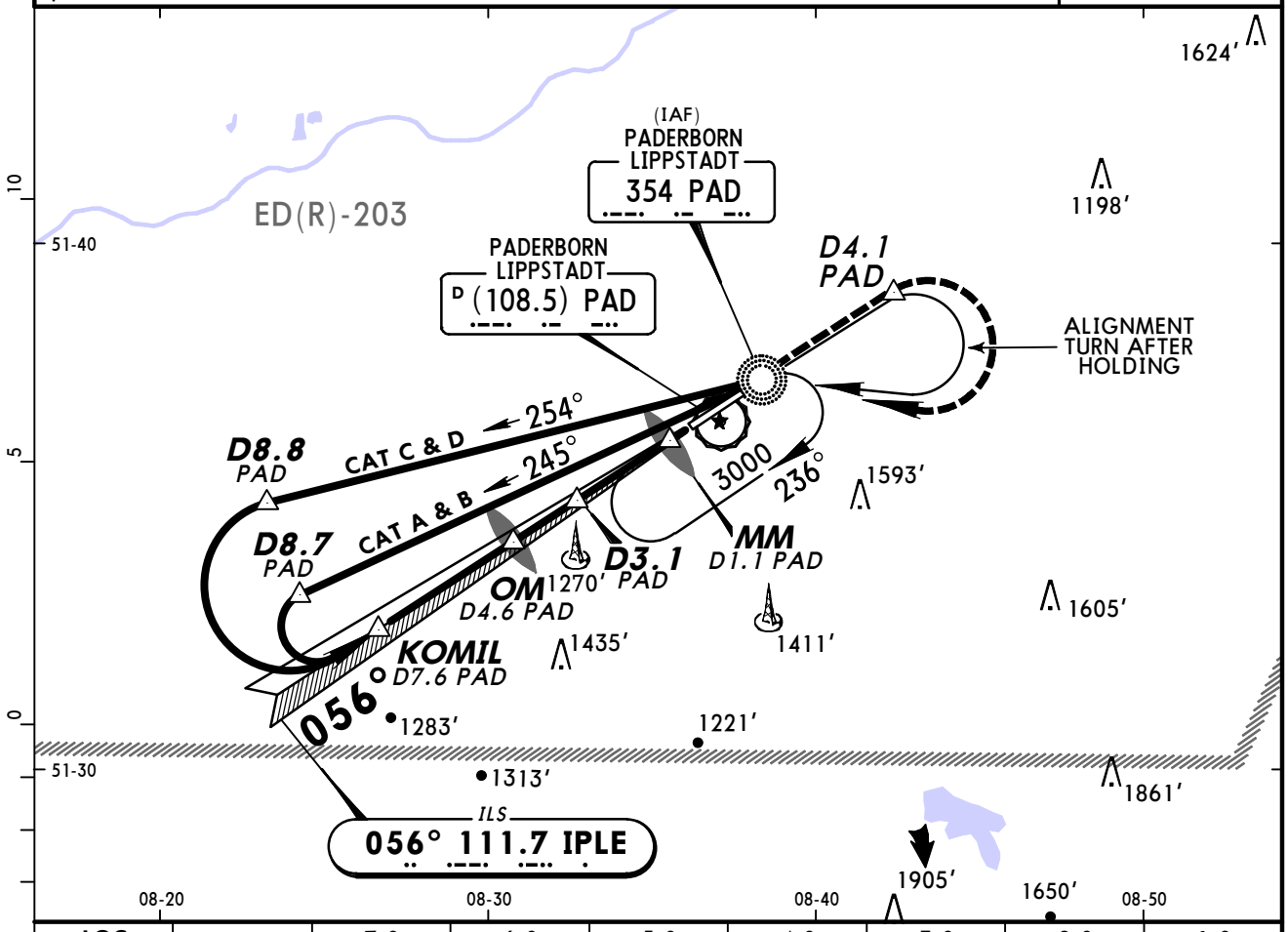
MISSED APCH: Climb STRAIGHT AHEAD to D4.1 PAD, then turn RIGHT to NDB climbing to 3000′.

Alt Set: hPa (IN on req) Rwy Elev: 25 hPa Trans level: By ATC Trans alt: 5000′

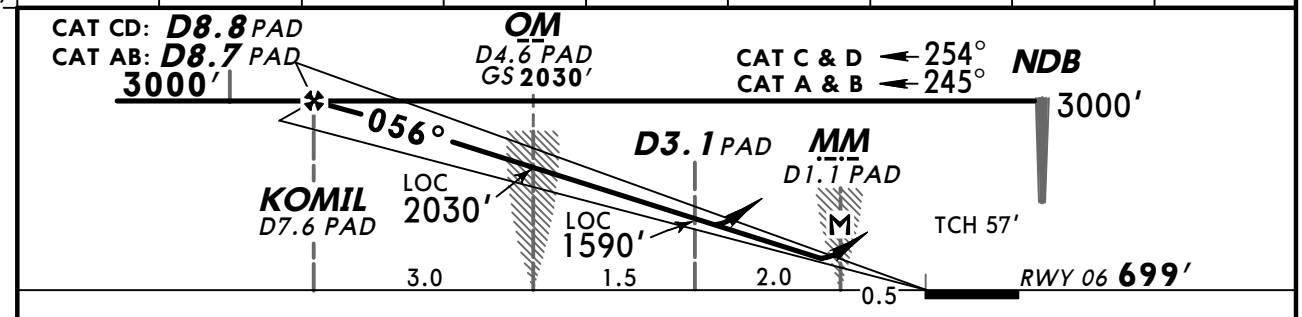
1. LOC: **DME required.** 2. No radar contact at or below 2000′. 3. CAUTION: VFR traffic up to 1900′.



MSA PAD NDB



LOC (GS out)	PAD DME	7.0	6.0	5.0	4.0	3.0	2.0	1.0
	ALTITUDE	2800′	2480′	2160′	1840′	1530′	1210′	890′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent angle	3.00°	377	484	538	646	753	861
MAP at MM/D1.1 PAD							

HIALS
REIL
PAPI

D4.1 PAD

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 06

	ILS DA(H) 899′ (200′)		LOC (GS out) DA(H) 1150′ (451′)	
	FULL/Limited	ALS out		ALS out
A	RVR 750m	RVR 1200m	RVR 1500m	
B				
C			RVR 1700m	CMV 2100m
D				

CIRCLE-TO-LAND

Not authorized
South of airport

Max Kts	MDA(H)	VIS
100	1250′ (551′)	1500m
135	1250′ (551′)	1600m
180	1670′ (971′)	2400m
205	1670′ (971′)	3600m

CHANGES: Minimums.

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EDLP/PAD
PADERBORN/LIPPSTADT

JEPPESEN PADERBORN/LIPPSTADT, GERMANY

11-2 1 JUL 11

ILS or LOC Rwy 24

*ATIS	LANGEN Radar(APP)	*PADERBORN Tower	*Ground
125.72	125.22	133.37	121.92

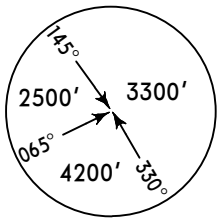
BRIEFING STRIP™

LOC IPLW	Final Apch Crs	GS D3.6 IPLW	ILS DA(H)	Apt Elev 699′
108.55	236°	1830′ (1156′)	874′ (200′)	RWY 674′

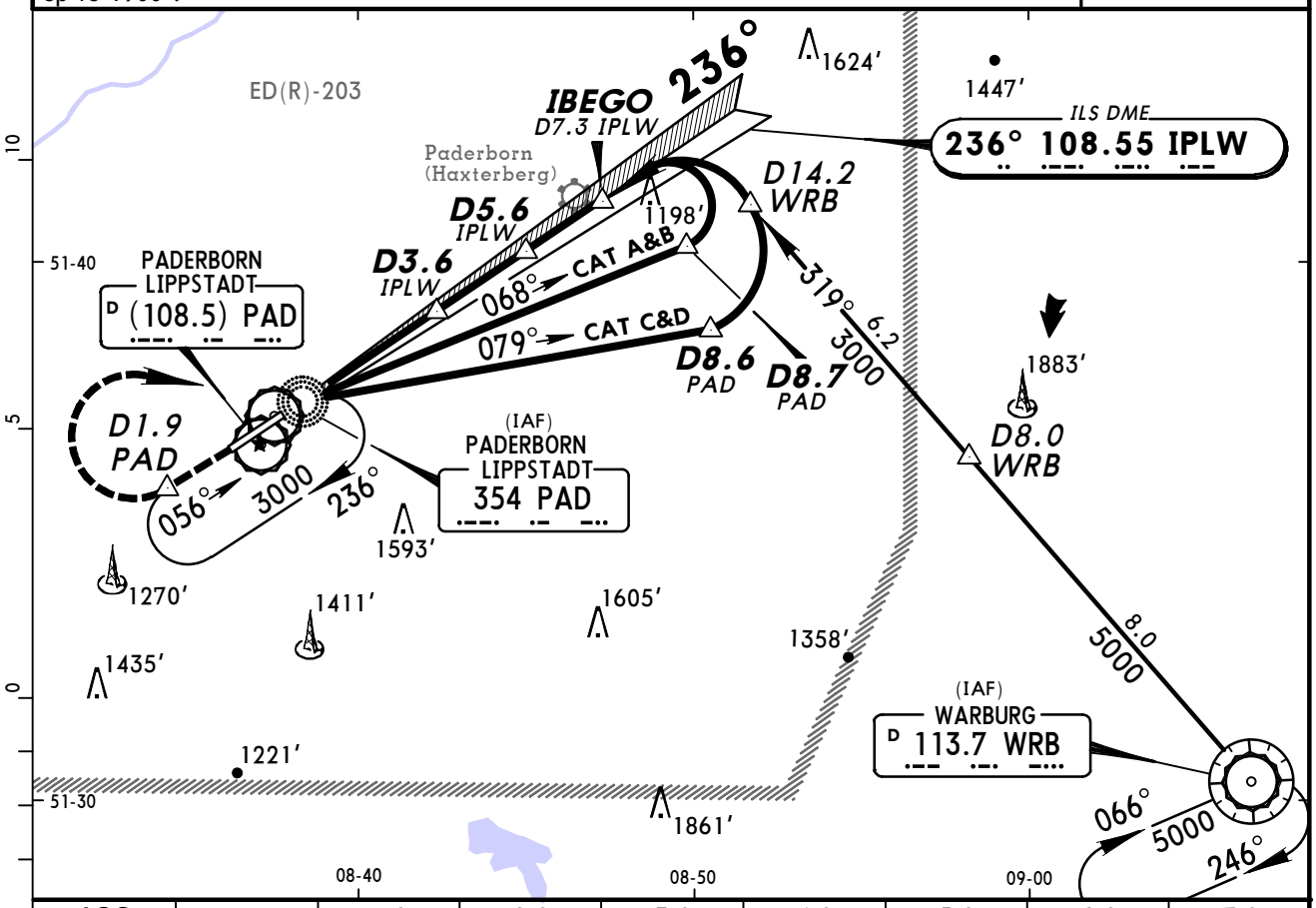
MISSED APCH: Climb STRAIGHT AHEAD to D1.9 PAD, then turn RIGHT to NDB climbing to 3000′.

Alt Set: hPa (IN on req) Rwy Elev: 24 hPa Trans level: By ATC Trans alt: 5000′

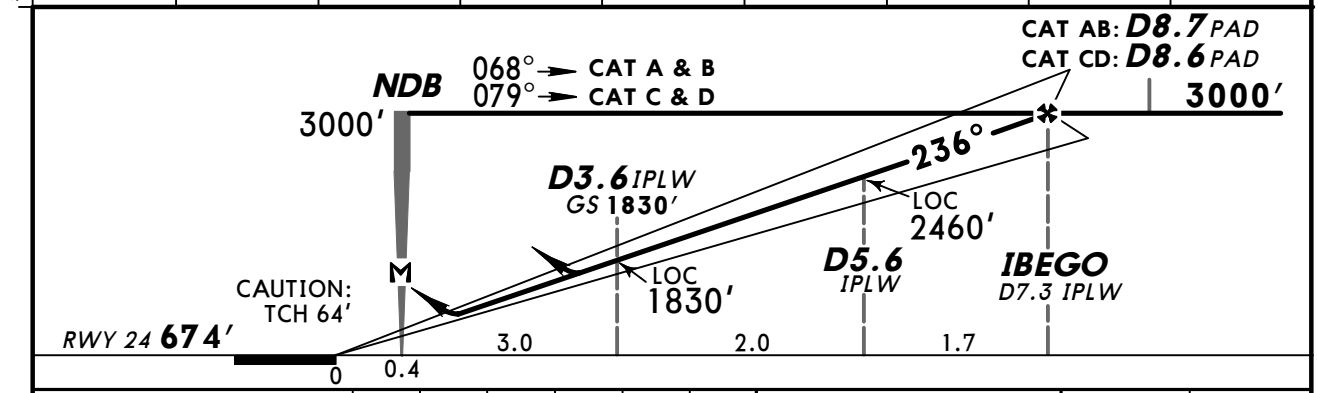
1. **DME required.** 2. No radar contact at or below 2000′. 3. CAUTION: VFR traffic up to 1900′.



MSA PAD NDB



LOC (GS out)	IPLW DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0
	ALTITUDE	1000′	1320′	1630′	1950′	2270′	2590′	2910′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent angle	3.00°	377	484	538	646	753	861
MAP at NDB							

HIALS
REIL
PAPI

D1.9 PAD

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 24

	ILS DA(H) 874′ (200′)			LOC (GS out) DA(H) 1130′ (456′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

CIRCLE-TO-LAND

Not authorized South of airport

Max Kts	MDA(H)	VIS
100	1250′ (551′)	1500m
135	1250′ (551′)	1600m
180	1670′ (971′)	2400m
205	1670′ (971′)	3600m

CHANGES: Minimums.

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EDLP/PAD
PADERBORN/LIPPSTADT

JEPPESEN (12-1) 1 JUL 11

PADERBORN/LIPPSTADT, GERMANY
RNAV (GPS) Rwy 06

*ATIS	LANGEN Radar(APP)	*PADERBORN Tower	*Ground
125.72	125.22	133.37	121.92

BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 699′
	056°	KOMIL 3000′ (2301′)	1190′ (491′)	RWY 699′

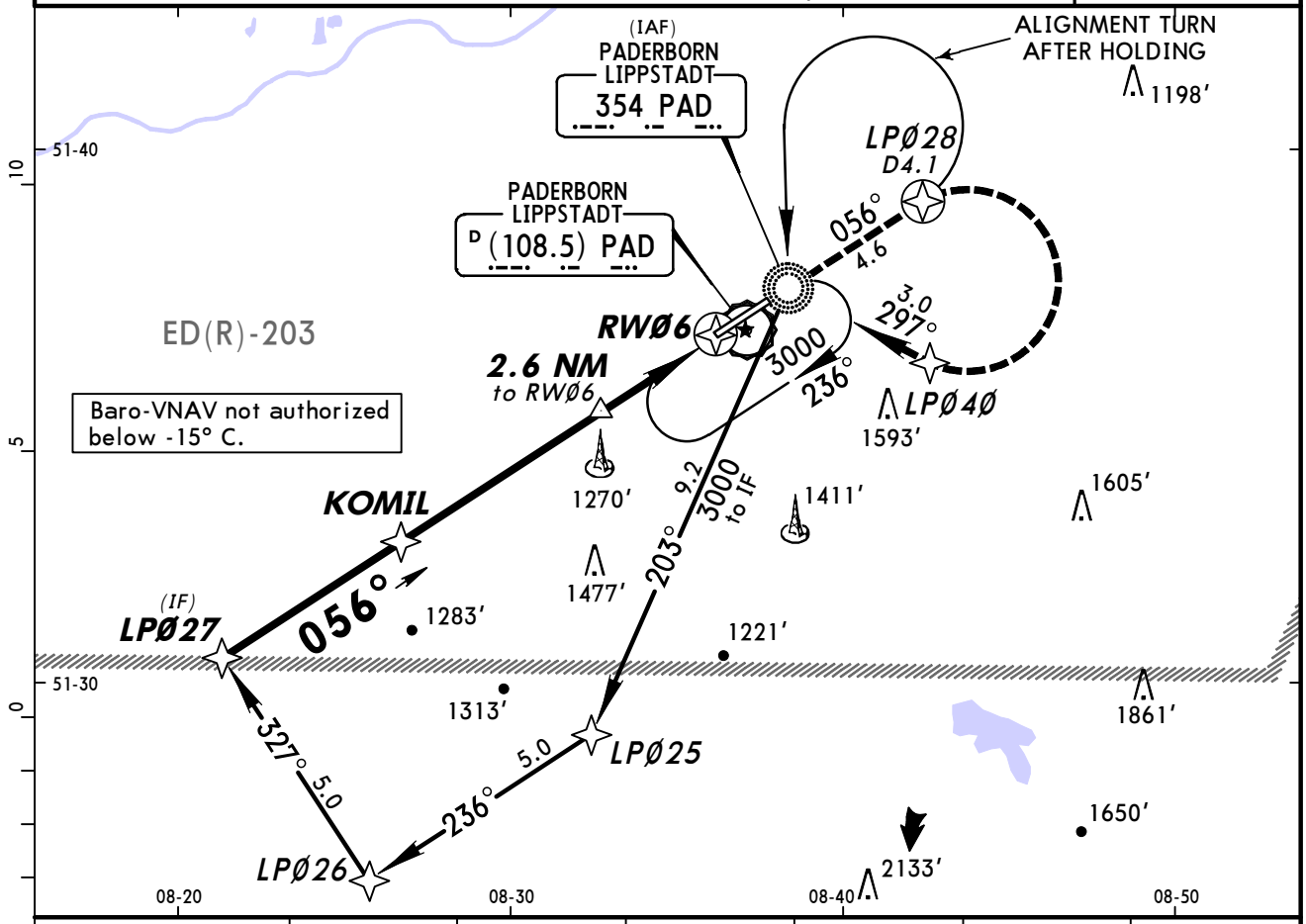
MISSED APCH: RNAV: Climb on track 056° to LPØ28, then turn RIGHT via LPØ4Ø on track 297° to NDB. Climb and maintain 3000′. **NON-RNAV:** Climb STRAIGHT AHEAD to D4.1, then turn RIGHT to NDB climbing to 3000′.

Alt Set: hPa (IN on req) Rwy Elev: 25 hPa Trans level: By ATC Trans alt: 5000′

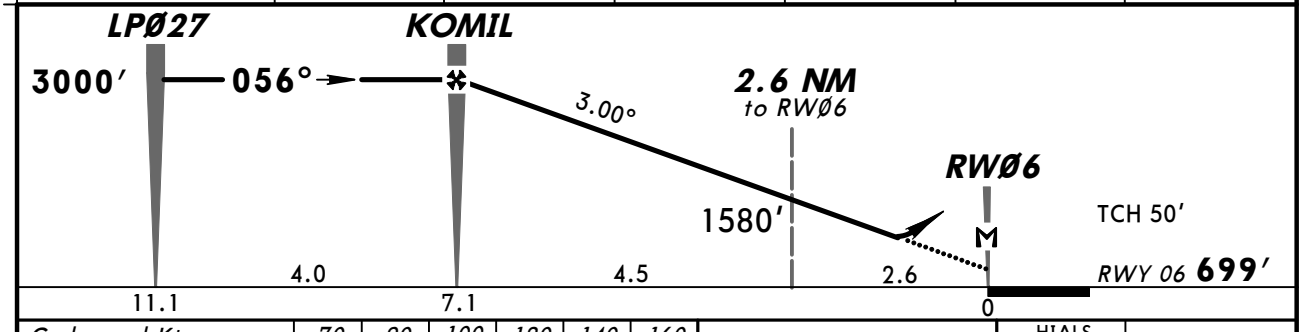
1. No radar contact at or below 2000′. 2. CAUTION: VFR traffic up to 1900′.

4200′

MSA ARP



DIST to RWØ6	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2980′	2660′	2350′	2030′	1710′	1390′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
MAP at RWØ6							

HIALS
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **06**

PANS OPS 4

	LNAV/VNAV DA(H) 1190′ (491′)		LNAV DA(H) 1190′ (491′)	
		ALS out		ALS out
A	RVR 1500m		RVR 1500m	
B				
C	RVR 1800m	CMV 2300m	RVR 1800m	CMV 2300m
D				

CHANGES: Minimums.

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EDLP/PAD
PADERBORN/LIPPSTADT

JEPPESEN (12-2) 1 JUL 11

PADERBORN/LIPPSTADT, GERMANY
RNAV (GPS) Rwy 24

*ATIS	LANGEN Radar(APP)	*PADERBORN Tower	*Ground
125.72	125.22	133.37	121.92

BRIEFING STRIP™

RNAV	Final Apch Crs **236°**	Minimum Alt **IBEGO** **3000′** (2326′)	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev 699′ RWY **674′**

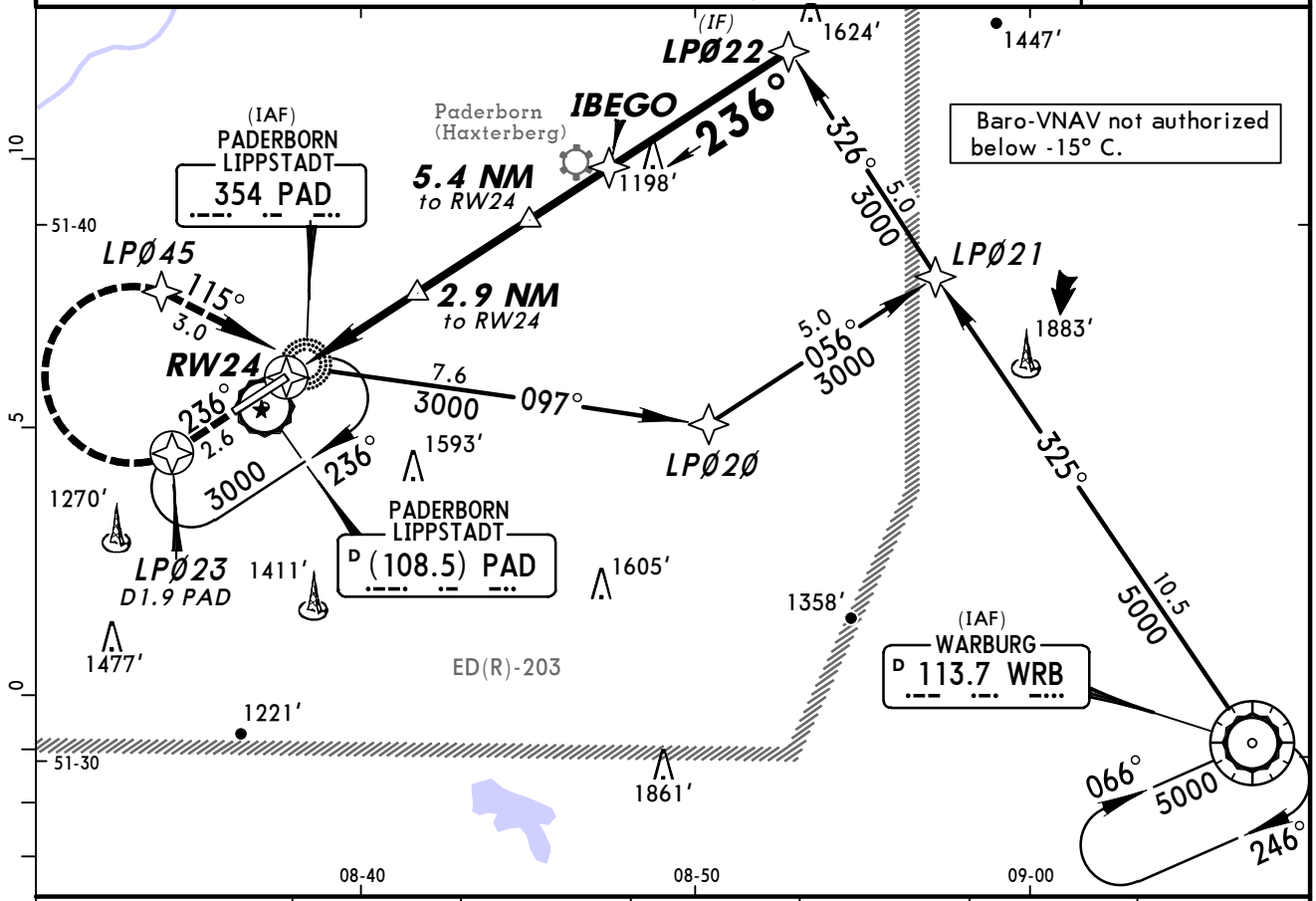
MISSED APCH: RNAV: Climb on track 236° to LPØ23, then turn RIGHT via LPØ45 on track 115° to NDB. Climb and maintain 3000′. **NON-RNAV**: Climb STRAIGHT AHEAD to D1.9 PAD, then turn RIGHT to NDB climb and maintain 3000′.

Alt Set: hPa (IN on req) Rwy Elev: 24 hPa Trans level: By ATC Trans alt: 5000′

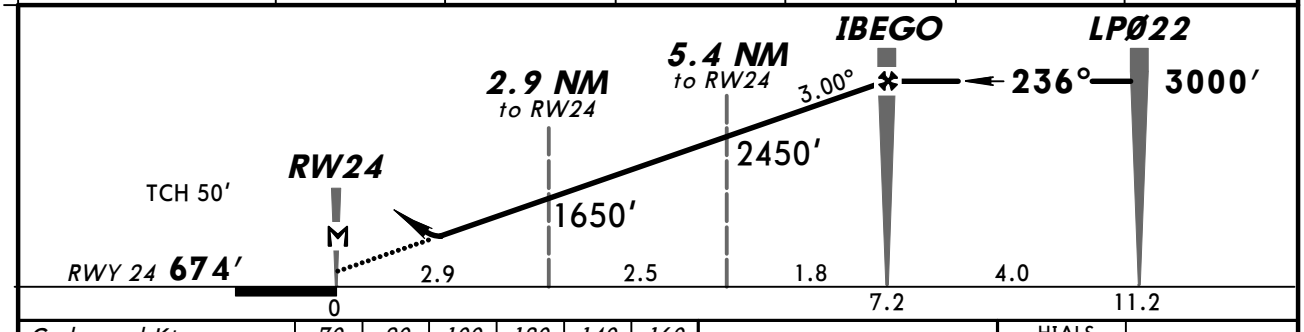
1. No radar contact at or below 2000′. 2. CAUTION: VFR traffic up to 1900′.

4200′

MSA ARP



DIST to RW24	2.0	3.0	4.0	5.0	6.0	7.0
ALTITUDE	1370′	1680′	2000′	2320′	2640′	2960′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
MAP at RW24							

HIALS
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **24**

	LNAV/VNAV DA(H) A: **1040′** (366′) BCD: **1050′** (376′)		LNAV DA(H) **1110′** (436′)	
		ALS out		ALS out
A	RVR 1000m	RVR 1500m	RVR 1300m	RVR 1500m
B				
C		RVR 1700m		RVR 2000m
D				

CHANGES: Minimums.

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General Information

Location: Niederrhein Deu
IATA Code: NRN
Lat/Long: N51° 36.1' E006° 08.5'
Elevation: 106 ft

Airport Use: Public
Magnetic Variation: 0.7°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: No
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0626 Z
Sunset: 1711 Z,

Runway Information

Runway: 09
Length x Width: 8005 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 95 ft
Lighting: Edge, ALS, Centerline
Stopway: 902 ft

Runway: 27
Length x Width: 8005 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 105 ft
Lighting: Edge, ALS, Centerline, TDZ
Stopway: 902 ft

Communication Information

ATIS 124.45
Niederrhein Tower 129.4 MF Air-Ground

*ATIS	Apt Elev
124.45	106′

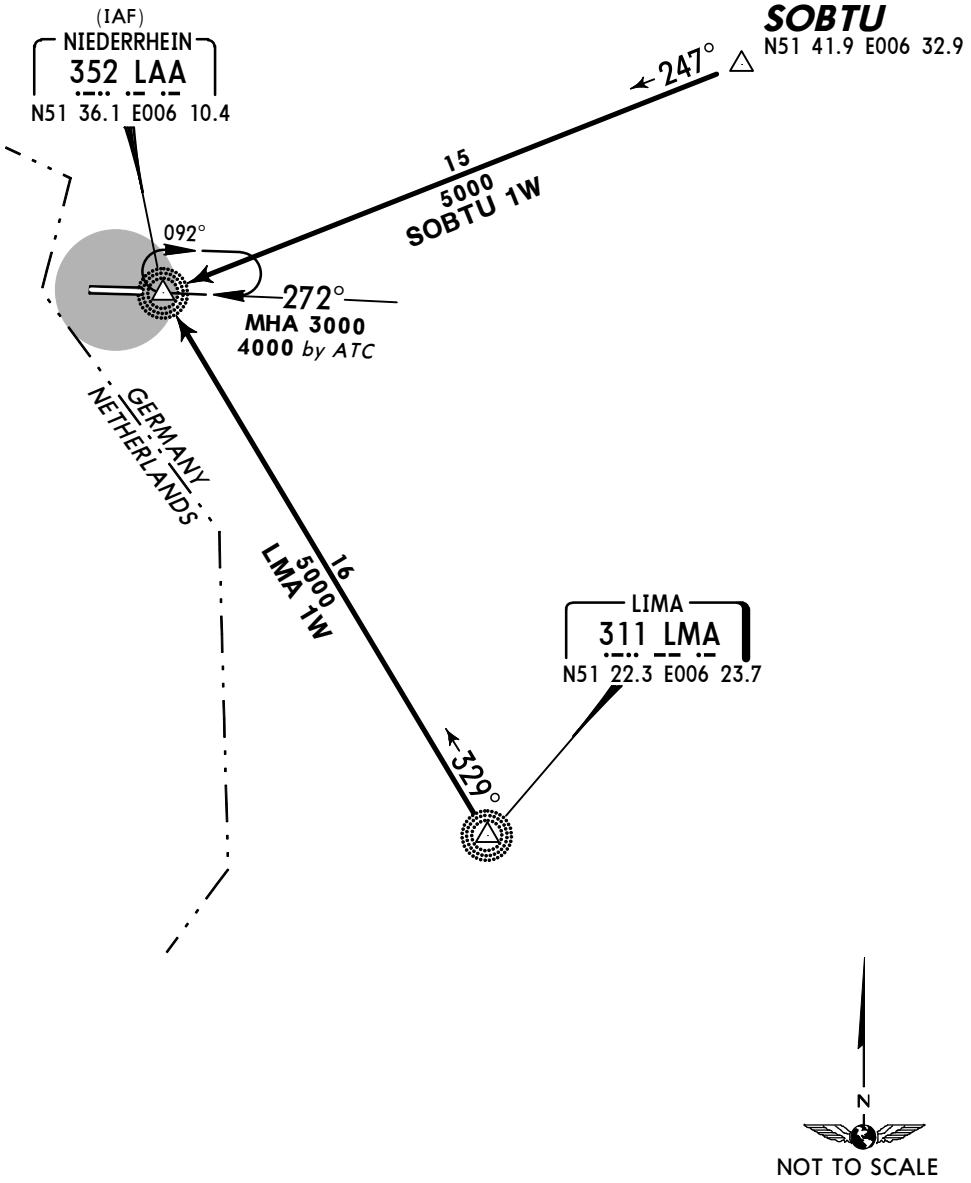
Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
CAUTION: EXPECT intensive glider activities in the vicinity of airport.

2200′

MSA
LAA NDB
applicable over German territory only

LIMA ONE WHISKEY (LMA 1W)
SOBTU ONE WHISKEY (SOBTU 1W) *[SOBT1W]*
RWYS 09, 27 ARRIVALS

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



CHANGES: STAR PABMO 1W replaced by SOBTU 1W.

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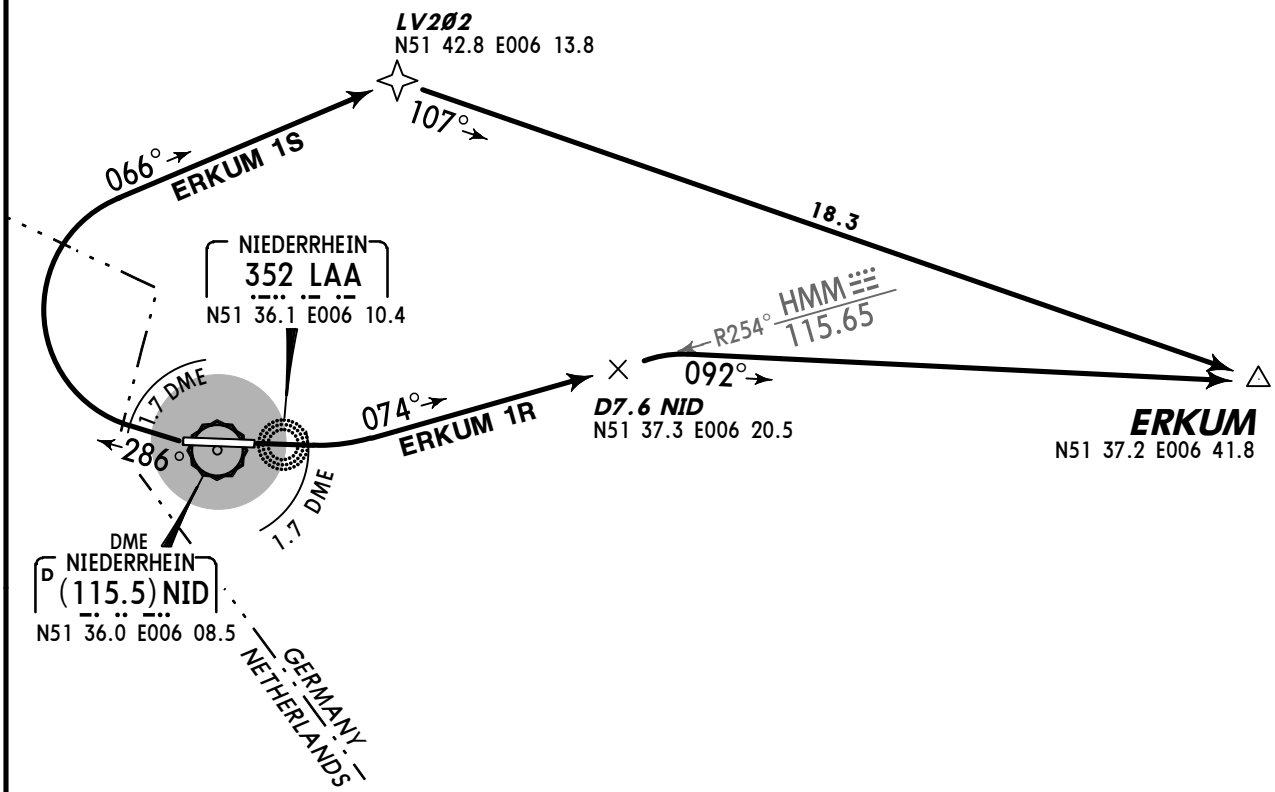
LANGEN Radar 128.5	*Apt Elev* 106′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. WARNING: EXPECT close-in obstacles. 3. CAUTION: EXPECT intensive glider activities in the vicinity of airport. 4. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory.

2200′

MSA
LAA NDB applicable over German territory only

ERKUM ONE ROMEO (ERKUM 1R)
ERKUM ONE SIERRA (ERKUM 1S)
RWYS 09, 27 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require a minimum climb gradient of

ERKUM 1R

425′ per NM (7%) up to 3000′ due to navaid coverage.

ERKUM 1S

425′ per NM (7%) up to 3000′ due to airspace structure. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

N

NOT TO SCALE

Initial climb clearance **5000′**

SID	RWY	ROUTING
ERKUM 1R	**09**	Climb on runway track to NID 1.7 DME, turn LEFT, intercept HMM R-254 inbound to D7.6 NID ❶turn RIGHT, 092° track to ERKUM.
ERKUM 1S ❷	**27**	Climb on 286° track to NID 1.7 DME, turn RIGHT, 066° track to LV202, turn RIGHT, 107° track to ERKUM.

BRNAV equipment necessary after: ❶ D7.6 NID/ ❷ passing 2000′.

CHANGES: MEVEL SIDs withdrawn; ERKUM SIDs established.

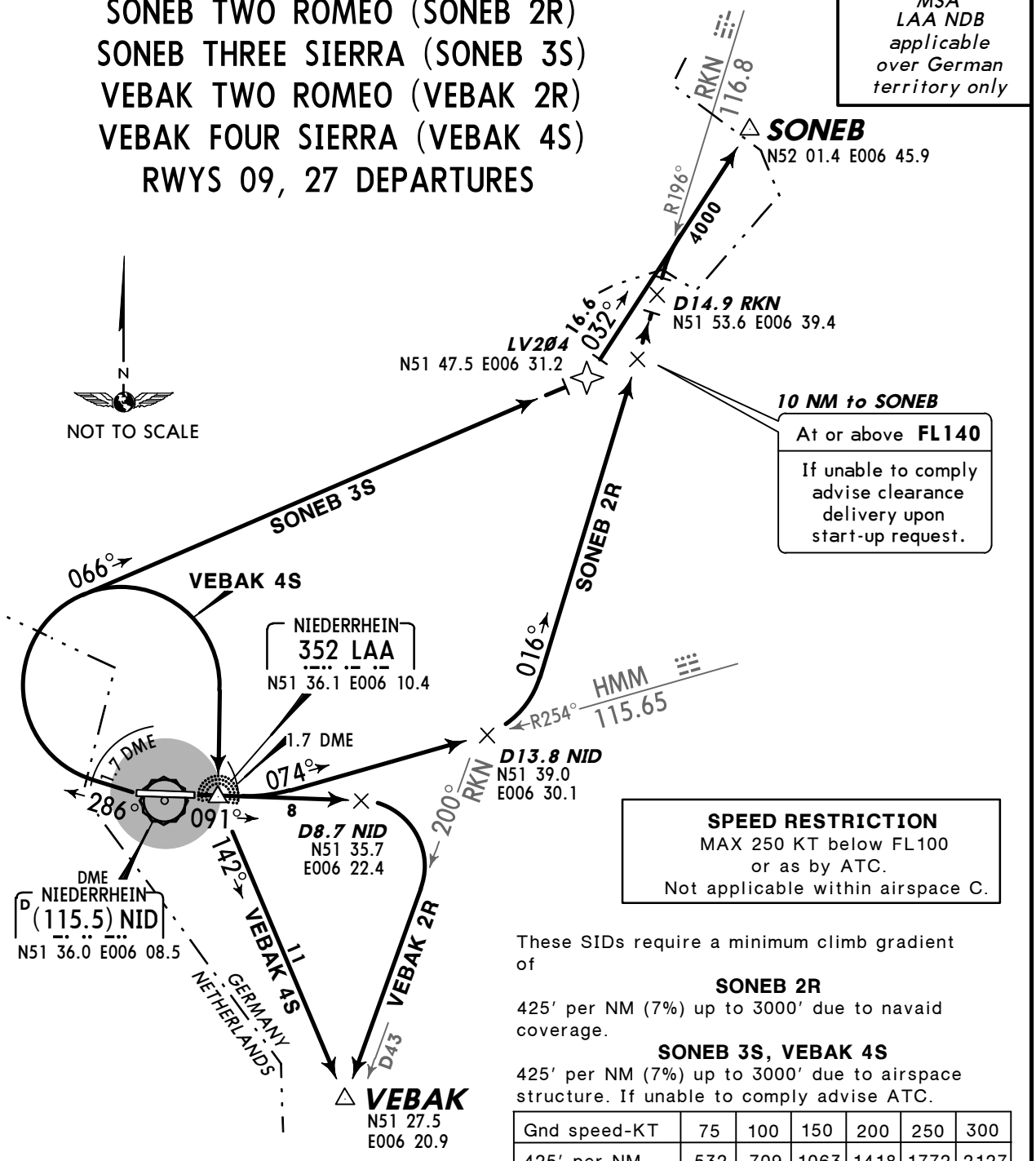
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LANGEN Radar 128.5	*Apt Elev* 106′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. WARNING: EXPECT close-in obstacles. 3. CAUTION: EXPECT intensive glider activities in the vicinity of airport. 4. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory.

2200′

MSA
LAA NDB applicable over German territory only

SONEB TWO ROMEO (SONEB 2R)
SONEB THREE SIERRA (SONEB 3S)
VEBAK TWO ROMEO (VEBAK 2R)
VEBAK FOUR SIERRA (VEBAK 4S)
RWYS 09, 27 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require a minimum climb gradient of

SONEB 2R

425′ per NM (7%) up to 3000′ due to navaid coverage.

SONEB 3S, VEBAK 4S

425′ per NM (7%) up to 3000′ due to airspace structure. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **5000′**

SID	RWY	ROUTING
SONEB 2R ❶	**09**	Climb on runway track to NID 1.7 DME, turn LEFT, intercept HMM R-254 inbound to D13.8 NID, turn LEFT, intercept RKN R-196 inbound to D14.9 RKN , ❷ turn RIGHT, 032° track to SONEB.
SONEB 3S ❶❸	**27**	Climb on 286° track to NID 1.7 DME, turn RIGHT, 066° track to LV204, turn LEFT, 032° track to SONEB.
VEBAK 2R	**09**	Climb on 091° bearing via LAA to D8.7 NID, turn RIGHT, intercept RKN R-200 to VEBAK.
VEBAK 4S	**27**	Climb on 286° track to NID 1.7 DME, turn RIGHT to LAA, 142° bearing to VEBAK.

❶ For flights with RFL140 or above. Other flights proceed via ERKUM.
BRNAV equipment necessary after: ❷ D14.9 RKN/ ❸ passing 2000′.

CHANGES: SIDs renumbered & revised.

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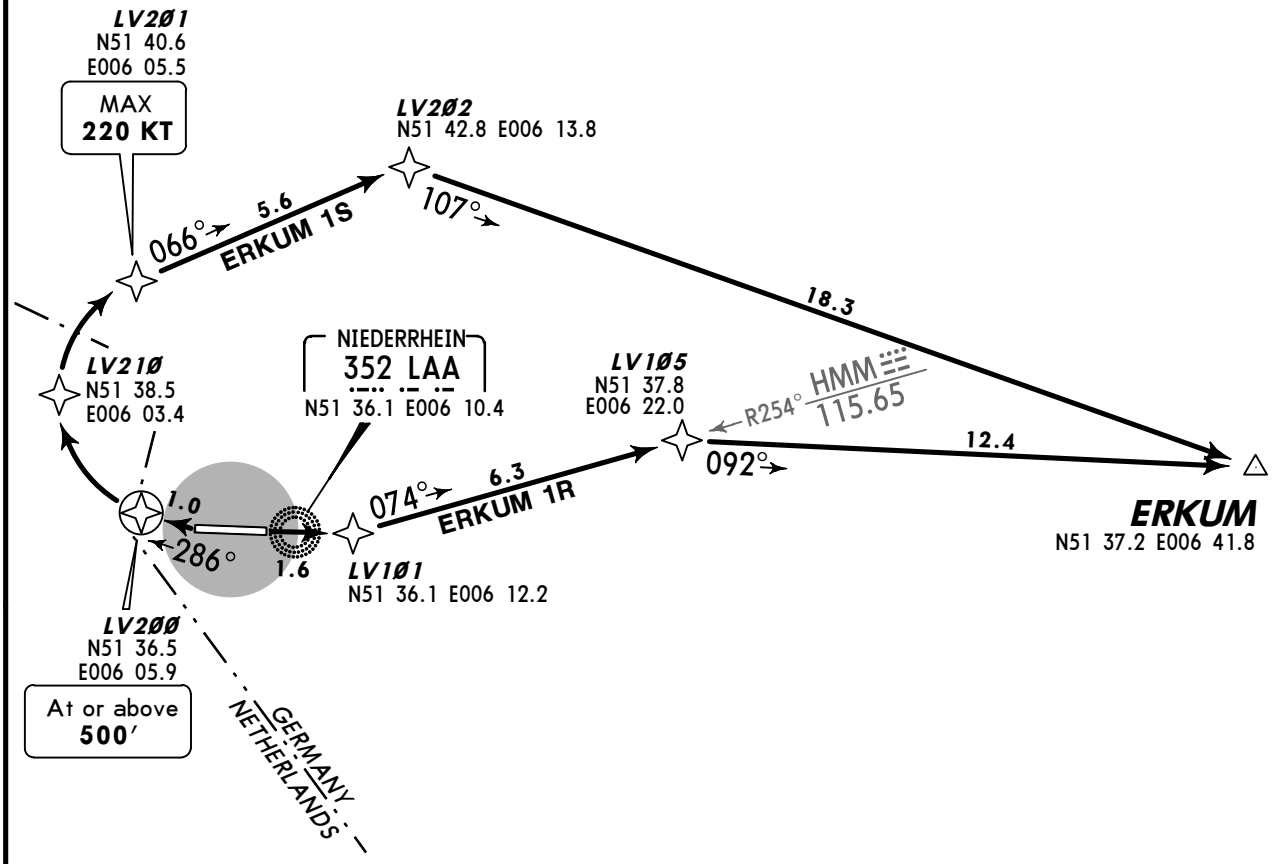
LANGEN Radar 128.5	*Apt Elev* 106′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. WARNING: EXPECT close-in obstacles. 3. CAUTION: EXPECT intensive glider activities in the vicinity of airport. 4. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory.

2200′

MSA
LAA NDB applicable over German territory only

ERKUM ONE ROMEO (ERKUM 1R) *[ERKU1R]*
ERKUM ONE SIERRA (ERKUM 1S) *[ERKU1S]*
RWYS 09, 27 RNAV DEPARTURES (OVERLAY 10-3)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



N
NOT TO SCALE

These SIDs require a minimum climb gradient of

ERKUM 1R

425′ per NM (7%) up to 3000′ due to navaid coverage.

ERKUM 1S

425′ per NM (7%) up to 3000′ due to airspace structure. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

Initial climb clearance **5000′**

SID	RWY	ROUTING
ERKUM 1R	**09**	(500′+) - LV101 - LV105 - ERKUM.
ERKUM 1S	**27**	LV200 (500′+) - LV210 - LV201 (K220-) - LV202 - ERKUM.

CHANGES: MEVEL RNAV SIDs withdrawn; ERKUM RNAV SIDs established.

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LANGEN Radar 128.5	*Apt Elev* 106′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. WARNING: EXPECT close-in obstacles. 3. CAUTION: EXPECT intensive glider activities in the vicinity of airport. 4. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory.

2200′

MSA
LAA NDB applicable over German territory only

SONEB TWO ROMEO (SONEB 2R) *[SONE2R]*
SONEB THREE SIERRA (SONEB 3S) *[SONE3S]*
VEBAK TWO ROMEO (VEBAK 2R) *[VEBA2R]*
VEBAK FOUR SIERRA (VEBAK 4S) *[VEBA4S]*
RWYS 09, 27 RNAV DEPARTURES (OVERLAY 10-3A)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

These SIDs require a minimum climb gradient of

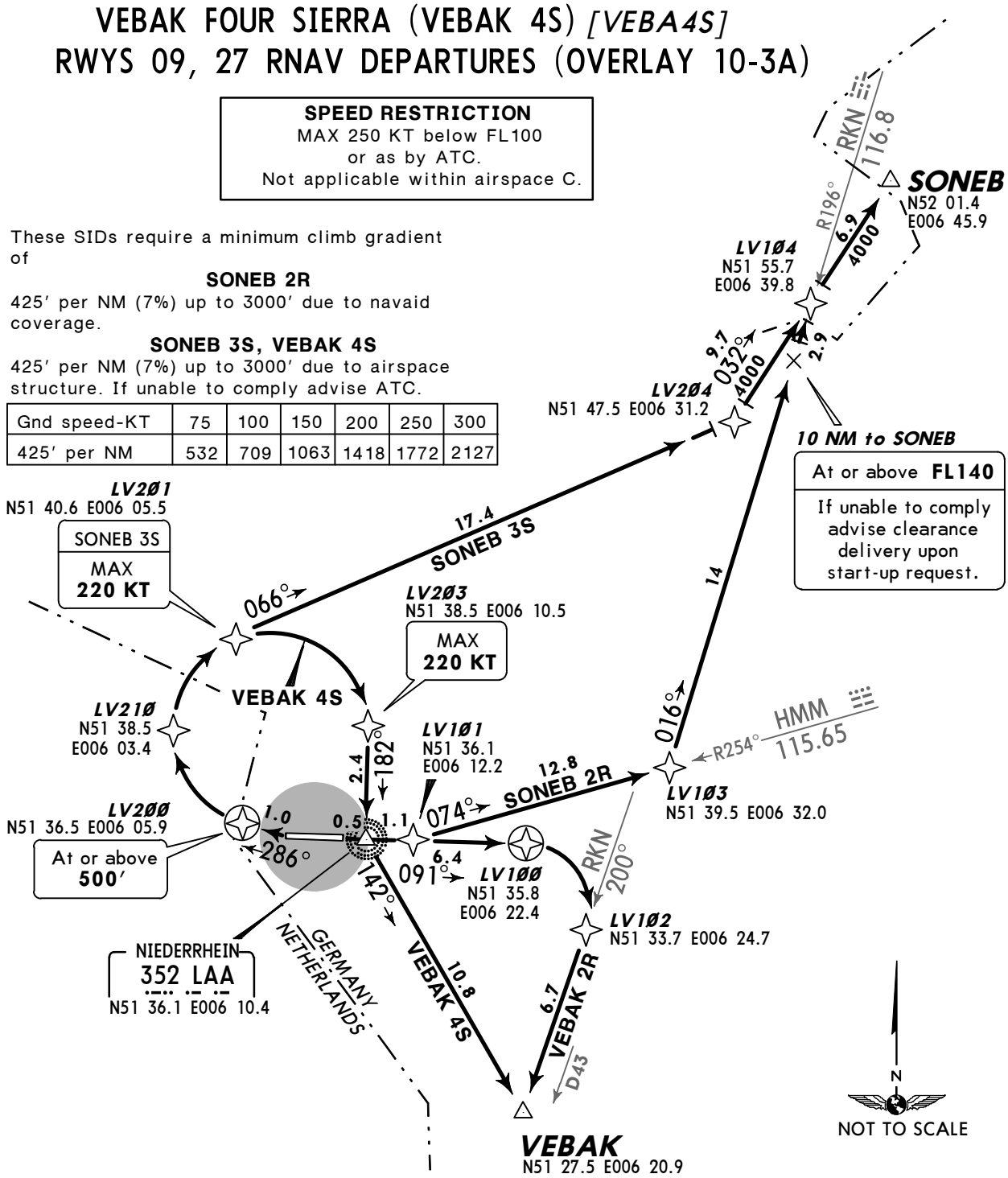
SONEB 2R

425′ per NM (7%) up to 3000′ due to navaid coverage.

SONEB 3S, VEBAK 4S

425′ per NM (7%) up to 3000′ due to airspace structure. If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127



Initial climb clearance **5000′**

SID	RWY	ROUTING
SONEB 2R ❶	**09**	(500′+) - LAA - LV101 - LV103 - LV104 - SONEB.
SONEB 3S ❶	**27**	LV200 (500′+) - LV210 - LV201 (K220-) - LV204 - SONEB.
VEBAK 2R	**09**	(500′+) - LAA - LV100 - LV102 - VEBAK.
VEBAK 4S	**27**	LV200 (500′+) - LV210 - LV201 - LV203 (K220-) - LAA - VEBAK.

❶ For flights with RFL140 or above. Other flights proceed via ERKUM.

CHANGES: RNAV SIDs renumbered & revised.

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NOISE ABATEMENT

SUMMER	**: LT minus 2 HOURS**	**= UTC (Z)**
WINTER	**: LT minus 1 HOUR**	**= UTC (Z)**

GENERAL

The following types of aircraft are authorized to use the aerodrome:

1. Aeroplanes, with the exception of:
   - aeroplane without noise certification according to ICAO Annex 16.
   - jet aeroplanes with noise certification according to ICAO Annex 16, Volume 1, Chapter 2.
   - jet aeroplanes with a maximum permissible take-off mass (MTOW) exceeding 300t.
   - military jet aeroplanes,
   - supersonic aeroplanes.
2. Aeroplanes of the type Boeing B-757
3. Rotorcraft
4. Powered gliders able to take-off unaided
5. Free balloons

Take-offs or landing clearances, as well as other clearances, issued by ATC do not automatically include permission by the Aviation Supervision Office which may be required. Exceptional permission will not be issued by ATC via radiotelephony.

Aviation Supervision Office
Tel.: (+49) 2837-666 620
Fax: (+49) 2837-666 623

NIGHT FLYING RESTRICTIONS

Flight operations are permitted between 0600-2200LT.

Between 2200-0000LT flight operations are permitted for aircraft which are employed on scheduled air services or scheduled charter services and operated for air carriers which regularly park their aircraft at Niederrhein Airport during the night or maintain approved maintenance facilities (Base-Carriers) and are

- certified according to ICAO Annex 16 Volume 1, Chapter 3 and included in the valid Bonus List (”Bonus list for departing and landing aeroplanes” of 18.02.2003 of the Federal Ministry of Traffic, Building and Urban Affairs (NfL I-83/03) of the competent Federal Ministry or certified according to ICAO Annex 16, Volume 1, Chapter 4 or according to stricter noise certification criteria or
- certified according to ICAO Annex 16, Volume 1, Chapter 4, Chapter 10 and LSL (noise protection requirements for aircraft, publications by the Federal Office of Civil Aviation (LBA) of 1.1.1991 (Federal Gazette No 54a of 19.03.1991), Nfl II-4/97) Chapter X or according to stricter noise certification criteria only as follows:
- scheduled take-offs until 2300LT.
- delayed take-offs
  - -from RWY 09 between 2300-2330LT if the scheduled take-off time is prior 2300LT,
  - -from RWY 27 between 2300-2330LT if the scheduled take-off time is prior 2300LT, as far as technical problems of the aircraft or the aeronautical engineering basic equipment are concerned or extreme meteorological conditions prevail which justify a delay of the scheduled take-off.
- scheduled landing
  - -on RWY 27 until 2330LT,
  - -on RWY 09 until 2300LT.
- delayed landings
  - -on RWY 27 between 2330-0000LT if the scheduled landing is prior 2330LT.
  - -on RWY 09 between 2330-0000LT if the scheduled landing is prior 2300LT and if delay is due to unexpected circumstances unforeseen on departure; subject to permission by the local Aviation Supervision Office.

cont’d

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NOISE ABATEMENT

NIGHT FLYING RESTRICTIONS (cont'd)

At weekends and public holidays and legal holidays in the UK and the Netherlands, flight operations are permitted only between 0800-2000LT and for aircraft which are not:

- certified according to Annex 16, Volume 1, Chapter 3 and are included in the valid Bonus List ("Bonus list for departing and landing aircraft" of 18.02.2003 of the Federal Ministry of Traffic, Building and Urban Affairs (NfL I-83/03) of the competent Federal Ministry or certified according to ICAO Annex 16, Volume 1, Chapter 4
  or according to stricter noise certification criteria or
- certified according to ICAO Annex 16, Volume 1, Chapter 4, Chapter 10 and LSL Chapter X or according to stricter noise certification criteria.

EXCEPTIONS

The following are exempt from the afore-mentioned restrictions:

- Landings of aircraft provably approaching Niederrhein Airport as alternate aerodrome for meteorological, technical or other safety reasons.
  Written proof that landings have taken place for meteorological, technical or other safety reasons shall be submitted to the local Aviation Supervision Office within 24 hours after the landing in question.
- Take-offs and landings of aircraft on disaster missions and/or aircraft rendering medical assistance as well as in other emergency cases. Take-offs, however, are subject to permission by the Aviation Supervision Office. Written proof that the flights were conducted on disaster missions and/or while rendering medical assistance as well as in other emergency cases shall be submitted to the local Aviation Supervision Office within 24 hours after the landing in question and not later than 30 minutes prior the planned take-off. In the case that these take-offs and landings are planned between 2200-0600LT PPR shall be obtained by telephone (+49) 2837 666 600) by 2100LT.

RESTRICTIONS OF FLIGHT OPERATIONS

The following restrictions apply in addition:

- flights of jet aeroplanes, propeller-driven aeroplanes and helicopters with a maximum permissible take-off mass (MTOM) exceeding 5.700 kg are prohibited as far as traffic circuit flights are concerned or touch-and-go flights of the same aircraft for training purposes with a period of less than one hour, unless routings, published as IFR arrival and departure procedures, are used. Functional check flights are exempt from this restriction after prior permission by the Aviation Supervision Office at the following times:
  -between 0800-1200LT and
  -between 1500-1900LT.

Traffic circuit flights as well as multiple approaches and departures of the same aircraft for training, exercise or inspection purposes are prohibited over the territory of the Netherlands. Multiple approaches and departures shall be understood as more than two approaches and/or departures of the same aircraft within a period of one hour beginning with the first movement.

- visual approaches or approaches in visual meteorological conditions (VMC) of IFR flights approaching the aerodrome are prohibited. Exceptions may be granted by ATC to propeller-driven aeroplanes with a maximum permissible take-off mass (MTOM) of up to 5.700 kg.
- Intersection take-offs are prohibited

REVERSE THRUST

Thrust reversal after landing is permitted only if required for safety reasons.

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NOISE ABATEMENT

RUN-UP TESTS

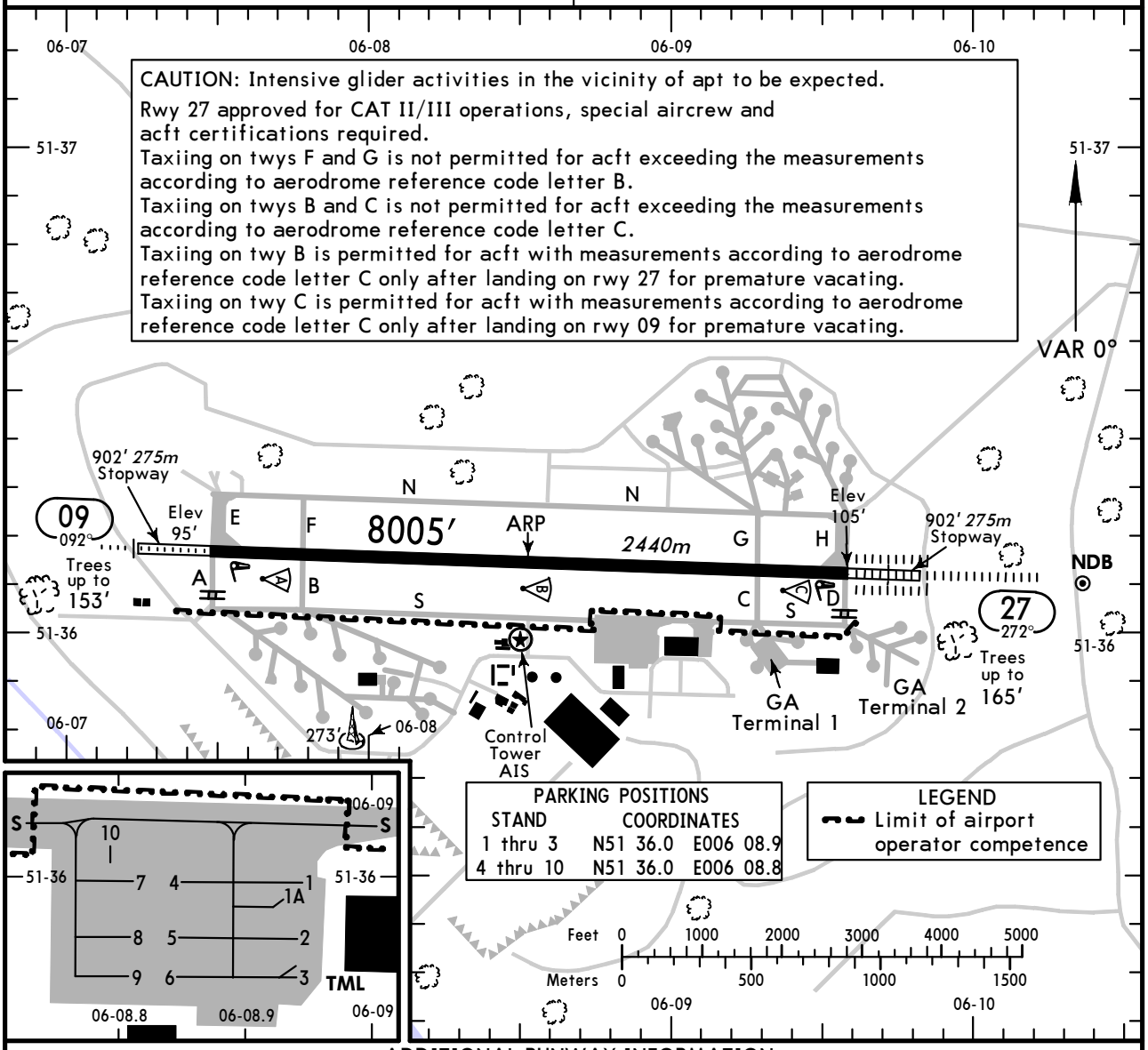
Engine test-runs and ground run-ups are permissible only after previous consent by the Aviation Supervision Office and detailed instructions from the airport operator.
As a rule, engine test-runs and ground run-ups are prohibited.

- at weekends and public holidays (and legal holidays in the UK and the Netherlands) as well as
- on workdays between 2000-0800LT.

Engine test-runs and engine ground run-ups by aircraft outside the times established above may be granted by the Aviation Supervision Office in justified cases. Permission must be given in writing.

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*ATIS	*NIEDERRHEIN Tower
124.45	129.4



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
09	HIRL *(60m)* CL *(15m)* HIALS PAPI-L (3.0°) RVR				148′ *45m*
27	HIRL *(60m)* CL *(15m)* HIALS-II TDZ PAPI-L ❶ RVR		7051′ *2149m*		

❶ angle 3.0°

Standard TAKE-OFF ❶

All Rwys
LVP must be in force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

❶ Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: Minimums.

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LOW VISIBILITY PROCEDURES (LVP)

During all-weather operations CAT II, CAT IIIA and CAT IIIB or Low Visibility Take-off:
a) unaided taxiing is only permitted on twys A, S and D,
b) the rwy may only be entered and vacated via twys A and D,
c) twys B, C, E, F, N, G and H shall not be used,
d) after landing, pilots may, in individual cases, expect backtrack on the rwy in accordance with special instructions issued by the local air navigation service provider,
e) acft may only enter or leave the GA Terminal 1 and GA Terminal 2 areas when following a follow-me car,
f) taxiing on the apron is only permitted when following a follow-me car (to/from junction twy S/apron)

Lighted stop bars are installed at the CAT II/III holding positions on twys A and D to prevent unauthorised entry onto the rwy and to mark the critical/sensitive areas. Taxiing across the stop bars is strictly prohibited, when they are switched on.

Arriving acft shall stop at the junction of twy S to the apron until they are met by a follow-me car and led to the parking position.

Additional radiotelephony procedures during all-weather operations CAT II, CAT IIIA and CAT IIIB or Low Visibility Take-off:
a) Acft taxiing from the apron to take-off will be instructed to report their direction of movement upon reaching the twy centerline of twy S.
(Example: CALL SIGN TAXI VIA SIERRA EASTBOUND/WESTBOUND)
b) Acft taxiing to take-off will be instructed to report reaching the appropriate CAT II/III holding position.
(Example: CALL SIGN HOLDING AT CAT II/III HOLDING POINT)
c) Departing acft will be instructed to report rolling.
(Example: CALL SIGN REPORT ROLLING)
d) Departing acft will be instructed to report airborne.
(Example: CALL SIGN REPORT AIRBORNE)
e) After landing, acft will be instructed to report vacating the green-and-yellow coded twy centerline on twys A and D.
(Example: CALL SIGN REPORT COLOUR-CODED CENTERLINE VACATED)

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STRAIGHT-IN RWY		A	B	C	D
09	NDB	**680′**(585′)	**680′**(585′)	**680′**(585′)	**680′**(585′)
		R1400m	**R1500m**	**R1600m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m
27	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**205′**(100′)	**205′**(100′)	**205′**(100′)	**205′**(100′)
		RA105′ R300m	**RA105′ R300m**	**RA105′ R300m**	**RA105′ R300m**
	ILS	**305′**(200′)	**305′**(200′)	**305′**(200′)	**305′**(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**560′**(455′)	**560′**(455′)	**560′**(455′)	**560′**(455′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**610′**(505′)	**610′**(505′)	**610′**(505′)	**610′**(505′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

TAKE-OFF RWY 09, 27

	LVP must be in Force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

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EDLV/NRN
NIEDERRHEIN

JEPPESEN
2 SEP 11 (11-1)

NIEDERRHEIN, GERMANY
ILS or LOC Rwy 27

*ATIS	LANGEN Radar (APP)	*NIEDERRHEIN Tower
124.45	128.5	129.4

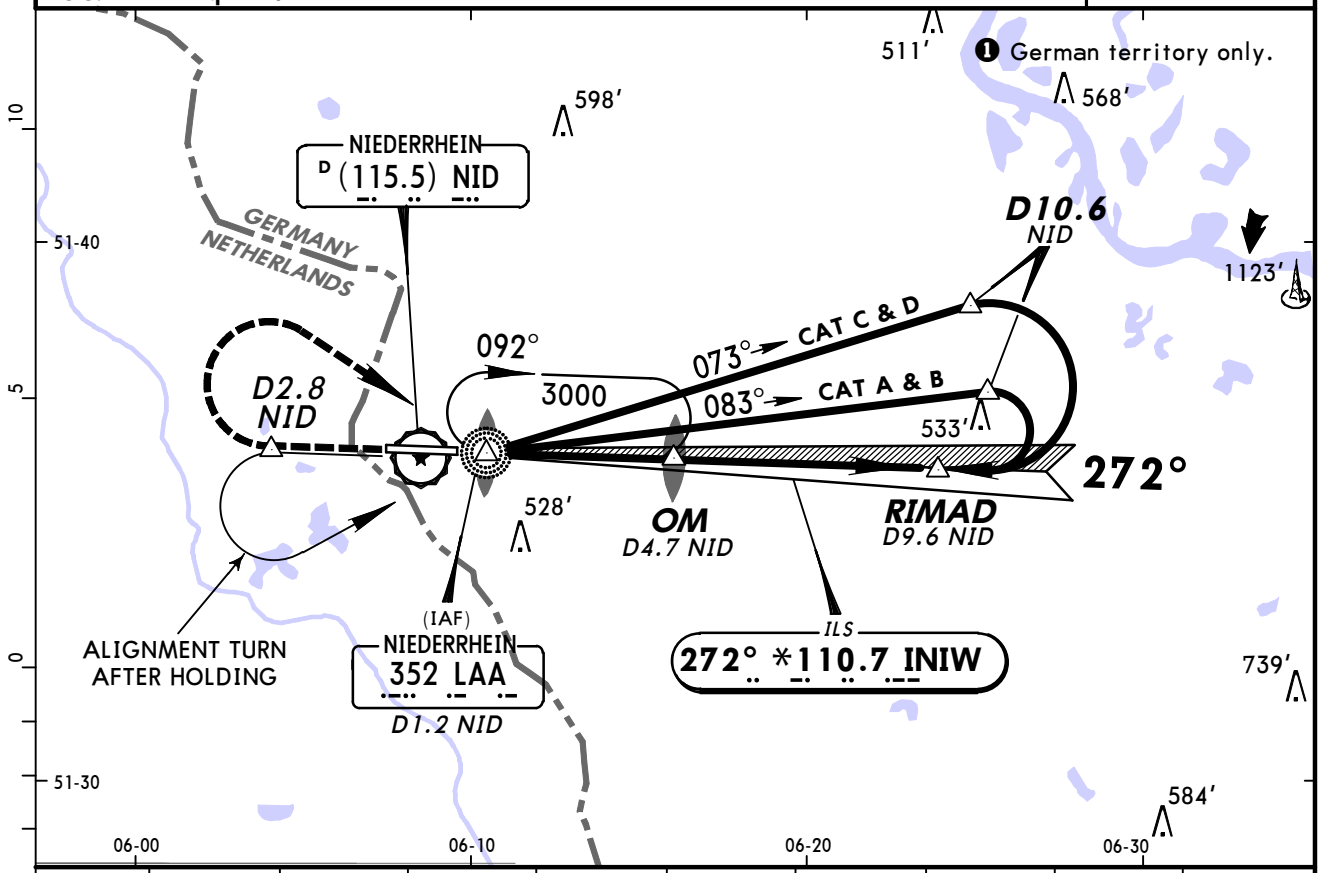
BRIEFING STRIP™

LOC	Final	GS	ILS	Apt Elev 106′
INIW	Apch Crs	OM	DA(H)	RWY 105′
*110.7	272°	1430′ (1325′)	305′ (200′)	

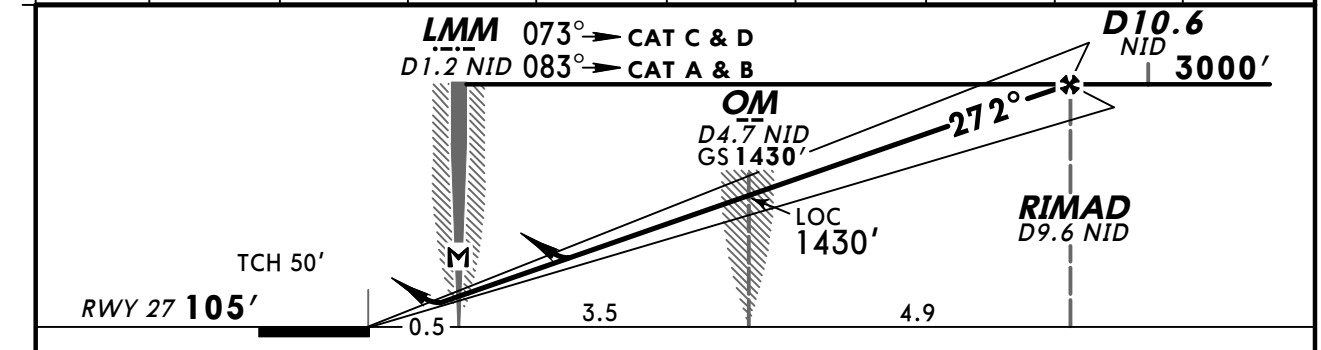
MISSED APCH: Climb STRAIGHT AHEAD to D2.8 NID, then turn RIGHT to NDB climbing to 3000′. Climb in holding to 4000′.

Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
LOC: **DME required.**

2200′ ❶
MSA LAA NDB



LOC (GS out)	NID DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	570′	890′	1210′	1530′	1850′	2170′	2480′	2800′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at LMM/D1.2 NID						

HIALS-II
PAPI
D2.8 NID

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **27**

	ILS DA(H) 305′ (200′)			LOC (GS out) DA(H) 560′ (455′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

CHANGES: Minimums.

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EDLV/NRN
NIEDERRHEIN

JEPPESEN
2 SEP 11 (11-1A)

NIEDERRHEIN, GERMANY
CAT II ILS Rwy 27

*ATIS	LANGEN Radar (APP)	*NIEDERRHEIN Tower
124.45	128.5	129.4

LOC	Final Apch Crs	GS	CAT II ILS	
INIW		OM	RA 105′	Apt Elev 106′
*110.7	272°	1430′ (1325′)	DA(H) 205′ (100′)	RWY 105′

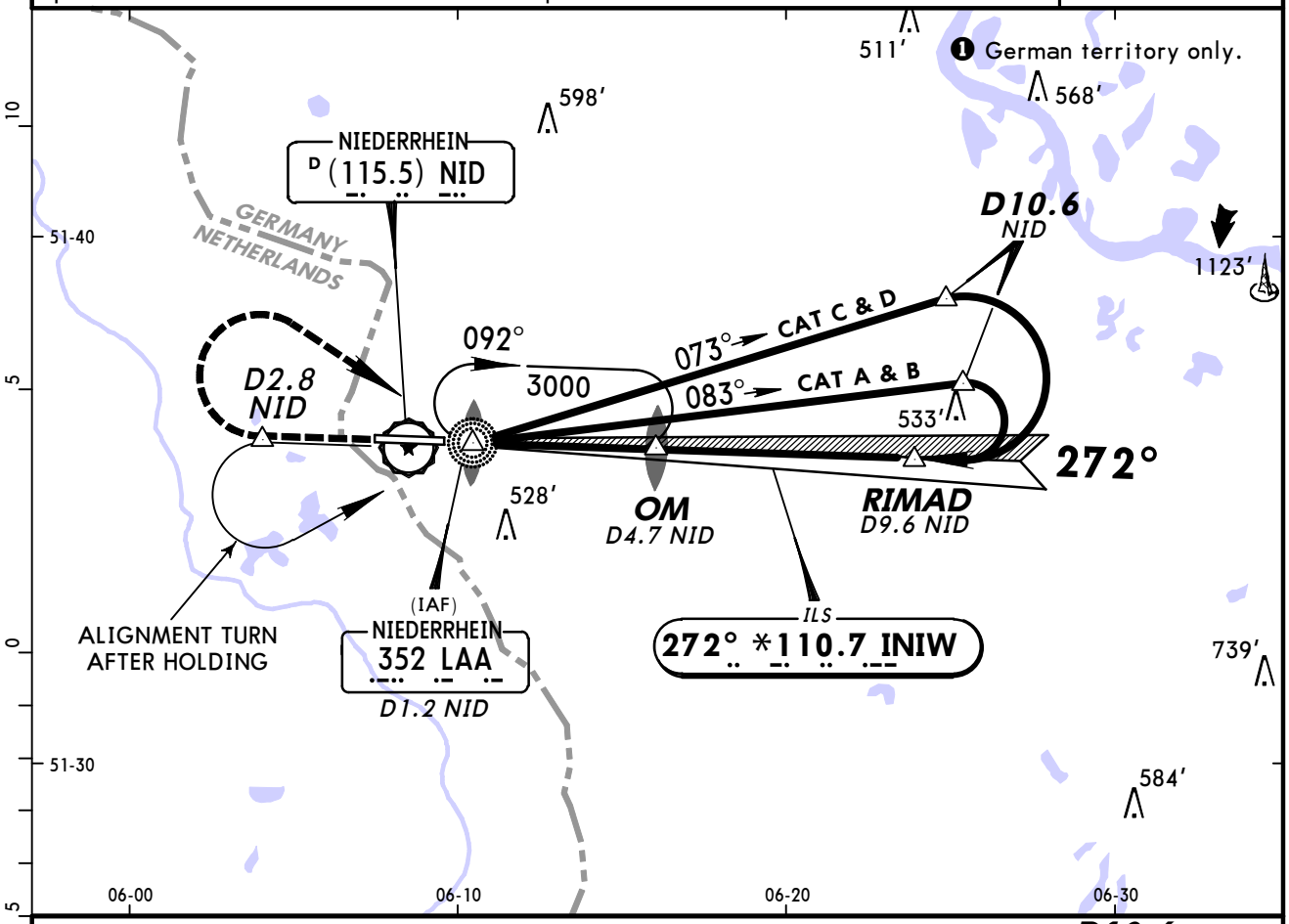
MISSED APCH: Climb STRAIGHT AHEAD to D2.8 NID, then turn RIGHT to NDB climbing to 3000′. Climb in holding to 4000′.

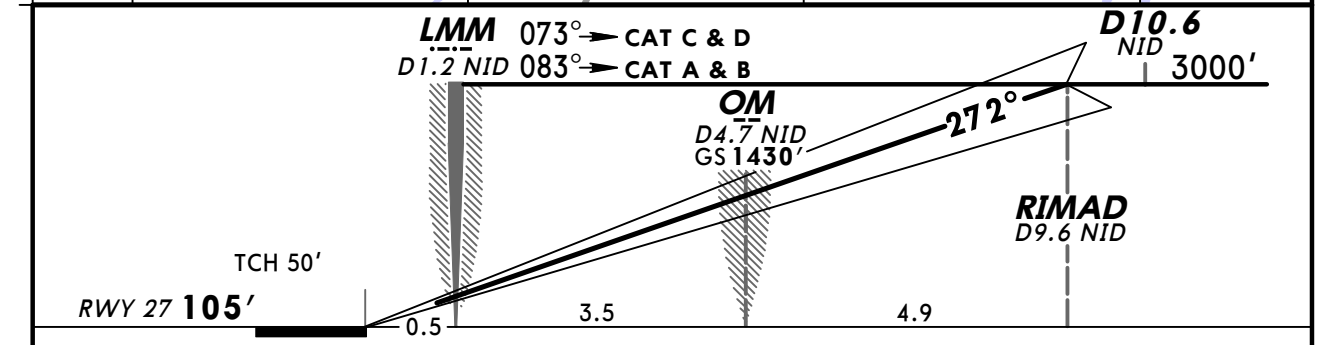
Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Aircraft Certification Required.

2200′ [1]
MSA LAA NDB

BRIEFING STRIP™

[1] German territory only.





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

HIALS-II
PAPI

D2.8
NID

Standard

STRAIGHT-IN LANDING RWY **27**
CAT II ILS

ABCD
RA 105′
DA(H) **205′** (100′)

RVR 300m [1]

[1] Operators applying U.S. Ops Specs: Autoland or HGS required below 350m.

PANS OPS 4

CHANGES: None.

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BRIEFING STRIP™

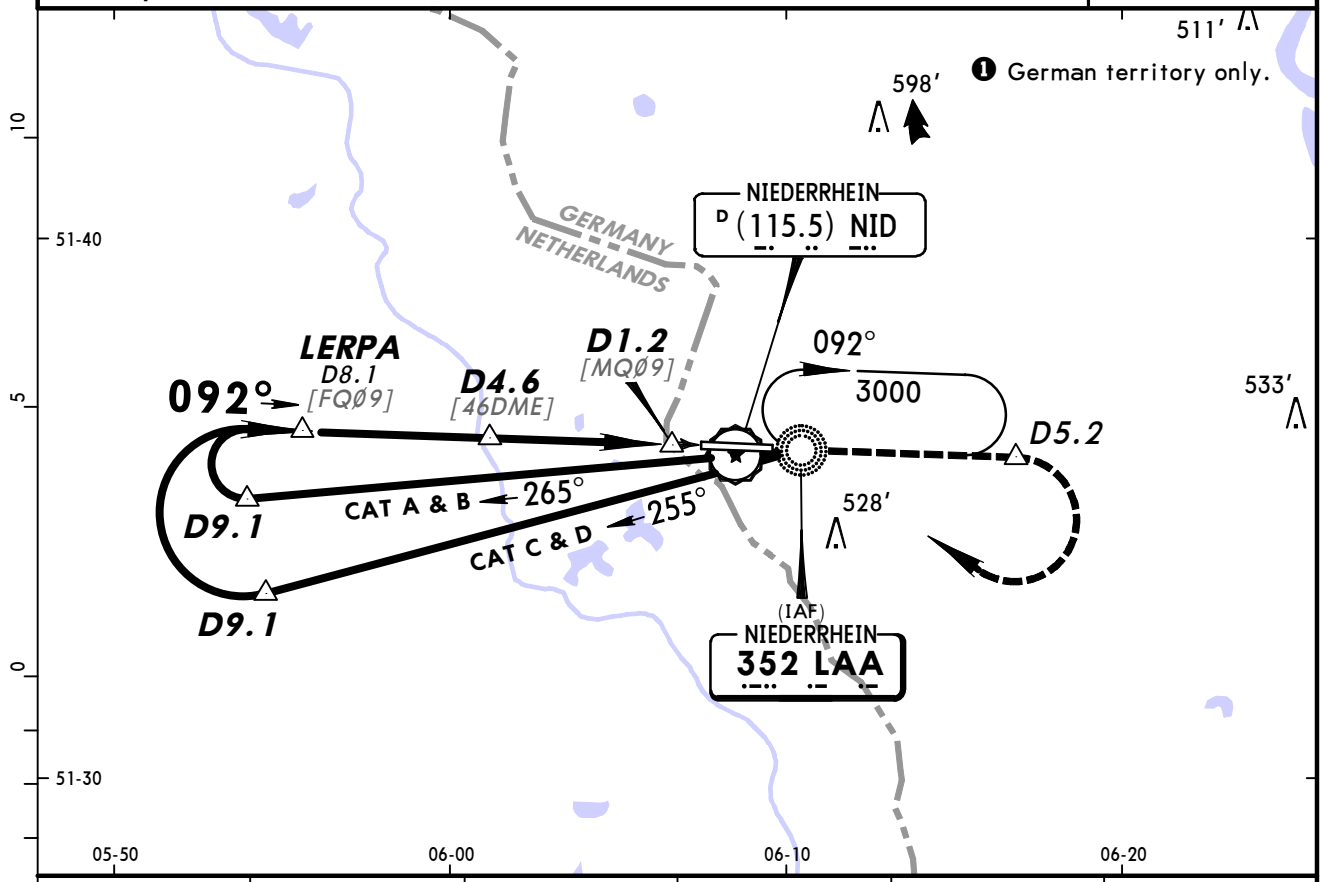
*ATIS	LANGEN Radar (APP)	*NIEDERRHEIN Tower
124.45	128.5	129.4

NDB LAA	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
352	092°	LERPA 2500′ (2405′)	680′ (585′)	106′ / 95′

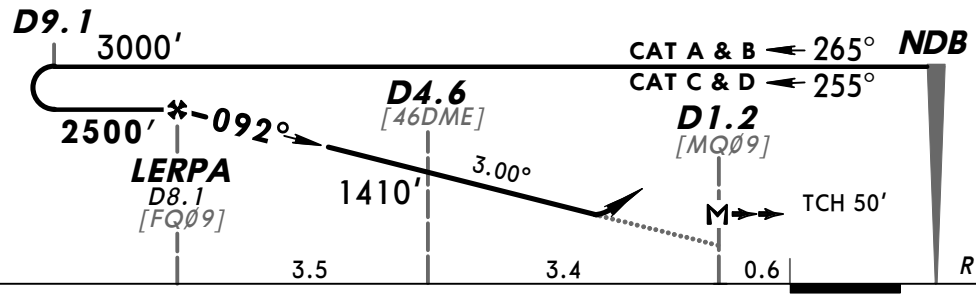
MISSED APCH: Climb STRAIGHT AHEAD to D5.2, then turn RIGHT to NDB climbing to 4000′.

Alt Set: hPa Rwy Elev: 3 hPa Trans level: By ATC Trans alt: 5000′
DME required.

2200′ ❶
MSA LAA NDB



NID DME	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2160′	1840′	1520′	1200′	880′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.2							

HIALS
PAPI
D5.2

Standard STRAIGHT-IN LANDING RWY **09**

DA(H) **680′** (585′)

	ALS out
A B	RVR 1500m
C	CMV 2300m
D	CMV 2400m

PANS OPS 4

CHANGES: None.

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EDLV/NRN
NIEDERRHEIN

JEPPESEN
2 SEP 11 (16-2)

NIEDERRHEIN, GERMANY
NDB Rwy 27

*ATIS	LANGEN Radar (APP)	*NIEDERRHEIN Tower
124.45	128.5	129.4

BRIEFING STRIP™

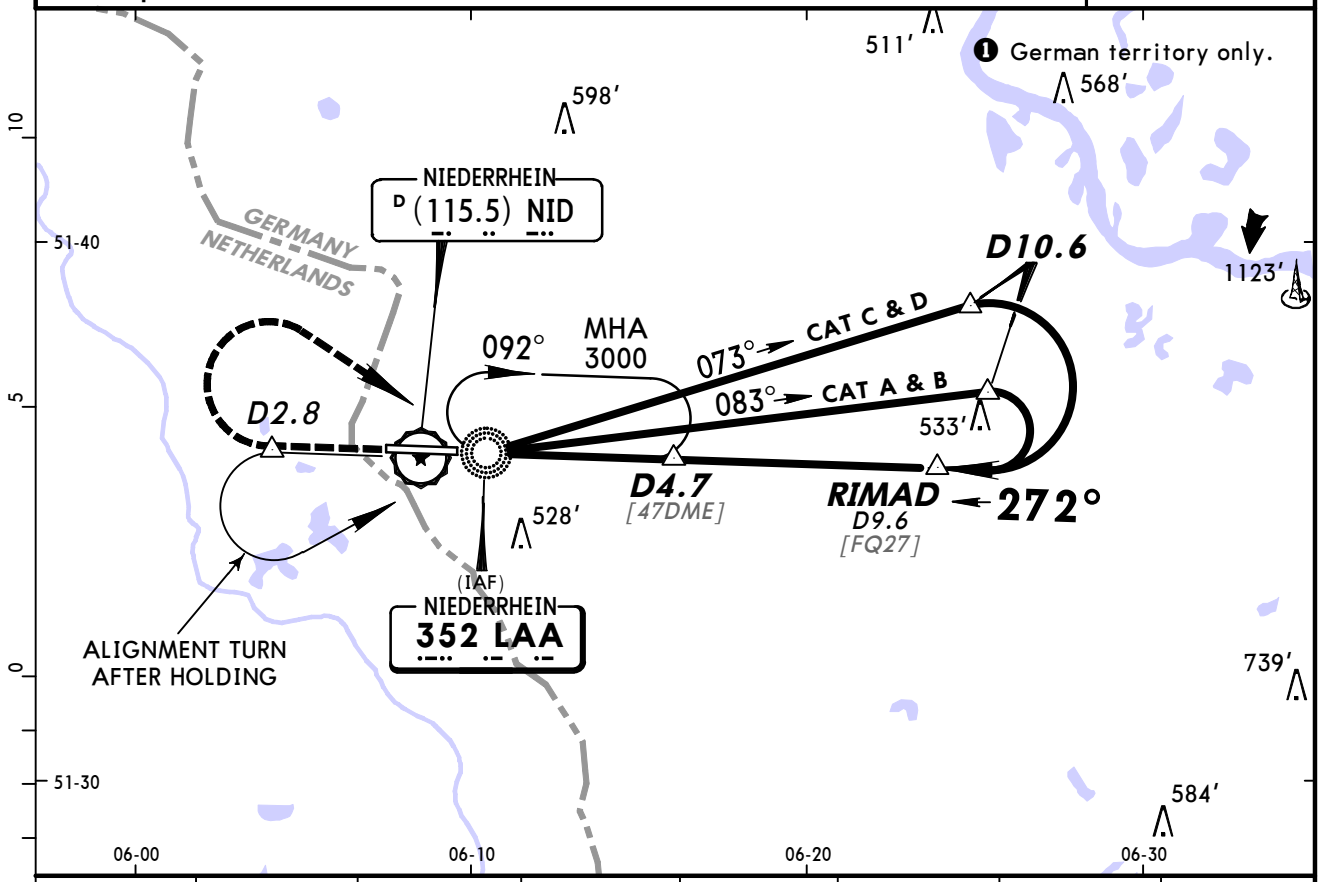
NDB LAA	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
352	272°	RIMAD 3000′ (2895′)	610′ (505′)	Apt Elev 106′ / RWY 105′

MISSED APCH: Climb STRAIGHT AHEAD to D2.8 NID, then turn RIGHT to NDB climbing to 3000′. Climb in holding to 4000′.

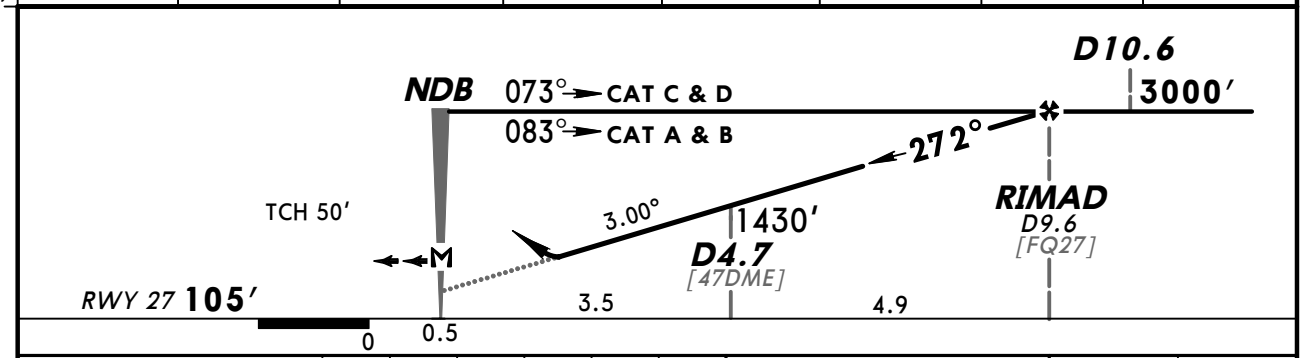
Alt Set: hPa | Rwy Elev: 4 hPa | Trans level: By ATC | Trans alt: 5000′

DME required.

2200′ ❶
MSA LAA NDB



NID DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	890′	1210′	1530′	1850′	2170′	2480′	2800′



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

HIALS-II
PAPI

D2.8

Standard

STRAIGHT-IN LANDING RWY 27

DA(H) 610′ (505′)

		ALS out
A B	RVR 1500m	RVR 1500m
C D	RVR 1600m	CMV 2400m

PANS OPS 4

CHANGES: Minimums.

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General Information

Location: Dortmund Deu
IATA Code: DTM
Lat/Long: N51° 31.1' E007° 36.7'
Elevation: 424 ft

Airport Use: Public
Magnetic Variation: 1.2°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0620 Z
Sunset: 1705 Z,

Runway Information

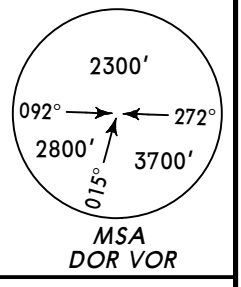
Runway: 06
Length x Width: 6562 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 418 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 984 ft

Runway: 24
Length x Width: 6562 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 401 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 984 ft

Communication Information

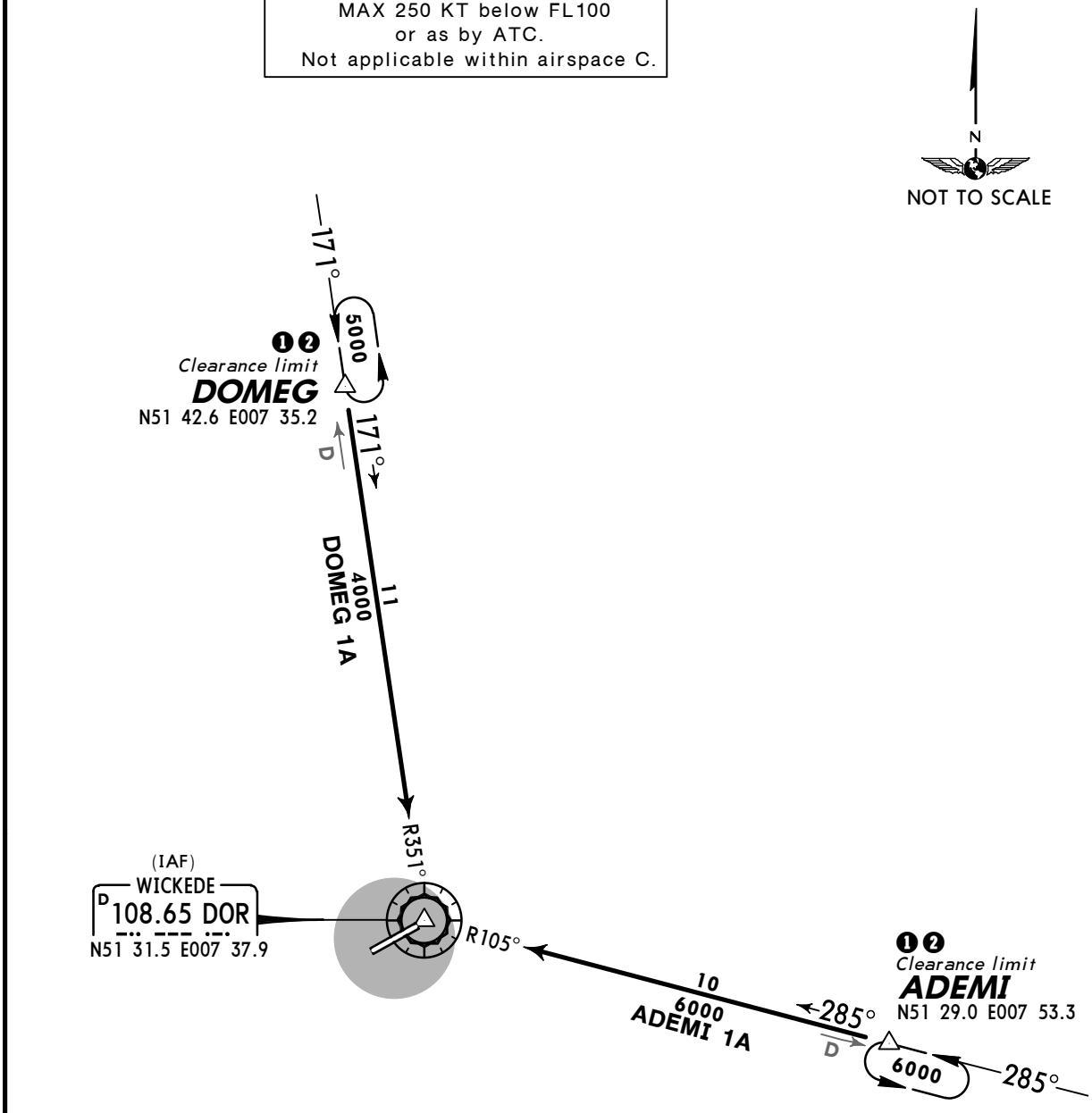
ATIS 125.125
Dortmund Ground Tower 121.825
Dortmund Tower 134.175

*ATIS	Apt Elev	Alt Set: hPa (IN on request)
125.12	424′	Trans level: By ATC Trans alt: 5000′

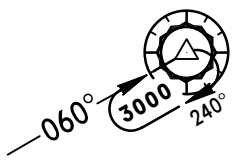


ADEMI ONE ALFA (ADEMI 1A) *[ADEM1A]*
DOMEG ONE ALFA (DOMEG 1A) *[DOME1A]*
RWYS 06, 24 ARRIVALS

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



HOLDING OVER DOR



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

❶ In case of communication failure proceed to DOR for standard approach.

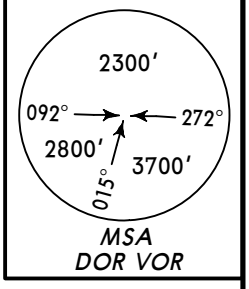
❷ Radar vectoring will be provided onto final approach track.

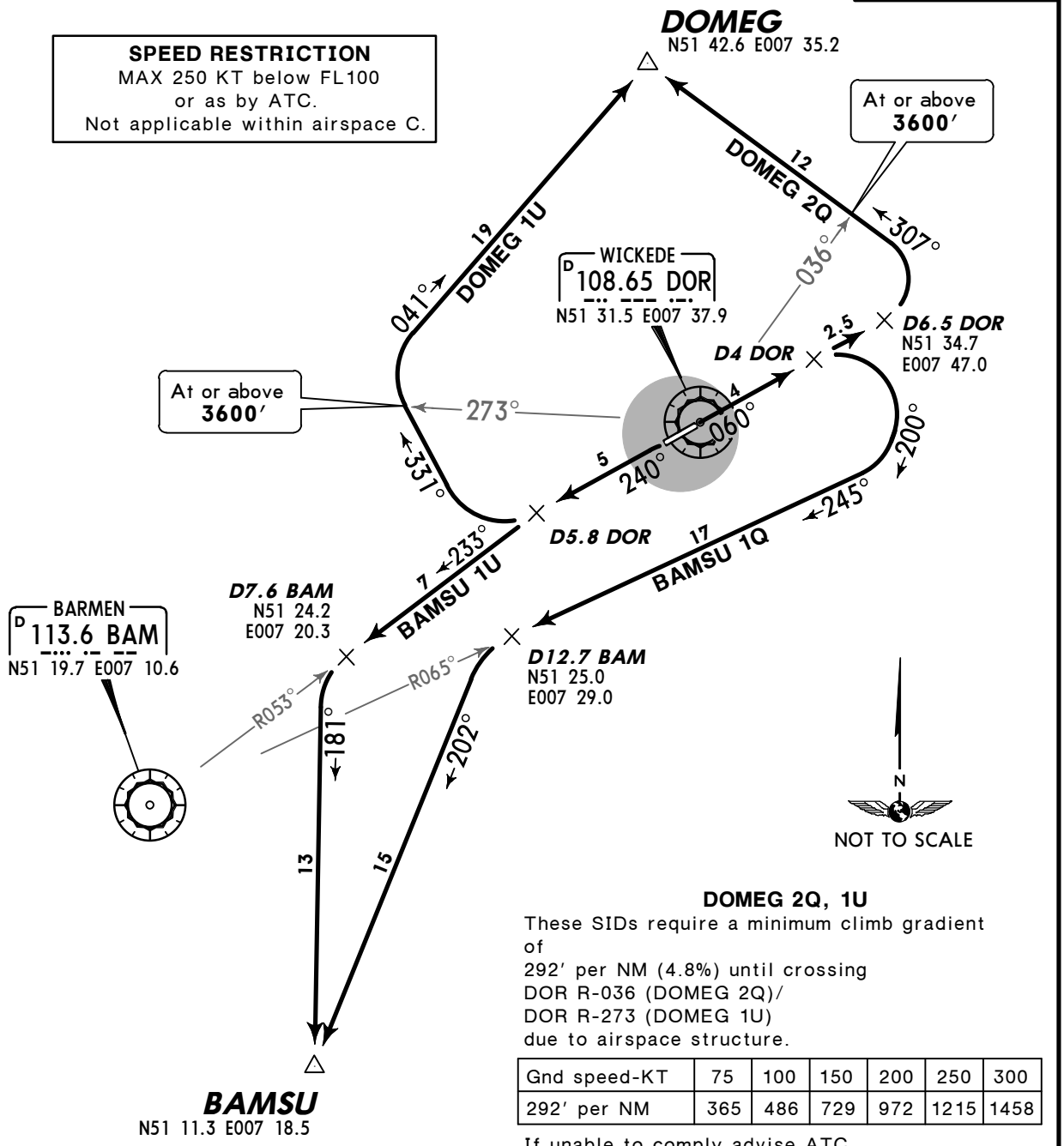
CHANGES: STAR DOM 1A replaced by STAR DOMEG 1A.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
125.22	424′	**1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

BAMSU ONE QUEBEC (BAMSU 1Q)
BAMSU ONE UNIFORM (BAMSU 1U)
DOMEG TWO QUEBEC (DOMEG 2Q)
DOMEG ONE UNIFORM (DOMEG 1U)
RWYS 06, 24 DEPARTURES





DOMEG 2Q, 1U

These SIDs require a minimum climb gradient of
292′ per NM (4.8%) until crossing
DOR R-036 (DOMEG 2Q)/
DOR R-273 (DOMEG 1U)
due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
292′ per NM	365	486	729	972	1215	1458

If unable to comply advise ATC.

Initial climb clearance **5000′**

SID	RWY	ROUTING
BAMSU 1Q	**06**	Intercept DOR R-060 to D4 DOR, turn RIGHT, 200° track, intercept BAM R-065 inbound to D12.7 BAM ❶turn LEFT, 202° track to BAMSU.
BAMSU 1U	**24**	Intercept DOR R-240 to D5.8 DOR, turn LEFT, intercept BAM R-053 inbound to D7.6 BAM ❷turn LEFT, 181° track to BAMSU.
DOMEG 2Q	**06**	Intercept DOR R-060 to D6.5 DOR, turn LEFT ❸, 307° track to DOMEG.
DOMEG 1U	**24**	Intercept DOR R-240 to D5.8 DOR, turn RIGHT, 331° track, when passing DOR R-273 turn RIGHT ❹, 041° track to DOMEG.

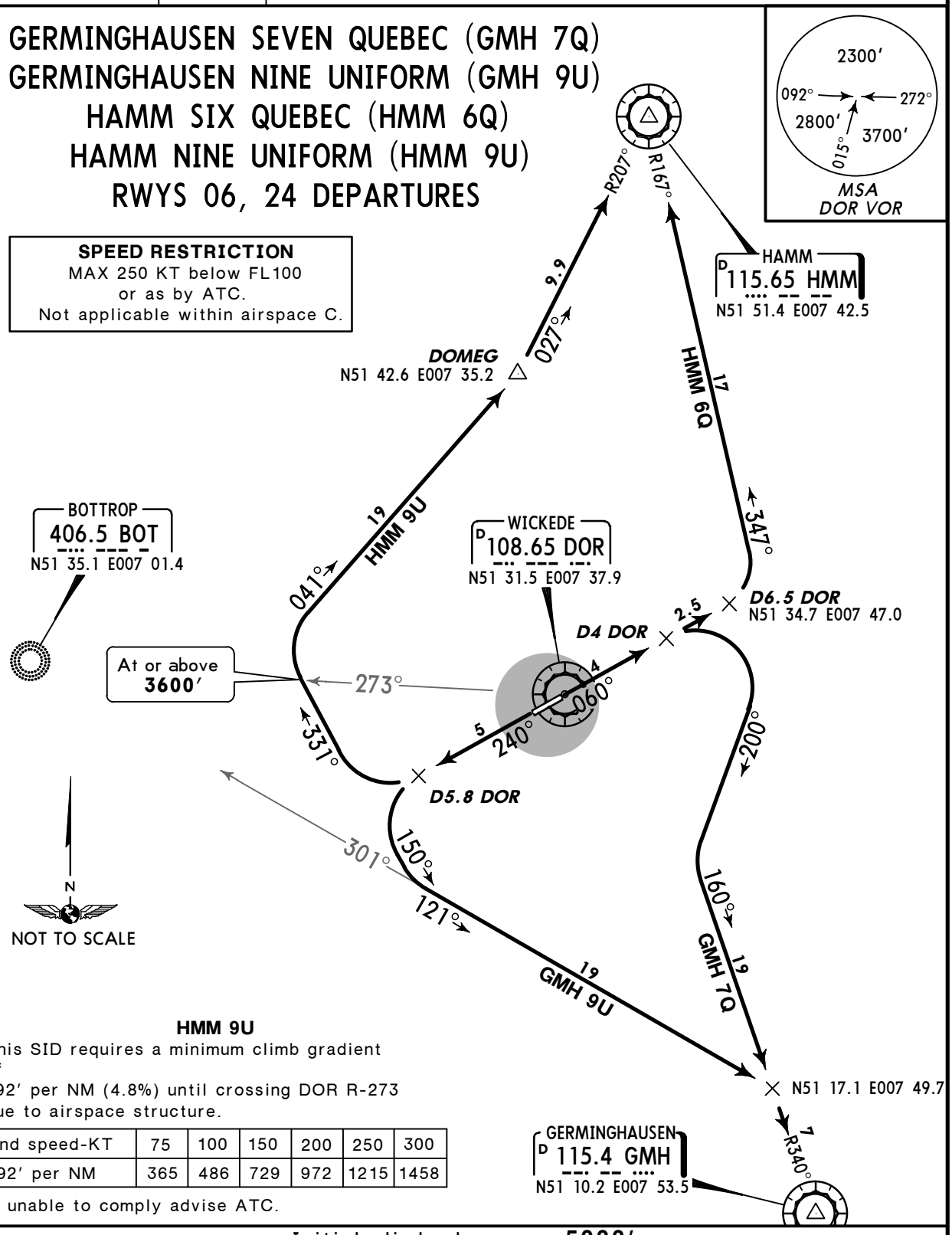
After D12.7 BAM ❶/ D7.6 BAM ❷/ DOR R-036 ❸/ DOR R-273 ❹ BRNAV equipment necessary.

CHANGES: SID DOMEG 1Q renumbered 2Q.

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LANGEN Radar	Apt Elev	
125.22	424′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

GERMINGHAUSEN SEVEN QUEBEC (GMH 7Q)
GERMINGHAUSEN NINE UNIFORM (GMH 9U)
HAMM SIX QUEBEC (HMM 6Q)
HAMM NINE UNIFORM (HMM 9U)
RWYS 06, 24 DEPARTURES



HMM 9U

This SID requires a minimum climb gradient of
292′ per NM (4.8%) until crossing DOR R-273 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
292′ per NM	365	486	729	972	1215	1458

If unable to comply advise ATC.

Initial climb clearance **5000′**

SID	RWY	ROUTING
GMH 7Q	**06**	Intercept DOR R-060 to D4 DOR, turn RIGHT, 200° track, intercept GMH R-340 inbound to GMH.
GMH 9U	**24**	Intercept DOR R-240 to D5.8 DOR, turn LEFT, 150° track, intercept 121° bearing from BOT, intercept GMH R-340 inbound to GMH.
HMM 6Q	**06**	Intercept DOR R-060 to D6.5 DOR, turn LEFT, intercept HMM R-167 inbound to HMM.
HMM 9U	**24**	Intercept DOR R-240 to D5.8 DOR, turn RIGHT 331° track, when passing DOR R-273 turn RIGHT ❶, 041° track to DOMEG, turn LEFT, intercept HMM R-207 inbound to HMM.

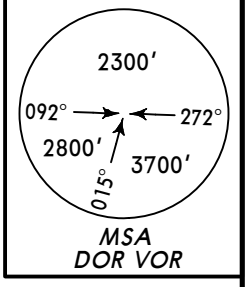
❶ After DOR R-273 BRNAV equipment necessary.

CHANGES: None.

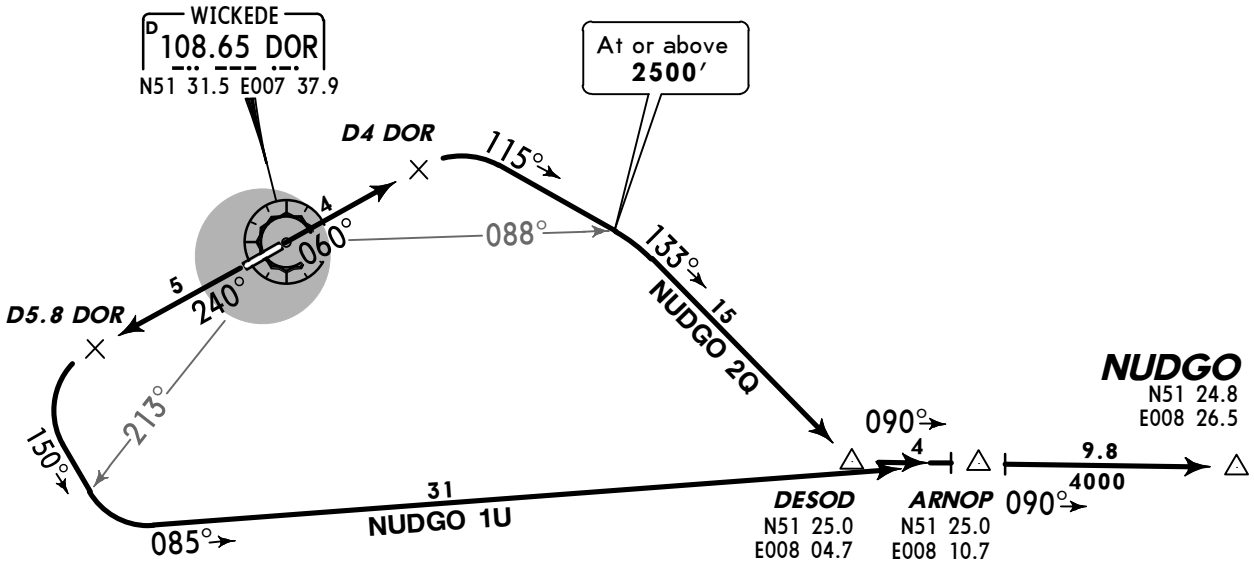
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LANGEN Radar	Apt Elev	Trans level: By ATC Trans alt: 5000′
125.22	424′	**1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

NUDGO TWO QUEBEC (NUDGO 2Q)
NUDGO ONE UNIFORM (NUDGO 1U)
RWYS 06, 24 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





NUDGO 2Q
This SID requires a minimum climb gradient of
292′ per NM (4.8%) until crossing **5000′**
due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
292′ per NM	365	486	729	972	1215	1458

If unable to comply advise ATC.

Initial climb clearance **5000′**

SID	RWY	ROUTING
NUDGO 2Q	**06**	Intercept DOR R-060 to D4 DOR, turn RIGHT, 115° track, when passing DOR R-088 turn RIGHT ❶, 133° track to DESOD, turn LEFT, 090° track via ARNOP to NUDGO.
NUDGO 1U	**24**	Intercept DOR R-240 to D5.8 DOR, turn LEFT, 150° track, when passing DOR R-213 ❷, turn LEFT, 085° track to ARNOP, turn RIGHT, 090° track to NUDGO.

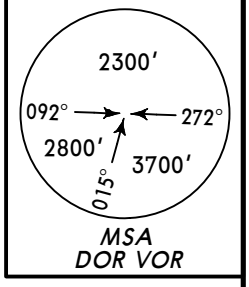
After passing DOR R-088 ❶ / DOR R-213 ❷ BRNAV equipment necessary.

CHANGES: None.

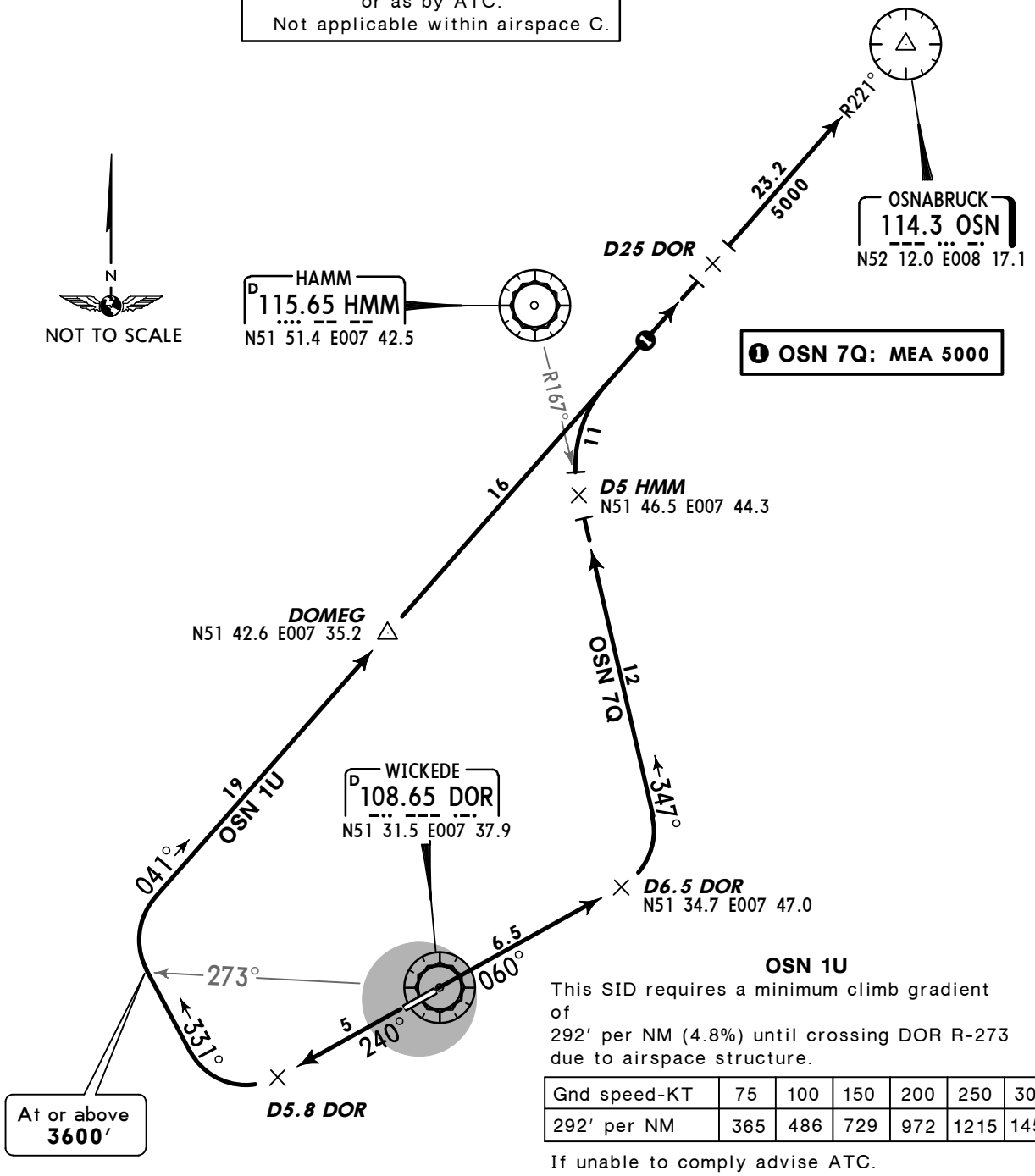
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LANGEN Radar 125.22	*Apt Elev* 424′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

OSNABRUCK SEVEN QUEBEC (OSN 7Q)
OSNABRUCK ONE UNIFORM (OSN 1U)
RWYS 06, 24 DEPARTURES



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



OSN 1U
This SID requires a minimum climb gradient of
292′ per NM (4.8%) until crossing DOR R-273 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
292′ per NM	365	486	729	972	1215	1458

If unable to comply advise ATC.

Initial climb clearance **5000′**

SID	RWY	ROUTING
OSN 7Q	**06**	Intercept DOR R-060 to D6.5 DOR, turn LEFT, intercept HMM R-167 inbound to D5 HMM, turn RIGHT, intercept OSN R-221 inbound o OSN.
OSN 1U	**24**	Intercept DOR R-240 to D5.8 DOR, turn RIGHT, 331° track, when passing DOM R-273 turn RIGHT ❷, intercept OSN R-221 inboubond via DOMEG to OSN.

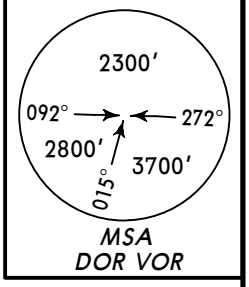
❷ After passing DOR R-273 BRNAV equipment necessary.

CHANGES: SID OSN 9U renumbered 1U.

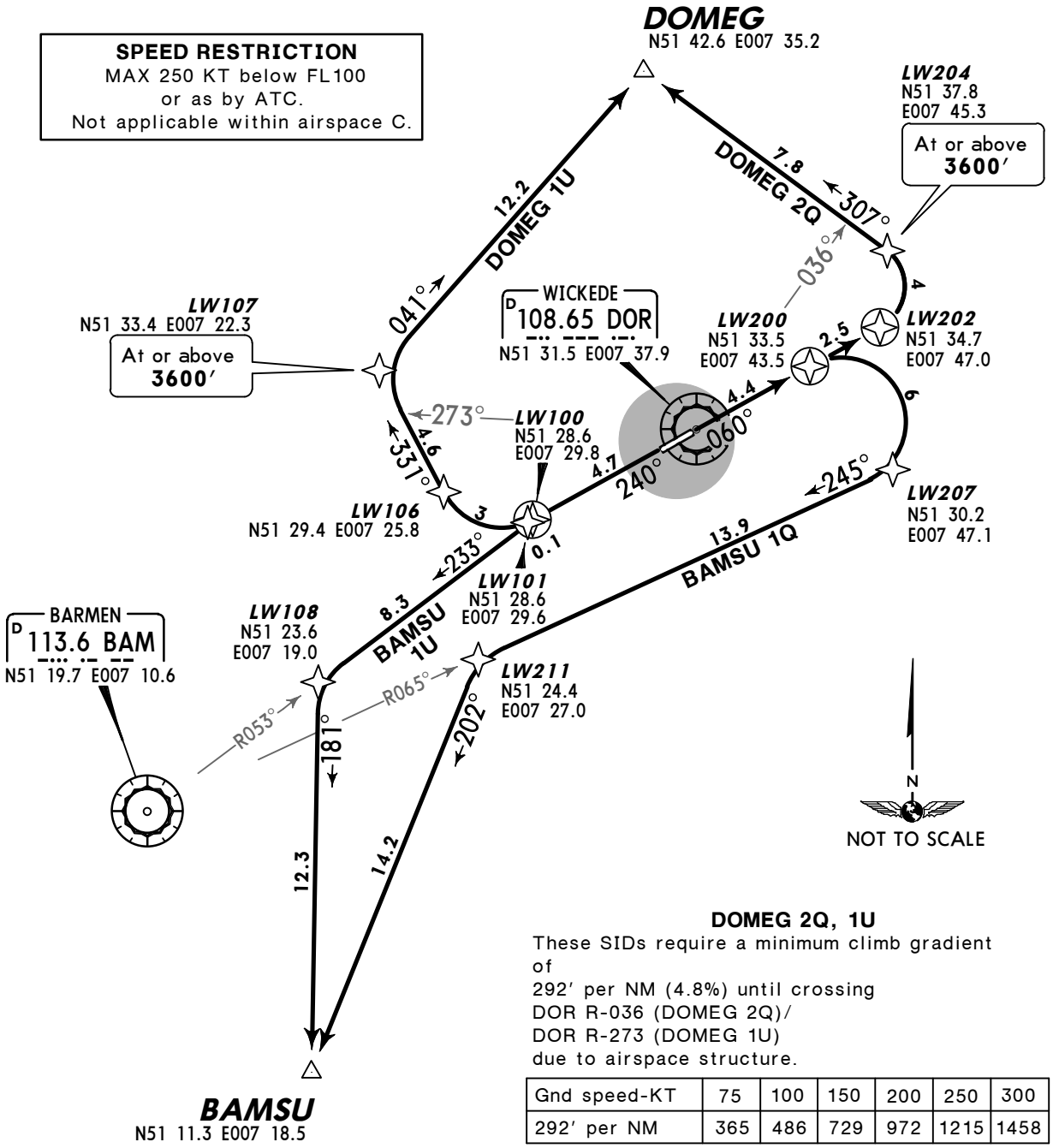
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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
125.22	424′	**1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

BAMSU ONE QUEBEC (BAMSU 1Q) *[BAMS1Q]*
BAMSU ONE UNIFORM (BAMSU 1U) *[BAMS1U]*
DOMEG TWO QUEBEC (DOMEG 2Q) *[DOME2Q]*
DOMEG ONE UNIFORM (DOMEG 1U) *[DOME1U]*
RWYS 06, 24 RNAV DEPARTURES
(OVERLAY 10-3)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



DOMEG 2Q, 1U
These SIDs require a minimum climb gradient of
292′ per NM (4.8%) until crossing
DOR R-036 (DOMEG 2Q)/
DOR R-273 (DOMEG 1U)
due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
292′ per NM	365	486	729	972	1215	1458

If unable to comply advise ATC.

Initial climb clearance **5000′**

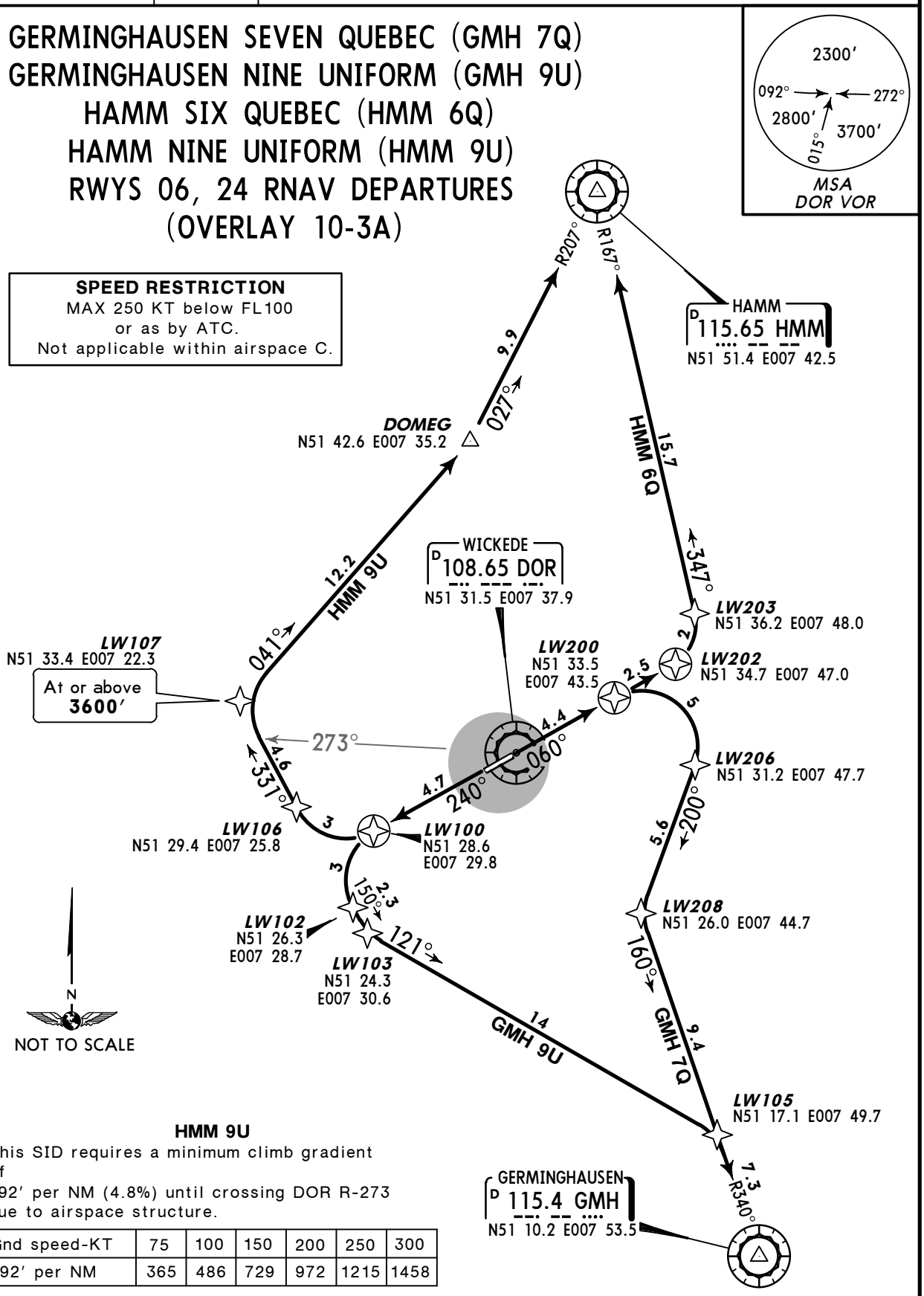
SID	RWY	ROUTING
BAMSU 1Q	**06**	**(900′+)** - LW200 - LW207 - LW211 - BAMSU.
BAMSU 1U	**24**	**(900′+)** - LW101 - LW108 - BAMSU.
DOMEG 2Q	**06**	**(900′+)** - LW202 - LW204 **(3600′+)** - DOMEG.
DOMEG 1U	**24**	**(900′+)** - LW100 - LW106 - LW107 **(3600′+)** - DOMEG.

CHANGES: RNAV SID DOMEG 1Q renumbered 2Q.

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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
125.22	424′	**1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

GERMINGHAUSEN SEVEN QUEBEC (GMH 7Q)
GERMINGHAUSEN NINE UNIFORM (GMH 9U)
HAMM SIX QUEBEC (HMM 6Q)
HAMM NINE UNIFORM (HMM 9U)
RWYS 06, 24 RNAV DEPARTURES
(OVERLAY 10-3A)



HMM 9U

This SID requires a minimum climb gradient of
292′ per NM (4.8%) until crossing DOR R-273 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
292′ per NM	365	486	729	972	1215	1458

If unable to comply advise ATC.

Initial climb clearance **5000′**

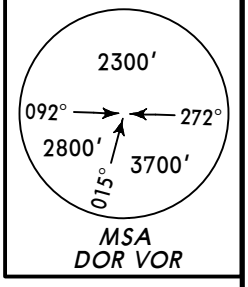
SID	RWY	ROUTING
GMH 7Q	**06**	**(900′+)** - LW200 - LW206 - LW208 - GMH.
GMH 9U	**24**	**(900′+)** - LW100 - LW102 - LW103 - LW105 - GMH.
HMM 6Q	**06**	**(900′+)** - LW202 - LW203 - HMM.
HMM 9U	**24**	**(900′+)** - LW100 - LW106 - LW107 **(3600′+)** - DOMEG - HMM.

CHANGES: None.

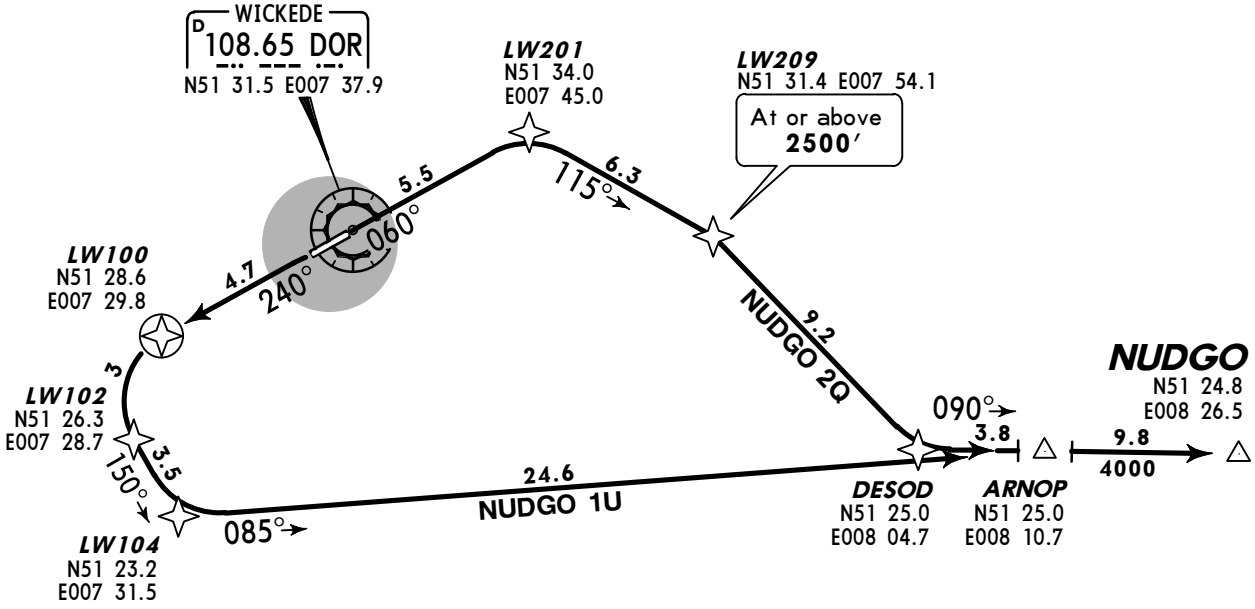
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LANGEN Radar	Apt Elev	
125.22	424′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

NUDGO TWO QUEBEC (NUDGO 2Q) *[NUDG2Q]*
NUDGO ONE UNIFORM (NUDGO 1U) *[NUDG1U]*
RWYS 06, 24 RNAV DEPARTURES
(OVERLAY 10-3B)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





NUDGO 2Q
This SID requires a minimum climb gradient of
292′ per NM (4.8%) until crossing **5000′**
due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
292′ per NM	365	486	729	972	1215	1458

If unable to comply advise ATC.

Initial climb clearance **5000′**

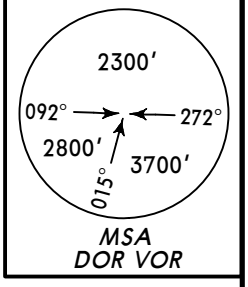
SID	RWY	ROUTING
NUDGO 2Q	**06**	**(900′+)** - LW201 - LW209 **(2500′+)** - DESOD - ARNOP - NUDGO.
NUDGO 1U	**24**	**(900′+)** - LW100 - LW102 - LW104 - ARNOP - NUDGO.

CHANGES: None.

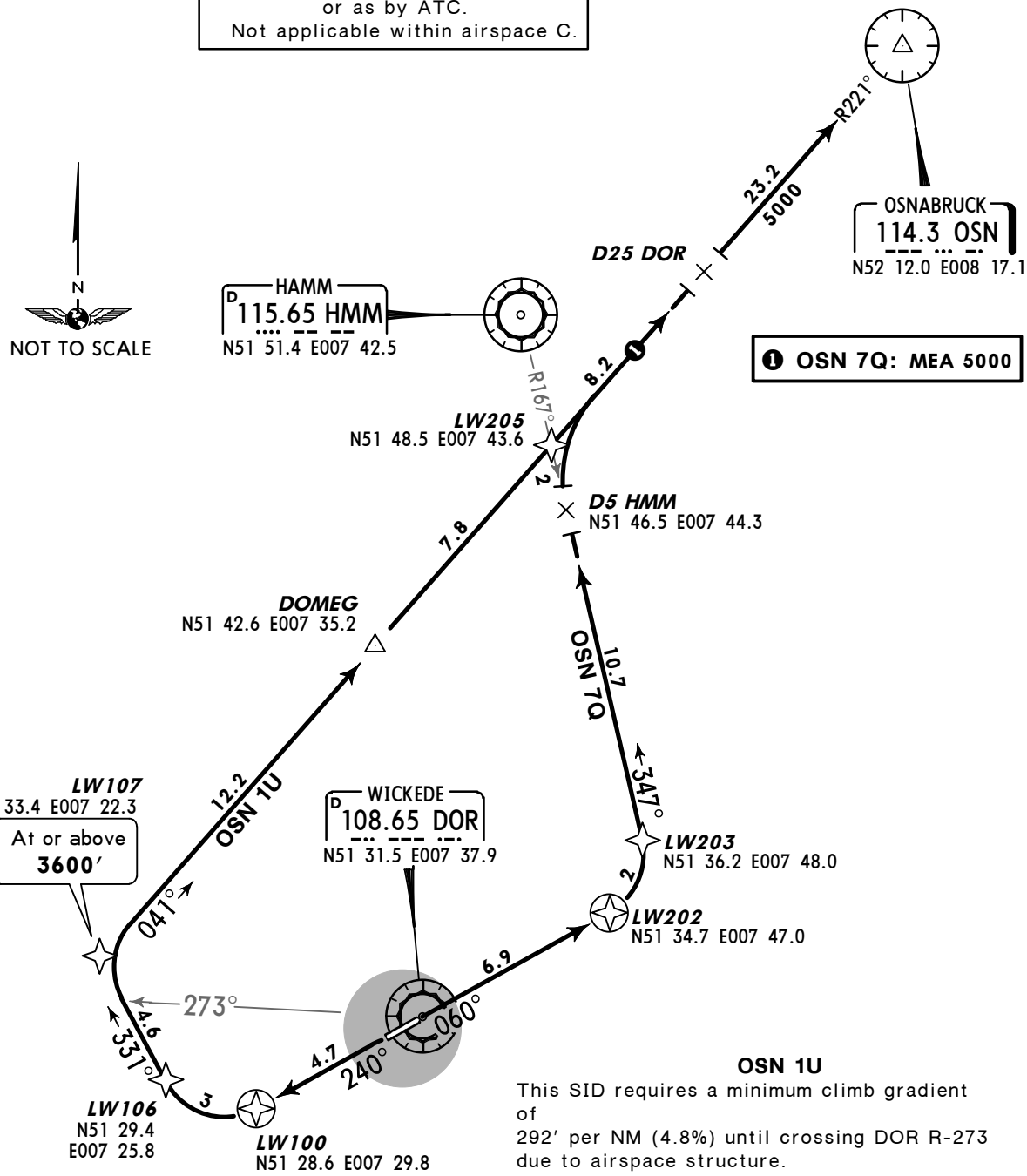
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LANGEN Radar 125.22	*Apt Elev* 424′	Trans level: By ATC Trans alt: 5000′ **1.** Contact LANGEN Radar immediately after take-off. **2.** SIDs are also noise abatement procedures. Strict adherence within the limits of aircraft performance is mandatory.

OSNABRUCK SEVEN QUEBEC (OSN 7Q)
OSNABRUCK ONE UNIFORM (OSN 1U)
RWYS 06, 24 RNAV DEPARTURES
(OVERLAY 10-3C)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



OSN 1U
This SID requires a minimum climb gradient of
292′ per NM (4.8%) until crossing DOR R-273 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
292′ per NM	365	486	729	972	1215	1458

If unable to comply advise ATC.

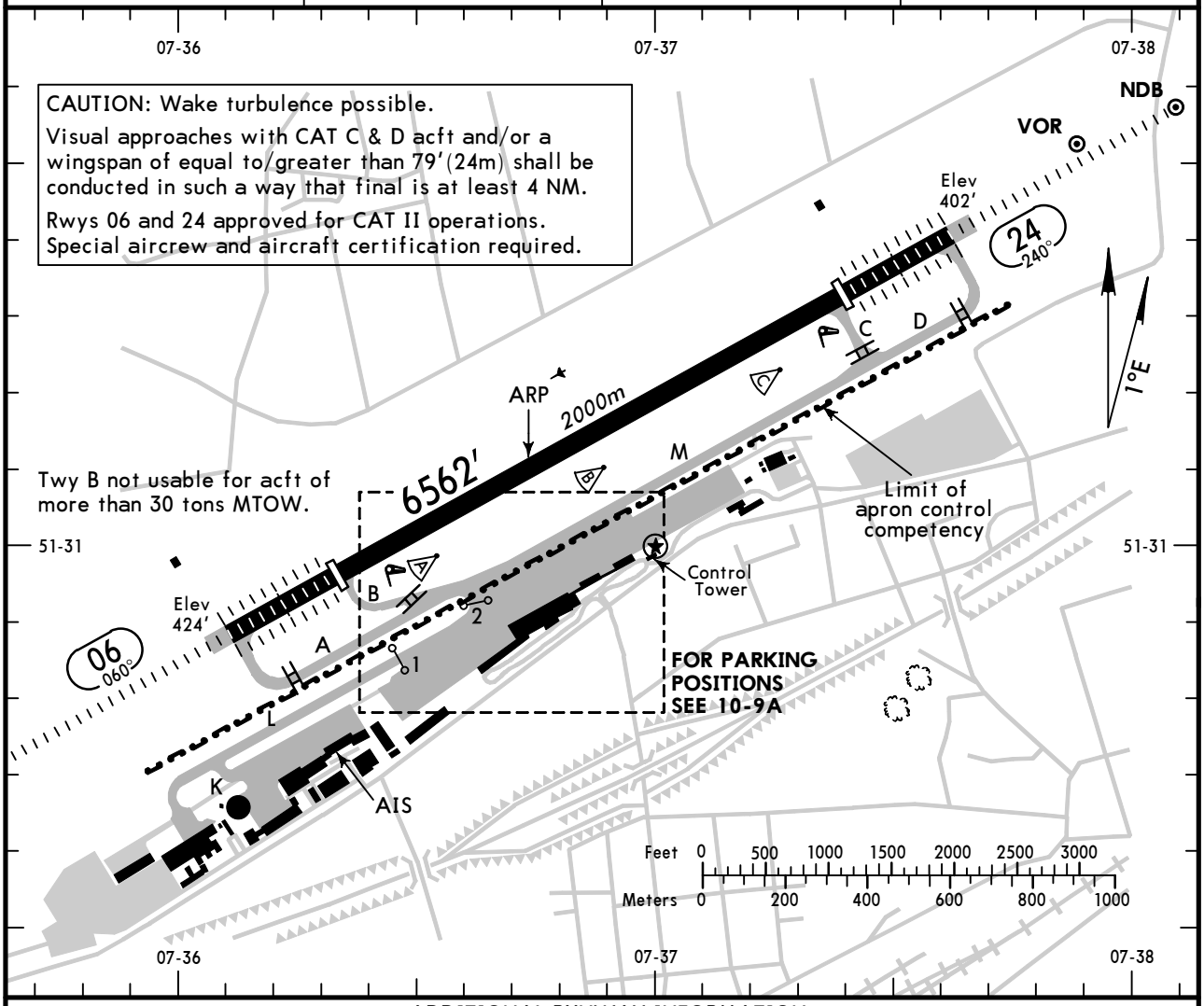
Initial climb clearance **5000′**

SID	RWY	ROUTING
OSN 7Q	**06**	**(900′+)** - LW202 - LW203 - LW205 - OSN.
OSN 1U	**24**	**(900′+)** - LW100 - LW106 - LW107 **(3600′+)** - DOMEG - OSN.

CHANGES: RNAV SID OSN 9U renumbered 1U.

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*ATIS	*DORTMUND Ground	*Tower	LANGEN Radar (Dep)
125.12	121.82	134.17	125.22



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
06 ❶ 24	HIRL CL *(15m)* ALSF-II TDZ REIL PAPI-L ❷ RVR	5577′ *1700m*	4454′ *1358m* 4522′ *1378m*	❸	148′ *45m*

❶ Anti-skid layer.

❷ angle 3.0°

❸ TAKE-OFF RUN AVAILABLE

RWY 06:
From rwy head 6562′ (2000m)
twy B int 5577′ (1700m)

RWY 24:
From rwy head 6562′ (2000m)
twy C int 5577′ (1700m)

LOW VISIBILITY PROCEDURE

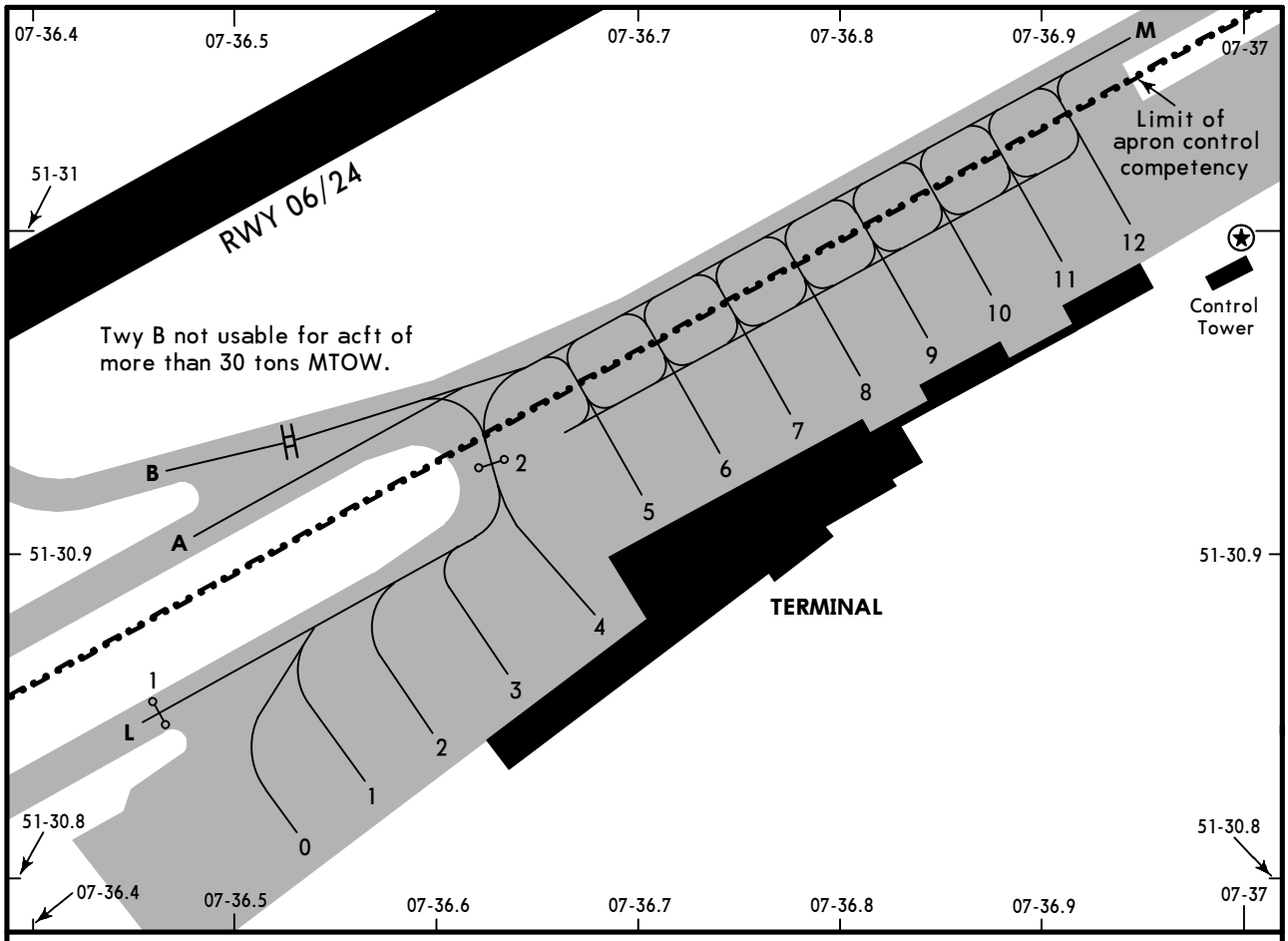
Low Visibility Take-Off Procedures (LVTO) as well as all-weather operations CAT II are available for both take-off directions by TWR.
Taxiing to/from rwy will generally be conducted via twys A, D and M only. Twy C may be used on express orders from TWR only. Twy B is closed (no centerline available). Twy L (west of Stop 1) and twy K may be used only when guided by "Follow Me". With visual ranges of less than 200m, acft in the apron area will be guided by "Follow Me" (from/to junction A/M and/or M/apron north in front of the TWR). For take-off run, the approach lighting, the green lights of the displaced threshold, the red sidelights and the TDZ lights will be switched off; the white centerline will be switched on from the beginning of the rwy up to the displaced threshold.

Standard TAKE-OFF 1

	LVP must be in Force: Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

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INS COORDINATES

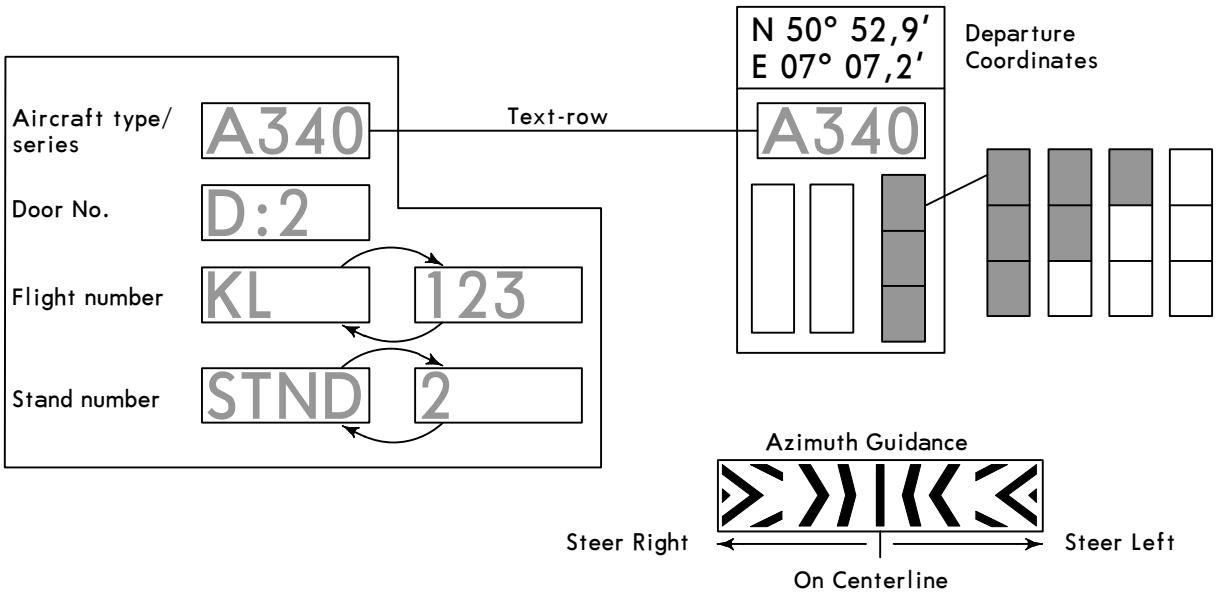
STAND No.	COORDINATES	STAND No.	COORDINATES
0	N51 30.8 E007 36.5	8, 9	N51 31.0 E007 36.8
1, 2	N51 30.8 E007 36.6	10, 11, 12	N51 31.0 E007 36.9
3	N51 30.9 E007 36.6		
4, 5, 6	N51 30.9 E007 36.7		
7	N51 30.9 E007 36.8		

VISUAL DOCKING GUIDANCE SYSTEM "APIS"

Available for stands 0 thru 4.

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

- Intercept the centerline and watch the azimuth guidance display.
- Check that the correct aircraft type/series is displayed on the APIS display unit.
- Do not enter the stand if display shows "STOP" or wrong aircraft type/series.



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DORTMUND, GERMANY

DORTMUND

STRAIGHT-IN RWY		A	B	C	D
06	CAT 2 ILS	**518**′(100′)	**518**′(100′)	**518**′(100′)	**525**′(107′)
		RA94′ R300m	**RA94′ R300m**	**RA94′ R300m**	**RA100′R300m**
	ILS	**618**′(200′)	**618**′(200′)	**618**′(200′)	**622**′(204′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**850**′(432′)	**850**′(432′)	**850**′(432′)	**850**′(432′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**810**′(392′)	**810**′(392′)	**810**′(392′)	**810**′(392′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**850**′(432′)	**850**′(432′)	**850**′(432′)	**850**′(432′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	VOR	**920**′(502′)	**920**′(502′)	**920**′(502′)	**920**′(502′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**840**′(422′)	**840**′(422′)	**840**′(422′)	**840**′(422′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
24	CAT 2 ILS	**501**′(100′)	**501**′(100′)	**505**′(104′)	**518**′(117′)
		RA100′R300m	**RA100′R300m**	**RA104′R300m**	**RA111′R300m**
	ILS	**601**′(200′)	**601**′(200′)	**601**′(200′)	**601**′(200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**850**′(449′)	**850**′(449′)	**850**′(449′)	**850**′(449′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**660**′(259′)	**660**′(259′)	**670**′(269′)	**690**′(289′)
		R800m	**R800m**	**R800m**	**R1200m**
	ALS out	R1500m	R1500m	R1600m	R1800m
	RNAV (LNAV)	**790**′(389′)	**790**′(389′)	**790**′(389′)	**790**′(389′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	VOR	**900**′(499′)	**900**′(499′)	**900**′(499′)	**900**′(499′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB	**840**′(439′)	**840**′(439′)	**840**′(439′)	**840**′(439′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m

TAKE-OFF RWY 06, 24

Approved Operators	LVP must be in Force					
	HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: New page.

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EDLW/DTM
DORTMUND

JEPPESEN
6 AUG 10 (11-1)

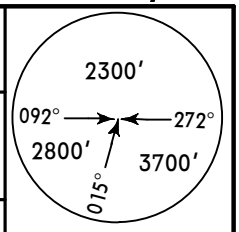
DORTMUND, GERMANY
ILS or LOC Rwy 06

*ATIS	LANGEN Radar (APP)	*DORTMUND Tower Within 25 NM up to 4000' AAL	*Ground
125.12	125.22	134.17	121.82

BRIEFING STRIP™

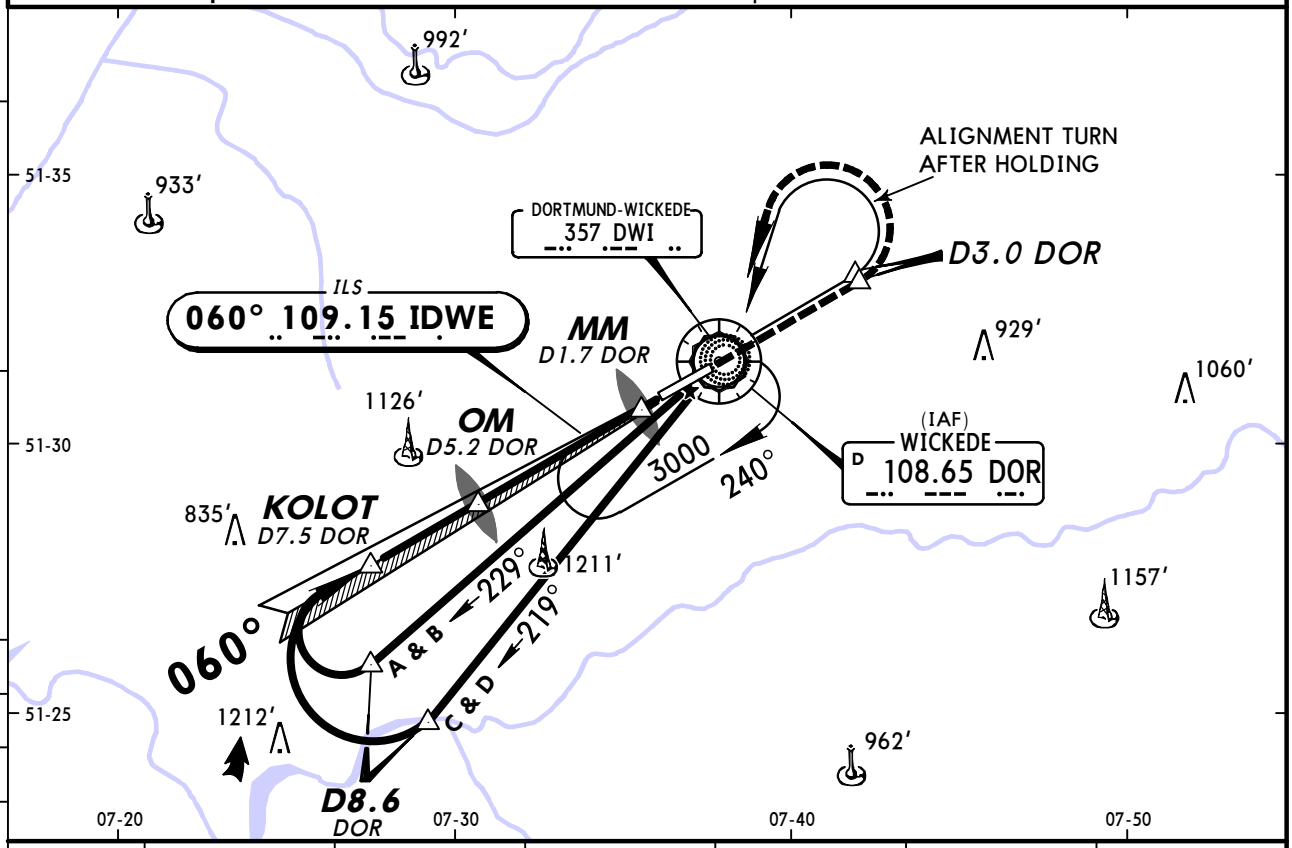
LOC	Final	GS	ILS	
IDWE	Apch Crs	OM	DA(H)	Apt Elev 425'
109.15	060°	1780'(1362')	Refer to Minimums	RWY 418'

MISSED APCH: Climb STRAIGHT AHEAD to D3.0 DOR, then turn LEFT to VOR climbing to 3000'.

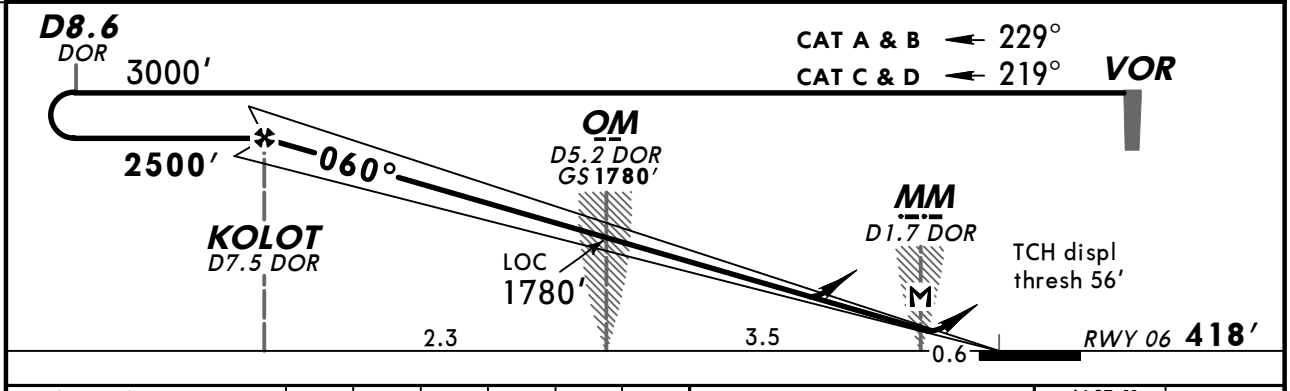


Alt Set: hPa (IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000'

1. LOC: **DME required.** 2. GS unusable outside 10 NM from displaced threshold.



LOC (GS out)	DOR DME	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	2360'	2040'	1720'	1400'	1080'



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.7 DOR						

ALSF-II
REIL
PAPI

D3.0
DOR

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY**06**

	ILS			LOC (GS out)	
	DA(H) ABC: **618'**(200') D: **622'**(204')			DA(H) **850'**(432')	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1300m	RVR 1500m
B					
C					RVR 2000m
D					

CHANGES: Minimums.

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EDLW/DTM
DORTMUND

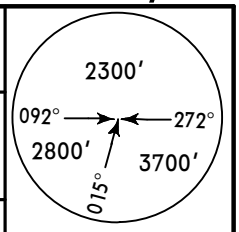
JEPPESEN
6 AUG 10 (11-1A)

DORTMUND, GERMANY
CAT II ILS Rwy 06

*ATIS	LANGEN Radar (APP)	*DORTMUND Tower Within 25 NM up to 4000' AAL	*Ground
125.12	125.22	134.17	121.82

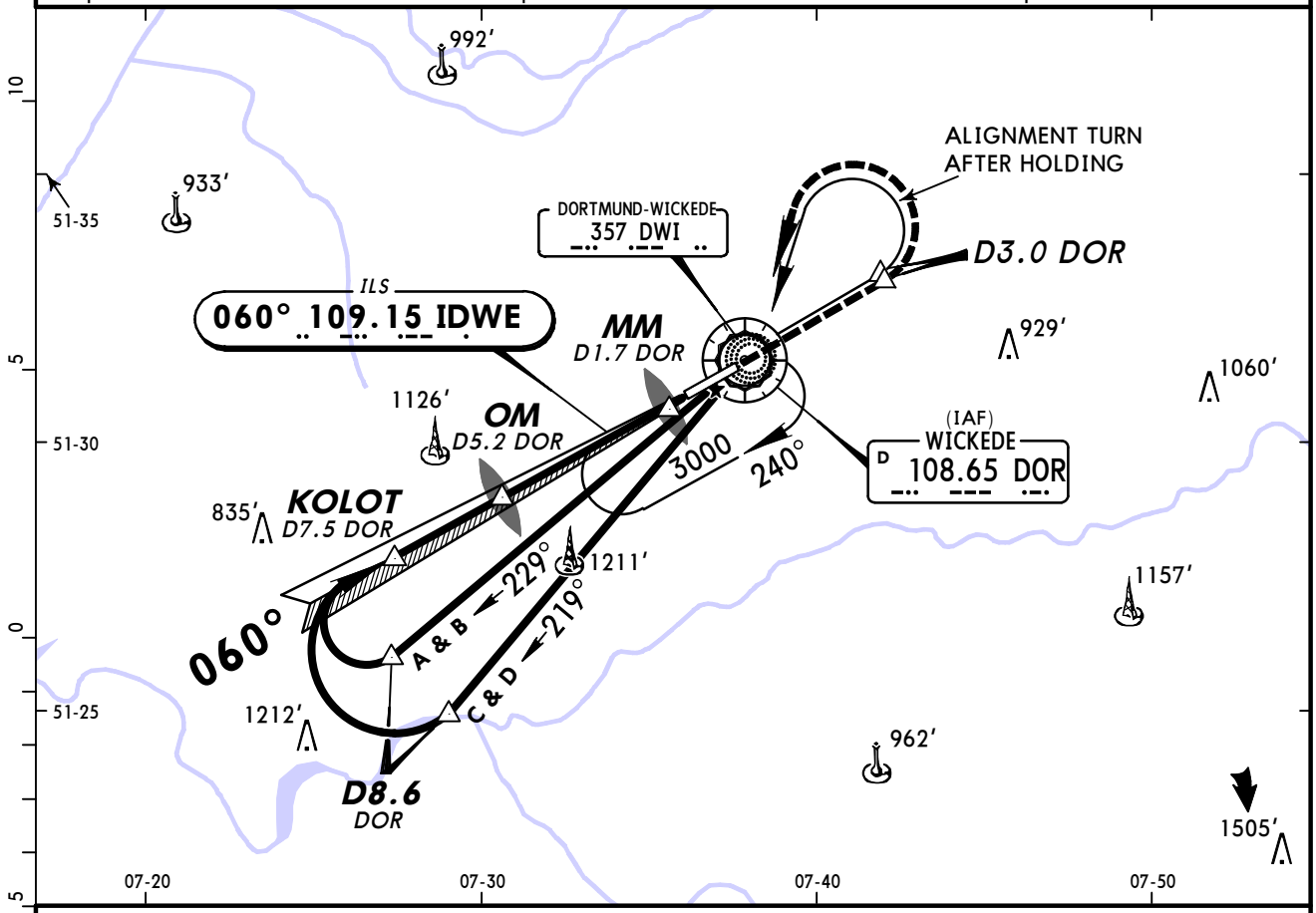
LOC	Final Apch Crs	GS	CAT II ILS RA/DA(H)	
IDWE		OM		Apt Elev 425'
109.15	060°	1780'(1362')	Refer to Minimums	RWY 418'

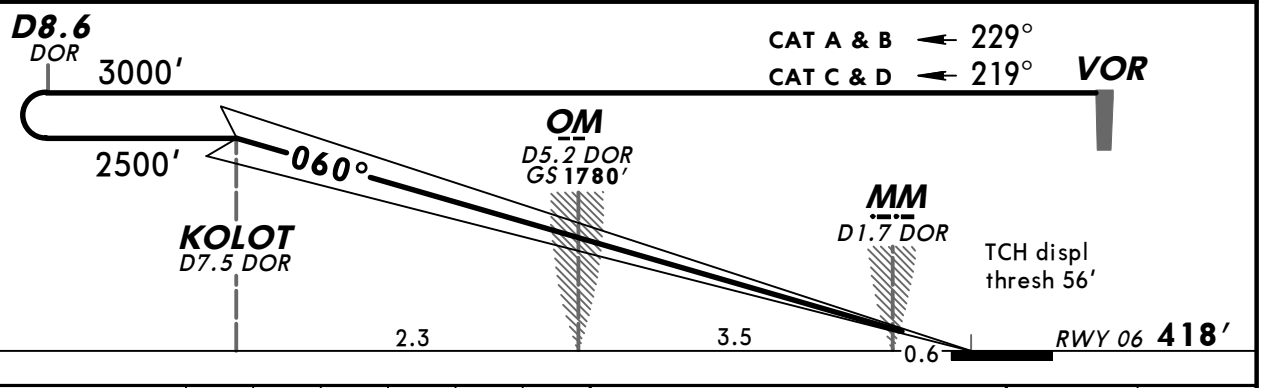
MISSED APCH: Climb STRAIGHT AHEAD to D3.0 DOR, then turn LEFT to VOR climbing to 3000'.



Alt Set: hPa (IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000'

1. Special aircrew and acft certification required. 2. GS unusable outside 10 NM from displ thresh.





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

ALSF-II
REIL
PAPI

D3.0
DOR

Standard

STRAIGHT-IN LANDING RWY **06**
CAT II ILS

ABC	D
RA 94'	**RA 100'**
DA(H) **518'** (100')	DA(H) **525'** (107')

RVR 300m 1

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

PANS OPS 4

CHANGES: Minimums.

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EDLW/DTM
DORTMUND

JEPPESEN
6 AUG 10 (11-2)

DORTMUND, GERMANY
ILS or LOC Rwy 24

*ATIS	LANGEN Radar (APP)	*DORTMUND Tower Within 25 NM up to 4000' AAL	*Ground
125.12	125.22	134.17	121.82

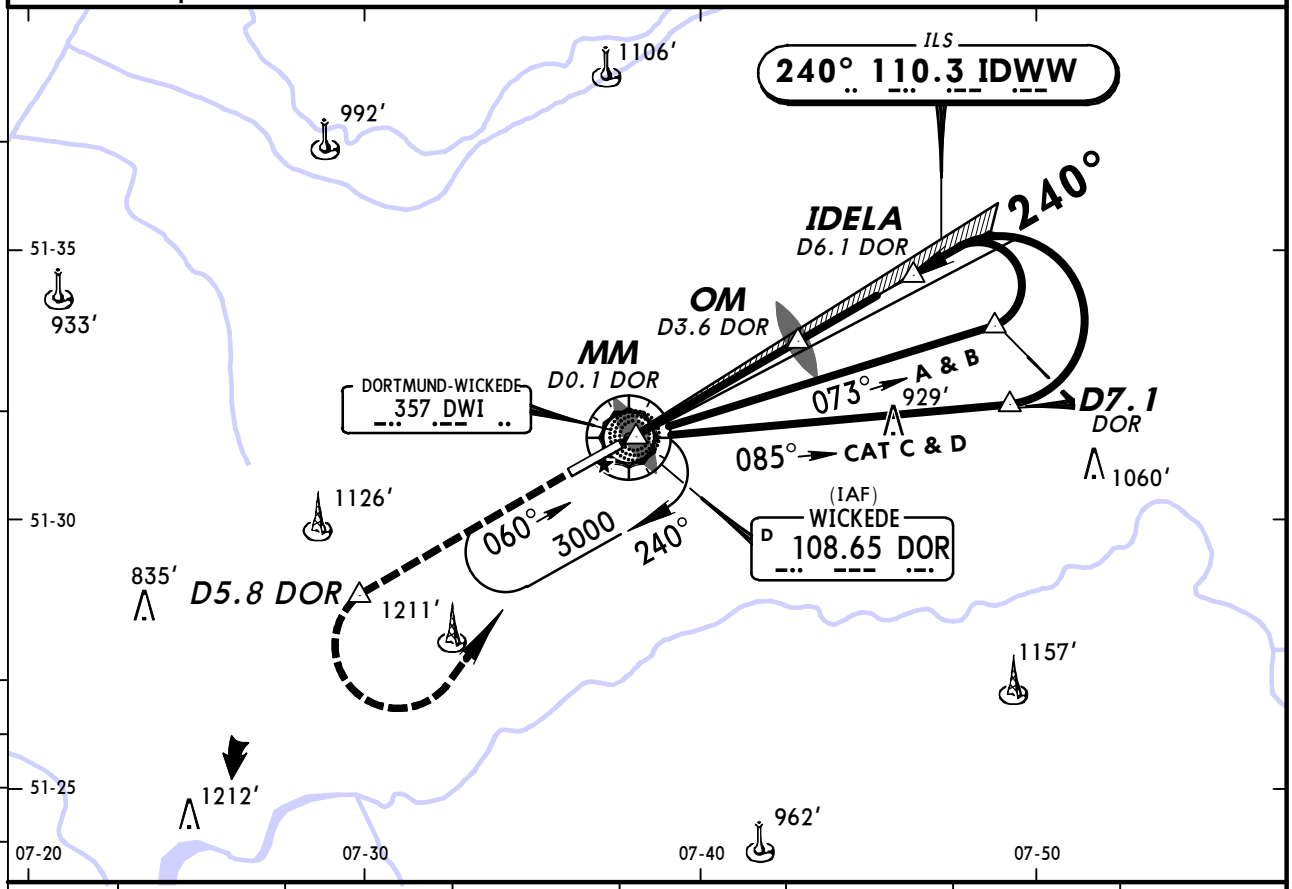
LOC IDWW	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev / RWY
110.3	240°	1730′ (1329′)	601′ (200′)	425′ / 401′

MISSED APCH: Climb STRAIGHT AHEAD to D5.8 DOR, then turn LEFT to VOR climbing to 3000′.

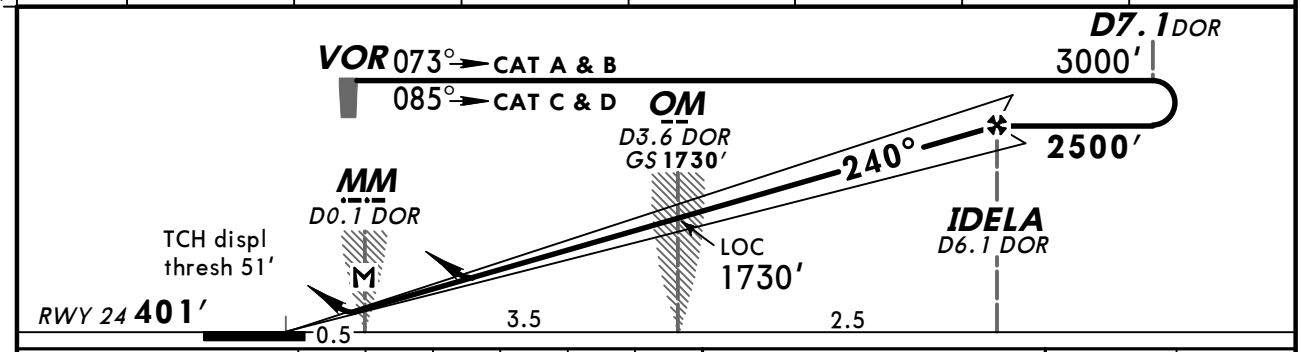
MSA DOR VOR: 2300′ (092°–272°), 2800′, 3700′, 015°

Alt Set: hPa (IN on req) | Rwy Elev: 15 hPa | Trans level: By ATC | Trans alt: 5000′

LOC: **DME required.**



LOC (GS out)	DOR DME	1.0	2.0	3.0	4.0	5.0	6.0
	ALTITUDE	870′	1190′	1510′	1830′	2140′	2460′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D0.1 DOR						

ALSF-II
REIL
PAPI

D5.8 DOR

Standard STRAIGHT-IN LANDING RWY 24

	ILS DA(H) 601′ (200′)			LOC (GS out) DA(H) 850′ (449′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					CMV 2100m
D					

PANS OPS 4

CHANGES: Minimums.

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EDLW/DTM
DORTMUND

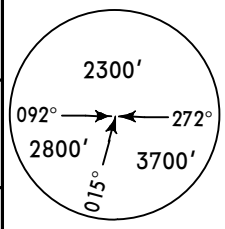
JEPPESEN
6 AUG 10 (11-2A)

DORTMUND, GERMANY
CAT II ILS Rwy 24

BRIEFING STRIP™

*ATIS	LANGEN Radar (APP)	*DORTMUND Tower Within 25 NM up to 4000' AAL	*Ground
125.12	125.22	134.17	121.82

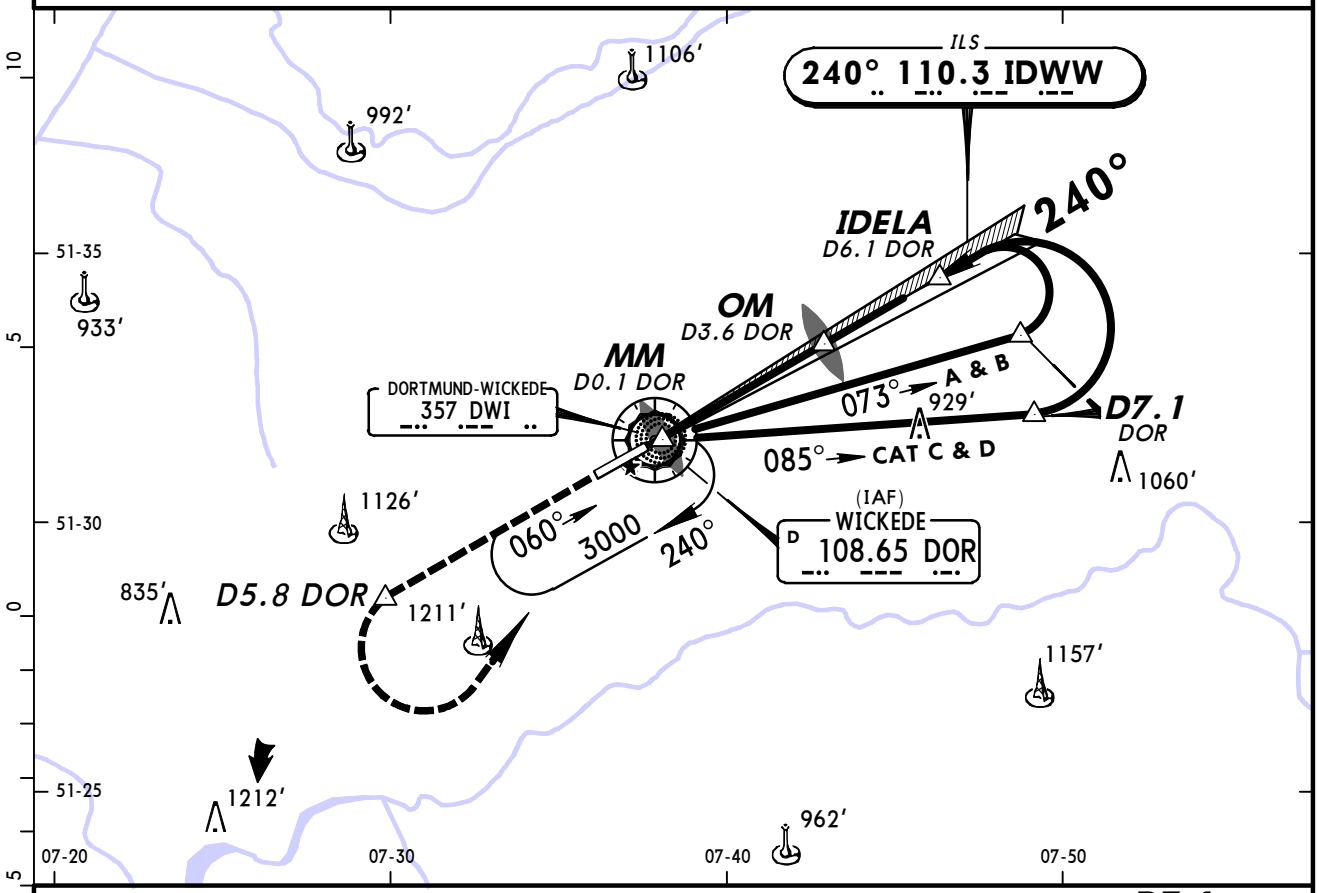
LOC	Final Apch Crs	GS	CAT II ILS RA/DA(H)	Apt Elev / RWY
IDWW 110.3	240°	OM 1730' (1329')	Refer to Minimums	Apt Elev 425' RWY 401'

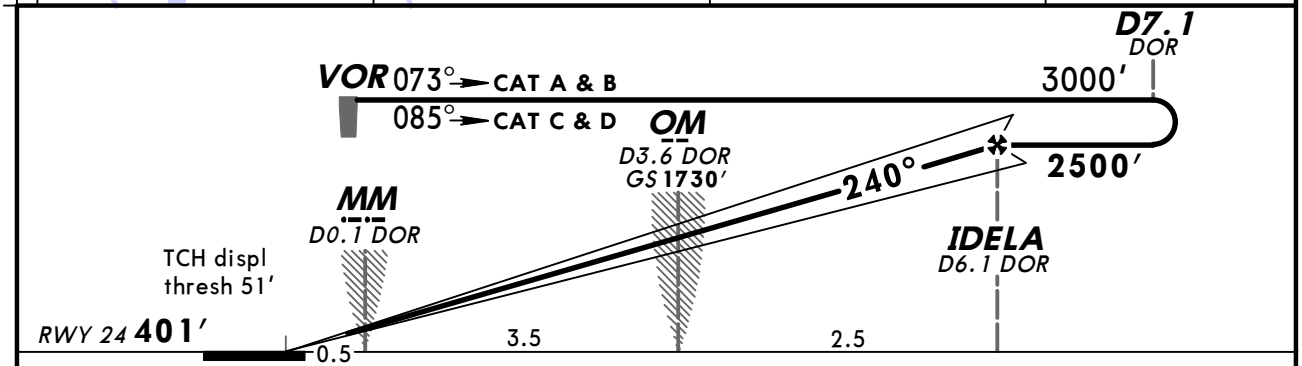


MSA
DOR VOR

MISSED APCH: Climb STRAIGHT AHEAD to D5.8 DOR, then turn LEFT to VOR climbing to 3000'.

Alt Set: hPa (IN on req) | Rwy Elev: 15 hPa | Trans level: By ATC | Trans alt: 5000'
Special aircrew and acft certification required.





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

ALSF-II
REIL
PAPI

D5.8 DOR

Standard

STRAIGHT-IN LANDING RWY 24
CAT II ILS

AB	C	D
RA 100'	RA 104'	RA 111'
DA(H) 501' (100')	DA(H) 505' (104')	DA(H) 518' (117')

RVR 300m [1]

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

PANS OPS 4

CHANGES: Minimums.

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EDLW/DTM
DORTMUND

JEPPESEN
6 AUG 10 (12-1)

DORTMUND, GERMANY
RNAV (GPS) Rwy 06

*ATIS	LANGEN Radar (APP)	*DORTMUND Tower Within 25 NM up to 4000' AAL	*Ground
125.12	125.22	134.17	121.82

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	060°	KOLOT 2500' (2082')	810' (392')	425' / RWY 418'

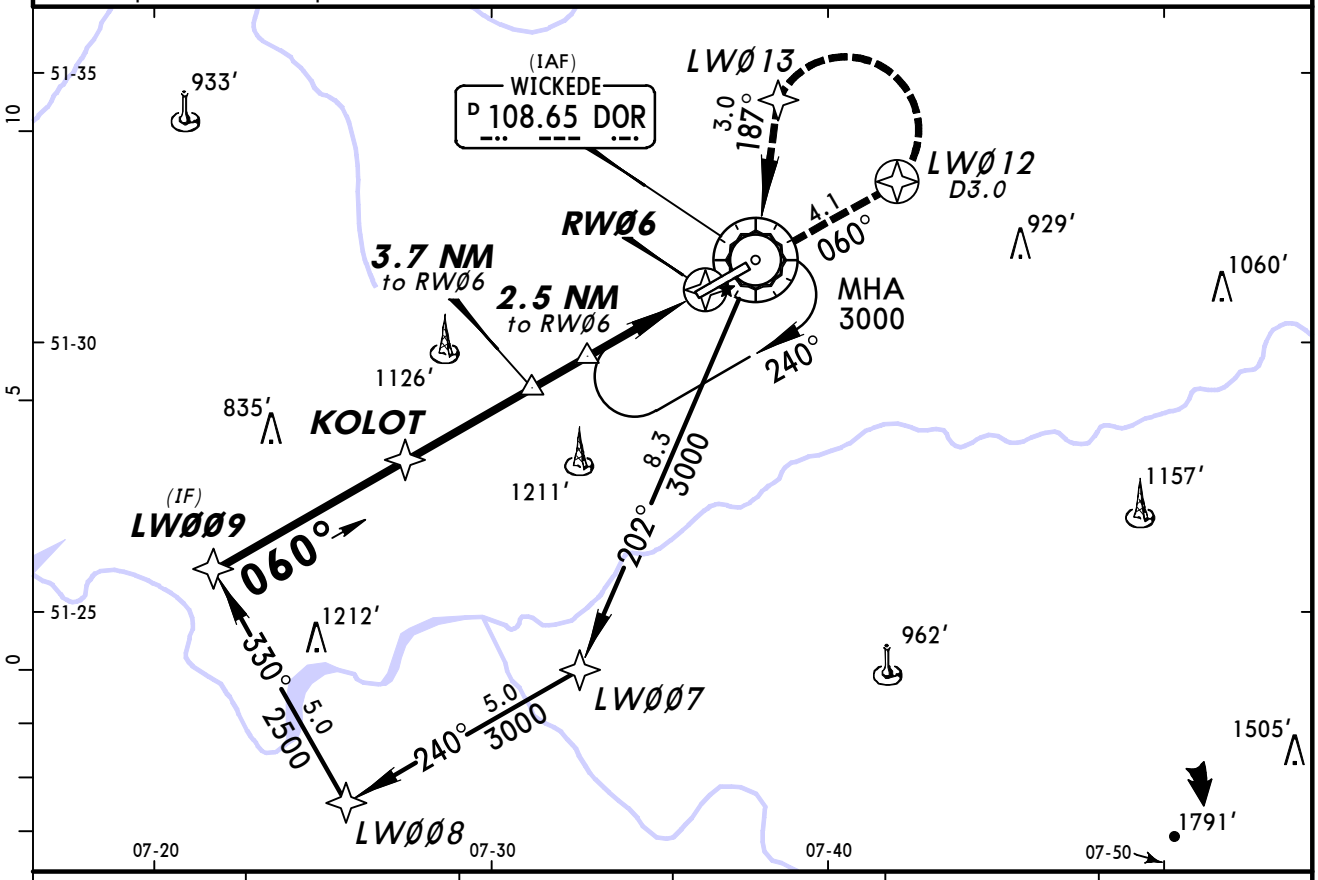
3700'
MSA
ARP

MISSED APCH: RNAV: Climb on track 060° to LWØ12, then turn LEFT via LWØ13 onto track 187° to VOR climbing to 3000'. **NON RNAV:** Climb STRAIGHT AHEAD to D3.0, then turn LEFT to VOR climbing to 3000'.

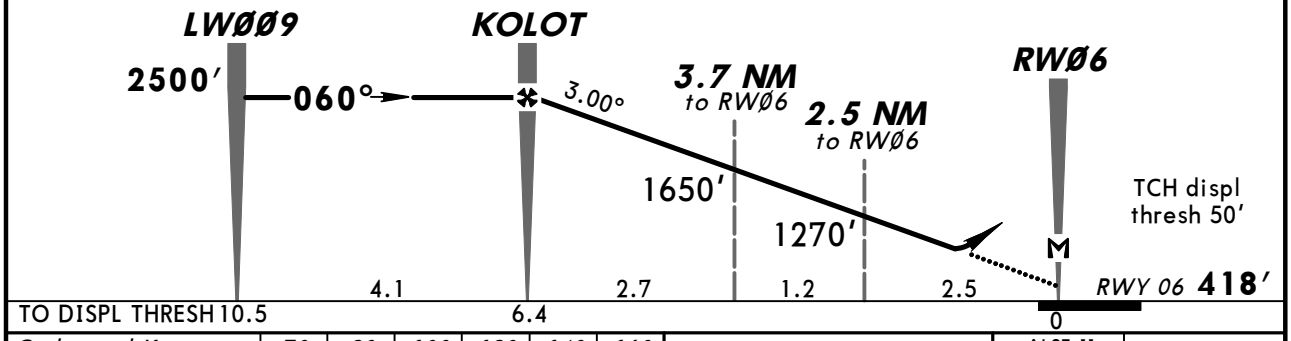
Alt Set: hPa (IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000'

1. GPS qualification required. 2. Baro-VNAV not authorized below -15° C.

BRIEFING STRIP™



DIST to RWØ6	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2390'	2070'	1750'	1430'	1120'



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RWØ6						

ALSF-II
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **06**

	LNAV/VNAV DA(H) 810' (392')		LNAV DA(H) 850' (432')	
		ALS out		ALS out
A	RVR 1100m	RVR 1500m	RVR 1300m	RVR 1500m
B				
C		RVR 1800m		RVR 2000m
D				

CHANGES: Minimums.

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EDLW/DTM
DORTMUND

JEPPESEN
6 AUG 10 (12-2)

DORTMUND, GERMANY
RNAV (GPS) Rwy 24

*ATIS	LANGEN Radar (APP)	*DORTMUND Tower Within 25 NM up to 4000' AAL	*Ground
125.12	125.22	134.17	121.82

RNAV	Final Apch Crs	Minimum Alt IDELA	LNAV/VNAV DA(H)	Apt Elev / RWY
	240°	2500′ (2099′)	Refer to Minimums	425′ / 401′

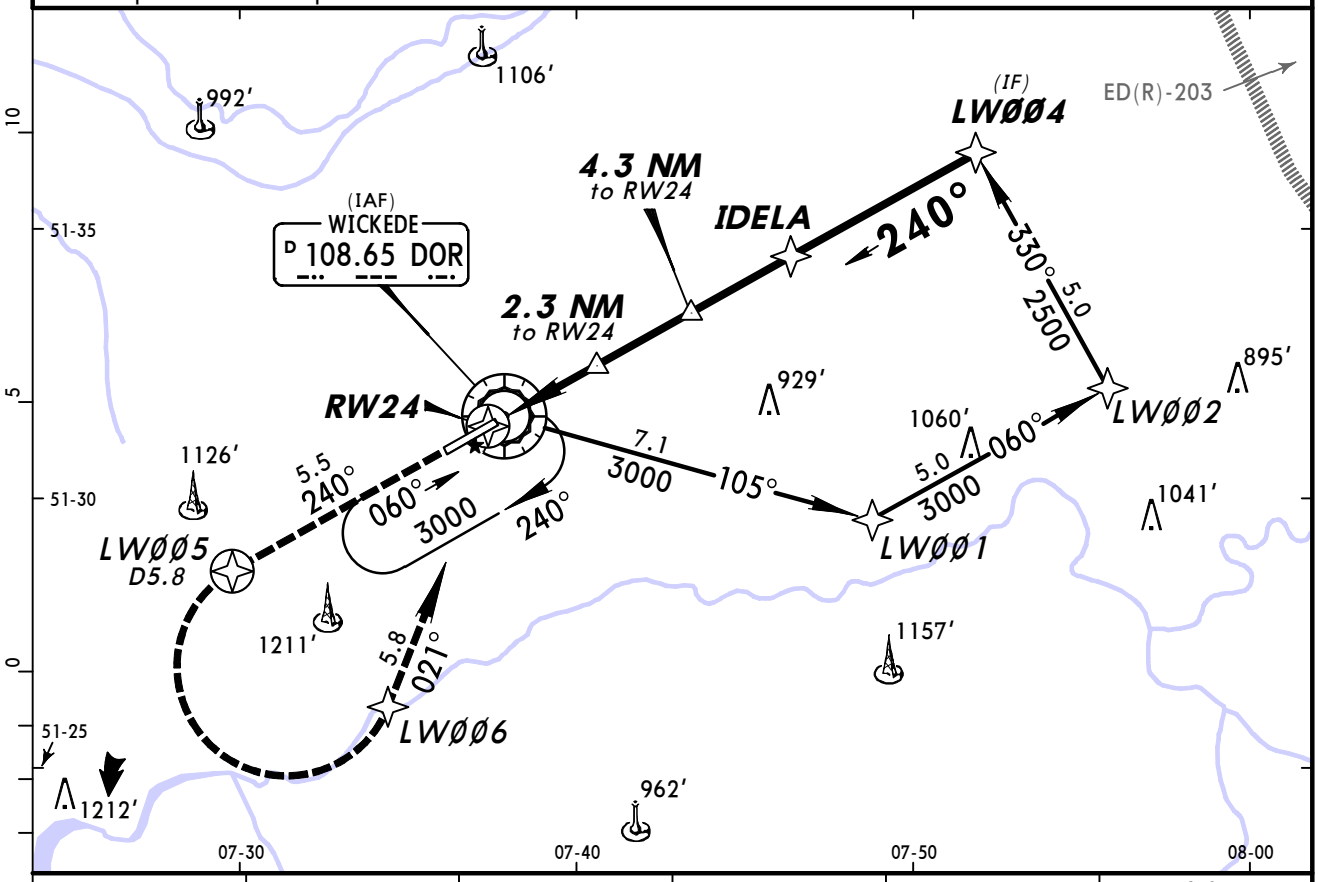
3700′ MSA ARP

MISSED APCH: RNAV: Climb on track 240° to LWØØ5, then turn LEFT via LWØØ6 onto track 021° to VOR climbing to 3000′. **NON RNAV:** Climb STRAIGHT AHEAD to D5.8, then turn LEFT to VOR climbing to 3000′.

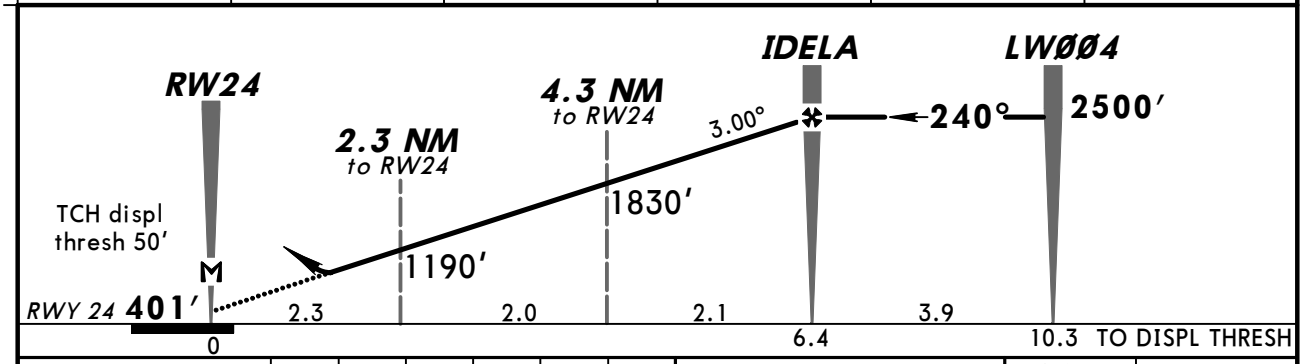
Alt Set: hPa (IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000′

1. GPS qualification required. 2. Baro-VNAV not authorized below -15° C.

BRIEFING STRIP ™



DIST to RW24	2.0	3.0	4.0	5.0	6.0
ALTITUDE	1090′	1410′	1730′	2050′	2370′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW24							

ALSF-II
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 24

	LNAV/VNAV		LNAV	
	DA(H) AB: 651′ (250′) C: 670′ (269′) D: 690′ (289′)		DA(H) 790′ (389′)	
		ALS out		ALS out
A	RVR 750m 1	RVR 1300m	RVR 1100m	RVR 1500m
B				
C				RVR 1800m
D		RVR 1400m		

1 With TDZ, CL, and HUD: CAT ABC RVR 600m, CAT D RVR 650m.

CHANGES: Minimums.

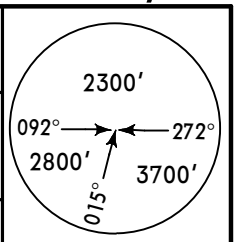
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BRIEFING STRIP TM

*ATIS	LANGEN Radar (APP)	*DORTMUND Tower Within 25 NM up to 4000' AAL	*Ground
125.12	125.22	134.17	121.82

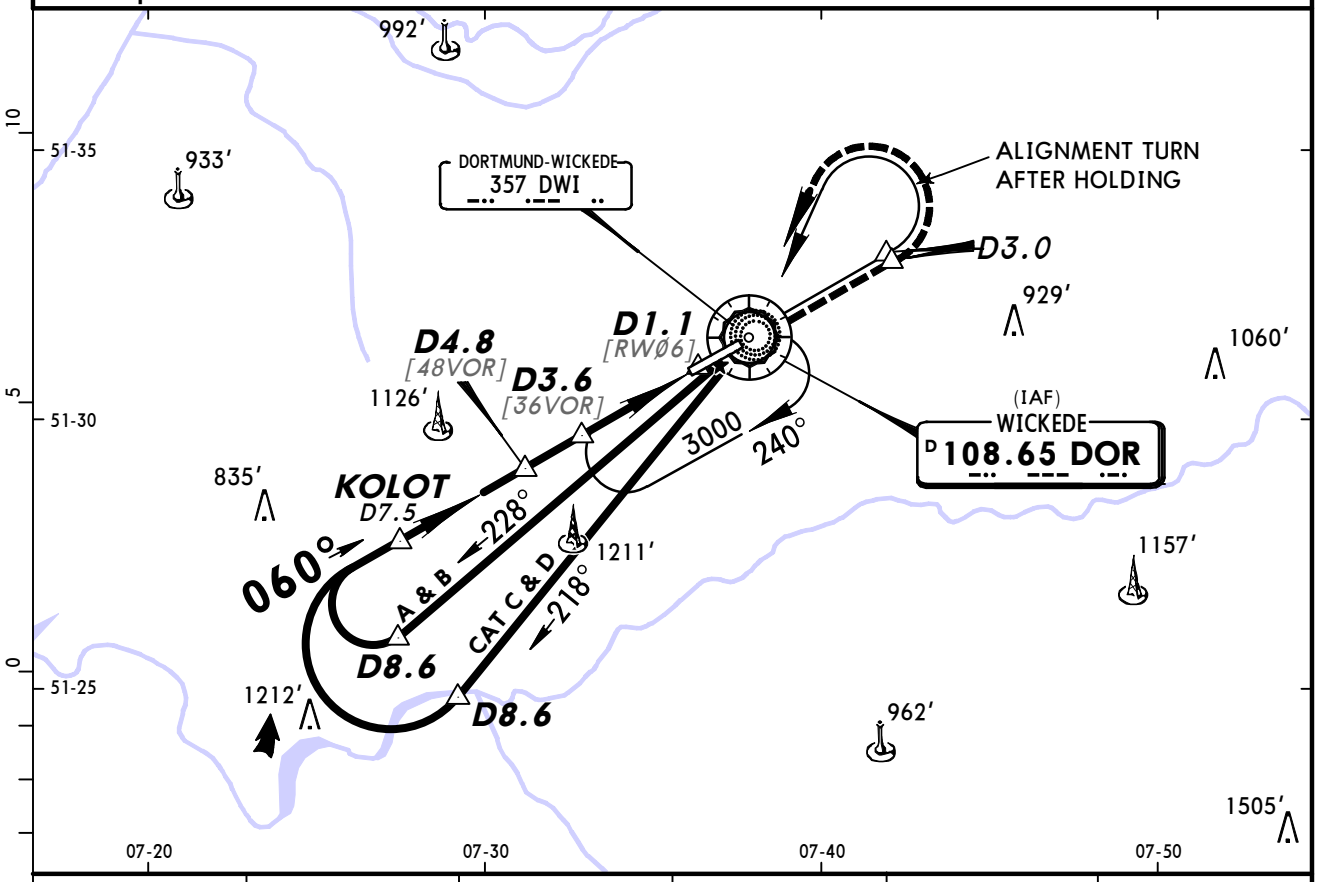
VOR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 425'
DOR 108.65	060°	KOLOT 2500' (2082')	920' (502')	RWY 418'

MISSED APCH: Climb STRAIGHT AHEAD to D3.0, then turn LEFT to VOR climbing to 3000'.

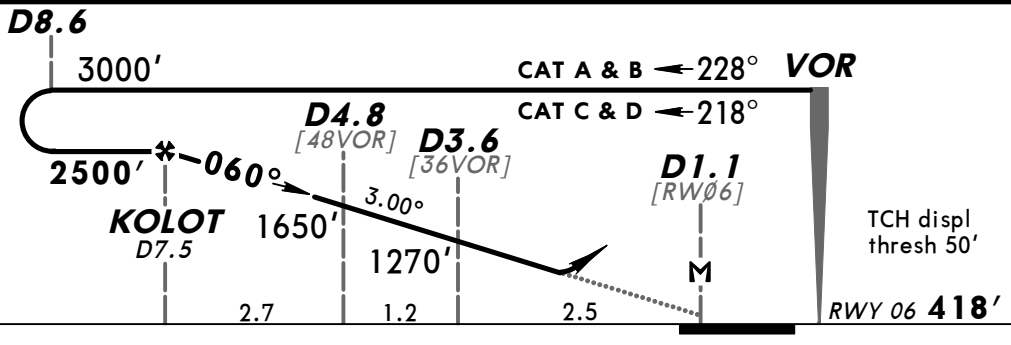


MSA DOR VOR

Alt Set: hPa (IN on req) | Rwy Elev: 15 hPa | Trans level: By ATC | Trans alt: 5000'
DME required.



DOR DME	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2360'	2040'	1720'	1400'	1080'



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.1						

ALSF-II
REIL
PAPI

D3.0

Standard STRAIGHT-IN LANDING RWY **06**

DA(H) **920'** (502')

	ALS out
A, B	RVR 1500m
C	RVR 1600m
D	CMV 2400m

PANS OPS 4

CHANGES: Minimums.

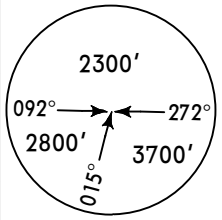
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BRIEFING STRIP™

*ATIS	LANGEN Radar (APP)	*DORTMUND Tower Within 25 NM up to 4000' AAL	*Ground
125.12	125.22	134.17	121.82

VOR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
DOR 108.65	240°	IDELA 2500' (2099')	900' (499')	Apt Elev 425' RWY 401'

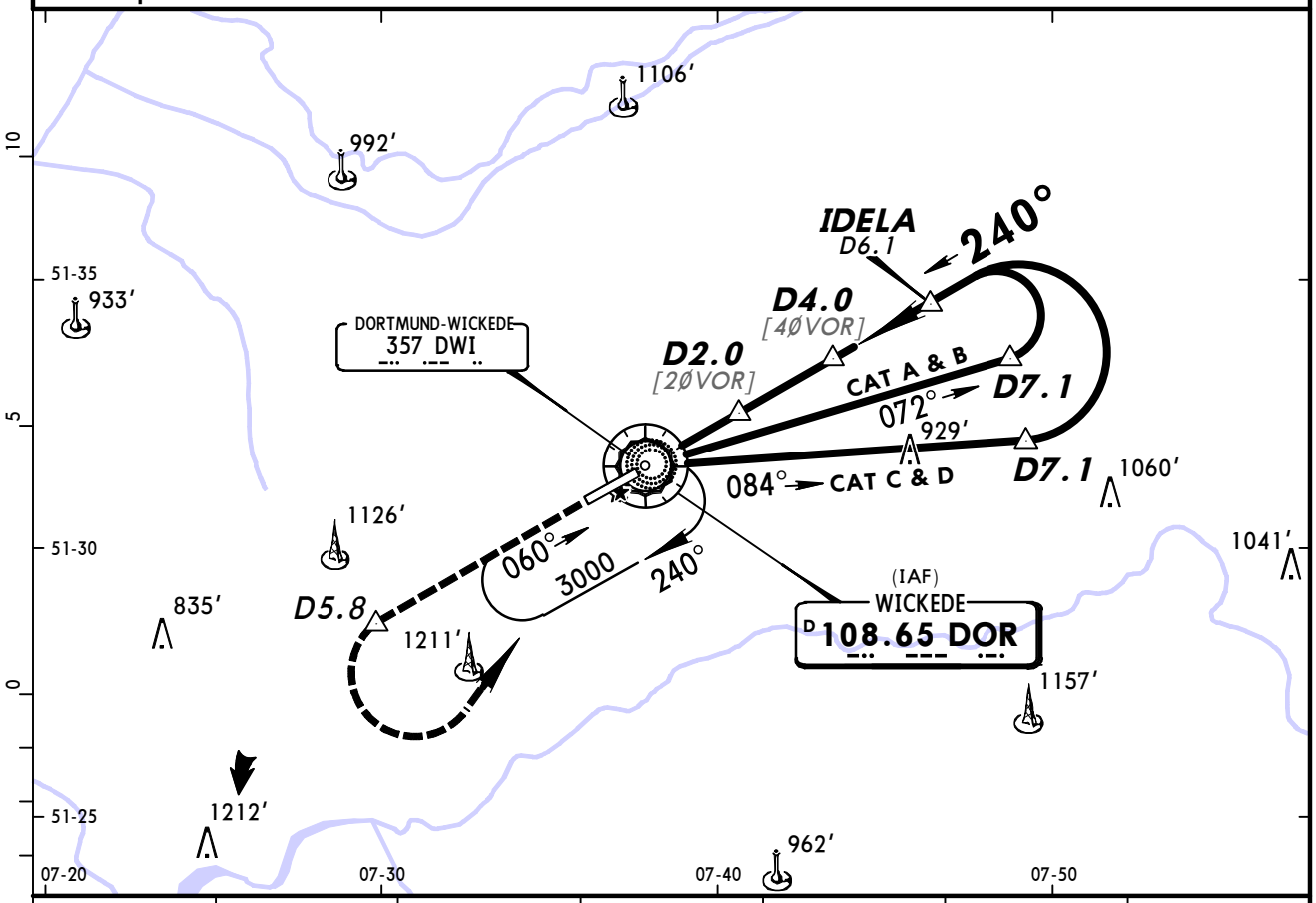
MISSED APCH: Climb STRAIGHT AHEAD to D5.8, then turn LEFT to VOR climbing to 3000'.



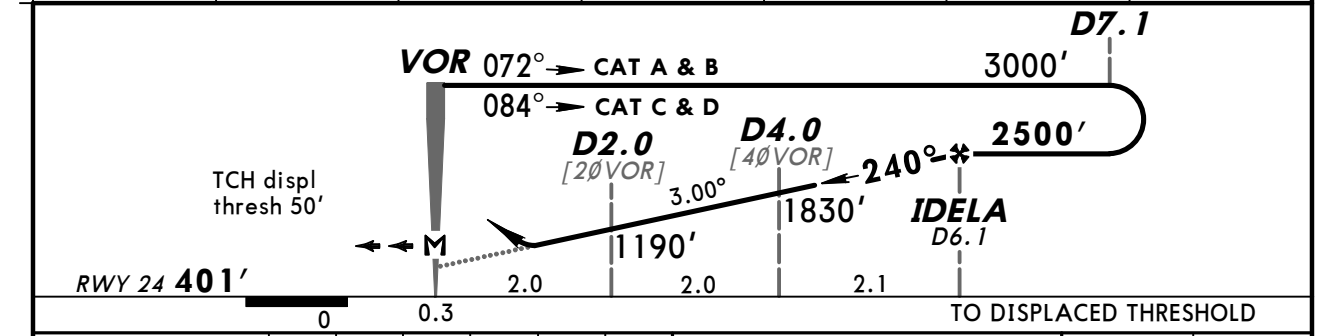
MSA DOR VOR

Alt Set: hPa (IN on req) | Rwy Elev: 15 hPa | Trans level: By ATC | Trans alt: 5000'

DME required.



DOR DME	1.0	2.0	3.0	4.0	5.0	6.0
ALTITUDE	870'	1190'	1510'	1830'	2140'	2460'



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

ALSF-II
REIL
PAPI

D5.8

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 24

DA(H) 900' (499')

	ALS out
A, B	RVR 1500m
C, D	RVR 1500m / CMV 2300m

CHANGES: Minimums.

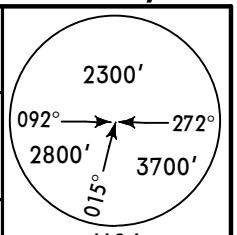
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BRIEFING STRIP™

*ATIS	LANGEN Radar (APP)	*DORTMUND Tower Within 25 NM up to 4000' AAL	*Ground
125.12	125.22	134.17	121.82

NDB DWI 357	Final Apch Crs 060°	Minimum Alt KOLOT 2500' (2082')	DA(H) 840' (422')	Apt Elev 425' RWY 418'

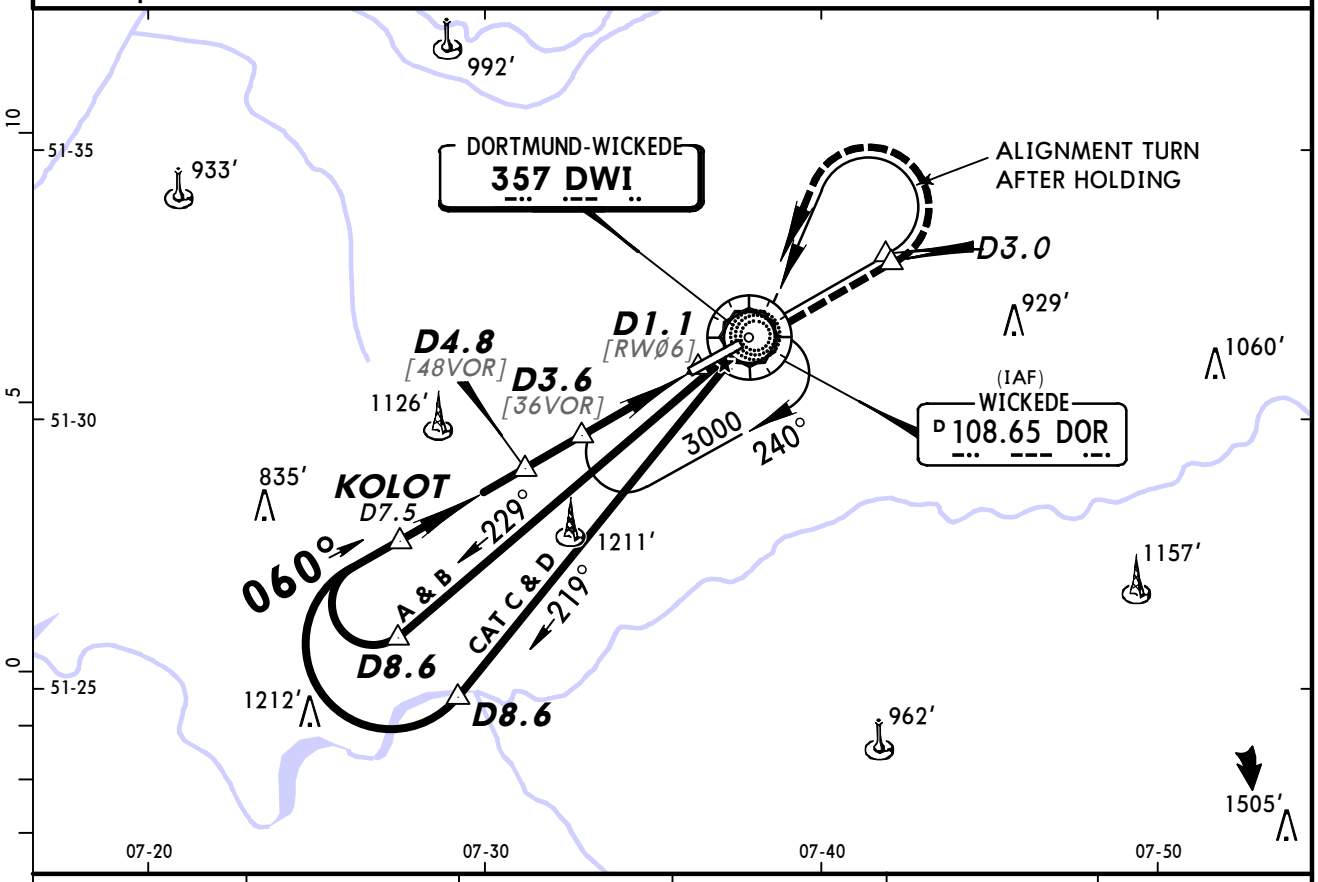
MISSED APCH: Climb STRAIGHT AHEAD to D3.0, then turn LEFT to VOR climbing to 3000'.



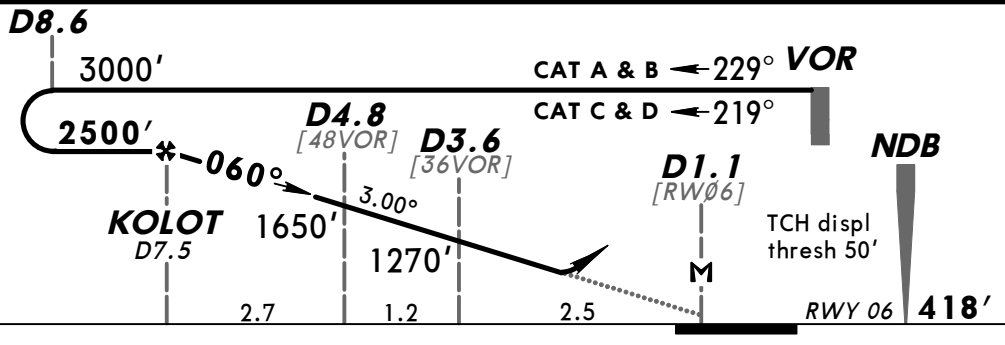
MSA
DOR VOR

Alt Set: hPa (IN on req) | Rwy Elev: 15 hPa | Trans level: By ATC | Trans alt: 5000'

DME required.



DOR DME	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2360'	2040'	1720'	1400'	1080'



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.1						

ALSF-II
REIL
PAPI

D3.0

Standard STRAIGHT-IN LANDING RWY **06**

DA(H) **840'** (422')

		ALS out
A	RVR 1300m	RVR 1500m
B		
C		RVR 2000m
D		

PANS OPS 4

CHANGES: Minimums.

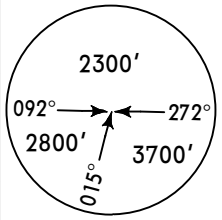
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BRIEFING STRIP™

*ATIS	LANGEN Radar (APP)	*DORTMUND Tower Within 25 NM up to 4000' AAL	*Ground
125.12	125.22	134.17	121.82

NDB	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 425'
DWI		IDELA		RWY 401'
357	240°	2500' (2099')	840' (439')	

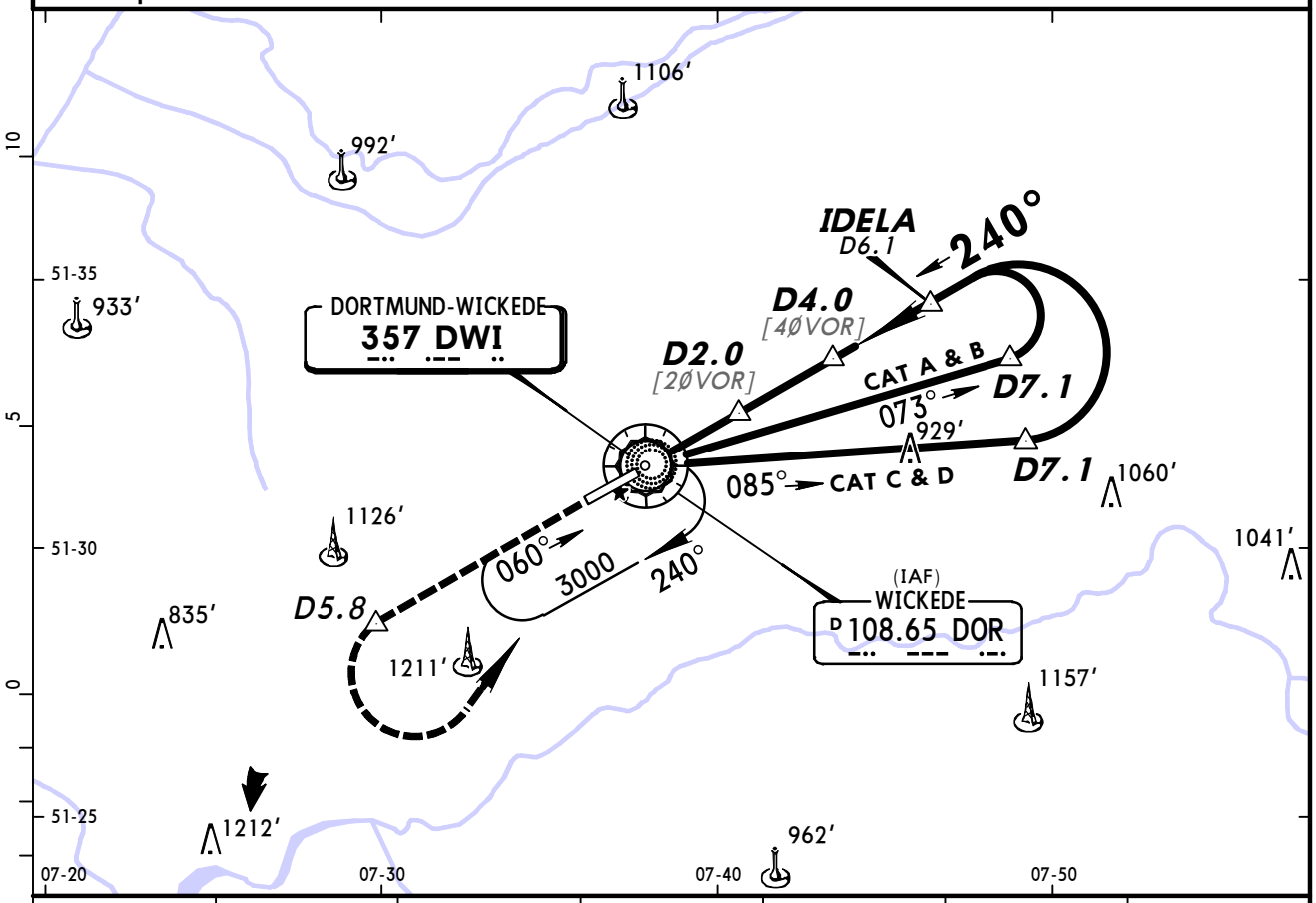
MISSED APCH: Climb STRAIGHT AHEAD to D5.8, then turn LEFT to VOR climbing to 3000'.



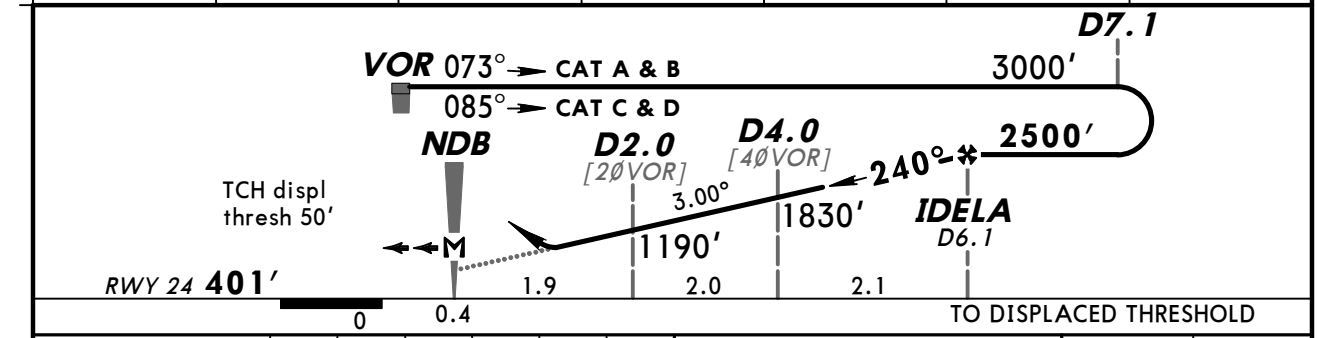
MSA DOR VOR

Alt Set: hPa (IN on req) | Rwy Elev: 15 hPa | Trans level: By ATC | Trans alt: 5000'

DME required.



DOR DME	1.0	2.0	3.0	4.0	5.0	6.0
ALTITUDE	870'	1190'	1510'	1830'	2140'	2460'



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

ALSF-II
REIL
PAPI

D5.8

Standard STRAIGHT-IN LANDING RWY 24

DA(H) 840' (439')

PANS OPS 4

	ALS out
A, B	RVR 1300m / RVR 1500m
C	RVR 2000m
D	

CHANGES: Minimums.

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General Information

Location: Oberpfaffenhofen Deu
IATA Code: OBF
Lat/Long: N48° 04.9' E011° 17.0'
Elevation: 1947 ft

Airport Use: Public
Magnetic Variation: 2.2°E

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

Sunrise: 0601 Z
Sunset: 1655 Z,

Runway Information

Runway: 04
Length x Width: 7500 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1947 ft
Lighting: Edge

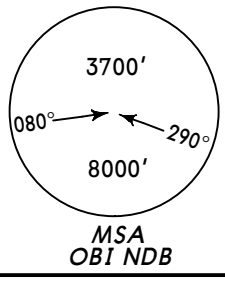
Runway: 22
Length x Width: 7500 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1890 ft
Lighting: Edge, ALS

Communication Information

Oberpfaffenhofen Tower 122.1
Oberpfaffenhofen Tower 119.55
Oberpfaffenhofen Tower 37.65 Military

Apt Elev 1947′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′



DISUN THREE ALFA (DISUN 3A) *[DISU3A]*

MERSI THREE ALFA (MERSI 3A) *[MERS3A]*

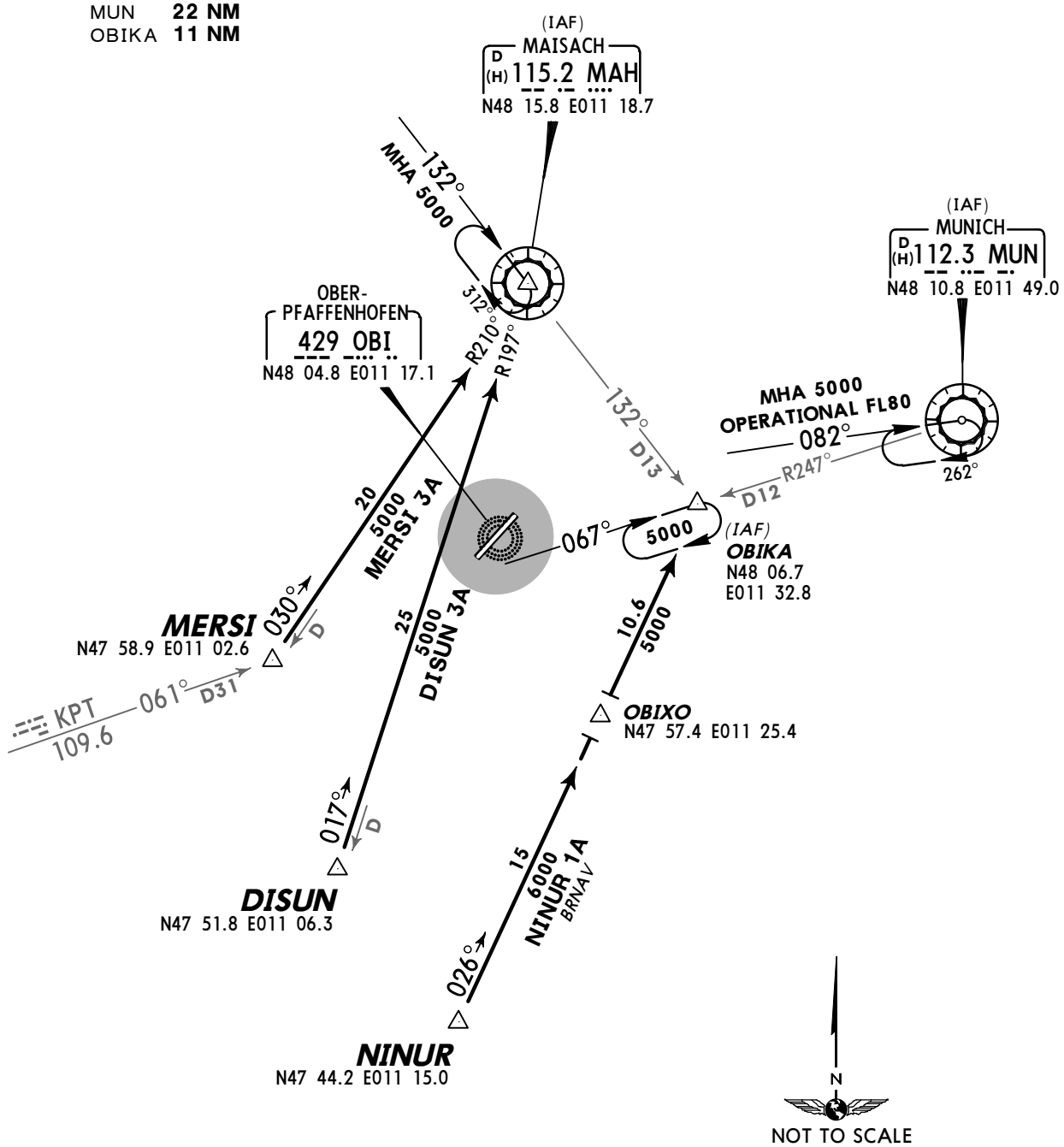
FOR FLIGHTS AT OR BELOW FL120

NINUR ONE ALFA (NINUR 1A) *[NINU1A]*

RWY 22 ARRIVALS

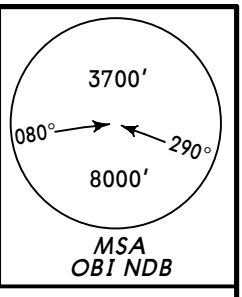
SPEED RESTRICTION
MAX 250 KT below FL 100
or as by ATC.
Not applicable within airspace C.

Direct distance to
Oberpfaffenhofen Apt from:
MAH **11 NM**
MUN **22 NM**
OBIKA **11 NM**



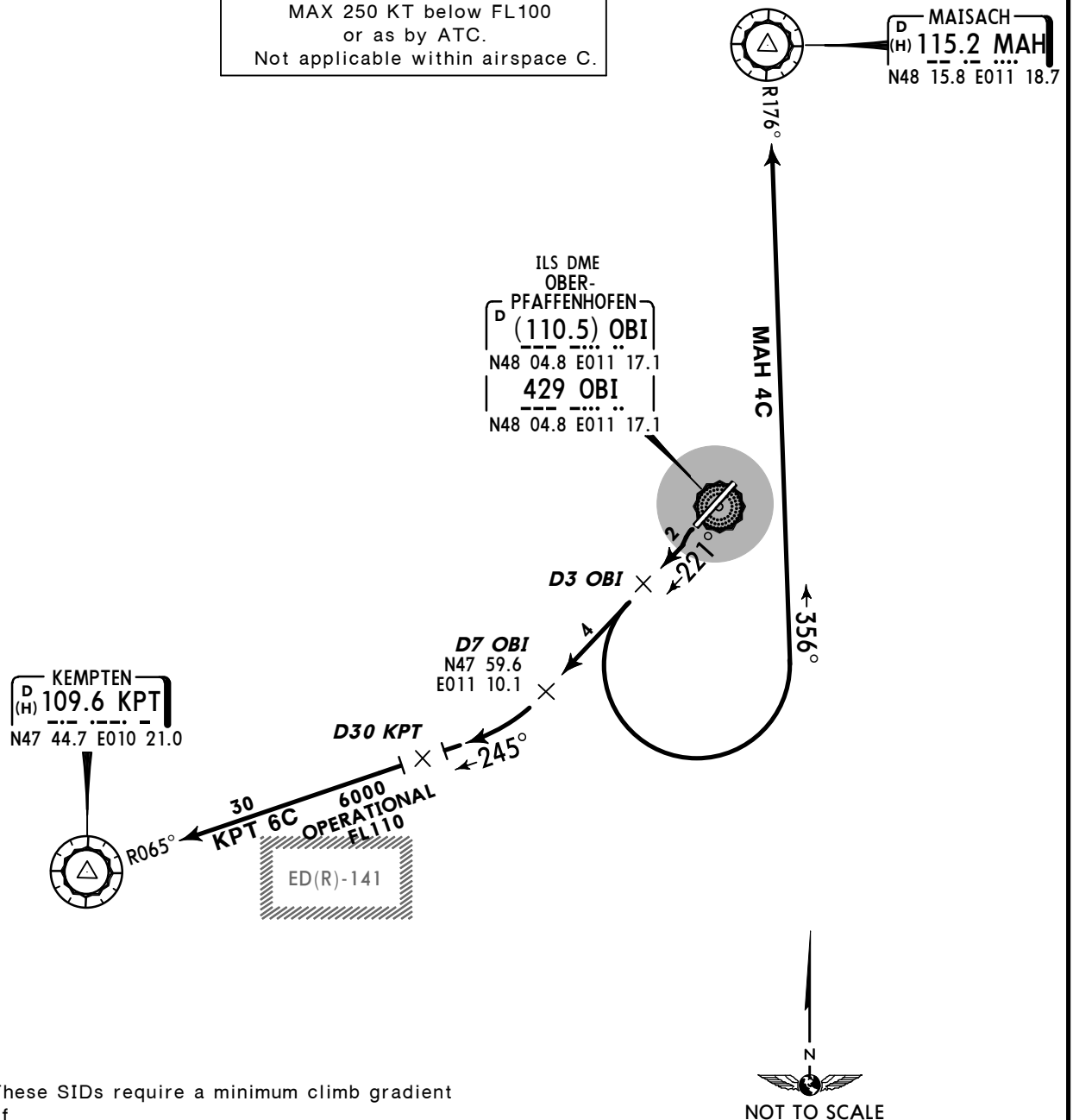
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MUNICH Radar 127.95	*Apt Elev* 1947′	Trans level: By ATC Trans alt: 5000′ 1. EXPECT close-in obstacles. 2. Contact MUNICH Radar immediately after take-off. 3. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.



KEMPTEN SIX CHARLIE (KPT 6C)
MAISACH FOUR CHARLIE (MAH 4C)
RWY 22 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require a minimum climb gradient of
243′ per NM (4%) until passing 2200′.

Gnd speed-KT	75	100	150	200	250	300
243′ per NM	304	405	608	810	1013	1215

Initial climb clearance **FL70**

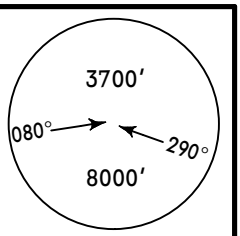
SID	ROUTING
KPT 6C ❶	On 221° bearing from OBI to D7 OBI, turn RIGHT, intercept KPT R-065 inbound to KPT.
MAH 4C	On 221° bearing from OBI to D3 OBI, turn LEFT, intercept MAH R-176 inbound to MAH.

❶ When ED(R)-141 active flights at or below FL100 expect re-routing by ATC.

CHANGES: SIDs renumbered.

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MUNICH Radar 127.95	*Apt Elev* 1947′	Trans level: By ATC Trans alt: 5000′ 1. EXPECT close-in obstacles. 2. Contact MUNICH Radar immediately after take-off. 3. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.



MSA
OBI NDB

KEMPTEN SIX CHARLIE (KPT 6C)
MAISACH FOUR CHARLIE (MAH 4C)
RWY 22 RNAV DEPARTURES
(OVERLAY 10-3)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

MAISACH
D (H) 115.2 MAH
N48 15.8 E011 18.7

R176°

OBER-PFAFFENHOFEN
429 OBI
N48 04.8 E011 17.1

MAH 4C
14.5

MOØ22
N48 02.7 E011 14.0
MAH 4C
At or above **2400′**

2.4
221°

356°

MOØ23
N48 01.4 E011 19.6

4.6

KEMPTEN
D (H) 109.6 KPT
N47 44.7 E010 21.0

D30 KPT
5.7
245°

MOØ21
N47 59.3
E011 09.4

30
KPT 6C
6000
OPERATIONAL
FL110

R065°

ED(R)-141

N

NOT TO SCALE

These SIDs require a minimum climb gradient of
243′ per NM (4%) until passing 2200′.

Gnd speed-KT	75	100	150	200	250	300
243′ per NM	304	405	608	810	1013	1215

Initial climb clearance **FL70**

SID	ROUTING
KPT 6C ❶	(2400′+) - MO021 - KPT.
MAH 4C	MO022 (2400′+) - MO023 - MAH.

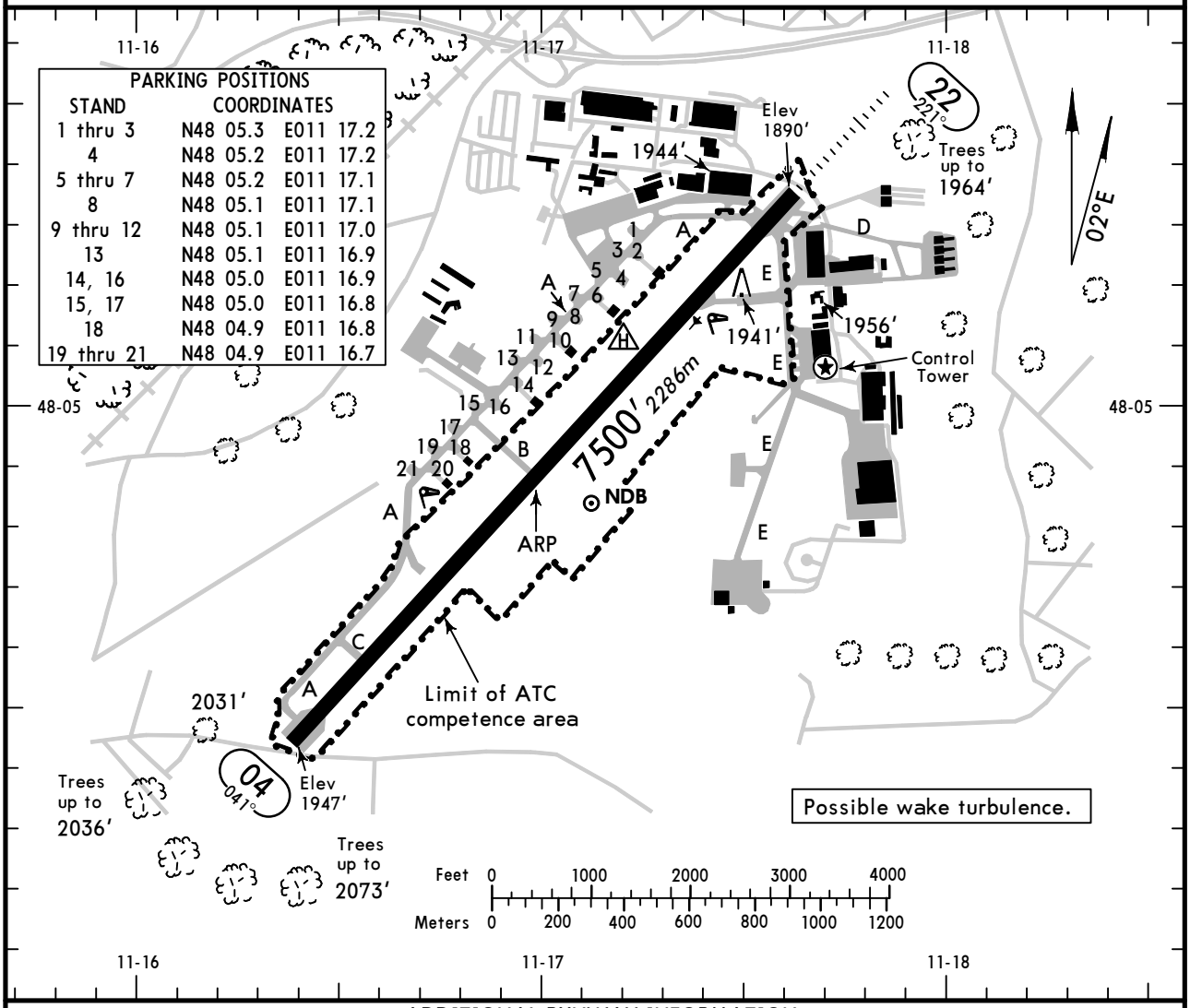
❶ When ED(R)-141 active flights at or below FL100 expect re-routing by ATC.

CHANGES: RNAV SIDs renumbered.

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*OBERPFAFFENHOFEN Tower

119.55 122.1X



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
04❶	HIRL			NA	148′ *45m*
22	HIRL HIALS PAPI-L (angle 3.0°)		6388′ *1947m*		

❶ No NIGHT landings.

NOISE ABATEMENT PROCEDURES

Noise abatement requirements apply after 1900LT to all aircraft.
Jet and turbine-powered ACFT must have a noise certificate in compliance with ICAO Annex 16, Chapter 4.

RUN-UP TESTS

Engine test runs are only permitted Mon - Fri (workdays) between 0700-1900LT, additionally between 1900-2100LT after PPR from the traffic management office, and Sat (workdays) between 0900-1400LT.
OBERPFAFFENHOFEN Tower shall be informed prior to starting up engines and after turning off.

Standard

TAKE-OFF

Rwy 22

	RCLM (DAY only) or RL	NIL (DAY only)
A	*400m*	*500m*
B		
C		
D		

CHANGES: Rwy 04 restriction.

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EDMO/OBF
OBERPFAFFENHOFEN

JEPPESEN 6 MAY 11 (11-1)

OBERPFAFFENHOFEN, GERMANY
ILS or LOC Rwy 22

MUNICH Radar (South)	MUNICH Arrival(APP) (South)	*OBERPFAFFENHOFEN Tower
127.95	120.77	119.55 122.1X

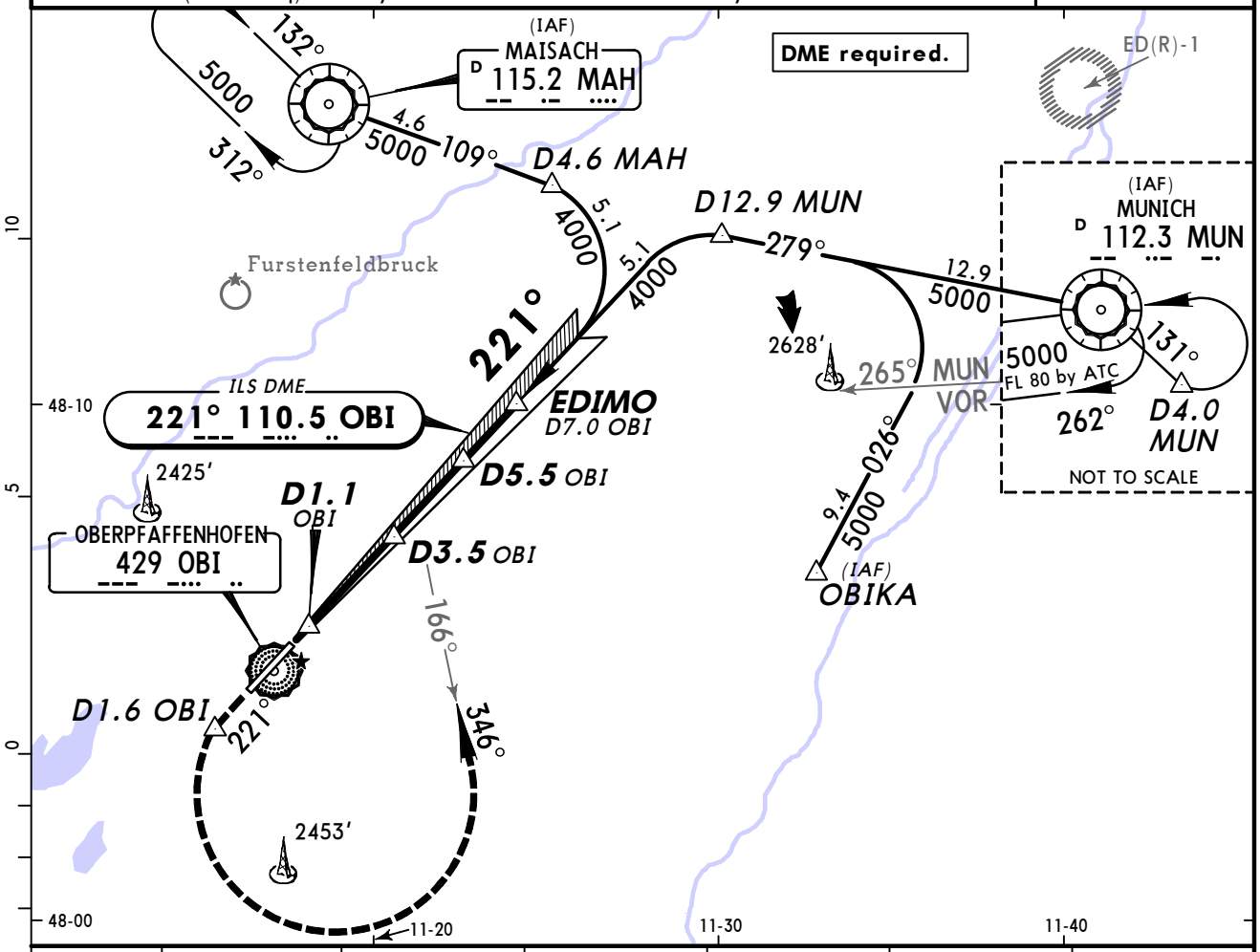
BRIEFING STRIP ™

LOC OBI	Final Apch Crs	GS EDIMO	ILS DA(H)	Apt Elev 1947′
110.5	221°	4000′ (2110′)	Refer to Minimums	RWY 1890′

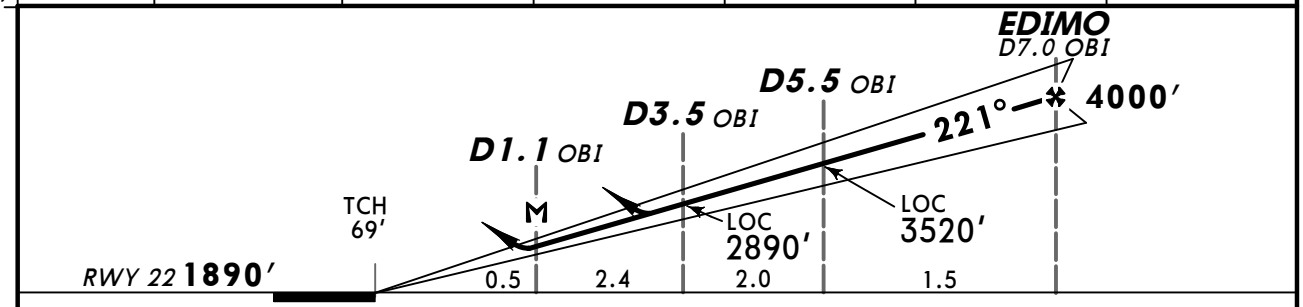
MISSED APCH: Climb on track 221° to D1.6 OBI, then turn LEFT to intercept R-166 inbound MAH VOR at 3000′ or above. Continue climb to 5000′ to MAH VOR.

3700′ 080° 290° 8000′
MSA OBI NDB

Alt Set: hPa (IN on req) Rwy Elev: 67 hPa Trans level: By ATC Trans alt: 5000′



LOC (GS out)	OBI DME	2.0	3.0	4.0	5.0	6.0
	ALTITUDE	2410′	2730′	3050′	3360′	3680′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	377	485	539	647	755	862
MAP at D1.1 OBI						

HIALS PAPI

D1.6 OBI on 221°

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 22

DA(H) ILS	LOC (GS out) DA(H) 2290′ (400′)
A: 2090′ (200′) C: 2102′ (212′)	
B: 2092′ (202′) D: 2112′ (222′)	

	FULL/Limited	ALS out		ALS out
A	1000m	1200m	1400m	1500m
B				
C				1800m
D				

CIRCLE-TO-LAND
TO RWY 04 (DAY only)
Not authorized
Northwest of airport

Max Kts	MDA(H)	VIS
100	2440′ (493′)	1500m
135	2560′ (613′)	1600m
180	2850′ (903′)	2400m
205	2850′ (903′)	3600m

CHANGES: MSA. Minimums.

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EDMO/OBF
OBERPFAFFENHOFEN

JEPPESEN 6 MAY 11 (12-1)

OBERPFAFFENHOFEN, GERMANY
RNAV (GPS) Rwy 22

MUNICH Radar (South)	MUNICH Arrival(APP) (South)	*OBERPFAFFENHOFEN Tower
127.95	120.77	119.55 122.1X

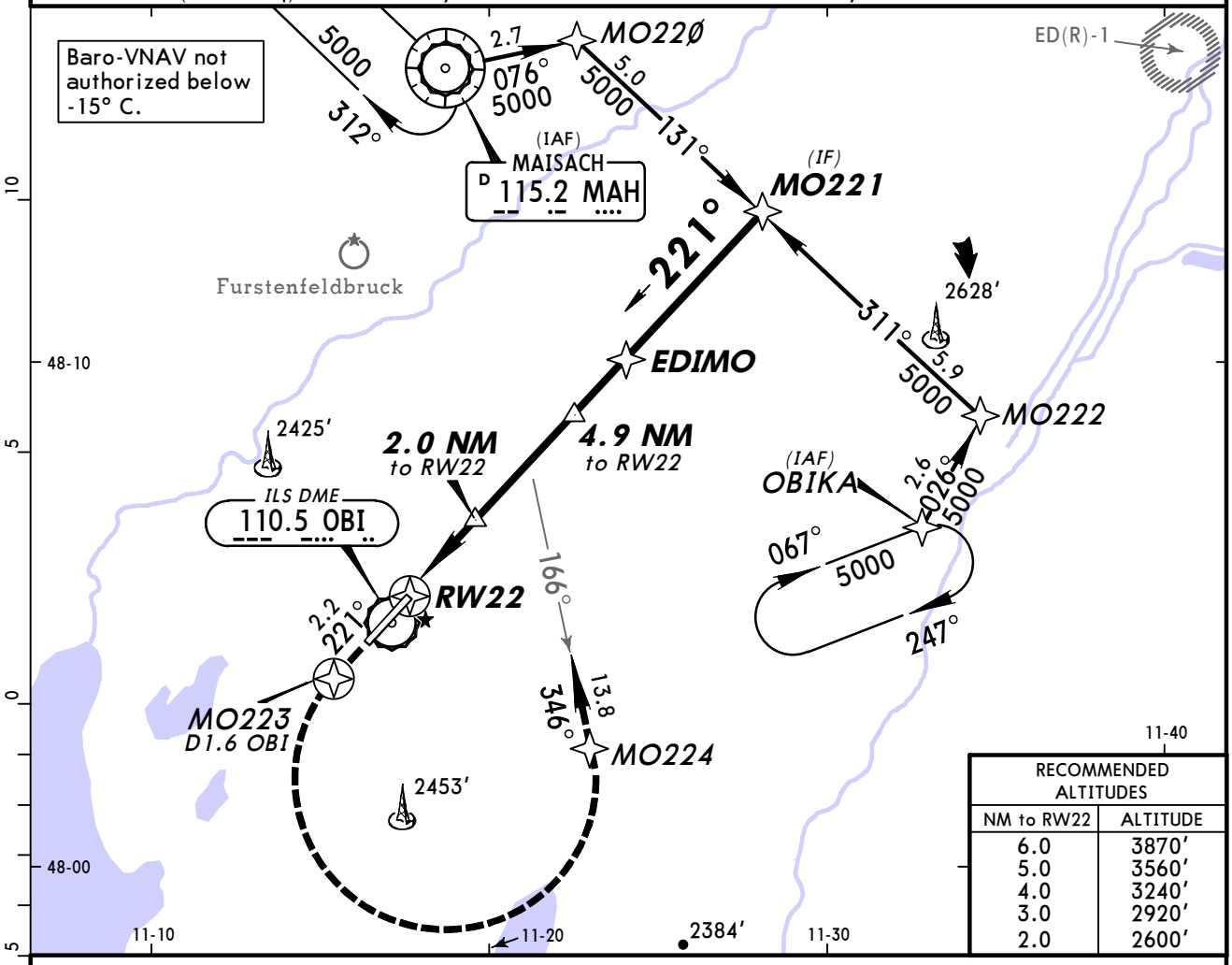
BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt EDIMO	LNAV/VNAV DA(H)	Apt Elev 1947′ RWY 1890′
	221°	4000′ (2110′)	2270′ (380′)	

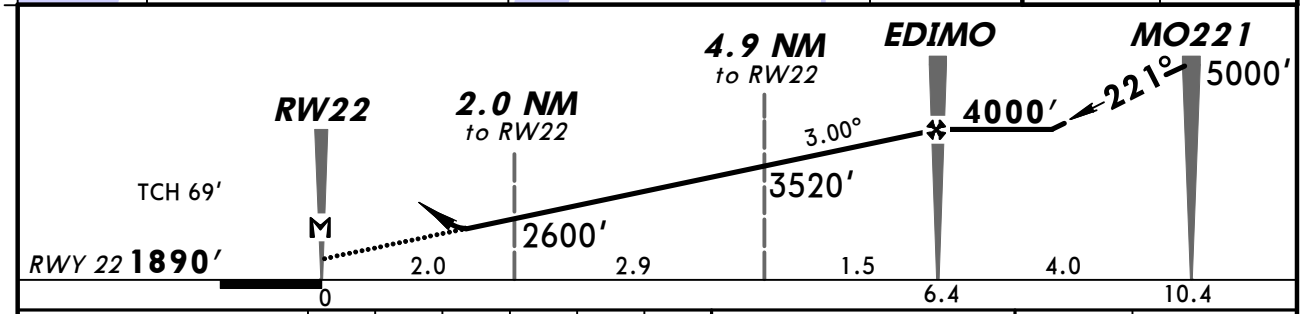
MISSED APCH RNAV: Climb on 221° to MO223, then turn LEFT to MO224 to 3000′ or above. Continue climb on 346° to 5000′ to MAH VOR.
NON-RNAV: Climb on 221° to D1.6 OBI, then turn LEFT to intercept R-166 inbound MAH VOR at 3000′ or above. Continue climb to 5000′ to MAH VOR.

8000′
MSA ARP

Alt Set: hPa (IN on req) | Rwy Elev: 67 hPa | Trans level: By ATC | Trans alt: 5000′



RECOMMENDED ALTITUDES	
NM to RW22	ALTITUDE
6.0	3870′
5.0	3560′
4.0	3240′
3.0	2920′
2.0	2600′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
MAP at RW22							

HIALS
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 22

	LNAV/VNAV DA(H) 2270′ (380′)		LNAV DA(H) 2310′ (420′)	
		ALS out		ALS out
A	1500m		1500m	
B				
C	1500m	1700m	1500m	1900m
D				

CIRCLE-TO-LAND
TO RWY 04 (DAY only)
Not authorized Northwest of airport

Max Kts	MDA(H)	VIS
100	2440′ (493′)	1500m
135	2560′ (613′)	1600m
180	2850′ (903′)	2400m
205	2850′ (903′)	3600m

CHANGES: MSA. Minimums.

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EDMO/OBF
OBERPFAFFENHOFEN

JEPPESEN 6 MAY 11 (16-1)

OBERPFAFFENHOFEN, GERMANY
NDB Rwy 22

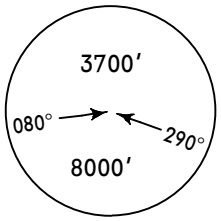
MUNICH Radar (South)	MUNICH Arrival(APP) (South)	*OBERPFAFFENHOFEN Tower
127.95	120.77	119.55 122.1X

BRIEFING STRIP ™

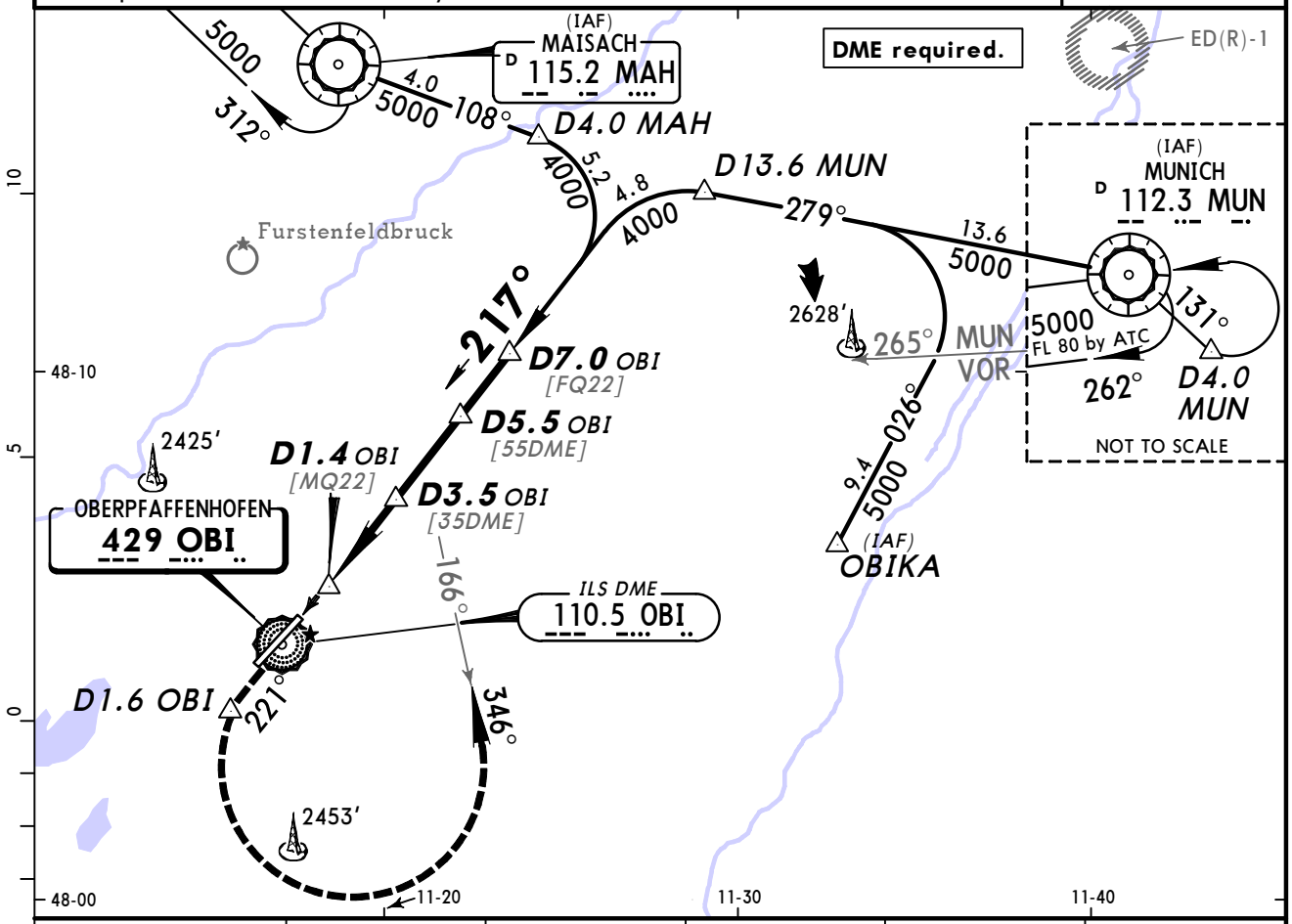
NDB OBI	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 1947′
429	217°	D7.0 OBI 4000′ (2110′)	2440′ (550′)	RWY 1890′

MISSED APCH: Climb on track 221° to D1.6 OBI, then turn LEFT to intercept R-166 inbound MAH VOR at 3000′ or above. Continue climb to 5000′ to MAH VOR.

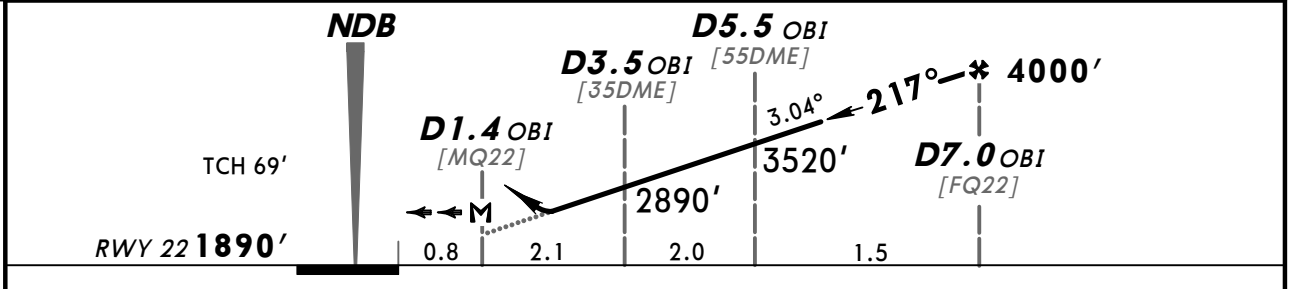
Alt Set: hPa (IN on req) Rwy Elev: 67 hPa Trans level: By ATC Trans alt: 5000′
Final apch track offset 4° from Rwy centerline.



MSA
OBI NDB



OBI DME	2.0	3.0	4.0	5.0	6.0
ALTITUDE	2410′	2730′	3050′	3360′	3680′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.04°	376	484	538	645	753	861
MAP at D1.4 OBI							

HIALS
PAPI

D1.6 OBI on 221°

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 22

DA(H) 2440′ (550′)

	ALS out	
A	1500m	
B		
C	2100m	2400m
D		

CIRCLE-TO-LAND
TO RWY 04 (DAY only)
Not authorized
Northwest of airport

Max Kts	MDA(H)	VIS
100	2500′ (553′)	1500m
135	2560′ (613′)	1600m
180	2850′ (903′)	2400m
205	2850′ (903′)	3600m

CHANGES: MSA. Minimums.

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General Information

Location: Friedrichshafen Deu
IATA Code: FDH
Lat/Long: N47° 40.3' E009° 30.7'
Elevation: 1367 ft

Airport Use: Public
Magnetic Variation: 1.8°E

Fuel Types: 100 Octane (LL), Jet, Jet A-1
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0607 Z
Sunset: 1702 Z,

Runway Information

Runway: 06
Length x Width: 7730 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1335 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 886 ft

Runway: 24
Length x Width: 7730 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1368 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Displaced Threshold: 676 ft

Communication Information

ATIS 129.6
Friedrichshafen Tower 120.075
Friedrichshafen Tower 134.3

*ATIS	Apt Elev	Alt Set: hPa (IN on request)
129.6	1367′	Trans level: By ATC Trans alt: 5000′

GARMO ONE PAPA (GARMO 1P) *[GARM1P]* ❶
KEMPTEN SIX PAPA (KPT 6P)
ROLSA TWO PAPA (ROLSA 2P) *[ROLS2P]* ❶
ZURICH FOUR PAPA (ZUE 4P)
RWYS 06, 24 ARRIVALS

7400′
MSA
ARP
applicable over German territory only

KEMPTEN
109.6 KPT
N47 44.7 E010 21.0

D11 KPT
11
7000
7600 ❷
KPT 6P
267°

D17.5 KPT
6.5
6000
6600 ❷

D27 KPT
9.5
5000
6600 ❷

12
5000

LOST COMMS
Maintain last cleared FL to MOKOP, descent in holding to 5000′.
LOST COMMS

NOT TO SCALE

SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

❶ BRNAV equipment necessary.

❷ During activity of NIGHT LOW FLYING SYSTEM

❸ GPS/FMS equipped aircraft expect respective TRANSITION on charts 10-2B (Rwy 06) & 10-2C (Rwy 24).
❹ BRNAV and NON-RNAV equipped aircraft expect radar vectors to final approach.

❹ (IAF)
MOKOP
N47 43.8
E009 23.3

D39

GARMO 1P ❶
5.3
5000
135°

❸ GARMO
N47 47.6
E009 18.0

D25
7
5000

D18 ZUE

11.3
5000
029°

RUDSI
N47 34.1 E009 14.8
3.8
5000

LAPDI
N47 30.5 E009 13.1
5.1
5000
016°

IBILA
N47 25.6 E009 10.8
8.1
7000

ATBAS
N47 21.0 E009 01.0

ROLSA 2P ❶
8000
050°
6.3

❸ ROLSA
N47 17.4
E008 53.4

18
6000
ZUE 4P
090°

❸ ZURICH EAST
110.05 ZUE
N47 35.5 E008 49.1

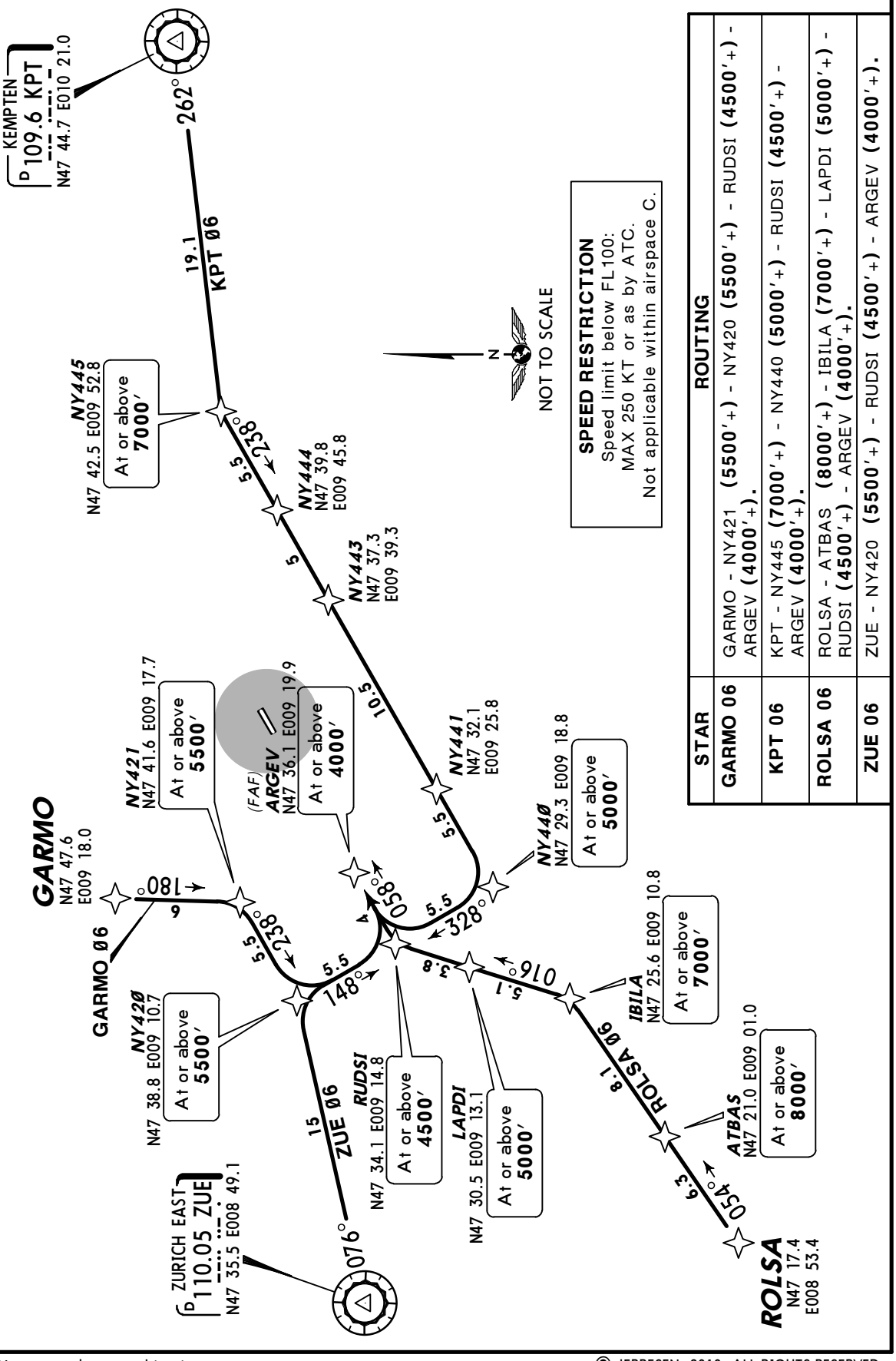
HOLDING OVER MOKOP
240°
5000
ZUE R069°
D25

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*ATIS	Apt Elev	
129.6	1367′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ Level assignments will be issued by ATC.

7400′
MSA
ARP
applicable over German territory only

GARMO Ø6 [GARØ6], KPT Ø6
ROLSA Ø6 [ROLØ6], ZUE Ø6
RWY 06 RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
BY ATC



STAR	ROUTING
GARMO 06	GARMO - NY421 **(5500′+)** - NY420 **(5500′+)** - RUDSI **(4500′+)** - ARGEV **(4000′+).**
KPT 06	KPT - NY445 **(7000′+)** - NY440 **(5000′+)** - RUDSI **(4500′+)** - ARGEV **(4000′+).**
ROLSA 06	ROLSA - ATBAS **(8000′+)** - IBILA **(7000′+)** - LAPDI **(5000′+)** - RUDSI **(4500′+)** - ARGEV **(4000′+).**
ZUE 06	ZUE - NY420 **(5500′+)** - RUDSI **(4500′+)** - ARGEV **(4000′+).**

CHANGES: New procedures at this airport.

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*ATIS	Apt Elev	
129.6	1367′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ Level assignments will be issued by ATC.

GARMO 24 *[GAR24]*, KPT 24
ROLSA 24 *[ROL24]*, ZUE 24
RWY 24 RNAV TRANSITIONS
GPS- OR FMS-EQUIPPED AIRCRAFT
BY ATC

7400′
MSA
ARP
applicable over German territory only

N
NOT TO SCALE

STAR	ROUTING
GARMO 24	GARMO - MOKOP (7000′+) - NY423 (6000′+) - NY425 - NY435 (5000′+) - ETREM (4000′+).
KPT 24	KPT - NY450 (7000′+) - NY451 (5600′+) - NY435 (5000′+) - ETREM (4000′+).
ROLSA 24	ROLSA - ATBAS (8000′+) - IBILA (7000′+) - NY440 - NY443 (6000′+) - NY445 - NY435 (5000′+) - ETREM (4000′+).
ZUE 24	ZUE - MOKOP (7000′+) - NY423 (6000′+) - NY425 - NY435 (5000′+) - ETREM (4000′+).

KEMPTEN
D 109.6 KPT
N47 44.7 E010 21.0

ZURICH EAST
D 110.05 ZUE
N47 35.5 E008 49.1

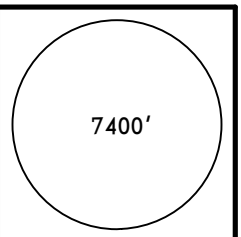
SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

NY450 N47 45.8 E010 07.3 — At or above 7000′
NY451 N47 46.8 E009 55.1 — At or above 5600′
NY435 N47 47.3 E009 48.8 — At or above 5000′
NY445 N47 42.5 E009 52.8
ETREM (FAF) N47 44.6 E009 41.7 — At or above 4000′
NY425 N47 52.0 E009 44.8
NY444 N47 39.8 E009 45.8
NY443 N47 37.3 E009 39.3 — At or above 6000′
NY424 N47 49.3 E009 37.7
NY423 N47 46.8 E009 31.3 — At or above 6000′
NY441 N47 32.1 E009 25.8
NY440 N47 29.3 E009 18.8
MOKOP N47 43.8 E009 23.3 — At or above 7000′
GARMO N47 47.6 E009 18.0
IBILA N47 25.6 E009 10.8 — At or above 7000′
ATBAS N47 21.0 E009 01.0 — At or above 8000′
ROLSA N47 17.4 E008 53.4

275° KPT 24 9.3
8.3
4.3
148° 5.5
328° 5.5
238° 5.5
5.5
5
10.5
058° 6.2
050° 5.3 135° GARMO 24
058° 5.5
6.6
8.1 ROLSA 24
054° 9.3
069° 24.6 ZUE 24

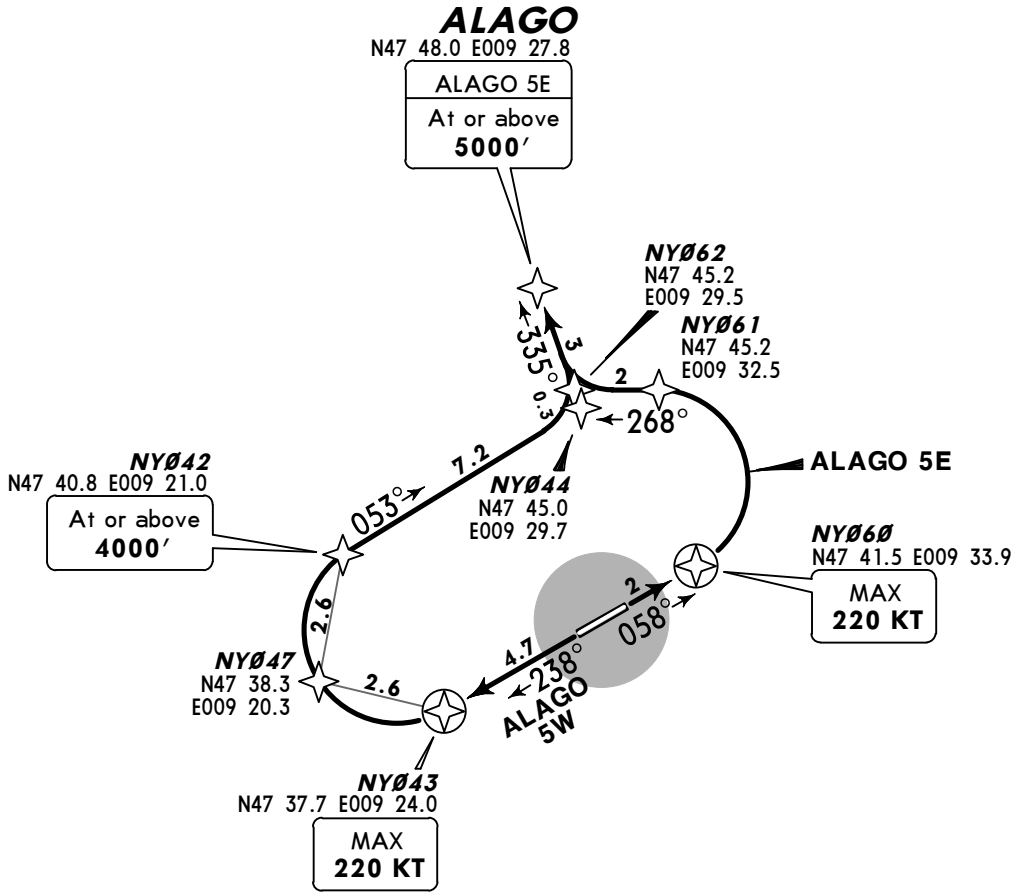
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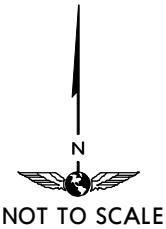
ZURICH Arrival 119.92	*Apt Elev* 1367′	Trans level: By ATC Trans alt: 5000′ 1. Contact ZURICH Arrival immediately after take-off. 2. SIDs are also noise abatement routings. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.



MSA
ARP
applicable over German territory only

ALAGO FIVE ECHO (ALAGO 5E) *[ALAG5E]*
ALAGO FIVE WHISKEY (ALAGO 5W) *[ALAG5W]*
RWYS 06, 24 RNAV DEPARTURES
RNAV (GPS)





NOT TO SCALE

These SIDs require minimum climb gradients of

ALAGO 5E
328′ per NM (5.4%) until passing **5000′** due to airspace.

ALAGO 5W
261′ per NM (4.3%) until passing **4000′** due to airspace.

Gnd speed-KT	75	100	150	200	250	300
328′ per NM	410	547	820	1094	1367	1641
261′ per NM	327	435	653	871	1089	1306

SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
ALAGO 5E	**06**	**(1800+)** - NY060 (K220-) - NY061 - NY062 - ALAGO **(5000+).**
ALAGO 5W	**24**	**(1800+)** - NY043 (K220-) - NY047 - NY042 **(4000+)** - NY044 - ALAGO.

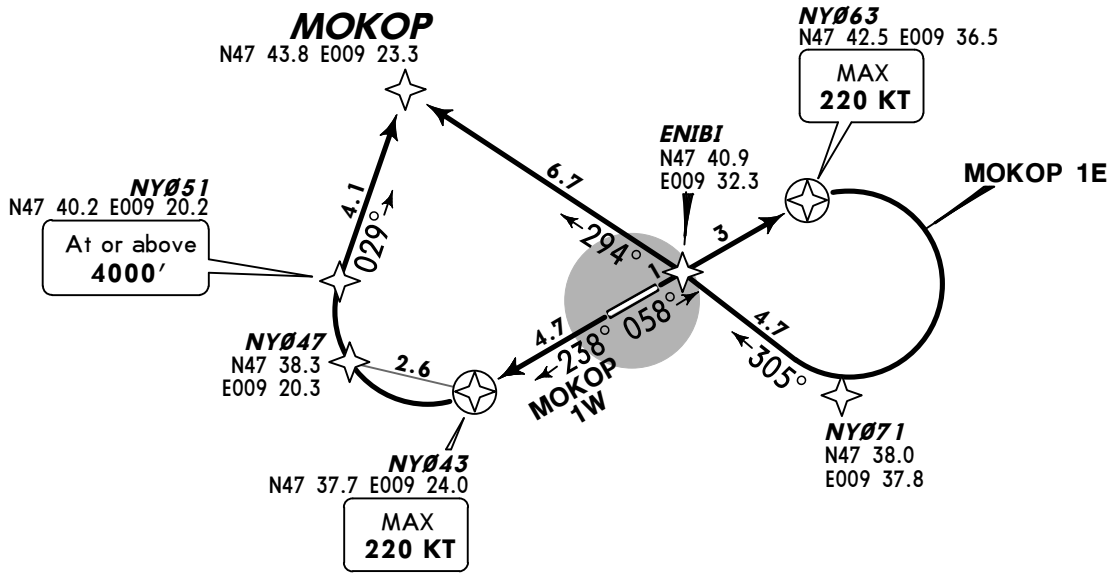
CHANGES: SIDs replaced by RNAV SIDs.

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ZURICH Arrival 119.92	*Apt Elev* 1367′	Trans level: By ATC Trans alt: 5000′ 1. Contact ZURICH Arrival immediately after take-off. 2. SIDs are also noise abatement routings. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

7400′
MSA
ARP
applicable over German territory only

MOKOP ONE ECHO (MOKOP 1E) *[MOKO1E]*
MOKOP ONE WHISKEY (MOKOP 1W) *[MOKO1W]*
RWYS 06, 24 RNAV DEPARTURES
RNAV (GPS)
BY ATC





NOT TO SCALE

MOKOP 1W

This SID requires a minimum climb gradient of
352′ per NM (5.8%) until passing **4000′**
due to airspace.

Gnd speed-KT	75	100	150	200	250	300
352′ per NM	441	587	881	1175	1468	1762

SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
MOKOP 1E	**06**	**(1800′+)** - NY063 (K220-) - NY071 - ENIBI - MOKOP.
MOKOP 1W	**24**	**(1800′+)** - NY043 (K220-) - NY051 **(4000′+)** - MOKOP.

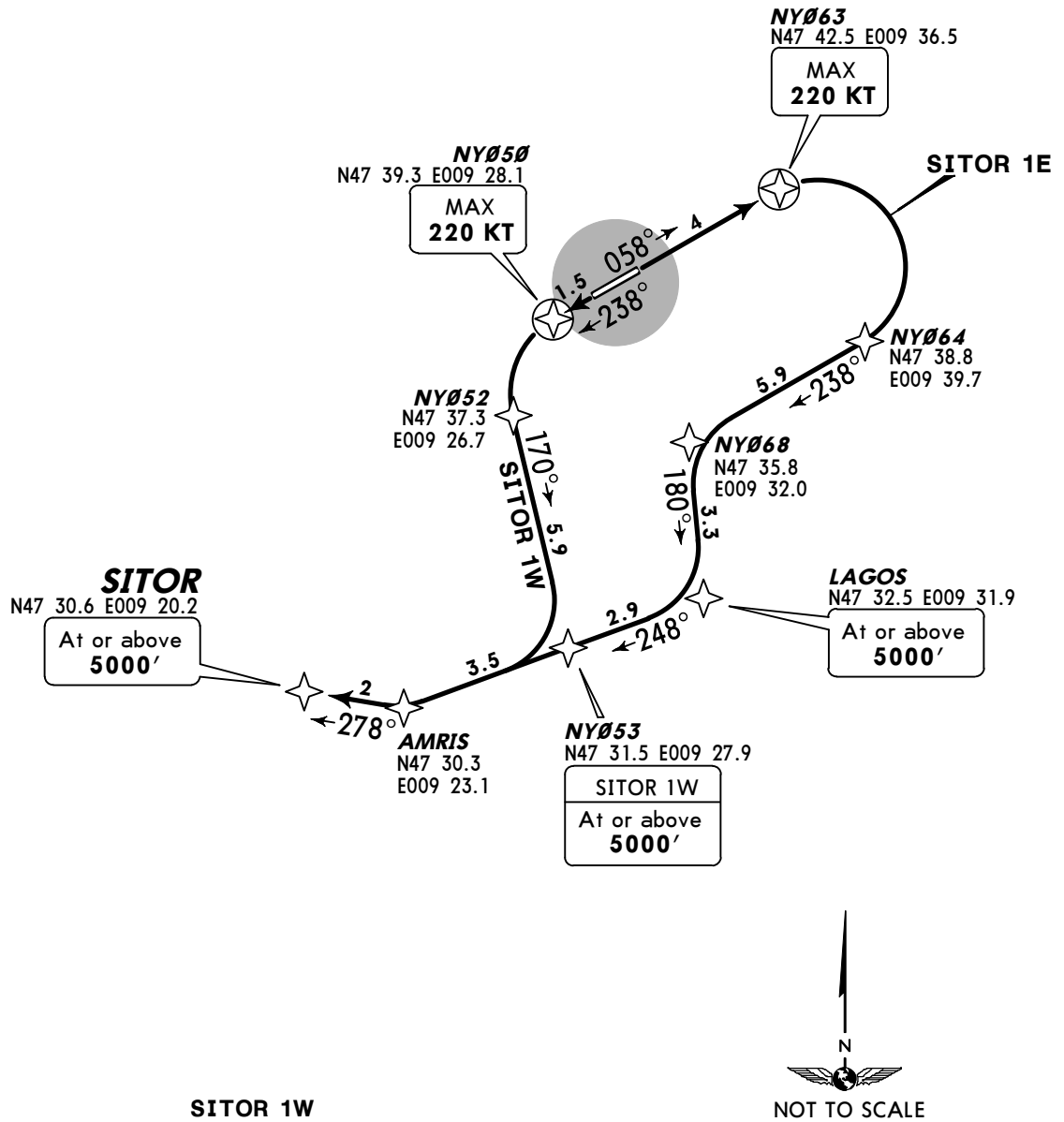
CHANGES: SIDs replaced by RNAV SIDs.

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ZURICH Arrival 119.92	*Apt Elev* 1367′	Trans level: By ATC Trans alt: 5000′ 1. Contact ZURICH Arrival immediately after take-off. 2. SIDs are also noise abatement routings. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

7400′
MSA
ARP
applicable over German territory only

SITOR ONE ECHO (SITOR 1E) *[SITO1E]*
SITOR ONE WHISKEY (SITOR 1W) *[SITO1W]*
RWYS 06, 24 RNAV DEPARTURES
RNAV (GPS)
ONLY FOR FLIGHTS TO LSZR



SITOR 1W
This SID requires a minimum climb gradient of
377′ per NM (6.2%) until passing **5000′**
due to airspace.

Gnd speed-KT	75	100	150	200	250	300
377′ per NM	471	628	942	1256	1570	1884

SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
SITOR 1E	**06**	**(1800′+)** - NY063 (K220-) - NY064 - NY068 - LAGOS **(5000′+)** - AMRIS - SITOR **(5000′+).**
SITOR 1W	**24**	**(1800′+)** - NY050 (K220-) - NY052 - NY053 **(5000′+)** - AMRIS - SITOR **(5000′+).**

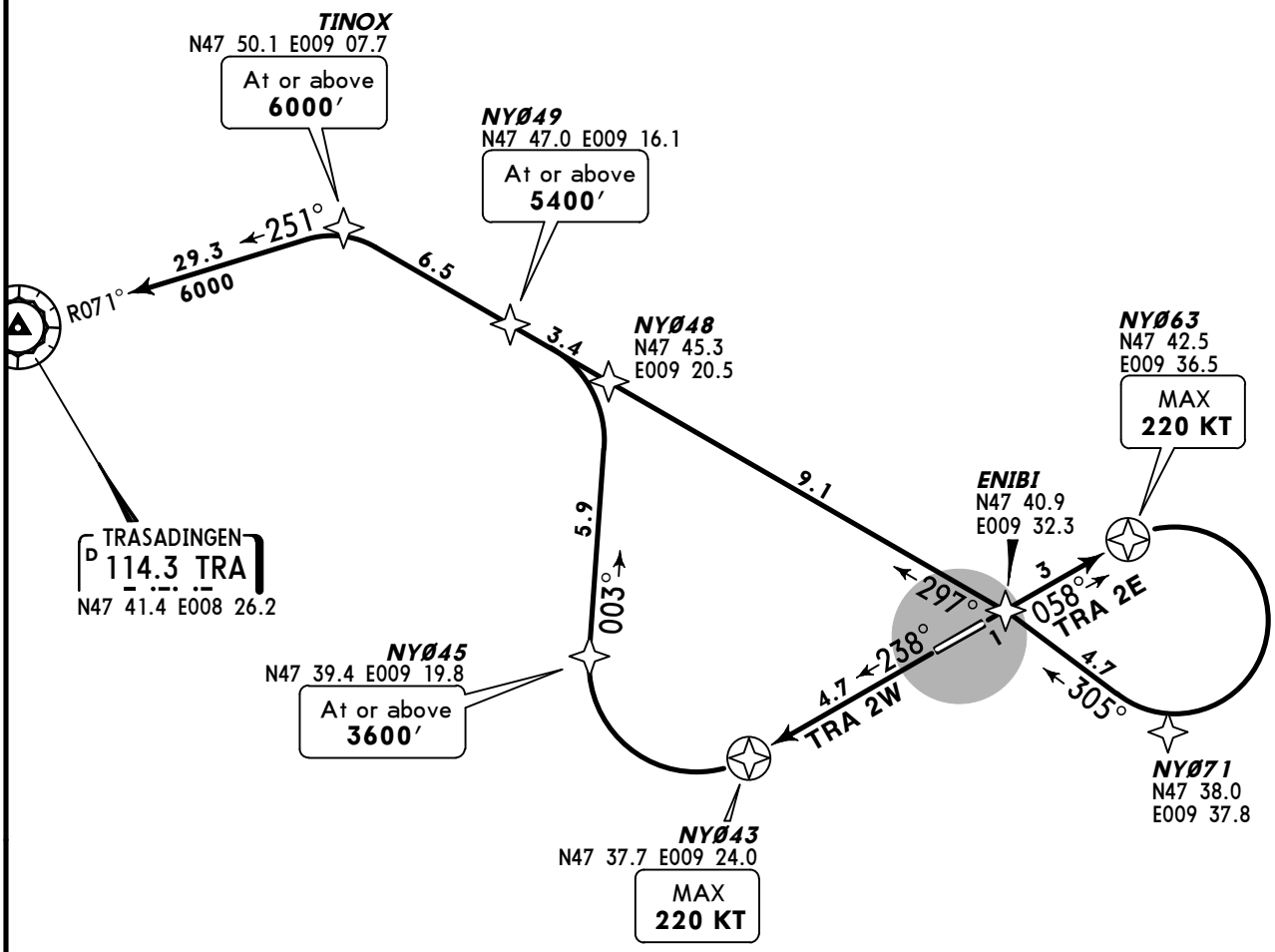
CHANGES: SIDs replaced by RNAV SIDs.

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ZURICH Arrival 119.92	Apt Elev 1367′	Trans level: By ATC Trans alt: 5000′ 1. Contact ZURICH Arrival immediately after take-off. 2. SIDs are also noise abatement routings. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

7400′
MSA
ARP
applicable over German territory only

TRASADINGEN TWO ECHO (TRA 2E)
TRASADINGEN TWO WHISKEY (TRA 2W)
RWYS 06, 24 RNAV DEPARTURES
RNAV (GPS)



TRA 2W
This SID requires a minimum climb gradient of
261′ per NM (4.3%) until passing **5400′**
due to airspace.

Gnd speed-KT	75	100	150	200	250	300
261′ per NM	327	435	653	871	1089	1306

SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
TRA 2E	**06**	**(1800′+)** - NY063 (K220-) - NY071 - ENIBI - NY049 **(5400′+)** - TINOX **(6000′+)** - TRA.
TRA 2W	**24**	**(1800′+)** - NY043 (K220-) - NY045 **(3600′+)** - NY048 - NY049 **(5400′+)** - TINOX **(6000′+)** - TRA.

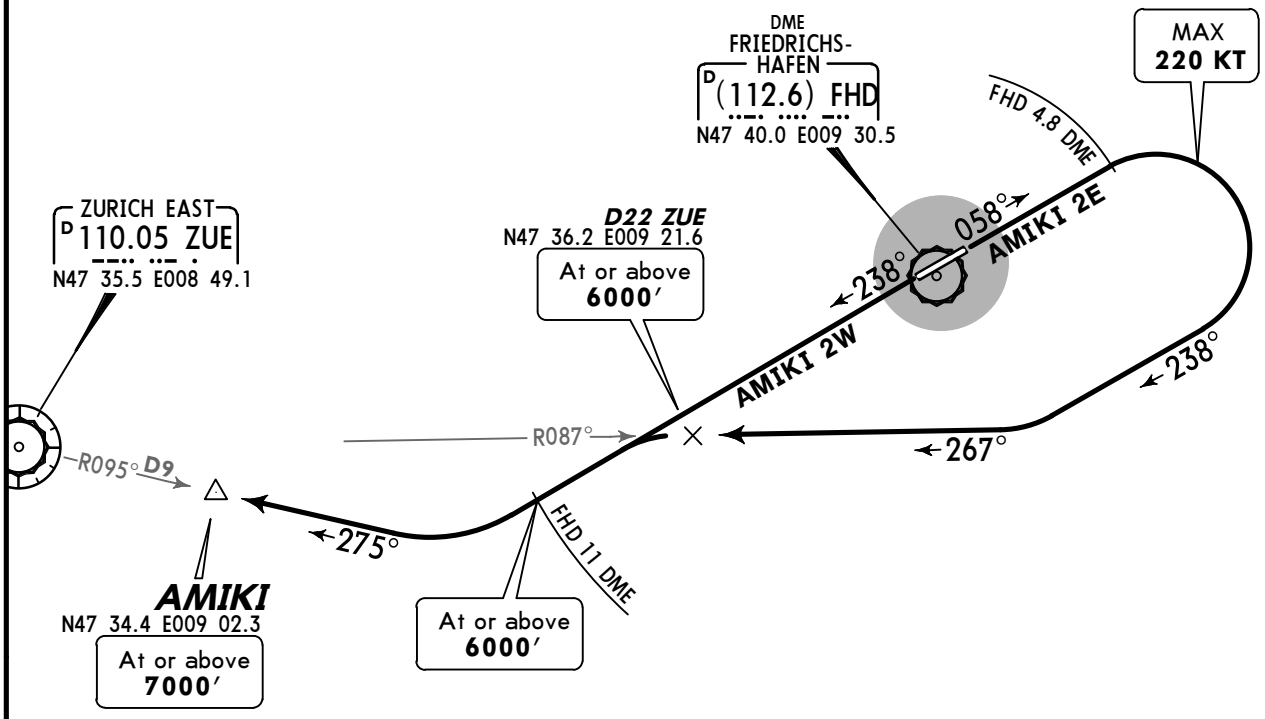
CHANGES: SIDs replaced by RNAV SIDs.

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ZURICH Arrival 119.92	*Apt Elev* 1367′	Trans level: By ATC Trans alt: 5000′ 1. Contact ZURICH Arrival immediately after take-off. 2. SIDs are also noise abatement routings. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

7400′
MSA
ARP
applicable over German territory only

AMIKI TWO ECHO (AMIKI 2E)
AMIKI TWO WHISKEY (AMIKI 2W)
RWYS 06, 24 DEPARTURES



AMIKI 2W

This SID requires a minimum climb gradient of
425′ per NM (7%) until passing **6000′**
due to airspace.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

N
NOT TO SCALE

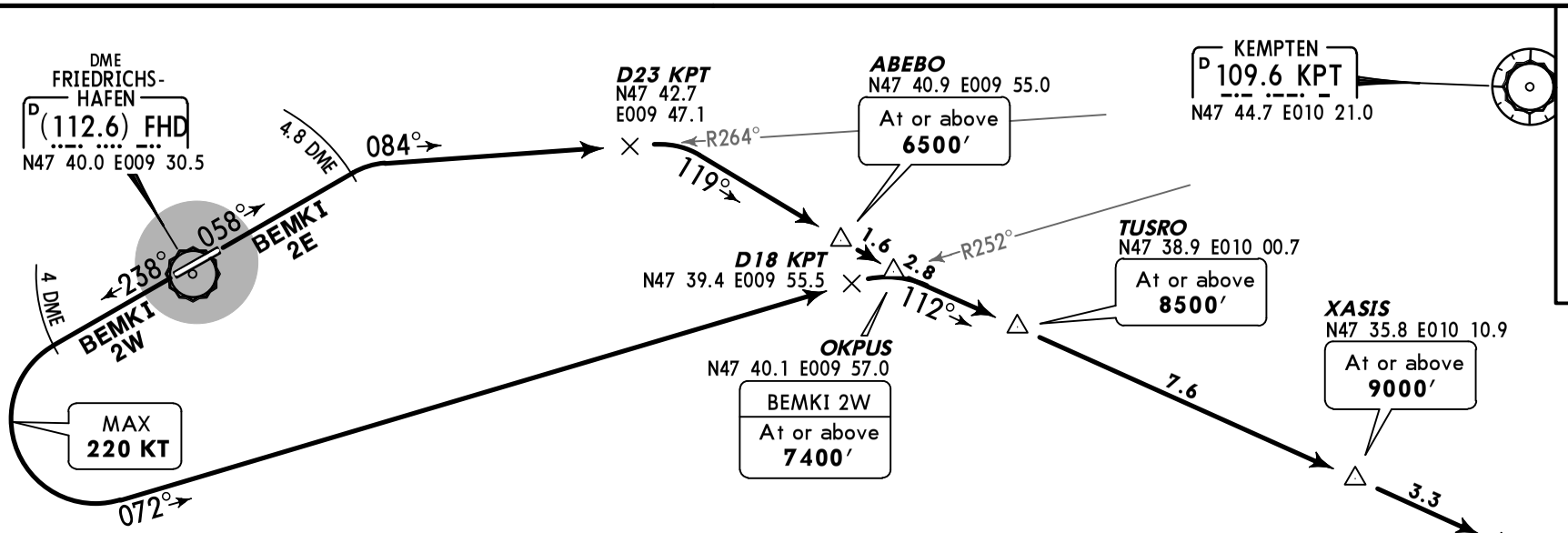
SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	RWY	ROUTING
AMIKI 2E	**06**	On 058° track to FHD 4.8 DME, turn RIGHT, 238° track, intercept ZUE R-087 inbound to D22 ZUE, turn LEFT, 238° track, intercept ZUE R-095 inbound to AMIKI.
AMIKI 2W	**24**	On 238° track FHD 11 DME, turn RIGHT, intercept ZUE R-095 inbound to AMIKI.

CHANGES: SIDs renumbered, revised & transferred.

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ZURICH Arrival 119.92

Apt Elev 1367′

Trans level: By ATC Trans alt: 5000′

1. Contact ZURICH Arrival immediately after take-off.
2. SIDs are also noise abatement routings. Strict adherence within the limits of aircraft performance is mandatory.
3. EXPECT close-in obstacles.

BEMKI TWO ECHO (BEMKI 2E) BEMKI TWO WHISKEY (BEMKI 2W)

RWYS 06, 24 DEPARTURES

These SIDs require minimum climb gradients of

BEMKI 2E

401′ per NM (6.6%) until passing **5400′** due to navaid coverage, then
304′ per NM (5%) until passing **8500′** due to airspace, and
650′ per NM (10.7%) up to **7400′** if Night Low Flying System is active.
If unable to comply advise ATC.

BEMKI 2W

346′ per NM (5.7%) due to navaid coverage.

Gnd speed-KT	75	100	150	200	250	300
650′ per NM	813	1084	1625	2167	2709	3251
401′ per NM	501	668	1003	1337	1671	2005
346′ per NM	433	577	866	1155	1443	1732
304′ per NM	380	506	760	1013	1266	1519

Initial climb clearance **5000′**

SID	RWY	ROUTING
BEMKI 2E	06	On 058° track to FHD 4.8 DME, turn RIGHT, 084° track, intercept KPT R-264 inbound to D23 KPT ❶, turn RIGHT, 119° track via ABEBO to OKPUS, turn LEFT, 112° track via TUSRO, XASIS and EVTAT to BEMKI.
BEMKI 2W	24	On 238° track to FHD 4 DME, turn LEFT, 072° track, intercept KPT R-252 inbound to D18 KPT ❷, turn RIGHT, 112° track via TUSRO, XASIS and EVTAT to BEMKI.

❶ After D23 KPT BRNAV equipment necessary.
❷ After D18 KPT BRNAV equipment necessary.

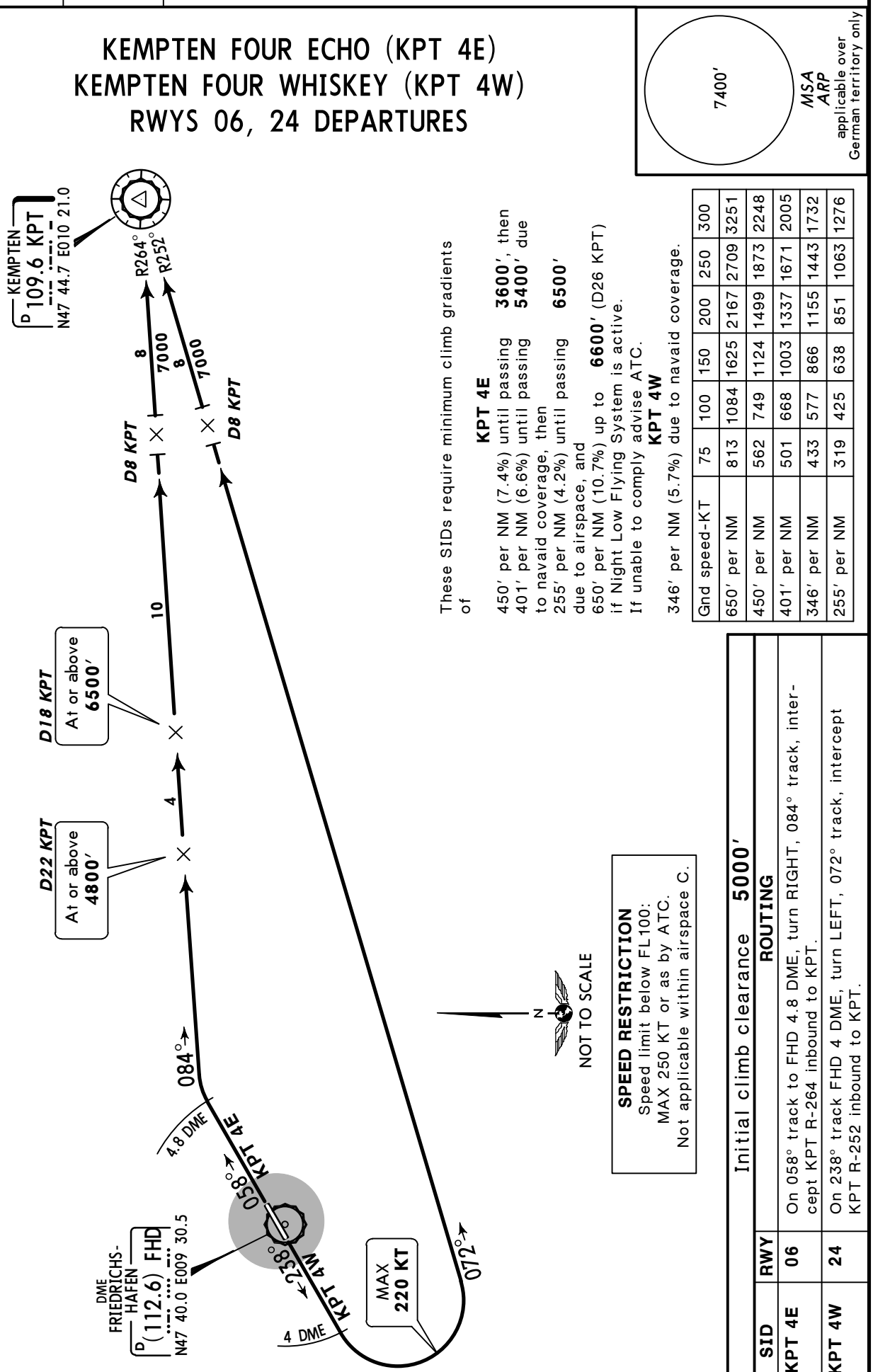
SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

CHANGES: SIDs renumbered, revised, transferred & withdrawn.
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ZURICH Arrival 119.92	*Apt Elev* 1367′

Trans level: By ATC Trans alt: 5000′
1. Contact ZURICH Arrival immediately after take-off.
2. SIDs are also noise abatement routings. Strict adherence within the limits of aircraft performance is mandatory.
3. EXPECT close-in obstacles.

KEMPTEN FOUR ECHO (KPT 4E)
KEMPTEN FOUR WHISKEY (KPT 4W)
RWYS 06, 24 DEPARTURES



These SIDs require minimum climb gradients of

KPT 4E

450′ per NM (7.4%) until passing **3600′**, then
401′ per NM (6.6%) until passing **5400′** due to navaid coverage, then
255′ per NM (4.2%) until passing **6500′** due to airspace, and
650′ per NM (10.7%) up to **6600′** (D26 KPT) if Night Low Flying System is active.
If unable to comply advise ATC.

KPT 4W

346′ per NM (5.7%) due to navaid coverage.

Gnd speed-KT	75	100	150	200	250	300
650′ per NM	813	1084	1625	2167	2709	3251
450′ per NM	562	749	1124	1499	1873	2248
401′ per NM	501	668	1003	1337	1671	2005
346′ per NM	433	577	866	1155	1443	1732
255′ per NM	319	425	638	851	1063	1276

Initial climb clearance **5000′**

SID	RWY	ROUTING
KPT 4E	06	On 058° track to FHD 4.8 DME, turn RIGHT, 084° track, intercept KPT R-264 inbound to KPT.
KPT 4W	24	On 238° track FHD 4 DME, turn LEFT, 072° track, intercept KPT R-252 inbound to KPT.

CHANGES: SIDs renumbered, revised & transferred.

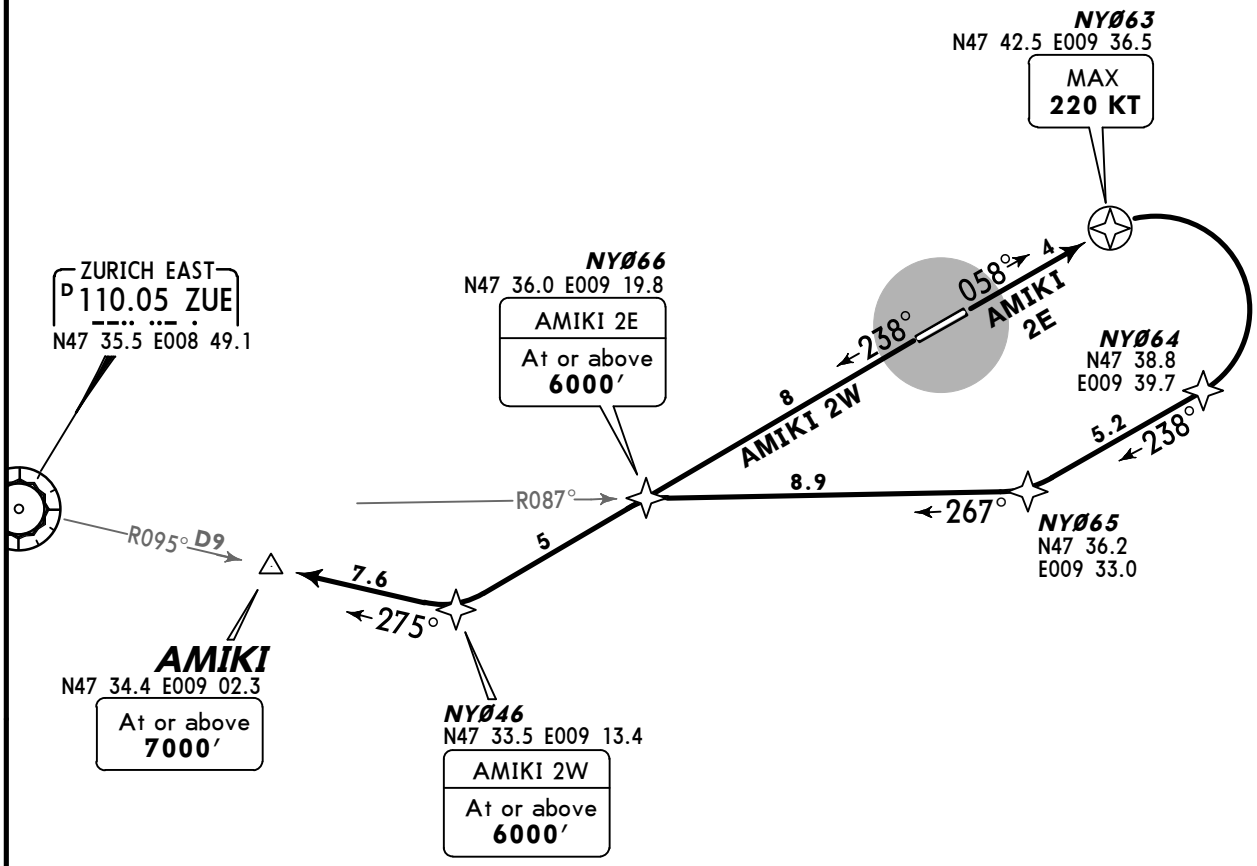
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ZURICH Arrival 119.92	*Apt Elev* 1367′	Trans level: By ATC Trans alt: 5000′ 1. Contact ZURICH Arrival immediately after take-off. 2. SIDs are also noise abatement routings. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

7400′

MSA
ARP
applicable over German territory only

AMIKI TWO ECHO (AMIKI 2E) *[AMIK2E]*
AMIKI TWO WHISKEY (AMIKI 2W) *[AMIK2W]*
RWYS 06, 24 RNAV DEPARTURES
(OVERLAY 10-3D)



AMIKI 2W

This SID requires a minimum climb gradient of
425′ per NM (7%) until passing **6000′**
due to airspace.

Gnd speed-KT	75	100	150	200	250	300
425′ per NM	532	709	1063	1418	1772	2127

N

NOT TO SCALE

SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

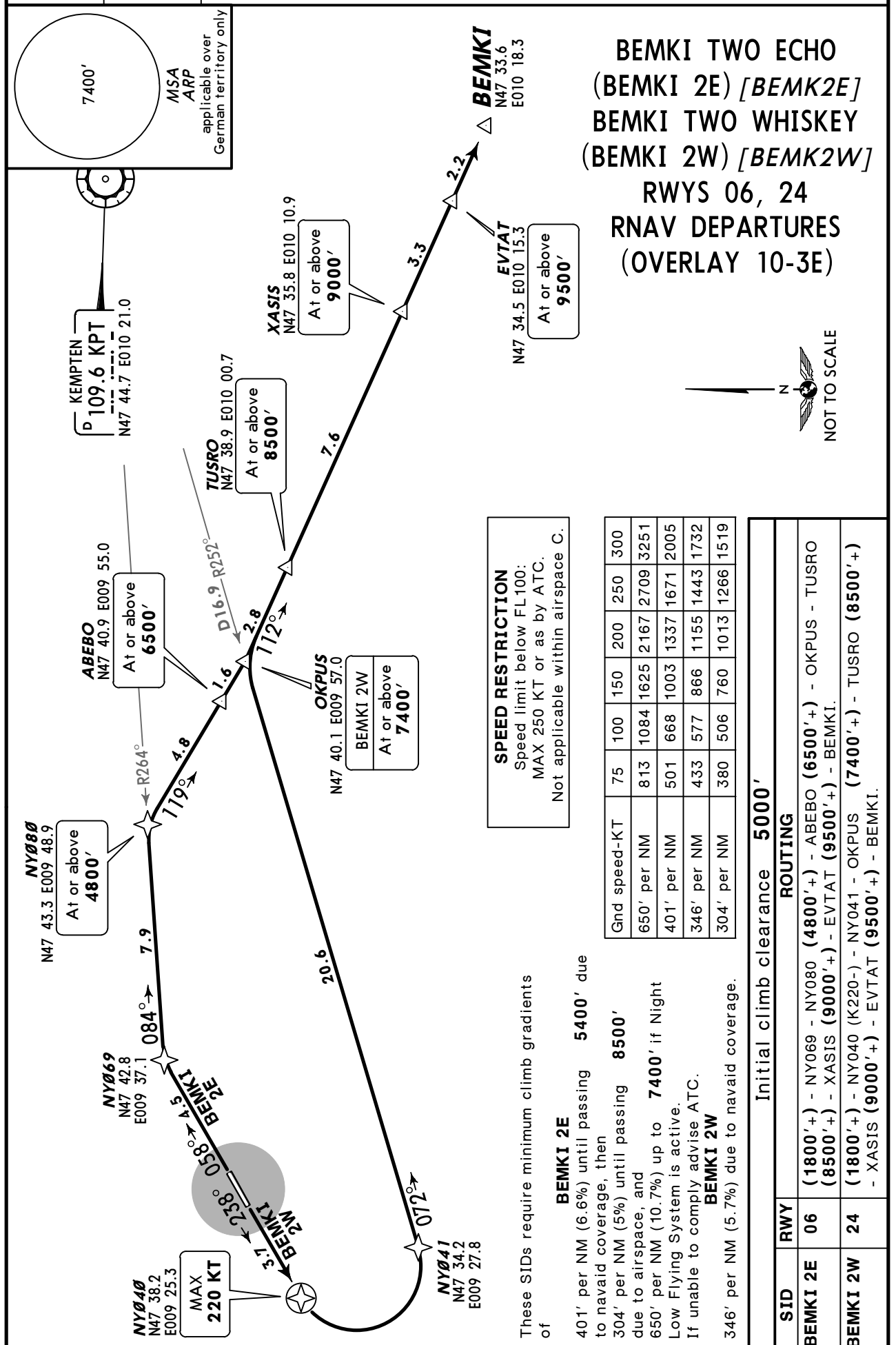
SID	RWY	ROUTING
AMIKI 2E	**06**	**(1800′+)** - NY063 (K220-) - NY064 - NY065 - NY066 **(6000′+)** - NY046 - AMIKI **(7000′+).**
AMIKI 2W	**24**	**(1800′+)** - NY046 **(6000′+)** - AMIKI **(7000′+).**

CHANGES: RNAV SIDs renumbered, revised & transferred.

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ZURICH Arrival 119.92	Apt Elev 1367′	Trans level: By ATC Trans alt: 5000′ 1. Contact ZURICH Arrival immediately after take-off. 2. SIDs are also noise abatement routings. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

BEMKI TWO ECHO (BEMKI 2E) *[BEMK2E]* BEMKI TWO WHISKEY (BEMKI 2W) *[BEMK2W]* RWYS 06, 24 RNAV DEPARTURES (OVERLAY 10-3E)



SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

Gnd speed-KT	75	100	150	200	250	300
650′ per NM	813	1084	1625	2167	2709	3251
401′ per NM	501	668	1003	1337	1671	2005
346′ per NM	433	577	866	1155	1443	1732
304′ per NM	380	506	760	1013	1266	1519

These SIDs require minimum climb gradients of
BEMKI 2E
401′ per NM (6.6%) until passing **5400′** due to navaid coverage, then
304′ per NM (5%) until passing **8500′** due to airspace, and
650′ per NM (10.7%) up to **7400′** if Night Low Flying System is active.
If unable to comply advise ATC.
BEMKI 2W
346′ per NM (5.7%) due to navaid coverage.

SID	RWY	Initial climb clearance 5000′ ROUTING
BEMKI 2E	06	**(1800′+)** - NY069 - NY080 **(4800′+)** - ABEBO **(6500′+)** - OKPUS - TUSRO **(8500′+)** - XASIS **(9000′+)** - EVTAT **(9500′+)** - BEMKI.
BEMKI 2W	24	**(1800′+)** - NY040 (K220-) - NY041 - OKPUS **(7400′+)** - TUSRO **(8500′+)** - XASIS **(9000′+)** - EVTAT **(9500′+)** - BEMKI.

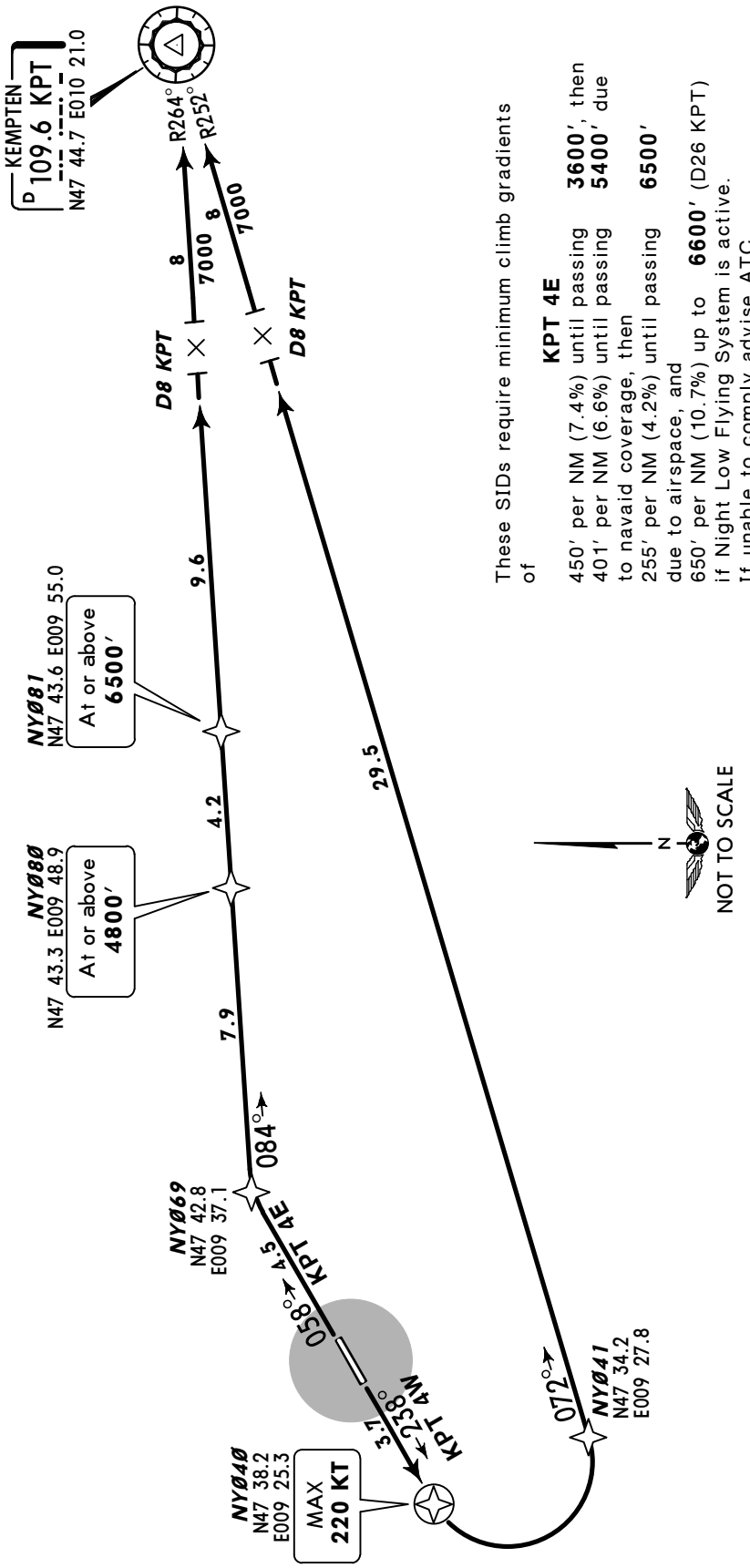
CHANGES: RNAV SIDs renumbered, revised & transferred.

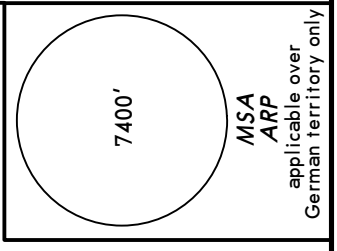
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ZURICH Arrival 119.92	*Apt Elev* 1367′

Trans level: By ATC Trans alt: 5000′
1. Contact ZURICH Arrival immediately after take-off.
2. SIDs are also noise abatement routings. Strict adherence within the limits of aircraft performance is mandatory.
3. EXPECT close-in obstacles.

KEMPTEN FOUR ECHO (KPT 4E)
KEMPTEN FOUR WHISKEY (KPT 4W)
RWYS 06, 24 RNAV DEPARTURES
(OVERLAY 10-3F)





These SIDs require minimum climb gradients of

KPT 4E
450′ per NM (7.4%) until passing **3600′**, then
401′ per NM (6.6%) until passing **5400′** due to navaid coverage, then
255′ per NM (4.2%) until passing **6500′** due to airspace, and
650′ per NM (10.7%) up to **6600′** (D26 KPT) if Night Low Flying System is active.
If unable to comply advise ATC.

KPT 4W
346′ per NM (5.7%) due to navaid coverage.

Gnd speed-KT	75	100	150	200	250	300
650′ per NM	813	1084	1625	2167	2709	3251
450′ per NM	562	749	1124	1499	1873	2248
401′ per NM	501	668	1003	1337	1671	2005
346′ per NM	433	577	866	1155	1443	1732
255′ per NM	319	425	638	851	1063	1276

SPEED RESTRICTION
Speed limit below FL100:
MAX 250 KT or as by ATC.
Not applicable within airspace C.

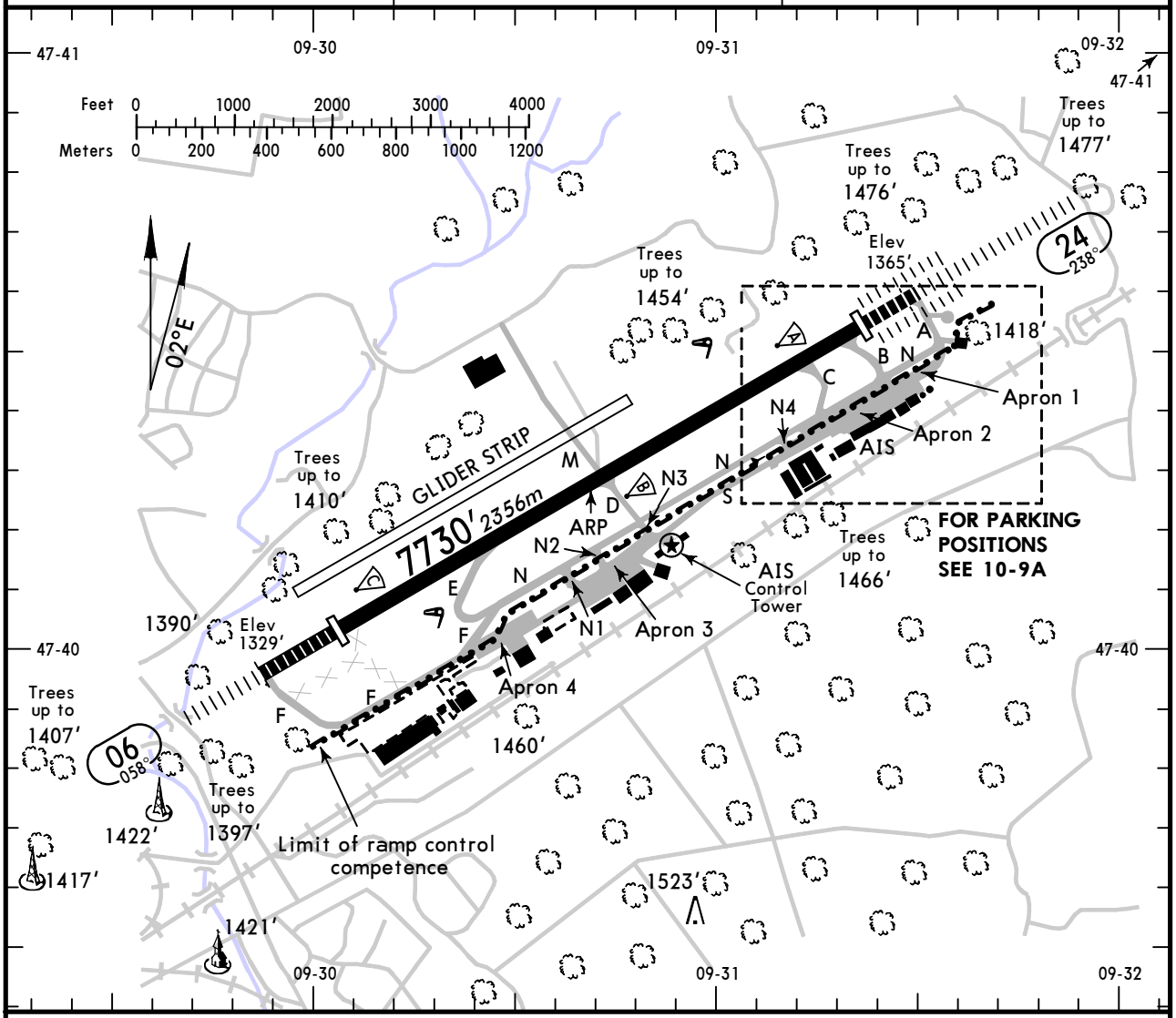
Initial climb clearance **5000′**

SID	RWY	ROUTING
KPT 4E	06	**(1800′+)** - NY069 - NY080 **(4800′+)** - NY081 **(6500′+)** - KPT.
KPT 4W	24	**(1800′+)** - NY040 (K220-) - NY041 - KPT.

CHANGES: RNAV SIDs renumbered, revised & transferred.

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*ATIS	*FRIEDRICHSHAFEN Tower		ZURICH Arrival (APP/DEP)
129.6	120.07	134.3	119.92



GENERAL

Rwy 24 approved for CAT II/III operations, special aircrew and acft certification required.
Visual approaches shall be conducted on or above the glide path angle which is defined by the ILS.

CAUTION: Birds in vicinity of airport.
Possible wake turbulence.
Glider activity on weekends and holidays.

ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
06 ❶ 24	HIRL CL *(15m)* HIALS SFL REIL PAPI-L(3.1°) RVR	6844′ *2086m*	5963′ *1818m*	7251′ *2210m*	148′ *45m*
	HIRL CL *(15m)* ALSF-II TDZ REIL ❷ RVR	7053′ *2150m*	5873′ *1790m*	7041′ *2146m*	

❶ Rwy with anti-skid layer.
❷ PAPI-L(3.0°)

Standard

TAKE-OFF 1

All Rwys

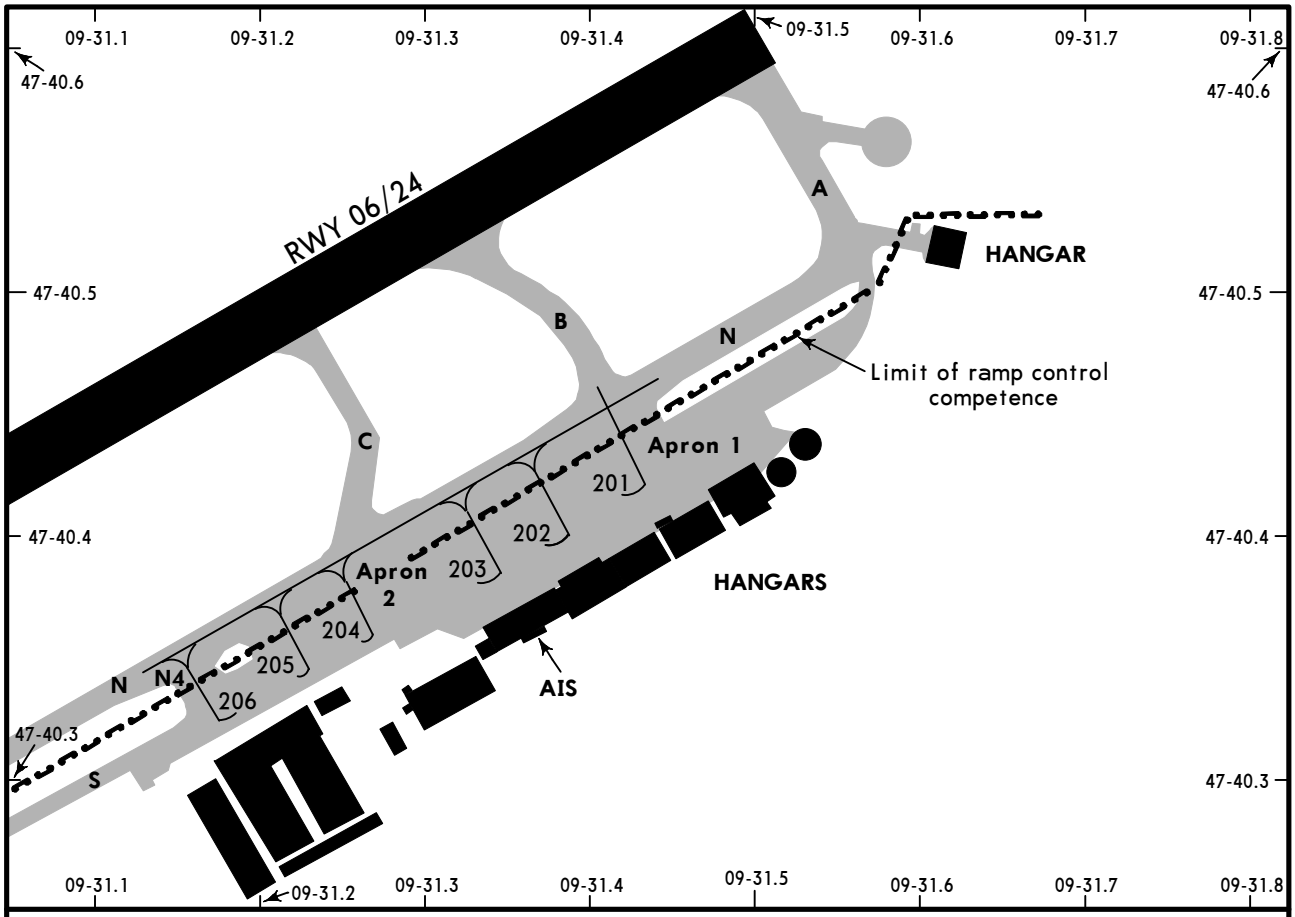
LVP must be in Force

	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: Variation. Rwy bearings.

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INS COORDINATES

STAND No.	COORDINATES		
201 thru 203	N47 40.4 E009 31.4		
204	N47 40.4 E009 31.3		
205	N47 40.4 E009 31.2		
206	N47 40.3 E009 31.2		

Auxiliary Power Unit (APU): Due to noise restriction reasons, it is prohibited to use the APU for acft during restrictions for night flying. In addition, the use of the APU is only permitted if absolutely necessary and if the supply to the ground installations is not realizable with ground support equipment. This does not apply to the use of the APU for engine start-up.

LOW VISIBILITY PROCEDURES

LVP will be announced via ATIS with the phrase "Low visibility procedures in operation".
LVP become effective when RVR is less than 600m.
If CAT II or III all-weather operations are announced, taxiing outside the apron is permitted for all aircraft on taxiways with operating center line lights, only. Landing aircraft are requested to report leaving the sections with colorcoded taxiway center line lights to indicate that the aircraft has vacated the safety area of the RWY.

CHANGES: None.

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FRIEDRICHSHAFEN, GERMANY

FRIEDRICHSHAFEN

STRAIGHT-IN RWY		A	B	C	D
06	ILS	**1534′** (200′)	**1534′** (200′)	**1549′** (215′)	**1559′** (225′)
		R700m	**R700m**	**R700m**	**R700m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC ❶	**1760′** (426′)	**1760′** (426′)	**1760′** (426′)	**1760′** (426′)
		R1200m	**R1300m**	**R1400m**	**R1600m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**1750′** (416′)	**1750′** (416′)	**1750′** (416′)	**1750′** (416′)
		R1200m	**R1300m**	**R1400m**	**R1600m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**1760′** (426′)	**1760′** (426′)	**1760′** (426′)	**1760′** (426′)
		R1200m	**R1300m**	**R1400m**	**R1600m**
	ALS out	R1500m	R1500m	R1800m	R2000m
24	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**1467′** (100′)	**1467′** (100′)	**1467′** (100′)	**1467′** (100′)
		RA107′ R300m	**RA107′ R300m**	**RA107′ R300m**	**RA107′ R300m**
	ILS	**1567′** (200′)	**1567′** (200′)	**1631′** (264′)	**1641′** (274′)
		R550m	**R550m**	**R650m**	**R650m**
	ALS out	R1000m	R1000m	R1200m	R1200m
	LOC ❶	**1730′** (363′)	**1730′** (363′)	**1730′** (363′)	**1730′** (363′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV/VNAV)	**1670′** (303′)	**1690′** (323′)	**1740′** (373′)	**1740′** (373′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	RNAV (LNAV)	**1740′** (373′)	**1740′** (373′)	**1740′** (373′)	**1740′** (373′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m

❶ MM out: NOT AUTHORIZED.

TAKE-OFF RWY 06, 24

	Approved Operators	LVP must be in force				
	HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

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EDNY/FDH
FRIEDRICHSHAFEN

JEPPESEN 27 AUG 10 (11-1)

FRIEDRICHSHAFEN, GERMANY
ILS or LOC Rwy 06

*ATIS	ZURICH Arrival (APP)	*FRIEDRICHSHAFEN Tower	
129.6	119.92	120.07	134.3

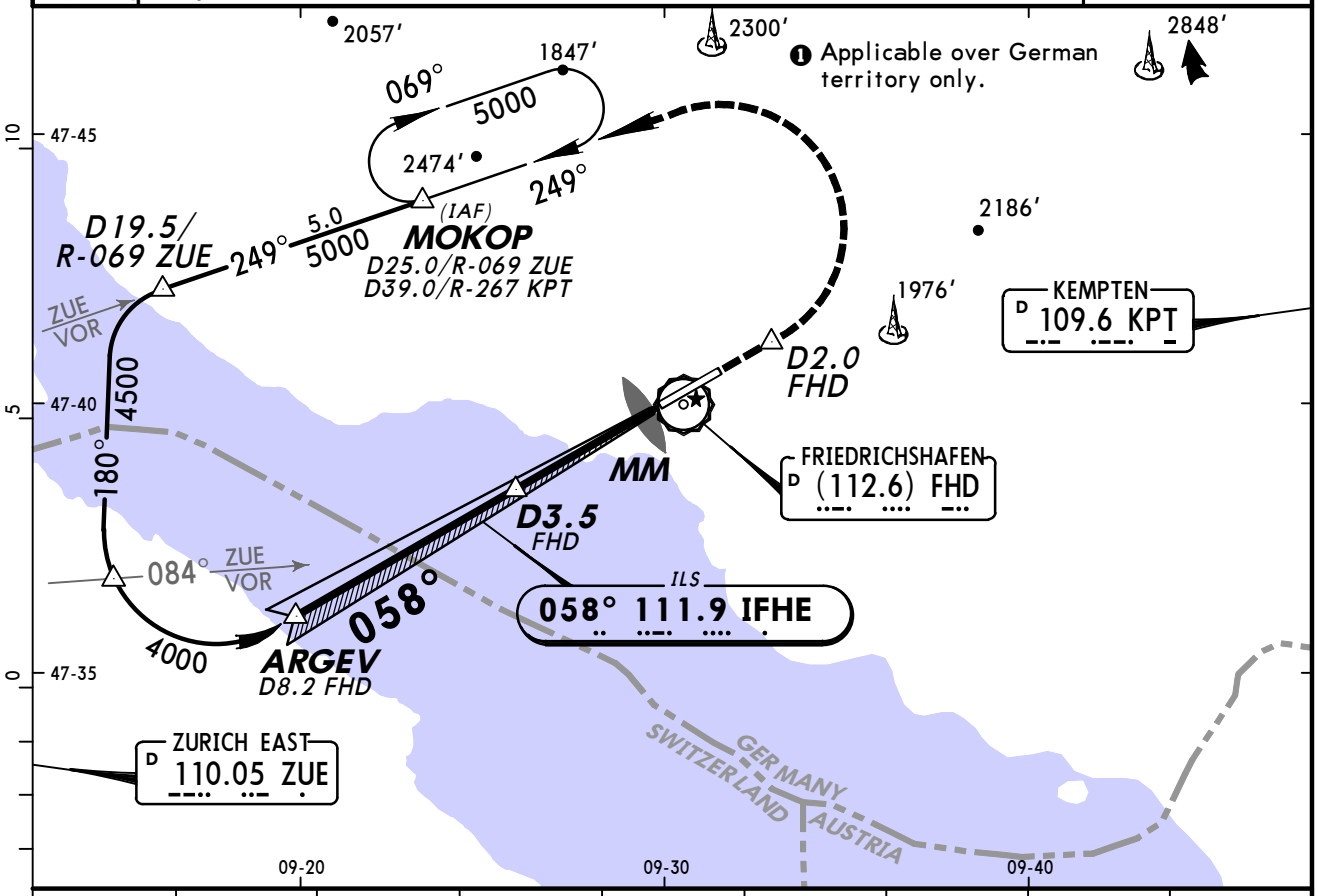
BRIEFING STRIP™

LOC IFHE	Final Apch Crs	GS	ILS DA(H)	Apt Elev 1367′
111.9	058°	D3.5 FHD 2440′ (1106′)	Refer to Minimums	RWY 1334′

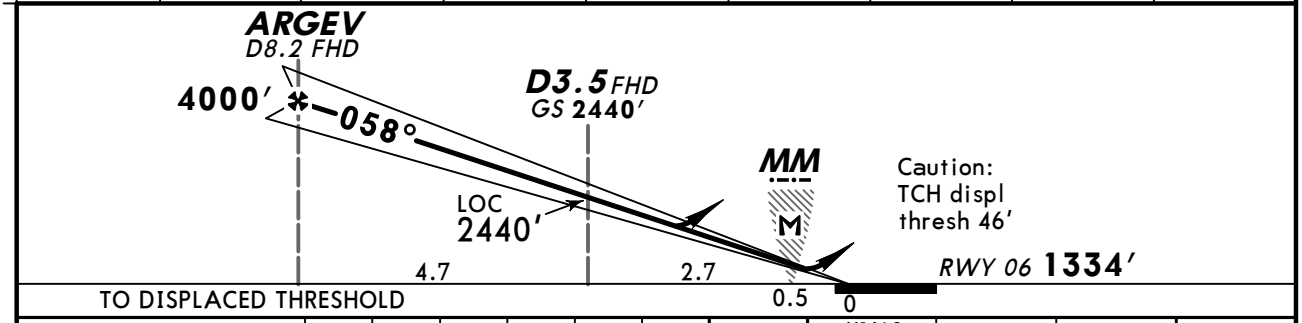
MISSED APCH: Climb on 058° to D2.0 FHD or 2000′, whichever is later, then turn LEFT to intercept R-069 ZUE to MOKOP climbing to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 48 hPa Trans level: By ATC Trans alt: 5000′
DME required.

7400′
MSA Airport ❶



LOC (GS out)	FHD DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3910′	3580′	3260′	2930′	2600′	2270′	1940′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.10°	389	500	556	667	778	889
MAP at MM						

HIALS
REIL
PAPI

058°

D2.0 FHD
whichever is later
2000′

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 06

	ILS		LOC (GS out)	
	DA(H) AB: 1534′ (200′)	C: 1549′ (215′) D: 1559′ (225′)	DA(H) 1760′ (426′)	
	FULL/Limited	ALS out		ALS out
A B	RVR 750m	RVR 1200m	RVR 1500m	
C D	RVR 800m		RVR 1600m	RVR 2000m

CHANGES: ILS minimums.

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EDNY/FDH
FRIEDRICHSHAFEN

JEPPESEN 15 APR 11 (11-2)

FRIEDRICHSHAFEN, GERMANY
ILS or LOC Rwy 24

*ATIS	ZURICH Arrival (APP)	*FRIEDRICHSHAFEN Tower	
129.6	119.92	120.07	134.3

BRIEFING STRIP™

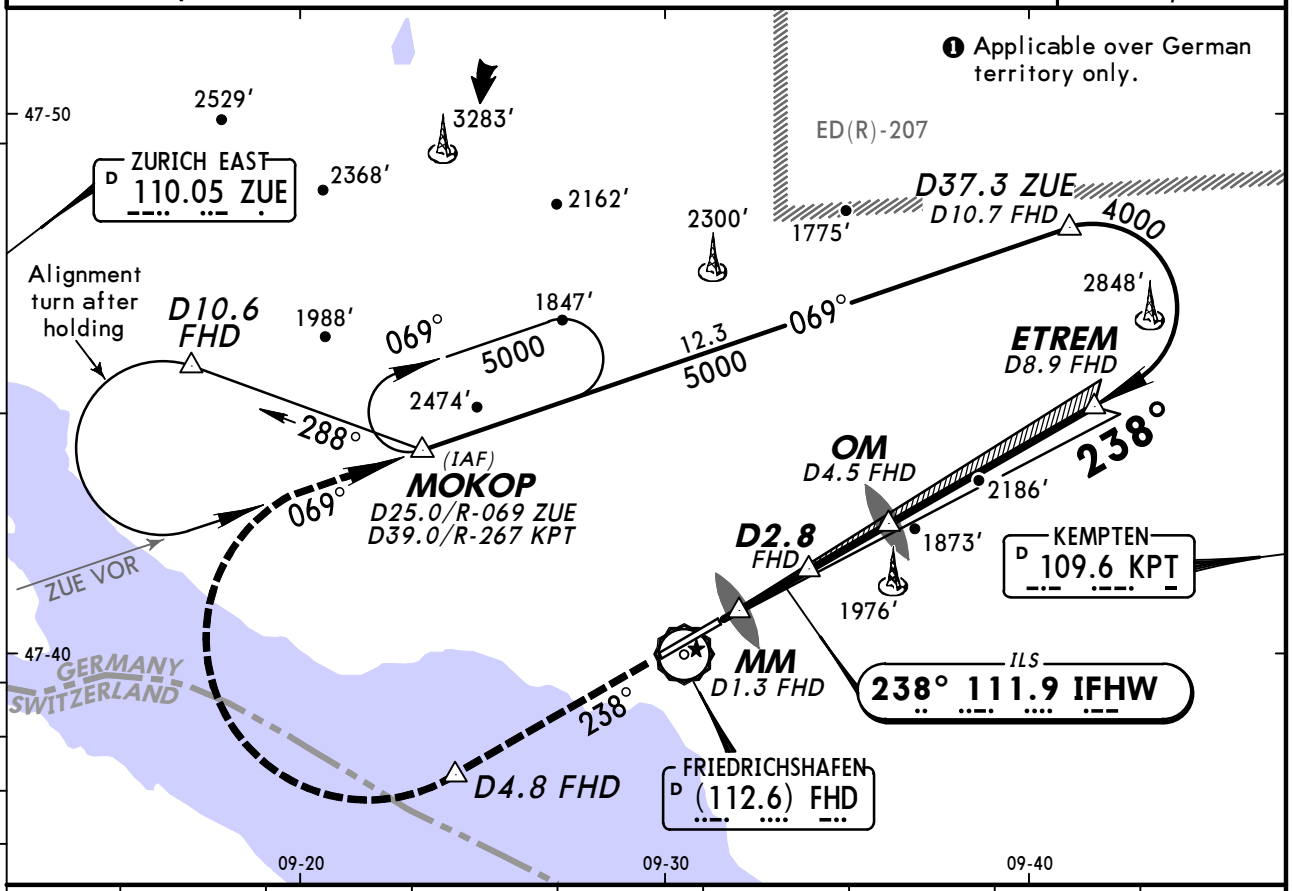
LOC IFHW 111.9	Final Apch Crs 238°	GS OM 2610′ (1243′)	ILS DA(H) Refer to Minimums	Apt Elev 1367′ RWY 1367′

MISSED APCH: Climb on 238° to D4.8 FHD or 3000′, whichever is later, then turn RIGHT to intercept R-069 ZUE to MOKOP climbing to 5000′.

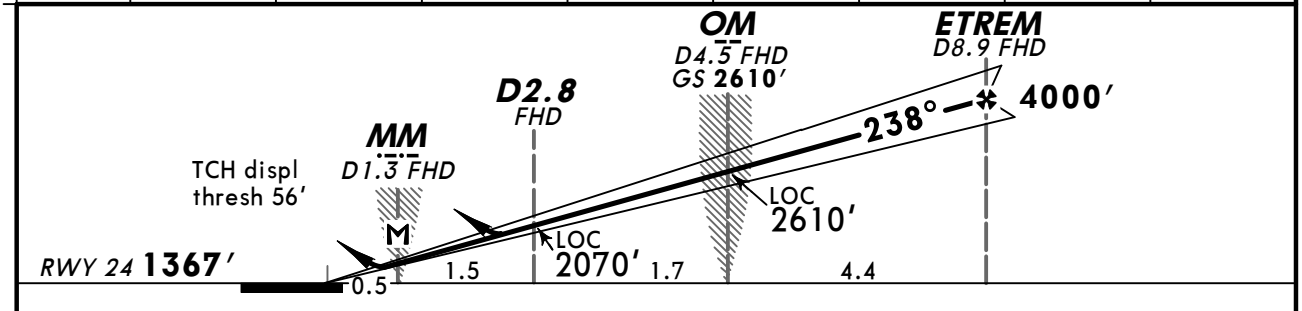
Alt Set: hPa (IN on req) Rwy Elev: 49 hPa Trans level: By ATC Trans alt: 5000′
LOC: **DME required.**

7400′
MSA
Airport ❶

❶ Applicable over German territory only.



LOC (GS out)	FHD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0
	ALTITUDE	1810′	2130′	2450′	2770′	3080′	3400′	3720′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM						

ALSF-II
REIL
PAPI

238°

D4.8 FHD 3000′ whichever is later

Standard STRAIGHT-IN LANDING RWY **24**

	ILS			LOC (GS out)	
	DA(H) AB: 1567′ (200′)	C: 1631′ (264′) D: 1641′ (274′)		DA(H) 1730′ (363′)	
	FULL	Limited	ALS out		ALS out
A B	RVR 550m	RVR 750m	RVR 1200m	RVR 1000m	RVR 1500m
C D	RVR 600m		RVR 1300m		RVR 1700m

PANS OPS 4

CHANGES: NDB FHA withdrawn.

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EDNY/FDH
FRIEDRICHSHAFEN

15 APR 11 (11-2A)

JEPPESEN FRIEDRICHSHAFEN, GERMANY
CAT II ILS Rwy 24

*ATIS	ZURICH Arrival (APP)	*FRIEDRICHSHAFEN Tower	
129.6	119.92	120.07	134.3

BRIEFING STRIP™

LOC	Final	GS	CAT II ILS	Apt Elev 1367′
IFHW	Apch Crs	OM	RA 105′	RWY 1367′
111.9	238°	2610′ (1243′)	DA(H) 1467′ (100′)	

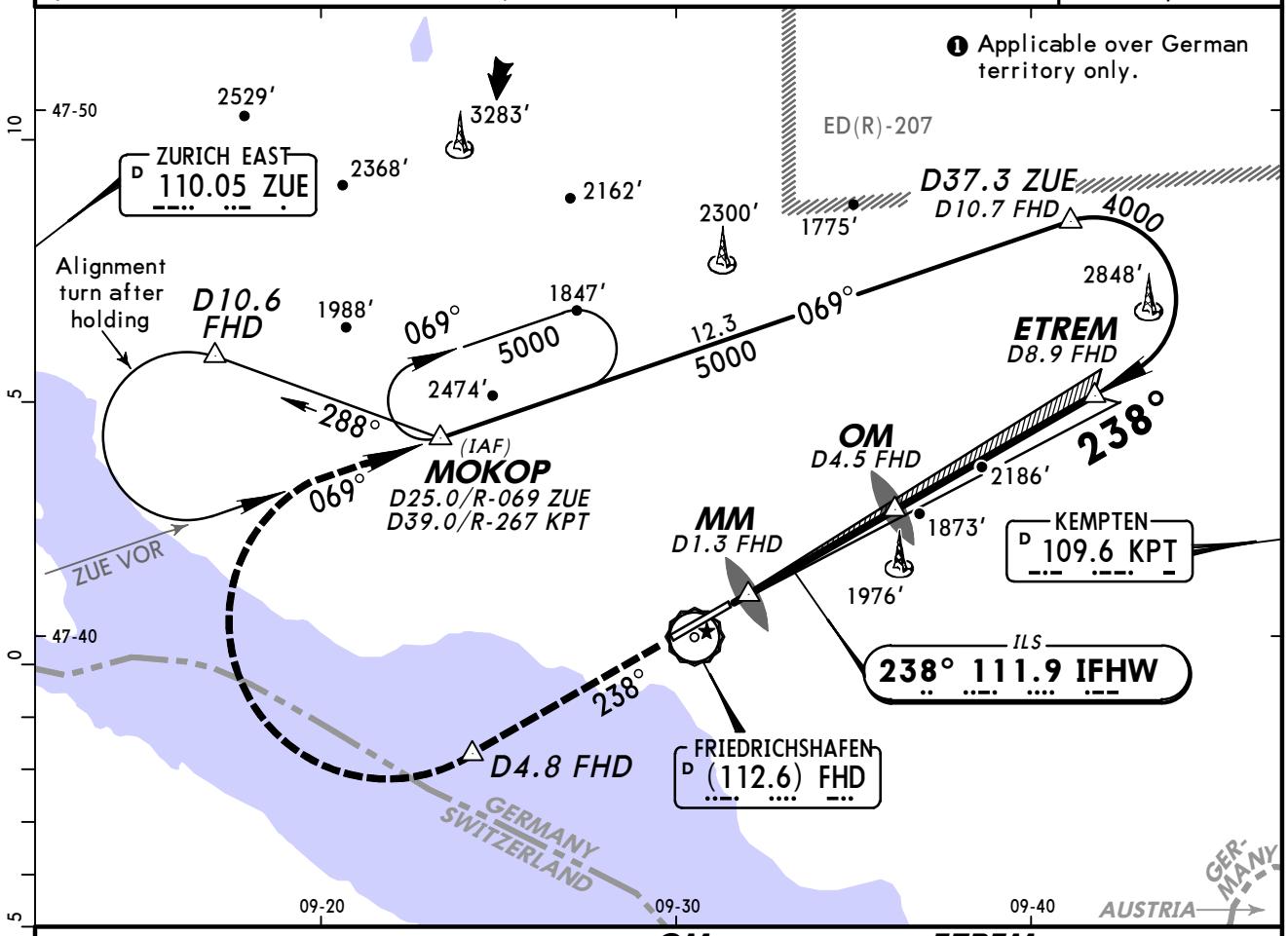
MISSED APCH: Climb on 238° to D4.8 FHD or 3000′, whichever is later, then turn RIGHT to intercept R-069 ZUE to MOKOP climbing to 5000′.

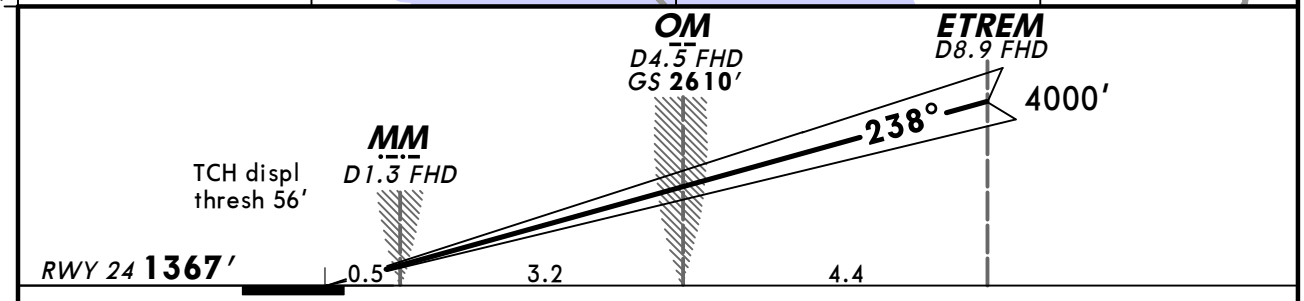
Alt Set: hPa (IN on req) Rwy Elev: 49 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Acft Certification Required.

7400′

MSA ❶
Airport

❶ Applicable over German territory only.





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

ALSF-II
REIL
PAPI

238°

D4.8 FHD 3000′ whichever is later

Standard

STRAIGHT-IN LANDING RWY 24
CAT II ILS
ABCD
RA 105′
DA(H) **1467′ (100′)**

RVR 300m ❶

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

PANS OPS 4

CHANGES: NDB FHA withdrawn. RA.

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EDNY/FDH
FRIEDRICHSHAFEN

JEPPESEN 27 AUG 10 (12-1)

FRIEDRICHSHAFEN, GERMANY
RNAV (GPS) Rwy 06

*ATIS	ZURICH Arrival (APP)	*FRIEDRICHSHAFEN Tower	
129.6	119.92	120.07	134.3

BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 1367′
	058°	ARGEV 4000′ (2666′)	1750′ (416′)	RWY 1334′

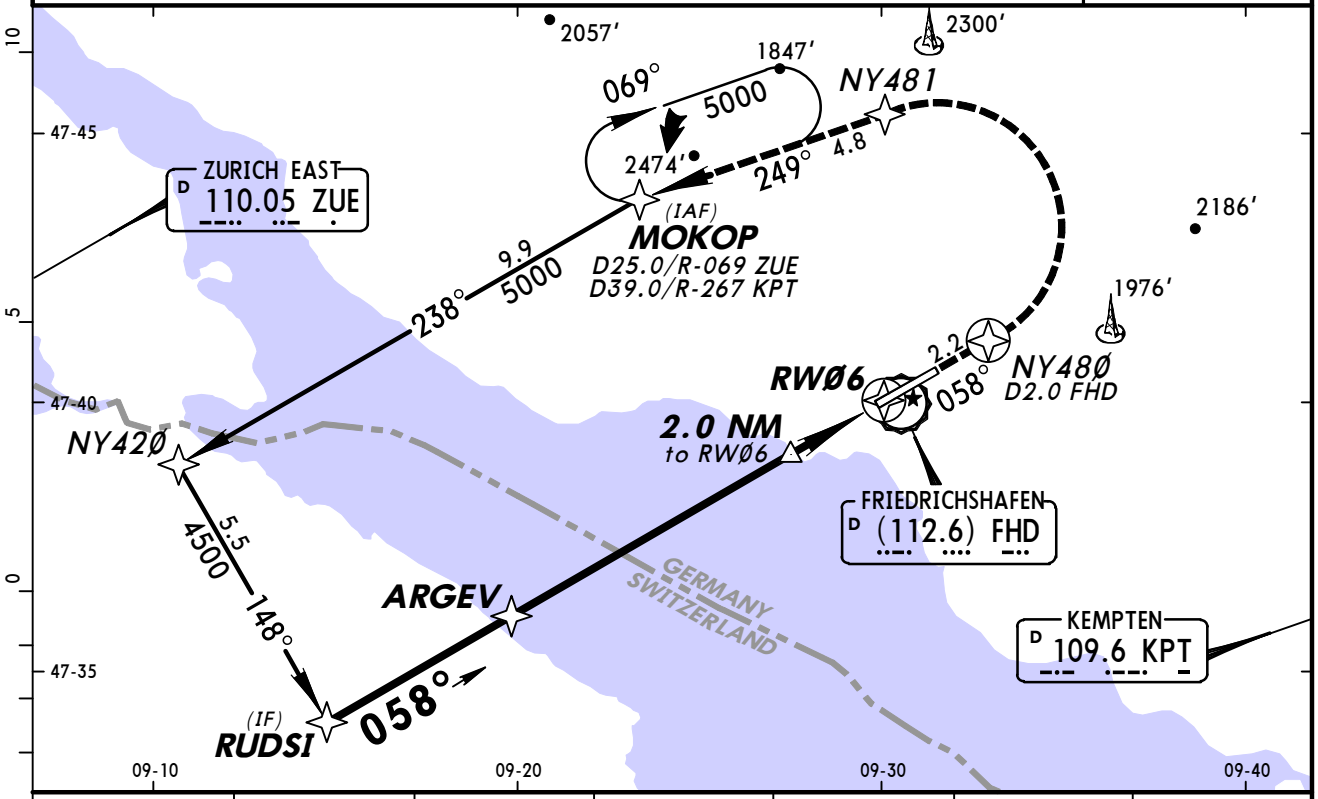
MISSED APCH: Climb on 058° to NY48Ø or 2000′, whichever is later, then turn LEFT via NY481 on 249° to MOKOP climbing to 5000′.

NON-RNAV: Climb on 058° to D2.0 FHD or 2000′, whichever is later, then turn LEFT to intercept R-069 ZUE to MOKOP climbing to 5000′.

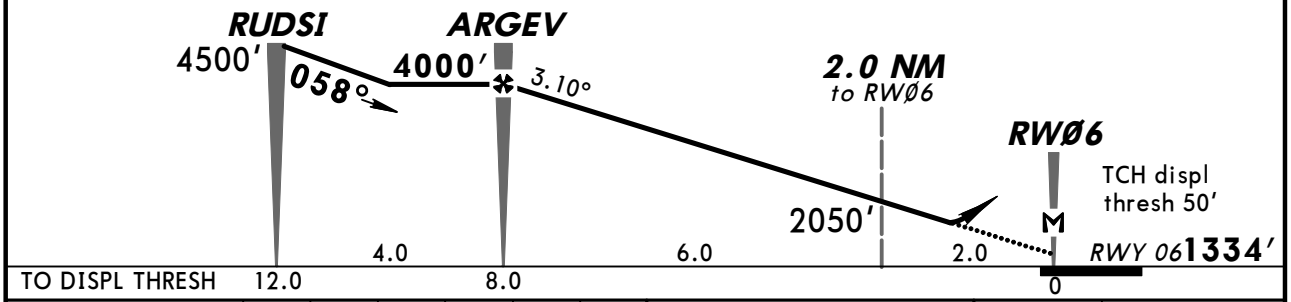
Alt Set: hPa (IN on req) Rwy Elev: 48 hPa Trans level: By ATC Trans alt: 5000′
Baro-VNAV not authorized below -15° C.

7400′

MSA
Airport
(Over German territory only)



DIST to RWØ6	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3690′	3360′	3030′	2700′	2370′	2050′



TO DISPL THRESH	12.0	8.0				
Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.10°	384	494	548	658	768	878
MAP at RWØ6						

HIALS
REIL
PAPI

Refer to Missed Apch above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **06**

	LNAV/VNAV DA(H) 1750′ (416′)		LNAV DA(H) 1760′ (426′)	
		ALS out		ALS out
A	RVR 1500m	RVR 1500m	RVR 1500m	
B				
C		RVR 1900m	RVR 1600m	RVR 2000m
D				

CHANGES: LNAV minimums.

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EDNY/FDH
FRIEDRICHSHAFEN

JEPPESEN FRIEDRICHSHAFEN, GERMANY
27 AUG 10 (12-2)
RNAV (GPS) Rwy 24

BRIEFING STRIP™

*ATIS	ZURICH Arrival (APP)	*FRIEDRICHSHAFEN Tower	
129.6	119.92	120.07	134.3

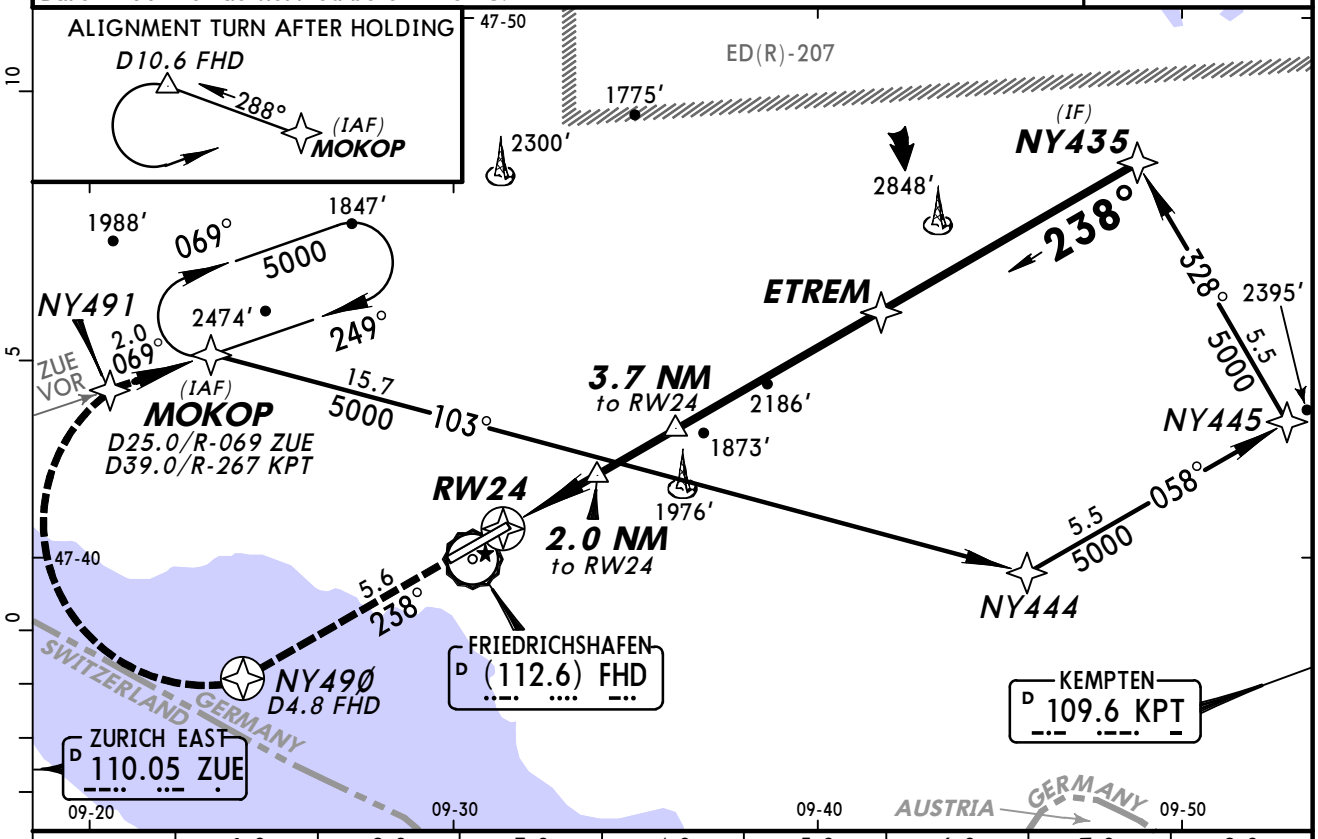
RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	238°	ETREM 4000′ (2633′)	Refer to Minimums	Apt Elev 1367′ RWY 1367′

MISSED APCH: Climb on 238° to NY490 or 3000′, whichever is later, then turn RIGHT via NY491 on 069° to MOKOP climbing to 5000′.

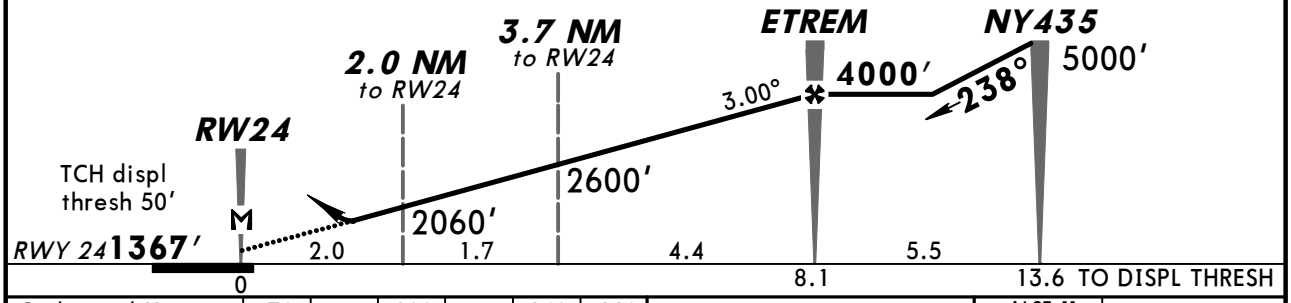
NON-RNAV: Climb on 238° to D4.8 FHD or 3000′, whichever is later, then turn RIGHT to intercept R-069 ZUE to MOKOP climbing to 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 49 hPa Trans level: By ATC Trans alt: 5000′
Baro-VNAV not authorized below -15° C.

7400′
MSA
Airport
(Over German territory only)



DIST to RW24	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1740′	2060′	2380′	2700′	3010′	3330′	3650′	3970′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at RW24						

ALSF-II
REIL
PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY 24

LNAV/VNAV		LNAV	
DA(H) A: 1670′ (303′) B: 1690′ (323′) CD: 1740′ (373′)		DA(H) 1740′ (373′)	
	ALS out		ALS out
A	RVR 750m 1	RVR 1400m	RVR 1000m
B	RVR 800m	RVR 1500m	RVR 1500m
C	RVR 1000m	RVR 1700m	RVR 1700m
D			

1 With TDZ, CL and HUD: RVR 700m.

PANS OPS 4

CHANGES: Minimums.

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General Information

Location: Schwerin-Parchim Deu
IATA Code: SZW
Lat/Long: N53° 25.6' E011° 47.0'
Elevation: 166 ft

Airport Use: Public
Magnetic Variation: 2.4°E

Fuel Types: 100 Octane (LL), Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes
Pattern Altitude: 846 ft AGL

Sunrise: 0606 Z
Sunset: 1645 Z,

Runway Information

Runway: 06
Length x Width: 9843 ft x 180 ft
Surface Type: concrete
TDZ-Elev: 147 ft
Lighting: Edge, ALS, REIL

Runway: 24
Length x Width: 9843 ft x 180 ft
Surface Type: concrete
TDZ-Elev: 166 ft
Lighting: Edge, ALS

Communication Information

Parchim Tower 128.9 Secondary
Parchim Information 128.9 At or below 4000 ft Out to 25 mi.

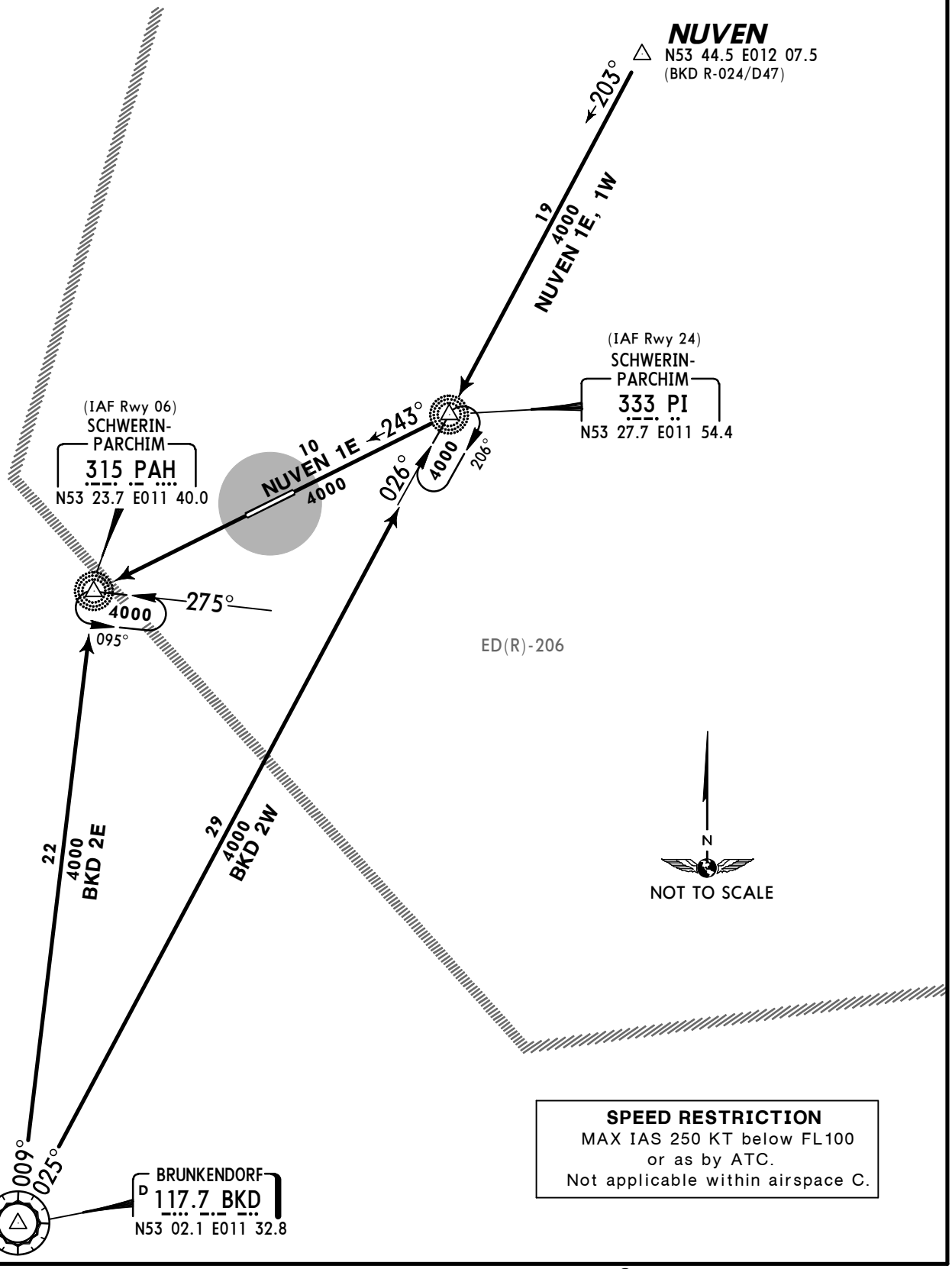
Apt Elev 166′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′

2400′
MSA
PI NDB

BRUNKENDORF TWO ECHO (BKD 2E)
NUVEN ONE ECHO (NUVEN 1E) *[NUVE1E]*
RWY 06 ARRIVALS
BRUNKENDORF TWO WHISKEY (BKD 2W)
NUVEN ONE WHISKEY (NUVEN 1W) *[NUVE1W]*
RWY 24 ARRIVALS

DURING ACTIVITY OF ED(R)-206 ONLY AVAILABLE AT OR BELOW FL70



SPEED RESTRICTION
MAX IAS 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

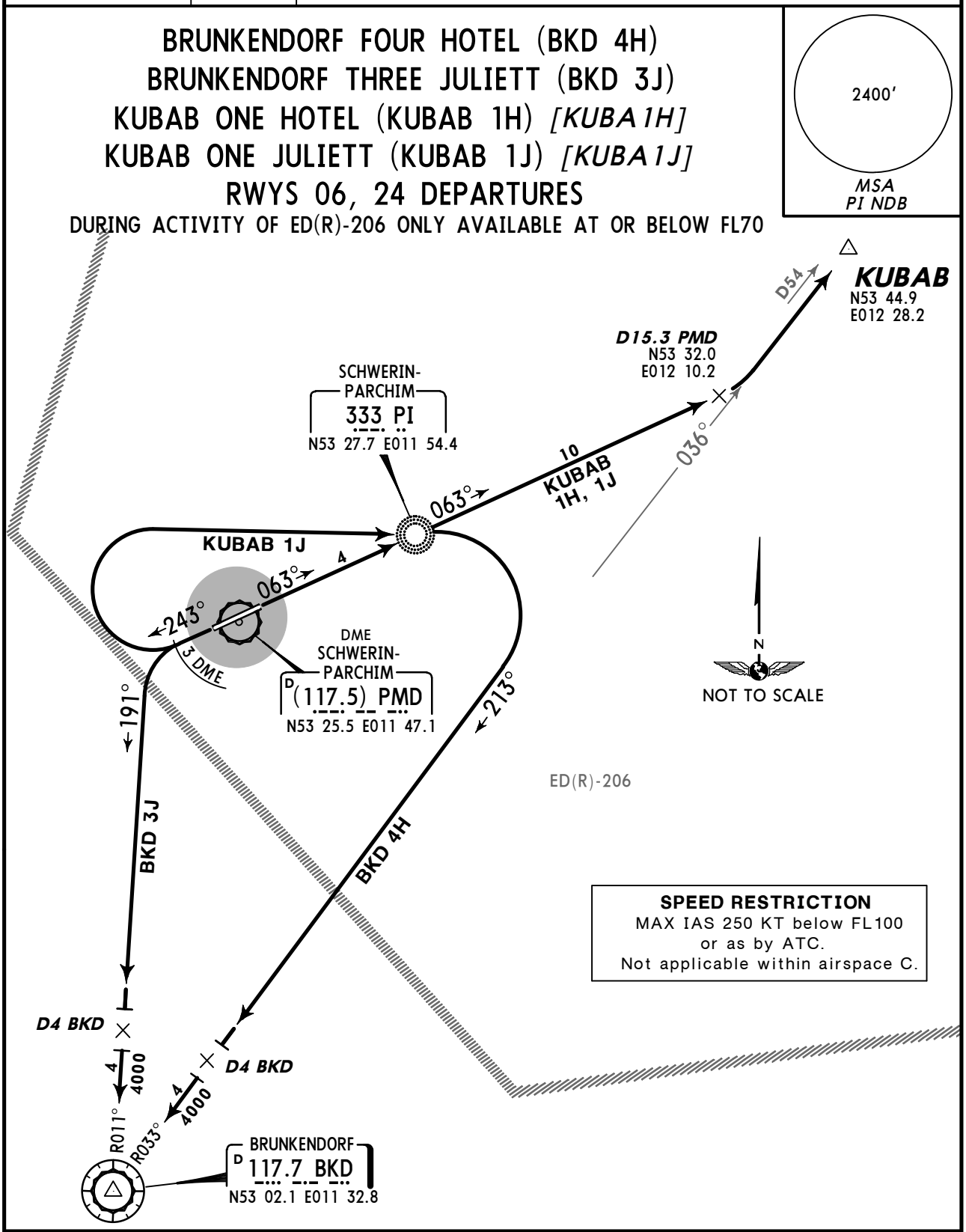
CHANGES: None.

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BREMEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
124.17	166′	**1.** Contact BREMEN Radar immediately after take-off. **2.** Runway 06: EXPECT close-in obstacles. **3.** Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

BRUNKENDORF FOUR HOTEL (BKD 4H)
BRUNKENDORF THREE JULIETT (BKD 3J)
KUBAB ONE HOTEL (KUBAB 1H) *[KUBA1H]*
KUBAB ONE JULIETT (KUBAB 1J) *[KUBA1J]*
RWYS 06, 24 DEPARTURES

DURING ACTIVITY OF ED(R)-206 ONLY AVAILABLE AT OR BELOW FL70



Initial climb clearance **5000′**

SID	RWY	ROUTING
BKD 4H	**06**	On 063° bearing to PI, turn RIGHT, intercept BKD R-033 inbound to BKD.
BKD 3J	**24**	On 243° track to PMD 3 DME, turn LEFT, intercept BKD R-011 inbound to BKD.
KUBAB 1H	**06**	On 063° bearing via PI to D15.3 PMD, turn LEFT, intercept BKD R-036 to KUBAB.
KUBAB 1J	**24**	On 243° track to PMD 3 DME, turn RIGHT to PI, turn LEFT, 063° bearing to D15.3 PMD, turn LEFT, intercept BKD R-036 to KUBAB.

CHANGES: Communication.

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EDOP/SZW

Apt Elev **166′**

N53 25.6 E011 47.0

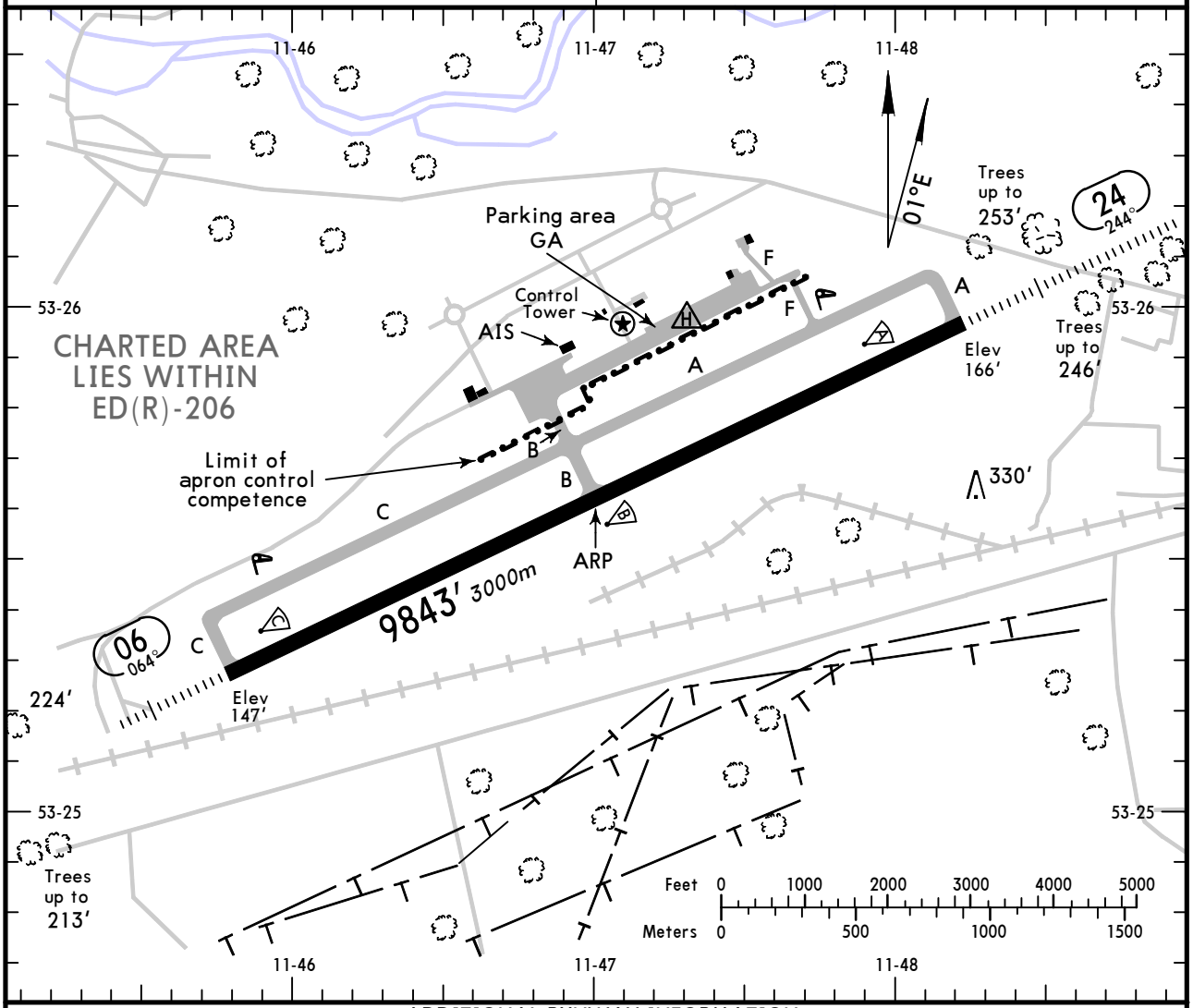
30 APR 10 (10-9)

JEPPESEN

SCHWERIN-PARCHIM, GERMANY

SCHWERIN-PARCHIM

*PARCHIM Tower	*PARCHIM Info (outside TWR hr)
128.9	128.9 German



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
06	HIRL HIALS REIL PAPI-L (angle 3.0°) RVR			❶	180′ *55m*
24	HIRL HIALS SFL PAPI-L (angle 3.0°) RVR		8694′ *2650m*		

❶ TAKE-OFF RUN AVAILABLE

RWY 06:
From rwy head 9843′ (3000m)
twy B int 4921′ (1500m)

RWY 24:
From rwy head 9843′ (3000m)
twy B int 4921′ (1500m)

Standard TAKE-OFF **1**

	LVP must be in Force: RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A, B, C	*250m*	*400m*	*500m*
D	*300m*		

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

CHANGES: Minimums.

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STRAIGHT-IN RWY		A	B	C	D
06	NDB	**630**′(483′)	**630**′(483′)	**630**′(483′)	**630**′(483′)
		R1400m	**R1500m**	**R1600m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m
24	ILS	**395**′(229′)	**405**′(239′)	**415**′(249′)	**425**′(259′)❶
		R600m	**R600m**	**R600m**	**R650m**
	ALS out	R1000m	R1000m	R1000m	R1200m
	LOC	**580**′(414′)	**580**′(414′)	**580**′(414′)	**580**′(414′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**610**′(444′)	**610**′(444′)	**610**′(444′)	**610**′(444′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m

❶LACFT: DA(H) 425′ (259).

TAKE-OFF RWY 06, 24

	LVP must be in force RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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EDOP/SZW
SCHWERIN-PARCHIM

30 APR 10 (11-1)

JEPPESEN

SCHWERIN-PARCHIM, GERMANY
ILS or LOC Rwy 24

BRIEFING STRIP™

BREMEN Radar	*PARCHIM Tower	*PARCHIM Info (outside TWR hr) (within 25 NM up to 4000')
124.17	128.9	128.9 German

LOC	Final	GS	ILS	Apt Elev 166'
IPAW	Apch Crs	LOM	DA(H)	RWY 166'
108.7	244°	1530' (1364')	Refer to Minimums	

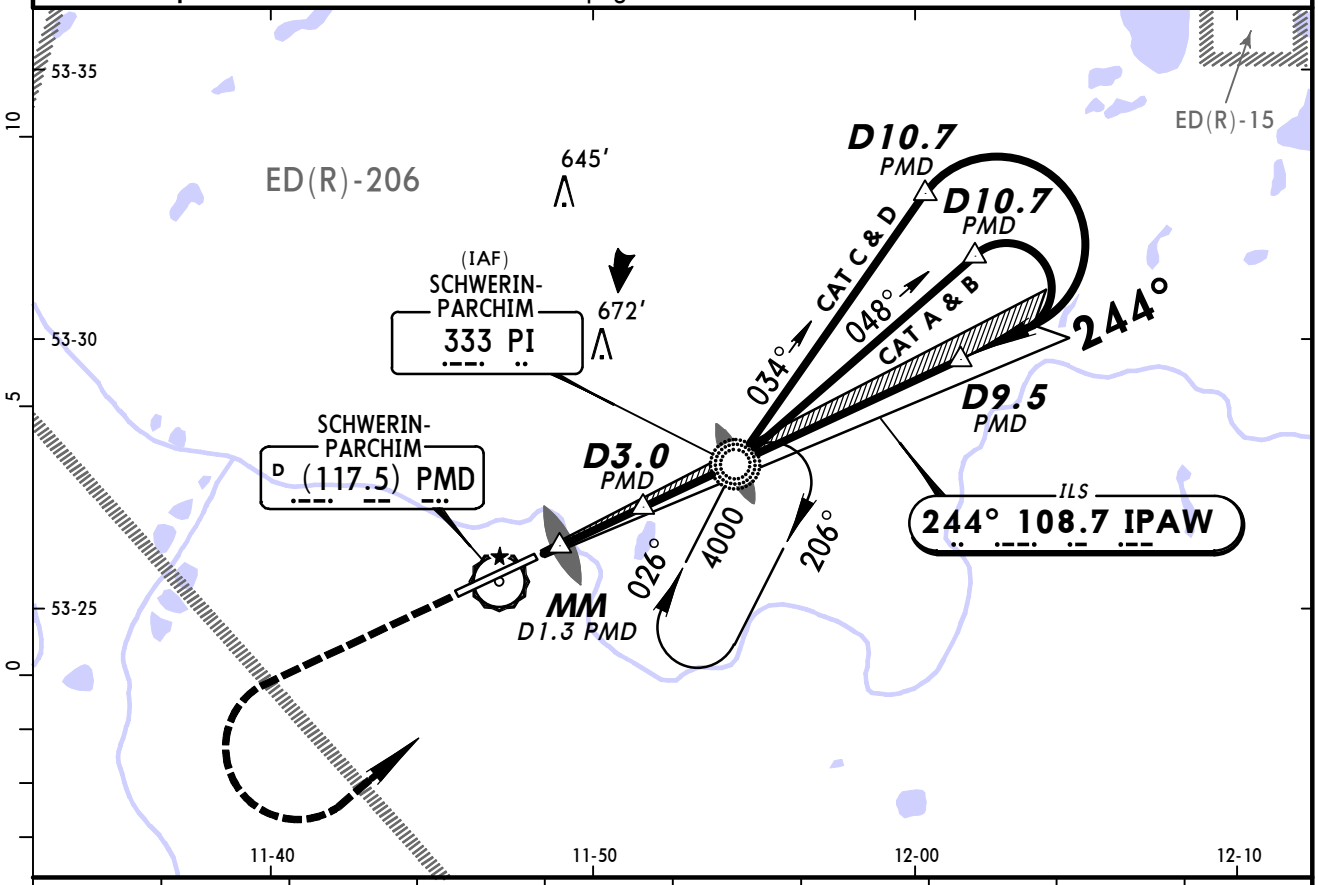
MISSED APCH: Climb STRAIGHT AHEAD to 2000', then turn LEFT to NDB climbing to 4000'.

2400'

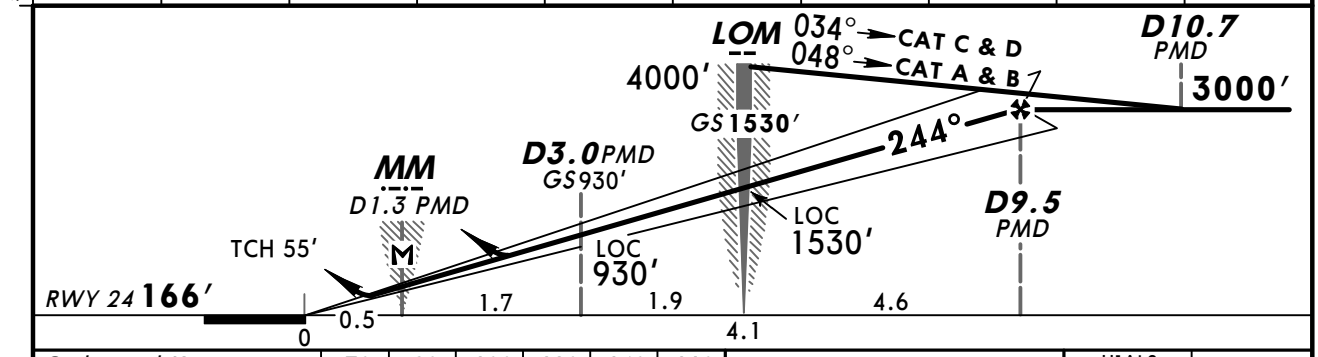
MSA
PI NDB

Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000'

1. DME required. 2. LACFT: See ATC State pages.



LOC (GS out)	PMD DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	610'	930'	1240'	1560'	1880'	2200'	2520'	2840'



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at MM/D1.3 PMD						

HIALS
PAPI

2000'

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 24

ILS 1		LOC (GS out)	
DA(H) A: 395' (229') C: 415' (249')		DA(H) 580' (414')	
B: 405' (239') D: 425' (259')			
FULL	Limited	ALS out	ALS out
A, B: RVR 550m	RVR 750m	RVR 1200m	RVR 1200m / RVR 1500m
C: RVR 1300m / RVR 1900m			
D: RVR 600m			

1 LACFT: DA(H) 425'(259').

CHANGES: Communications. Minimums.

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EDOP/SZW
SCHWERIN-PARCHIM

JEPPESEN 30 APR 10 (16-1)

SCHWERIN-PARCHIM, GERMANY
NDB Rwy 06

BRIEFING STRIP™

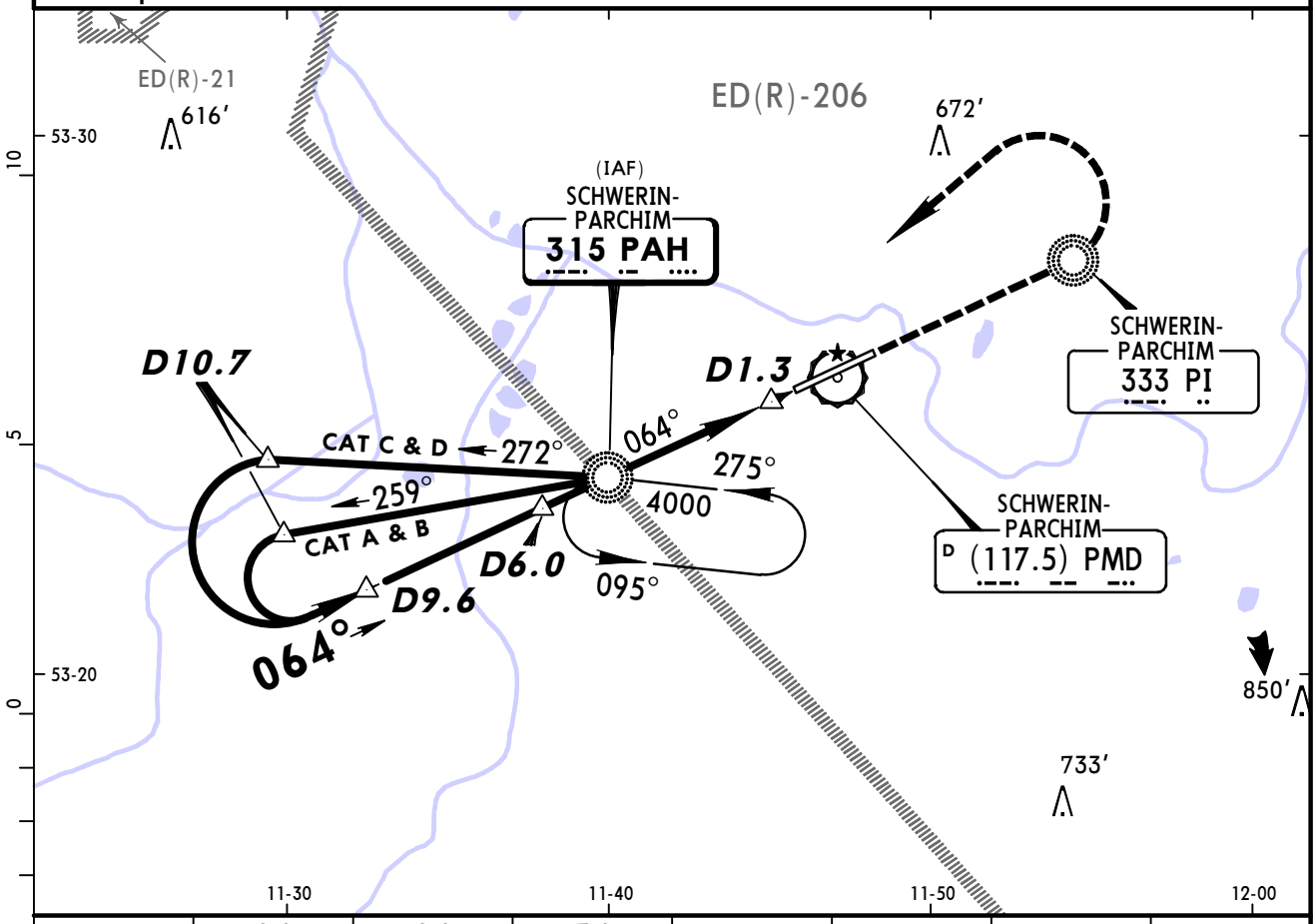
BREMEN Radar	*PARCHIM Tower	*PARCHIM Info (outside TWR hr) (within 25 NM up to 4000')
124.17	128.9	128.9 German

NDB PAH	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
315	064°	D9.6 3000' (2853')	630' (483')	Apt Elev 166' RWY 147'

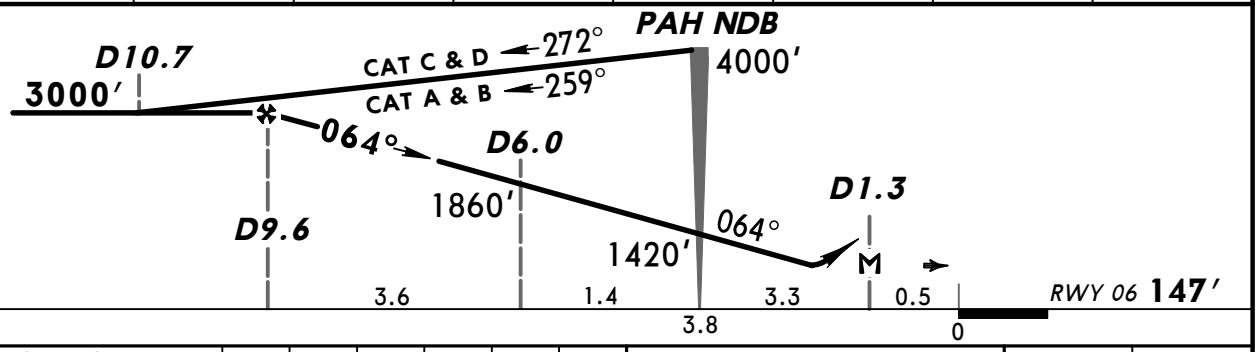
MISSED APCH: Climb STRAIGHT AHEAD to PI NDB, then turn LEFT to PAH NDB climbing to 4000'.

2400'
MSA
PI NDB

Alt Set: hPa (IN on req)
DME required.
Rwy Elev: 5 hPa
Trans level: By ATC
Trans alt: 5000'



PMD DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2810'	2490'	2180'	1860'	1540'	1220'	900'



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.3						

HIALS
REIL
PAPI

PI 333

Standard STRAIGHT-IN LANDING RWY **06**

DA(H) **630'** (483')

	ALS out
A B	RVR 1500m
C D	RVR 1800m / CMV 2300m

PANS OPS 4

CHANGES: Communications. Minimums.

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EDOP/SZW
SCHWERIN-PARCHIM

JEPPESEN 30 APR 10 (16-2)

SCHWERIN-PARCHIM, GERMANY
NDB Rwy 24

BRIEFING STRIP ™

BREMEN Radar	*PARCHIM Tower	*PARCHIM Info (outside TWR hr) (within 25 NM up to 4000')
124.17	128.9	128.9 German

NDB PI	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
333	244°	D9.5 3000' (2834')	610' (444')	Apt Elev 166' RWY 166'

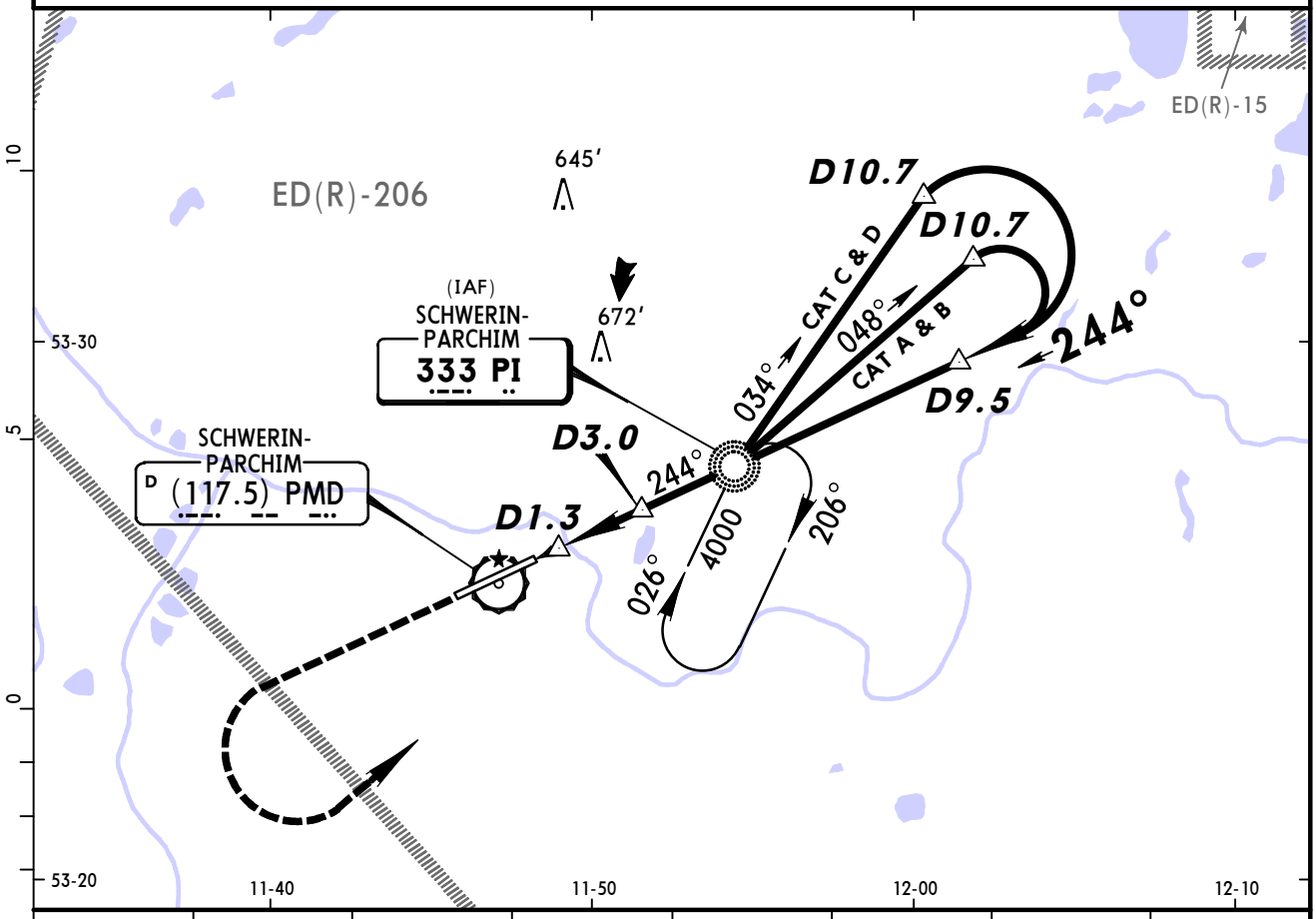
MISSED APCH: Climb STRAIGHT AHEAD to 2000', then turn LEFT to NDB climbing to 4000'.

2400'

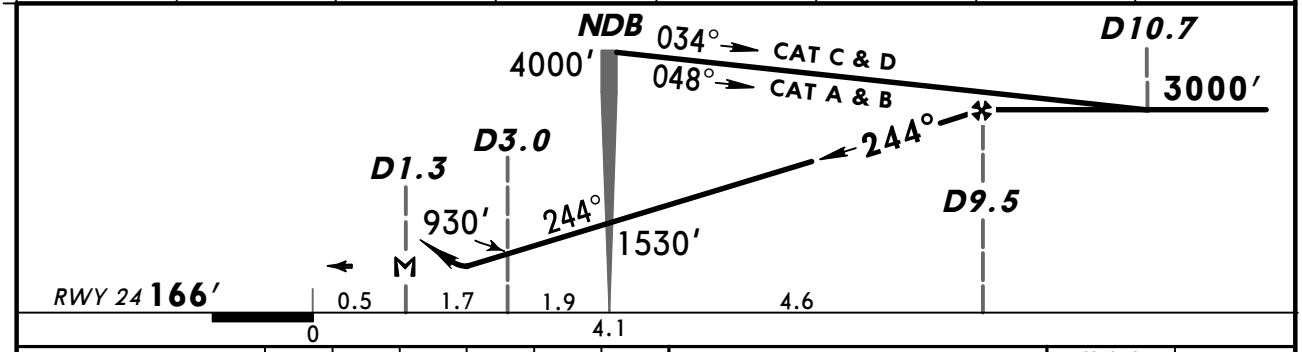
MSA PI NDB

Alt Set: hPa (IN on req) | Rwy Elev: 6 hPa | Trans level: By ATC | Trans alt: 5000'

DME required.



PMD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	930'	1240'	1560'	1880'	2200'	2520'	2840'



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D1.3						

HIALS
PAPI

2000'

Standard STRAIGHT-IN LANDING RWY **24**

DA(H) **610'** (444')

PANS OPS 4

		ALS out
A	RVR 1400m	RVR 1500m
B		
C		CMV 2100m
D		

CHANGES: Communications. Minimums.

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General Information

Location: Giebelstadt Deu
IATA Code:
Lat/Long: N49° 38.9' E009° 58.0'
Elevation: 979 ft

Airport Use: Public
Magnetic Variation: 1.9°E

Fuel Types: 100 Octane (LL), Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: No
Control Tower: No
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes
Pattern Altitude: 821 ft AGL

Sunrise: 0608 Z
Sunset: 1658 Z,

Runway Information

Runway: 08
Length x Width: 6503 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 977 ft
Lighting: Edge
Displaced Threshold: 443 ft

Runway: 26
Length x Width: 6503 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 978 ft
Lighting: Edge, ALS
Displaced Threshold: 328 ft

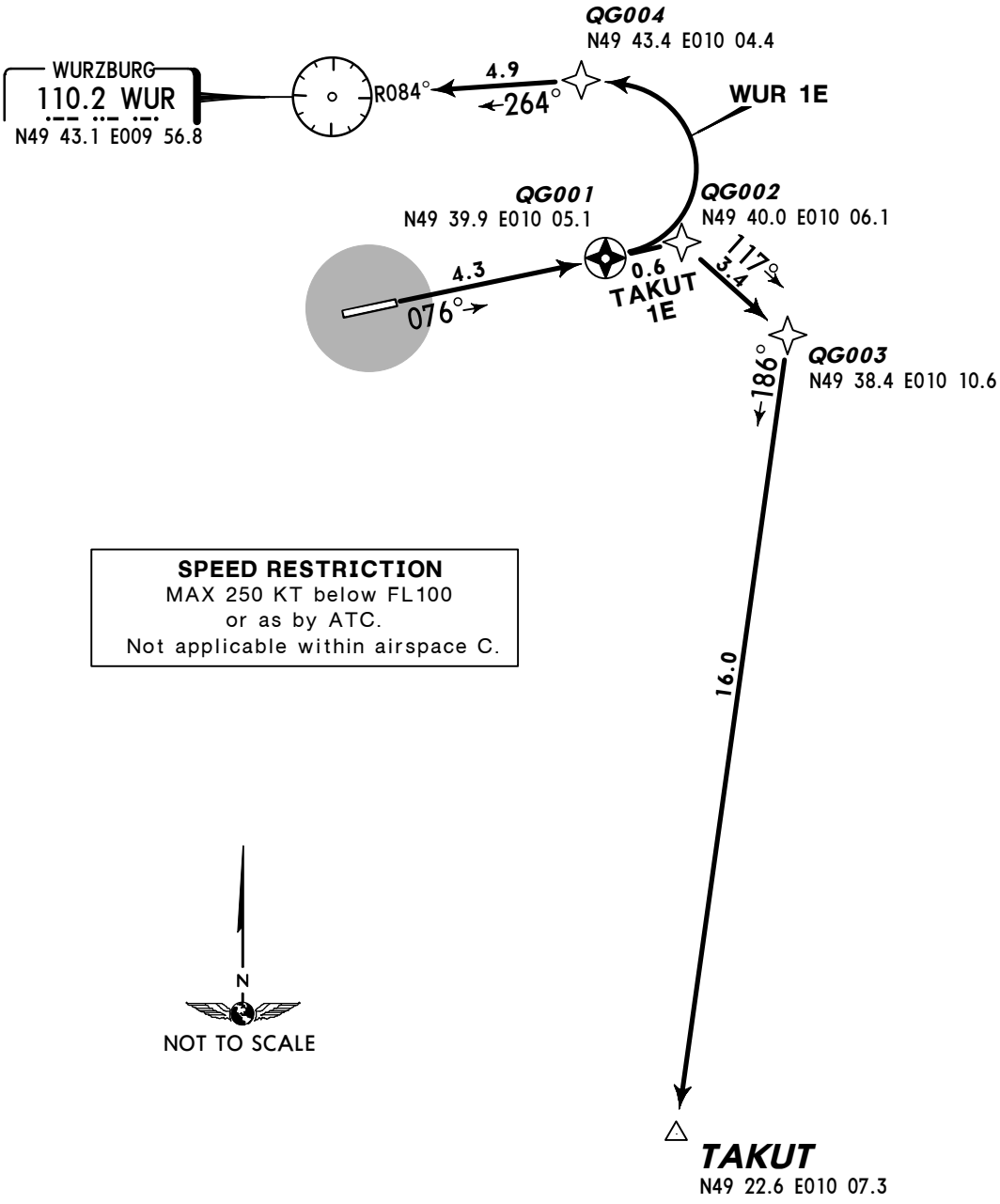
Communication Information

Giebelstadt Information 122.5 AFIS

STETTEN Radar	Apt Elev	Trans level: By ATC Trans alt: 5000′
135.6	979′	Contact STETTEN Radar immediately after take-off.

3500′
MSA
ARP

TAKUT ONE ECHO (TAKUT 1E) *[TAKU1E]*
WURZBURG ONE ECHO (WUR 1E)
RWY 08 RNAV DEPARTURES
RNAV (GPS)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	ROUTING
TAKUT 1E	(1400′+) - QG002 - QG003 - TAKUT.
WUR 1E	(1400′+) - QG001 - QG004 - WUR.

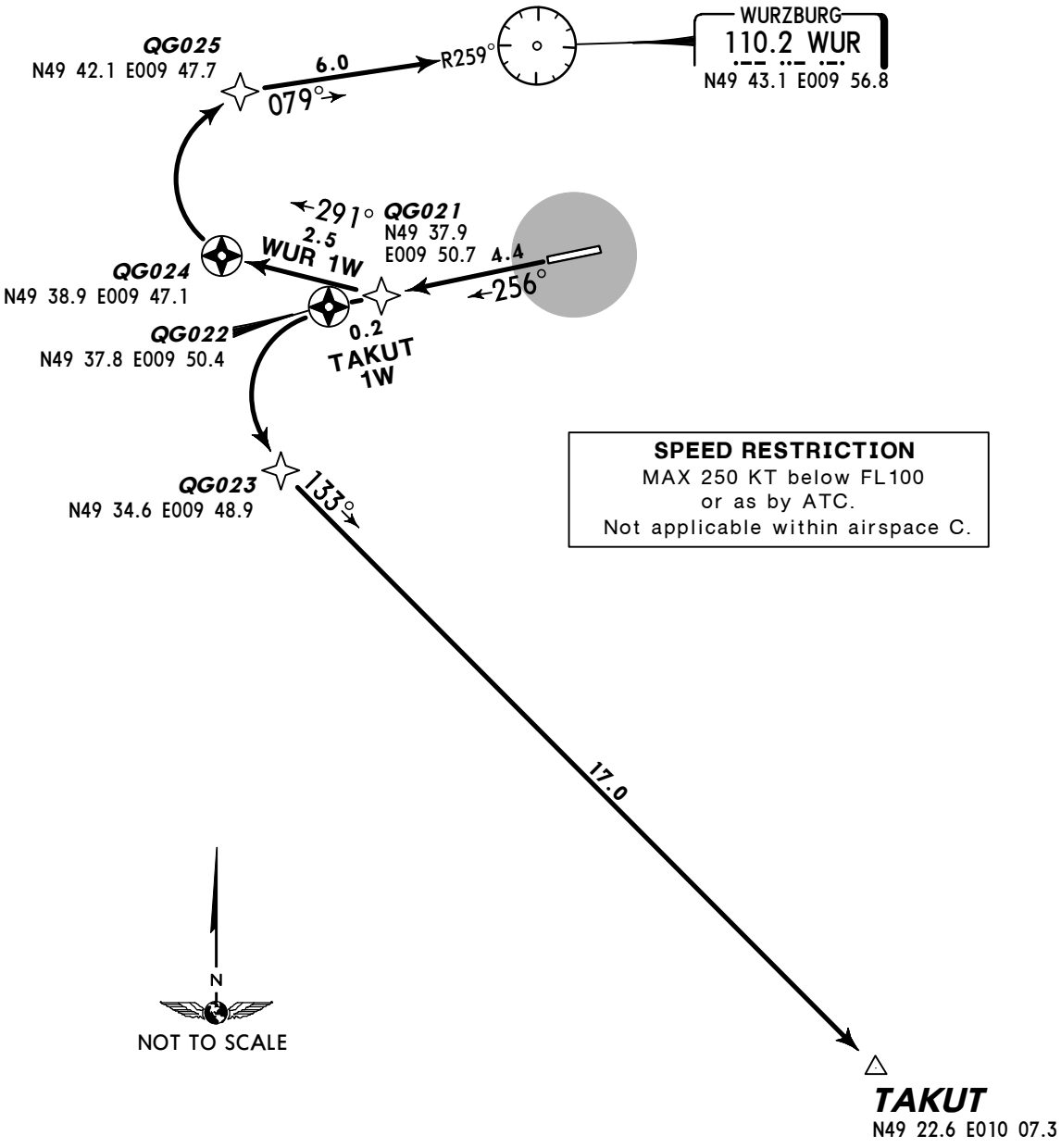
CHANGES: New chart.

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STETTEN Radar	Apt Elev	Trans level: By ATC Trans alt: 5000′
135.6	979′	Contact STETTEN Radar immediately after take-off.

3500′
MSA
ARP

TAKUT ONE WHISKEY (TAKUT 1W) [TAKU1W]
WURZBURG ONE WHISKEY (WUR 1W)
RWY 26 RNAV DEPARTURES
RNAV (GPS)



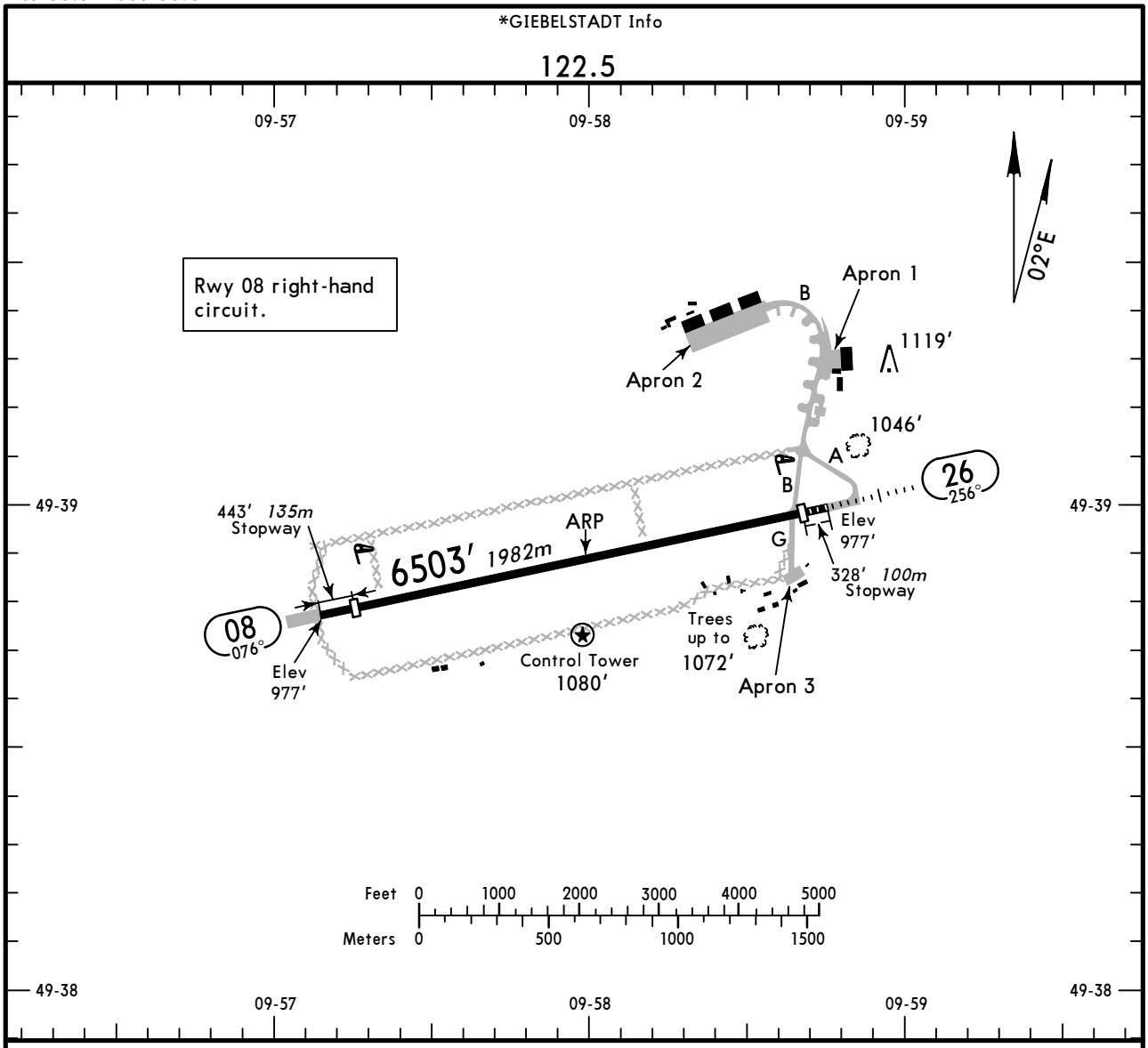
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

Initial climb clearance **5000′**

SID	ROUTING
TAKUT 1W	(1400′+) - QG022 - QG023 - TAKUT.
WUR 1W	(1400′+) - QG021 - QG024 - QG025 - WUR.

CHANGES: New chart.

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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
08	MIRL PAPI-L (angle 3.0°)	6060′ *1847m*		6175′ *1882m*	98′ *30m*
26	MIRL HIALS PAPI-L (angle 3.0°, MEHT 18′)	6175′ *1882m*		6060′ *1847m*	

Standard TAKE-OFF **1**

	LVP must be in force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	NOT APPLICABLE		

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

CHANGES: New airport.

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EDQG
GIEBELSTADT

JEPPESEN 13 JAN 12 (12-1) CAT A, B & C

GIEBELSTADT, GERMANY
RNAV (GPS) Rwy 08

*STETTEN Radar	*LANGEN Radar	*GIEBELSTADT Info within 25 NM up to 3000' AGL
135.6X	135.72X	122.5

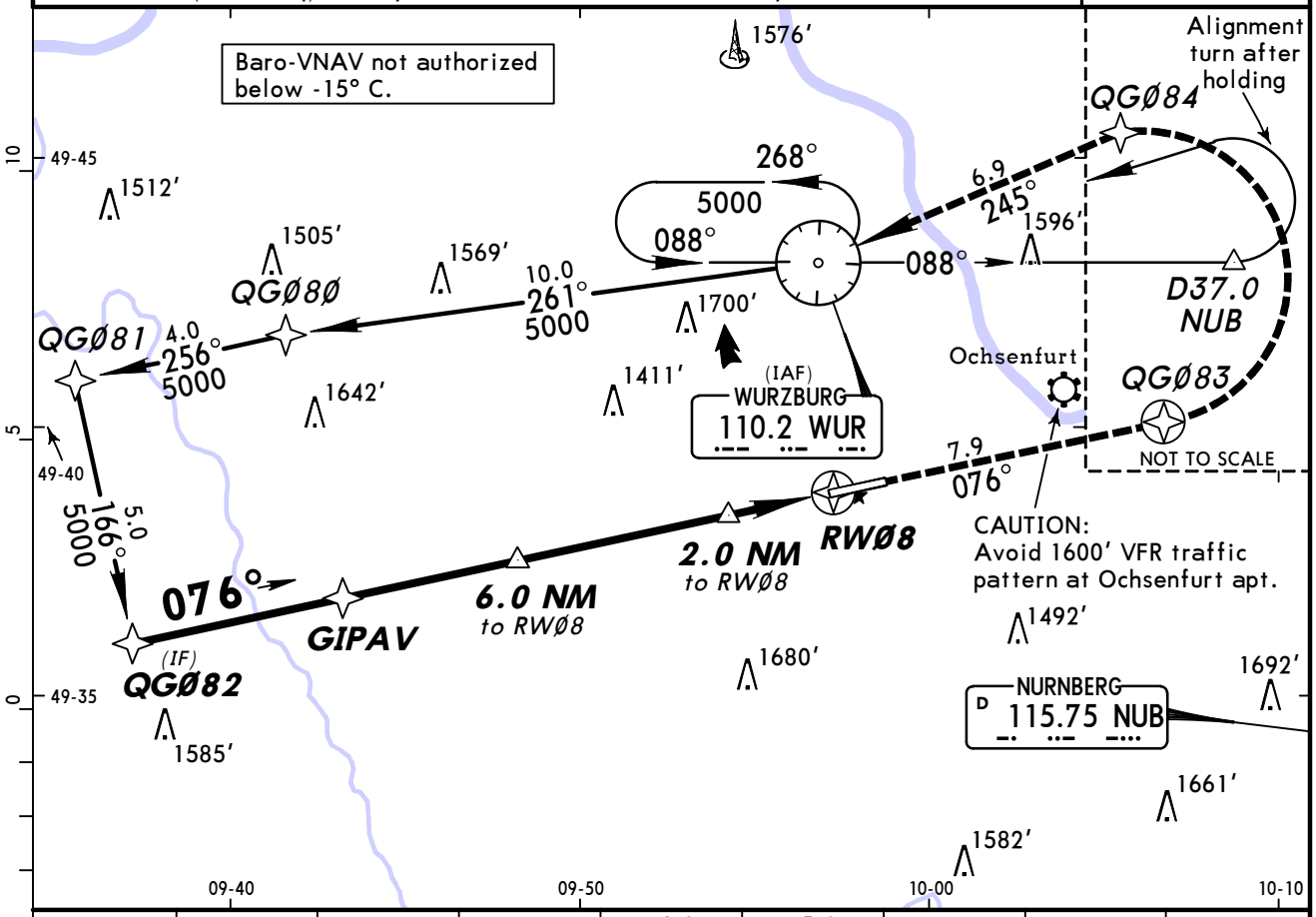
BRIEFING STRIP

RNAV	Final Apch Crs	Minimum Alt GIPAV	LNAV/VNAV DA(H)	Apt Elev / RWY
	076°	4000' (3023')	1280' (303)	980' / 977'

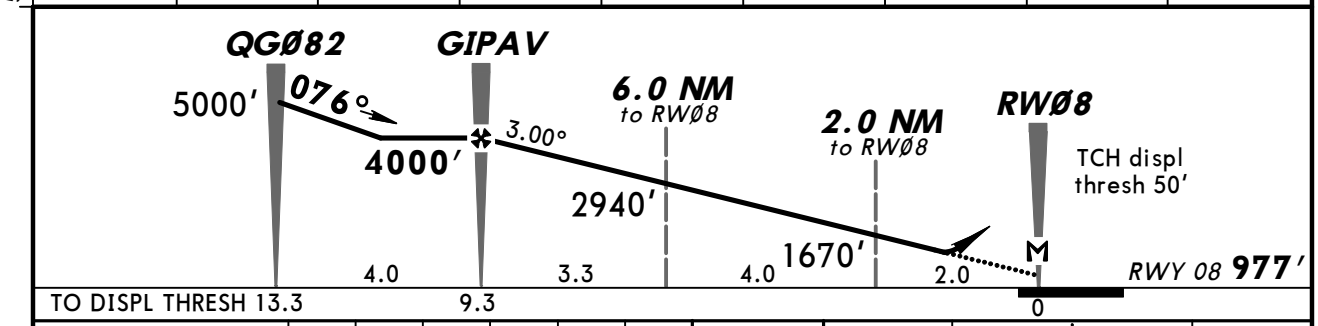
MISSED APCH: Climb on track 076° to QGØ83 to 2500' or above, then turn LEFT via QGØ84 onto track 245° to WUR VOR climbing to 5000'.

3500'
MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 35 hPa Trans level: By ATC Trans alt: 5000'



DIST to RWØ8	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3900'	3580'	3260'	2940'	2620'	2310'	1990'	1670'



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RWØ8						

PAPI-L

QGØ83 on 076° — 2500' or above

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **08**

	LNAV/VNAV	LNAV
	DA(H) 1280' (303')	DA(H) 1370' (393')
A	RVR 1400m	RVR 1500m
B		
C		RVR 1800m
D	NOT APPLICABLE	

CHANGES: New procedure.

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EDQG
GIEBELSTADT

JEPPESEN 13 JAN 12 (12-2) CAT A, B & C

GIEBELSTADT, GERMANY
RNAV (GPS) Rwy 26

*STETTEN Radar	*LANGEN Radar	*GIEBELSTADT Info within 25 NM up to 3000' AGL
135.6X	135.72X	122.5

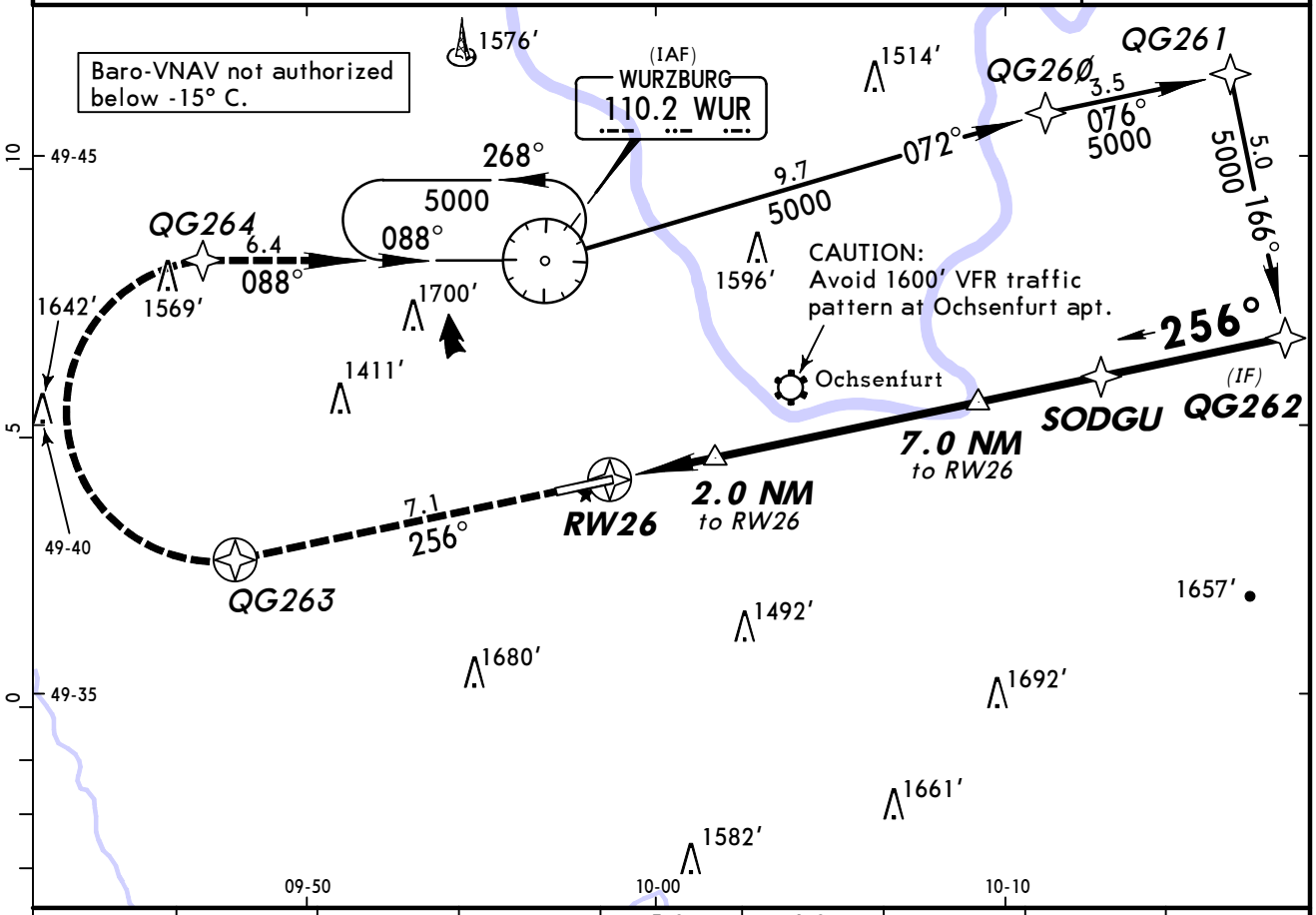
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev / RWY
	256°	SODGU 4000' (3022')	Refer to Minimums	Apt Elev 980' / RWY 978'

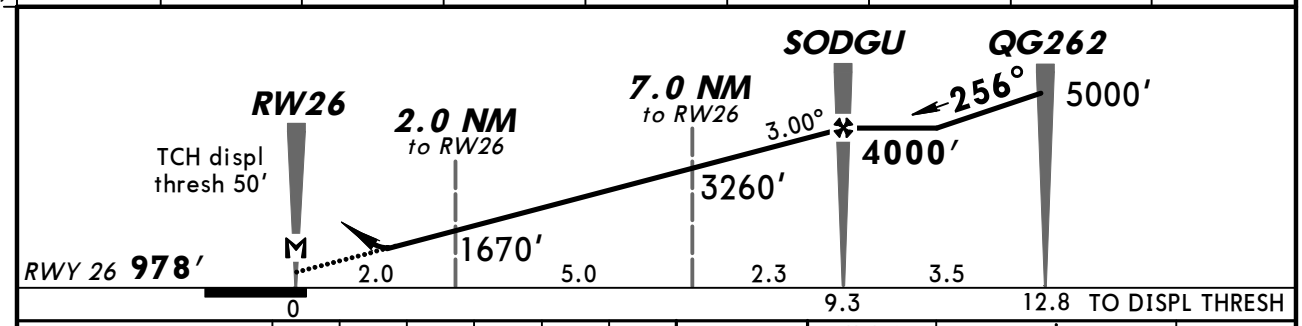
MISSED APCH: Climb on track 256° to QG263 to 2500' or above, then turn RIGHT via QG264 onto track 088° to VOR climbing to 5000'.

Alt Set: hPa (IN on req) | Rwy Elev: 35 hPa | Trans level: By ATC | Trans alt: 5000'

3500'
MSA ARP



DIST to RW26	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	1670'	1990'	2310'	2620'	2940'	3260'	3580'	3900'



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW26							

HIALS
PAPI

QG263 on 256°

2500' or above

Standard STRAIGHT-IN LANDING RWY **26**

LNAV/VNAV		LNAV	
DA(H) A: **1280'** (302')	B: **1300'** (322') C: **1320'** (342')	DA(H) **1370'** (392')	

	ALS out		ALS out
A	RVR 1000m	RVR 1400m	RVR 1400m / RVR 1500m
B	RVR 1100m	RVR 1500m	
C	RVR 1200m	RVR 1600m	RVR 1800m
D	NOT APPLICABLE		

PANS OPS 4

CHANGES: New procedure.

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General Information

Location: Zweibrucken Deu
IATA Code: ZQW
Lat/Long: N49° 12.6' E007° 24.0'
Elevation: 1133 ft

Airport Use: Public
Magnetic Variation: 1.2°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0618 Z
Sunset: 1709 Z,

Runway Information

Runway: 03
Length x Width: 8776 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1126 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 902 ft

Runway: 21
Length x Width: 8776 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1115 ft
Lighting: Edge, ALS, Centerline, REIL

Communication Information

ATIS 124.65
Zweibrucken Tower 123.825 At or below 3000 ft Out to 15 mi.
Langen Radar Approach Control 129.675
Langen Radar Approach Control 25.667 Military

*ATIS	Apt Elev
124.65	1133′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
During activity of NIGHT LOW FLYING SYSTEM alternative instructions will be given by ATC.

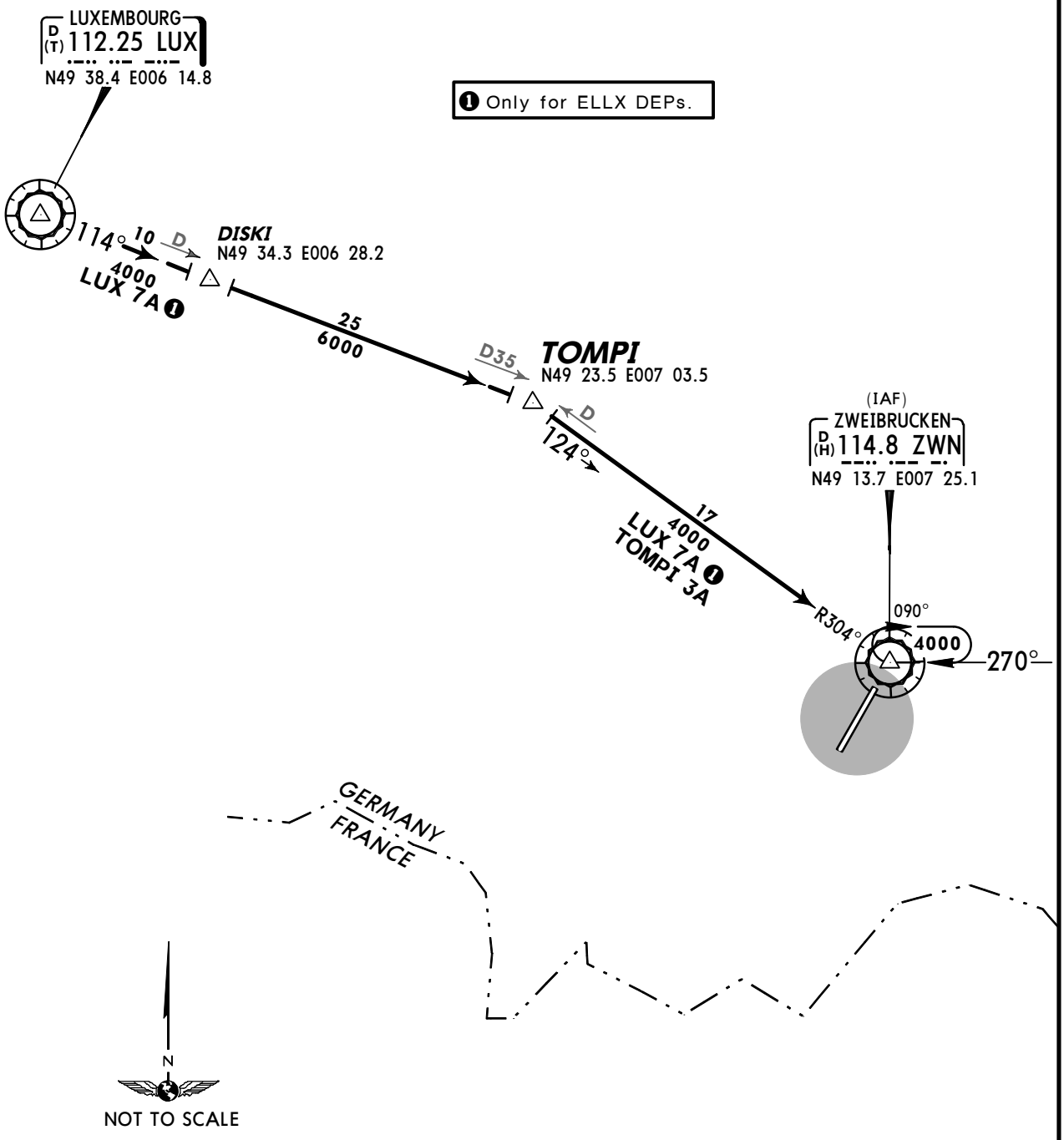
3700′

MSA
ZWN VOR
applicable over
German territory only

LUXEMBOURG SEVEN ALFA (LUX 7A) ❶
TOMPI THREE ALFA (TOMPI 3A) *[TOMP3A]*
RWYS 03, 21 ARRIVALS

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ Only for ELLX DEPs.



CHANGES: STAR LUX 6A renumbered 7A.

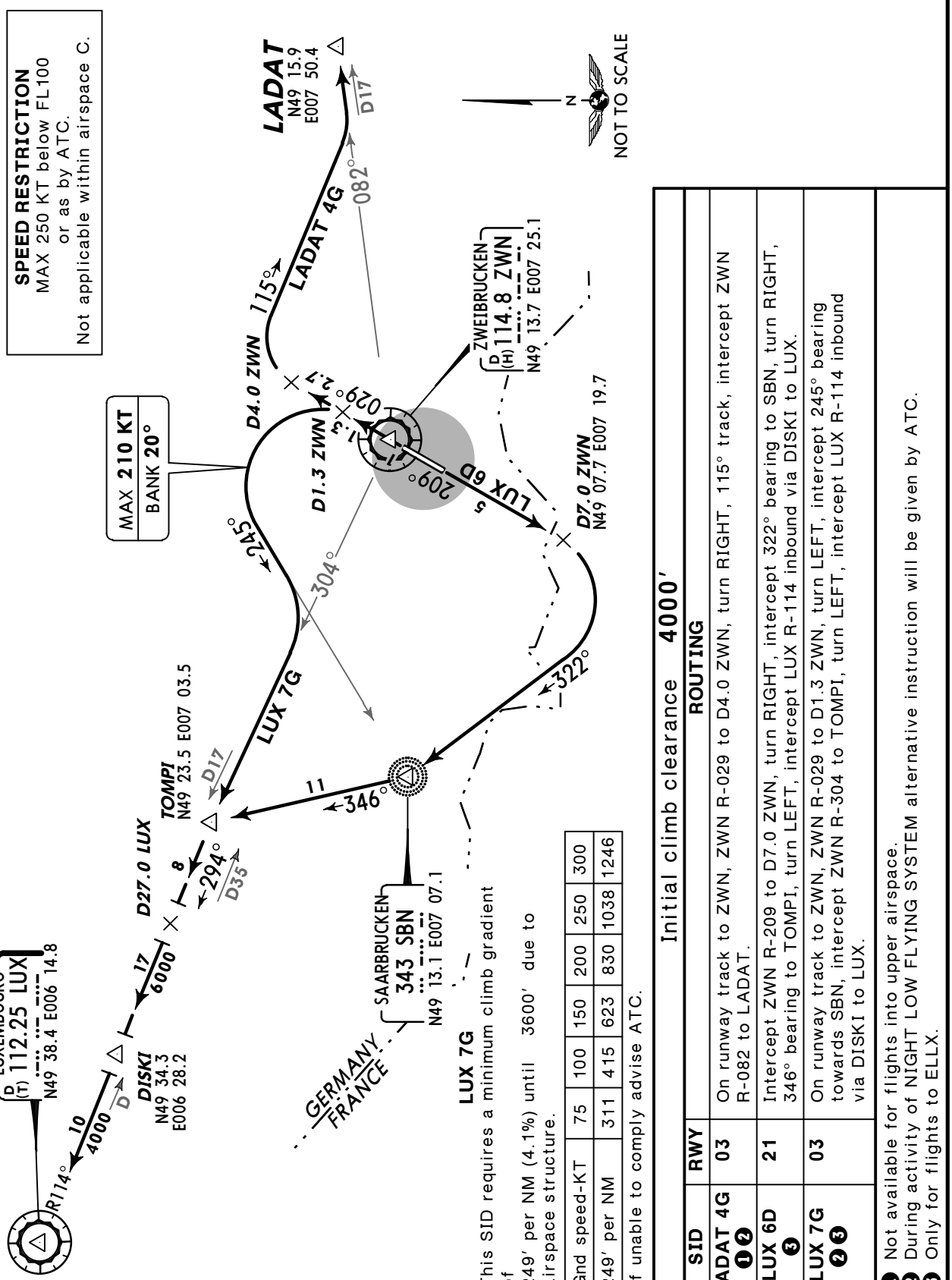
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LANGEN Radar	Apt Elev
129.67	1133′

Trans level: By ATC Trans alt: 5000′

1. Contact LANGEN Radar immediately after take-off.
2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

LADAT FOUR GOLF (LADAT 4G)
LUXEMBOURG SIX DELTA (LUX 6D)
LUXEMBOURG SEVEN GOLF (LUX 7G)
RWYS 03, 21 DEPARTURES



This SID requires a minimum climb gradient of 249′ per NM (4.1%) until 3600′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
249′ per NM	311	415	623	830	1038	1246

If unable to comply advise ATC.

Initial climb clearance 4000′

SID	RWY	ROUTING
LADAT 4G ❶❷	03	On runway track to ZWN, ZWN R-029 to D4.0 ZWN, turn RIGHT, 115° track, intercept ZWN R-082 to LADAT.
LUX 6D ❸	21	Intercept ZWN R-209 to D7.0 ZWN, turn RIGHT, intercept 322° bearing to SBN, turn RIGHT, 346° bearing to TOMPI, turn LEFT, intercept LUX R-114 inbound via DISKI to LUX.
LUX 7G ❷❸	03	On runway track to ZWN, ZWN R-029 to D1.3 ZWN, turn LEFT, intercept 245° bearing towards SBN, intercept ZWN R-304 to TOMPI, turn LEFT, intercept LUX R-114 inbound via DISKI to LUX.

❶ Not available for flights into upper airspace.
❷ During activity of NIGHT LOW FLYING SYSTEM alternative instruction will be given by ATC.
❸ Only for flights to ELLX.

CHANGES: SIDs LUX 5D & 6G renumbered 6D & 7G.

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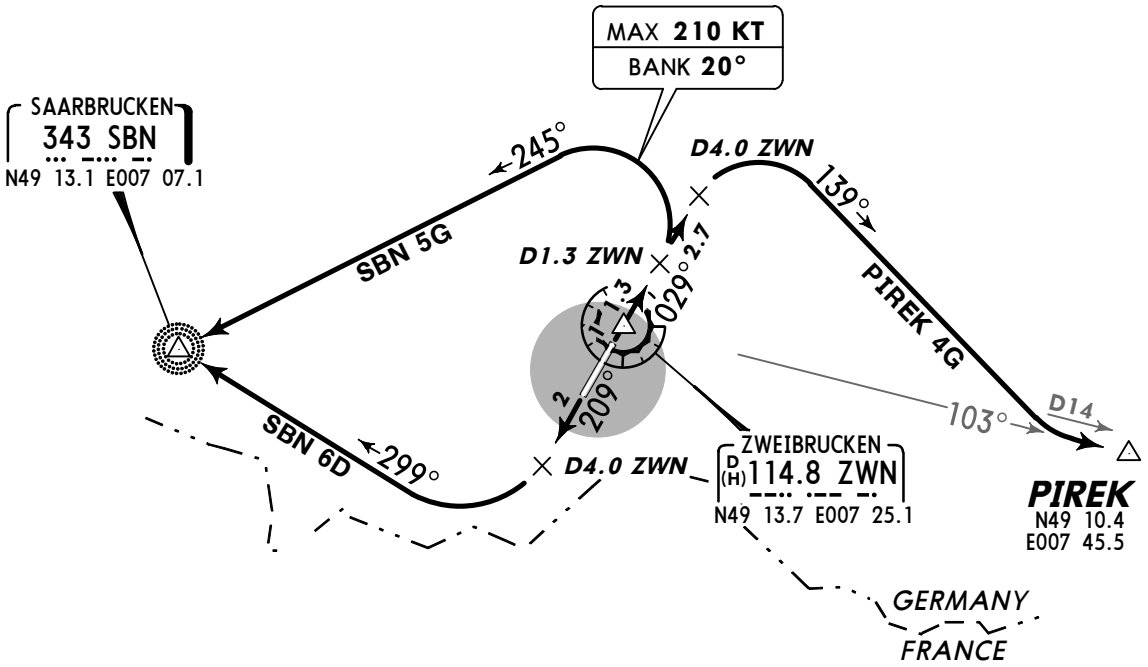
LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
129.67	1133′	1. Contact LANGEN Radar immediately after take-off. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

3700′

MSA
ZWN VOR
applicable over
German territory only

PIREK FOUR GOLF (PIREK 4G)
SAARBRUCKEN SIX DELTA (SBN 6D)
SAARBRUCKEN FIVE GOLF (SBN 5G)
RWYS 03, 21 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

SBN 6D: 334′ per NM (5.5%) until 3600′ due to airspace structure.

SBN 5G: 249′ per NM (4.1%) until 3600′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
334′ per NM	418	557	835	1114	1392	1671
249′ per NM	311	415	623	830	1038	1246

If unable to comly advise ATC.

N
NOT TO SCALE

Initial climb clearance **4000′**

SID	RWY	ROUTING
PIREK 4G ❶	**03**	On runway track to ZWN, ZWN R-029 to D4.0 ZWN, turn RIGHT, 139° track, intercept ZWN R-103 to PIREK.
SBN 6D ❷	**21**	Intercept ZWN R-209 to D4.0 ZWN, turn RIGHT, intercept 299° bearing to SBN.
SBN 5G ❶❷	**03**	On runway track to ZWN, ZWN R-029 to D1.3 ZWN, turn LEFT, intercept 245° bearing to SBN.

❶ During activity of NIGHT LOW FLYING SYSTEM alternative instruction will be given by ATC.
❷ Only for flights via airway G 21 cross D13.0 GTQ at or above FL80.

CHANGES: None.

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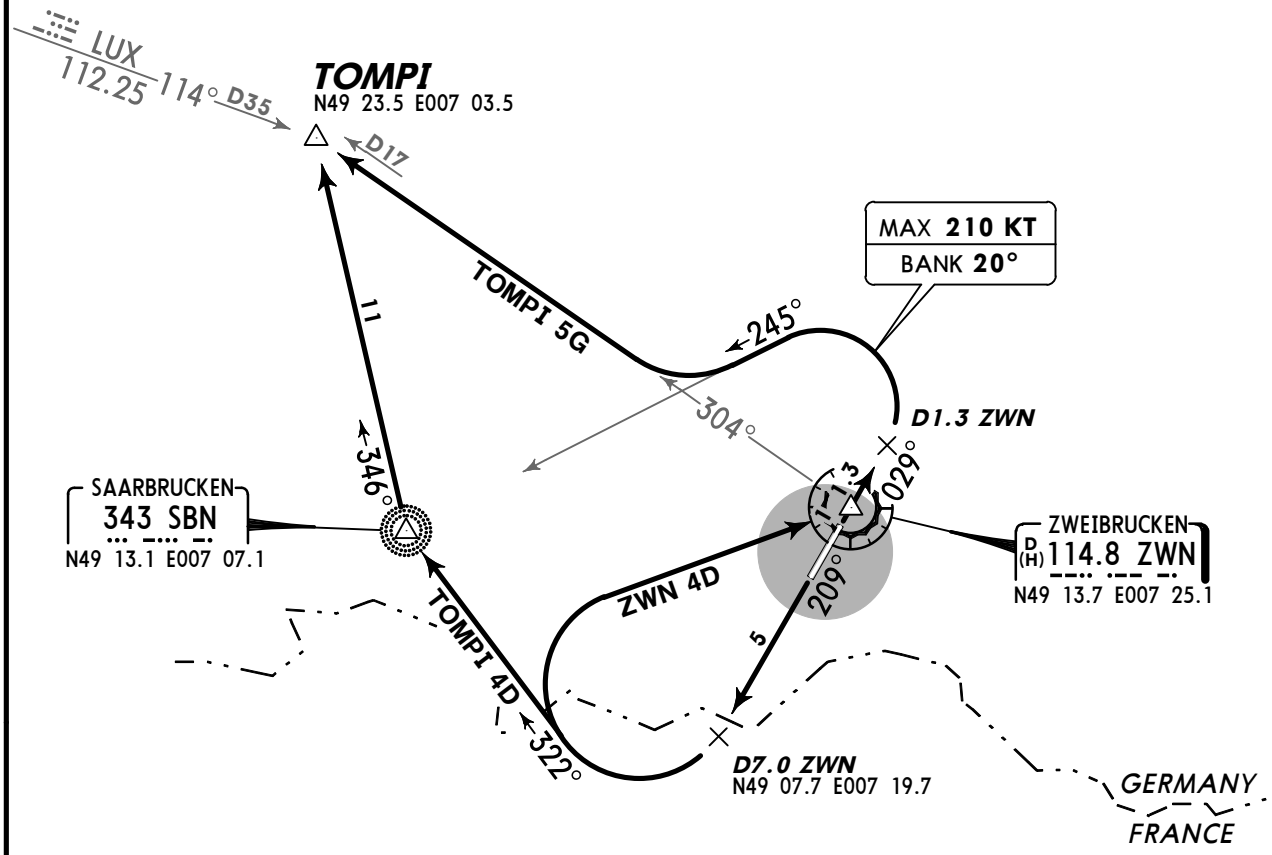
LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
129.67	1133′	1. Contact LANGEN Radar immediately after take-off. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

3700′

MSA
ZWN VOR
applicable over
German territory only

TOMPI FOUR DELTA (TOMPI 4D)
TOMPI FIVE GOLF (TOMPI 5G)
ZWEIBRUCKEN FOUR DELTA (ZWN 4D)
RWYS 21, 03 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



TOMPI 5G
This SID requires a minimum climb gradient of
249′ per NM (4.1%) until 3600′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
249′ per NM	311	415	623	830	1038	1246

If unable to comly advise ATC.



NOT TO SCALE

Initial climb clearance **4000′**

SID	RWY	ROUTING
TOMPI 4D	**21**	Intercept ZWN R-209 to D7.0 ZWN, turn RIGHT, intercept 322° bearing to SBN, turn RIGHT, 346° bearing to TOMPI.
TOMPI 5G ❶	**03**	On runway track to ZWN, ZWN R-029 to D1.3 ZWN, turn LEFT, intercept 245° bearing towards SBN, intercept ZWN R-304 to TOMPI.
ZWN 4D	**21**	Intercept ZWN R-209 to D7.0 ZWN, turn RIGHT to ZWN.

❶ During activity of NIGHT LOW FLYING SYSTEM alternative instruction will be given by ATC.

CHANGES: SID ZWN 3D renumbered ZWN 4D & revised.

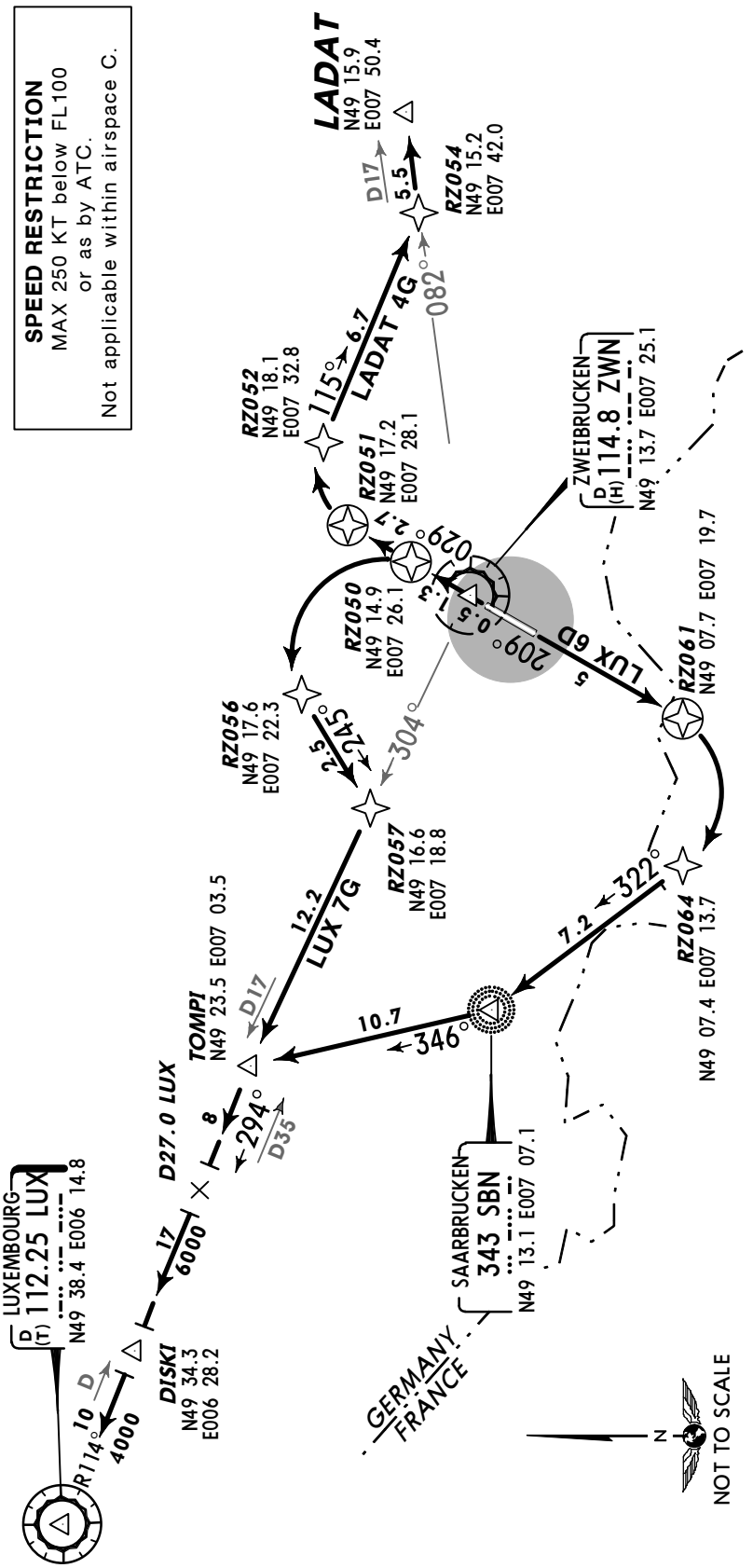
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LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
129.67	1133′	1. Contact LANGEN Radar immediately after take-off. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

LADAT FOUR GOLF (LADAT 4G) *[LADA4G]*
LUXEMBOURG SIX DELTA (LUX 6D)
LUXEMBOURG SEVEN GOLF (LUX 7G)
RWYS 03, 21 RNAV DEPARTURES
(OVERLAY 10-3)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

3700′
MSA
ZWN VOR
applicable over
German territory only



LUX 7G
This SID requires a minimum climb gradient of
249′ per NM (4.1%) until 3600′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
249′ per NM	311	415	623	830	1038	1246

If unable to comly advise ATC.

SID	RWY	ROUTING	Initial climb clearance 4000′
LADAT 4G ❶❷	03	(1600+) - ZWN - RZ051 - RZ052 - RZ054 - LADAT.	
LUX 6D ❸	21	(1600+) - RZ061 - RZ064 - SBN - TOMPI - DISKI - LUX.	
LUX 7G ❷❸	03	(1600+) - ZWN - RZ050 - RZ056 - RZ057 - TOMPI - DISKI - LUX.	

❶ Not available for flights into upper airspace.
❷ During activity of NIGHT LOW FLYING SYSTEM alternative instruction will be given by ATC.
❸ Only for flights to ELLX.

CHANGES: RNAV SIDs LUX 5D & 6G renumbered 6D &7G; track update.

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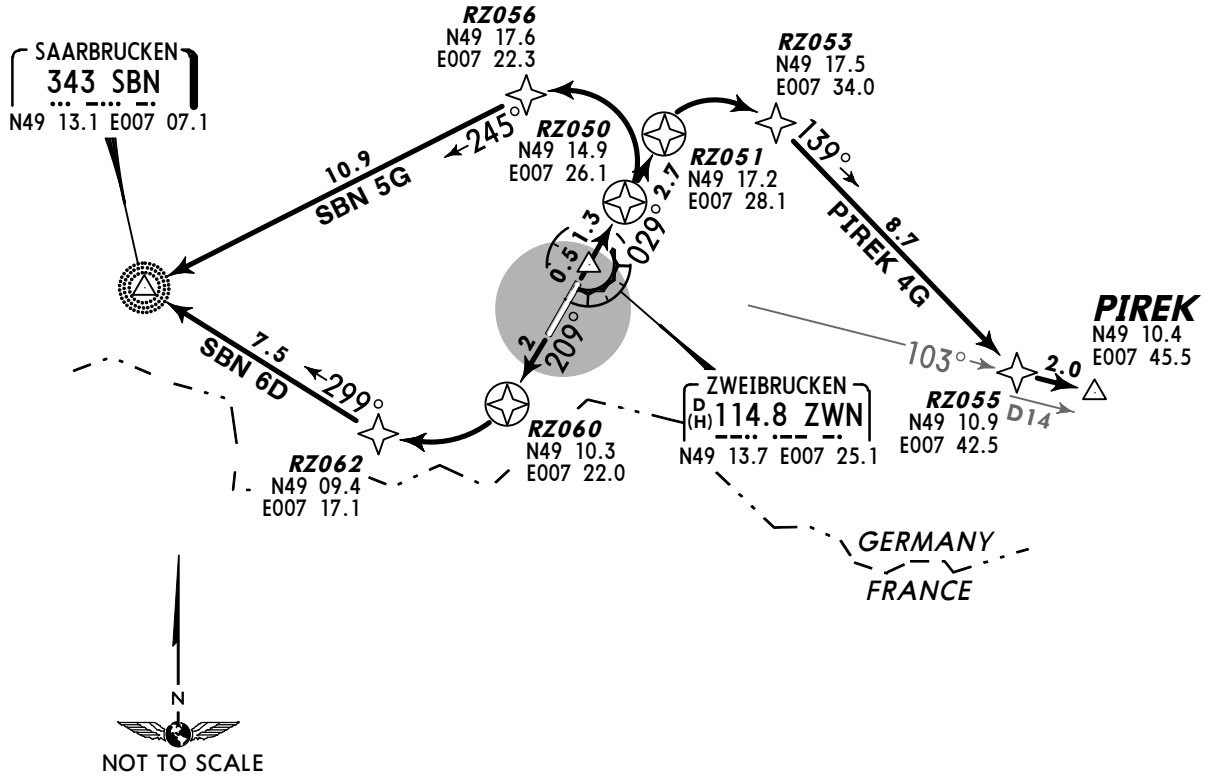
LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′
129.67	1133′	1. Contact LANGEN Radar immediately after take-off. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

3700′

MSA
ZWN VOR
applicable over
German territory only

PIREK FOUR GOLF (PIREK 4G) *[PIRE4G]*
SAARBRUCKEN SIX DELTA (SBN 6D)
SAARBRUCKEN FIVE GOLF (SBN 5G)
RWYS 03, 21 RNAV DEPARTURES
(OVERLAY 10-3A)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



These SIDs require minimum climb gradients of

SBN 6D: 334′ per NM (5.5%) until 3600′ due to airspace structure.

SBN 5G: 249′ per NM (4.1%) until 3600′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
334′ per NM	418	557	835	1114	1392	1671
249′ per NM	311	415	623	830	1038	1246

If unable to comly advise ATC.

Initial climb clearance **4000′**

SID	RWY	ROUTING
PIREK 4G ❶	**03**	(1600+) - ZWN - RZ051 - RZ053 - RZ055 - PIREK.
SBN 6D ❷	**21**	(1600+) - RZ060 - RZ062 - SBN.
SBN 5G ❶❷	**03**	(1600+) - ZWN - RZ050 - RZ056 - SBN.

❶ During activity of NIGHT LOW FLYING SYSTEM alternative instruction will be given by ATC.
❷ Only for flights via airway G 21 cross D13.0 GTQ at or above FL80.

CHANGES: None.

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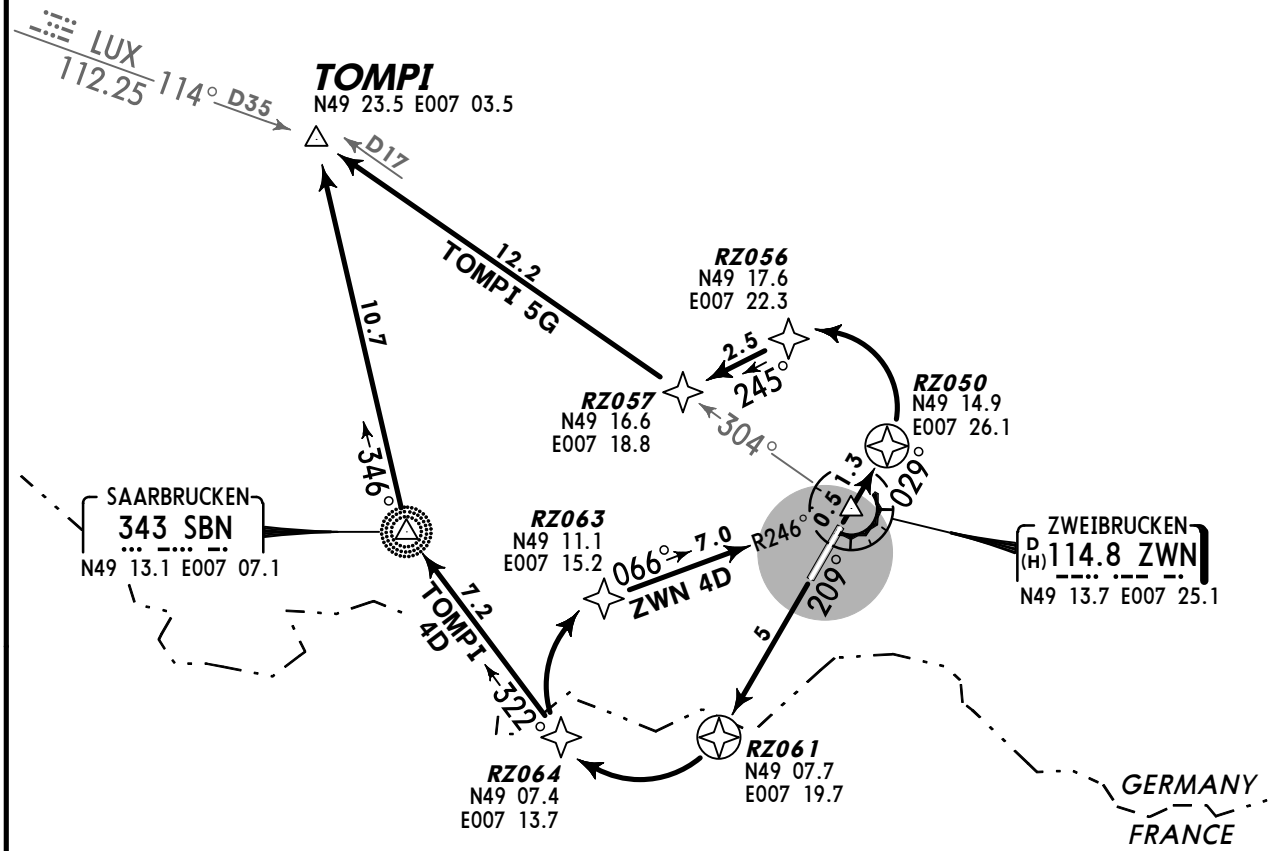
LANGEN Radar	*Apt Elev*	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar immediately after take-off. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.
129.67	1133′	

3700′

MSA
ZWN VOR
applicable over
German territory only

TOMPI FOUR DELTA (TOMPI 4D) *[TOMP4D]*
TOMPI FIVE GOLF (TOMPI 5G) *[TOMP5G]*
ZWEIBRUCKEN FOUR DELTA (ZWN 4D)
RWYS 21, 03 RNAV DEPARTURES
(OVERLAY 10-3B)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



TOMPI 5G
This SID requires a minimum climb gradient of
249′ per NM (4.1%) until 3600′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
249′ per NM	311	415	623	830	1038	1246

If unable to comly advise ATC.

N
NOT TO SCALE

Initial climb clearance **4000′**

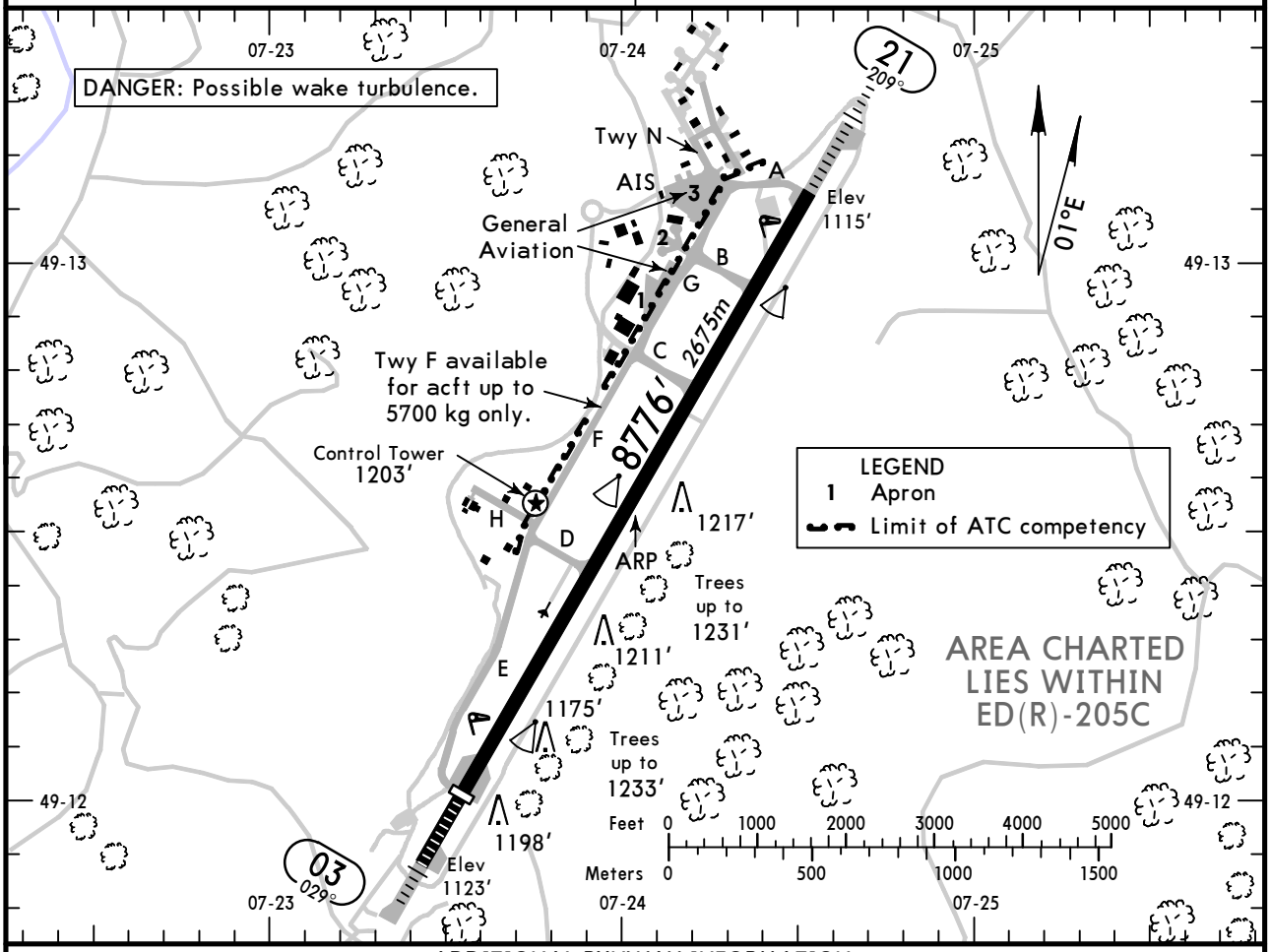
SID	RWY	ROUTING
TOMPI 4D	**21**	(1600+) - RZ061 - RZ064 - SBN - TOMPI.
TOMPI 5G❶	**03**	(1600+) - ZWN - RZ050 - RZ056 - RZ057 - TOMPI.
ZWN 4D	**21**	(1600+) - RZ061 - RZ063 - ZWN.

❶ During activity of NIGHT LOW FLYING SYSTEM alternative instruction will be given by ATC.

CHANGES: RNAV SID ZWN 3D renumbered 4D; track update.

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*ATIS	*ZWEIBRUCKEN Tower
124.65	123.82



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
03 21	HIRL CL *(15m)* HIALS REIL SFL PAPI-L(3.0°) RVR	7874′ *2400m*	6977′ *2127m* 7743′ *2360m*	❶	148′ *45m*

❶ TAKE-OFF RUN AVAILABLE

RWY 03:		RWY 21:	
From rwy head	8776′ (2675m)	From rwy head	8776′ (2675m)
twy E int	7874′ (2400m)	twy B int	7559′ (2304m)
twy D int	4980′ (1518m)	twy C int	6237′ (1901m)
twy C int	2615′ (797m)	twy D int	3845′ (1172m)

LOW VISIBILITY PROCEDURES (LVP)

Rwy 21 is approved for Low Visibility Take-Offs (LVTO).
Rwy 03 is approved for LVTO provided that the RVR is not less than 350m.
Twys A and C only are available for conducting LVTO procedures. Twy centreline lights and stop bars have been installed there.
When applying LVTO procedures, aircraft will be guided by a follow-me vehicle up to the CAT II taxi-holding position at Twy A or C.
Taxiing across the stop bars at the CAT II taxi-holding positions when they are in operation (red), is strictly prohibited.
No clearance of any kind includes permission to taxi across a stop bar (red).

Standard

TAKE-OFF 1

	LVP must be in force: Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
B						
C						
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: Variation. Rwy bearings.

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ZWEIBRUCKEN, GERMANY

ZWEIBRUCKEN

STRAIGHT-IN RWY		A	B	C	D
03	ILS	**1365**′(239′)	**1375**′(249′)	**1384**′(258′)	**1394**′(268′)
		R700m	**R700m**	**R800m**	**R800m**
	ALS out	R1000m	R1000m	R1200m	R1200m
	LOC	**1570**′(444′)	**1570**′(444′)	**1570**′(444′)	**1570**′(444′)
		R1200m	**R1300m**	**R1400m**	**R1600m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	VOR	**1590**′(464′)	**1590**′(464′)	**1590**′(464′)	**1590**′(464′)
		R1400m	**R1500m**	**R1600m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m
21	ILS	**1315**′(200′)	**1321**′(206′)	**1331**′(216′)	**1341**′(226′)
		R700m	**R700m**	**R700m**	**R700m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**1590**′(475′)	**1590**′(475′)	**1590**′(475′)	**1590**′(475′)
		R1400m	**R1500m**	**R1600m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	VOR	**1670**′(555′)	**1670**′(555′)	**1670**′(555′)	**1670**′(555′)
		R1400m	**R1500m**	**R1600m**	**R1800m**
	ALS out	R1500m	R1500m	R2000m	R2000m

TAKE-OFF RWY 03, 21

	LVP must be in Force					
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: Minimums.

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EDRZ/ZQW
ZWEIBRUCKEN

JEPPESEN 3 FEB 12 (11-1) Eff 9 Feb

ZWEIBRUCKEN, GERMANY
ILS or LOC Rwy 03

*ATIS	LANGEN Radar (APP)	*ZWEIBRUCKEN Tower Within 25 NM up to 4000' AGL
124.65	129.67	123.82

BRIEFING STRIP™

LOC	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev 1133'
IZWE 108.35	029°	2330'(1204')	Refer to Minimums	RWY 1126'

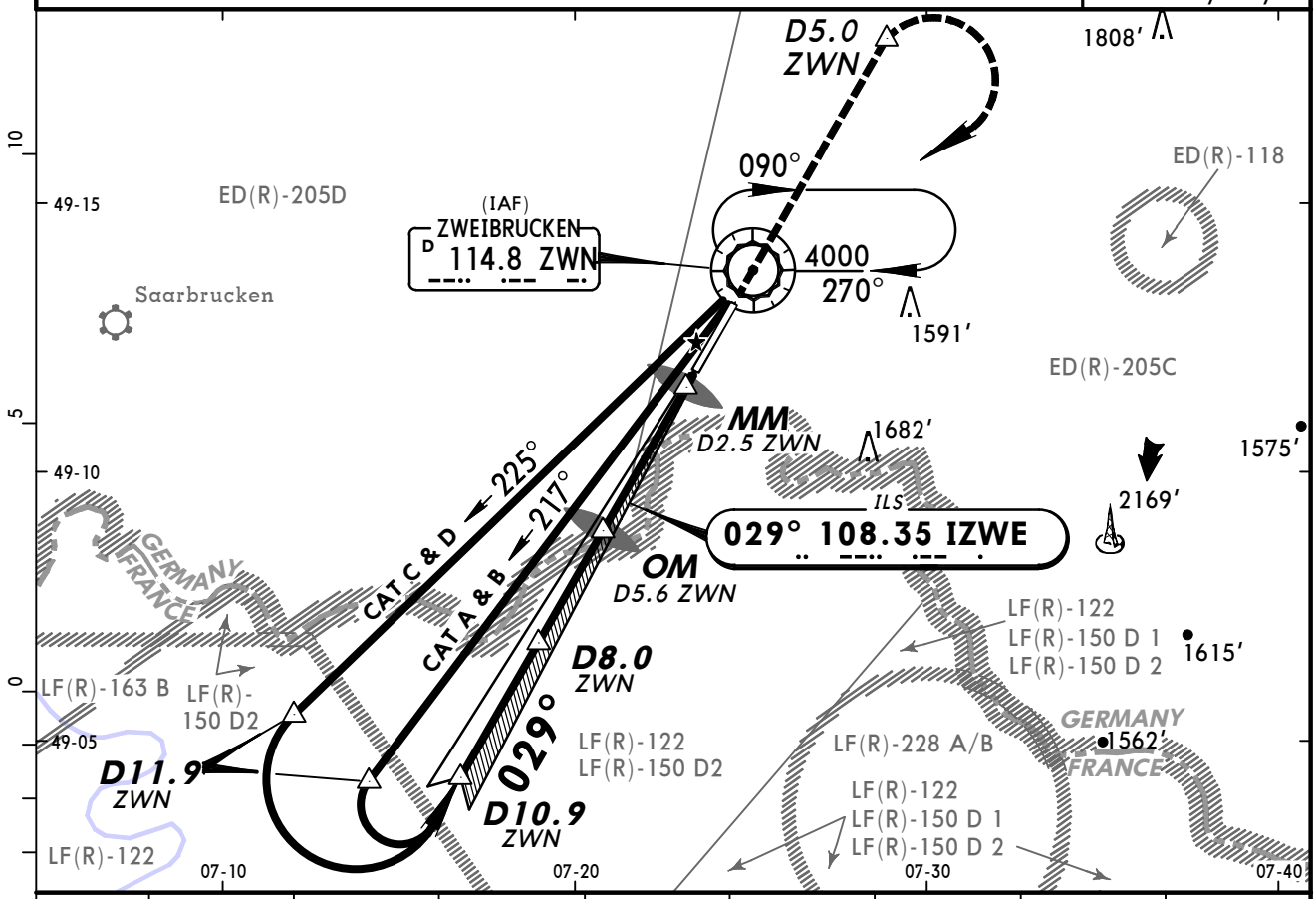
MISSED APCH: Climb STRAIGHT AHEAD to D5.0 ZWN, then turn RIGHT to VOR climbing to 4000'.

Alt Set: hPa (IN on req) Rwy Elev: 40 hPa Trans level: By ATC Trans alt: 5000'

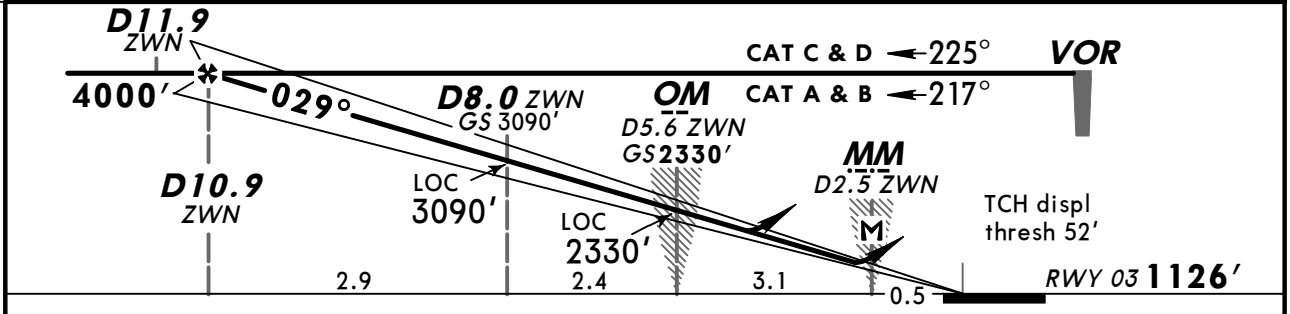
1. LOC: **DME required.**

3700' ❶

MSA ZWN VOR
❶Applicable over Germany only.



LOC (GS out)	ZWN DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0
	ALTITUDE	3730'	3410'	3090'	2770'	2460'	2140'	1820'



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	372	478	531	637	743	849
MAP at MM/D2.5 ZWN						

HIALS
REIL
PAPI

D5.0 ZWN

Standard STRAIGHT-IN LANDING RWY **03**

ILS	LOC (GS out)
DA(H) A:1365'(239') C:1384'(258') B:1375'(249') D:1394'(268')	DA(H) 1570'(444')

PANS OPS 4

	FULL/Limited	ALS out		ALS out
A	RVR 800m	RVR 1200m	RVR 1500m	
B				
C		RVR 1300m	RVR 1700m	CMV 2100m
D	RVR 900m			

CHANGES: Bearings.

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EDRZ/ZQW
ZWEIBRUCKEN

JEPPESEN 3 FEB 12 (11-2) Eff 9 Feb

ZWEIBRUCKEN, GERMANY
ILS or LOC Rwy 21

*ATIS	LANGEN Radar (APP)	*ZWEIBRUCKEN Tower Within 25 NM up to 4000' AGL
124.65	129.67	123.82

BRIEFING STRIP™

LOC IZWW	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev 1133'
109.35	209°	2450' (1335')	Refer to Minimums	RWY 1115'

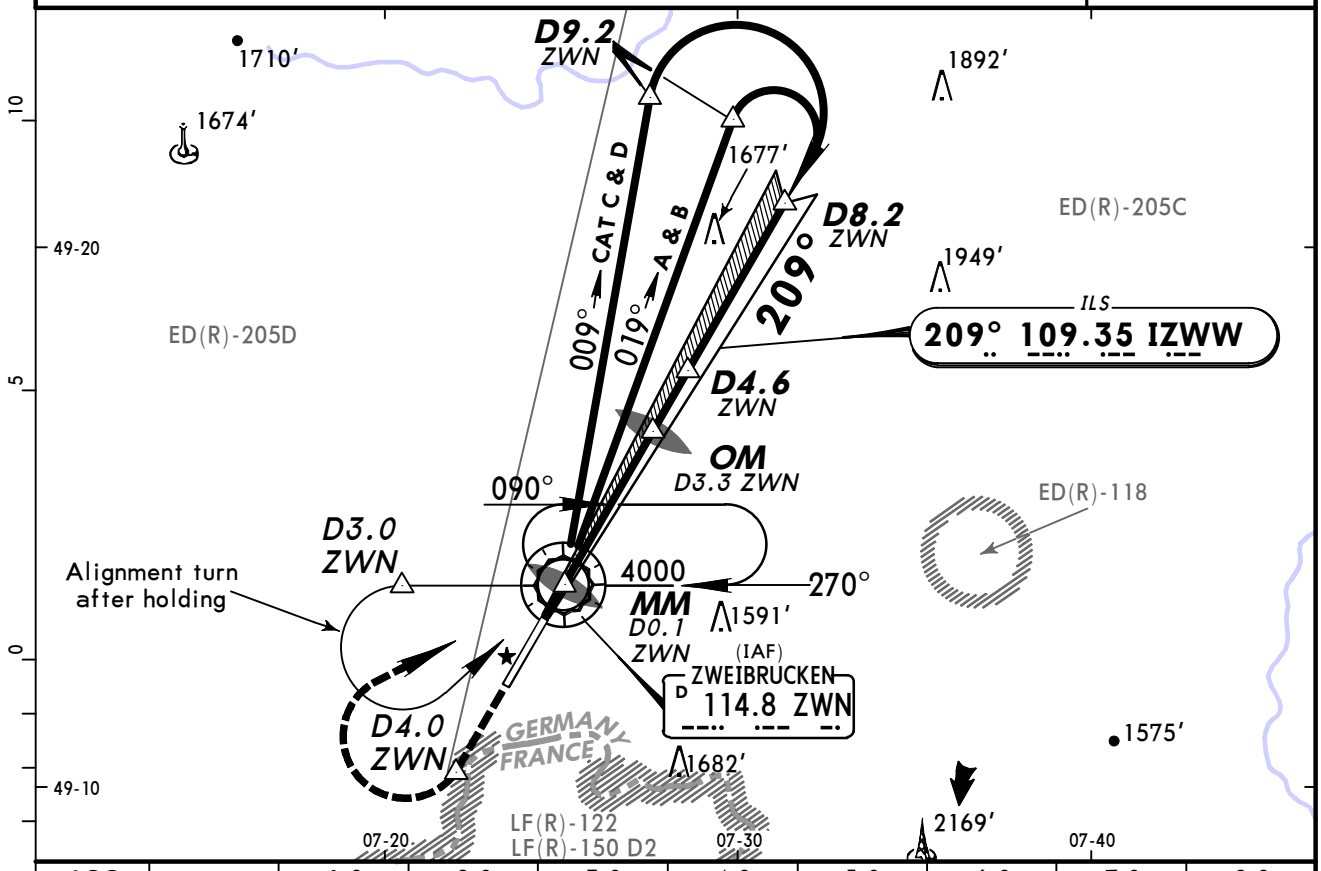
MISSED APCH: Climb STRAIGHT AHEAD to D4.0 ZWN, then turn RIGHT to VOR climbing to 4000'.

Alt Set: hPa (IN on req) Rwy Elev: 40 hPa Trans level: By ATC Trans alt: 5000'

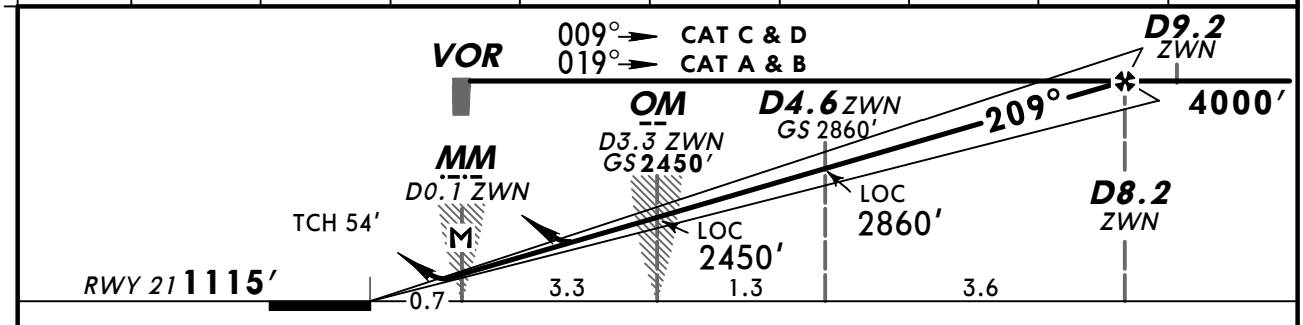
1. LOC: **DME required.**
2. During activity of night low flying system alternative instructions will be given by ATC.

3700' ❶ *MSA ZWN VOR*

❶Applicable over Germany only.



LOC (GS out)	ZWN DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
	ALTITUDE	1720'	2030'	2350'	2670'	2990'	3310'	3630'	3940'



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	372	478	531	637	743	849
MAP at MM/D0.1 ZWN						

HIALS REIL PAPI

D4.0 ZWN

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 21

	ILS		LOC (GS out)	
	DA(H) A:1315'(200') C:1331'(216') B:1321'(206') D:1341'(226')		DA(H) 1590'(475')	
	FULL/Limited	ALS out		ALS out
A, B	RVR 750m	RVR 1200m	RVR 1500m	
C	RVR 800m		RVR 1800m	CMV 2200m
D				

CHANGES: Bearings.

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BRIEFING STRIP™

*ATIS	LANGEN Radar (APP)	*ZWEIBRUCKEN Tower Within 25 NM up to 4000' AGL
124.65	129.67	123.82

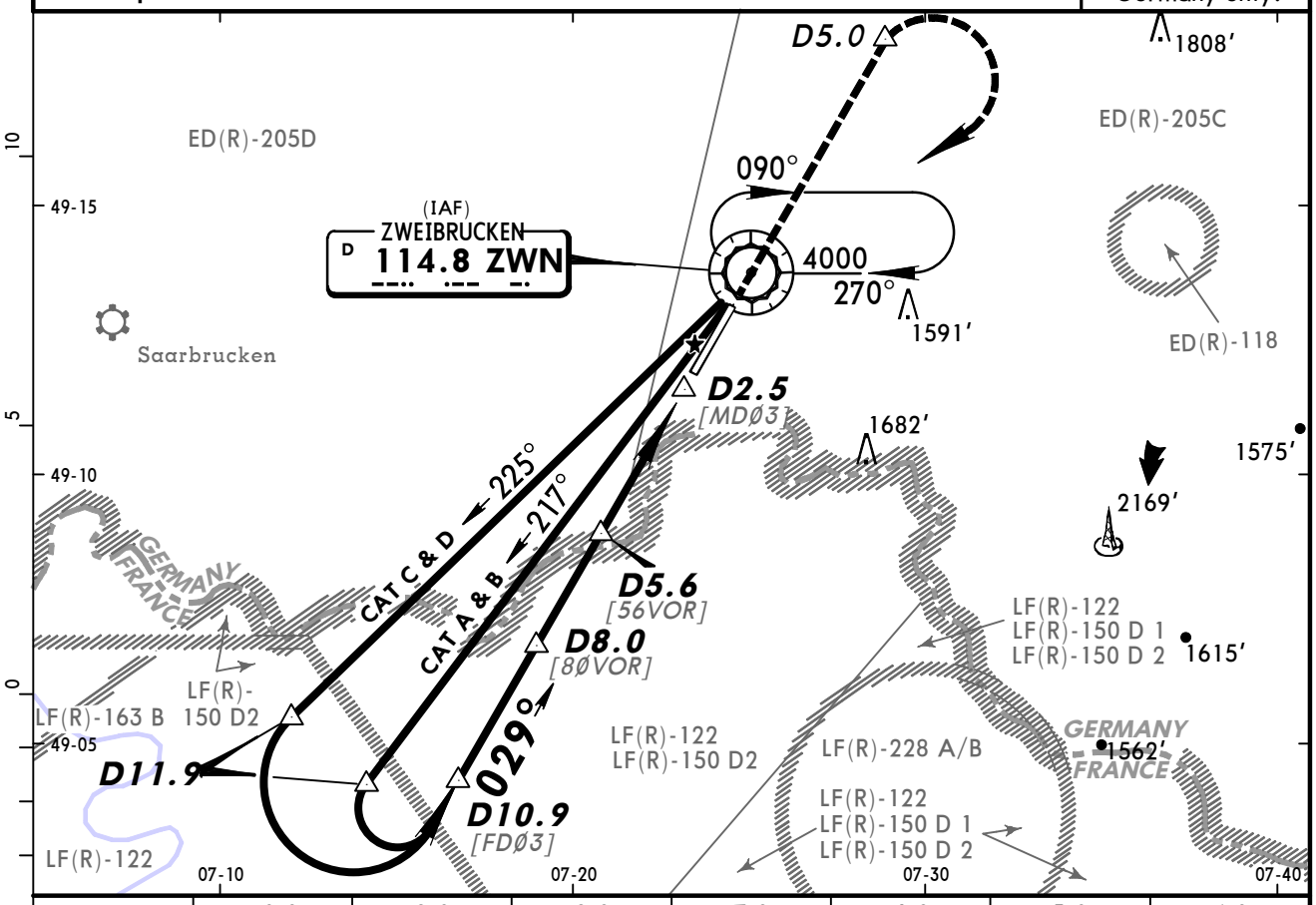
VOR ZWN 114.8	Final Apch Crs 029°	Minimum Alt D10.9 4000'(2874')	DA(H) 1590'(464')	Apt Elev 1133' RWY 1126'

MISSED APCH: Climb STRAIGHT AHEAD to D5.0, then turn RIGHT to VOR climbing to 4000'.

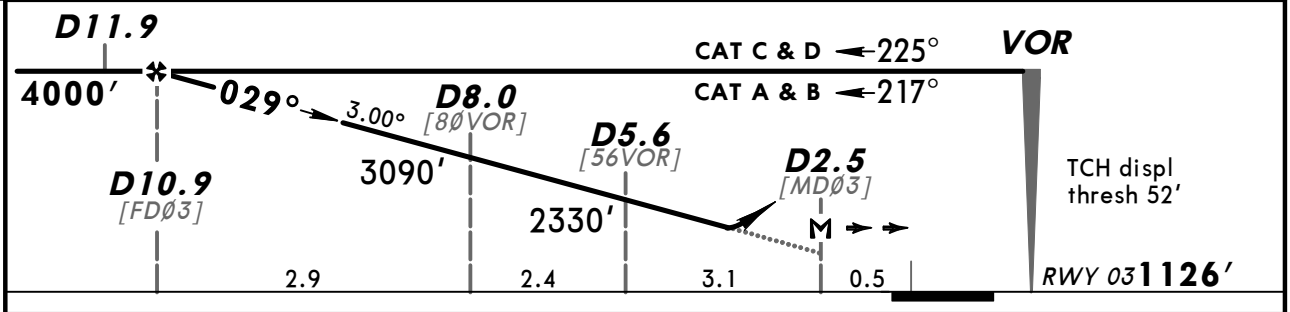
3700' ❶

MSA ZWN VOR
❶Applicable over Germany only.

Alt Set: hPa (IN on req) **DME required.** | Rwy Elev: 40 hPa | Trans level: By ATC | Trans alt: 5000'



ZWN DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0
ALTITUDE	3730'	3410'	3090'	2770'	2460'	2140'	1820'



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D2.5						

HIALS
REIL
PAPI

D5.0

Standard STRAIGHT-IN LANDING RWY **03**

DA(H) **1590'**(464')

ALS out

PANS OPS 4

A, B	RVR 1500m	
C, D	RVR 1800m	CMV 2200m

CHANGES: Bearings.

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BRIEFING STRIP™

*ATIS	LANGEN Radar (APP)	*ZWEIBRUCKEN Tower Within 25 NM up to 4000' AGL
124.65	129.67	123.82

VOR ZWN	Final Apch Crs	Minimum Alt D8.2	DA(H)	Apt Elev 1133'
114.8	209°	4000' (2885')	1670' (555')	RWY 1115'

MISSED APCH: Climb STRAIGHT AHEAD to D4.0, then turn RIGHT to VOR climbing to 4000'.

Alt Set: hPa (IN on req) Rwy Elev: 40 hPa Trans level: By ATC Trans alt: 5000'

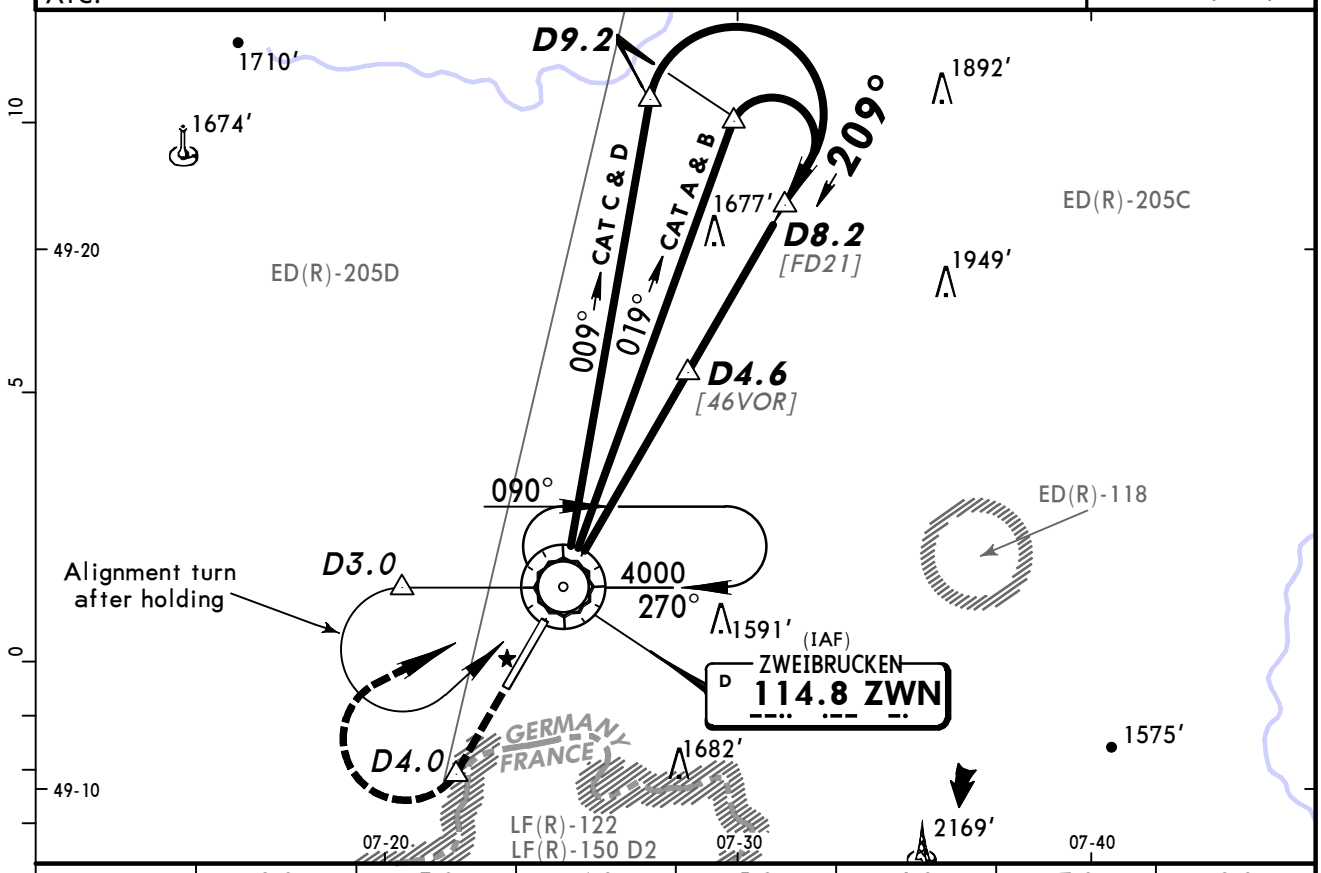
1. DME required.

2. During activity of night low flying system alternative instructions will be given by ATC.

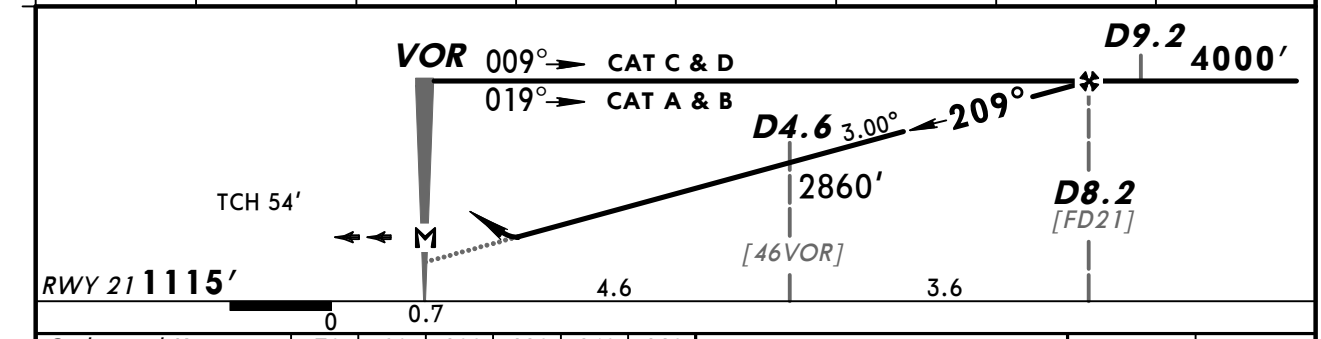
3700' ❶

MSA ZWN VOR

❶Applicable over Germany only.



ZWN DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	2030'	2350'	2670'	2990'	3310'	3630'	3940'



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

HIALS
REIL
PAPI

D4.0

Standard STRAIGHT-IN LANDING RWY 21

DA(H) 1670' (555')

ALS out

PANS OPS 4

A	RVR 1500m	
B		
C	CMV 2100m	CMV 2400m
D		

CHANGES: Bearings.

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General Information

Location: Karlsruhe/Baden-Baden Deu
IATA Code: FKB
Lat/Long: N48° 46.8' E008° 04.8'
Elevation: 409 ft

Airport Use: Public
Magnetic Variation: 1.4°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes
Pattern Altitude: 993 ft AGL

Sunrise: 0614 Z
Sunset: 1707 Z,

Runway Information

Runway: 03
Length x Width: 9843 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 406 ft
Lighting: Edge, ALS, Centerline
Displaced Threshold: 853 ft

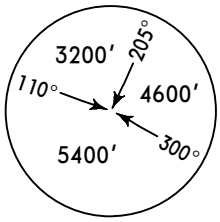
Runway: 21
Length x Width: 9843 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 405 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 853 ft

Communication Information

ATIS 121.275
Baden Tower 125.875 At or below 4000 ft Out to 25 mi.
Baden Ground Control 121.825
Strasbourg Approach Control 119.575

*ATIS	Apt Elev	Alt Set: hPa (IN on request)
121.27	408′	Trans level: By ATC Trans alt: 5000′

KARLSRUHE TWO MIKE (KRH 2M)
LADAT ONE MIKE (LADAT 1M)[LADA1M] ❶
SULZ THREE MIKE (SUL 3M)
RWYS 03, 21 ARRIVALS



MSA
KBA NDB
German territory only

LADAT
N49 15.9 E007 50.4

❶ BRNAV equipment necessary.

135° 23.4 6000 LADAT 1M ❶

GERMANY / FRANCE

ABKUT
N48 59.0 E008 15.0

208° 12.7 6000

196° 016° 6000 238°

(IAF By ATC)
KARLSRUHE
D 115.95 KRH
N48 59.6 E008 35.1

23 6000 KRH 2M

(IAF)
KARLSRUHE/
BADEN-BADEN
431 KBA
N48 47.9 E008 05.9

031° 6000 211°

CAUTION
Intensive VFR-traffic in the vincinity of aerodrome

33 6000 SUL 3M

N
NOT TO SCALE

SULZ
116.1 SUL
N48 22.9 E008 38.7

318°

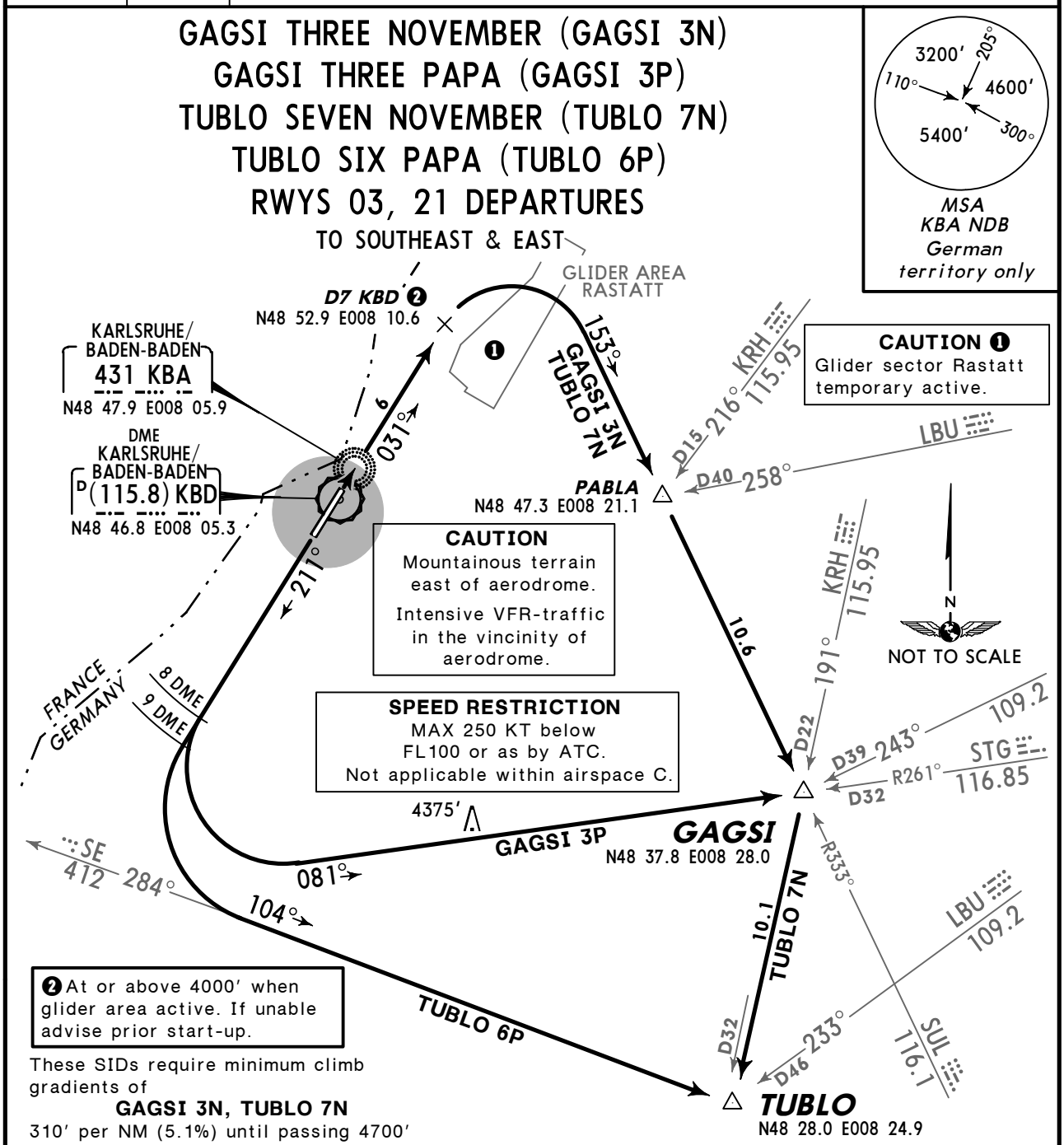
SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

CHANGES: Runway designation.

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STRASBOURG Radar 119.57	Apt Elev 409′	Trans level: By ATC Trans alt: 5000′ 1. Contact STRASBOURG Radar immediately after take-off. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

GAGSI THREE NOVEMBER (GAGSI 3N)
GAGSI THREE PAPA (GAGSI 3P)
TUBLO SEVEN NOVEMBER (TUBLO 7N)
TUBLO SIX PAPA (TUBLO 6P)
RWYS 03, 21 DEPARTURES



❷ At or above 4000′ when glider area active. If unable advise prior start-up.

These SIDs require minimum climb gradients of

GAGSI 3N, TUBLO 7N
310′ per NM (5.1%) until passing 4700′ due to navaid coverage, then
346′ per NM (5.7%) until passing 6000′ due to airspace structure.

GAGSI 3P
304′ per NM (5%) until passing 5200′, then
365′ per NM (6%) until passing 5500′ due to navaid coverage.

TUBLO 6P
243′ per NM (4%) until passing 6600′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
365′ per NM	456	608	911	1215	1519	1823
346′ per NM	433	577	866	1155	1443	1732
310′ per NM	387	516	775	1033	1291	1549
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215

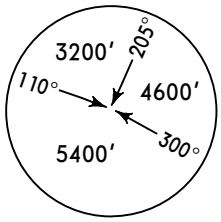
Initial climb clearance **FL70**

SID	RWY	ROUTING
GAGSI 3N	**03**	On 031° track via KBA to D7 KBD, turn RIGHT, intercept SUL R-333 inbound via PABLA to GAGSI.
GAGSI 3P	**21**	On 211° bearing from KBA to KBD 8 DME, turn LEFT, intercept STG R-261 inbound to GAGSI.
TUBLO 7N	**03**	On 031° track via KBA to D7 KBD, turn RIGHT, intercept SUL R-333 inbound via PABLA to GAGSI, turn RIGHT, intercept KRH R-191 to TUBLO.
TUBLO 6P	**21**	On 211° bearing from KBA to KBD 9 DME, turn LEFT, intercept 104° bearing from SE to TUBLO.

CHANGES: Crossing altitude at D7 KBD established.

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STRASBOURG Radar 119.57	*Apt Elev* 409′	Trans level: By ATC Trans alt: 5000′ 1. Contact STRASBOURG Radar immediately after take-off. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.



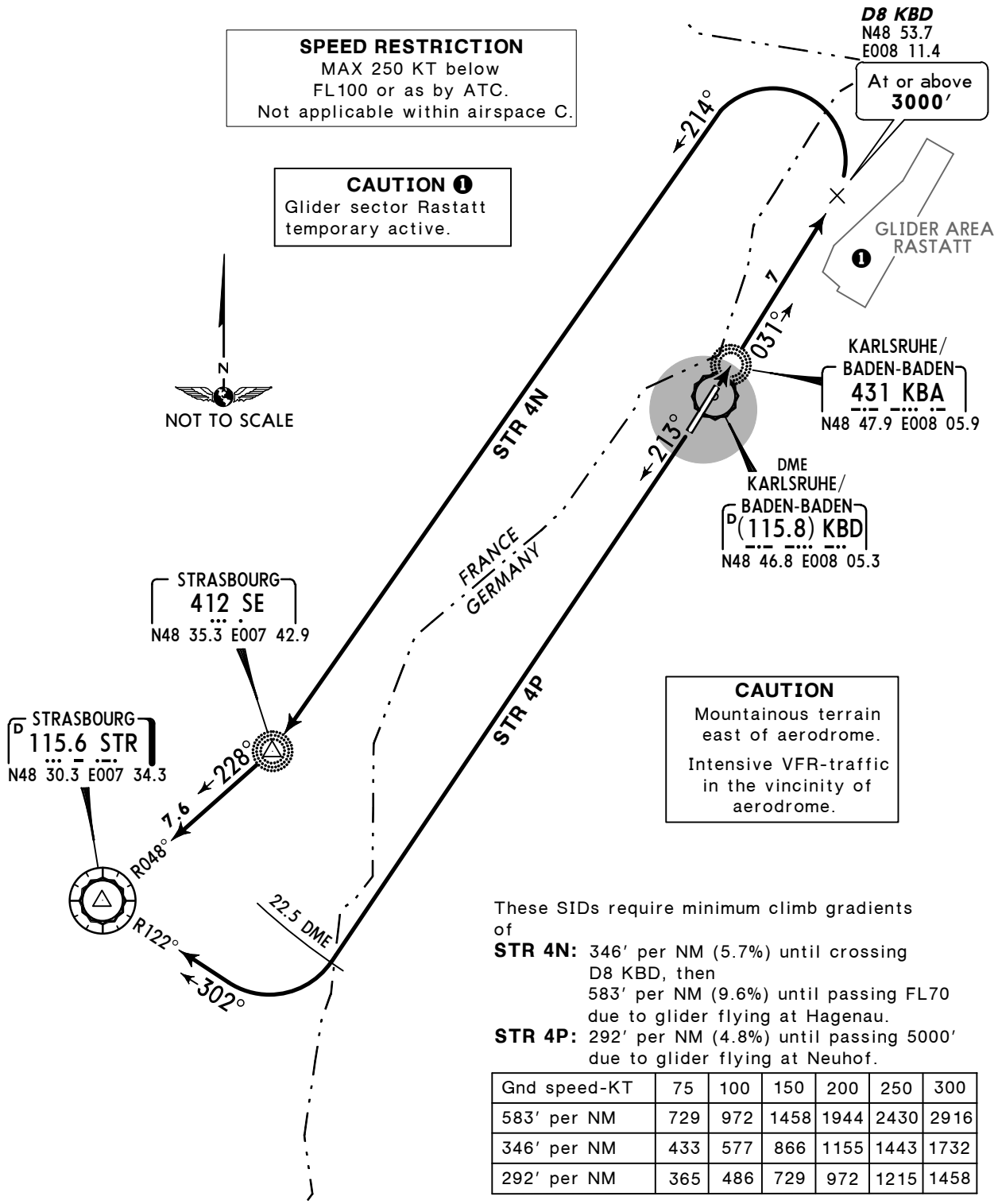
MSA
KBA NDB
German territory only

STRASBOURG FOUR NOVEMBER (STR 4N)
STRASBOURG FOUR PAPA (STR 4P)
RWYS 03, 21 DEPARTURES
TO SOUTHWEST

SPEED RESTRICTION
MAX 250 KT below FL100 or as by ATC.
Not applicable within airspace C.

CAUTION ❶
Glider sector Rastatt temporary active.

CAUTION
Mountainous terrain east of aerodrome.
Intensive VFR-traffic in the vincinity of aerodrome.



These SIDs require minimum climb gradients of

STR 4N: 346′ per NM (5.7%) until crossing D8 KBD, then
583′ per NM (9.6%) until passing FL70 due to glider flying at Hagenau.

STR 4P: 292′ per NM (4.8%) until passing 5000′ due to glider flying at Neuhof.

Gnd speed-KT	75	100	150	200	250	300
583′ per NM	729	972	1458	1944	2430	2916
346′ per NM	433	577	866	1155	1443	1732
292′ per NM	365	486	729	972	1215	1458

Initial climb clearance **FL70**

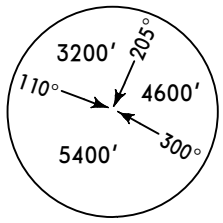
SID	RWY	ROUTING
STR 4N	**03**	On 031° track via KBA to D8 KBD, turn LEFT, intercept 214° bearing to SE, STR R-048 inbound to STR.
STR 4P	**21**	On 213° bearing from KBA to KBD 22.5 DME, turn RIGHT, intercept STR R-122 inbound to STR.

CHANGES: None.

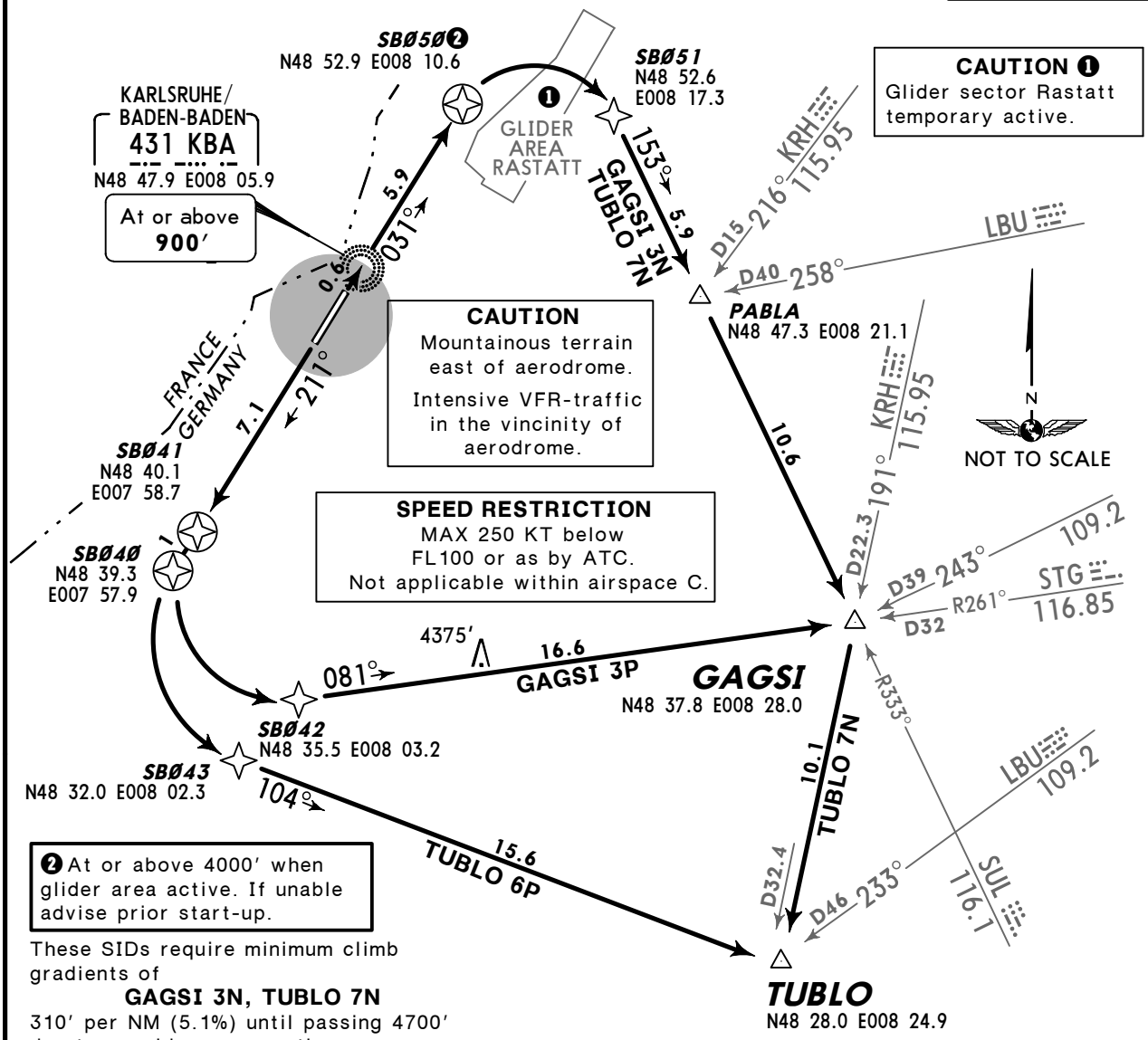
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STRASBOURG Radar 119.57	Apt Elev 409′	Trans level: By ATC Trans alt: 5000′ 1. Contact STRASBOURG Radar immediately after take-off. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

GAGSI THREE NOVEMBER (GAGSI 3N)[GAGS3N]
GAGSI THREE PAPA (GAGSI 3P)[GAGS3P]
TUBLO SEVEN NOVEMBER (TUBLO 7N)[TUBL7N]
TUBLO SIX PAPA (TUBLO 6P)[TUBL6P]
RWYS 03, 21 RNAV DEPARTURES (OVERLAY 10-3)
TO SOUTHEAST & EAST



MSA
KBA NDB
German territory only



❷ At or above 4000′ when glider area active. If unable advise prior start-up.

These SIDs require minimum climb gradients of

GAGSI 3N, TUBLO 7N
310′ per NM (5.1%) until passing 4700′ due to navaid coverage, then
346′ per NM (5.7%) until passing 6000′ due to airspace structure.

GAGSI 3P
304′ per NM (5%) until passing 5200′, then
365′ per NM (6%) until passing 5500′ due to navaid coverage.

TUBLO 6P
243′ per NM (4%) until passing 6600′ due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
365′ per NM	456	608	911	1215	1519	1823
346′ per NM	433	577	866	1155	1443	1732
310′ per NM	387	516	775	1033	1291	1549
304′ per NM	380	506	760	1013	1266	1519
243′ per NM	304	405	608	810	1013	1215

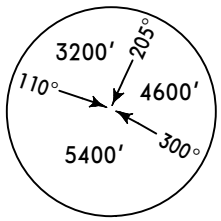
Initial climb clearance **FL70**

SID	RWY	ROUTING
GAGSI 3N	03	KBA (900′+) - SB050 ❷- SB051 - PABLA - GAGSI.
GAGSI 3P	21	(900′+) - SB041 - SB042 - GAGSI.
TUBLO 7N	03	KBA (900′+) - SB050 ❷- SB051 - PABLA - GAGSI - TUBLO.
TUBLO 6P	21	(900′+) - SB040 - SB043 - TUBLO.

CHANGES: Crossing altitude at SB050 established.

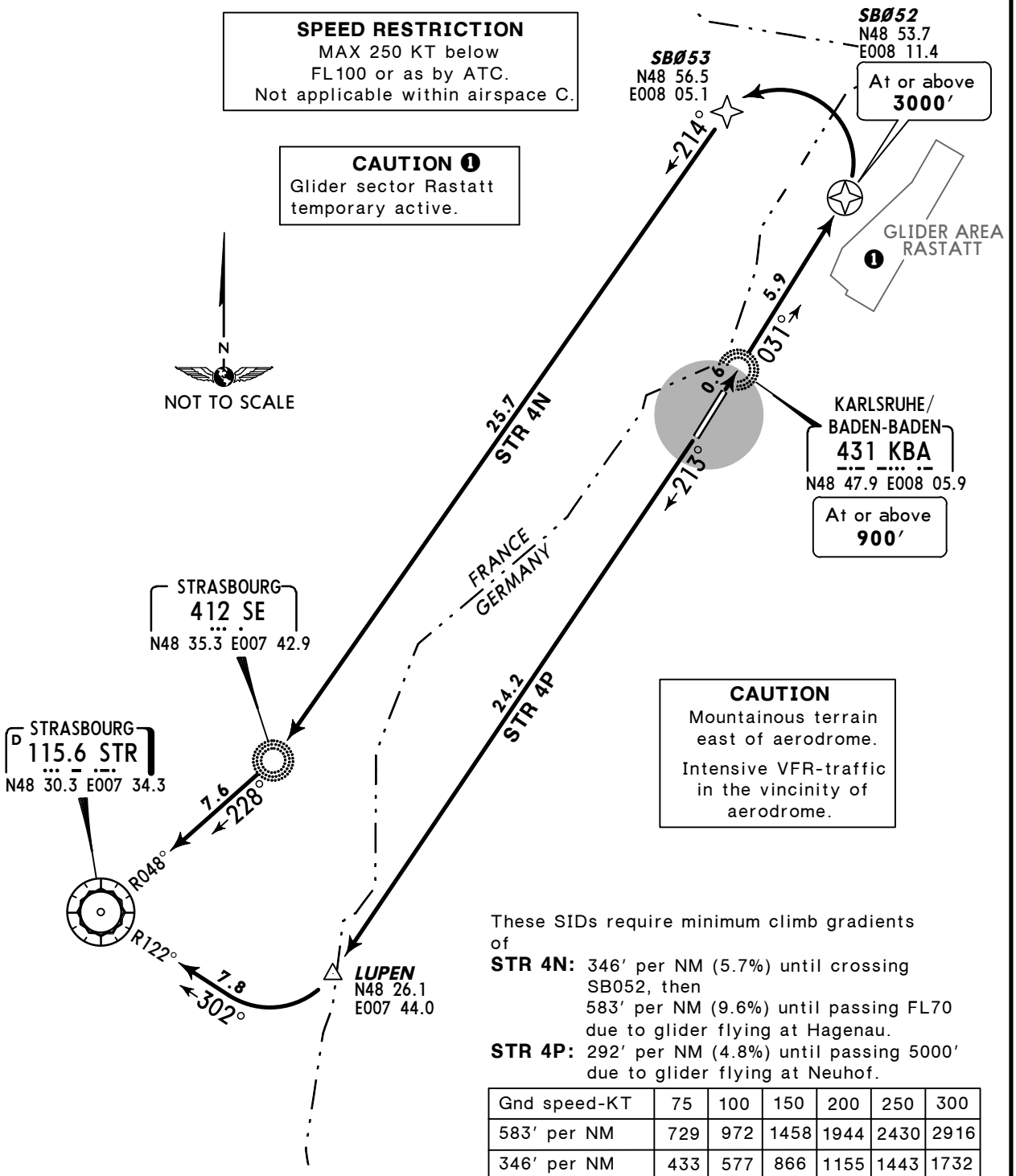
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STRASBOURG Radar 119.57	*Apt Elev* 409′	Trans level: By ATC Trans alt: 5000′ 1. Contact STRASBOURG Radar immediately after take-off. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.



MSA
KBA NDB
German territory only

STRASBOURG FOUR NOVEMBER (STR 4N)
STRASBOURG FOUR PAPA (STR 4P)
RWYS 03, 21 RNAV DEPARTURES (OVERLAY 10-3A)
TO SOUTHWEST



These SIDs require minimum climb gradients of

STR 4N: 346′ per NM (5.7%) until crossing SB052, then 583′ per NM (9.6%) until passing FL70 due to glider flying at Hagenau.

STR 4P: 292′ per NM (4.8%) until passing 5000′ due to glider flying at Neuhof.

Gnd speed-KT	75	100	150	200	250	300
583′ per NM	729	972	1458	1944	2430	2916
346′ per NM	433	577	866	1155	1443	1732
292′ per NM	365	486	729	972	1215	1458

Initial climb clearance **FL70**

SID	RWY	ROUTING
STR 4N	**03**	KBA (900′+) - SB052 (3000′+) - SB053 - SE - STR.
STR 4P	**21**	(900′+) - LUPEN - STR.

CHANGES: None.

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NOISE ABATEMENT

SUMMER	**: LT minus 2 HOURS**	**= UTC (Z)**
WINTER	**: LT minus 1 HOUR**	**= UTC (Z)**

GENERAL

The following types of ACFT are authorized to use the aerodrome:
1. Jet-propelled ACFT with noise certification according to ICAO Annex 16, Volume I, Chapter 3
2. Propeller-driven ACFT insofar as they adhere at least to the noise values in Chapter III, Para. III.2.3, Chapter V Para V.2.3, Chapter VI, Para VI.2.3 or Chapter X, Para X.2.3 in accordance with LSL in its respective valid version (published in the Federal Law Gazette, Part I, from p. 35 onwards dated 27.01.1999; valid since 28.01.1999; NfL I -134/99) and possess a corresponding noise certificate or comparable document
3. Rotorcraft
4. Powered gliders in keeping with the requirements of the repair hangars resident at the airport after prior permission (PPR) from Baden-Airpark GmbH
5. triple-axled ultra-light aeroplanes in keeping with the requirements of the repair hangars resident at the airport after prior permission (PPR) from Baden-Airpark GmbH

NIGHT FLYING RESTRICTIONS

Flight operations at Karlsruhe/Baden-Baden Airport are restricted between 2200-0600LT(early morning) to avoid disturbing the night peace. During this time, flights are permitted only as follows:

Flights are permitted between 2200-2300LT after prior permission (PPR) from Baden-Airpark GmbH:
- with ACFT exceeding 5.700 kg MTOM which are included in the currently valid version of the Bonus list published by the Ministry of Transport, Building and Urban Development (BMVBS);
- with ACFT exceeding 2.000 kg up to 5.700 kg MTOM with location Karlsruhe/ Baden-Baden Airport.

Flights are permitted between 2300-0000LT after prior permission (PPR) from Baden-Airpark GmbH for:
- Landings of delayed aeroplanes exceeding 5.700 kg MTOM which are included in the currently valid version of the Bonus list published by the Ministry of Transport, Building and Urban Development (BMVBS).
- Take-offs of delayed aeroplanes on scheduled air services and air inclusive tours exceeding 5.700 kg MTOM which are included in the currently valid version of the Bonus list published by the Ministry of Transport, Building and Urban Development (BMVBS) but with not more than 15 such delayed take-offs per month.

EXCEPTIONS

Take-offs and/or landings of ACFT are also permitted at night between 2200-0600LT
- when using the airport as an emergency or alternate airport for meteorological, technical or other safety reasons,
- on a mission in disasters or when rendering medical assistance,
- on a mission by the police of the Land of Baden-Wuerttemberg.

cont'd

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NOISE ABATEMENT

RESTRICTIONS OF FLIGHT OPERATIONS

Restrictions on Sundays and official German holidays:
Flights are prohibited for ACFT of less than 2.000 kg MTOM and/or for non-resident ACFT exceeding 2.000 kg up to 5.700 kg on Sundays and official German holidays between 0600-0900LT and between 2000-2200LT.

Rest periods for traffic circuit flights:
Traffic circuit flights with propeller aeroplanes of less than 2.000 kg MTOM may be conducted Mon-Fri prior to 0700LT and between 1300-1500LT well as Sat, Sun and HOL after 1300LT with increased sound proofing only.

REVERSE THRUST

When landing, reverse thrust, other than idle thrust, may be used only to an extent indispensable for safety reasons.

RUN-UP TESTS

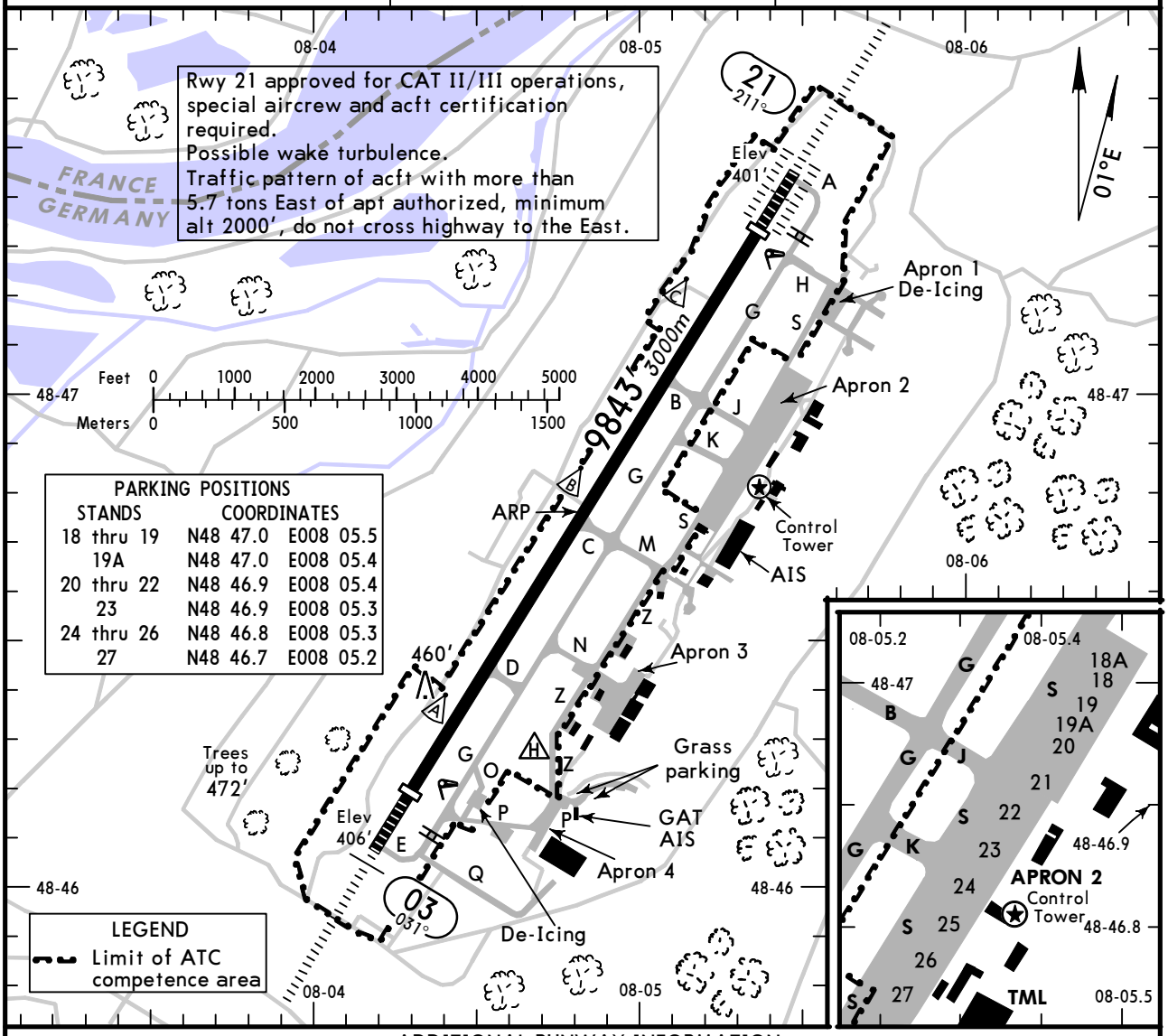
Test-runs and run-ups of engines are permitted only after prior permission and exact instructions from the Aviation Supervision Office.

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JEPPESEN KARLSRUHE/BADEN-BADEN, GERMANY

KARLSRUHE/BADEN-BADEN

*ATIS	*BADEN Ground	Tower
121.27	121.82	125.87



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
03	HIRL CL *(15m)* HIALS SFL REIL PAPI-L (3.0°) RVR	8990' *2740m*	7957' *2425m*	❶	148' *45m*
21	HIRL CL *(15m)* ALSF-II TDZ REIL PAPI-L (3.0°) RVR		8018' *2444m*		

❶ TAKE-OFF RUN AVAILABLE

RWY 03: From rwy head 9843' (3000m)
twy D int 7382' (2250m)
twy C int 5184' (1580m)
twy B int 3018' (920m)

RWY 21: From rwy head 9843' (3000m)
twy B int 6890' (2100m)
twy C int 4790' (1460m)
twy D int 2559' (780m)

LOW VISIBILITY PROCEDURE (LVP)

During LVP unaided taxiing with switched on twy center line lights only. Taxiing on apron with follow-me car only.

Standard

TAKE-OFF 1

	LVP must be in force: Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A						
B	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
C						
D	*150m*	*200m*	*250m*	*300m*		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved guidance system required below 150m.

CHANGES: None.

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KARLSRUHE/BADEN-BADEN, GERMANY

KARLSRUHE/BADEN-BADEN

STRAIGHT-IN RWY		A	B	C	D
03	ILS	**606′** (200′)	**606′** (200′)	**606′** (200′)	**606′** (200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**800′** (394′)	**800′** (394′)	**800′** (394′)	**800′** (394′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**980′** (574′)	**980′** (574′)	**980′** (574′)	**980′** (574′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
21	CAT 3B ILS	**approved**	**approved**	**approved**	**approved**
	CAT 3A ILS	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**	**RA50′R200m**
	CAT 2 ILS	**505′**(100′)	**505′**(100′)	**505′**(100′)	**505′**(100′)
		RA100′ R300m	**RA100′ R300m**	**RA100′ R300m**	**RA100′ R300m**
	ILS	**605′** (200′)	**605′** (200′)	**605′** (200′)	**605′** (200′)
		R550m	**R550m**	**R550m**	**R550m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC	**810′** (405′)	**810′** (405′)	**810′** (405′)	**810′** (405′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB	**940′** (535′)	**940′** (535′)	**940′** (535′)	**940′** (535′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

TAKE-OFF RWY 03, 21

	Approved Operators	LVP must be in force				
	HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*125m*	*150m*	*200m*	*250m*	*400m*	*500m*
D	*150m*	*200m*	*250m*	*300m*		

CHANGES: Minimums.

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EDSB/FKB
KARLSRUHE/BADEN-BADEN

JEPPESEN

21 JAN 11 (11-1)

KARLSRUHE/BADEN-BADEN, GERMANY
ILS or LOC Rwy 03

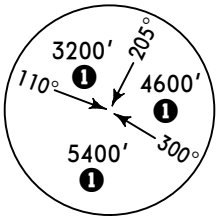
BRIEFING STRIP

*ATIS	STRASBOURG Approach	BADEN Tower	*Ground
121.27	119.57	125.87	121.82

LOC IKBE	Final Apch Crs	GS OM	ILS DA(H)	Apt Elev 409′
109.95	031°	1740′ (1334′)	606′ (200′)	RWY 406′

MISSED APCH: Climb STRAIGHT AHEAD to 5000′ or D7.0 KBD, whichever is later, then climbing turn RIGHT to NDB to 6000′.

Alt Set: hPa(IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000′



MSA KBA NDB

LOC: **DME REQUIRED.**

❶ Applicable over German territory only.

(IAF) KARLSRUHE/ BADEN-BADEN 431 KBA

KARLSRUHE/ BADEN-BADEN D (115.8) KBD

D7.0 KBD

Alignment turn after holding

031°

211°

6000

MM D1.5 KBD

D3.5 KBD

OM D4.9 KBD

D6.0 KBD

D12.0 KBD

D13.0 KBD

ILS 031° 109.95 IKBE

CAT A & B 201°

CAT C & D 197°

Do not mistake Baden-Baden (Oos) apt 3 NM East of Karlsruhe/Baden-Baden when performing visual apch.

Baden-Baden (Oos)

CAUTION: Intensive VFR traffic in glider areas Rheinstetten and Rastatt Northeast of apt between 6 NM and 20NM. Mountainous terrain East of airport.

LF(D)-526

LF(R)-122

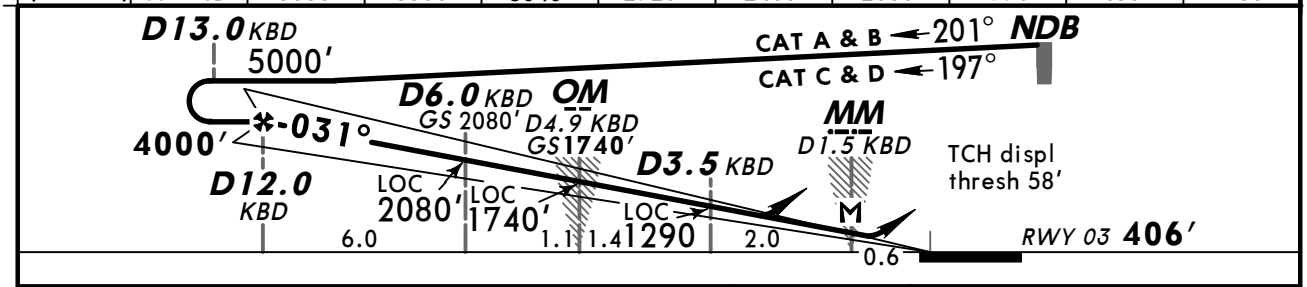
FRANCE GERMANY

1745′ 2012′ 1227′ 2002′ 2415′ 1165′ 3462′ 4375′ 2950′ 3321′ 2494′ 811′

48-50 48-40 10 5 0 5

07-50 08-00 08-10 08-20

LOC (GS out)	KBD DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0
	ALTITUDE	3680′	3360′	3040′	2720′	2400′	2080′	1770′	1450′	1130′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.5 KBD						

HIALS
REIL
PAPI

5000′ whichever is later — D7.0 KBD

Standard STRAIGHT-IN LANDING RWY **03**

PANS OPS 4

	ILS DA(H) 606′ (200′)			LOC (GS out) DA(H) 800′ (394′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1100m	RVR 1500m
B					
C					RVR 1800m
D					

CHANGES: Minimums. Procedure.

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EDSB/FKB
KARLSRUHE/BADEN-BADEN

JEPPESEN 21 JAN 11 (11-2)

KARLSRUHE/BADEN-BADEN, GERMANY
ILS or LOC Rwy 21

*ATIS	STRASBOURG Approach	BADEN Tower	*Ground
121.27	119.57	125.87	121.82

LOC IKBW	Final Apch Crs	GS OM	ILS DA(H)	
108.75	211°	1670′ (1265′)	605′ (200′)	Apt Elev 409′ RWY 405′

MISSED APCH: Climb STRAIGHT AHEAD to 5000′ or D7.0 KBD, whichever is later, then climbing turn LEFT to NDB to 6000′.

Alt Set: hPa(IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000′

3200′ 205° 110° 4600′ 300° 5400′
MSA KBA NDB

BRIEFING STRIP™

LOC: **DME REQUIRED.**

ED(R)-205 B SECTOR 2

LF(R)-150 D 2

LF(R)-122

❶ Applicable over German territory only.

D12.0 KRH 2.5 263° 12.0 4000 to D11.6 KBD

D11.6 KBD

D12.5 KBD

D12.5 KBD

1506′

1237′

(IAF) by ATC 115.95 KRH

211°

ILS 211° 108.75 IKBW

D6.0 KBD

043° CAT A & B

047° CAT C & D

(IAF) KARLSRUHE/ BADEN-BADEN 431 KBA

D1.1 KBD

OM D4.3 KBD

D3.5 KBD

KARLSRUHE/ BADEN-BADEN D (115.8) KBD

1745′

2012′

Do not mistake Baden-Baden (Oos) apt 3 NM East of Karlsruhe/Baden-Baden when performing visual apch.

2487′

1227′

Baden-Baden (Oos)

2002′

2973′

LF(D)-526

031° 6000 211°

CAUTION:
Intensive VFR traffic in glider areas Rheinstetten and Rastatt Northeast of apt between 6 NM and 20NM. Mountainous terrain East of airport.

3229′

2415′

08-00

NOT TO SCALE

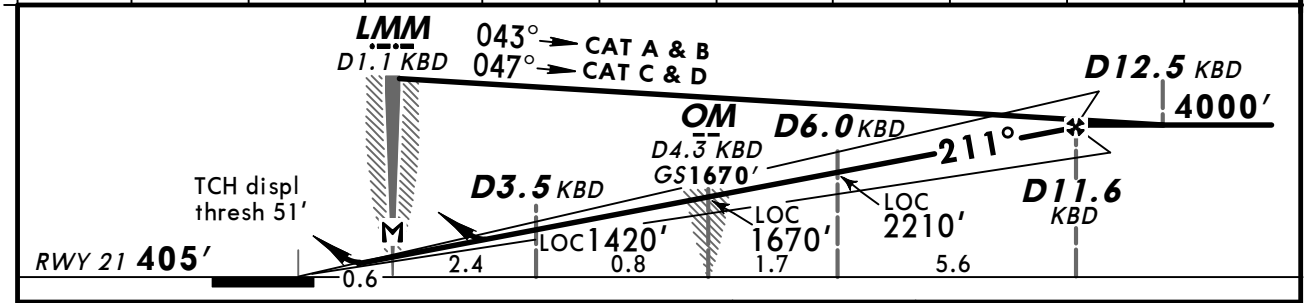
D7.0 KBD

FRANCE GERMANY

48-55 48-50 48-45

08-10 08-20

LOC (GS out)	KBD DME	2.0	3.0	4.0	5.0	7.0	8.0	9.0	10.0	11.0
	ALTITUDE	940′	1260′	1580′	1890′	2530′	2850′	3170′	3490′	3810′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at LMM/D1.1 KBD						

ALSF-II REIL PAPI

5000′ whichever is later D7.0 KBD

Standard STRAIGHT-IN LANDING RWY 21

	ILS DA(H) 605′(200′)			LOC (GS out) DA(H) 810′(405′)	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1200m	RVR 1500m
B					
C					RVR 1900m
D					

PANS OPS 4

CHANGES: Minimums. Procedure.

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EDSB/FKB
KARLSRUHE/BADEN-BADEN

JEPPESEN 21 JAN 11 (11-2A)

KARLSRUHE/BADEN-BADEN, GERMANY
CAT II ILS Rwy 21

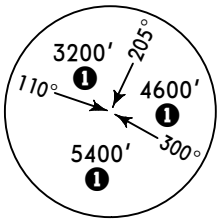
BRIEFING STRIP™

*ATIS	STRASBOURG Approach	BADEN Tower	*Ground
121.27	119.57	125.87	121.82

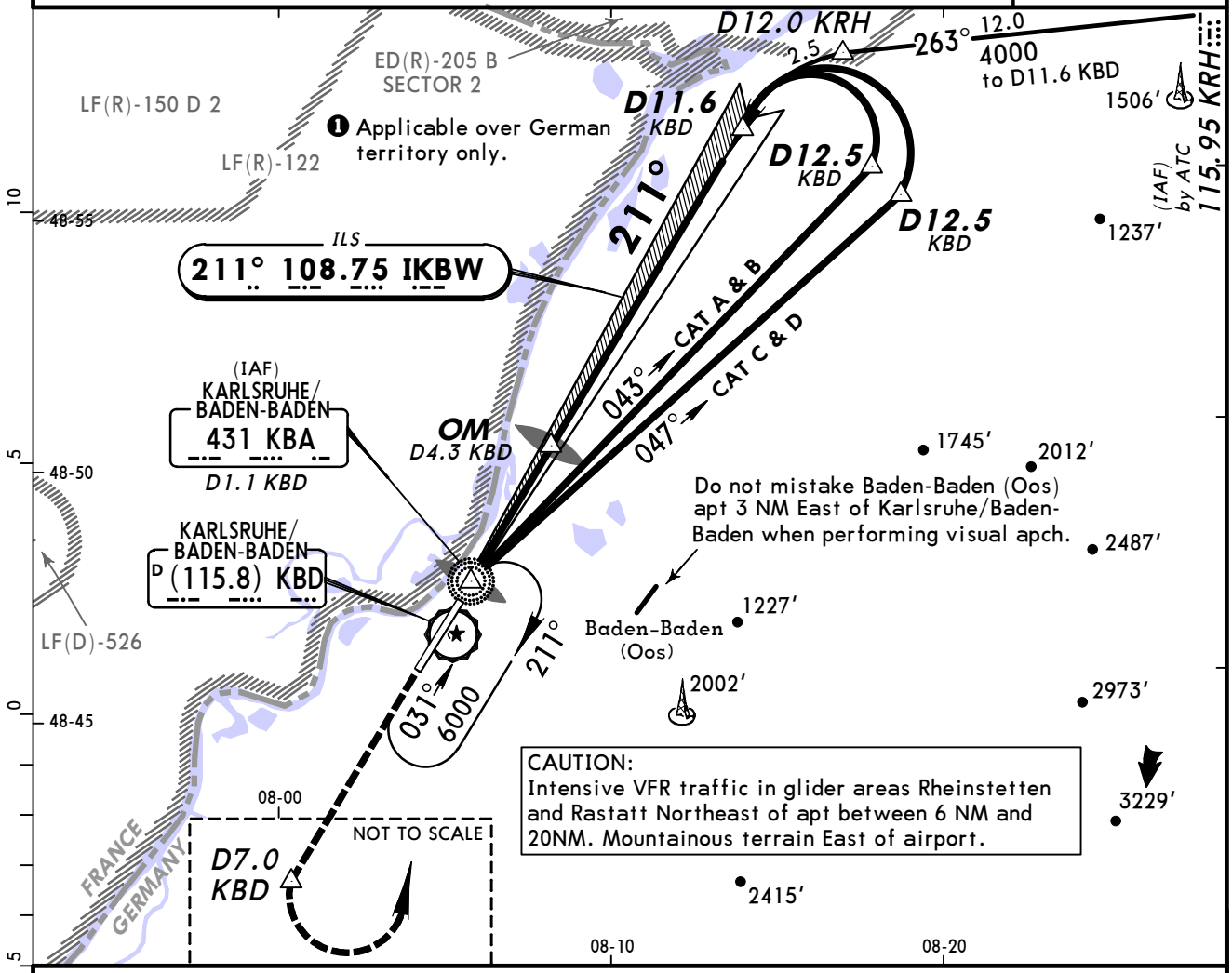
LOC	Final	GS	CAT II ILS	
IKBW	Apch Crs	OM	RA 100′	Apt Elev 409′
108.75	211°	1670′ (1265′)	DA(H) 505′ (100′)	RWY 405′

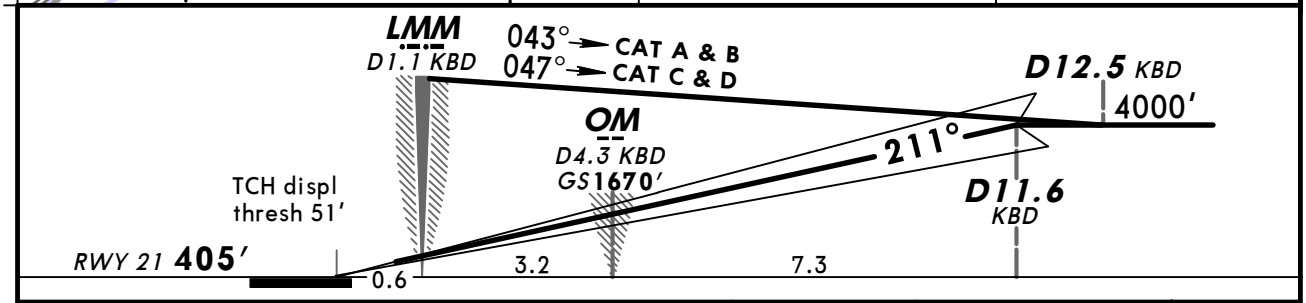
MISSED APCH: Climb STRAIGHT AHEAD to 5000′ or D7.0 KBD, whichever is later, then climbing turn LEFT to NDB to 6000′.

Alt Set: hPa(IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000′
Special Aircrew & Aircraft Certification Required.



MSA
KBA NDB





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

ALSF-II
REIL
PAPI

5000′ whichever is later
D7.0 KBD

PANS OPS 4

Standard

STRAIGHT-IN LANDING RWY **21**
CAT II ILS
ABCD
RA 100′
DA(H) **505′** (100′)

RVR 300m 1

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

CHANGES: None.

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EDSB/FKB
KARLSRUHE/BADEN-BADEN

JEPPESEN

21 JAN 11 (16-1)

KARLSRUHE/BADEN-BADEN, GERMANY
NDB Rwy 03

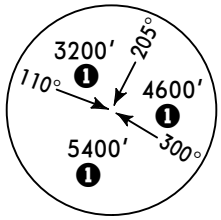
*ATIS	STRASBOURG Approach	BADEN Tower	*Ground
121.27	119.57	125.87	121.82

NDB KBA	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
431	031°	D12.0 4000′ (3594′)	980′ (574′)	409′ / RWY 406′

MISSED APCH: Climb STRAIGHT AHEAD to 5000′ or D7.0, whichever is later, then climbing turn RIGHT to NDB to 6000′.

Alt Set: hPa(IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000′

BRIEFING STRIP ™



MSA KBA NDB

DME REQUIRED.

❶ Applicable over German territory only.

(IAF) KARLSRUHE-BADEN 431 KBA

KARLSRUHE-BADEN D (115.8) KBD

D7.0

Alignment turn after holding

D7.0

031°

211°

6000

D1.5 [MQØ3]

D3.4 [34DME]

D6.0 [6ØDME]

201°

197°

CAT A & B

CAT C & D

D12.0 [FQØ3]

031°

D13.0

D13.0

Do not mistake Baden-Baden (Oos) apt 3 NM East of Karlsruhe/Baden-Baden when performing visual apch.

Baden-Baden (Oos)

CAUTION:
Intensive VFR traffic in glider areas Rheinstetten and Rastatt Northeast of apt between 6 NM and 20NM. Mountainous terrain East of airport.

LF(D)-526

LF(R)-122

FRANCE GERMANY

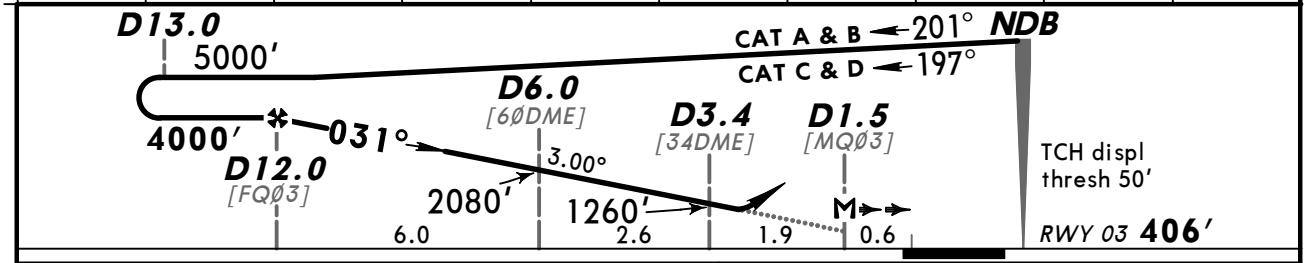
1745′ 2012′ 1227′ 2002′ 2415′ 1165′ 3462′ 4375′ 2494′ 2950′ 3321′ 811′

15 10 5 0 5

48-50 48-40

07-50 08-00 08-10 08-20

KBD DME	11.0	10.0	9.0	8.0	7.0	5.0	4.0	3.0	2.0
ALTITUDE	3680′	3360′	3040′	2720′	2400′	1770′	1450′	1130′	810′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.5							

HIALS
REIL
PAPI

5000′ D7.0
whichever is later

Standard STRAIGHT-IN LANDING RWY **03**

DA(H) **980′** (574′)

PANS OPS 4

A	ALS out	
B	RVR 1500m	
C	RVR 1900m	CMV 2400m
D		

CHANGES: Minimums.

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EDSB/FKB
KARLSRUHE/BADEN-BADEN

JEPPESEN

21 JAN 11 (16-2)

KARLSRUHE/BADEN-BADEN, GERMANY
NDB Rwy 21

ATIS	STRASBOURG Approach	BADEN Tower	*Ground
121.27	119.57	125.87	121.82

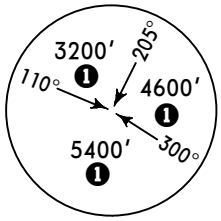
BRIEFING STRIP™

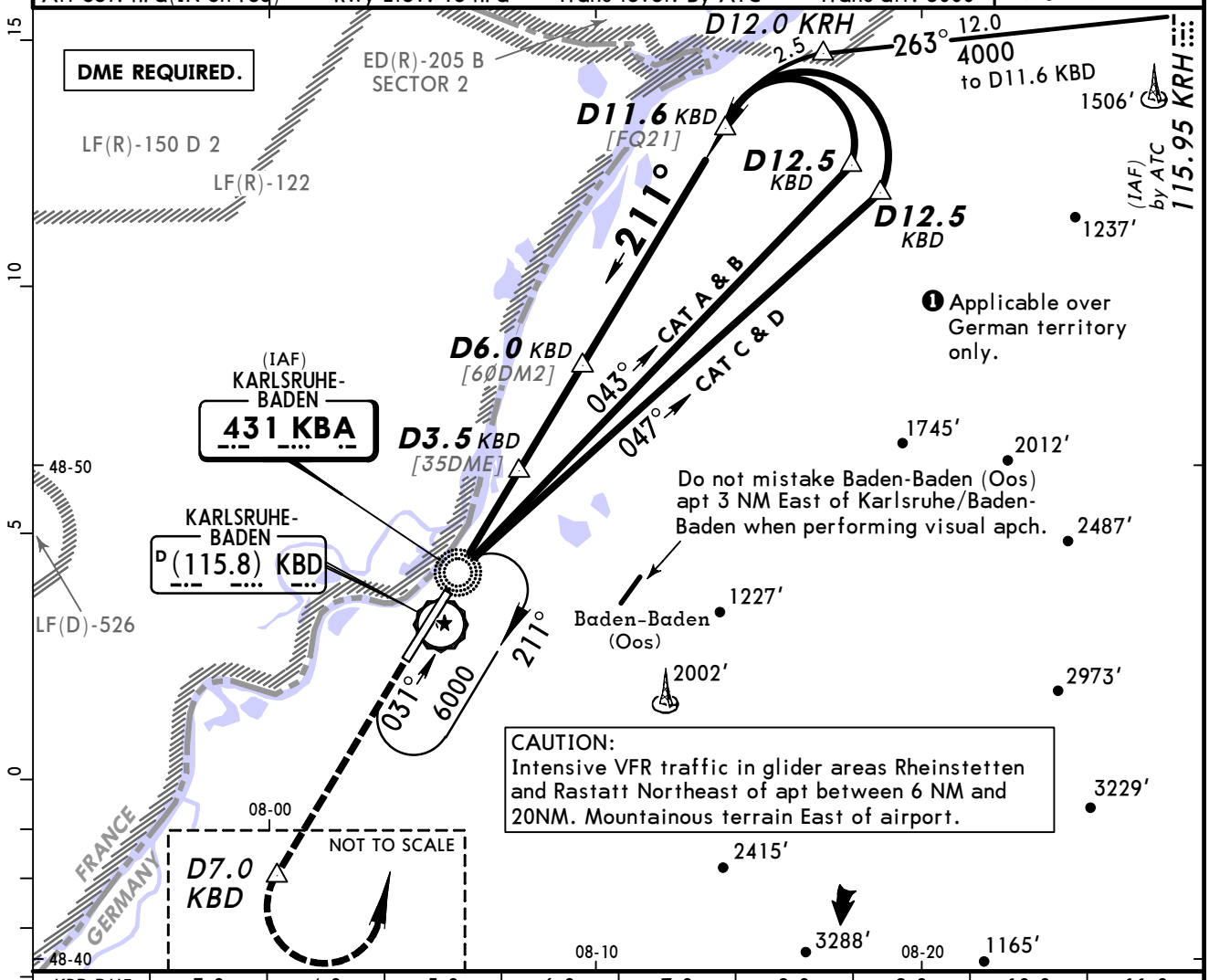
NDB KBA	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / RWY
431	211°	D11.6 KBD 4000′ (3595′)	940′ (535′)	Apt Elev 409′ RWY 405′

MISSED APCH: Climb STRAIGHT AHEAD to 5000′ or D7.0 KBD, whichever is later, then climbing turn LEFT to NDB to 6000′.

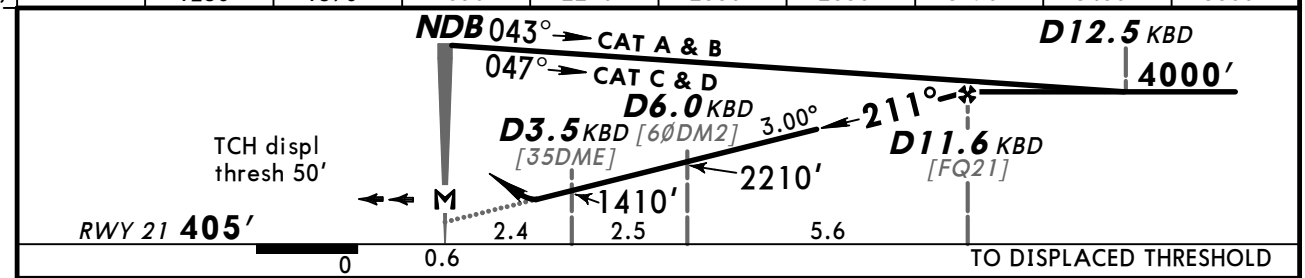
Alt Set: hPa(IN on req) Rwy Elev: 15 hPa Trans level: By ATC Trans alt: 5000′

MSA KBA NDB





KBD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
ALTITUDE	1250′	1570′	1890′	2210′	2530′	2850′	3170′	3480′	3800′



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

ALSF-II
REIL
PAPI

5000′ whichever is later
D7.0 KBD

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 21

DA(H) 940′ (535′)

	ALS out
A	RVR 1500m
B	
C	RVR 1700m
D	CMV 2400m

CHANGES: Minimums. Procedure.

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General Information

Location: Lahr Deu
IATA Code: LHA
Lat/Long: N48° 22.2' E007° 49.7'
Elevation: 511 ft

Airport Use: Public
Magnetic Variation: 1.3°E

Fuel Types: 100 Octane (LL), Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes
Pattern Altitude: 992 ft AGL

Sunrise: 0615 Z
Sunset: 1708 Z,

Runway Information

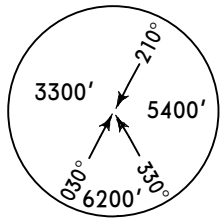
Runway: 03
Length x Width: 9843 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 511 ft
Lighting: Edge, ALS

Runway: 21
Length x Width: 9843 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 500 ft
Lighting: Edge, ALS

Communication Information

Lahr Tower 125.175
Strasbourg Approach Control 119.575

Apt Elev	Alt Set: hPa (IN on request)
511′	Trans level: By ATC Trans alt: 5000′



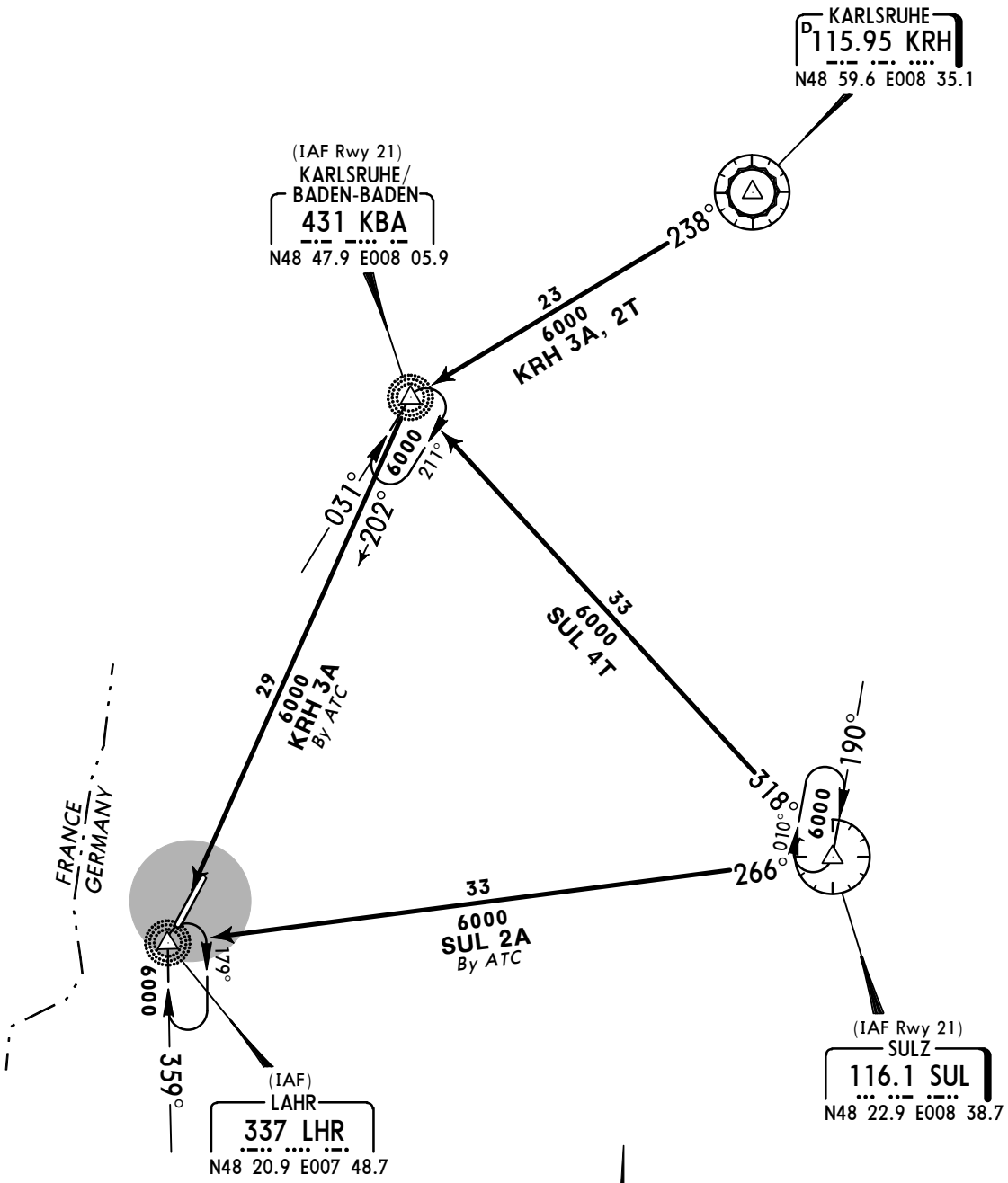
MSA
LHR NDB
applicable over
German territory only

KARLSRUHE TWO TANGO (KRH 2T)
SULZ FOUR TANGO (SUL 4T)

KARLSRUHE THREE ALFA (KRH 3A)
SULZ TWO ALFA (SUL 2A)

BY ATC

RWYS 03, 21 ARRIVALS



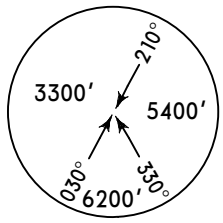
SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

N
NOT TO SCALE

CHANGES: MSA raised.

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STRASBOURG Radar 119.57	*Apt Elev* 511′	Trans level: By ATC Trans alt: 5000′ 1. Immediately after take-off contact STRASBOURG Radar. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

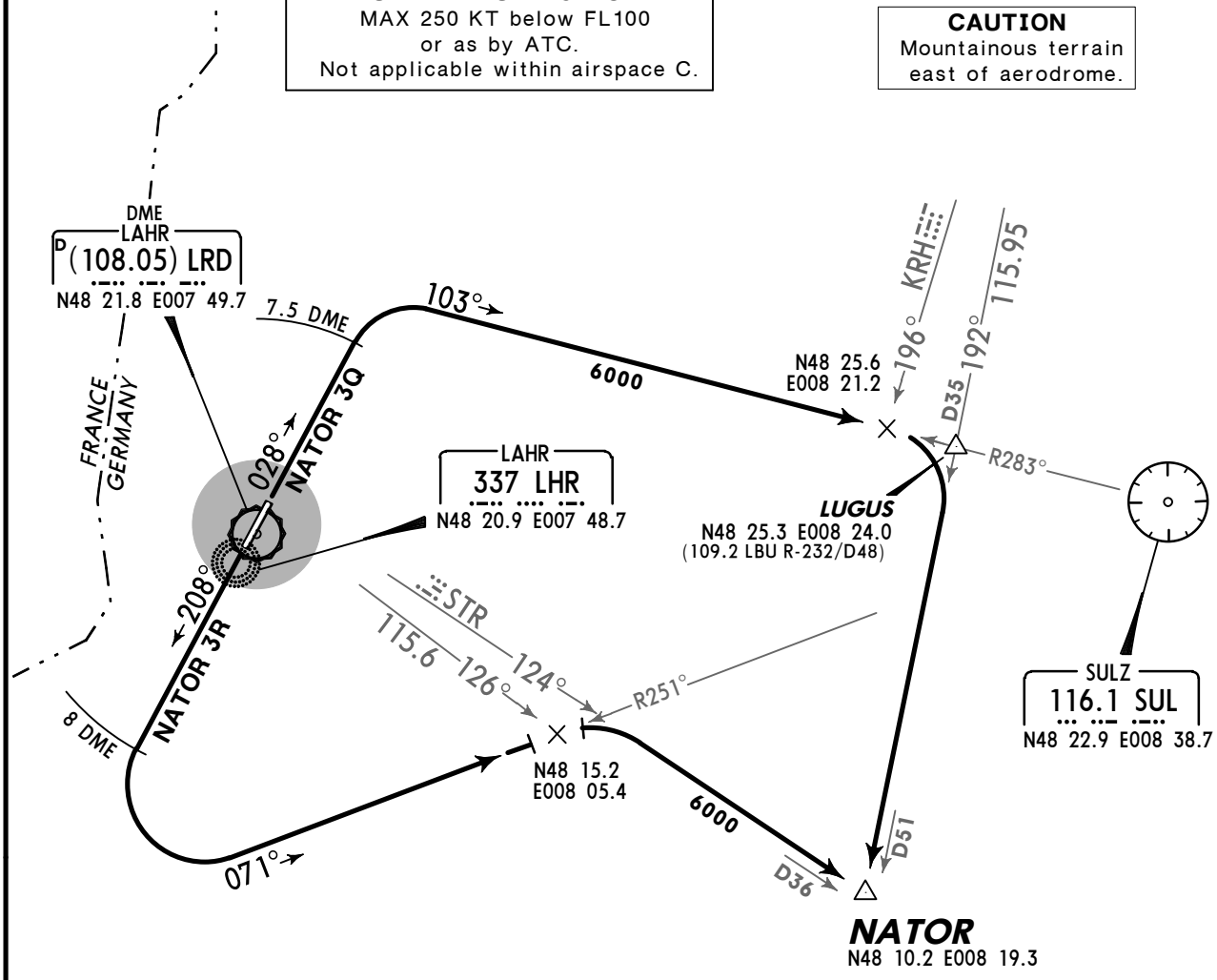


MSA
LHR NDB
applicable over
German territory only

NATOR THREE QUEBEC (NATOR 3Q)
NATOR THREE ROMEO (NATOR 3R)
RWYS 03, 21 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

CAUTION
Mountainous terrain
east of aerodrome.



These SIDs require minimum climb gradients of

NATOR 3Q
389′ per NM (6.4%) until passing to navaid coverage. **4000′** due

NATOR 3R
316′ per NM (5.2%) until passing to navaid coverage. **4400′** due

Gnd speed-KT	75	100	150	200	250	300
389′ per NM	486	648	972	1296	1620	1944
316′ per NM	395	527	790	1053	1317	1580



Initial climb clearance **FL70**

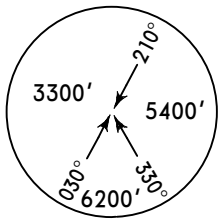
SID	RWY	ROUTING
NATOR 3Q	**03**	On 028° bearing from LHR to LRD 7.5 DME, turn RIGHT, intercept SUL R-283 inbound towards LUGUS, when passing KRH R-196 turn RIGHT, intercept KRH R-192 to NATOR.
NATOR 3R ❶	**21**	On 208° bearing via LHR to LRD 8 DME, turn LEFT, intercept SUL R-251 inbound, when passing STR R-126 turn RIGHT, intercept STR R-124 to NATOR.

❶ Not to be used during activity of night low flying system.

CHANGES: Communications.

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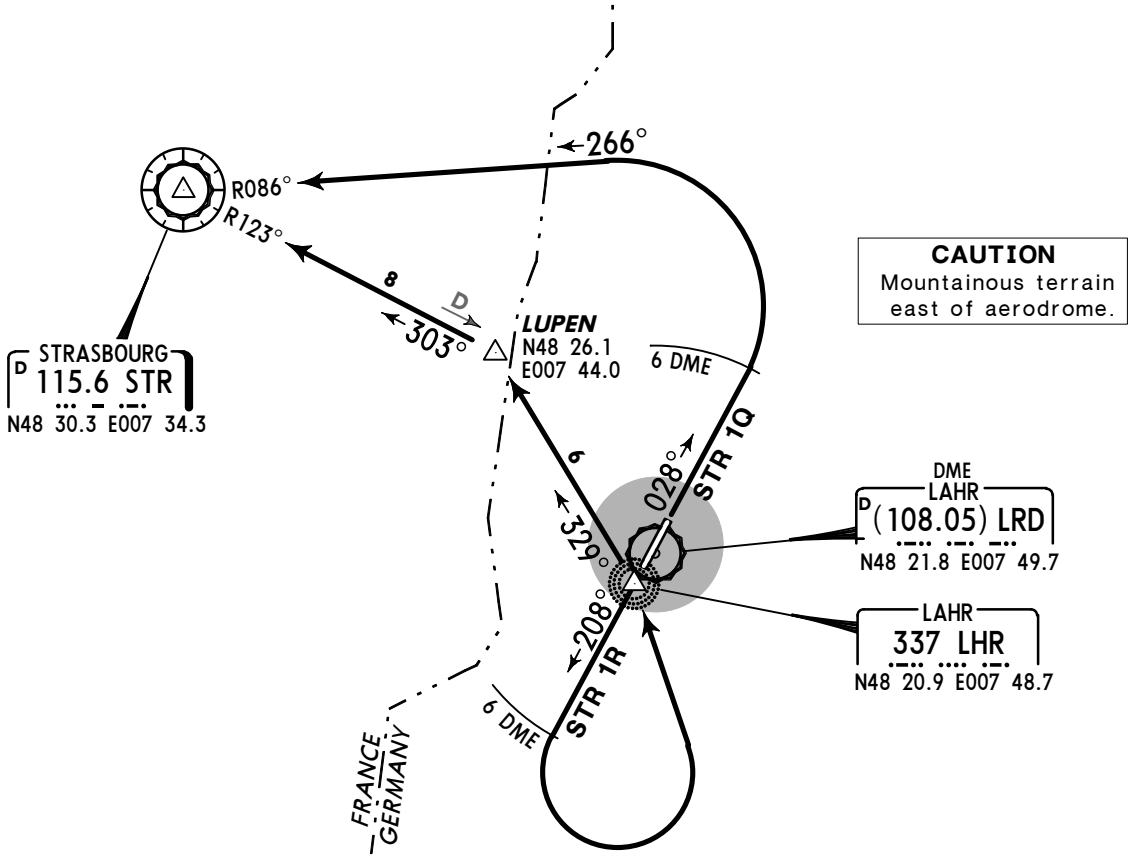
STRASBOURG Radar 119.57	*Apt Elev* 511′	Trans level: By ATC Trans alt: 5000′ 1. Immediately after take-off contact STRASBOURG Radar. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.



MSA
LHR NDB
applicable over German territory only

STRASBOURG ONE QUEBEC (STR 1Q)
STRASBOURG ONE ROMEO (STR 1R)
RWYS 03, 21 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



CAUTION
Mountainous terrain east of aerodrome.

These SIDs require minimum climb gradients of

STR 1Q

286′ per NM (4.7%) until passing **3800′.**

OPERATIONAL CLIMB GRADIENTS

STR 1Q: 468′ per NM (7.7%) until passing **5000′** due to glider flying at Neuhof.

STR 1R: 328′ per NM (5.4%) until passing **5000′** due to glider flying at Neuhof.

Gnd speed-KT	75	100	150	200	250	300
468′ per NM	585	780	1170	1560	1949	2339
328′ per NM	410	547	820	1094	1367	1641
286′ per NM	357	476	714	952	1190	1428



NOT TO SCALE

Initial climb clearance **FL70**

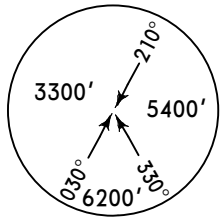
SID	RWY	ROUTING
STR 1Q	**03**	On 028° bearing from LHR to LRD 6 DME, turn LEFT, intercept STR R-086 inbound to STR.
STR 1R ❶	**21**	On 208° bearing via LHR to LRD 6 DME, turn LEFT to LHR, 329° bearing to LUPEN, intercept STR R-123 inbound to STR.

❶ Not to be used during activity of night low flying system.

CHANGES: Communications.

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STRASBOURG Radar 119.57	*Apt Elev* 511′	Trans level: By ATC Trans alt: 5000′ 1. Immediately after take-off contact STRASBOURG Radar. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

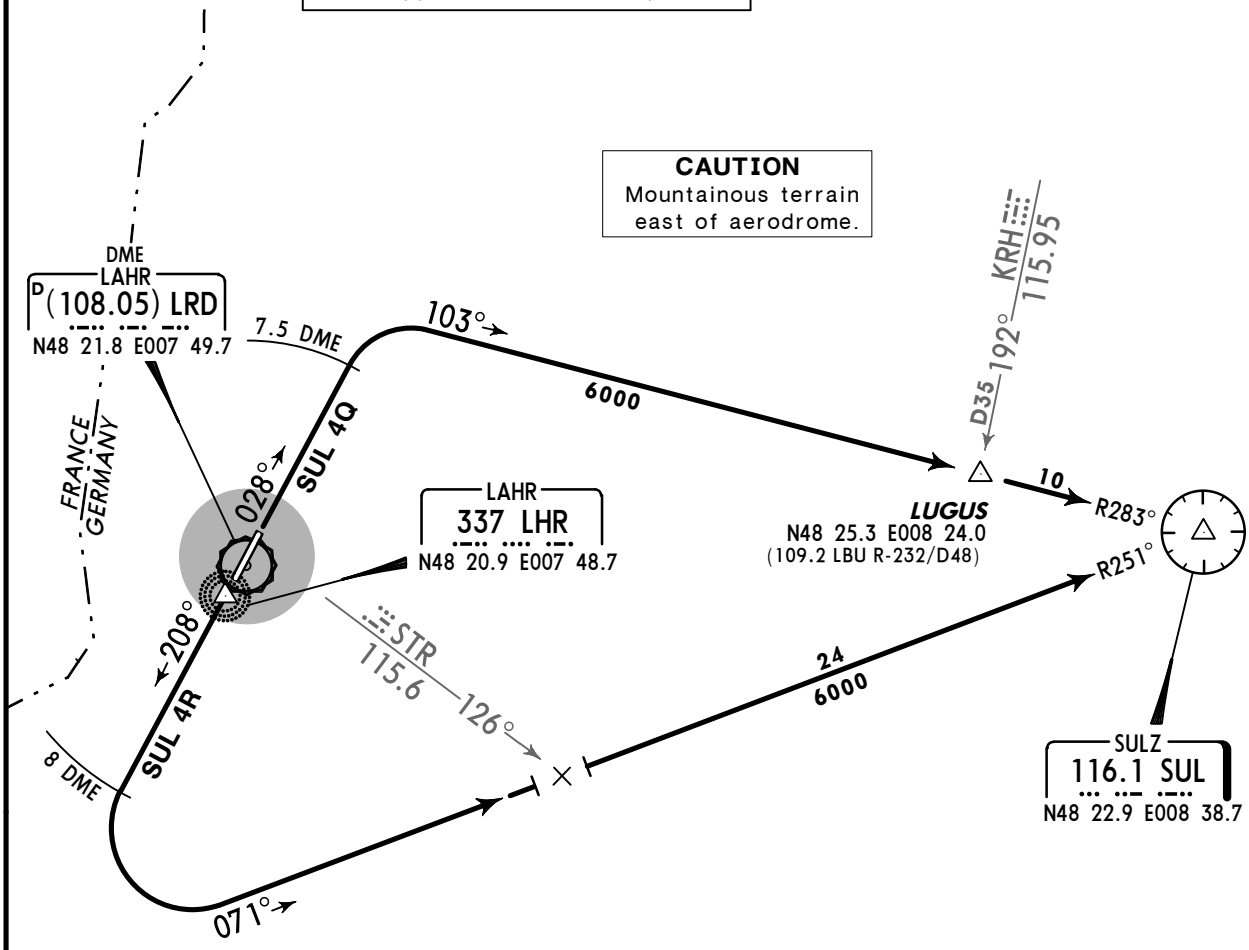


MSA
LHR NDB
applicable over German territory only

SULZ FOUR QUEBEC (SUL 4Q)
SULZ FOUR ROMEO (SUL 4R)
RWYS 03, 21 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

CAUTION
Mountainous terrain
east of aerodrome.





These SIDs require minimum climb gradients of

SUL 4Q
389′ per NM (6.4%) until passing **4000′** due to navaid coverage.

SUL 4R
316′ per NM (5.2%) until passing **4400′** due to navaid coverage.

Gnd Speed-KT	75	100	150	200	250	300
389′ per NM	486	648	972	1296	1620	1944
316′ per NM	395	527	790	1053	1317	1580

Initial climb clearance **FL70**

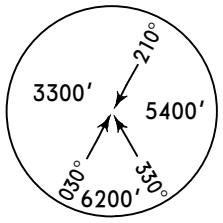
SID	RWY	ROUTING
SUL 4Q	**03**	On 028° bearing from LHR to LRD 7.5 DME, turn RIGHT, intercept SUL R-283 inbound to SUL.
SUL 4R ❶	**21**	On 208° bearing via LHR to LRD 8 DME, turn LEFT, intercept SUL R-251 inbound to SUL.

❶ Not to be used during activity of night low flying system.

CHANGES: Communications.

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STRASBOURG Radar 119.57	*Apt Elev* 511′	Trans level: By ATC Trans alt: 5000′ 1. Immediately after take-off contact STRASBOURG Radar. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

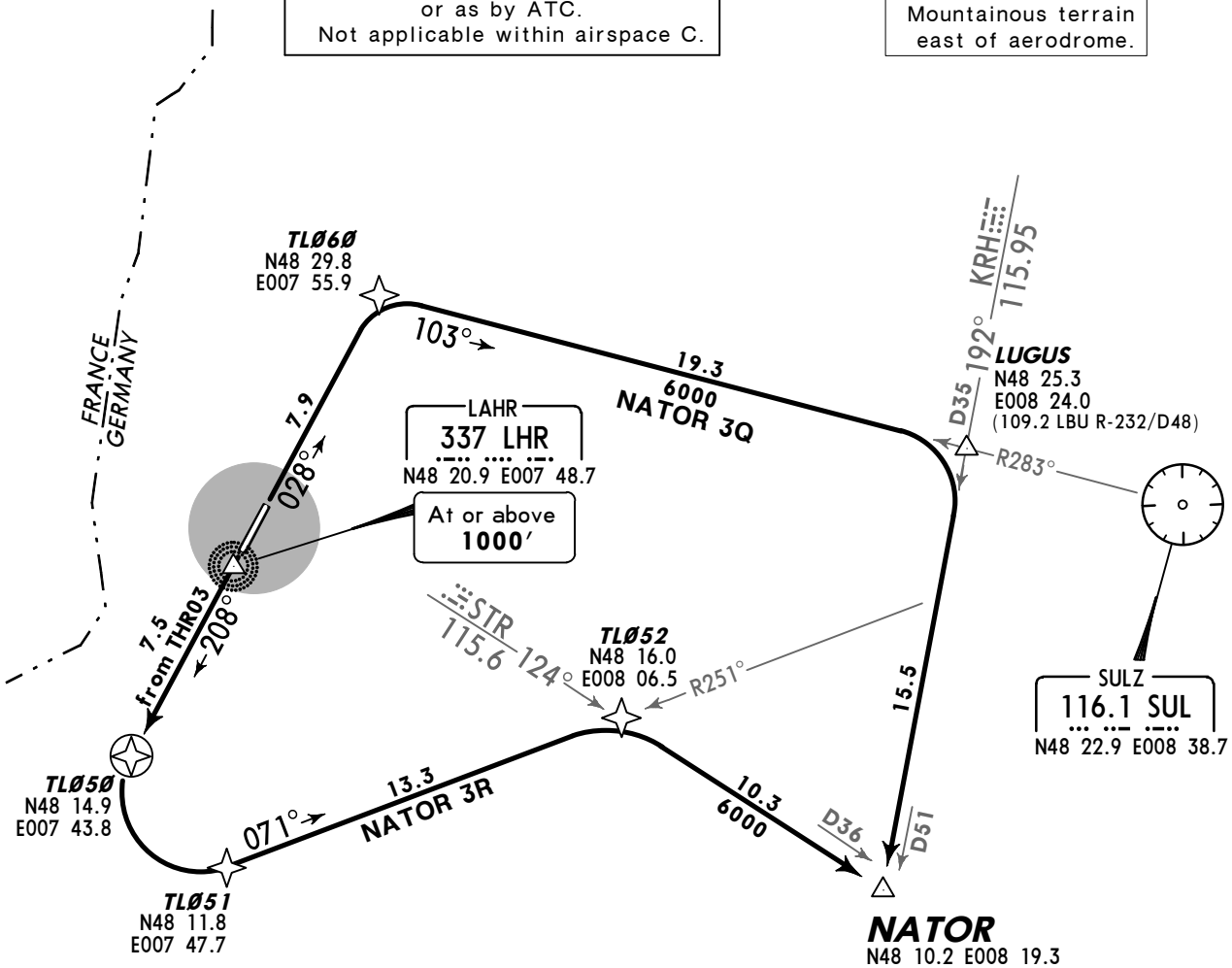


MSA
LHR NDB
applicable over
German territory only

NATOR THREE QUEBEC (NATOR 3Q) *[NATO3Q]*
NATOR THREE ROMEO (NATOR 3R) *[NATO3R]*
RWYS 03, 21 RNAV DEPARTURES (OVERLAY 10-3)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

CAUTION
Mountainous terrain
east of aerodrome.



These SIDs require minimum climb gradients of

NATOR 3Q
389′ per NM (6.4%) until passing **4000′** due to navaid coverage.

NATOR 3R
316′ per NM (5.2%) until passing **4400′** due to navaid coverage.

Gnd speed-KT	75	100	150	200	250	300
389′ per NM	486	648	972	1296	1620	1944
316′ per NM	395	527	790	1053	1317	1580



NOT TO SCALE

Initial climb clearance **FL70**

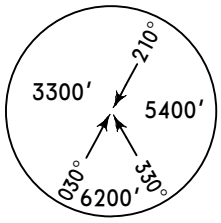
SID	RWY	ROUTING
NATOR 3Q	**03**	**(1000′+)** - TL060 - LUGUS - NATOR.
NATOR 3R ❶	**21**	LHR **(1000′+)** - TL050 - TL051 - TL052 - NATOR.

❶ Not to be used during activity of night low flying system.

CHANGES: Communications.

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STRASBOURG Radar 119.57	*Apt Elev* 511′	Trans level: By ATC Trans alt: 5000′ 1. Immediately after take-off contact STRASBOURG Radar. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

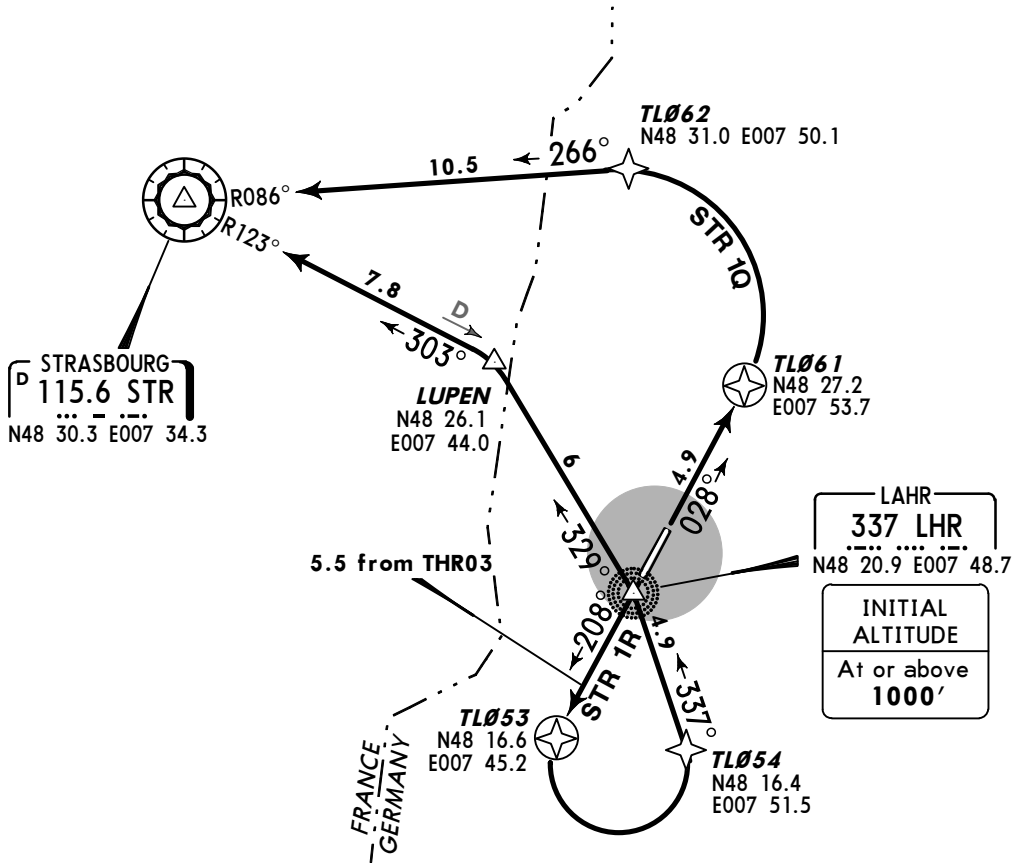


MSA
LHR NDB
applicable over
German territory only

STRASBOURG ONE QUEBEC (STR 1Q)
STRASBOURG ONE ROMEO (STR 1R)
RWYS 03, 21 RNAV DEPARTURES (OVERLAY 10-3A)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

CAUTION
Mountainous terrain
east of aerodrome.



These SIDs require minimum climb gradients of

STR 1Q
286′ per NM (4.7%) until passing **3800′.**

OPERATIONAL CLIMB GRADIENTS
STR 1Q: 468′ per NM (7.7%) until passing **5000′** due to glider flying at Neuhof.
STR 1R: 328′ per NM (5.4%) until passing **5000′** due to glider flying at Neuhof.

Gnd speed-KT	75	100	150	200	250	300
468′ per NM	585	780	1170	1560	1949	2339
328′ per NM	410	547	820	1094	1367	1641
286′ per NM	357	476	714	952	1190	1428



NOT TO SCALE

Initial climb clearance **FL70**

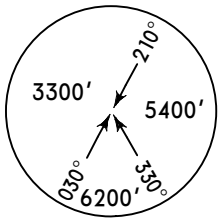
SID	RWY	ROUTING
STR 1Q	**03**	**(1000′+)** - TL061 - TL062 - STR.
STR 1R ❶	**21**	LHR **(1000′+)** - TL053 - TL054 - LHR - LUPEN - STR.

❶ Not to be used during activity of night low flying system.

CHANGES: Communications.

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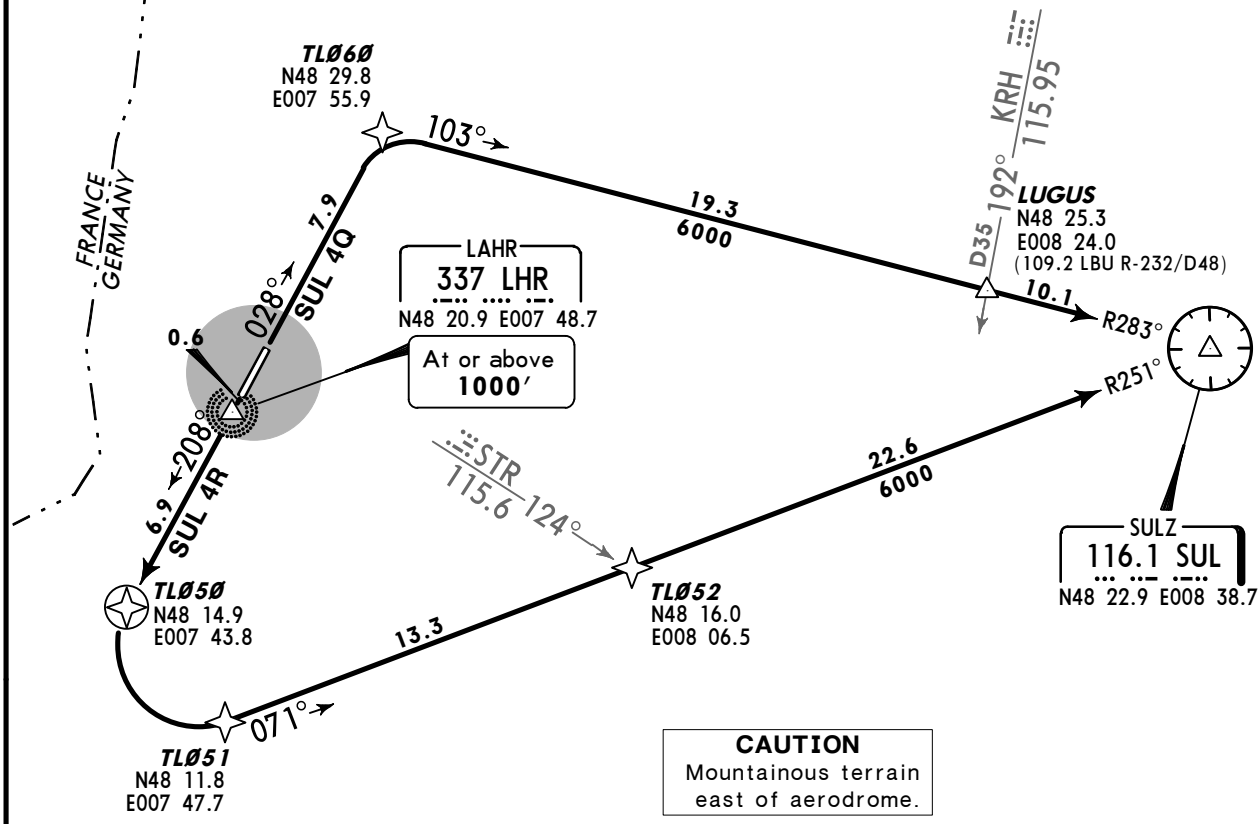
STRASBOURG Radar 119.57	*Apt Elev* 511′	Trans level: By ATC Trans alt: 5000′ 1. Immediately after take-off contact STRASBOURG Radar. 2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.



MSA
LHR NDB
applicable over German territory only

SULZ FOUR QUEBEC (SUL 4Q)
SULZ FOUR ROMEO (SUL 4R)
RWYS 03, 21 RNAV DEPARTURES (OVERLAY 10-3B)

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



CAUTION
Mountainous terrain
east of aerodrome.



NOT TO SCALE

These SIDs require minimum climb gradients of

SUL 4Q
389′ per NM (6.4%) until passing **4000**′ due to navaid coverage.

SUL 4R
316′ per NM (5.2%) until passing **4400**′ due to navaid coverage.

Gnd Speed-KT	75	100	150	200	250	300
389′ per NM	486	648	972	1296	1620	1944
316′ per NM	395	527	790	1053	1317	1580

Initial climb clearance **FL70**

SID	RWY	ROUTING
SUL 4Q	**03**	**(1000′+)** - TL060 - SUL.
SUL 4R ❶	**21**	LHR **(1000′+)** - TL050 - TL051 - SUL.

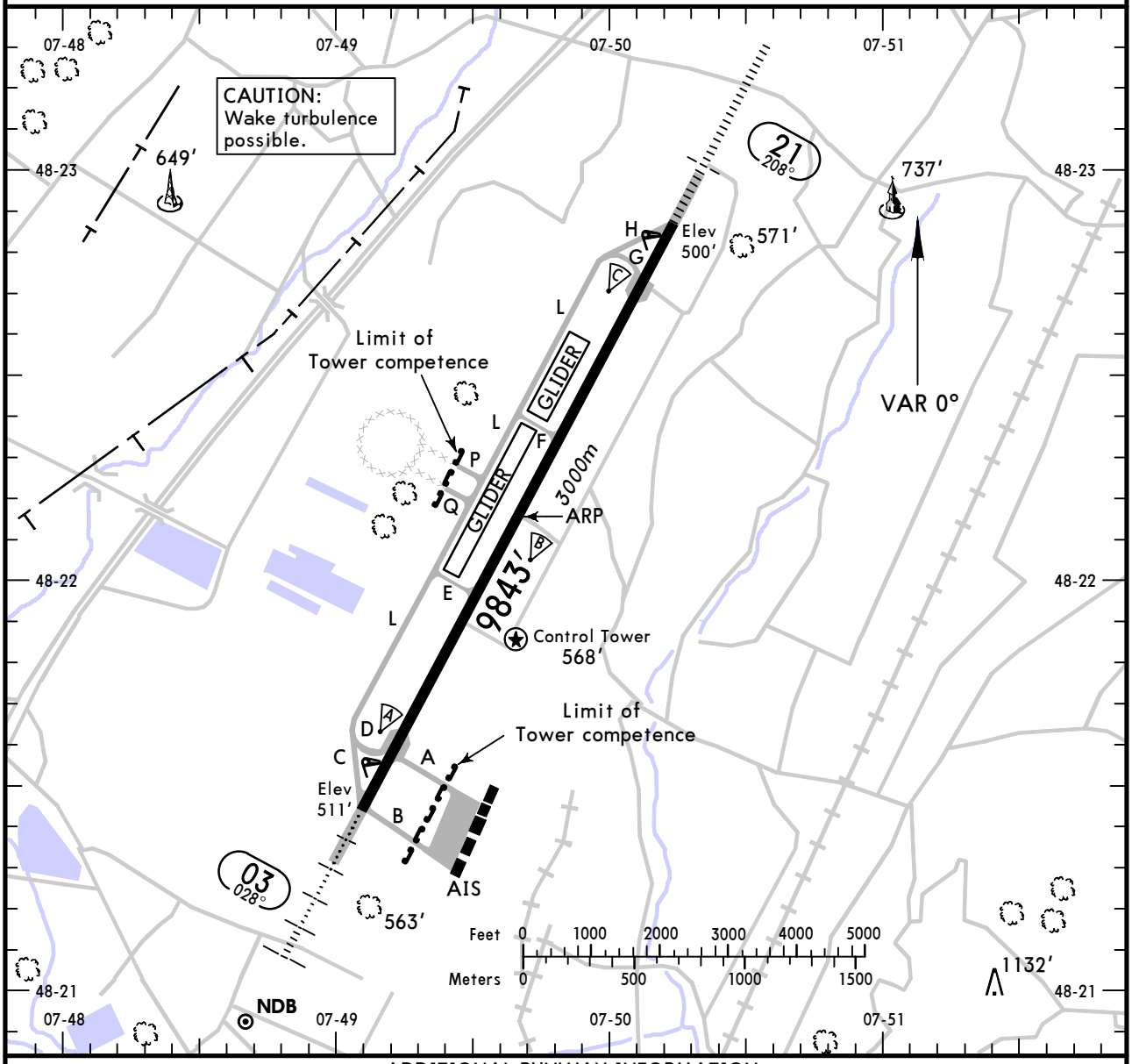
❶ Not to be used during activity of night low flying system.

CHANGES: Communications.

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*LAHR Tower

125.17



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
03 21	HIRL HIALS SFL PAPI-L(angle 3.0°) RVR		8821′ *2689m*		148′ *45m*

Standard TAKE-OFF 1

	LVP must be in Force RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

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

CHANGES: None.

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LAHR, GERMANY

LAHR

STRAIGHT-IN RWY		A	B	C	D
03	NDB ❶	**1020**′(509′)	**1020**′(509′)	**1020**′(509′)	**1020**′(509′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
21	ILS Z	**700**′(200′)	**700**′(200′)	**703**′(203′)	**713**′(213′)
		R550m	**R550m**	**R600m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC Z	**940**′(440′)	**940**′(440′)	**940**′(440′)	**940**′(440′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	ILS Y	**700**′(200′)	**700**′(200′)	**703**′(203′)	**713**′(213′)
		R550m	**R550m**	**R600m**	**R600m**
	ALS out	R1000m	R1000m	R1000m	R1000m
	LOC Y	**940**′(440′)	**940**′(440′)	**940**′(440′)	**940**′(440′)
		R900m	**R1000m**	**R1000m**	**R1400m**
	ALS out	R1500m	R1500m	R1800m	R2000m
	NDB Z	**1090**′(590′)	**1090**′(590′)	**1090**′(590′)	**1090**′(590′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m
	NDB Y	**1090**′(590′)	**1090**′(590′)	**1090**′(590′)	**1090**′(590′)
		R1000m	**R1200m**	**R1200m**	**R1600m**
	ALS out	R1500m	R1500m	R2000m	R2000m

❶ Missed apch climb gradient mim 4.0% up to 5400′.

TAKE-OFF RWY 03, 21

	LVP must be in force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

CHANGES: Minimums.

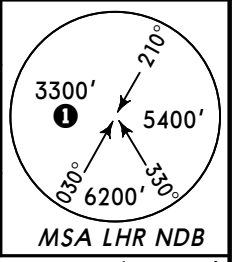
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BRIEFING STRIP™

STRASBOURG Radar (APP)	*LAHR Tower
119.57	125.17

LOC	Final	GS	ILS	Apt Elev 511′
ILRW	Apch Crs	D11.9 LRD	DA(H)	
109.7	208°	4000′ (3500′)	Refer to Minimums	RWY 500′

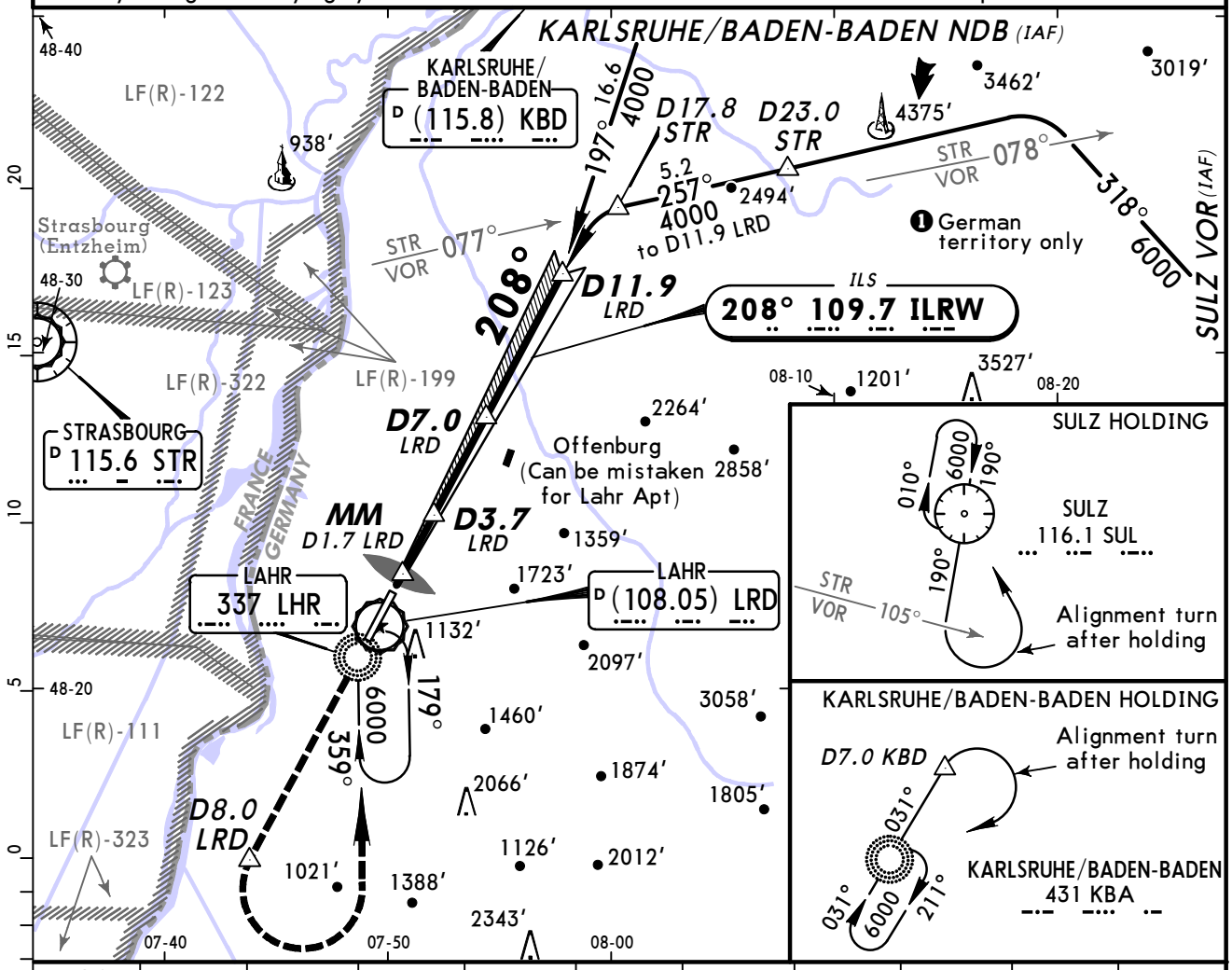
MISSED APCH: Climb STRAIGHT AHEAD to D8.0 LRD, then turn LEFT to LHR NDB climbing to 6000′.



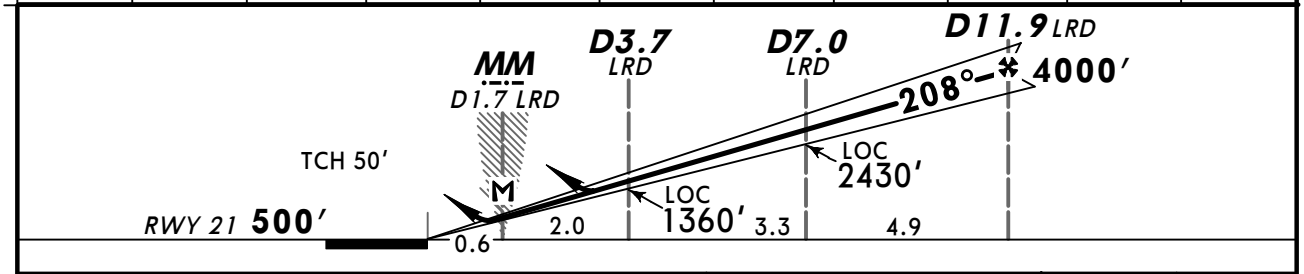
MSA LHR NDB

Alt Set: hPa (IN on req) Rwy Elev: 18 hPa Trans level: By ATC Trans alt: 5000′

1. DME required. 2. CAUTION: Mountainous terrain East of airport. 3. Procedure not to be used during activity of night low flying system. 4. CAUTION: VFR traffic within final and missed apch areas.



LOC (GS out)	LRD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
	ALTITUDE	1160′	1480′	1800′	2120′	2430′	2750′	3070′	3390′	3710′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.7 LRD						

HIALS
PAPI
D8.0 LRD

Standard STRAIGHT-IN LANDING RWY 21

ILS			LOC (GS out)	
DA(H) AB: 700′ (200′) C: 703′ (203′) D: 713′ (213′)			DA(H) 940′ (440′)	
FULL	Limited	ALS out		ALS out
A, B, C, D: RVR 550m	RVR 750m	RVR 1200m	RVR 1300m	RVR 1500m
				RVR 2000m

PANS OPS 4

CHANGES: Waypoints established. Minimums.

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EDTL/LHA
LAHR

JEPPESEN
21 JAN 11 (11-2)

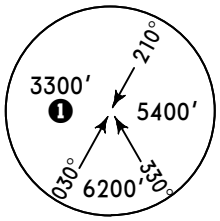
LAHR, GERMANY
ILS Y or LOC Y Rwy 21

BRIEFING STRIP™

STRASBOURG Radar (APP)	*LAHR Tower
119.57	125.17

LOC	Final	GS	ILS	Apt Elev 511′
ILRW	Apch Crs	D11.9 LRD	DA(H)	
109.7	208°	4000′ (3500′)	Refer to Minimums	RWY 500′

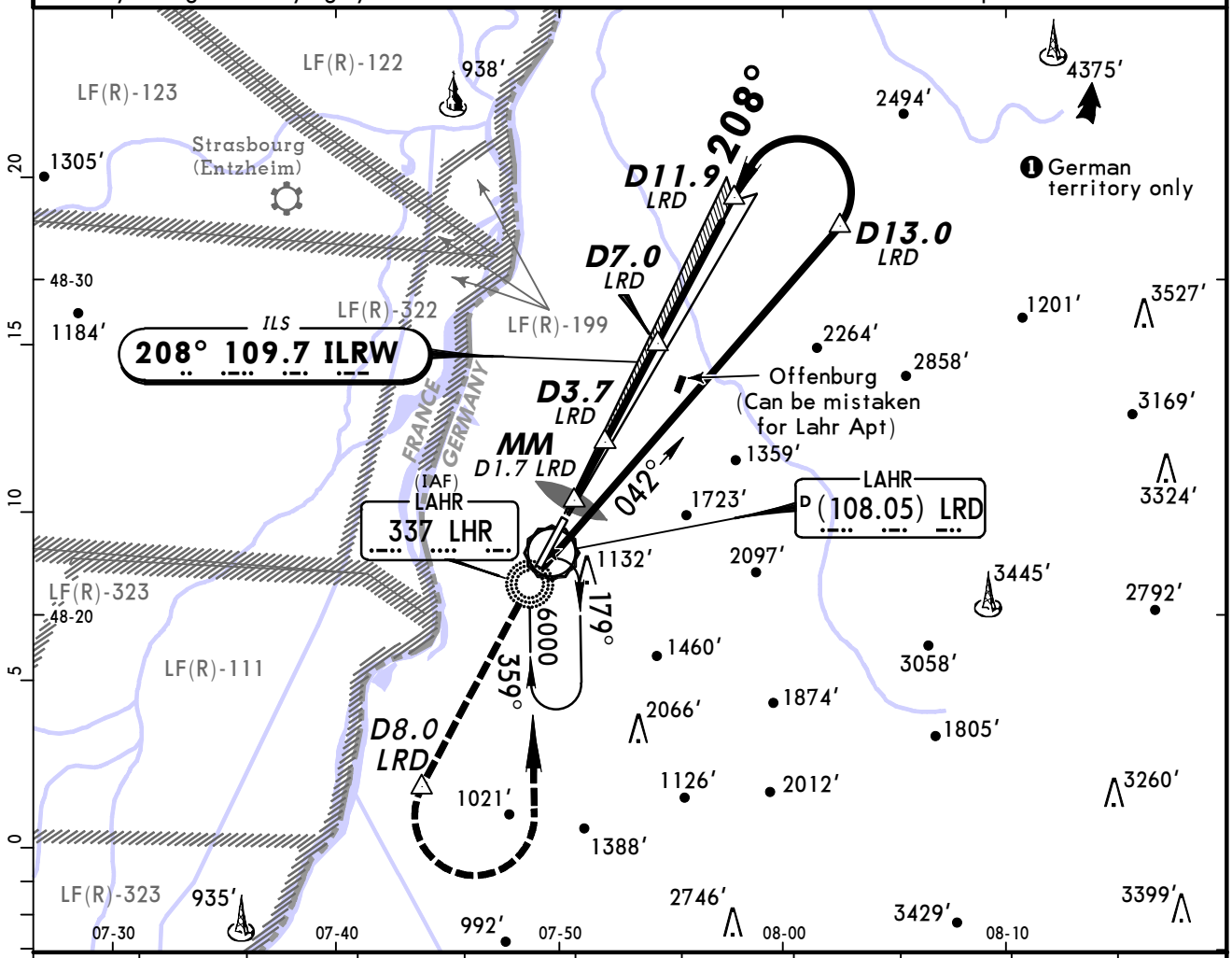
MISSED APCH: Climb STRAIGHT AHEAD to D8.0 LRD, then turn LEFT to NDB climbing to 6000′.



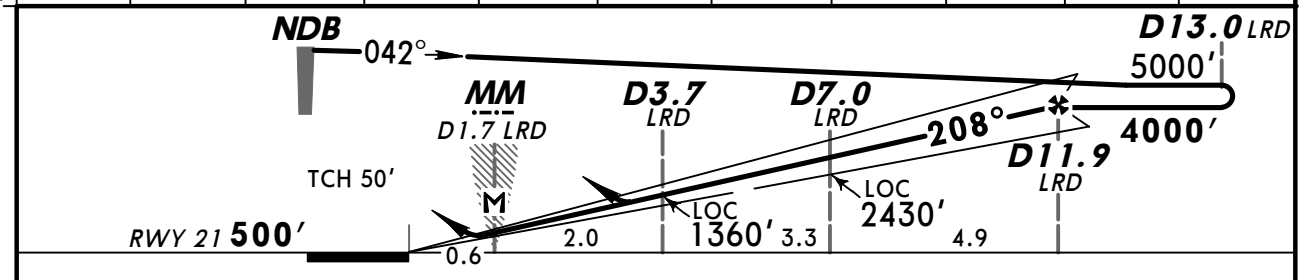
MSA LHR NDB

Alt Set: hPa (IN on req) Rwy Elev: 18 hPa Trans level: By ATC Trans alt: 5000′

1. DME required. 2. CAUTION: Mountainous terrain East of airport. 3. Procedure not to be used during activity of night low flying system. 4. CAUTION: VFR traffic within final and missed apch areas.



LOC (GS out)	LRD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
	ALTITUDE	1160′	1480′	1800′	2120′	2430′	2750′	3070′	3390′	3710′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	377	484	538	646	753	861
MAP at MM/D1.7 LRD						

HIALS
PAPI
D8.0 LRD

Standard STRAIGHT-IN LANDING RWY 21

ILS	LOC (GS out)
DA(H) AB: 700′ (200′) C: 703′ (203′) D: 713′ (213′)	DA(H) 940′ (440′)

PANS OPS 4

	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1300m	RVR 1500m
B					
C					RVR 2000m
D					

CHANGES: Waypoints established. Minimums.

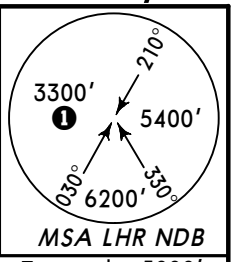
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BRIEFING STRIP ™

STRASBOURG Radar (APP)	*LAHR Tower
119.57	125.17

NDB LHR	Final Apch Crs	Minimum Alt D11.3	DA(H)	Apt Elev / RWY
337	028°	4000′ (3489′)	1020′ (509′)	511′ / 511′

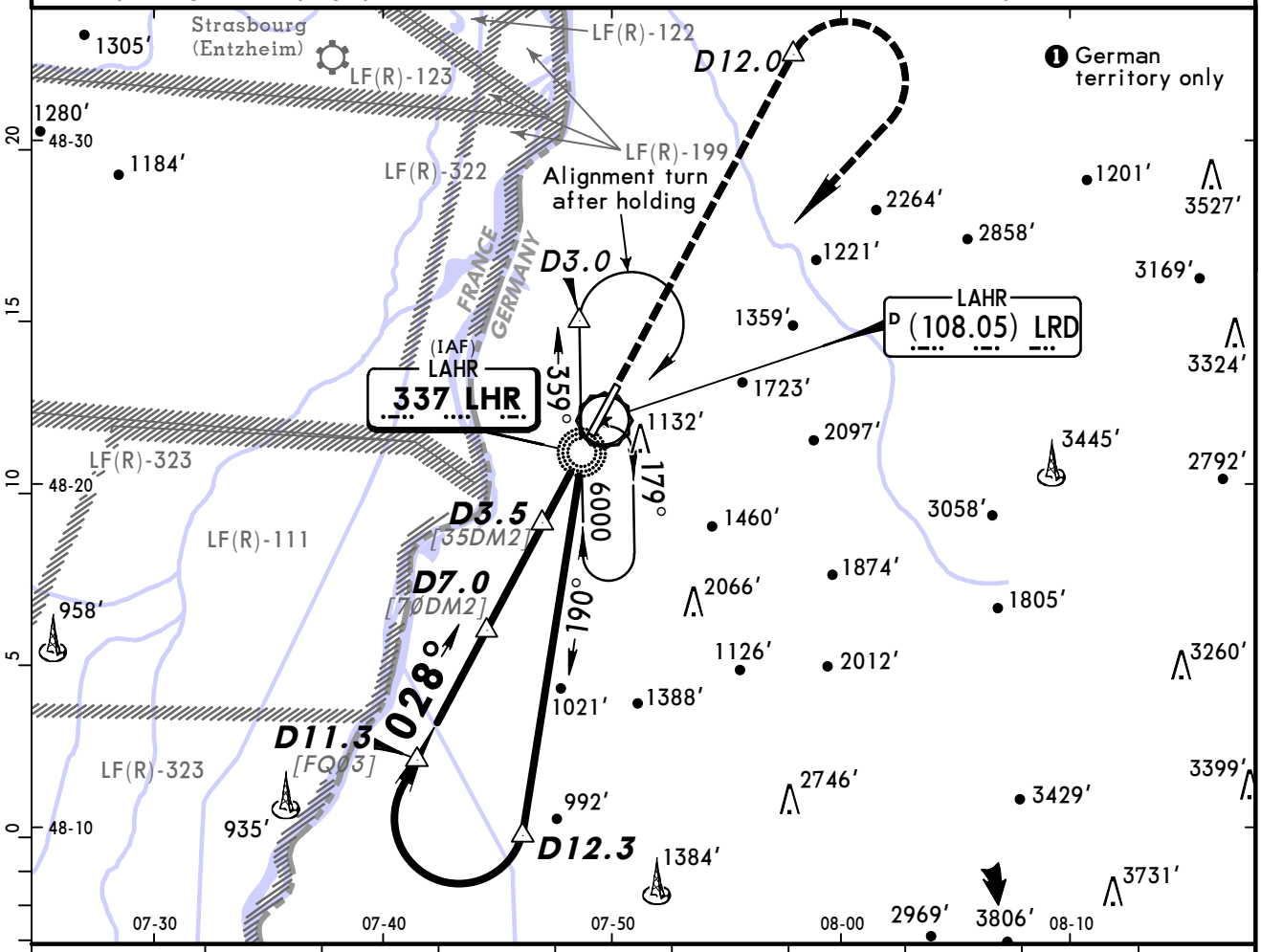
MISSED APCH: Climb STRAIGHT AHEAD to D12.0, then turn RIGHT to NDB climbing to 6000′.



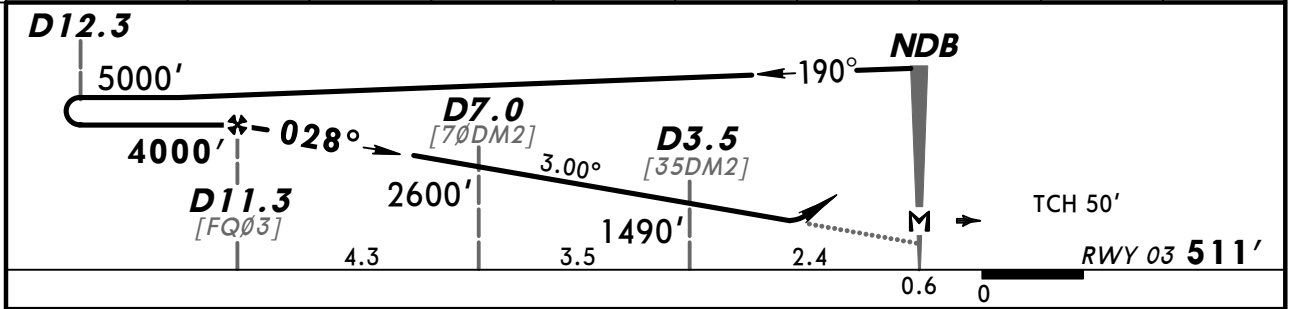
MSA LHR NDB

Alt Set: hPa (IN on req) | Rwy Elev: 19 hPa | Trans level: By ATC | Trans alt: 5000′

1. DME required. 2. CAUTION: Mountainous terrain East of airport. 3. Procedure not to be used during activity of night low flying system. 4. CAUTION: VFR traffic within final and missed apch areas.



LRD DME	11.0	10.0	9.0	8.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3880′	3560′	3240′	2920′	2290′	1970′	1650′	1330′	1010′



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

HIALS
PAPI

D12.0

PANS OPS 4

Standard

STRAIGHT-IN LANDING RWY **03**

Missed apch climb grad mim 4.0% up to 5400′

DA(H) **1020′** (509′)

	ALS out
A	RVR 1500m
B	
C	RVR 1600m
D	CMV 2400m

CHANGES: Minimums.

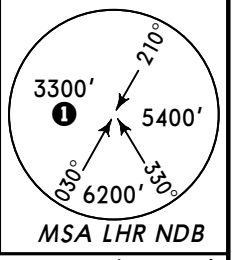
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BRIEFING STRIP™

STRASBOURG Radar (APP)	*LAHR Tower
119.57	125.17

NDB	Final	Minimum Alt	DA(H)	Apt Elev 511′
LHR	Apch Crs	D11.9 LRD	1090′ (590′)	RWY 500′
337	208°	4000′ (3500′)		

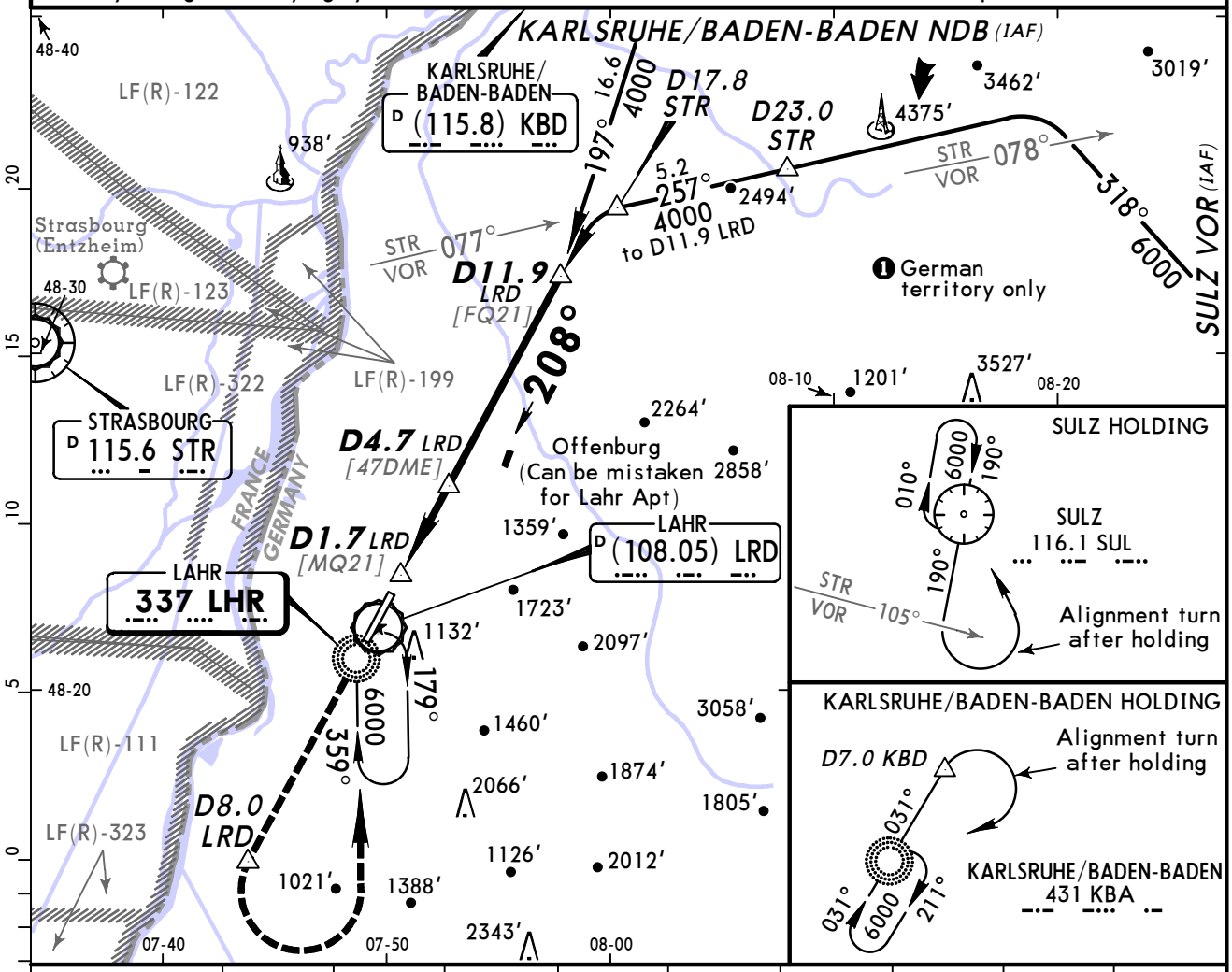
MISSED APCH: Climb STRAIGHT AHEAD to D8.0 LRD, then turn LEFT to LHR NDB climbing to 6000′.



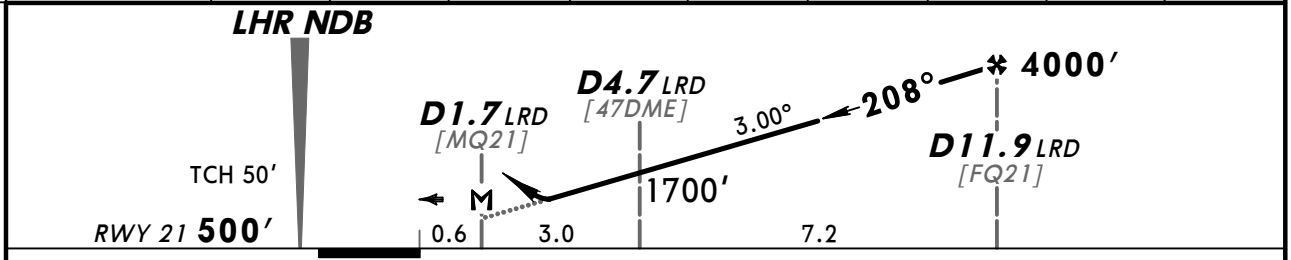
MSA LHR NDB

Alt Set: hPa (IN on req) Rwy Elev: 18 hPa Trans level: By ATC Trans alt: 5000′

1. DME required. 2. CAUTION: Mountainous terrain East of airport. 3. Procedure not to be used during activity of night low flying system. 4. CAUTION: VFR traffic within final and missed apch areas.



LRD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
ALTITUDE	1160′	1480′	1800′	2120′	2430′	2750′	3070′	3390′	3710′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.7 LRD						

HIALS
PAPI

D8.0 LRD

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY **21**

DA(H) **1090′** (590′)

		ALS out
A	RVR 1500m	RVR 1500m
B		
C	RVR 2000m	CMV 2400m
D		

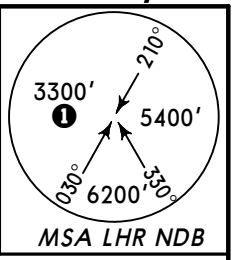
CHANGES: Minimums.

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BRIEFING STRIP ™

STRASBOURG Radar (APP) 119.57			*LAHR Tower 125.17	
NDB LHR **337**	*Final Apch Crs* **208°**	*Minimum Alt* ***D11.9*** **4000′** *(3500′)*	*DA(H)* **1090′** *(590′)*	*Apt Elev* 511′ *RWY* **500′**

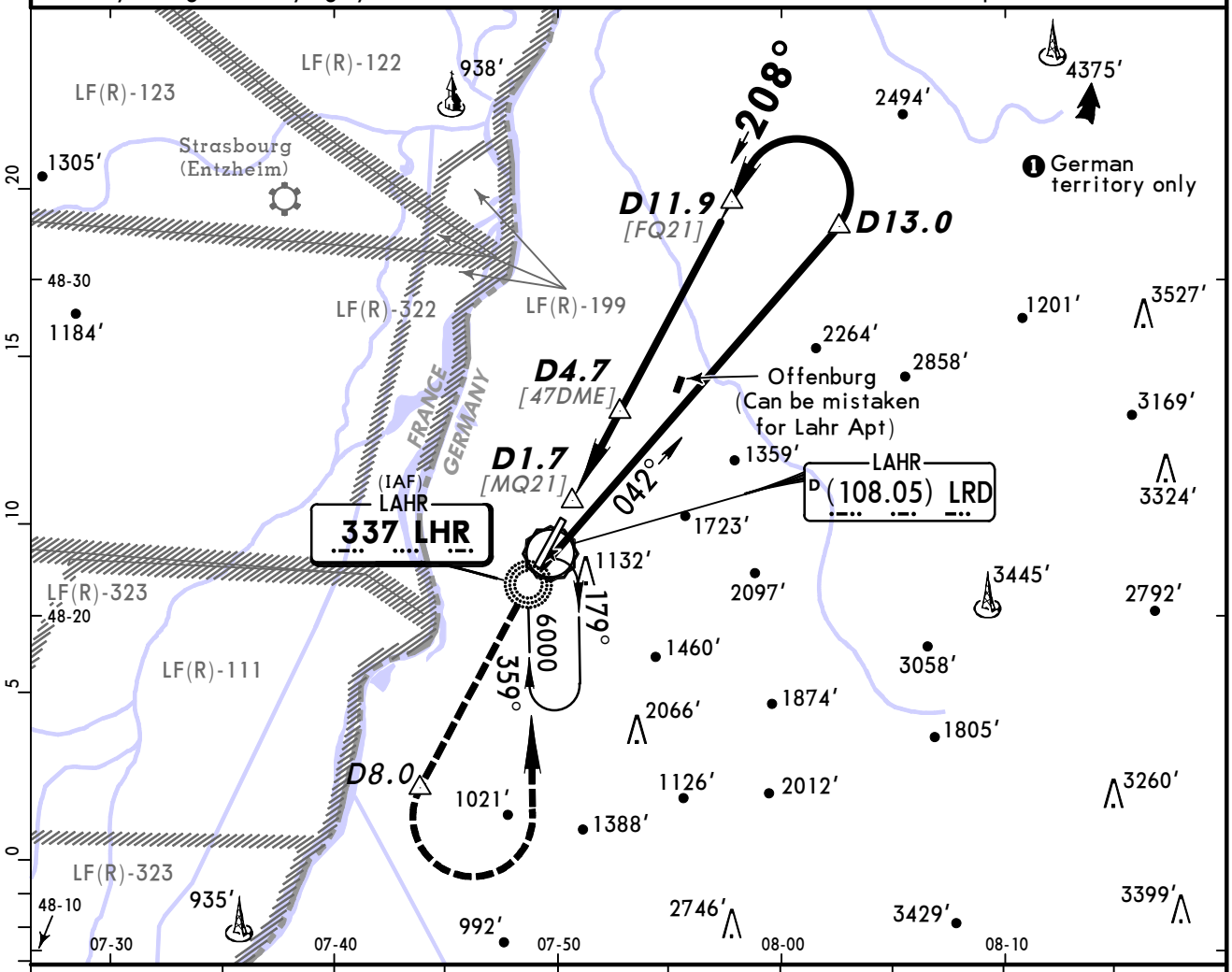
MISSED APCH: Climb STRAIGHT AHEAD to D8.0, then turn LEFT to NDB climbing to 6000′.



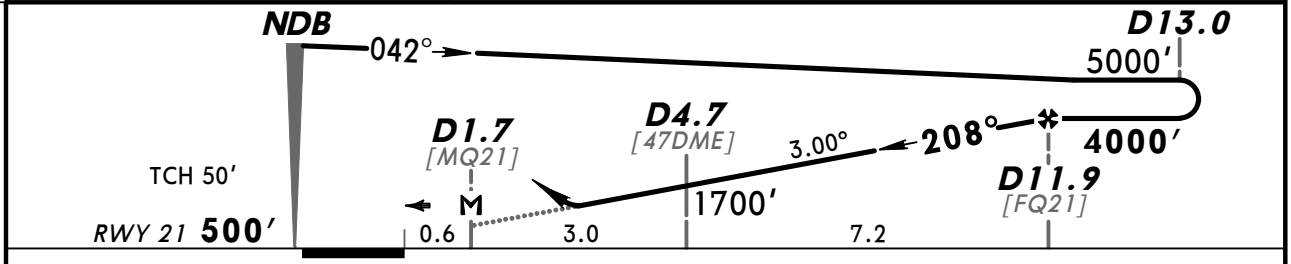
MSA LHR NDB

Alt Set: hPa (IN on req) Rwy Elev: 18 hPa Trans level: By ATC Trans alt: 5000′

1. DME required. 2. CAUTION: Mountainous terrain East of airport. 3. Procedure not to be used during activity of night low flying system. 4. CAUTION: VFR traffic within final and missed apch areas.



LRD DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
ALTITUDE	1160′	1480′	1800′	2120′	2430′	2750′	3070′	3390′	3710′



Gnd speed-Kts	*70*	*90*	*100*	*120*	*140*	*160*
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.7						

HIALS
PAPI

D8.0

Standard STRAIGHT-IN LANDING RWY **21**

DA(H) **1090′** *(590′)*

PANS OPS 4

		ALS out
A	RVR *1500m*	RVR *1500m*
B		
C	RVR *2000m*	CMV *2400m*
D		

CHANGES: Minimums.

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General Information

Location: Sylt Deu
IATA Code: GWT
Lat/Long: N54° 54.7' E008° 20.5'
Elevation: 51 ft

Airport Use: Public
Magnetic Variation: 1.3°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Major Airframe, Major Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: No

Sunrise: 0622 Z
Sunset: 1657 Z,

Runway Information

Runway: 06
Length x Width: 5564 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 27 ft

Runway: 14
Length x Width: 6955 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 32 ft
Lighting: Edge, ALS, REIL
Stopway: 105 ft

Runway: 24
Length x Width: 5564 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 51 ft

Runway: 32
Length x Width: 6955 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 31 ft
Lighting: Edge, ALS
Stopway: 105 ft

Communication Information

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ATIS 118.4
Sylt Tower 119.75 At or below 4000 ft Out to 25 mi.
Sylt Information 119.75 At or below 4000 ft Out to 25 mi. AFIS
Sylt Information 122.0 AFIS

*ATIS	Apt Elev	Alt Set: hPa (IN on request)
118.4	51′	Trans level: By ATC Trans alt: 5000′

1700′

MSA
SLT NDB
applicable over
German territory only

ELBE FIVE ALFA (LBE 5A)
HELGOLAND THREE WHISKEY (DHE 3W) ❶
WESER FIVE ALFA (WSR 5A)
RWYS 14, 32 ARRIVALS

DENMARK
GERMANY

(IAF)
SYLT
387 SLT
N54 51.4 E008 24.6

149°
3000
15
3000

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

(IAF - By ATC)
LANAS
N54 38.4 E008 37.6

D

❶ Available only between
FRI 1600LT and MON 0800LT.
Other times PPR via radio
contact or as cleared by ATC.

HELGOLAND
D 116.3 DHE
N54 11.1 E007 54.6

042°
37
5500
DHE 3W ❶

LBE 5A, WSR 5A
37
4000

MELDU
N54 06.3 E009 09.1

D

117° D46
17
4000
LBE 5A
31
329°

OSTOR
N53 49.8 E009 03.2

D22 298°

30
4000
WSR 5A
011°

N
NOT TO SCALE

WESER
112.9 WSR
N53 20.9 E008 52.5

ELBE
D 115.1 LBE
N53 39.3 E009 35.7

CHANGES: ATIS commissioned.

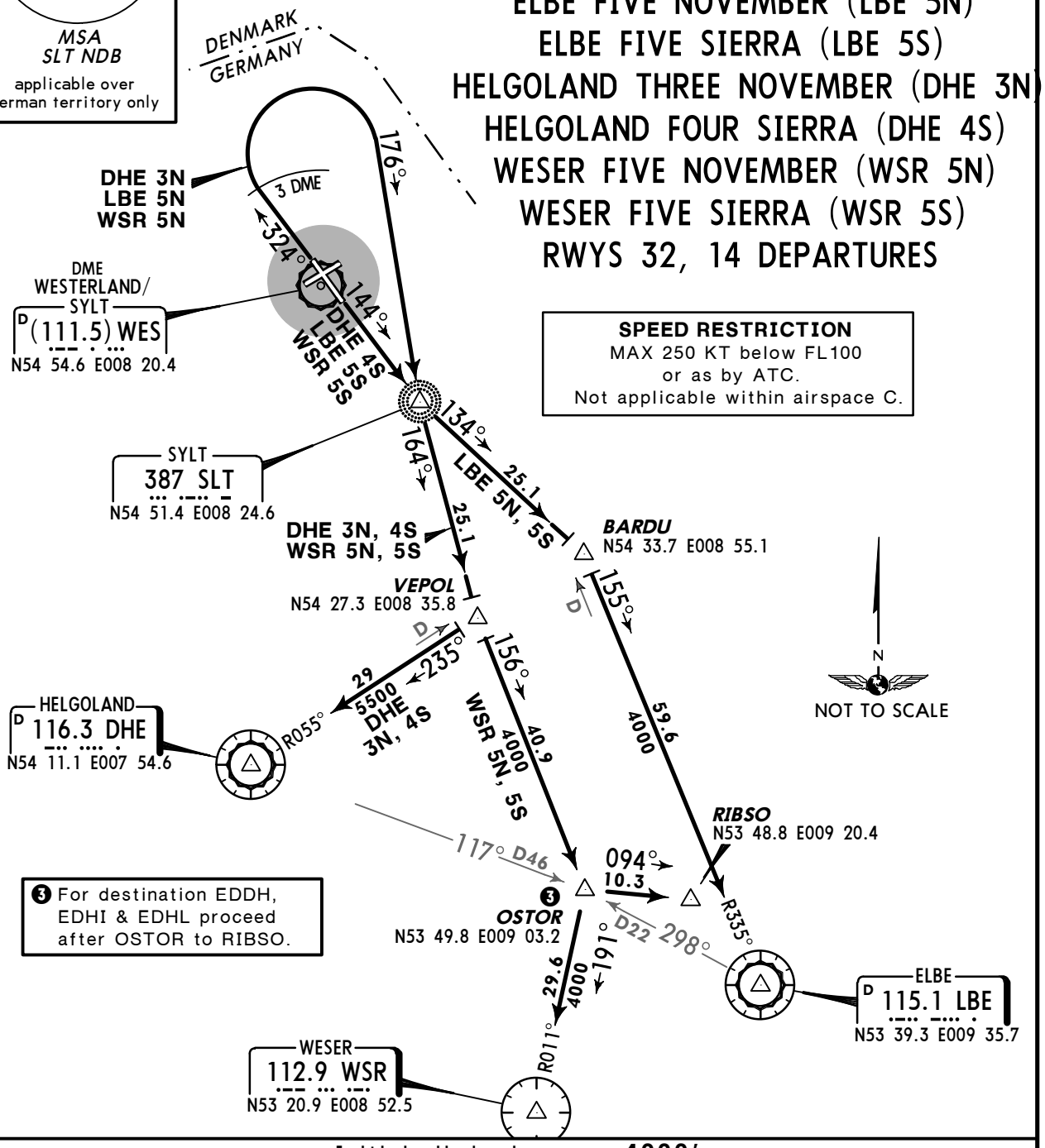
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1700′

MSA
SLT NDB
applicable over
German territory only

BREMEN Radar 120.22	Apt Elev 51′	Trans level: By ATC Trans alt: 5000′ 1. Contact BREMEN Radar immediately after take-off. 2. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles.

ELBE FIVE NOVEMBER (LBE 5N)
ELBE FIVE SIERRA (LBE 5S)
HELGOLAND THREE NOVEMBER (DHE 3N)
HELGOLAND FOUR SIERRA (DHE 4S)
WESER FIVE NOVEMBER (WSR 5N)
WESER FIVE SIERRA (WSR 5S)
RWYS 32, 14 DEPARTURES



❸ For destination EDDH, EDHI & EDHL proceed after OSTOR to RIBSO.

Initial climb clearance **4000′**

SID	RWY	ROUTING
DHE 3N	**32**	On 324° bearing from SLT to WES 3 DME, turn RIGHT, intercept 176° bearing to SLT, 164° bearing to VEPOL, turn RIGHT, intercept DHE R-055 inbound to DHE.
DHE 4S	**14**	On 144° bearing to SLT, turn RIGHT, 164° bearing to VEPOL, turn RIGHT, intercept DHE R-055 inbound to DHE.
LBE 5N ❷	**32**	On 324° bearing from SLT to WES 3 DME, turn RIGHT, intercept 176° bearing to SLT, 134° bearing to BARDU, intercept LBE R-335 inbound to LBE.
LBE 5S ❷	**14**	On 144° bearing to SLT, turn LEFT, 134° bearing to BARDU, turn RIGHT, intercept LBE R-335 inbound to LBE.
WSR 5N	**32**	On 324° bearing from SLT to WES 3 DME, turn RIGHT, intercept 176° bearing to SLT, 164° bearing to VEPOL ❶, turn LEFT, 156° track to OSTOR, turn RIGHT, intercept WSR R-011 inbound to WSR.
WSR 5S	**14**	On 144° bearing to SLT, turn RIGHT, 164° bearing to VEPOL ❶, turn LEFT, 156° track to OSTOR, turn RIGHT, intercept WSR R-011 inbound to WSR.

❶ Between VEPOL and OSTOR BRNAV equipment necessary.
❷ Not available for destination EDDH, EDHI & EDHL.

CHANGES: Location & airport name.

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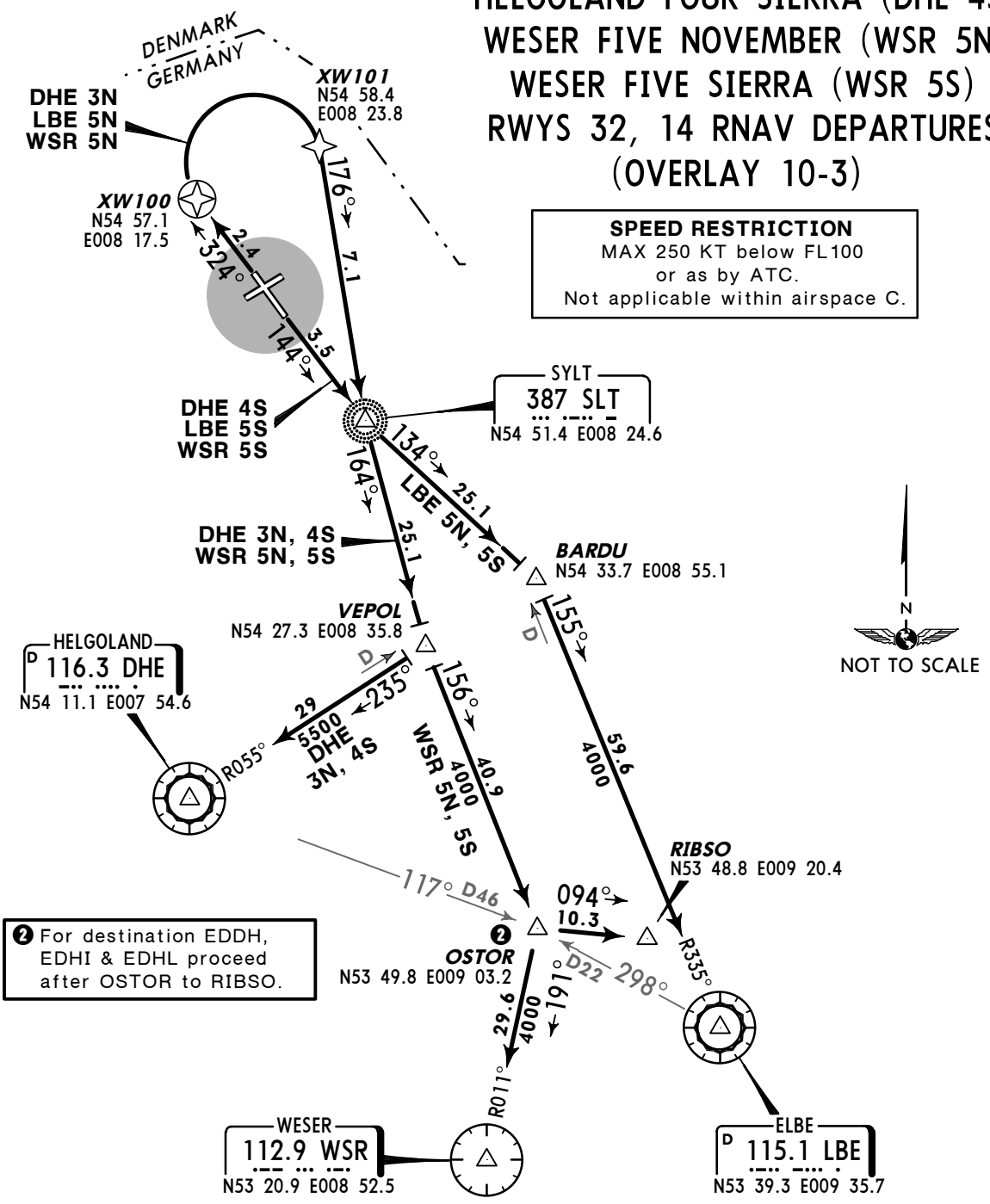
1700′

MSA
SLT NDB
applicable over
German territory only

BREMEN Radar 120.22	Apt Elev 51′

Trans level: By ATC Trans alt: 5000′
1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also minimum noise routings. Strict adherence within the limits of aircraft performance is mandatory.
3. EXPECT close-in obstacles.

ELBE FIVE NOVEMBER (LBE 5N)
ELBE FIVE SIERRA (LBE 5S)
HELGOLAND THREE NOVEMBER (DHE 3N)
HELGOLAND FOUR SIERRA (DHE 4S)
WESER FIVE NOVEMBER (WSR 5N)
WESER FIVE SIERRA (WSR 5S)
RWYS 32, 14 RNAV DEPARTURES
(OVERLAY 10-3)



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❷ For destination EDDH, EDHI & EDHL proceed after OSTOR to RIBSO.

Initial climb clearance **4000′**

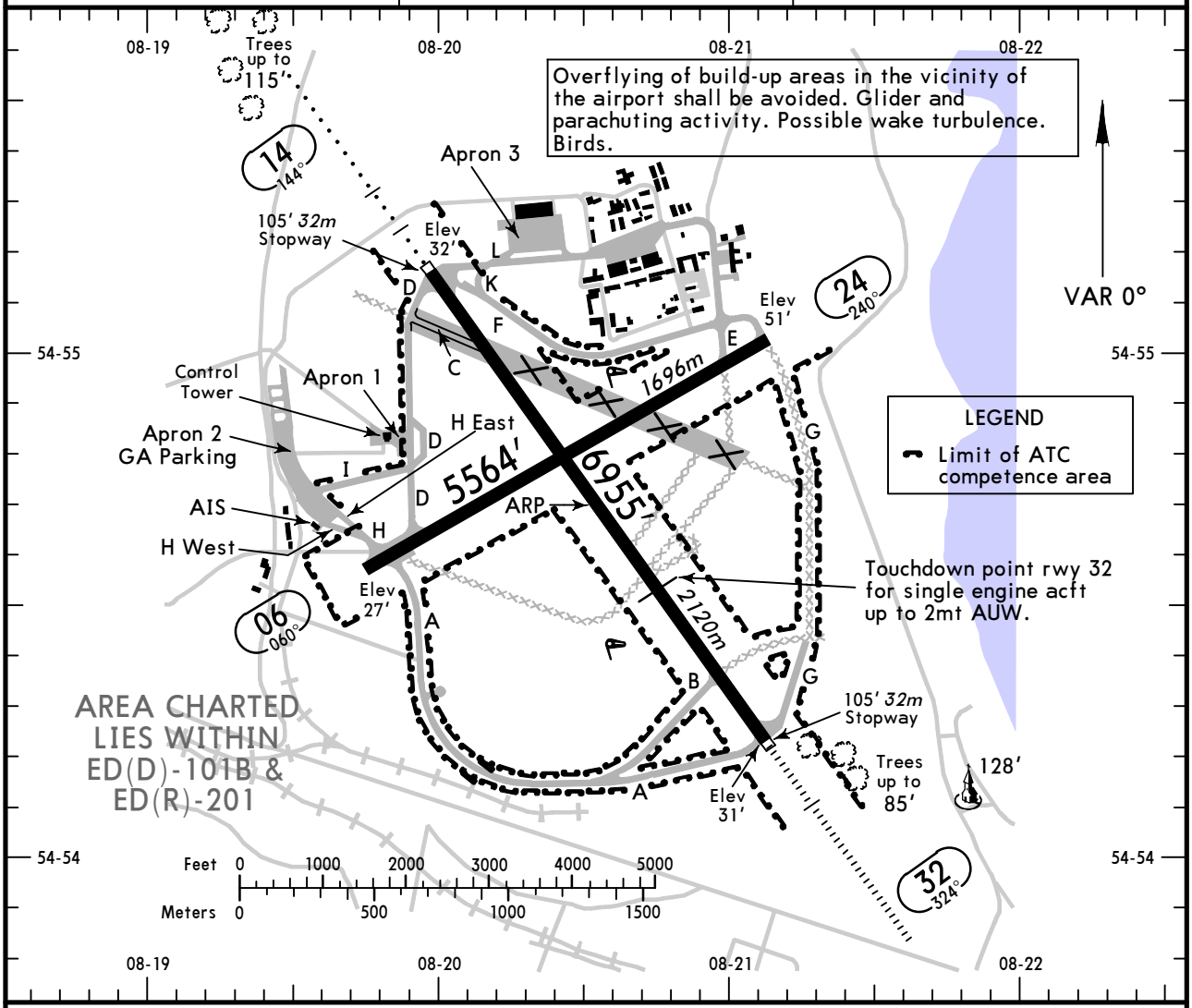
SID	RWY	ROUTING
DHE 3N	32	(500+) - XW100 - XW101 - SLT - VEPOL - DHE.
DHE 4S	14	(500+) - SLT - VEPOL - DHE.
LBE 5N ❶	32	(500+) - XW100 - XW101 - SLT - BARDU - LBE.
LBE 5S ❶	14	(500+) - SLT - BARDU - LBE.
WSR 5N	32	(500+) - XW100 - XW101 - SLT - VEPOL - OSTOR - WSR.
WSR 5S	14	(500+) - SLT - VEPOL - OSTOR - WSR.

❶ Not available for destination EDDH, EDHI & EDHL.

CHANGES: Location & airport name.

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*ATIS	*SYLT Tower	*SYLT Info (outside TWR hours)
118.4	119.75	119.75 122.0X



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
06 / 24					148′ *45m*
14	HIRL HIALS REIL PAPI-L (angle 3.00°)			❷	148′ *45m*
32	HIRL HIALS SFL PAPI-R (angle 3.00°)	❶	6044′ *1842m*		

❶ For single engine acft up to 2mt AUW, LDA:4373′(1333m).
❷ TAKE-OFF RUN AVAILABLE

RWY 14
From rwy head 6955′(2120m)
twy C int 5735′(1748m)

RWY 32
From rwy head 6955′(2120m)
twy B int 5991′(1826m)

Standard TAKE-OFF ❶

	All Rwys		
	LVP must be in Force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A, B, C	*250m*	*400m*	*500m*
D	*300m*		

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

CHANGES: None.

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SYLT, GERMANY

SYLT

STRAIGHT-IN RWY		DA(H) / MDA(H)	RVR (ALS/ALS out)
14	NDB	570′ (538′)	1000m / 1000m
32	ILS	231′ (200′)	500m / 1000m
	LOC	460′ (429′)	800m / 1000m
	NDB	450′ (419′)	800m / 1000m

CIRCLE-TO-LAND ❶	MDA(H)	VIS
	620′ (569′)	1000m

❶To rwy 14 not authorized Southwest of apt.

TAKE-OFF RWY 06, 14, 24, 32

LVP must be in Force ❷				
RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
150m	200m	200m	250m ❸	800m

❷Without LVP 400m are stipulated.

❸Or rejected take-off distance whichever is the greater.

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EDXW/GWT
SYLT

JEPPESEN
23 DEC 11 (11-1)

SYLT, GERMANY
ILS or LOC Rwy 32

BRIEFING STRIP TM

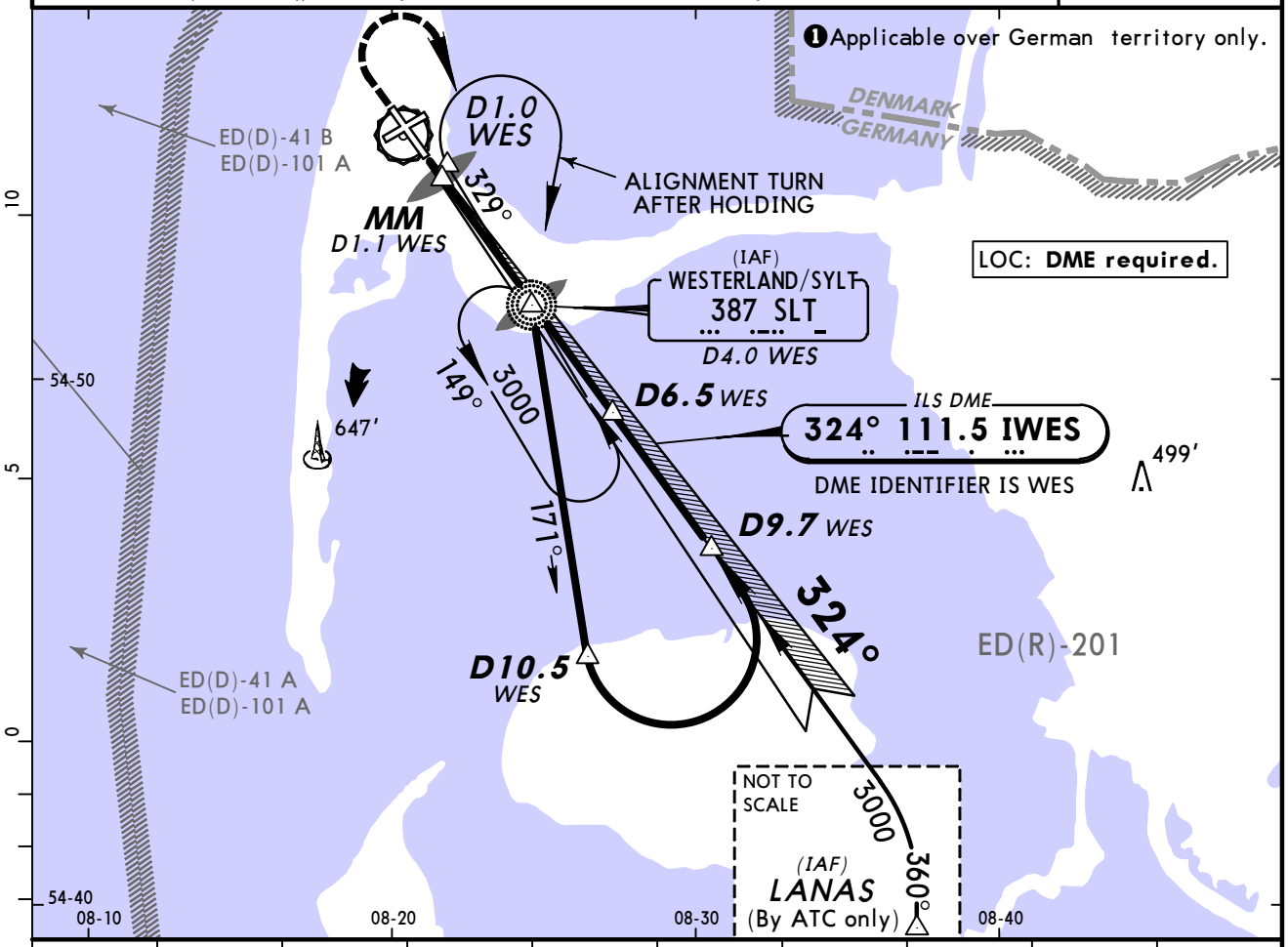
*ATIS	BREMEN Radar(APP)	*SYLT Tower	*SYLT Info (outside TWR hours)
118.4	120.22	119.75	119.75 122.0X
		Within 25 NM up to 4000' AAL	

LOC	Final	GS	ILS	Apt Elev 51'
IWES	Apch Crs	LOM	DA(H)	RWY 31'
111.5	324°	1170' (1139')	231' (200')	

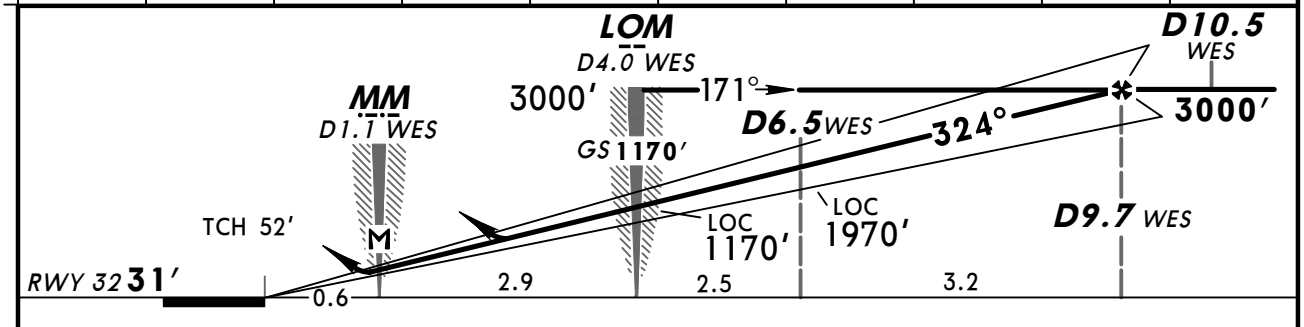
MISSED APCH: Climb STRAIGHT AHEAD to 1000', then turn RIGHT to NDB climbing to 3000'.

Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000'

1700' ❶
MSA
SLT NDB



LOC (GS out)	WES DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
	ALTITUDE	530'	850'	1170'	1490'	1810'	2130'	2440'	2760'



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	372	478	531	637	743	849
MAP at MM/D1.1 WES						

HIALS PAPI

1000' ↑

3000' RT

SLT 387

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 32

	ILS DA(H) 231' (200')			LOC (GS out) DA(H) 460' (429')	
	FULL	Limited	ALS out		ALS out
A	RVR 550m	RVR 750m	RVR 1200m	RVR 1300m	RVR 1500m
B					
C					RVR 2000m
D					

CIRCLE-TO-LAND
To rwy 14 not authorized Southwest of apt

Max Kts	MDA(H)	VIS
100	620' (569')	1500m
135	620' (569')	1600m
180	720' (669')	2400m
205	760' (709')	3600m

CHANGES: Minimums.

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BRIEFING STRIP™

*ATIS	BREMEN Radar(APP)	*SYLT Tower	*SYLT Info (outside TWR hours)
118.4	120.22	119.75	119.75 122.0X
		Within 25 NM up to 4000' AAL	

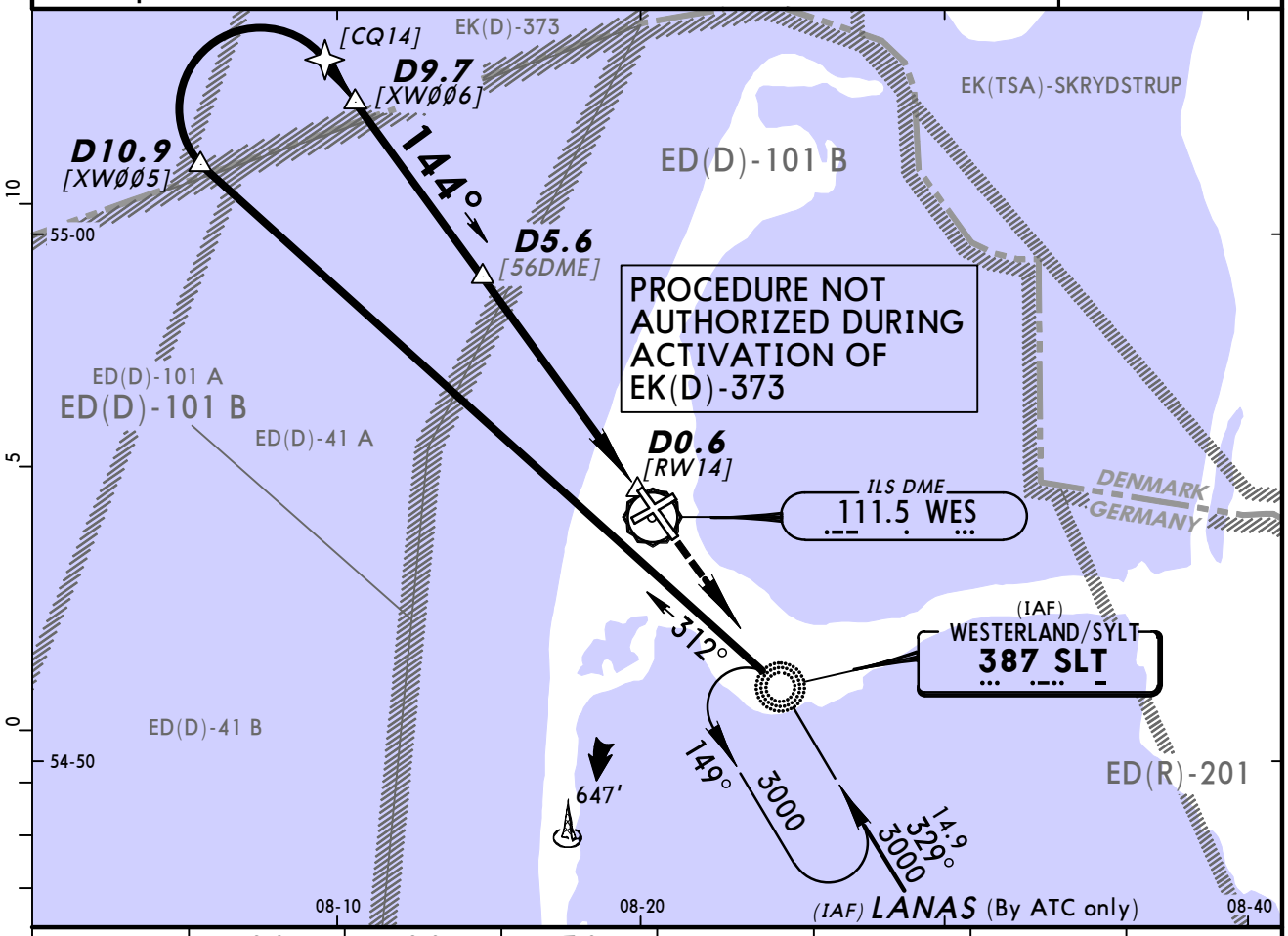
NDB	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 51'
SLT 387	144°	D9.7 3000' (2968')	570' (538')	RWY 32'

MISSED APCH: Climb STRAIGHT AHEAD to NDB to 3000'.

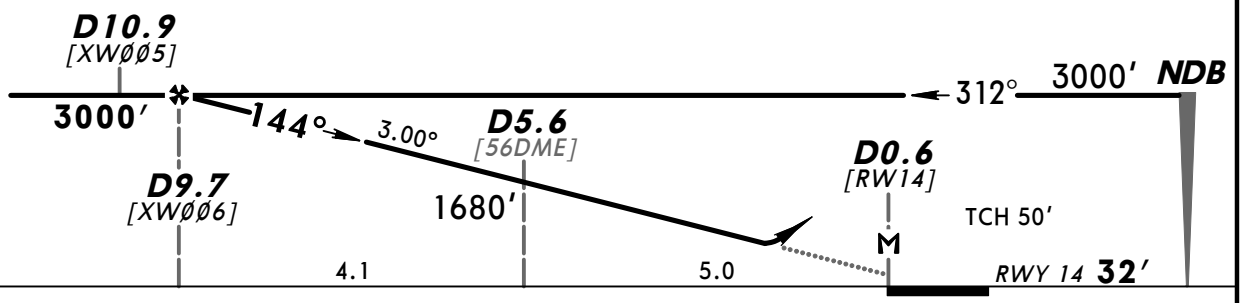
Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000'
DME required.

1700'

MSA SLT NDB
Applicable over German territory only.



WES DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0
ALTITUDE	2760'	2440'	2120'	1810'	1490'	1170'	850'



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D0.6						

HIALS
REIL
PAPI

3000'

SLT
387

PANS OPS 4

Standard STRAIGHT-IN LANDING RWY 14

DA(H) **570'** (538')

ALS out

A	RVR 1500m	
B		
C	RVR 1700m	CMV 2400m
D		

CHANGES: ATIS.

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BRIEFING STRIP TM

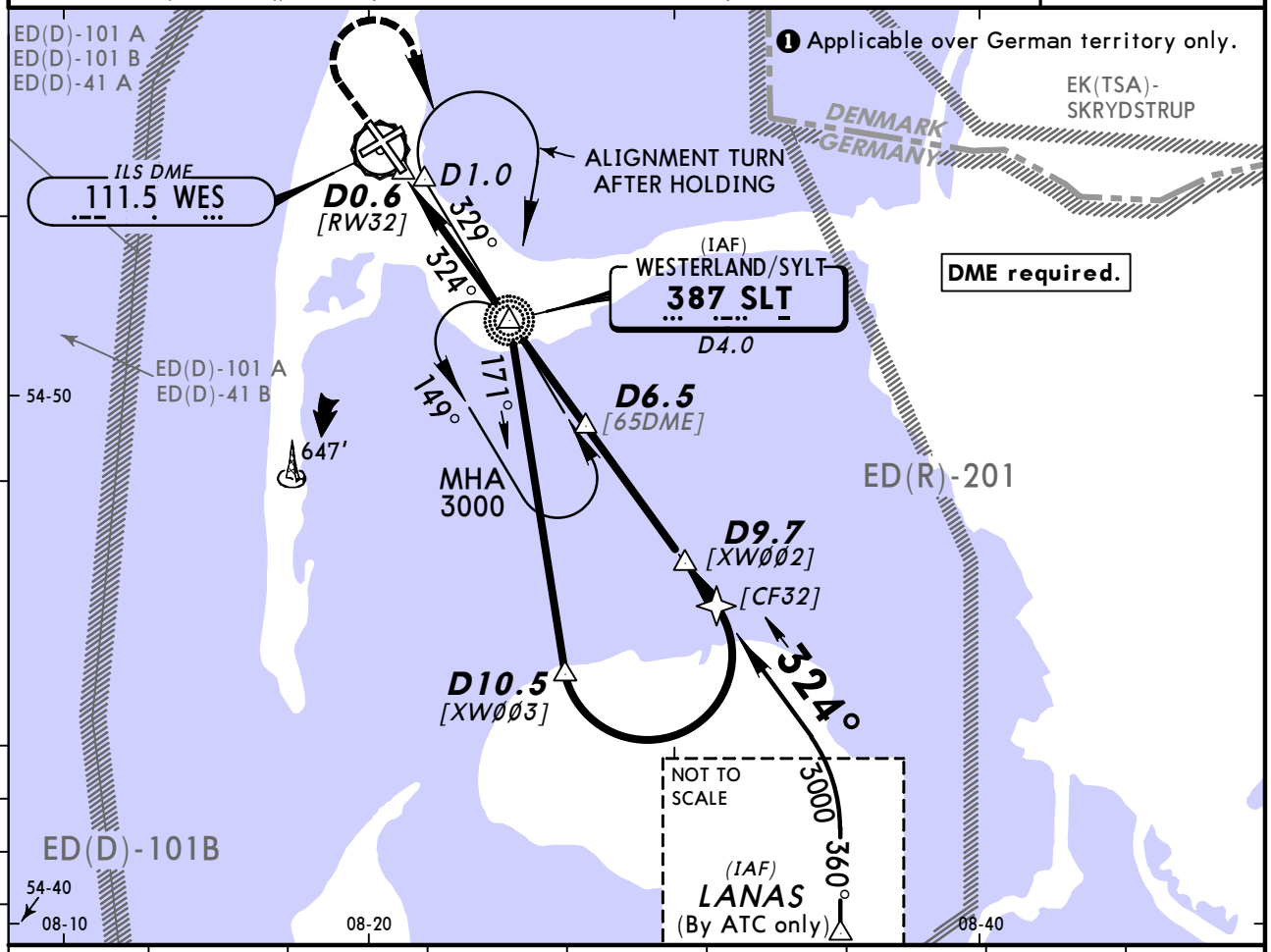
*ATIS	BREMEN Radar(APP)	*SYLT Tower	*SYLT Info (outside TWR hours)
118.4	120.22	119.75	119.75 122.0X
		Within 25 NM up to 4000' AAL	

NDB	Final	Minimum Alt	DA(H)	Apt Elev 51'
SLT	Apch Crs	D9.7	450' (419')	RWY 31'
387	324°	3000' (2969')		

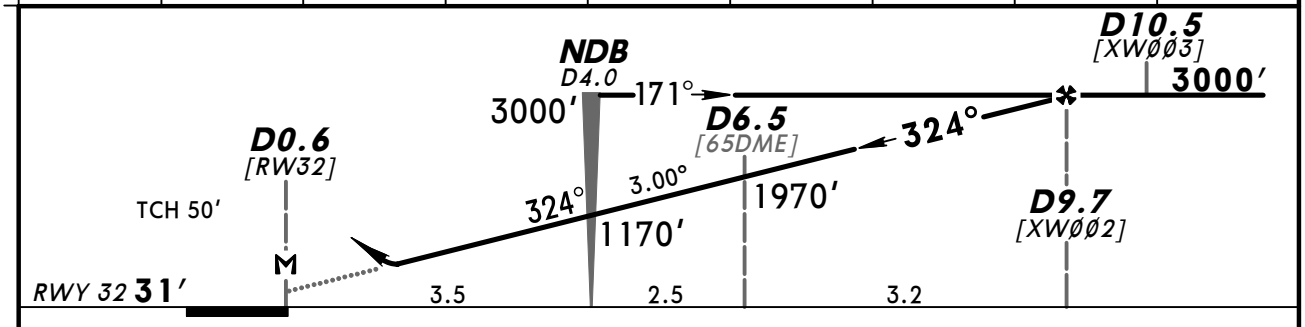
MISSED APCH: Climb STRAIGHT AHEAD to 1000', then turn RIGHT to NDB climbing to 3000'.

Alt Set: hPa (IN on req) Rwy Elev: 1 hPa Trans level: By ATC Trans alt: 5000'

1700' ❶
MSA
SLT NDB



WES DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	530'	850'	1170'	1490'	1810'	2130'	2440'	2760'



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
MAP at D0.6							

HIALS PAPI | 1000' | 3000' RT | SLT 387

Standard STRAIGHT-IN LANDING RWY 32

DA(H) 450' (419')

	ALS out	Max Kts	MDA(H)	VIS
A	RVR 1500m	100	620' (569')	1500m
B		135	620' (569')	1600m
C	RVR 1200m	180	720' (669')	2400m
D	RVR 1900m	205	760' (709')	3600m

CIRCLE-TO-LAND
To rwy 14 not authorized
Southwest of apt

PANS OPS 4

CHANGES: ATIS.

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JEPPESEN
JeppView for Windows

General Information

Location: Spangdahlem Deu
IATA Code: SPM
Lat/Long: N49° 58.6' E006° 41.9'
Elevation: 1197 ft

Airport Use: Military
Magnetic Variation: 1.0°E

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

Sunrise: 0622 Z
Sunset: 1711 Z,

Runway Information

Runway: 05
Length x Width: 10007 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1158 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Stopway: 1000 ft

Runway: 23
Length x Width: 10007 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1197 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Stopway: 1000 ft

Communication Information

ATIS 143.425 Military
ATIS 24.45 Military
Spangdahlem Tower 122.2 Military
Spangdahlem Tower 25.78 Military
Spangdahlem Tower 25.65 Military
Spangdahlem Ground Control 140.05 Military
Spangdahlem Ground Control 30.885 Military
Spangdahlem Clearance Delivery 30.885 Military
Spangdahlem Gca Radar 129.475 Military
Spangdahlem Gca Radar 34.147 Military
Spangdahlem Airlift Command Post 27.827 Military

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Langen Radar Center 125.6 Military

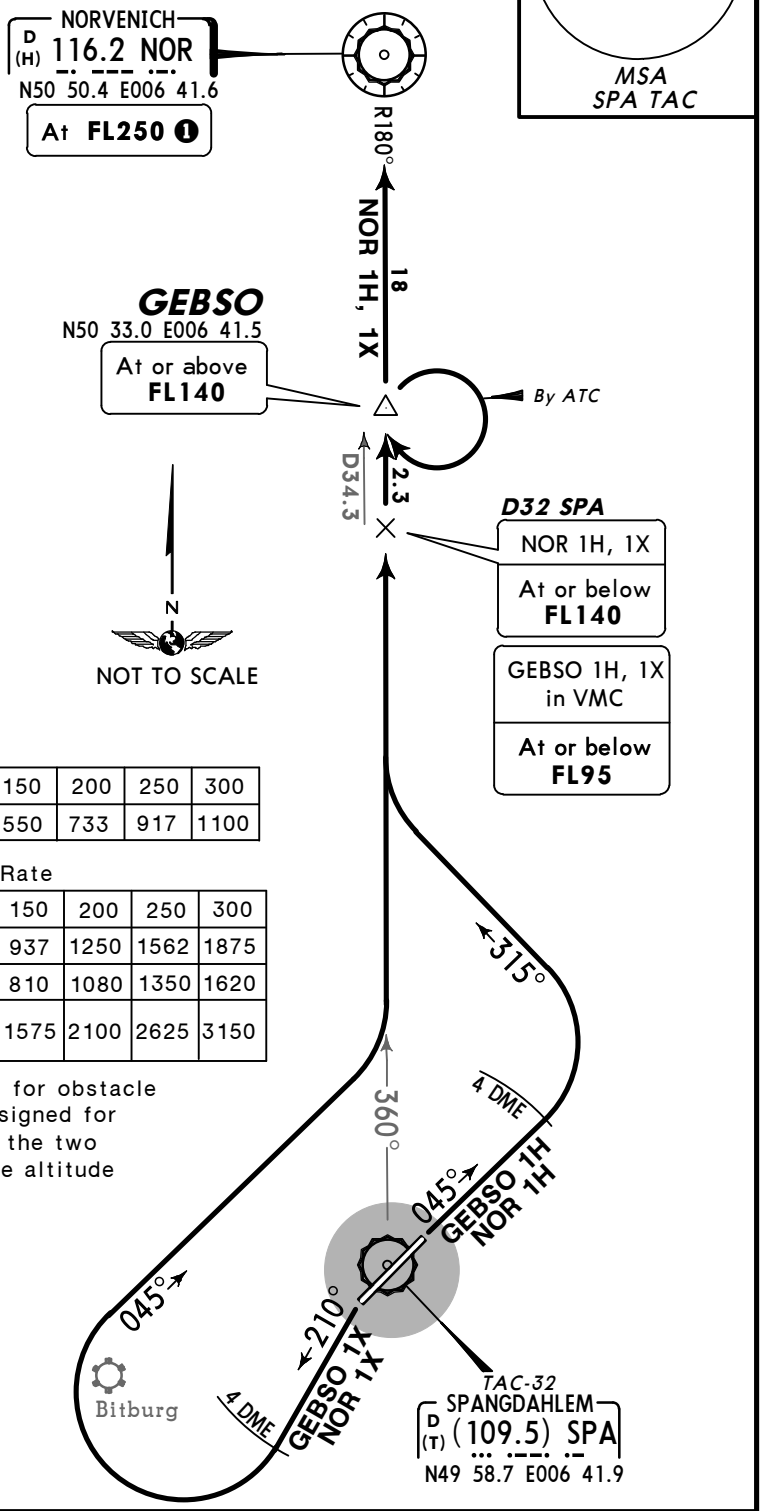
Apt Elev 1197′

Trans level: By ATC Trans alt: 5000′
1. Emergency Safe Altitude within 100 NM of Spangdahlem AB 4900′.
2. Rwy 23: Avoid overflight of village 1.2 NM from DER.

For UHF see MIL-101 listing

4200′
MSA
SPA TAC

GEBSO 1H *[GEBS1H]*
GEBSO 1X *[GEBS1X]*
NOR 1H
NOR 1X
RWYS 05, 23 DEPARTURES
TACAN AZIMUTH REQUIRED



SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ If unable to comply use 360° climbing turn at GEBSO.

*Minimum Climb Rate

Rwy	Gnd speed-KT	75	100	150	200	250	300
05	V/V (fpm) to 1500′	275	367	550	733	917	1100

*ATC Minimum Climb Rate

Rwy	Gnd speed-KT	75	100	150	200	250	300
05	V/V (fpm) to FL140	469	625	937	1250	1562	1875
23	V/V (fpm) to FL140	405	540	810	1080	1350	1620
05/23	V/V (fpm) FL140 to FL250	787	1050	1575	2100	2625	3150

*Minimum climb rates are designed for obstacle clearance. ATC climb rates are designed for airspace utilization. The higher of the two gradients should be used within the altitude range(s) specified.

CAUTION
Uncontrolled light aircraft operations in vicinity of Bitburg airport at or below 2700′.

NOR 1H, 1X: Climb to FL250

No turns before DER. Cross DER at least 16′ AGL.

SID	RWY	INITIAL CLIMB/ROUTING
GEBSO 1H FOR VFR FLIGHT	05	Climb on 045° track to SPA 4 DME, turn LEFT, 315° track, intercept SPA R-360 for VFR flight. If unable to maintain VMC, maintain last assigned altitude and advise ATC.
GEBSO 1X❺ FOR VFR FLIGHT	23	Climb on 210° track to SPA 4 DME, turn RIGHT, 045° track, intercept SPA R-360 for VFR flight. If unable to maintain VMC, maintain last assigned altitude and advise ATC.
NOR 1H	05	Climb on 045° track to SPA 4 DME, turn LEFT, 315° track, intercept SPA R-360 via GEBSO to NOR.
NOR 1X❺	23	Climb on 210° track to SPA 4 DME, turn RIGHT, 045° track, intercept SPA R-360 via GEBSO to NOR.

❺ RADAR required.

CHANGES: Climb gradient revised; MSA.

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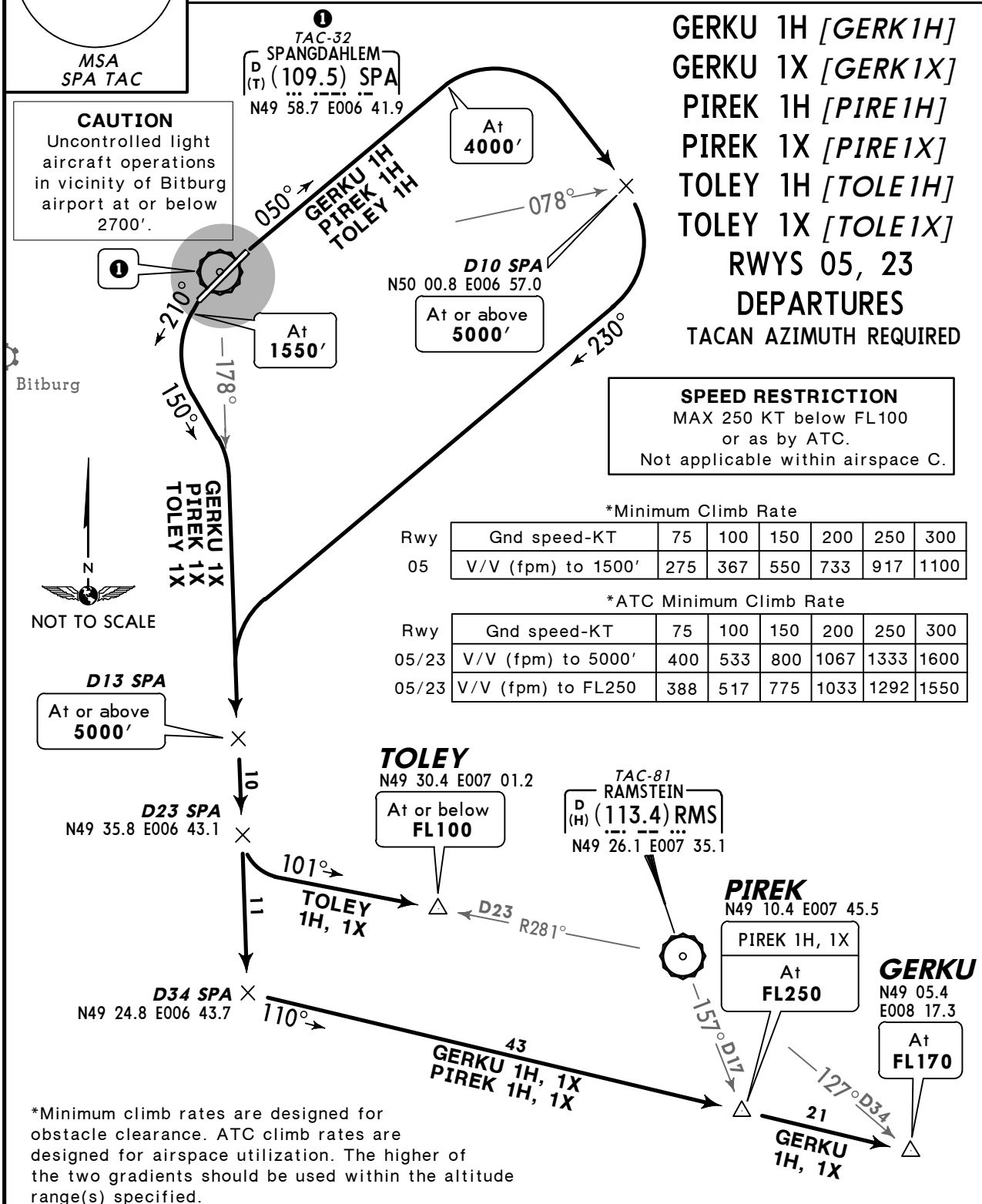
4200′
MSA
SPA TAC

Apt Elev
1197′

Trans level: By ATC Trans alt: 5000′
1. Emergency Safe Altitude within 100 NM of Spangdahlem AB 4900′.
2. Rwy 23: Avoid overflight of village 1.2 NM from DER.

For UHF see MIL-101 listing

GERKU 1H [GERK1H]
GERKU 1X [GERK1X]
PIREK 1H [PIRE1H]
PIREK 1X [PIRE1X]
TOLEY 1H [TOLE1H]
TOLEY 1X [TOLE1X]
RWYS 05, 23
DEPARTURES
TACAN AZIMUTH REQUIRED



*Minimum Climb Rate

Rwy	Gnd speed-KT	75	100	150	200	250	300
05	V/V (fpm) to 1500′	275	367	550	733	917	1100

*ATC Minimum Climb Rate

Rwy	Gnd speed-KT	75	100	150	200	250	300
05/23	V/V (fpm) to 5000′	400	533	800	1067	1333	1600
05/23	V/V (fpm) to FL250	388	517	775	1033	1292	1550

*Minimum climb rates are designed for obstacle clearance. ATC climb rates are designed for airspace utilization. The higher of the two gradients should be used within the altitude range(s) specified.

Climb to **5000′**

No turns before DER.

SID	RWY	INITIAL CLIMB
GERKU 1H, PIREK 1H TOLEY 1H	05	Climb on 050° track to 4000′, turn RIGHT to SPA R-078/D10, 230° track, intercept SPA R-178 to D13 SPA.
GERKU 1X, PIREK 1X TOLEY 1X	23	Climb on 210° track to 1550′, turn LEFT, 150° track, intercept SPA R-178 to D13 SPA.

SID	ROUTING
GERKU 1H, 1X	On SPA R-178 to D34 SPA, turn LEFT, 110° track to GERKU.
PIREK 1H, 1X	On SPA R-178 to D34 SPA, turn LEFT, 110° track to PIREK.
TOLEY 1H, 1X	On SPA R-178 to D23 SPA, turn LEFT, intercept RMS R-281 inbound to TOLEY.

CHANGES: Climb gradient revised; crossing restrictions; MSA.

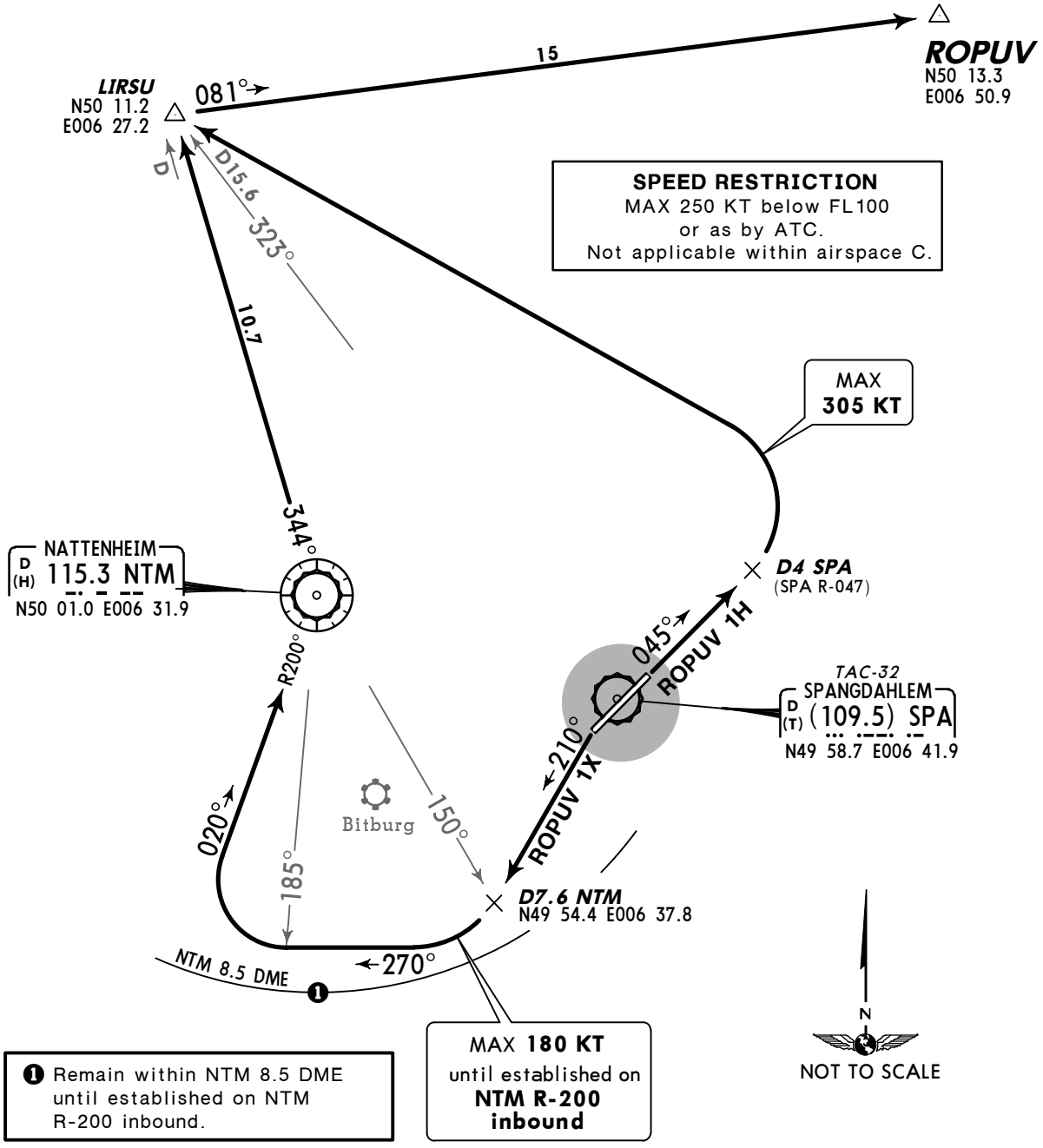
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Apt Elev	
1197′	Trans level: By ATC Trans alt: 5000′ Emergency Safe Altitude within 100 NM of Spangdahlem AB 4900′.

For UHF see MIL-101 listing

4200′
MSA
SPA TAC

ROPUV 1H *[ROPU1H]*
ROPUV 1X *[ROPU1X]*
RWYS 05, 23 DEPARTURES
TACAN AZIMUTH REQUIRED



Minimum Climb Rate
ROPUV 1H: up to 2400′.

Gnd speed-KT	75	100	150	200	250	300
V/V (fpm)	266	355	533	710	888	1065

CAUTION
Uncontrolled light aircraft operations in vicinity of Bitburg airport at or below 2700′.

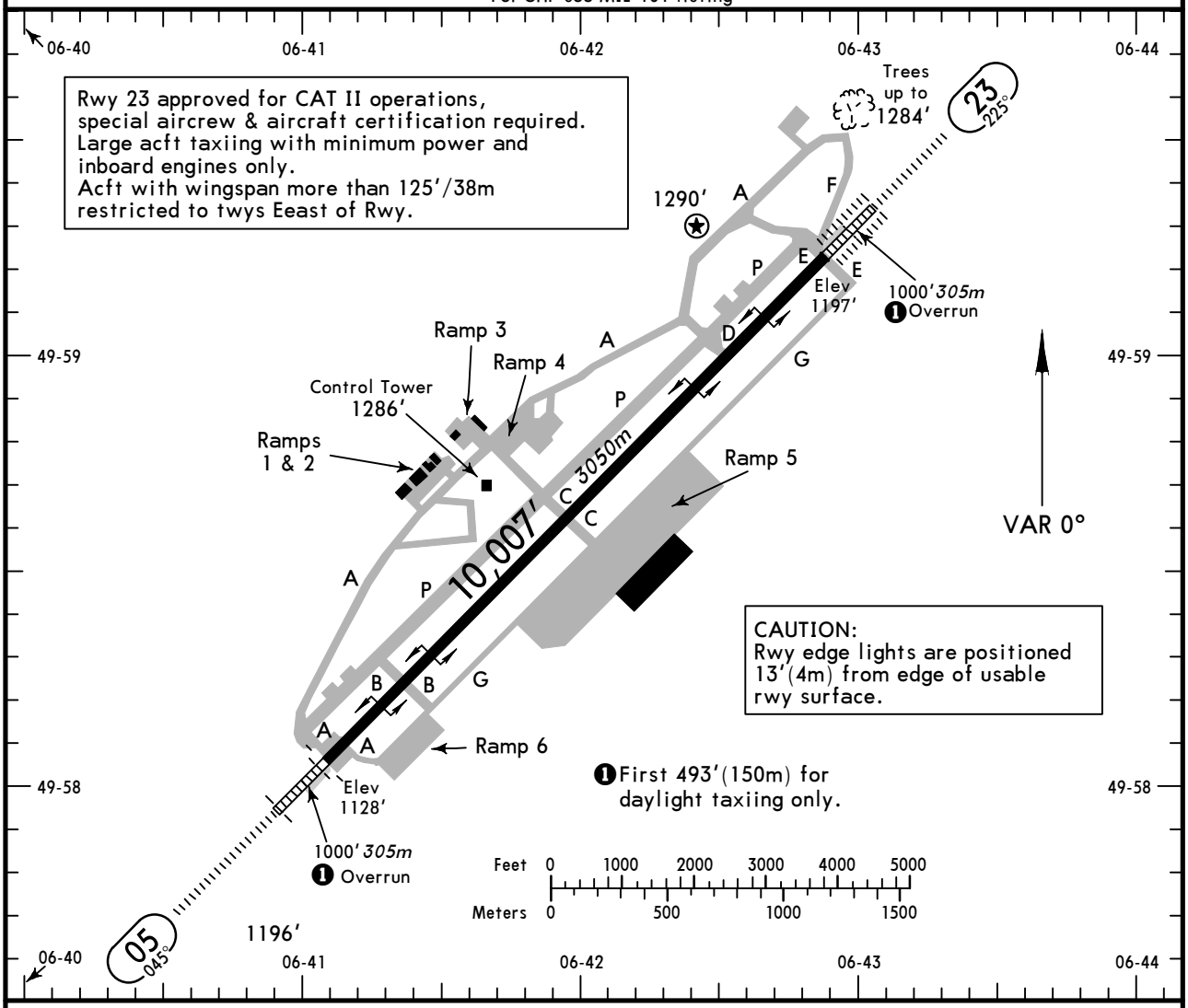
Climb to **5000′**

SID	RWY	INITIAL CLIMB/ROUTING
ROPUV 1H	05	Climb on 045° track to D4 SPA, turn LEFT to LIRSU, then to ROPUV.
ROPUV 1X	23	Climb on 210° track to D7.6 NTM, turn RIGHT, 270° track, when passing NTM R-185 turn RIGHT, intercept NTM R-200 inbound to NTM, NTM R-344 to LIRSU, turn RIGHT to ROPUV.

CHANGES: MSA.

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*SPANGDAHLEM Tower (R)
122.2
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
05 ❷	HIRL CL ALSF-I TDZ REIL PAPI RVR		9225′ *2812m*		148′ *45m*
23	HIRL CL ALSF-II TDZ REIL PAPI RVR		9233′ *2814m*		

❷ Rwy 05 first 493′(150m) and rwy 23 first 986′(300m) grooved concrete, middle portion 8528′(2600m) nonporous friction asphalt surface.

Military

	TAKE-OFF
	All Rwys
	STD
1 & 2 Eng	1
3 & 4 Eng	1/2

CHANGES: Note. Minimums.

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ETAD/SPM
SPANGDAHLEM AB

JEPPESEN
27 MAY 11
Eff 2 Jun
11-1

SPANGDAHLEM, GERMANY
MISSED APCH CLIMB GRAD MIM 5.0%
ILS or LOC Rwy 05

LANGEN Radar 125.6
For UHF see MIL-101 listing
*SPANGDAHLEM Tower (R) 122.2

BRIEFING STRIP

LOC	Final	GS	ILS	
ISPE	Apch Crs	ABDOB	DA(H)	Apt Elev 1197′
109.15	045°	3000′ (1872′)	Refer to Minimums	THR 1128′

MISSED APCH: Climbing to 5000′. Intercept SPA R-047 outbound to SPAØ3, then turn LEFT direct to ODROV/D11.0.

4300′
MSA SPA TAC

Alt Set: INCHES
Trans level: By ATC
Trans alt: 5000′

1. Non-TACAN acft: **RADAR required.** 2. LOC: **DME required.** 3. EMERG SAFE ALT 100 NM 4900′.

Radar required for holding above FL 140.

WEZEL
D28.0 SPA TAC
Leave at MAX FL 140 MIM FL 70
MANDATORY FL 70

SPA21
D21.0 SPA TAC
(IAF) WINKE
D14.0 SPA TAC
1805′

WINKE (IAF)
227° 14.0 to TACAN FL 70 MANDATORY

2126′
TAC-32
SPANGDAHLEM D (109.5) SPA

SPAØ3
D3.0 SPA TAC

SPEØ1
D1.0 SPA TAC

Bitburg

ABDOB
D6.5 SPA TAC
RADAR FIX

ILS 045° 109.15 ISPE

1724′

CAUTION: Uncontrolled light acft operations in the vicinity of BITBURG apt up to 2700′.

ED(R)-205

1752′
1797′
1723′
1698′

D13.0
SPA TAC

GERMANY LUXEMBOURG

49-50
06-20

RECOMMENDED ALTITUDES	
LOC (GS out)	
SPA TAC	ALTITUDE
6.0	2850′
5.0	2530′
4.0	2210′

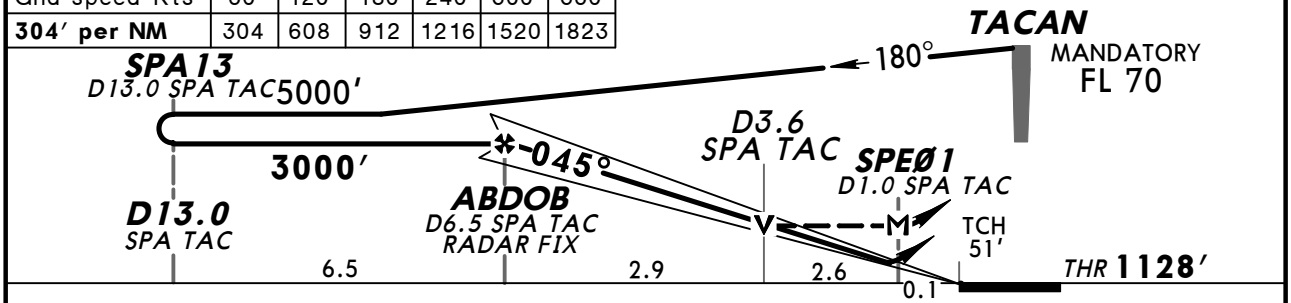
13 DME Arc SPA TAC
06-30
06-40

SPA13
D13.0 SPA TAC

06-50
MISSED APCH HOLDING
ODROV
D11.0
SPA TAC
MHA 4300
MAX FL 70

CAUTION: Missed apch climb gradient mim 5.0%. Climb rate to 4300′ mim 304′/NM.

Gnd speed-Kts	60	120	180	240	300	360
304′ per NM	304	608	912	1216	1520	1823



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	377	484	538	646	753	861
MAP at SPEØ1/D1.0 SPA TAC						

ALSF-I
REIL PAPI PAPI

5000′ via SPA TAC (109.5) R-047

Military

STRAIGHT-IN LANDING RWY 05
Missed apch climb gradient mim 5.0% up to 4300′

ILS
DA(H) A: 1354′ (226′) C: 1374′ (246′)
B: 1364′ (236′) D: 1384′ (256′)

LOC (GS out)
MDA(H) 2050′ (922′)

	FULL	ALS out	LOC (GS out)	ALS out
A	800m	1600m	1200m	2000m
B				
C			3600m	4400m
D	1200m		4000m	4800m

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	2050′ (853′)	2000m
135		
180	2170′ (973′)	4800m
205	2340′ (1143′)	4800m

MIPS

CHANGES: Minimums.

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ETAD/SPM
SPANGDAHLEM AB

27 MAY 11 **Eff 2 Jun**

JEPPESEN

11-2

SPANGDAHLEM, GERMANY
❶ MISSED APCH CLIMB GRAD MIM 4.1%

ILS or LOC Rwy 23

BRIEFING STRIP™

LANGEN Radar	*SPANGDAHLEM Tower (R)
125.6	122.2

For UHF see MIL-101 listing

LOC	Final	GS	ILS	
ISPA	Apch Crs	D6.1 SPA TAC	DA(H)	Apt Elev 1197′
108.1	225°	3000′ (1803′)	Refer to Minimums	THR 1197′

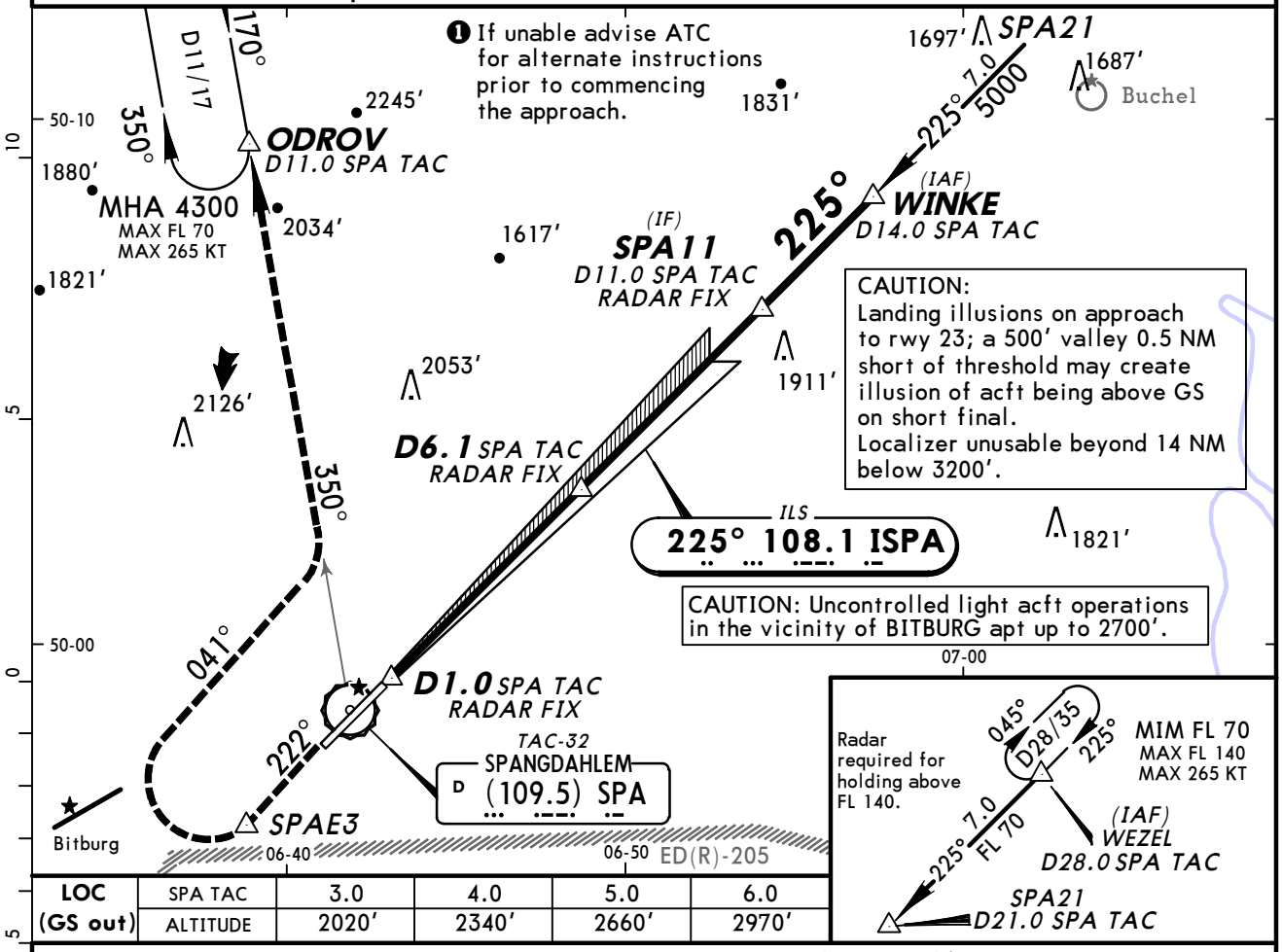
4300′

MSA
SPA TAC

MISSED APCH: Climbing to 5000′. Intercept SPA R-222 outbound to SPAE3, then turn RIGHT direct to ODROV/D11.0.

Alt Set: INCHES | Trans level: By ATC | Trans alt: 5000′

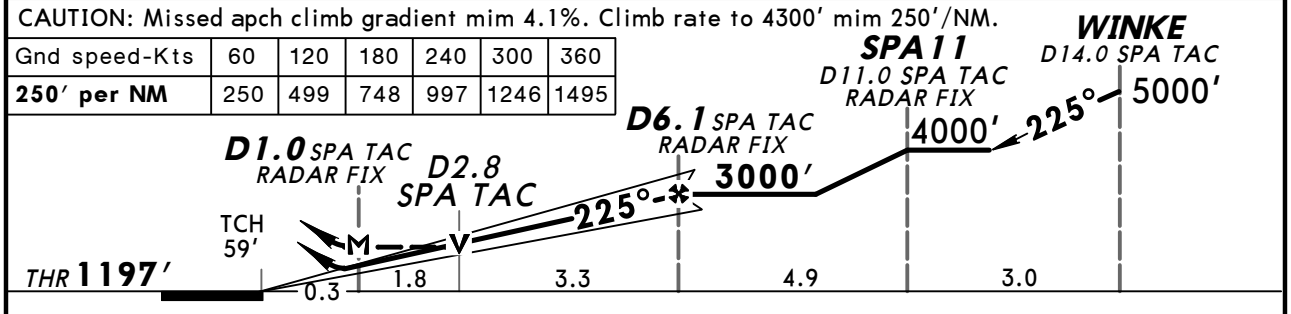
1. LOC: **DME or RADAR required.** 2. EMERG SAFE ALT 100 NM 4900′.



LOC (GS out)	SPA TAC	3.0	4.0	5.0	6.0
	ALTITUDE	2020′	2340′	2660′	2970′

CAUTION: Missed apch climb gradient mim 4.1%. Climb rate to 4300′ mim 250′/NM.

Gnd speed-Kts	60	120	180	240	300	360
250′ per NM	250	499	748	997	1246	1495



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	377	484	538	646	753	861
MAP at D1.0 SPA TAC/RADAR FIX						

ALSF-II
REIL PAPI PAPI

5000′ SPA TAC via (109.5) R-222

Military STRAIGHT-IN LANDING RWY **23**

Missed apch climb gradient mim 4.1% up to 4300′

ILS		LOC (GS out)	
DA(H) ABC: 1397′ (200′) D: 1406′ (209′)		MDA(H) 1910′ (713′)	
FULL	ALS out		ALS out
A, B, C, D: 1200m	1600m	1200m	1600m
		2400m	3200m
		2800m	3600m

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100 / 135	1910′ (713′)	1600m
180	2170′ (973′)	4800m
205	2340′ (1143′)	4800m

MIPS

CHANGES: Arrival. Minimums.

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ETAD/SPM
SPANGDAHLEM AB

JEPPESEN SPANGDAHLEM, GERMANY
27 MAY 11 | 11-2A | Eff 2 Jun
CAT II ILS Rwy 23

LANGEN Radar	*SPANGDAHLEM Tower (R)
125.6	122.2

For UHF see MIL-101 listing

LOC	Final	GS	CAT II ILS	
ISPA	Apch Crs	Not published	RA/DA(H) Refer to Minimums	Apt Elev 1197′
108.1	225°			THR 1197′

MISSED APCH: Climbing to 5000′. Intercept SPA R-222 outbound to SPAE3, then turn RIGHT direct to ODROV/D11.0.

4300′
MSA
SPA TAC

Alt Set: INCHES | Trans level: By ATC | Trans alt: 5000′

1. EMERG SAFE ALT 100 NM 4900′. 2. Special Aircrew & Aircraft Certification required.

BRIEFING STRIP ™

PROCEDURE NOT AUTHORIZED AT NIGHT WHEN VGSI INOPERATIVE

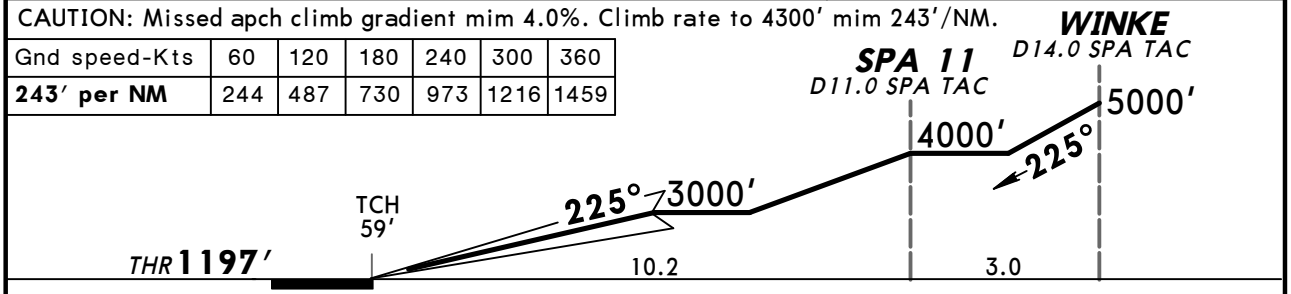
D11/17 170° 350°
2245′ ODROV D11.0 SPA TAC
1880′ MHA 4300 MAX 7000 MAX 265 KT
2034′
1821′
2126′
350°
041°
222°
SPAE3
Bitburg
1724′
ED(R)-205
06-40
06-50
50-10
50-00
10
5
0
5

1697′ SPA21
1687′ Buchel
7.0 5000
225°
1781′
(IAF) WINKE D14.0 SPA TAC
(IF) SPA11 D11.0 SPA TAC
225°
1617′
DME or RADAR required.
ILS DME reads zero at rwy 23 threshold.
2053′
1911′
CAUTION:
Radio altitude reading fluctuates rapidly on short final due to valley prior to the approach lights. Uncontrolled light acft operations in the vicinity of BITBURG apt up to 2700′.
1821′
ILS DME
225° 108.1 ISPA
DME FREQUENCY IS 111.9
TAC-32
SPANGDAHLEM
D (109.5) SPA

07-00
Radar required for holding above FL 140.
045° D28/35 225°
MIM FL 70
MAX FL 140
MAX 265 KT
7.0 FL 70
225°
(IAF) WEZEL D28.0 SPA TAC
SPA21 D21.0 SPA TAC

CAUTION: Missed apch climb gradient mim 4.0%. Climb rate to 4300′ mim 243′/NM.

Gnd speed-Kts	60	120	180	240	300	360
243′ per NM	244	487	730	973	1216	1459



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

ALSF-II
REIL PAPI PAPI

5000′ SPA TAC via (109.5) R-222

Military

STRAIGHT-IN LANDING RWY 23

CAT II ILS

Missed apch climb gradient mim 4.0% up to 4300′	Missed apch climb gradient mim 2.5% up to 4300′
ABCD	ABCD
RA 138′	**RA 138′**
DA(H) A:**1297′** (100′) C:**1314′** (117′) B:**1301′** (104′) D:**1328′** (131′)	DA(H) A:**1297′** (100′) C:**1315′** (118′) B:**1302′** (105′) D:**1328′** (131′)

370m

MIPS

CHANGES: Notes. Arrival. Minimums.

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General Information

Location: Ramstein Deu
IATA Code: RMS
Lat/Long: N49° 26.2' E007° 36.0'
Elevation: 781 ft

Airport Use: Military
Magnetic Variation: 1.2°E

Fuel Types: Jet A-1
Oxygen Types: High Pressure, Low Pressure
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0617 Z
Sunset: 1708 Z,

Runway Information

Runway: 08
Length x Width: 10498 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 761 ft
Lighting: Edge, ALS, Centerline, REIL
Stopway: 656 ft

Runway: 09
Length x Width: 9843 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 767 ft
Lighting: Edge, ALS, Centerline, REIL
Stopway: 656 ft

Runway: 26
Length x Width: 10498 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 776 ft
Lighting: Edge, ALS, Centerline, REIL, TDZ
Stopway: 656 ft

Runway: 27
Length x Width: 9843 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 781 ft
Lighting: Edge, ALS, Centerline, REIL
Stopway: 656 ft

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Communication Information

ATIS 142.125
ATIS 29.227 Military
Ramstein Tower 133.2 Military
Ramstein Tower 122.1 Military
Ramstein Tower 38.675 Military
Ramstein Tower 25.78 Military
Ramstein Ground Control 121.775 Military
Ramstein Ground Control 30.877 Military
Ramstein Radar 124.275
Ramstein Radar 35.622 Military
Dispatch Radio 36.912 Military
Amc Airlift Airlift Command Post 131.975 Military
Amc Airlift Airlift Command Post 35.58 Military

Apt Elev
781′

Trans level: By ATC Trans alt: 5000′
1. Do not turn before DER.
2. Emergency Safe Altitude within 100 NM of Ramstein AB 7200′.
3. SIDs are also noise abatement procedures. Strict adherence within the limits of performance criteria is mandatory.

For UHF see MIL-101 listing

BOLKI 2
RWYS 08, 09 DEPARTURE
NOT PLANNABLE WITHOUT TRANSITION

MINIMUM CLIMB RATE TABLE UP TO 1600′

RWY	KT	75	100	150	200	250	300
08	V/V (fpm)	325	433	650	867	1083	1300
09	V/V (fpm)	388	517	775	1033	1292	1550

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

NOT TO SCALE

Initial climb clearance: climb to and maintain **5000′**

RWY	INITIAL CLIMB
08	Climb on 082° track to RMS 3 DME, turn LEFT, 015° track, intercept RMS R-060 to BOLKI (non-TACAN equipped aircraft turn LEFT, 054° track ❶), expect further clearance prior to BOLKI or passing **4000′.**
09	Climb on 087° track to RMS 3 DME, turn LEFT, 015° track, intercept RMS R-060 to BOLKI (non-TACAN equipped aircraft climb on 087° track to RMS 3.5 DME ❷, turn LEFT, 054° track ❶), expect further clearance prior to BOLKI or passing **4000′.**

TRANSITION	ROUTING
BOLKI 2E *[BOLK2E]*	Proceed via airways **Q 762, Z 12** to RINEX.
BOLKI 2L *[BOLK2L]*	Proceed via airways **Q 762, W 718, Z 729, Q 760, Q 763** to LIMGO.
BOLKI 2N *[BOLK2N]*	Proceed via airway **Q 762** to RUDOT.
BOLKI 2S *[BOLK2S]*	Proceed via airway **Q 762** to BADLI.
BOLKI 2W *[BOLK2W]*	Proceed via airways **Q 762, W 718** to SBN.

CHANGES: Transition BOLKI 2N revised.

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Apt Elev	
781′	Trans level: By ATC Trans alt: 5000′ 1. Do not turn before DER. 2. Emergency Safe Altitude within 100 NM of Ramstein AB 7200′. 3. SIDs are also noise abatement procedures. Strict adherence within the limits of performance criteria is mandatory. 4. Avoid noise sensitive area on runway extended centerline between 2.8 NM and 5 NM.

For UHF see MIL-101 listing

TOLEY 2
RWYS 26, 27
DEPARTURE
NOT PLANNABLE WITHOUT TRANSITION

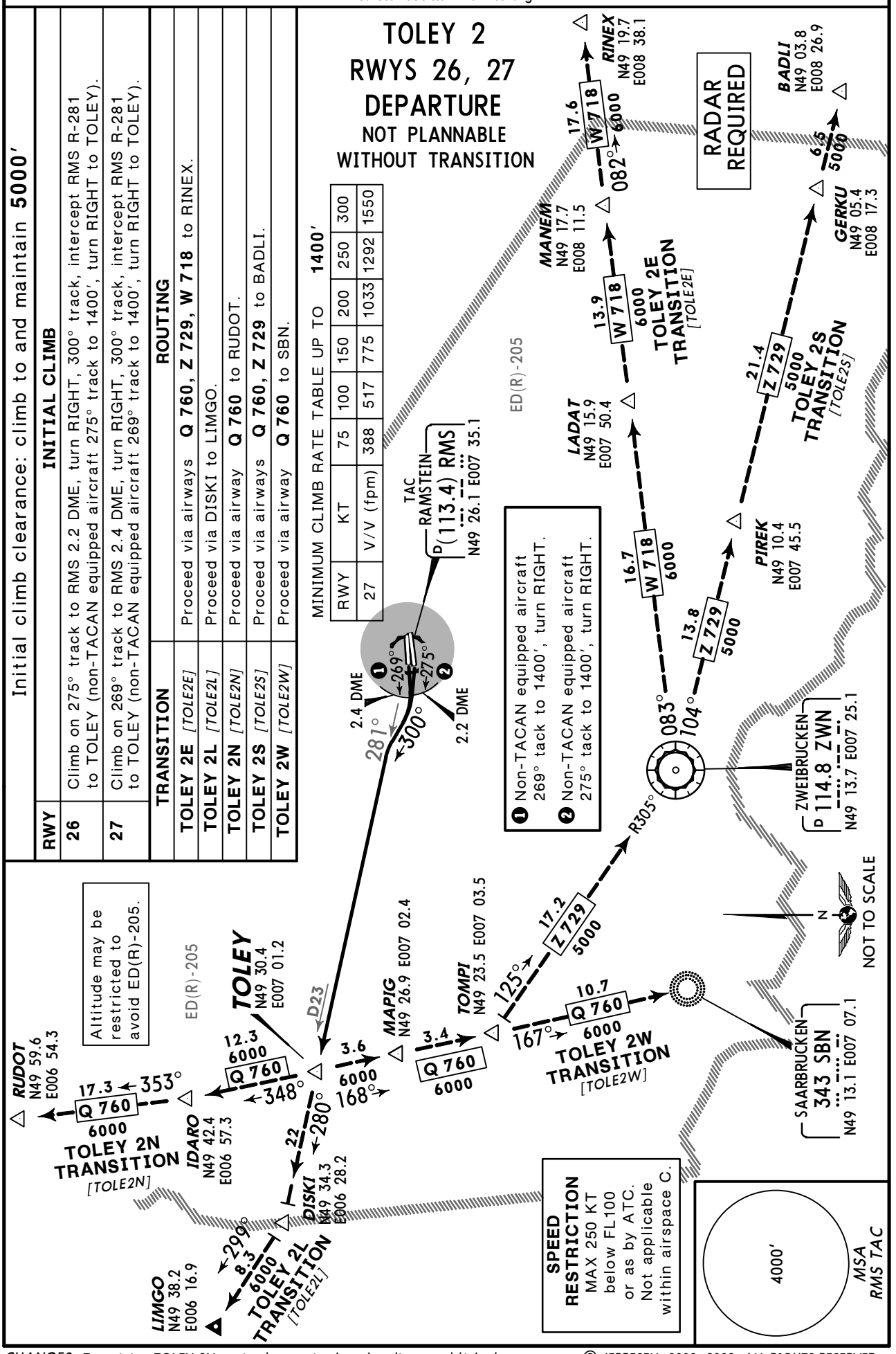
Initial climb clearance: climb to and maintain **5000′**

RWY	INITIAL CLIMB
26	Climb on 275° track to RMS 2.2 DME, turn RIGHT, 300° track, intercept RMS R-281 to TOLEY (non-TACAN equipped aircraft 275° track to 1400′, turn RIGHT to TOLEY).
27	Climb on 269° track to RMS 2.4 DME, turn RIGHT, 300° track, intercept RMS R-281 to TOLEY (non-TACAN equipped aircraft 269° track to 1400′, turn RIGHT to TOLEY).

TRANSITION	ROUTING
TOLEY 2E *[TOLE2E]*	Proceed via airways **Q 760, Z 729, W 718** to RINEX.
TOLEY 2L *[TOLE2L]*	Proceed via DISKI to LIMGO.
TOLEY 2N *[TOLE2N]*	Proceed via airway **Q 760** to RUDOT.
TOLEY 2S *[TOLE2S]*	Proceed via airways **Q 760, Z 729** to BADLI.
TOLEY 2W *[TOLE2W]*	Proceed via airway **Q 760** to SBN.

MINIMUM CLIMB RATE TABLE UP TO **1400′**

RWY	KT	75	100	150	200	250	300
27	V/V (fpm)	388	517	775	1033	1292	1550



CHANGES: Transition TOLEY 2N revised; note in chart heading established.

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ETAR/RMS

Apt Elev **781′**

N49 26.2 E007 36.4

JEPPESEN

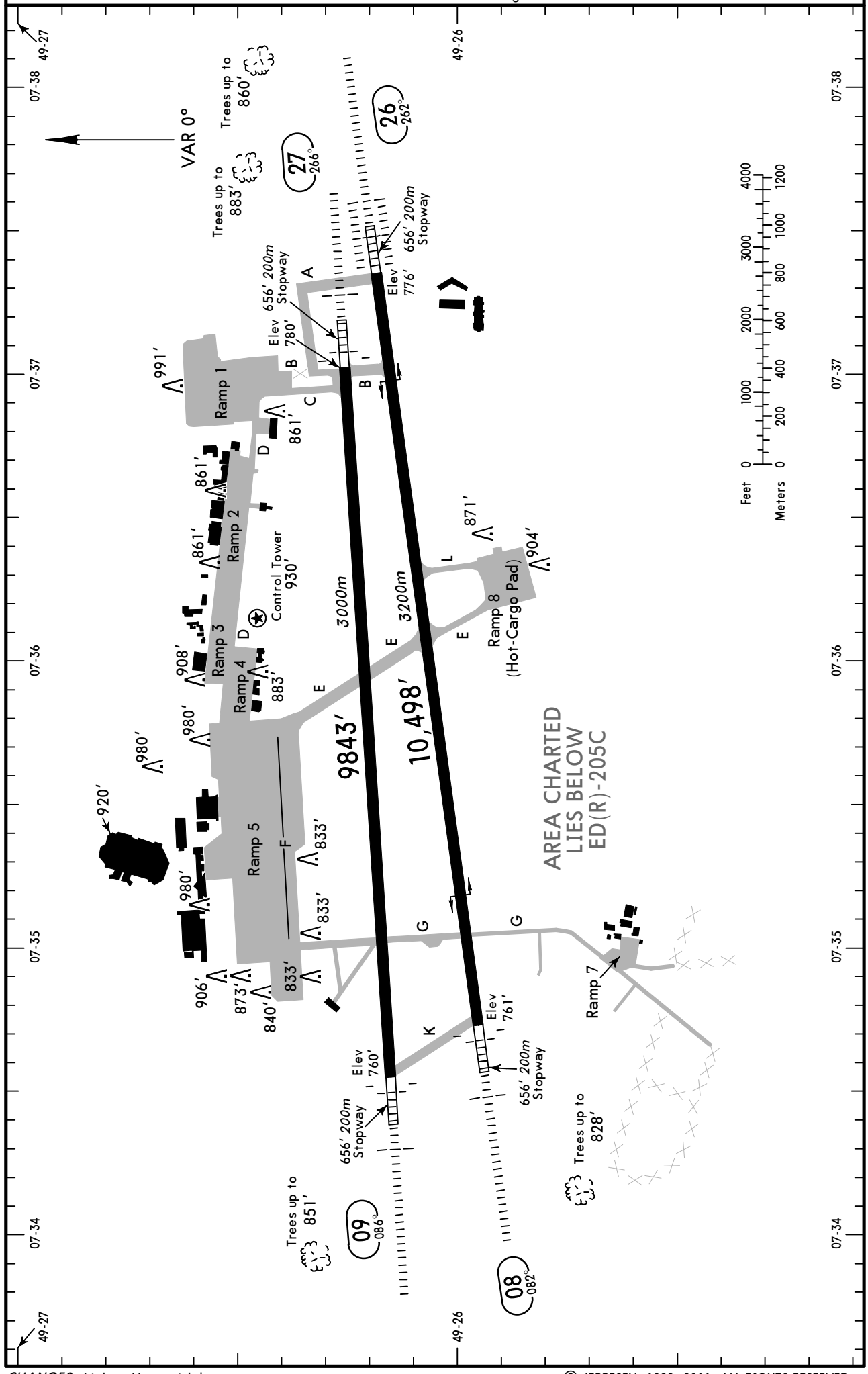
16 DEC 11 (10-9)

RAMSTEIN, GERMANY

RAMSTEIN AB

*ATIS	RAMSTEIN Ground	Tower
142.12	121.77	133.2

For UHF see MIL-101 listing



CHANGES: Lights. Note withdrawn.

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GENERAL

CAUTION: To avoid FOD, acft must use minimum power settings while taxiing, inboard engines only.
Do not use reverse thrust or above idle. Uncontrolled vehicles on ramps & twys.
Rwy 26 approved for CAT II/III operations, special aircrew & acft certification required.
Birds.
Rwys 08 and 26 right-hand circuit.

NOISE ABATEMENT

Mandatory quiet hour SUN-SAT between 2200(2300)LT-0600(0700)LT, SAT 2200(2300)LT-SUN 1300(1400)LT and german holiday.
Engine start not authorized prior to 0600(0700)LT without quiet hour waiver. SUN-german holiday engine start approved 30 minutes prior to end of quiet hour, but cannot depart until 1300(1400)LT.
Quiet hour waiver granted through GATEWAY COMD POST DSN 480-2121/2122 for mission essential traffic only.
RWY selection program in use to favor RWY 26.
5 KT tailwind component will not be exceeded.
TOLEY 2 is the preferred departure procedure for acft departing RWY 26 and 27. Strict adherence to ATC directed departure procedure is required due to noise abatement issues.

For aircraft licensed in accordance with ICAO Annex 16, Chapter 2:

Take-off to 2290'	take-off power take-off flaps climb at V_2 + 10 kt (or as limited by angle of attack)
At 2290'	reduce power to not less than climb power
2290' - 3790'	climb at V_2 + 10 kt
At 3790'	acceleration during climb and retraction of flaps normal transition to en-route climb

For aircraft licensed in accordance with ICAO Annex 16, Chapter 3 as well as B737-200 as far as the noise levels for take-off pursuant to ICAO Annex 16, Chapter 3 have provably been reached by supplementary equipment:

Take-off to 2290'	take-off power take-off flaps climb at V_2 + 10 kt (or as limited by angle of attack)
At 2290'	reduce power to not less than climb power acceleration during climb and retraction of flaps normal transition to en-route climb

ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	USABLE LENGTHS LANDING BEYOND Glide Slope	USABLE LENGTHS TAKE-OFF	WIDTH
08 ❶	HIRL *(60m)* CL ALSF-I REIL PAPI-R(3.0°) RVR		9466' *2885m*		148' *45m*
26	HIRL *(60m)* CL ALSF-II REIL TDZ ❷ RVR		9452' *2881m*		

❶ Rwy 08 first 1818'(554m) and rwy 26 first 1836'(560m) concrete, middle portion 6844'(2086m) grooved.

❷ PAPI-L(angle 3.0°)

09 ❸	HIRL CL ALSF-I REIL PAPI-R(angle 3.0°) RVR		8810' *2685m*		148' *45m*
27	HIRL CL ALSF-I REIL PAPI-L(angle 3.0°) RVR		8749' *2667m*		

❸ Rwy 09 first 1890'(576m) and rwy 27 first 985'(300m) concrete, middle portion 6968'(2124m) grooved.

Military

TAKE-OFF

	All Rwys
	STD
1 & 2 Eng	1
3 & 4 Eng	1/2

CHANGES: Notes. Lights.Minimums.

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*ATIS	LANGEN Radar	RAMSTEIN Tower	Ground
142.12	129.67	133.2	121.77

For UHF see MIL-101 listing

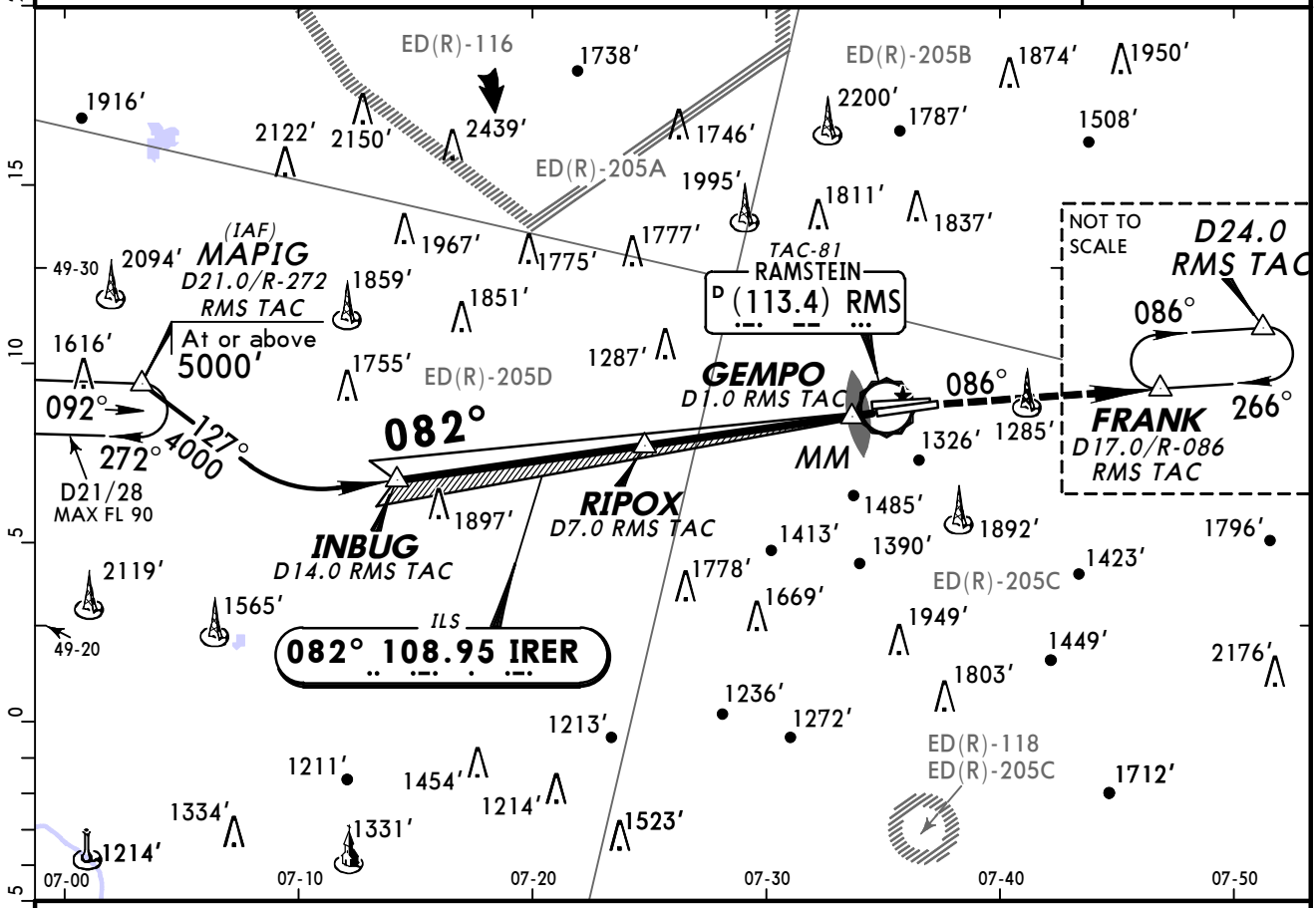
BRIEFING STRIP™

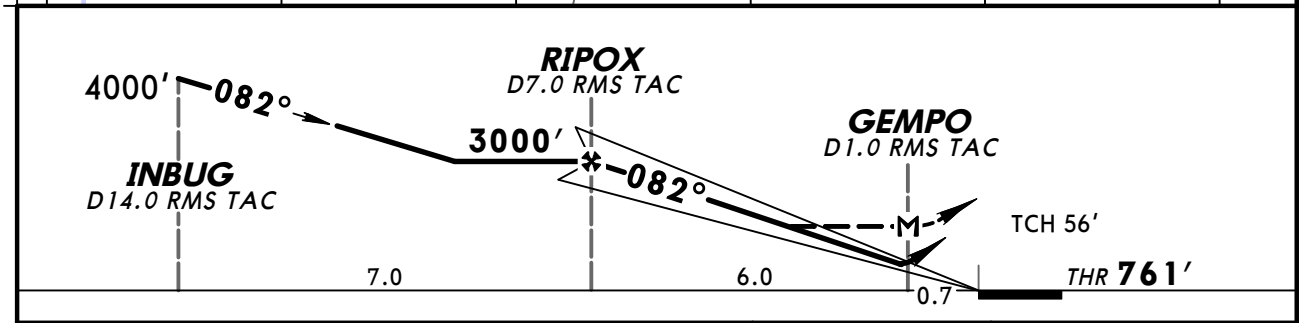
LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 781′
IRER 108.95	082°	RIPOX 3000′ (2239′)	Refer to Minimums	THR 761′

MISSED APCH FOR TACAN EQUIPPED ACFT: Climb on 082° to 5000′. Reaching 1800′ turn RIGHT to intercept R-086 RMS to FRANK and hold.
MISSED APCH FOR NON-TACAN EQUIPPED ACFT: Climb on 082° to 5000′. Reaching 1800′ proceed direct to FRANK and hold.

Alt Set: IN (hPa on req) THR Elev: 28 hPa Trans level: By ATC Trans alt: 5000′
1. LOC: **DME required.** 2. CAUTION: Uncontrolled traffic in AD vicinity.
3. EMERG SAFE ALT 100 NM 7200′.

4000′
MSA RMS TAC





Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	372	478	531	637	743	849
MAP at GEMPO/D1.0 RMS TAC						

ALSF-I
REIL PAPI

Refer to Missed Apch above

Military STRAIGHT-IN LANDING RWY **08**

	ILS DA(H) ABC: 961′ (200′) D: 970′ (209′)		LOC (GS out) MDA(H) 1400′ (639′)	
	FULL	ALS out		ALS out
A	800m	1200m	800m	1600m
B				
C			2000m	2800m
D		1600m	2400m	3200m

CIRCLE-TO-LAND
Not authorized South of rwy 08/26

Max Kts	MDA(H)	VIS
100	1720′ (939′)	2000m
135	1730′ (949′)	2000m
180	1870′ (1089′)	4800m
205	2260′ (1479′)	4800m

AMEND 2 MIPS

CHANGES: Minimums.

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*ATIS	LANGEN Radar	RAMSTEIN Tower	Ground
142.12	129.67	133.2	121.77

For UHF see MIL-101 listing

BRIEFING STRIP ™

LOC IREL	Final Apch Crs	GS IPTUD	ILS DA(H)	Apt Elev 781′
111.5	086°	3000′ (2240′)	Refer to Minimums	THR 760′

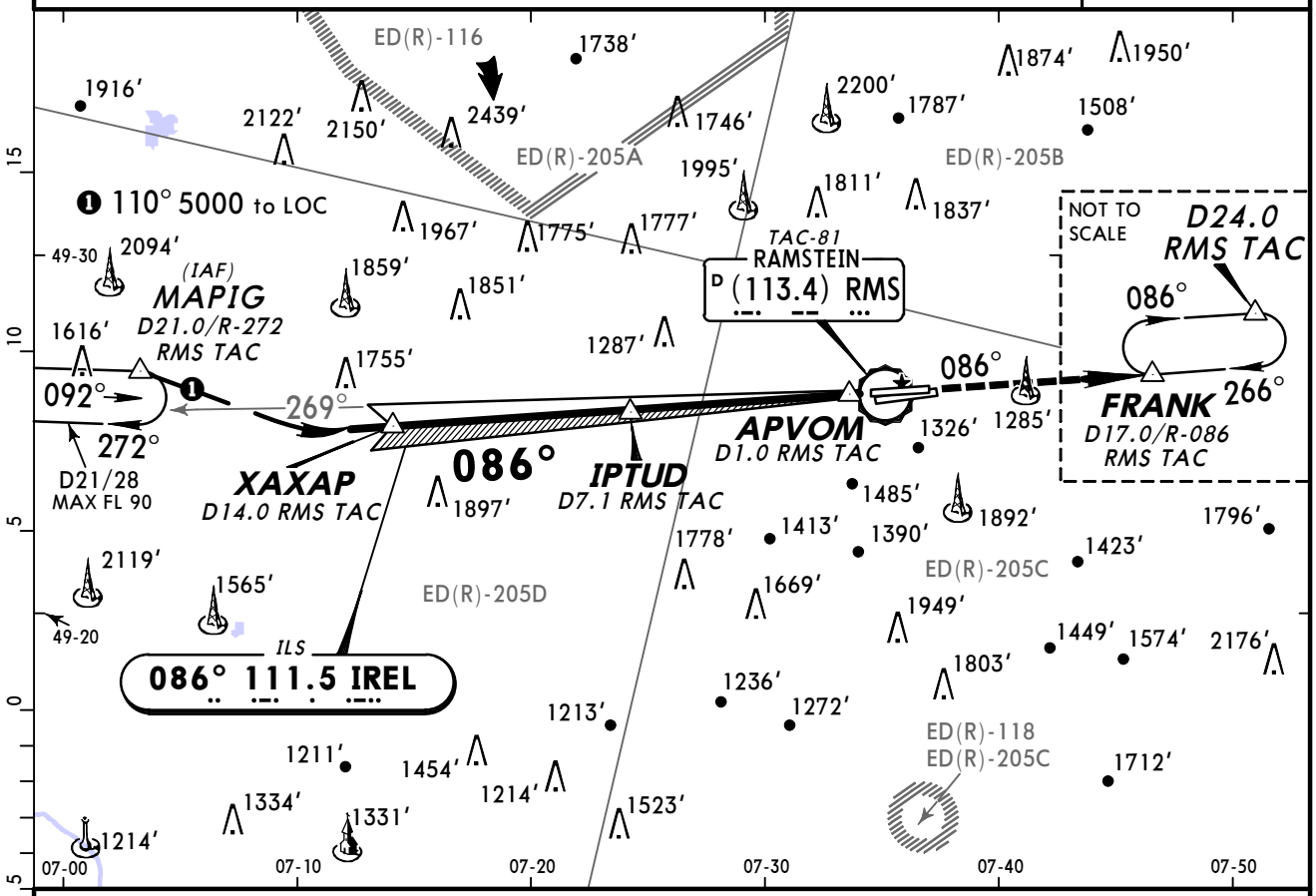
MISSED APCH: Climb to 5000′ on track 086° to intercept R-086 RMS outbound to FRANK (Non-TACAN equipped acft climb to 5000′ on track 086° to FRANK) and hold.

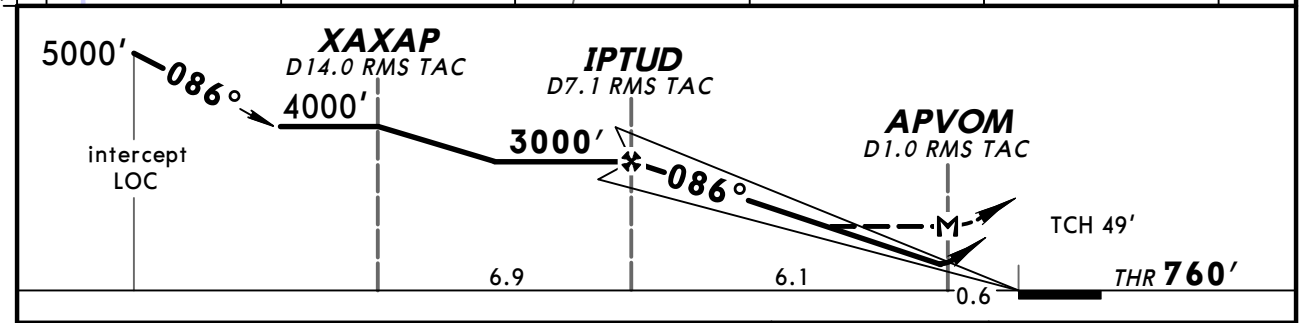
4000′

MSA
RMS TAC

Alt Set: IN (hPa on req) THR Elev: 28 hPa Trans level: By ATC Trans alt: 5000′

1. LOC: **DME required.** 2.CAUTION: Uncontrolled traffic in AD vicinity.
3.EMERG SAFE ALT 100 NM 7200′.





Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	372	478	531	637	743	849
MAP at APVOM/D1.0 RMS TAC						

ALSF-I
REIL PAPI

Refer to Missed Apch above

Military

STRAIGHT-IN LANDING RWY **09**

	ILS DA(H)		LOC (GS out) MDA(H)	
	ABC: 960′ (200′) D: 970′ (210′)		1520′ (760′)	
	FULL	ALS out		ALS out
A	800m	1200m	800m	1600m
B			1200m	2000m
C			2800m	3600m
D		1600m	3200m	4000m

CIRCLE-TO-LAND
Not authorized
South of rwy 08/26

Max Kts	MDA(H)	VIS
100	1660′ (879′)	1600m
135	1710′ (929′)	2000m
180	1870′ (1089′)	4800m
205	2260′ (1479′)	4800m

AMDT 0 MIPS

CHANGES: Notes. Minimums.

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ETAR/RMS
RAMSTEIN AB

JEPPESEN
16 DEC 11 (11-3)

RAMSTEIN, GERMANY
ILS or LOC Rwy 26

*ATIS	LANGEN Radar	RAMSTEIN Tower	Ground
142.12	129.67	133.2	121.77

For UHF see MIL-101 listing

BRIEFING STRIP™

LOC	Final	GS	ILS	
IRWL	Apch Crs	SUDUB	DA(H)	Apt Elev 781′
110.5	**262°**	**2700′** (1924′)	**976′** (200′)	THR **776′**

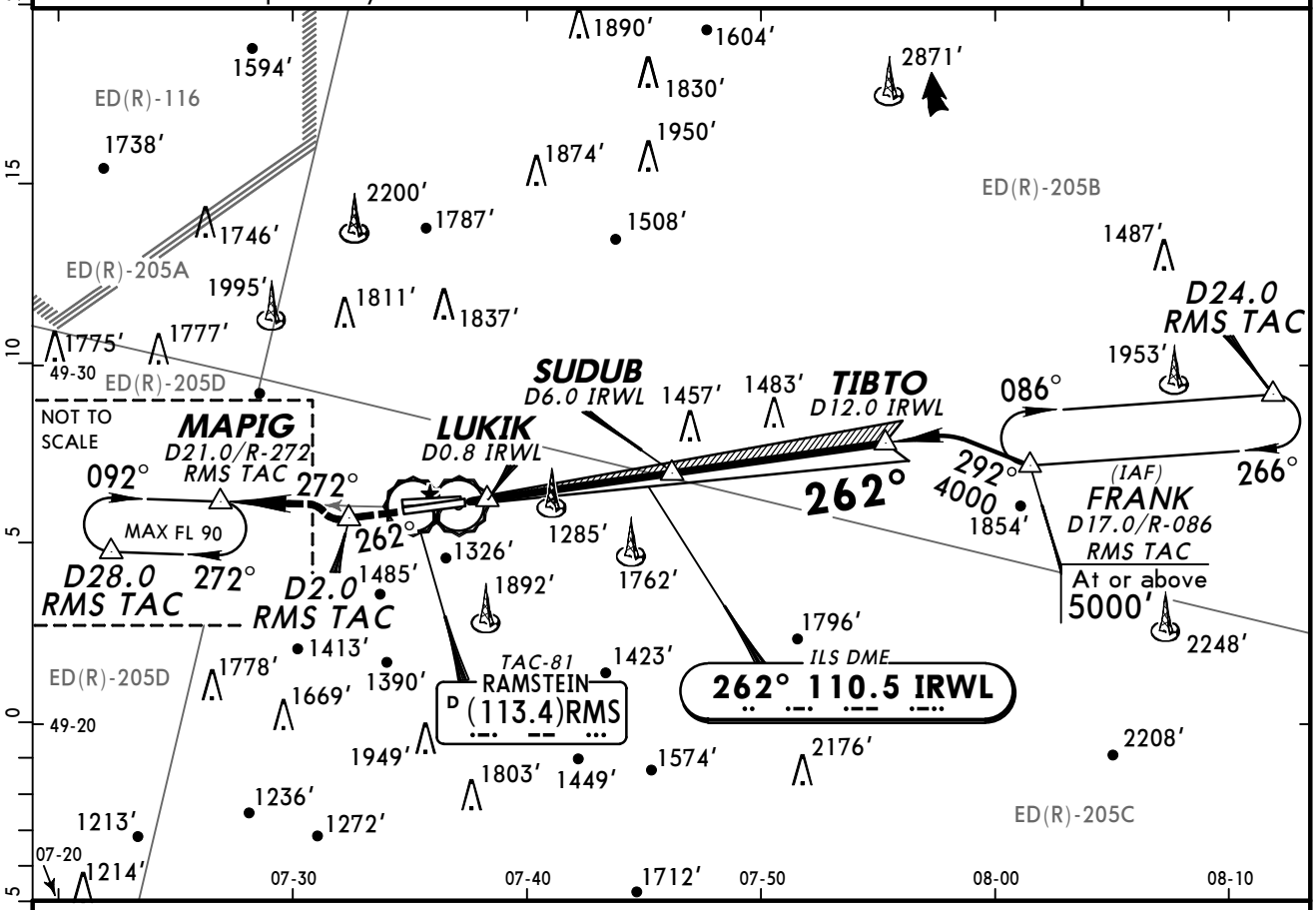
MISSED APCH: Climb on track 262° to 5000′. At D2.0 RMS turn RIGHT to heading 317° to intercept R-272 RMS outbound direct MAPIG (Non-TACAN equipped aircraft track 262° to D2.0 RMS, then turn RIGHT direct MAPIG) and hold.

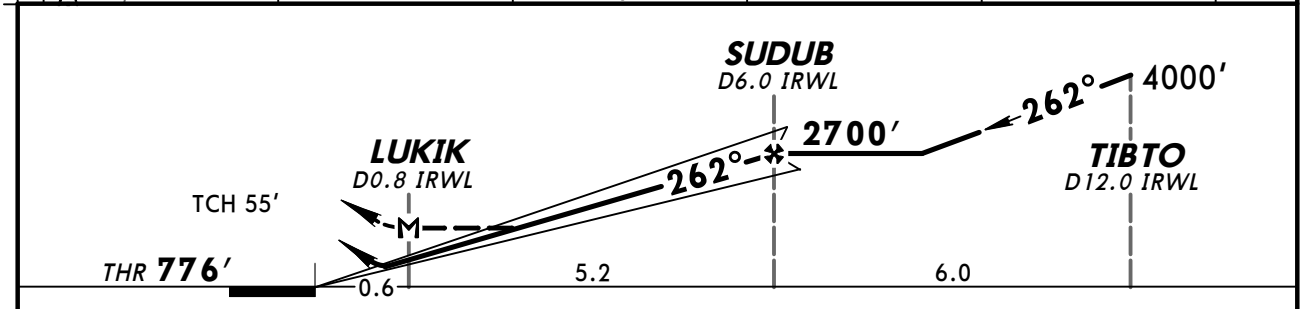
Alt Set: IN (hPa on req) THR Elev: 28 hPa Trans level: By ATC Trans alt: 5000′

1. RADAR required for Non-TACAN equipped aircraft. 2. LOC: **DME required.** 3. CAUTION: Uncontrolled traffic in AD vicinity. 4. CAUTION: Rwy 26 and 27 thresholds in close proximity. 5. EMERG SAFE ALT 100 NM 7200′.

4000′

MSA
RMS TAC





Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	372	478	531	637	743	849
MAP at LUKIK/D0.8 IRWL						

ALSF-II
REIL
PAPI

D2.0
RMS TAC
on **262°**

Military

STRAIGHT-IN LANDING RWY **26**

CIRCLE-TO-LAND

Not authorized
South of rwy 08/26

	ILS DA(H) 976′ (200′) FULL	ILS DA(H) 976′ (200′) ALS out	LOC (GS out) MDA(H) 1710′ (934′)	LOC (GS out) MDA(H) 1710′ (934′) ALS out	Max Kts	CIRCLE-TO-LAND MDA(H)	CIRCLE-TO-LAND VIS
A	800m	1200m	1200m	2000m	100	1710′ (929′)	2000m
B					135		
C			3600m	4400m	180	2020′ (1239′)	4800m
D			4000m	4800m	205	2260′ (1479′)	4800m

AMEND 0 MIPS

CHANGES: Note. Minimums.

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ETAR/RMS
RAMSTEIN AB

JEPPESEN
16 DEC 11 (11-3A)

RAMSTEIN, GERMANY
CAT II ILS Rwy 26

*ATIS	LANGEN Radar	RAMSTEIN Tower	Ground
142.12	129.67	133.2	121.77

For UHF see MIL-101 listing

LOC	Final Apch Crs	GS	CAT II ILS	Apt Elev / THR
IRWL **110.5**	**262°**	**SUDUB** **2700′** (1924′)	**RA 99′** DA(H) 876′ (100′)	781′ / THR **776′**

MISSED APCH: Climb on track 262° to 5000′. At D2.0 RMS turn RIGHT to heading 317° to intercept R-272 RMS outbound direct MAPIG (Non-TACAN equipped aircraft track 262° to D2.0 RMS, then turn RIGHT direct MAPIG) and hold.

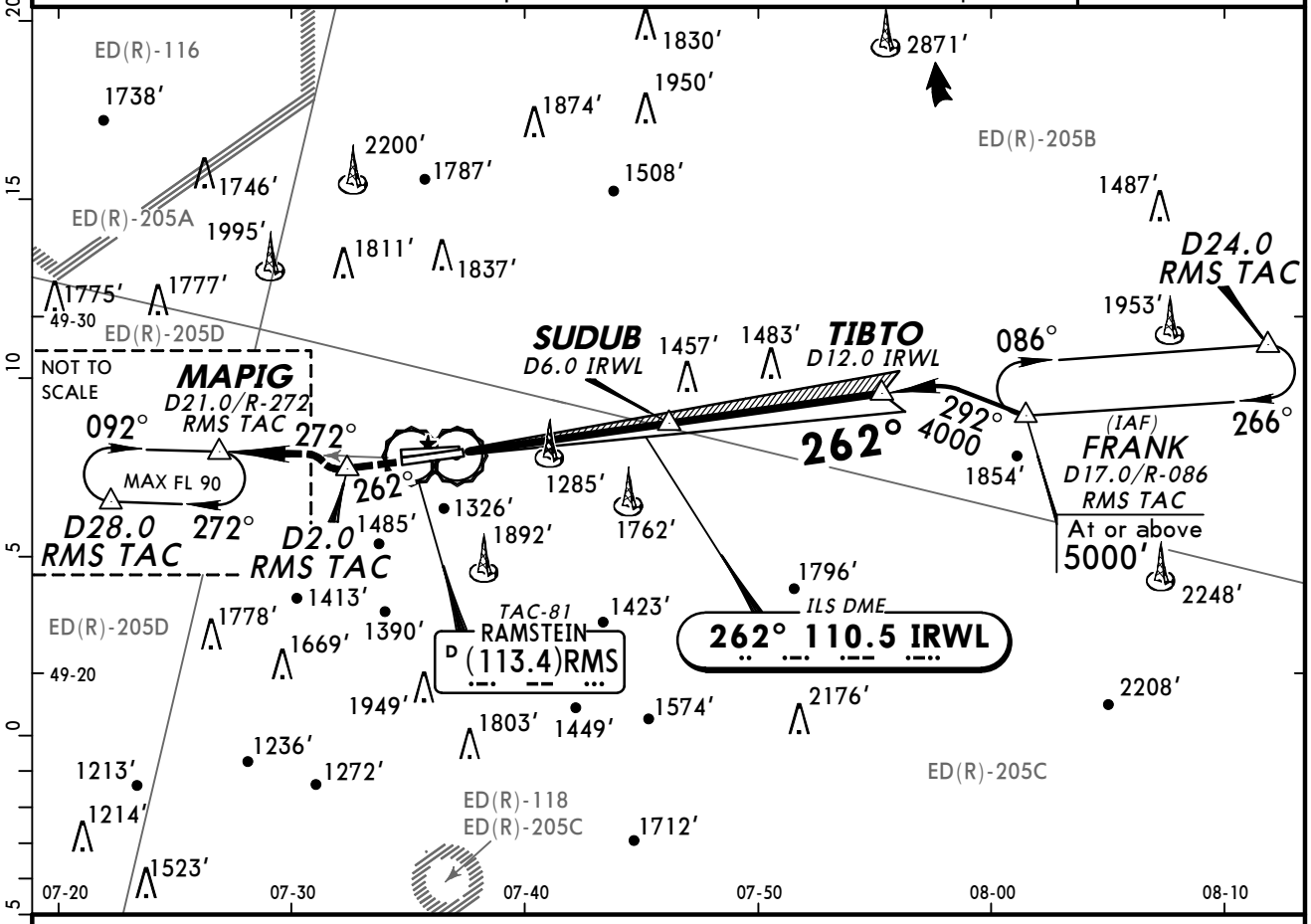
Alt Set: IN (hPa on req) THR Elev: 28 hPa Trans level: By ATC Trans alt: 5000′

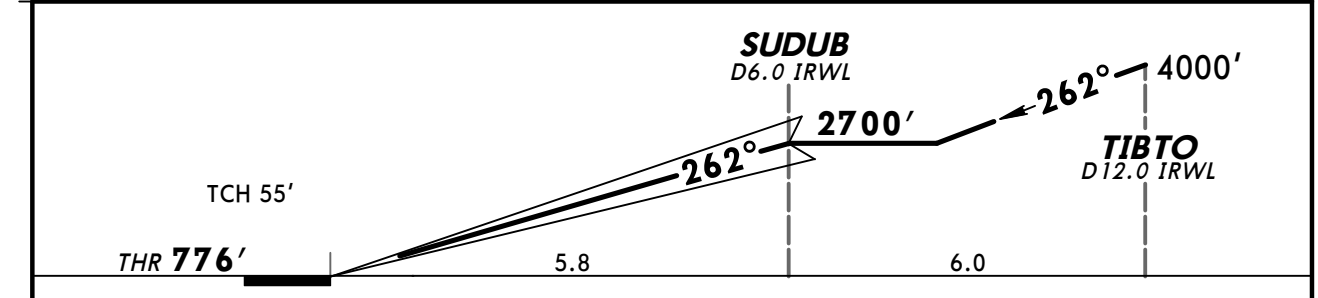
1. **RADAR required for Non-TACAN equipped aircraft.**
2. CAUTION: Uncontrolled traffic in AD vicinity.
3. CAUTION: Rwy 26 and 27 thresholds in close proximity.
4. EMERG SAFE ALT 100 NM 7200′. 5. Special Aircrew & Acft Certification Required.

4000′

MSA
RMS TAC

BRIEFING STRIP™





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

ALSF-II
REIL
PAPI

D2.0
RMS TAC on **262°**

Military

STRAIGHT-IN LANDING RWY **26**
CAT II ILS

ABCD
RA 99′
DA(H) **876′** (100′)

RVR *370m*

AMDT 0 MIPS

CHANGES: Note.

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ETAR/RMS
RAMSTEIN AB

JEPPESEN
11 NOV 11 (11-4) Eff 17 Nov

RAMSTEIN, GERMANY
ILS or LOC Rwy 27

LANGEN Radar	RAMSTEIN Tower	Ground
129.67	133.2	121.77

For UHF see MIL-101 listing

BRIEFING STRIP™

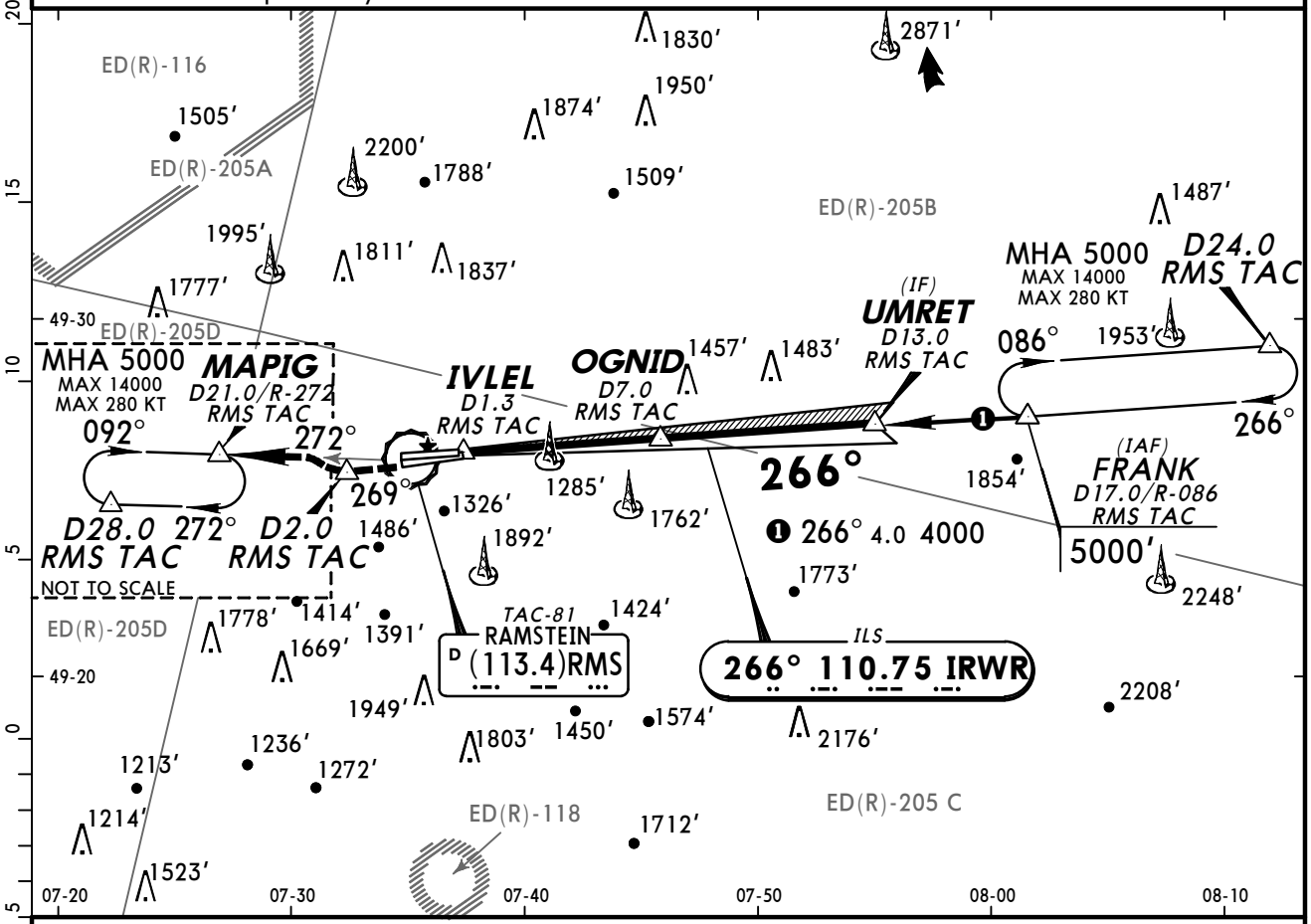
LOC	Final	GS	ILS	
IRWR	Apch Crs	OGNID	DA(H)	Apt Elev 781′
110.75	266°	2700′ (1920′)	980′ (200′)	THR 780′

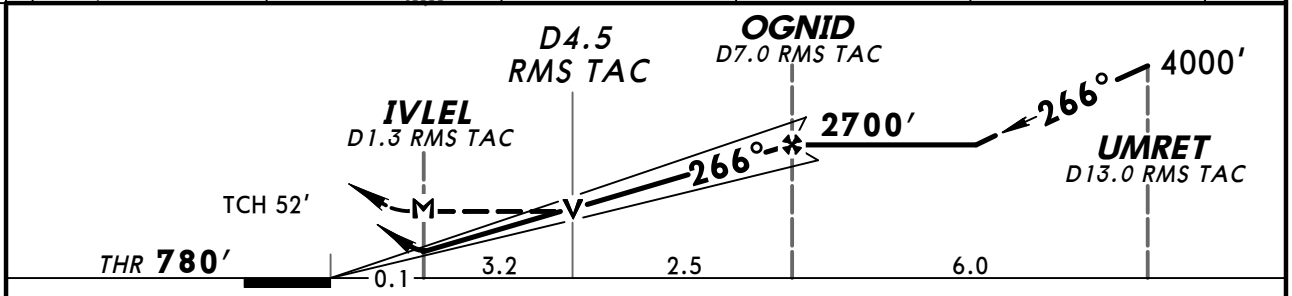
MISSED APCH: Climb on track 269° to 5000′. At D2.0 RMS turn RIGHT to intercept R-272 RMS outbound to MAPIG and hold. (Non-TACAN equipped acft: Climb on track 269° to 5000′. At D2.0 RMS turn RIGHT direct MAPIG or expect radar vectors.)

4000′
MSA
RMS TAC

Alt Set: IN (hPa on req) Thr Elev: 28 hPa Trans level: By ATC Trans alt: 5000′

1. DME required. 2. CAUTION: Uncontrolled traffic in AD vicinity. 3. CAUTION: Rwy 26 and 27 thresholds in close proximity.





Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	377	484	538	646	753	861
LOC Descent angle	3.14°	389	500	556	667	778	889
MAP at IVLEL/D1.3 RMS TAC							

ALSF-I
REIL
PAPI

Refer to Missed Apch above

Military STRAIGHT-IN LANDING RWY **27**

	ILS		LOC (GS out)			
	DA(H) 980′ (200′)		Missed apch climb gradient mim 3.3% MDA(H) 1320′ (540′)		Missed apch climb gradient mim 2.5% MDA(H) 1870′ (1090′)	
		ALS out		ALS out		ALS out
A	800m	1200m	800m	2000m	1200m	2000m
B					1600m	
C			1600m	4400m	4000m	4400m
D			2000m	4800m		4800m

CIRCLE-TO-LAND

Not authorized South of rwy 08/26

Max Kts	Missed apch climb gradient mim 3.3% MDA(H)	VIS	Missed apch climb gradient mim 2.5% MDA(H)	VIS
100	1400′ (619′)	1600m	1870′ (1089′)	2000m
135	1460′ (679′)	1600m	1870′ (1089′)	2400m
180	1870′ (1089′)	4800m	1870′ (1089′)	4800m
205	2340′ (1559′)	4800m	2340′ (1559′)	4800m

AMDT 2 MIPS

CHANGES: Holding altitudes. Minimums.

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*ATIS	LANGEN Radar	RAMSTEIN Tower	Ground
142.12	129.67	133.2	121.77

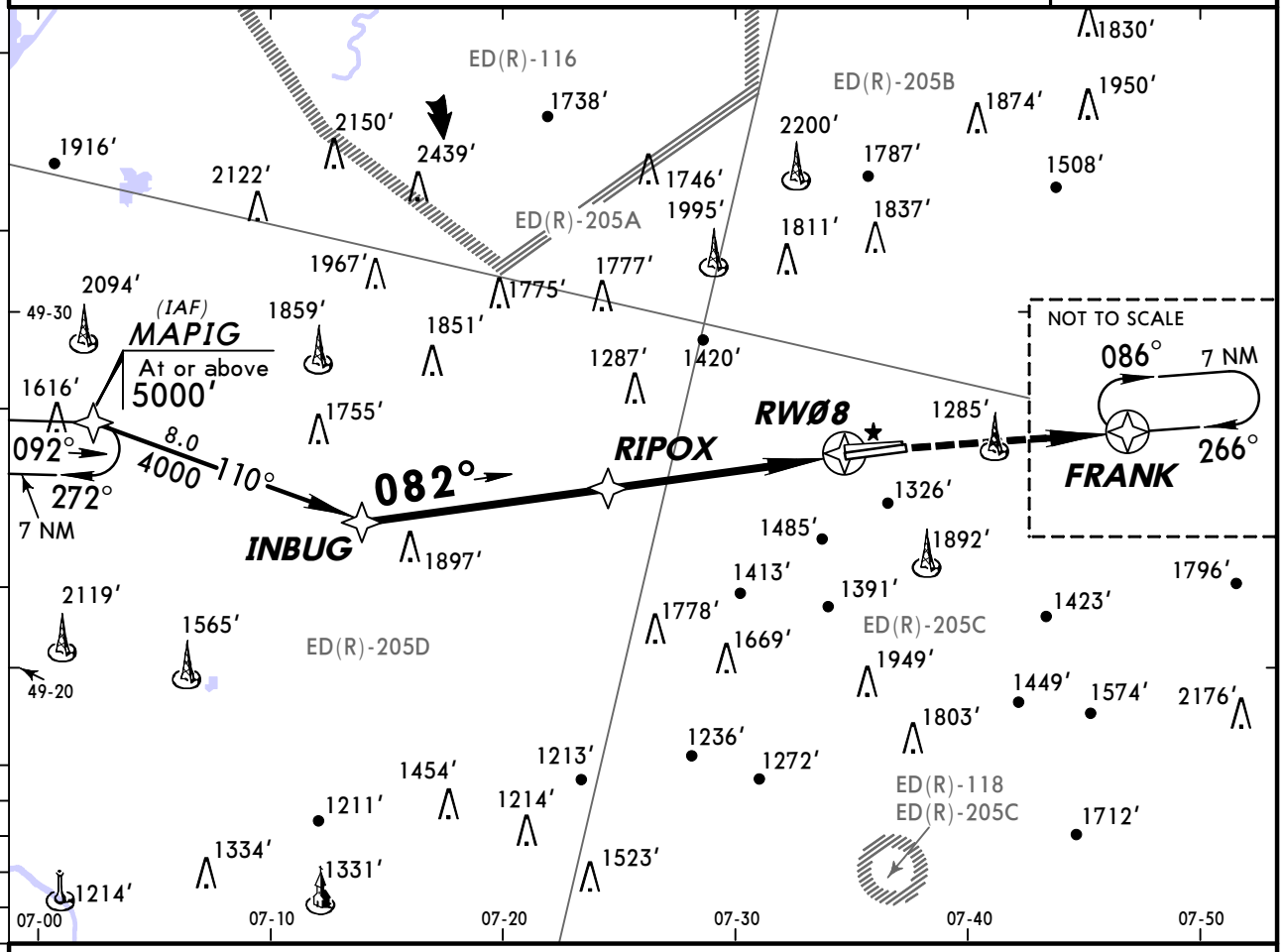
For UHF see MIL-101 listing

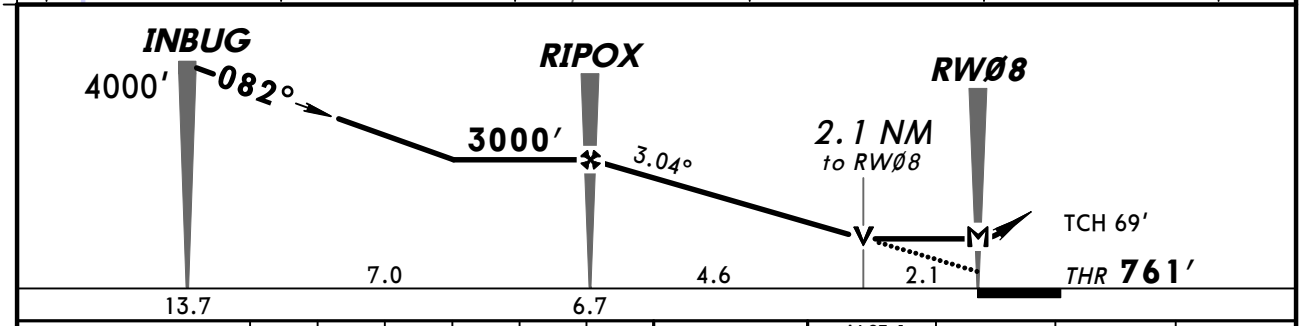
BRIEFING STRIP™

RNAV	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / THR
	082°	RIPOX 3000′ (2239′)	1500′ (739′)	Apt Elev 781′ THR 761′

MISSED APCH: Climbing to 5000′ direct to FRANK and hold.

Alt Set: IN (hPa on req) THR Elev: 28 hPa Trans level: By ATC Trans alt: 5000′
1. CAUTION: Uncontrolled traffic in AD vicinity. 2. EMERG SAFE ALT 100 NM 7200′.
3. DME/DME RNP -0.3 not authorized.





Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.04°	376	484	538	645	753	861
MAP at RWØ8						

ALSF-I
REIL PAPI
5000′
FRANK

Military STRAIGHT-IN LANDING RWY **08**

MDA(H) **1500′** (739′)

	ALS out
A	1600m
B	1600m
C	3200m
D	3600m

CIRCLE-TO-LAND

Not authorized South of rwy 08/26

Max Kts	MDA(H)	VIS
100	1720′ (939′)	2000m
135	1730′ (949′)	2000m
180	1870′ (1089′)	4800m
205	2260′ (1479′)	4800m

MIPS AMDT 1

CHANGES: Minimums.

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ETAR/RMS
RAMSTEIN AB

JEPPESEN
16 DEC 11 (12-2)

RAMSTEIN, GERMANY
RNAV (GPS) Rwy 26

*ATIS	LANGEN Radar	RAMSTEIN Tower	Ground
142.12	129.67	133.2	121.77

For UHF see MIL-101 listing

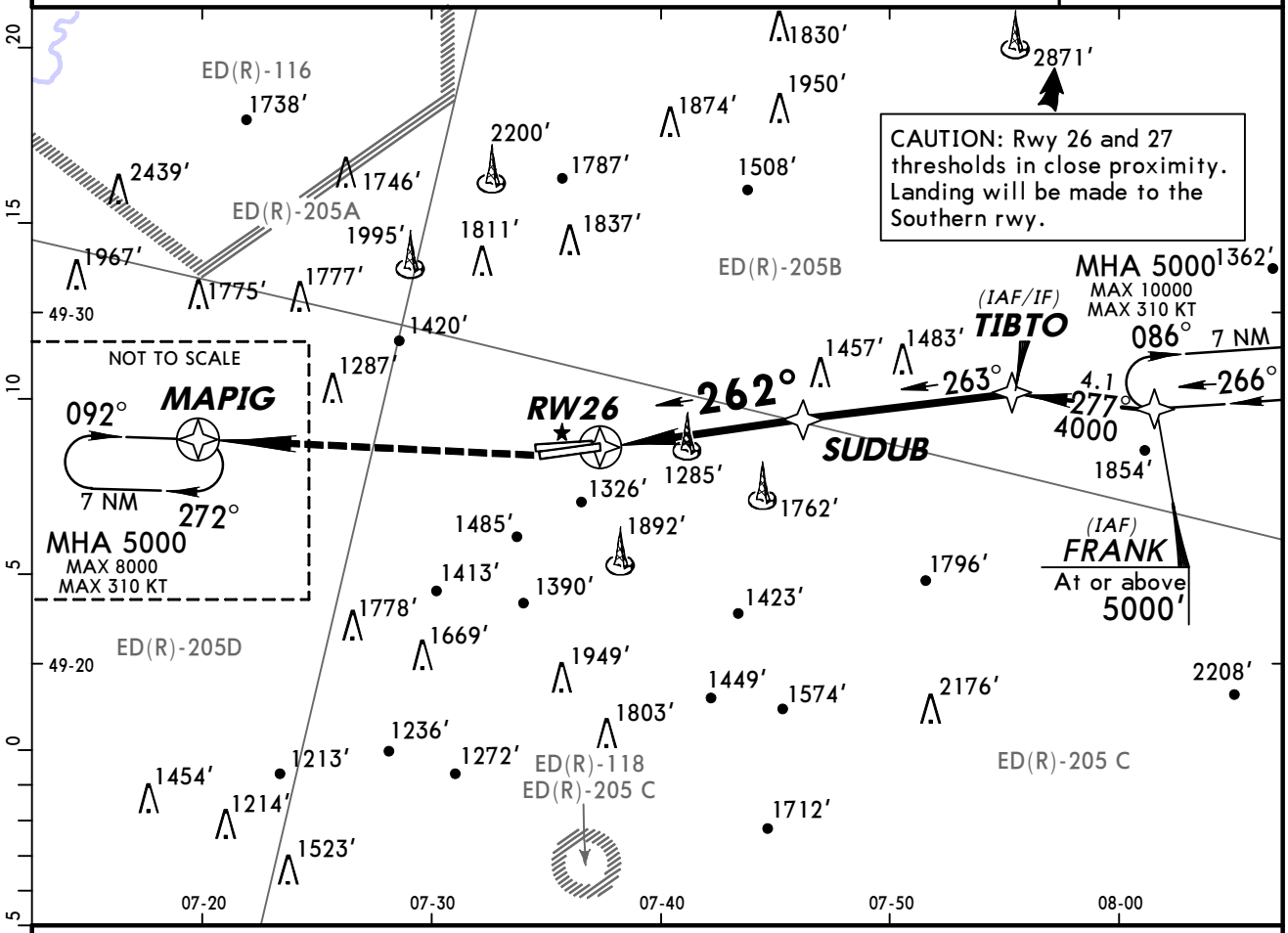
BRIEFING STRIP™

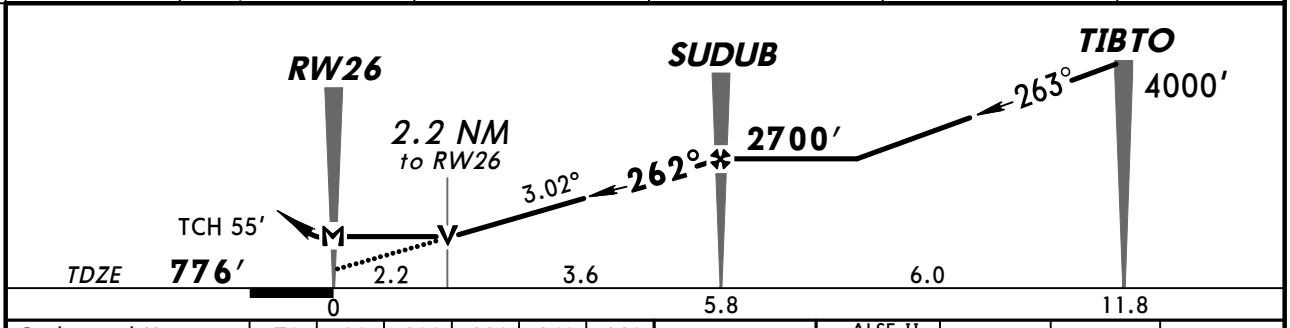
RNAV	Final Apch Crs	Minimum Alt SUDUB	LNAV MDA(H)	Apt Elev 781′ TDZE 776′
	262°	2700′ (1924′)	1520′ (744′)	

MISSED APCH: Climbing to 5000′ proceed direct to MAPIG and hold.

Alt Set: IN (hPa on req) TDZ Elev: 28 hPa Trans level: By ATC Trans alt: 5000′
1. CAUTION: Uncontrolled traffic in AD vicinity. 2. EMERG SAFE ALT 100 NM 7200′.
3. DME/DME RNP-0.3 not authorized.

4000′
MSA RW26





Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.02°	374	481	534	641	748	855
MAP at RW26						

ALSF-II
REIL
PAPI
5000′
MAPIG

Military STRAIGHT-IN LANDING RWY **26**

LNAV
MDA(H) **1520′** (744′)

		ALS out
A	750m	1600m
B	1200m	2000m
C	2700m	3500m
D		

CIRCLE-TO-LAND

Not authorized South of rwy 08/26

Max Kts	MDA(H)	VIS
100	1660′ (879′)	2000m
135	1680′ (899′)	2000m
180	1840′ (1059′)	4800m
205	2220′ (1439′)	4800m

AMEND 2 MIPS

CHANGES: Missed apch. Note. Holding altitude. Minimums.

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General Information

Location: Nordholz Deu
IATA Code: FCN
Lat/Long: N53° 46.1' E008° 39.5'
Elevation: 74 ft

Airport Use: Military
Magnetic Variation: 1.4°E

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

Sunrise: 0619 Z
Sunset: 1657 Z,

Runway Information

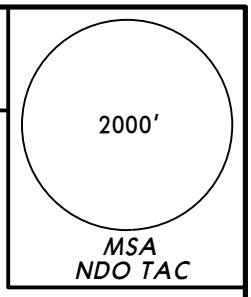
Runway: 08
Length x Width: 8002 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 74 ft
Lighting: Edge, ALS, Centerline

Runway: 26
Length x Width: 8002 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 67 ft
Lighting: Edge, ALS, Centerline

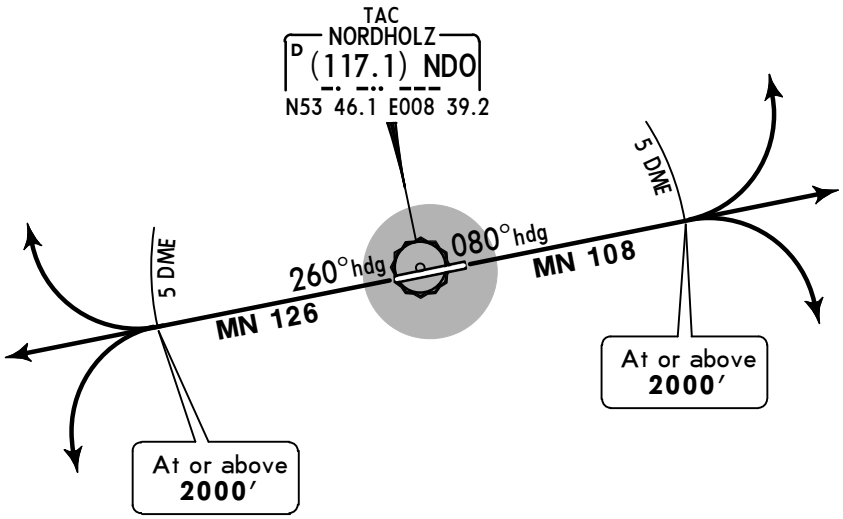
Communication Information

Nordholz Tower 142.9 Military
Nordholz Tower 131.25
Nordholz Tower 122.1 Military
Nordholz Tower 31.57 Military
Nordholz Tower 25.78 Military
Nordholz Radar 141.6 Military
Nordholz Radar 129.85 Military
Nordholz Radar 123.3 Military
Nordholz Radar 38.54 Military
Nordholz Radar 37.612 Military
Nordholz Radar 35.612 Military
Nordholz Radar 34.4 Military
Nordholz Radar 27.835 Military

Apt Elev	
74′	Trans level: By ATC Trans alt: 5000′ Emergency Safe Altitude within 100 NM of Nordholz Navy airport 2700′.

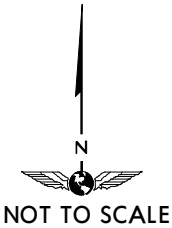


MN 108, MN 126
RWYS 08, 26 DEPARTURES



MINIMUM CLIMB RATE TABLE up to **2000′**

RWY	KT	75	100	150	200	250	300
08	V/V (fpm)	585	780	1170	1560	1950	2340
26	V/V (fpm)	538	717	1075	1433	1792	2150



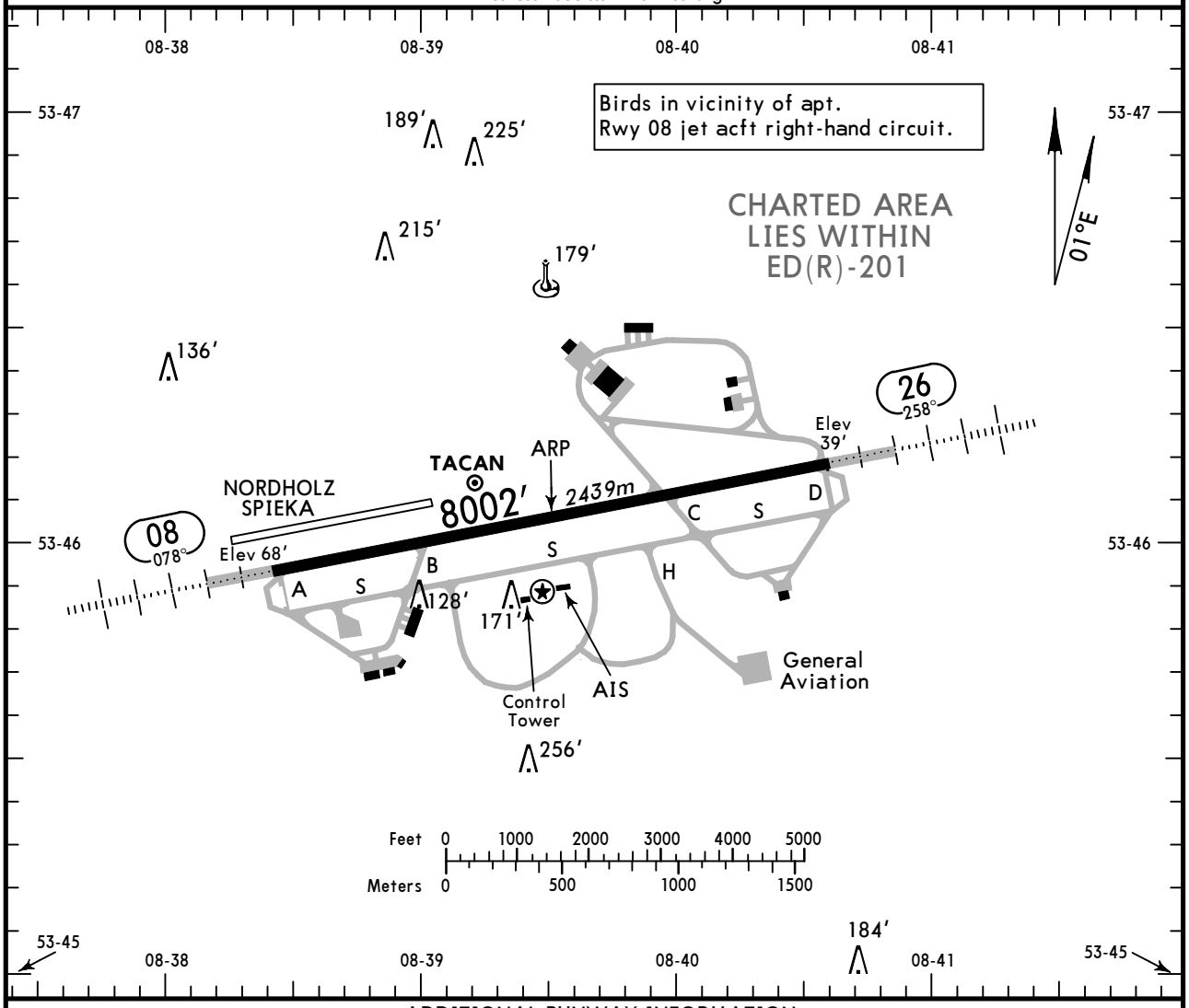
MILITARY

SID	RWY	ROUTING
MN 108	**08**	Climb on 080° heading to **2000′**, continue as cleared by ATC.
MN 126	**26**	Climb on 260° heading to **2000′**, continue as cleared by ATC.

CHANGES: New procedures at this airport.

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*NORDHOLZ Tower
131.25 (civ) 122.1
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
08 26	HIRL ❶ CL *(32m)* HIALS SFL PAPI (angle 3.0°)		7151′ *2180m*		148′ *45m*

❶ Distance from rwy edge: 7′/2m.

Standard TAKE-OFF ❶

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

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

JAR-OPS TAKE-OFF

	LVP must be in force ❷				
	RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
COPTER	*150m*	*200m*	*200m*	*250m* ❸	*800m*

❷ Without LVP 400m are stipulated.
❸ Or rejected take-off distance whichever is the greater.

CHANGES: Stopway rwy 26 withdrawn.

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BREMEN Radar	*NORDHOLZ Tower	
124.07	131.25 (civ)	122.1

For UHF see MIL-101 listing

BRIEFING STRIP TM

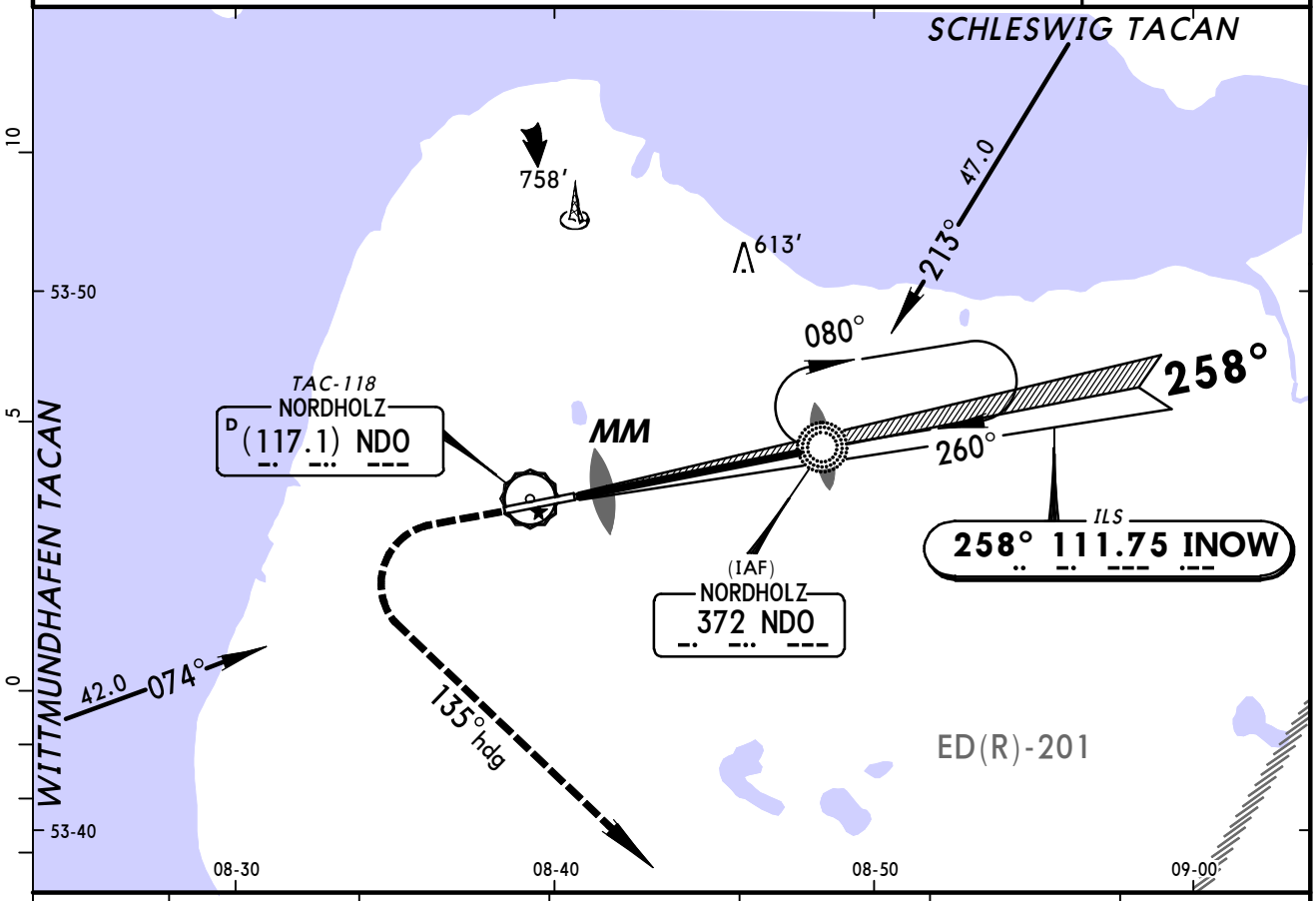
LOC	Final Apch Crs	GS LOM	ILS DA(H)	Apt Elev / TDZE
INOW 111.75	258°	1601′ (1534′)	267′ (200′)	74′ / 67′

MISSED APCH: Climb STRAIGHT AHEAD to 1000′, then turn LEFT onto hdg 135°. Continue climbing to 2000′. Intercept 9 DME Arc NDO TAC or proceed as cleared by ATC.

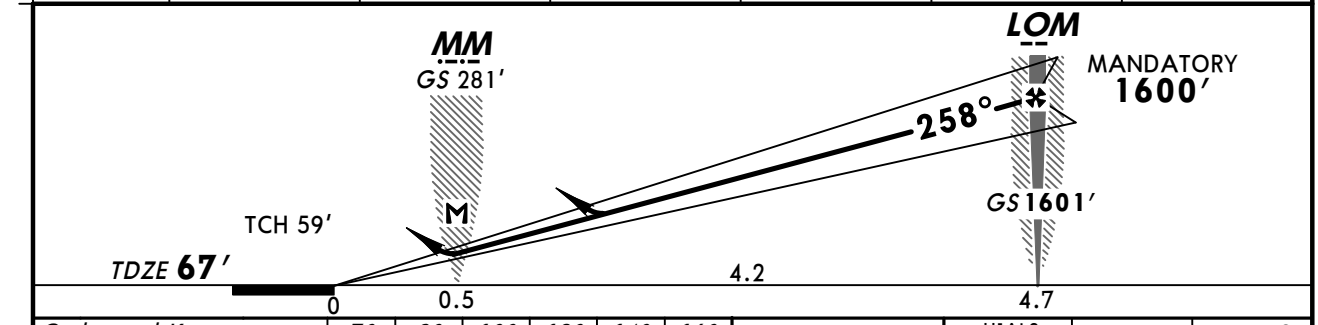
2000′

MSA NDO NDB

Alt Set: hPa (IN on req) TDZ Elev: 2 hPa Trans level: By ATC Trans alt: 5000′



LOC (GS out)	NDO TAC	2.0	3.0	4.0	5.0	5.5
	ALTITUDE	490′	810′	1130′	1450′	1600′



Gnd speed-Kts	70	90	100	120	140	160	
ILS GS or LOC Descent angle 3.00°	377	484	538	646	753	861	
LOM to MAP 4.2	3:36	2:48	2:31	2:06	1:48	1:35	or MAP at MM

HIALS PAPI PAPI

1000′

135° hdg LT

Standard STRAIGHT-IN LANDING RWY **26** **CEILING REQUIRED** CIRCLE-TO-LAND

TERPS

	ILS DA(H) 267′ (200′) FULL/Limited	ILS DA(H) 267′ (200′) ALS out	LOC (GS out) DA(H) 380′ (313′)	LOC (GS out) DA(H) 380′ (313′) ALS out
A	200′- 800m	200′- 1200m	400′- 800m	400′- 1600m
B				
C			400′- 1200m	
D				

Max Kts	MDA(H)	CEIL-VIS
90	560′ (486′)	500′- 1600m
120	580′ (506′)	500′- 1600m
140	680′ (606′)	500′- 2400m
D	NOT APPLICABLE	

CHANGES: BREMEN Radar frequency.

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BREMEN Radar	*NORDHOLZ Tower	
124.07	131.25 (civ)	122.1

For UHF see MIL-101 listing

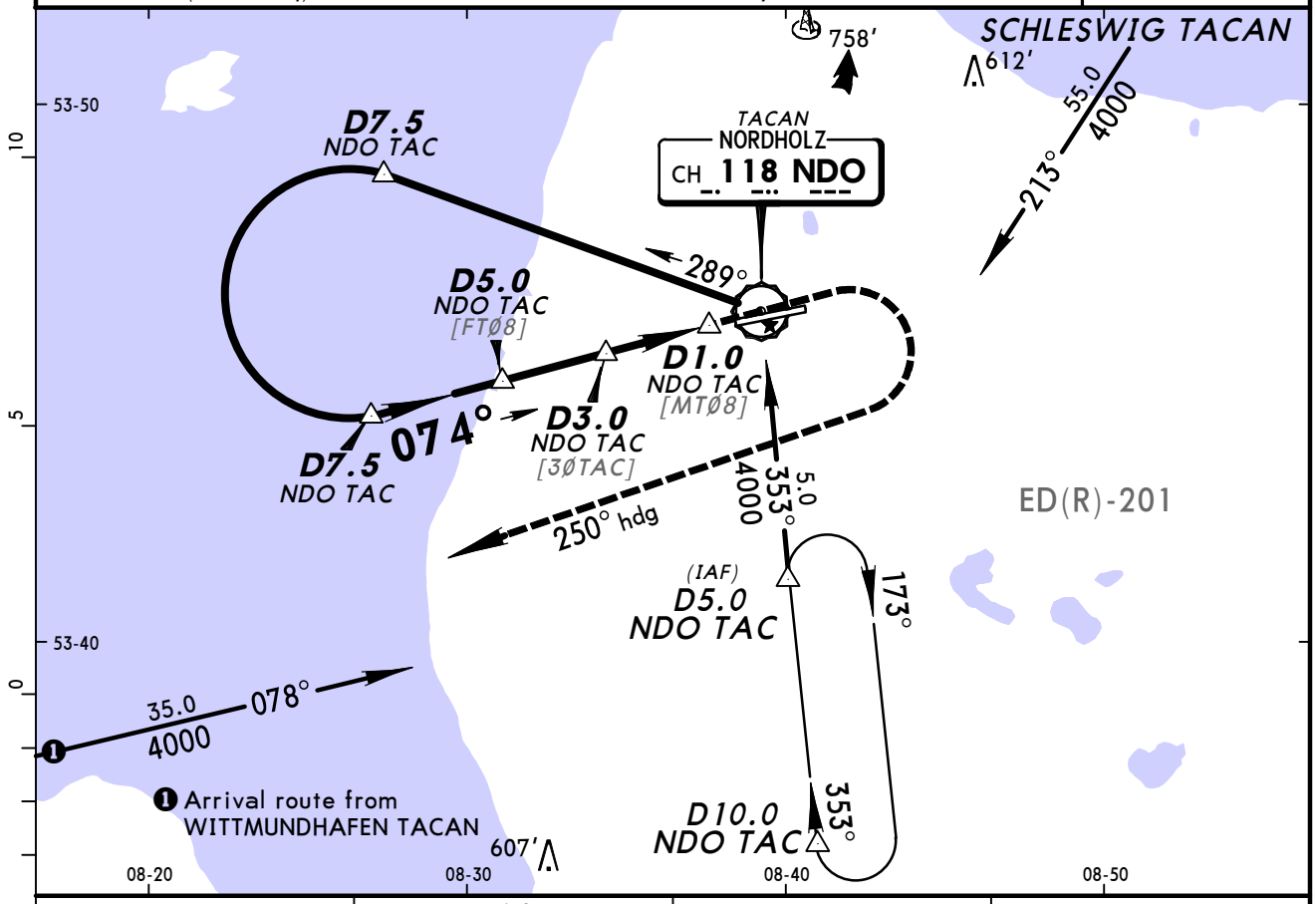
BRIEFING STRIP™

TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / TDZE
NDO CH 118	074°	D5.0 NDO TAC 1600′ (1526′)	400′ (326′)	Apt Elev 74′ / TDZE 74′

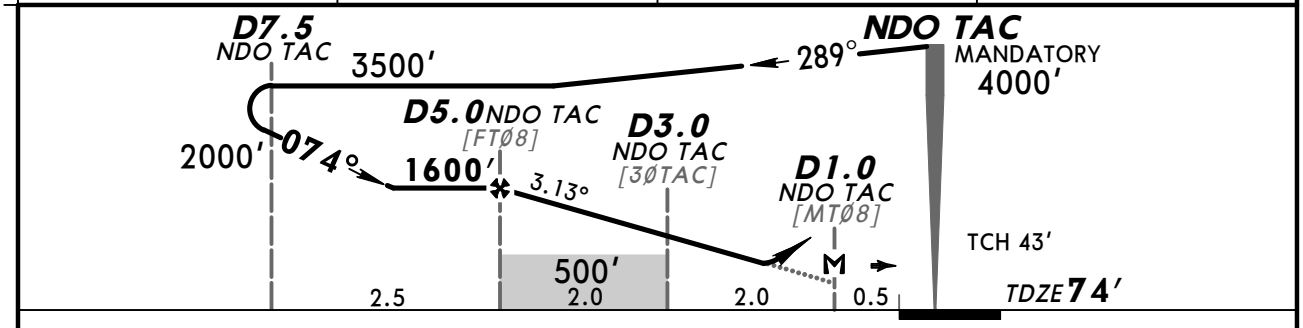
MISSED APCH: Climb STRAIGHT AHEAD to 1000′, then turn RIGHT onto hdg 250°. Continue climbing to 2500′. Intercept 10 DME Arc NDO TAC and return to final.

2000′ MSA NDO TAC

Alt Set: hPa(IN on req) TDZ Elev: 3 hPa Trans level: By ATC Trans alt: 5000′



NDO TAC	4.0	3.0	2.0
ALTITUDE	1270′	940′	610′



Gnd Speed-Kts	70	90	100	120	140	160
Descent angle 3.13°	388	498	554	665	775	886
MAP at D1.0 NDO TAC						

HIALS PAPI PAPI

1000′

2500′ RT onto 250° hdg

Standard STRAIGHT-IN LANDING RWY **08** **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) **400′** (326′)

	ALS out
A	400′- 800m
B	
C	400′- 1200m
D	

ALS out: 400′- 1600m

Max Kts	MDA(H)	CEIL-VIS
90	560′ (486′)	500′- 1600m
120	580′ (506′)	500′- 1600m
140	680′ (606′)	500′- 2400m
165	780′ (706′)	600′- 3600m

TERPS

CHANGES: BREMEN Radar frequency.

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ETMN/FCN
NORDHOLZ

JEPPESEN
23 SEP 11 14-2

NORDHOLZ, GERMANY
TACAN Rwy 26

BREMEN Radar	*NORDHOLZ Tower	
124.07	131.25 (civ)	122.1

For UHF see MIL-101 listing

BRIEFING STRIP™

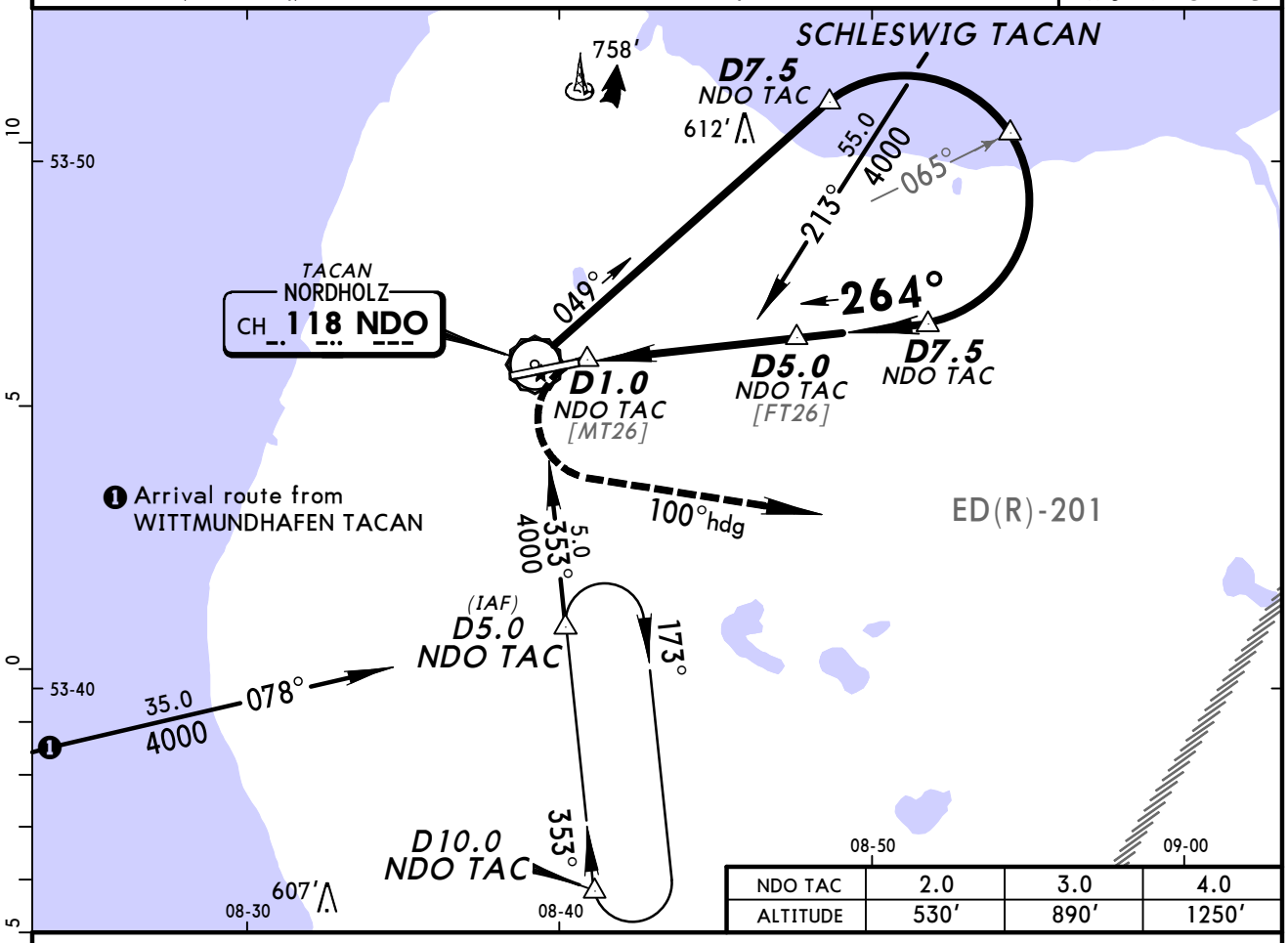
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / TDZE
NDO CH 118	264°	D5.0 NDO TAC 1600′ (1533′)	380′ (313′)	74′ / 67′

MISSED APCH: Turn LEFT climbing to 2500′ on heading 100° and intercept 10 DME Arc NDO TAC.

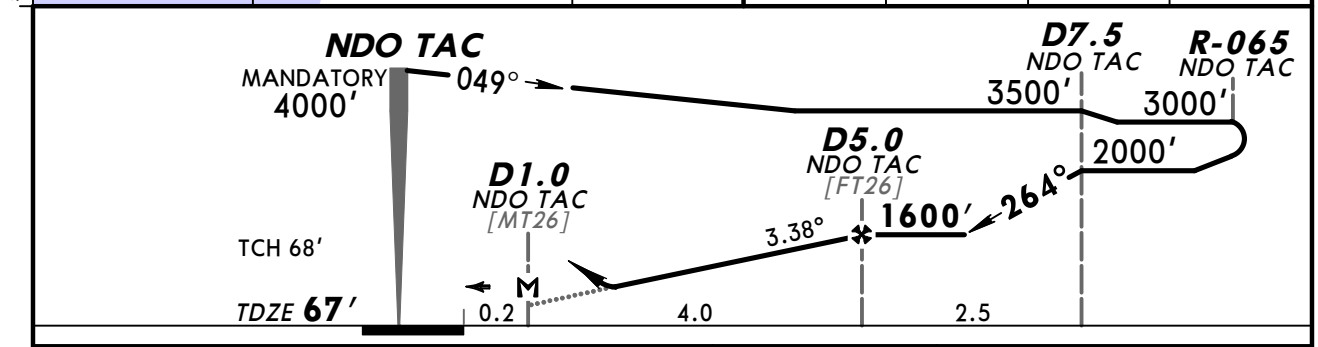
Alt Set: hPa(IN on req) TDZ Elev: 2 hPa Trans level: By ATC Trans alt: 5000′

2000′

MSA NDO TAC



NDO TAC	2.0	3.0	4.0
ALTITUDE	530′	890′	1250′



Gnd Speed-Kts		70	90	100	120	140	160
Descent angle	3.38°	419	538	598	718	837	957
MAP at D1.0 NDO TAC							

HIALS
PAPI PAPI
LT
2500′ on 100° hdg

Standard STRAIGHT-IN LANDING RWY 26 **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 380′ (313′)

	ALS out
A	400′- 800m
B	
C	400′- 1200m
D	

400′- 1600m

Max Kts	MDA(H)	CEIL-VIS
90	560′ (486′)	500′- 1600m
120	580′ (506′)	500′- 1600m
140	680′ (606′)	500′- 2400m
165	780′ (706′)	600′- 3600m

TERPS

CHANGES: BREMEN Radar frequency.

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BREMEN Radar	*NORDHOLZ Tower	
124.07	131.25 (civ)	122.1

For UHF see MIL-101 listing

BRIEFING STRIP TM

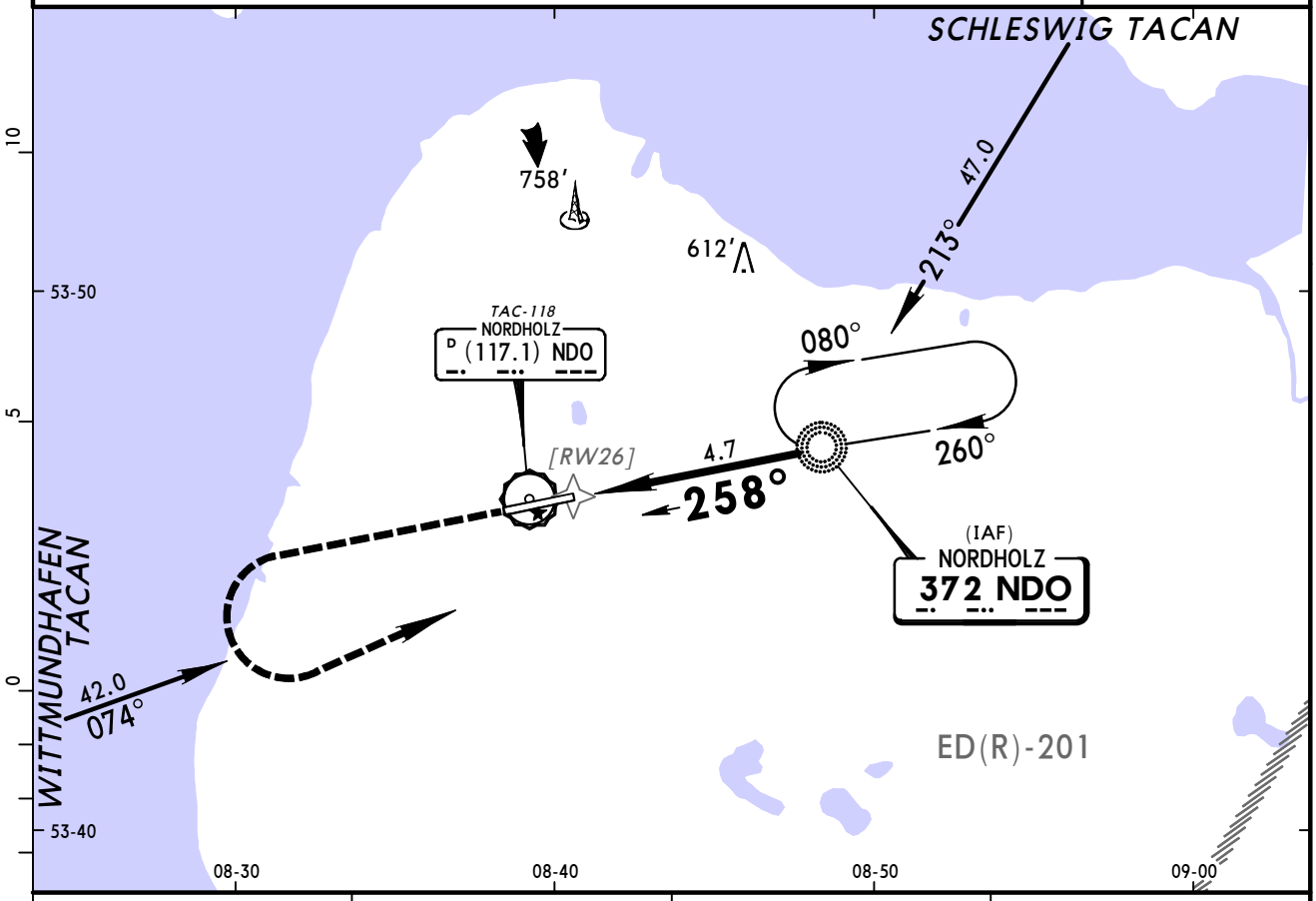
NDB NDO 372	Final Apch Crs 258°	Mandatory Alt NDB 1600′ (1533′)	MDA(H) 480′ (413′)	Apt Elev 74′ TDZE 67′

MISSED APCH: Climb STRAIGHT AHEAD to 1600′ before turning LEFT to rehome NDB, or proceed as cleared by ATC.

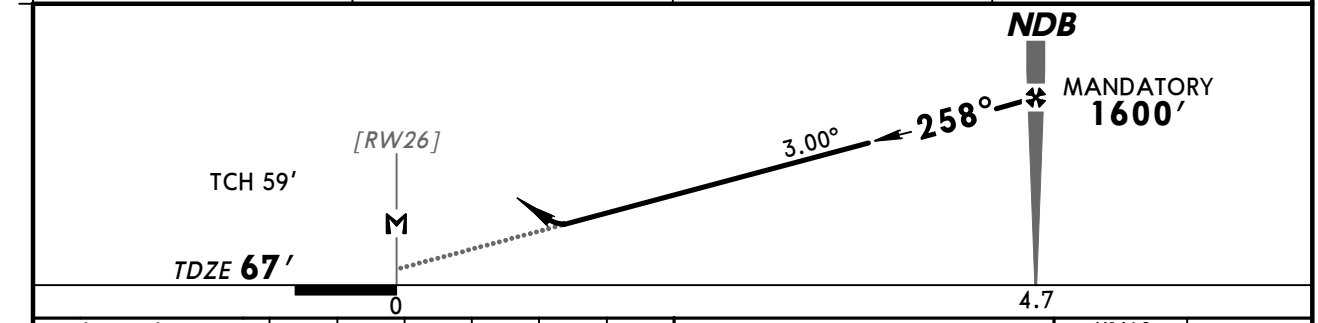
Alt Set: hPa (IN on req) TDZ Elev: 2 hPa Trans level: By ATC Trans alt: 5000′

2000′

MSA NDO NDB



DIST to RW26	2.0	3.0	4.0
ALTITUDE	750′	1060′	1380′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
NDB to MAP 4.7	4:02	3:08	2:49	2:21	2:01	1:46

HIALS
PAPI PAPI

1600′

Standard STRAIGHT-IN LANDING RWY **26** **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) **480′** (413′)

	ALS out
A	500′- 1600m
B	
C	500′- 2000m
D	

400′- 1200m

Max Kts	MDA(H)	CEIL-VIS
90	560′ (486′)	500′- 1600m
120	580′ (506′)	500′- 1600m
140	680′ (606′)	500′- 2400m
D	NOT APPLICABLE	

TERPS

CHANGES: BREMEN Radar frequency.

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BREMEN Radar	*NORDHOLZ Radar		*NORDHOLZ Tower	
124.07	123.3	129.85	131.25 (civ)	122.1

For UHF see MIL-101 listing

BRIEFING STRIP ™

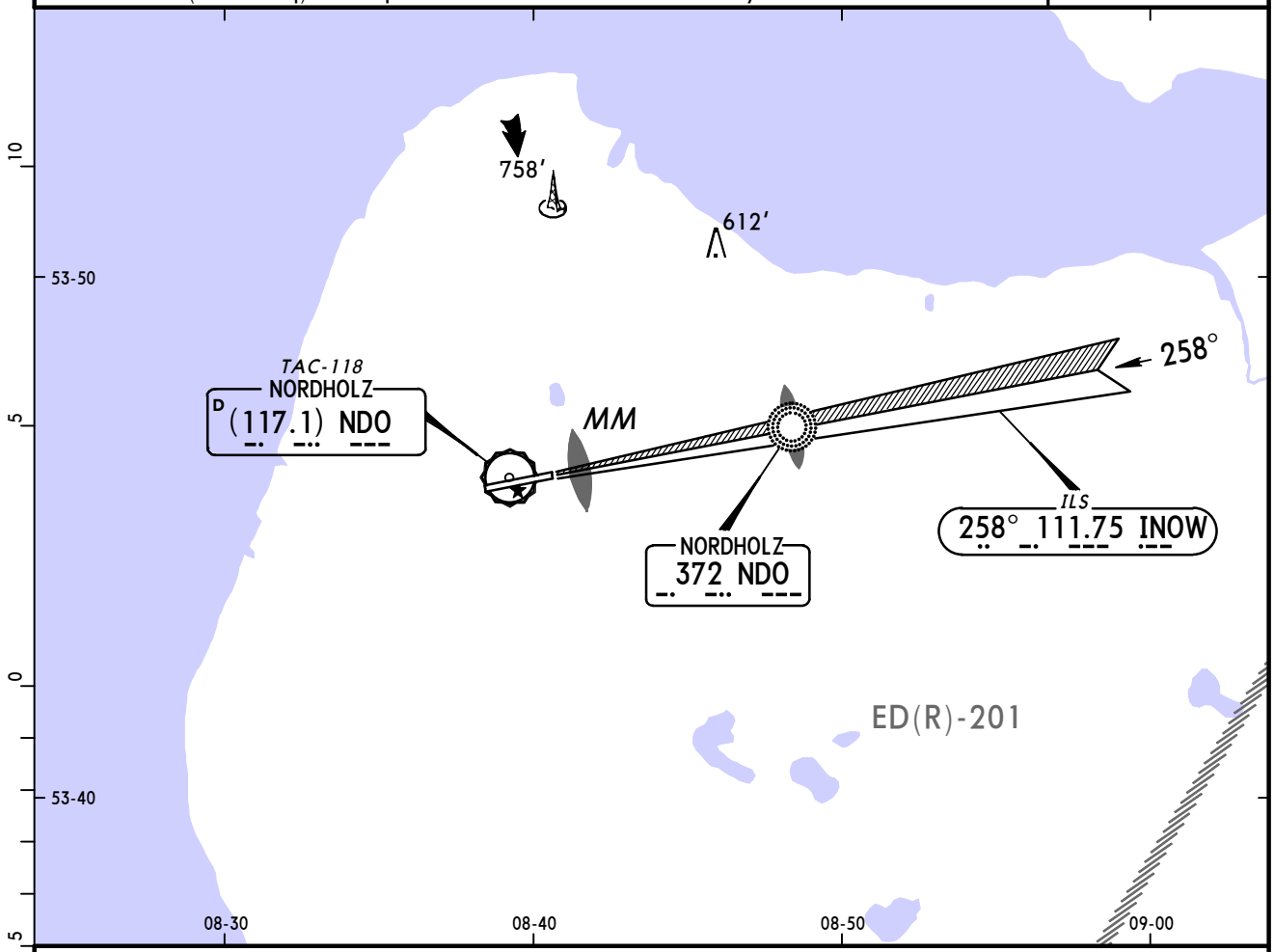
RADAR	Final Apch Crs BY ATC	PAR GS Not published / Minimum Alt No FAF	DA(H)/MDA(H) Refer to Minimums	Apt Elev 74′ / TDZE RWY 08 74′ / TDZE RWY 26 67′

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) | Apt Elev: 3 hPa | Trans level: By ATC | Trans alt: 5000′

2000′

MSA NDO NDB



RWY 08 PAR TCH 43′

RWY 26 PAR TCH 68′

Gnd speed-Kts		70	90	100	120	140	160
PAR 08 GS	3.00°	377	484	538	646	753	861
PAR 26 GS	3.00°	377	484	538	646	753	861

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

TERPS

	PAR 08 DA(H) 274′(200′)		PAR 26 DA(H) 267′(200′)		SRA 08 MDA(H) 440′(366′)		SRA 26 MDA(H) 420′(353′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	400′- 1200m	400′- 1900m	400′- 1100m	400′- 1800m
B								
C					400′- 1400m	400′- 2100m	400′- 1300m	400′- 2000m
D								

CHANGES: BREMEN Radar frequency.

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ETMN/FCN
NORDHOLZ

JEPPESEN
23 SEP 11 18-2

NORDHOLZ, GERMANY
COPTER *PAR 079°

BREMEN Radar	*NORDHOLZ Radar		*NORDHOLZ Tower	
124.07	123.3	129.85	131.25 (civ)	122.1

For UHF see MIL-101 listing

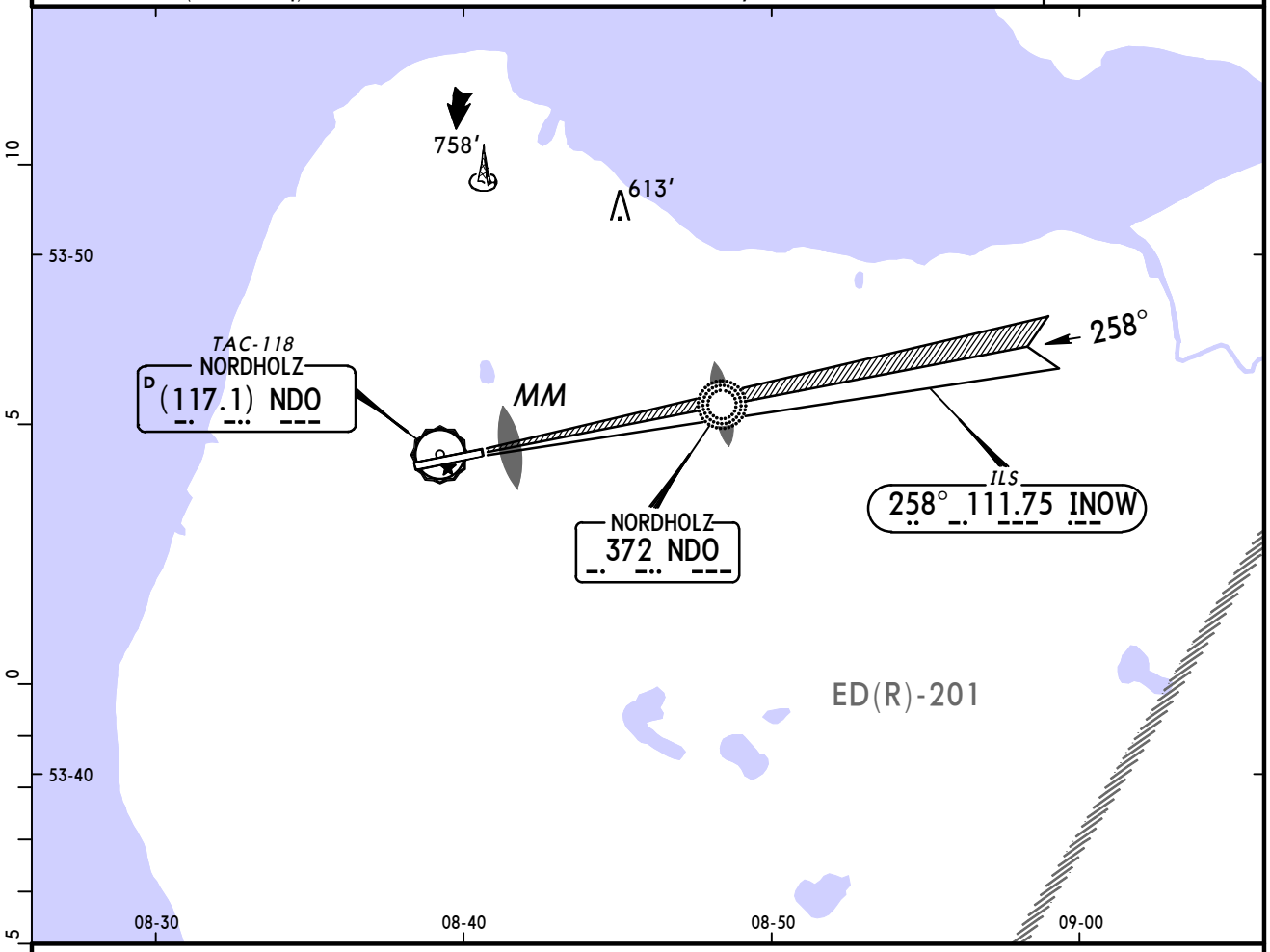
BRIEFING STRIP ™

RADAR	Final Apch Crs BY ATC	PAR GS No Alt published	DA(H) 274′ (200′)	Apt Elev 74′ TDZE 74′

No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) TDZ Elev: 3 hPa Trans level: By ATC Trans alt: 5000′



PAR TCH not published

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

HIALS
PAPI PAPI

Refer to Missed Apch above

JAR-OPS STRAIGHT-IN LANDING RWY **08** **CEILING REQUIRED**

DA(H) **274′** (200′)

TERPS

COPTER	FULL	ALS out
	100′- 500m	100′- 1000m

CHANGES: BREMEN Radar frequency.

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General Information

Location: Geilenkirchen Deu
IATA Code: GKE
Lat/Long: N50° 57.6' E006° 02.5'
Elevation: 292 ft

Airport Use: Military
Magnetic Variation: 0.7°E

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

Sunrise: 0626 Z
Sunset: 1712 Z,

Runway Information

Runway: 09
Length x Width: 10002 ft x 147 ft
Surface Type: concrete
TDZ-Elev: 263 ft
Lighting: Edge, ALS
Displaced Threshold: 488 ft

Runway: 27
Length x Width: 10002 ft x 147 ft
Surface Type: concrete
TDZ-Elev: 289 ft
Lighting: Edge, ALS
Displaced Threshold: 486 ft

Communication Information

ATIS 27.82 Military
Frisbee Tower 140.075 Military
Frisbee Tower 122.1 Military
Frisbee Tower 120.05
Frisbee Tower 37.857 Military
Frisbee Tower 25.78 Military
Frisbee Radar 143.4 Military
Frisbee Radar 123.725
Frisbee Radar 123.3 Military
Frisbee Radar 38.54 Military
Frisbee Radar 37.805 Military

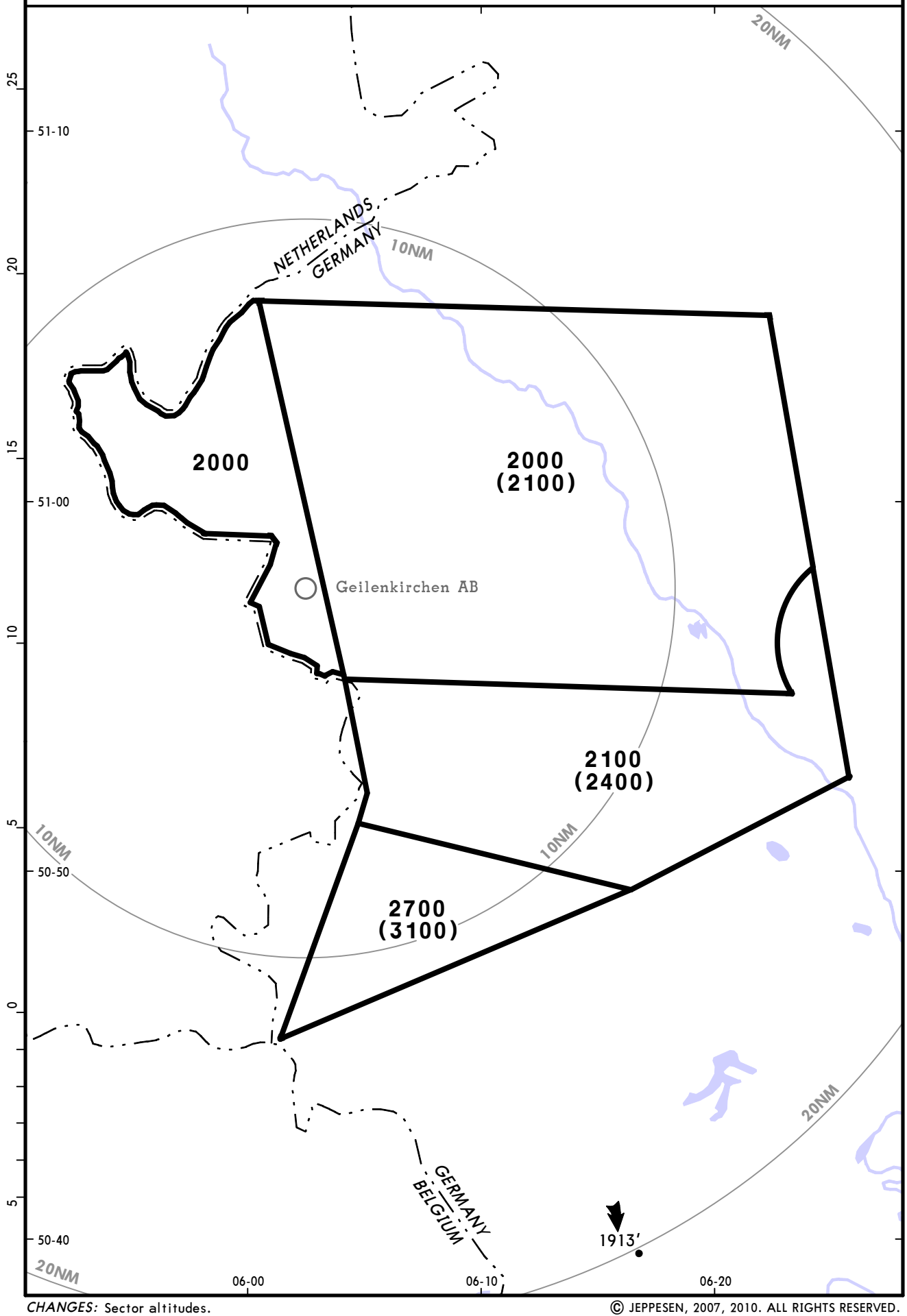
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Frisbee Radar 34.4 Military
Frisbee Radar 24.455 Military
Frisbee Radar 24.212 Military
Magic Command Airlift Command Post 139.875 Military
Magic Command Airlift Command Post 37.58 Military
Magic Command Airlift Command Post 25.965

*FRISBEE Radar	*Apt Elev*	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: Germany: 5000′ Netherlands: 3000′ Belgium: 4500′
123.72	292′	

For UHF see MIL-101 listing

Values in brackets consider additional height margins in order to meet required obstacle clearance at cold temperatures.



CHANGES: Sector altitudes.

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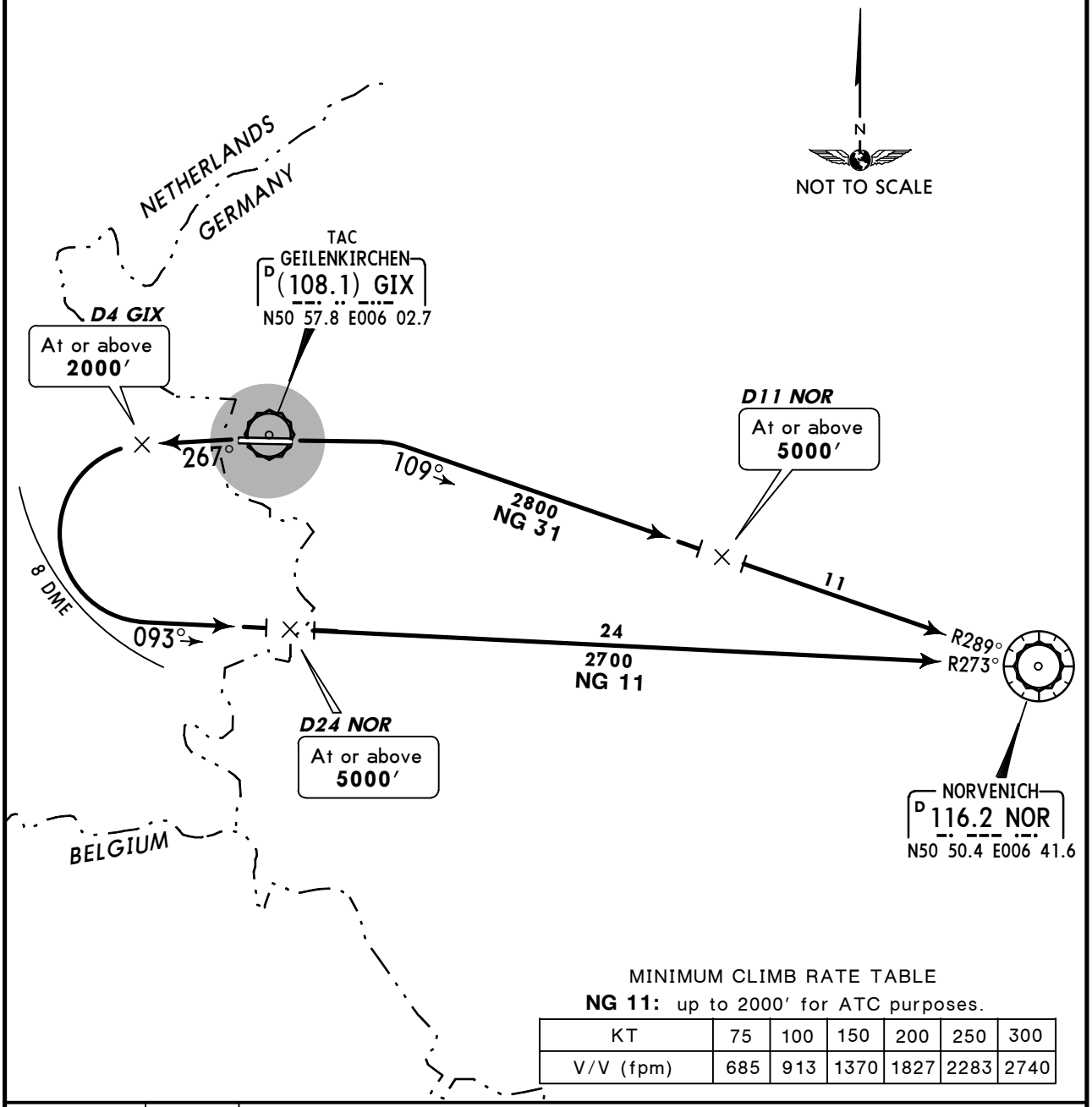
Apt Elev	
292′	Trans level: By ATC Trans alt: ❶ 1. Emergency safe altitude within 100 NM of Geilenkirchen 4200′. 2. SIDs are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

3400′
MSA
GIX TAC

NG 11
RADAR MONITORED ONLY
NG 31
RWYS 27, 09 DEPARTURES

❶ Germany: 5000′
Netherlands: 3000′
Belgium: 4500′

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



MINIMUM CLIMB RATE TABLE
NG 11: up to 2000′ for ATC purposes.

KT	75	100	150	200	250	300
V/V (fpm)	685	913	1370	1827	2283	2740

SID	RWY	ROUTING
NG 11	27	Climb on GIX R-267 to D4 GIX, turn LEFT, intercept NOR R-273 inbound to NOR.
NG 31	09	Climb straight ahead, intercept NOR R-289 inbound to NOR.

CHANGES: Warning note withdrawn.

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Apt Elev
292′

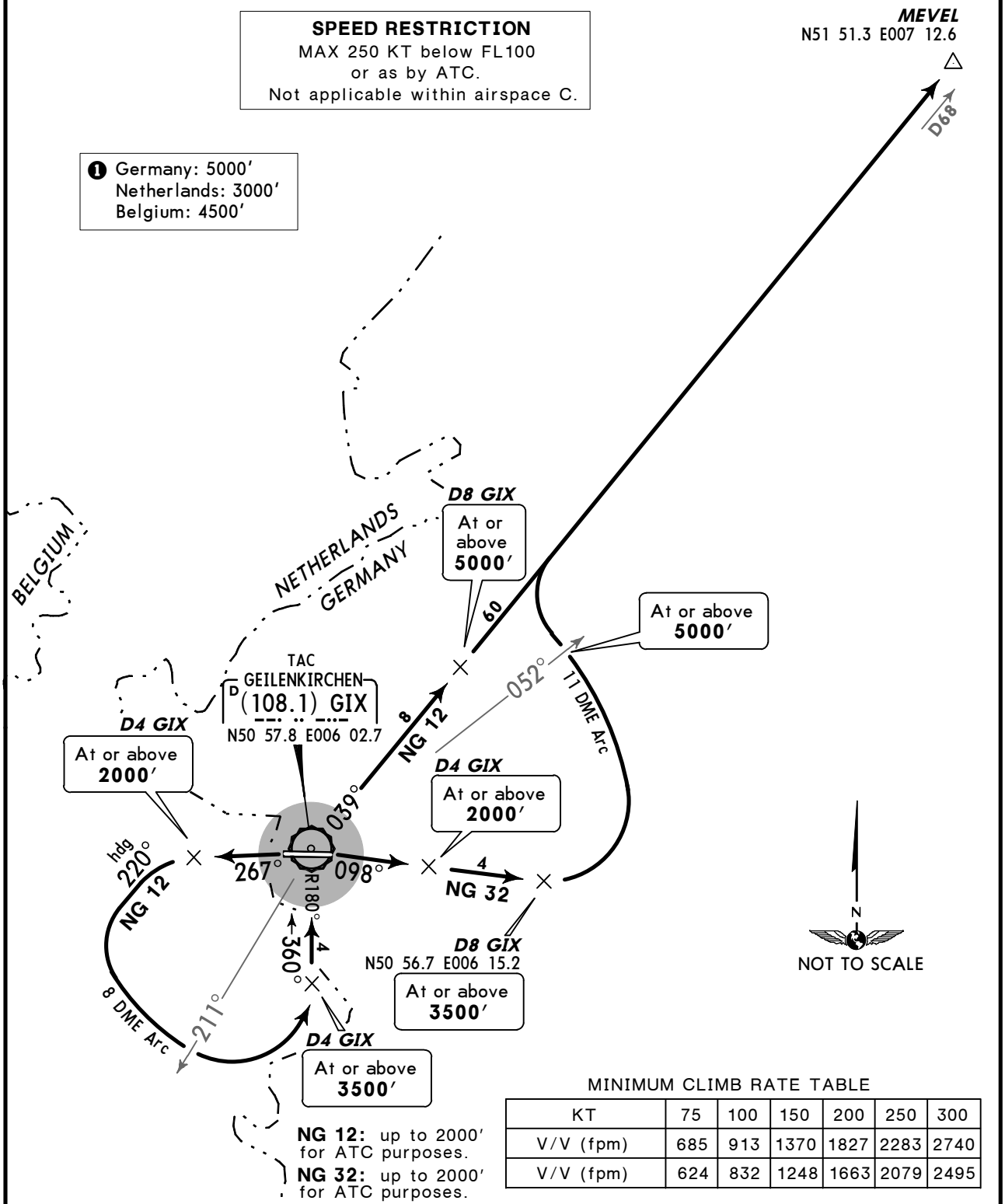
Trans level: By ATC Trans alt: ❶
1. Emergency safe altitude within 100 NM of Geilenkirchen 4200′.
2. SIDs are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

3400′
MSA
GIX TAC

NG 12, NG 32
RWYS 27, 09 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ Germany: 5000′
Netherlands: 3000′
Belgium: 4500′



MINIMUM CLIMB RATE TABLE

KT	75	100	150	200	250	300
V/V (fpm)	685	913	1370	1827	2283	2740
V/V (fpm)	624	832	1248	1663	2079	2495

NG 12: up to 2000′ for ATC purposes.
NG 32: up to 2000′ for ATC purposes.

SID	RWY	ROUTING
NG 12	27	Climb on GIX R-267 to D4 GIX, turn LEFT, 220° heading, along GIX 8 DME arc, when crossing GIX R-211 turn LEFT, intercept GIX R-180 inbound to GIX, GIX R-039 to MEVEL.
NG 32	09	Climb on GIX R-098 to D8 GIX, turn LEFT, along GIX 11 DME arc, when crossing GIX R-052 turn RIGHT, intercept GIX R-039 to MEVEL.

CHANGES: Warning note withdrawn.

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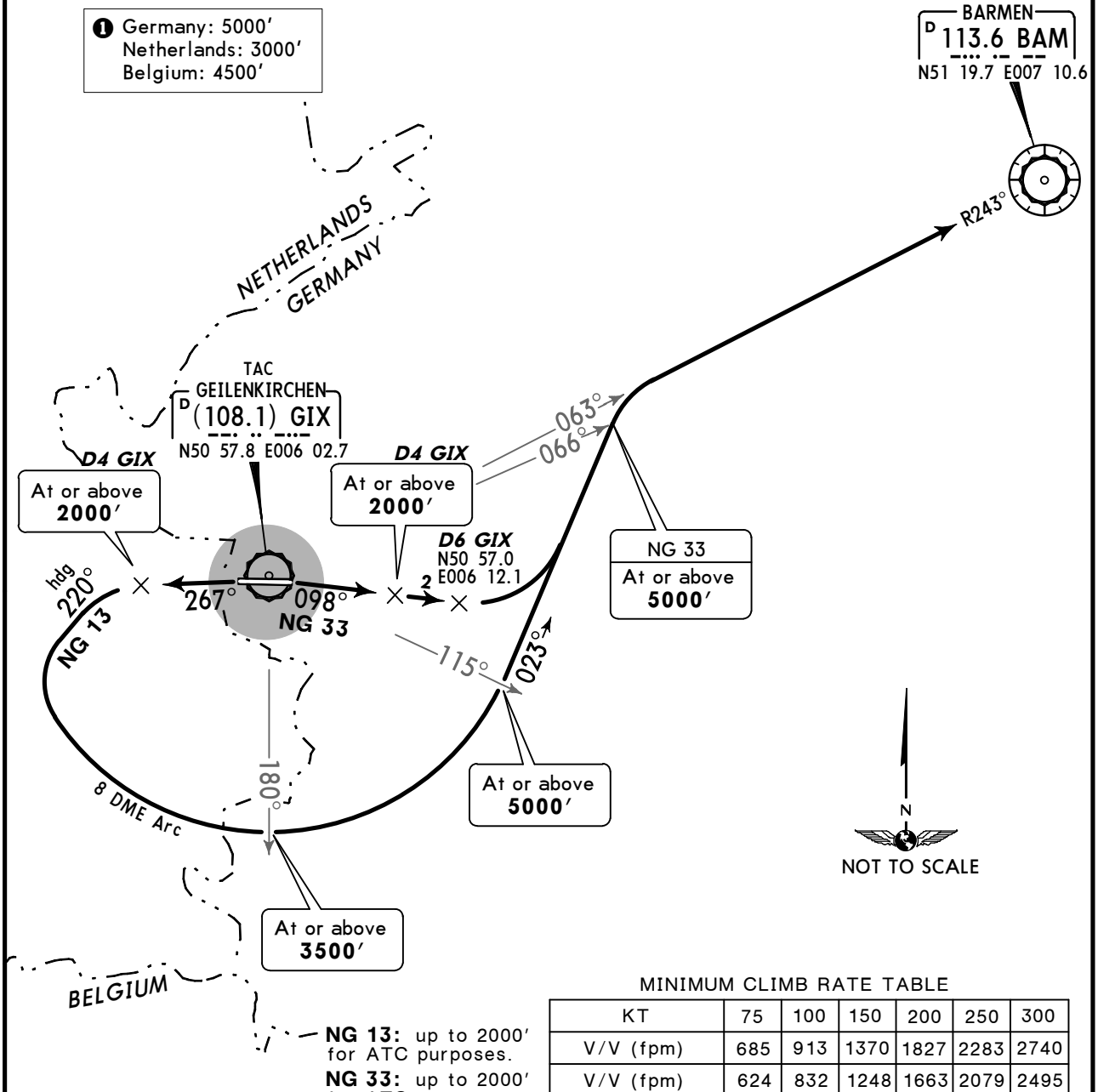
Apt Elev
292′

Trans level: By ATC Trans alt: ❶
1. Emergency safe altitude within 100 NM of Geilenkirchen 4200′.
2. SIDs are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

3400′
MSA
GIX TAC

NG 13, NG 33
RWYS 27, 09 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



MINIMUM CLIMB RATE TABLE

KT	75	100	150	200	250	300
V/V (fpm)	685	913	1370	1827	2283	2740
V/V (fpm)	624	832	1248	1663	2079	2495

NG 13: up to 2000′ for ATC purposes.
NG 33: up to 2000′ for ATC purposes.

SID	RWY	ROUTING
NG 13	**27**	Climb on GIX R-267 to D4 GIX, turn LEFT, 220° heading, along GIX 8 DME arc, when crossing GIX R-115 proceed on 023° track, when crossing GIX R-066 turn RIGHT, intercept GIX R-063 to BAM.
NG 33	**09**	Climb on GIX R-098 to D6 GIX, turn LEFT, 023° track, when crossing GIX R-066 turn RIGHT, intercept GIX R-063 to BAM.

CHANGES: Warning note withdrawn.

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Apt Elev 292′

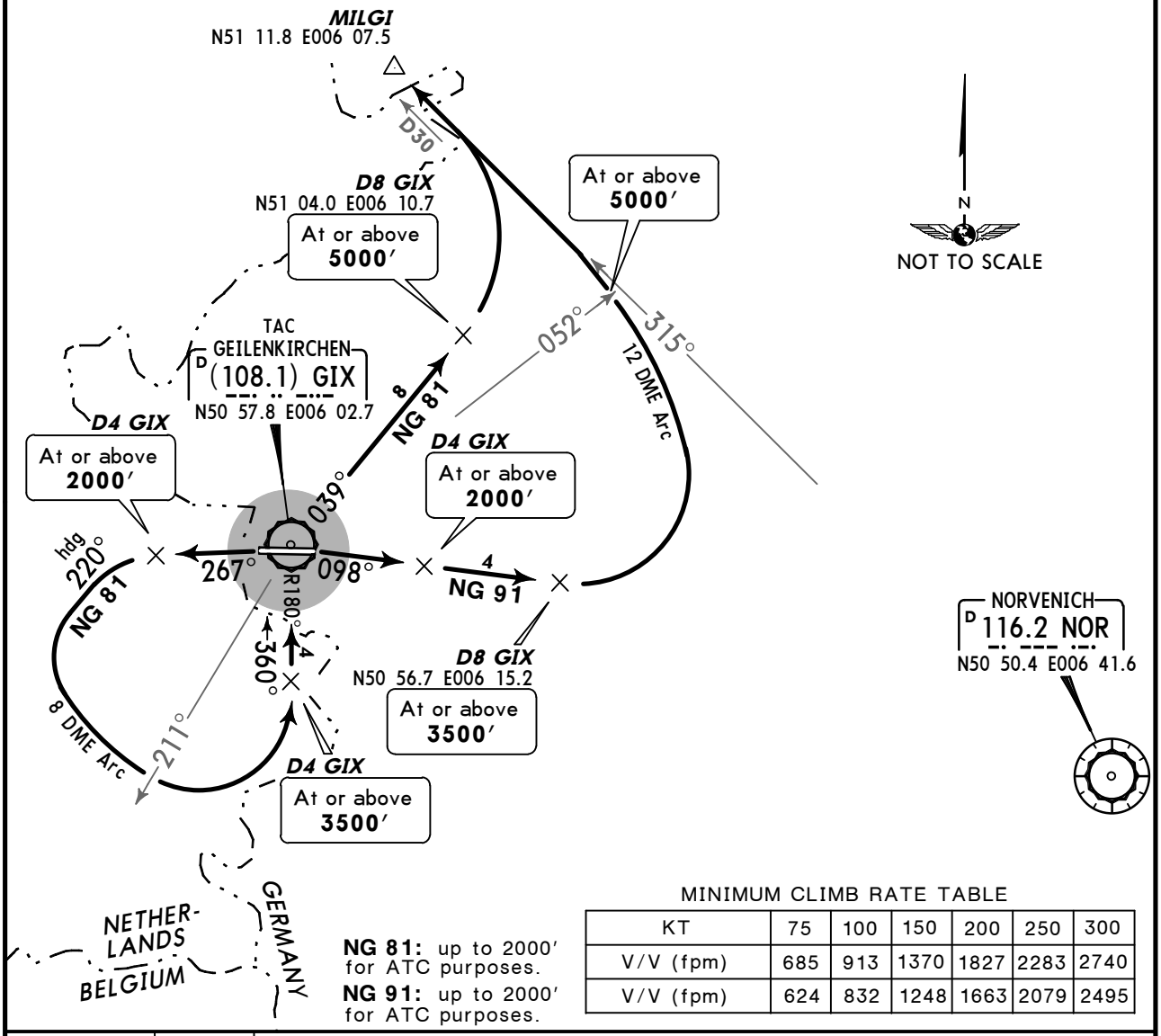
Trans level: By ATC Trans alt: ❶
1. Emergency safe altitude within 100 NM of Geilenkirchen 4200′.
2. SIDs are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

3400′
MSA
GIX TAC

NG 81, NG 91
RWYS 27, 09 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ Germany: 5000′
Netherlands: 3000′
Belgium: 4500′



NG 81: up to 2000′ for ATC purposes.
NG 91: up to 2000′ for ATC purposes.

MINIMUM CLIMB RATE TABLE

KT	75	100	150	200	250	300
V/V (fpm)	685	913	1370	1827	2283	2740
V/V (fpm)	624	832	1248	1663	2079	2495

SID	RWY	ROUTING
NG 81	27	Climb on GIX R-267 to D4 GIX, turn LEFT, 220° heading, along GIX 8 DME arc, when crossing GIX R-211 turn LEFT, intercept GIX R-180 inbound to GIX, GIX R-039 to D8 GIX, turn LEFT, intercept NOR R-315 to MILGI.
NG 91	09	Climb on GIX R-098 to D8 GIX, turn LEFT, along GIX 12 DME arc, when crossing GIX R-052 turn LEFT, intercept NOR R-315 to MILGI.

CHANGES: Warning note withdrawn.

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Apt Elev
292′

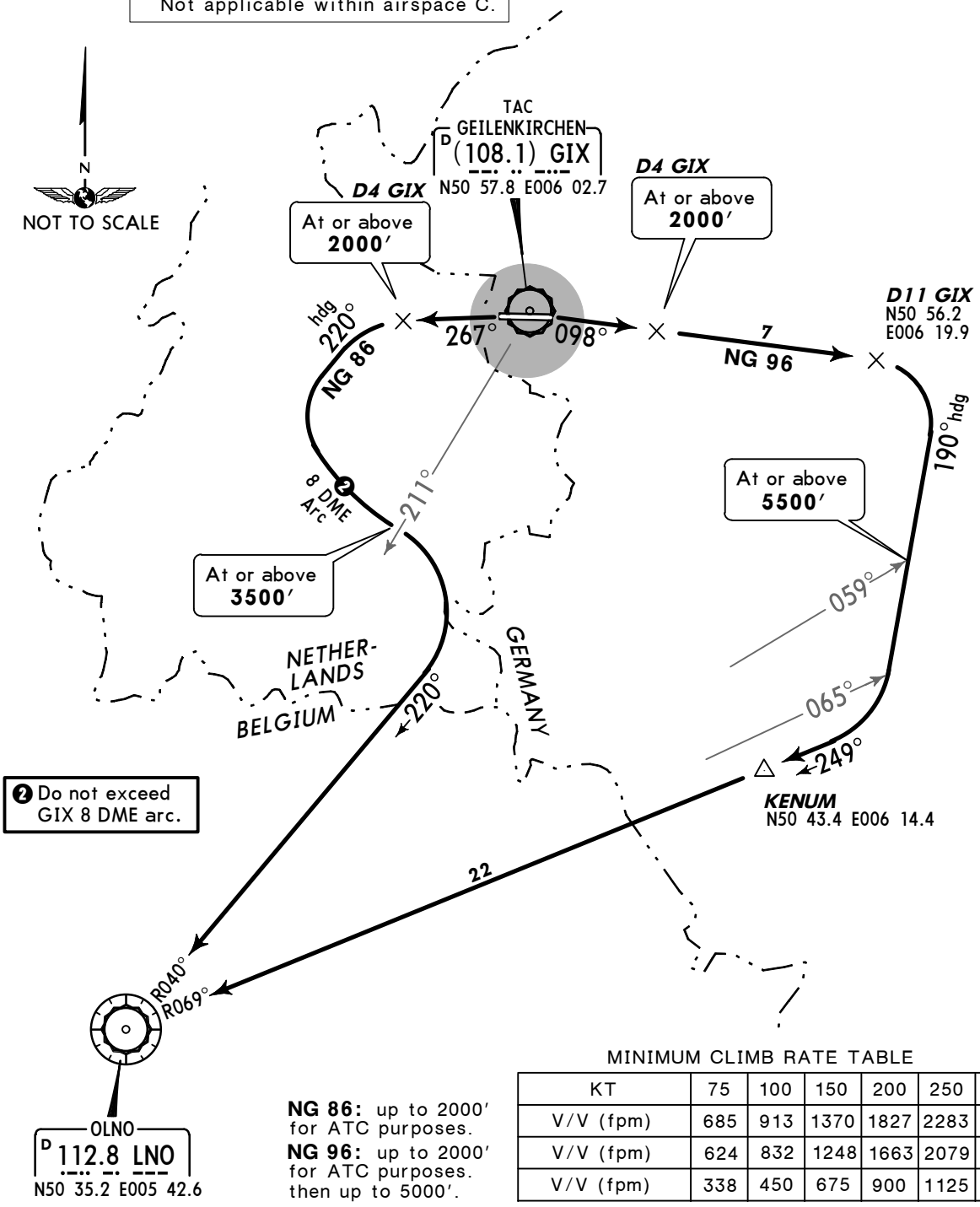
Trans level: By ATC Trans alt: ❶
1. Emergency safe altitude within 100 NM of Geilenkirchen 4200′.
2. SIDs are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

3400′
MSA
GIX TAC

NG 86, NG 96
RWYS 27, 09 DEPARTURES
RADAR MONITORED ONLY

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ Germany: 5000′
Netherlands: 3000′
Belgium: 4500′



NG 86: up to 2000′ for ATC purposes.
NG 96: up to 2000′ for ATC purposes. then up to 5000′.

MINIMUM CLIMB RATE TABLE

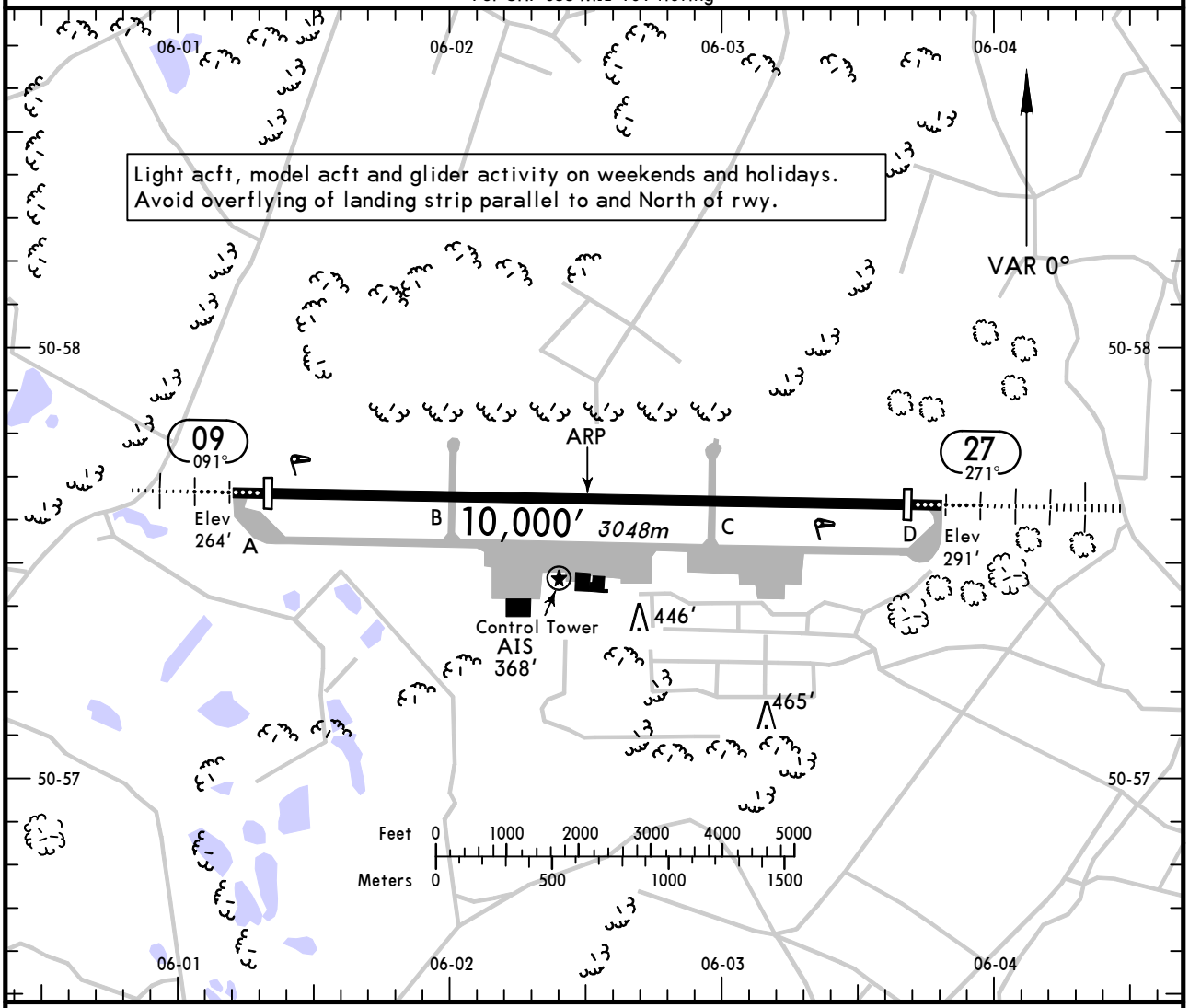
KT	75	100	150	200	250	300
V/V (fpm)	685	913	1370	1827	2283	2740
V/V (fpm)	624	832	1248	1663	2079	2495
V/V (fpm)	338	450	675	900	1125	1350

SID	RWY	ROUTING
NG 86	**27**	Climb on GIX R-267 to D4 GIX, turn LEFT, 220° heading, along GIX 8 DME arc, when crossing GIX R-211 turn RIGHT, intercept LNO R-040 inbound to LNO.
NG 96	**09**	Climb on GIX R-098 to D11 GIX, turn RIGHT, 190° heading, when crossing LNO R-065 turn RIGHT, intercept LNO R-069 inbound to LNO.

CHANGES: Warning note withdrawn.

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*FRISBEE Tower
122.1 120.05
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
09	HIRL HIALS VASI RVR	9511' 2899m			148' 45m
27	HIRL HIALS SFL VASI RVR	9514' 2900m	8366' 2550m		

Standard TAKE-OFF 1

	LVP must be in Force: RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	250m	400m	500m
B			
C			
D	300m		

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

CHANGES: None.

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ETNG/GKE
GEILENKIRCHEN

JEPPESEN 9 JUL 10 11-1

GEILENKIRCHEN, GERMANY
❶ ILS Rwy 27

LANGEN Radar (APP)	*FRISBEE Tower
128.5	122.1 120.05

For UHF see MIL-101 listing

BRIEFING STRIP™

LOC	Final	GS	ILS	Apt Elev 292′
IGEW	Apch Crs	D3.0 IGEW	DA(H)	TDZE 289′
110.1	271°	1239′ (950′)	489′ (200′)	

MISSED APCH: Climb on R-267 GIX TAC outbound to 2500′. At D4.0 GIX TAC turn LEFT (MAX 250 KT) to intercept R-273 NOR inbound, pass D24.0 NOR at 2500′ mandatory. Pass D17.0 NOR at 2800′ or above, then turn LEFT to intercept 12 DME Arc GIX TAC and return to final.

3400′
MSA GIX TAC

Alt Set: hPa (IN on req) | TDZ Elev: 11 hPa | Trans level: By ATC | Trans alt: ❷

020° D38/45 200°
(IAF)
D38.0/R-020
GIX TAC
At or above FL 100

TACAN required

EH(TRA)-12

❸ 200° 18.0 FL 100

D38.0
❸ GIX TAC (IAF)

D20.0
GIX TAC

❷ Germany: 5000′
Netherlands: 3000′
Belgium: 4500′

Monchengladbach

704′

❶ WARNING: Proc not usable for HIRTA - sensitive acft.

020°

699′

FL100

16 DME Arc GIX TAC

MAX FL 70

733′

043°

778′

51-10

EB(TRA)-NA

EB(TRA)-NA
EB(P)-5 B

BELGIUM
NETHERLANDS

NETHERLANDS
GERMANY

ILS DME
271° 110.1 IGEW

698′

844′

941′

697′

TAC-18
GEILENKIRCHEN
D (108.1) GIX

EB(TRA)-NA
EB(D)-5 C

737′

744′

744′

080°

082°

51-00

770′

D0.7 IGEW

D3.0 IGEW

D7.0 IGEW

D12.0 IGEW

763′

2800

267°

2500

271°

767′

EB(TRA)-17
EB(TRA)-NA

05-50

861′

791′

1090′

D4.0
GIX TAC

938′

742′

HIRTA ❶

ED(R)-111

❹ 12 DME Arc GIX TAC

751′

925′

093°

D24.0
NOR

1041′

1024′

D17.0
NOR

273°

NOR
116.2

796′

719′

1011′

826′

50-50

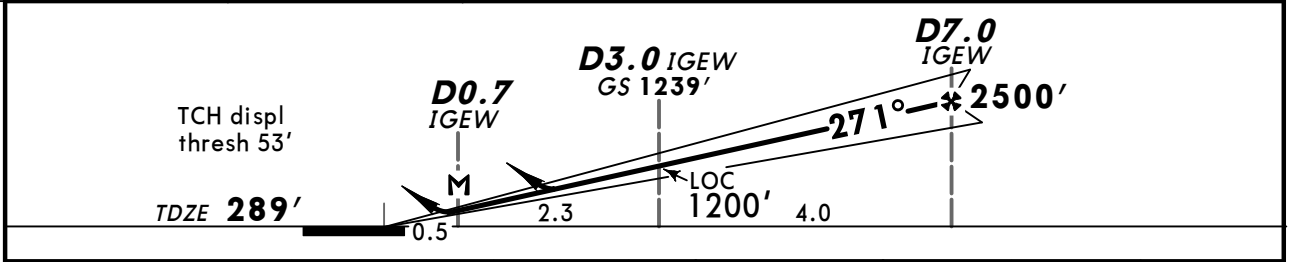
06-00

06-10

06-20

06-30

RECOMMENDED ALTITUDES	
LOC (GS out)	
IGEW DME	ALTITUDE
6.0	2160′
5.0	1840′
4.0	1520′
3.0	1200′
2.0	890′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent angle 3.00°	377	484	538	646	753	861
MAP at D0.7 IGEW						

HIALS
VASI VASI

D4.0 GIX TAC LT on GIX (108.1) R-267

Standard STRAIGHT-IN LANDING RWY **27** **CEILING REQUIRED**

	ILS DA(H) 489′ (200′)		LOC (GS out) DA(H) 710′ (421′)	
	FULL/Limited	ALS out		ALS out
A	200′- 800m	200′- 1200m	500′- 1300m	500′- 1600m
B				
C				500′- 2000m
D				

CHANGES: Procedure.

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ETNG/GKE
GEILENKIRCHEN

JEPPESEN GEILENKIRCHEN, GERMANY
16 APR 10 (14-1)
TACAN Rwy 09

LANGEN Radar (APP)	*FRISBEE Tower	
128.5	122.1	120.05

For UHF see MIL-101 listing

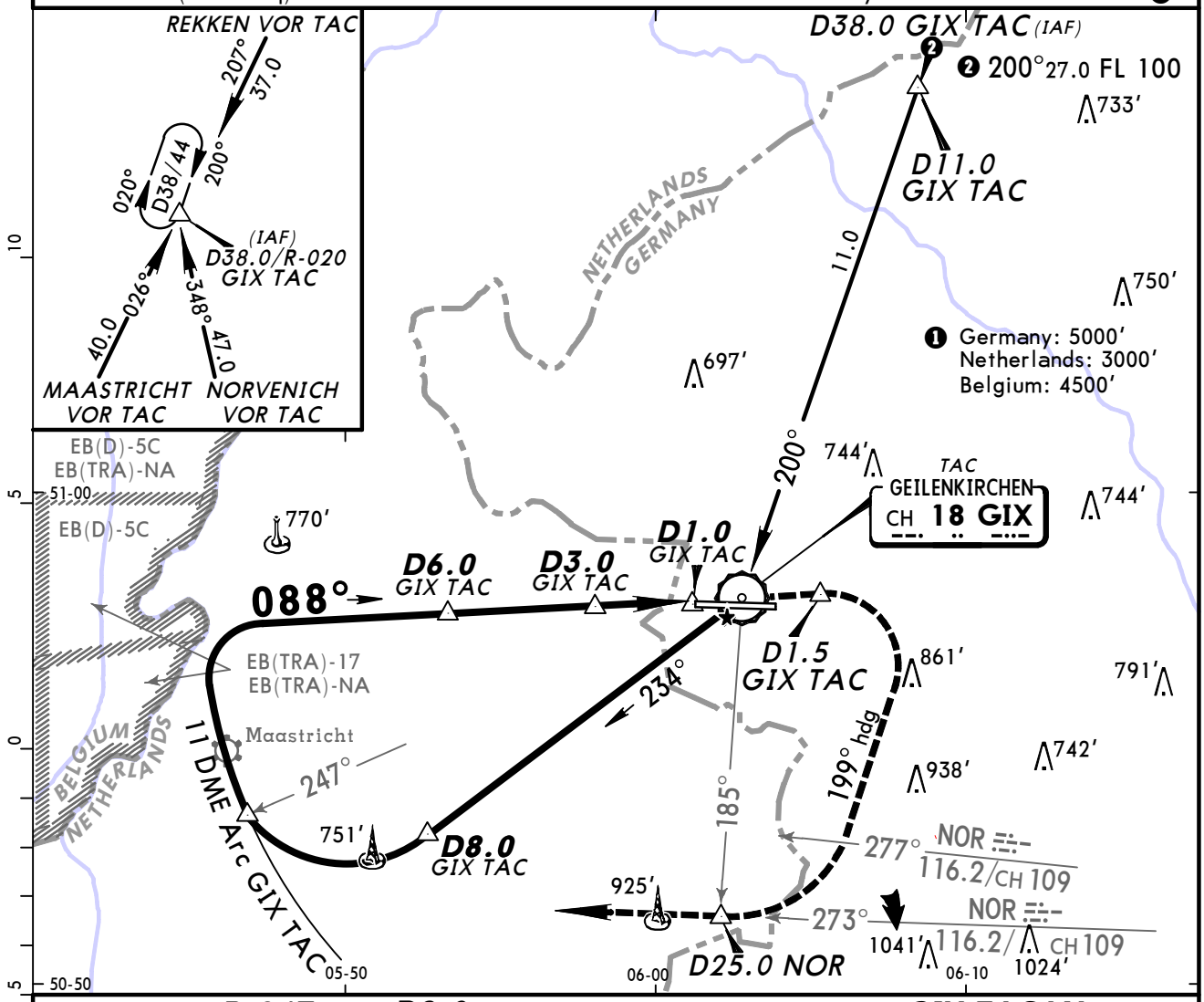
BRIEFING STRIP TM

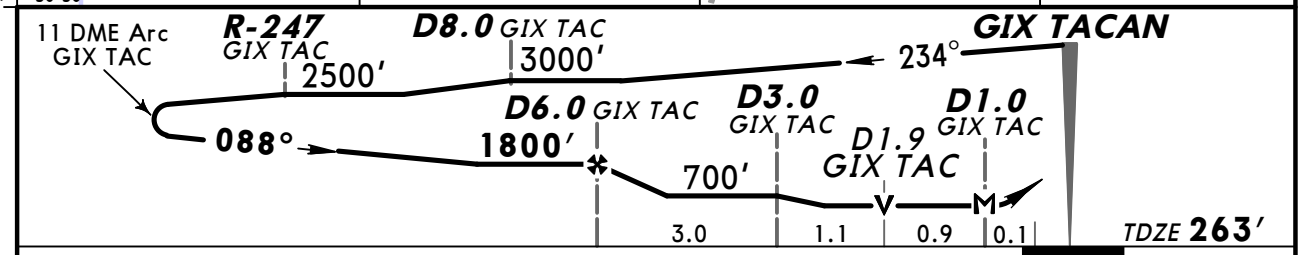
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 292′
GIX CH 18	088°	D6.0 GIX TAC 1800′ (1537′)	640′ (377′)	TDZE 263′

MISSED APCH: Climb STRAIGHT AHEAD to D1.5 GIX TAC, then turn RIGHT onto hdg 199° climbing to 2500′. When crossing R-277 NOR turn RIGHT to intercept R-273 NOR. Pass D25.0 NOR not below 2500′, intercept 11 DME Arc GIX TAC to cross R-247 GIX TAC not below 2500′.

3400′
MSA GIX TAC

Alt Set: hPa (IN on req) | TDZ Elev: 10 hPa | Trans level: By ATC | Trans alt: ❶





								HIALS VASI VASI	D1.5 GIX TAC	199° hdg RT	2500′
MAP at D1.0 GIX TAC										

Standard STRAIGHT-IN LANDING RWY **09** **CEILING REQUIRED**

MDA(H) **640′** (377′)

TERPS

	ALS out
A B	400′- 1500m
C D	400′- 1700m

	ALS out
A B	400′- 1900m
C D	400′- 2100m

CHANGES: Minimums.

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ETNG/GKE
GEILENKIRCHEN

JEPPESEN GEILENKIRCHEN, GERMANY
16 APR 10 (14-2)
❶ TACAN Rwy 27

LANGEN Radar (APP)	*FRISBEE Tower	
128.5	122.1	120.05

For UHF see MIL-101 listing

BRIEFING STRIP ™

TACAN	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 292′
GIX CH 18	278°	D6.0 GIX TAC 1900′ (1611′)	740′ (451′)	TDZE 289′

MISSED APCH: Climb STRAIGHT AHEAD to intercept R-267 GIX TAC. At D4.0 GIX TAC turn LEFT and climb on hdg 174° to 2500′. When crossing R-277 NOR turn LEFT to intercept R-273 NOR inbound. Pass D25.0 NOR at 2500′ mandatory and climb to 2600′ or above. At D17.0 NOR turn LEFT to intercept 12 DME Arc GIX TAC not below 2600′.

3400′
MSA
GIX TAC

Alt Set: hPa (IN on req) | TDZ Elev: 11 hPa | Trans level: By ATC | Trans alt: ❷

REKKEN VOR TAC
207° 37.0
200° 020° D38/44
(IAF)
D38.0/R-020 GIX TAC 51-10
026° 40.0 MAASTRICHT VOR TAC
348° 47.0 NORVENICH VOR TAC

D38.0 GIX TAC (IAF)
❸ 200° 20.0 FL 100
D18.0 GIX TAC
16 DME Arc GIX TAC FL 100
FL 70
020°
043°
080°
088°
At or below FL 70

❶ WARNING: Proc not usable for HIRTA - sensitive acft.
❷ Germany: 5000′
Netherlands: 3000′
Belgium: 4500′

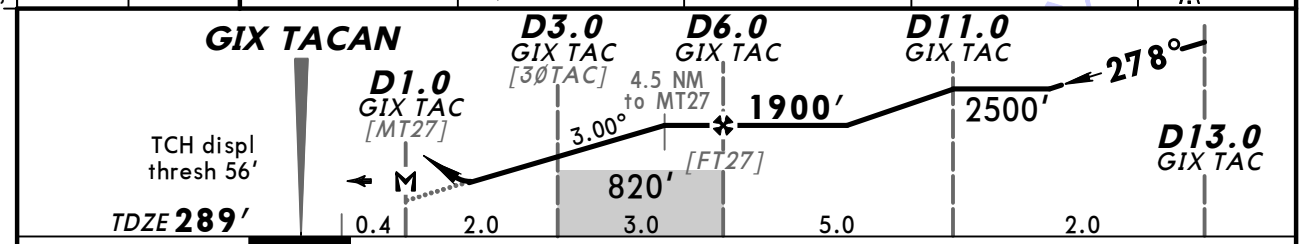
Monchengladbach
NETHERLANDS
GERMANY
BELGIUM
NETHERLANDS

EB(TRA)-NA
EB(P)-5-B
EB(D)-5C
EB(TRA)-NA
EB(TRA)-17
EB(TRA)-NA

TAC GEILENKIRCHEN CH 18 GIX

D1.0 GIX TAC [MT27]
D3.0 GIX TAC [3ØTAC]
D4.0 GIX TAC
D6.0 GIX TAC [FT27]
D11.0 GIX TAC
D13.0 GIX TAC
2500 to D11.0 GIX TAC
267°
174° hdg
277° NOR
116.2/ CH109
138°
093°
185°
278°
HIRTA ❶
ED(R)-111
❹ 12 DME Arc GIX TAC
273° NOR
116.2/ CH 109
D25.0 NOR
D17.0 NOR

RECOMMENDED ALTITUDES	
GIX TAC	ALTITUDE
5.5	1900′
5.0	1750′
4.0	1430′
3.0	1110′
2.0	790′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 GIX TAC						

HIALS
VASI VASI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **27** **CEILING REQUIRED**

DA(H) **740′** (451′)

TERPS

	ALS out
A, B	500′- 1400m / 500′- 1600m
C	500′- 2100m
D	500′- 1600m / 500′- 2400m

CHANGES: Minimums.

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ETNG/GKE
GEILENKIRCHEN

JEPPESEN GEILENKIRCHEN, GERMANY
16 APR 10 (18-1) *PAR or *SRA All Rwys

LANGEN Radar (APP)	*FRISBEE Radar	*FRISBEE Tower
128.5	123.72 123.3	122.1 120.05

For UHF see MIL-101 listing

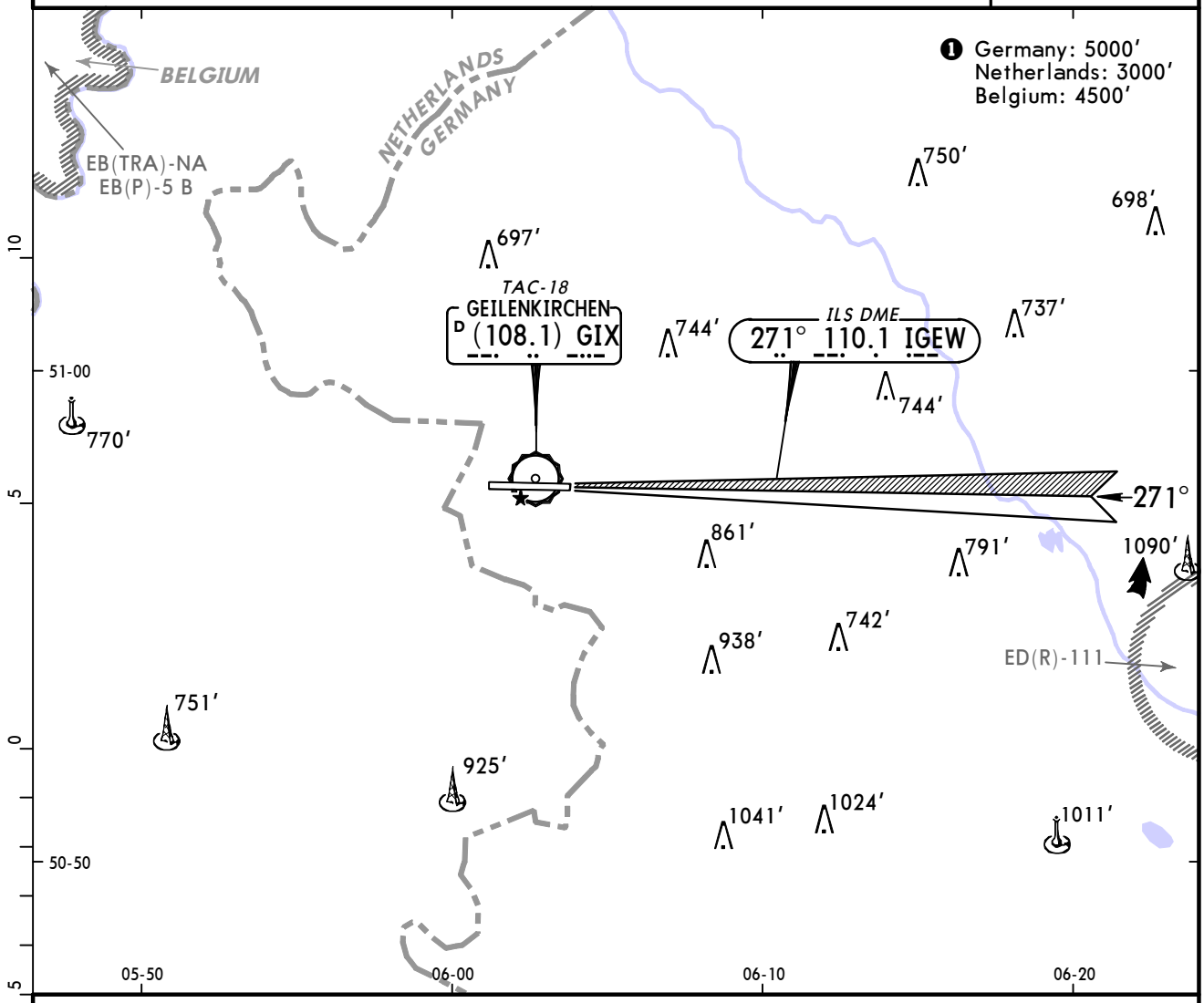
BRIEFING STRIP ™

RADAR	Final Apch Crs	PAR GS	Minimum Alt	DA(H)/MDA(H)	
	BY ATC	No Alt published	No FAF	Refer to Minimums	Apt Elev 292′ TDZE 09 263′ TDZE 27 289′

No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 11 hPa Trans level: By ATC Trans alt: ❶



RWY 09	RWY 27
PAR TCH	PAR TCH
displ thresh 64′	displ thresh 56′

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

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

TERPS

	PAR 09 DA(H) 463′(200′)		PAR 27 DA(H) 489′(200′)		SRA 09 MDA(H) 700′(437′)		SRA 27 MDA(H) 740′(451′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	500′- 1800m	500′- 2200m	500′- 1600m	500′- 2300m
B								
C	200′- 1200m				500′- 2000m	500′- 2400m	500′- 1800m	500′- 2500m
D								

CHANGES: Minimums.

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General Information

Location: Hohn Deu
IATA Code:
Lat/Long: N54° 18.7' E009° 32.3'
Elevation: 39 ft

Airport Use: Military
Magnetic Variation: 1.7°E

Fuel Types: Jet
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0617 Z
Sunset: 1653 Z,

Runway Information

Runway: 08
Length x Width: 8005 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 31 ft
Lighting: Edge, ALS

Runway: 26
Length x Width: 8005 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 38 ft
Lighting: Edge, ALS

Communication Information

Hohn Tower 141.7 Military
Hohn Tower 122.1 Military
Hohn Tower 36.93 Military
Hohn Tower 25.78 Military
Hohn Radar 141.1 Military
Hohn Radar 123.3 Military
Hohn Radar 38.54 Military
Hohn Radar 37.55 Military
Hohn Radar 34.4 Military
Hohn Radar 33.925 Military
Hohn Radar 27.905 Military

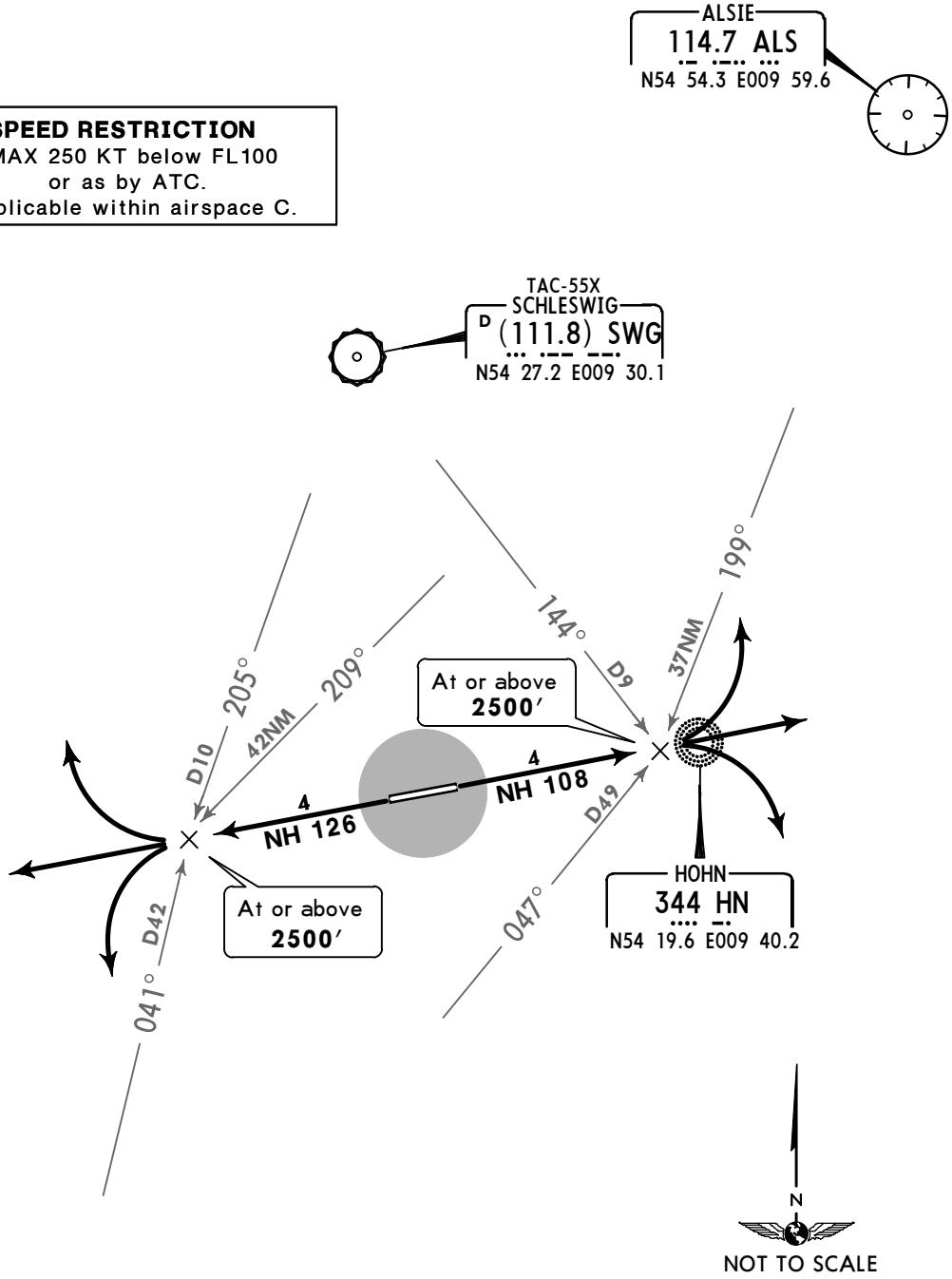
Apt Elev	
39′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Hohn 2500′.

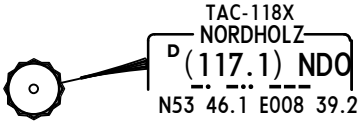
For UHF see MIL-101 listing

2000′
MSA
HN NDB

NH 108, NH 126
RWYS 08, 26 DEPARTURES
TACAN AZIMUTH REQUIRED

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





MINIMUM CLIMB RATE TABLE
FOR ATC PURPOSES

NH 126: up to 400′

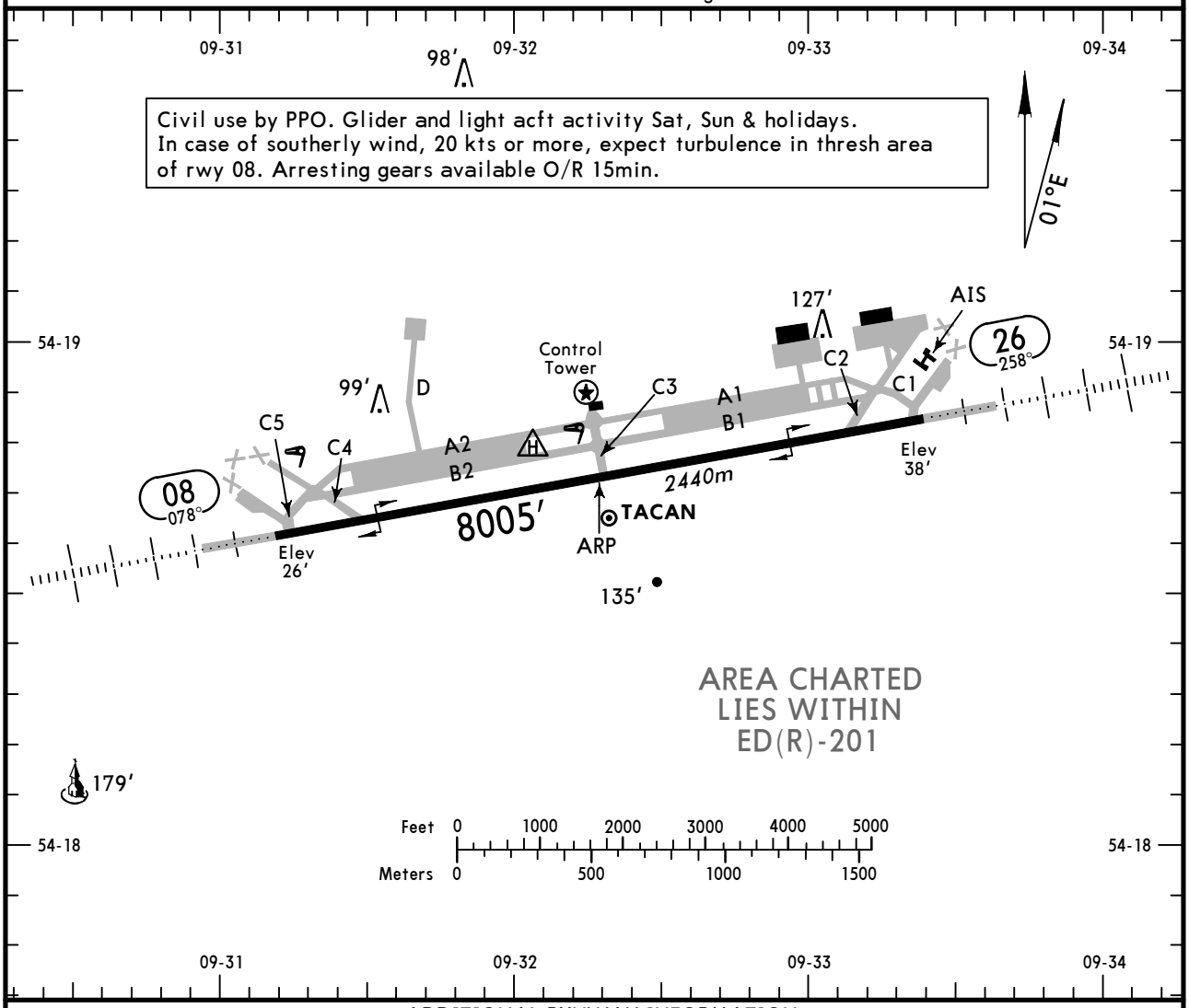
KT	75	100	150	200	250	300
V/V (fpm)	269	358	538	717	896	1075

SID	RWY	ROUTING
NH 108	08	Climb straight ahead to at or above 2500′ (to be reached within 4NM), continue as cleared by ATC.
NH 126	26	

CHANGES: New procedures at this airport.

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*HOHN Tower
122.1
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
08 26	HIRL HIALS SFL PAPI (angle 3.0°) RVR		 6891′ *2100m*		98′ *30m*

Standard TAKE-OFF [1] & DEPARTURE PROCEDURE

	LVP must be in Force [2]		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

[1] Operators applying U.S. Ops Specs: CL required below 300m.
[2] C-160 and LJ35 acft only.

CHANGES: None.

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HOHN, GERMANY
ILS or NDB Rwy 26

BREMEN Radar	*HOHN Tower
124.07	122.1

For UHF see MIL-101 listing

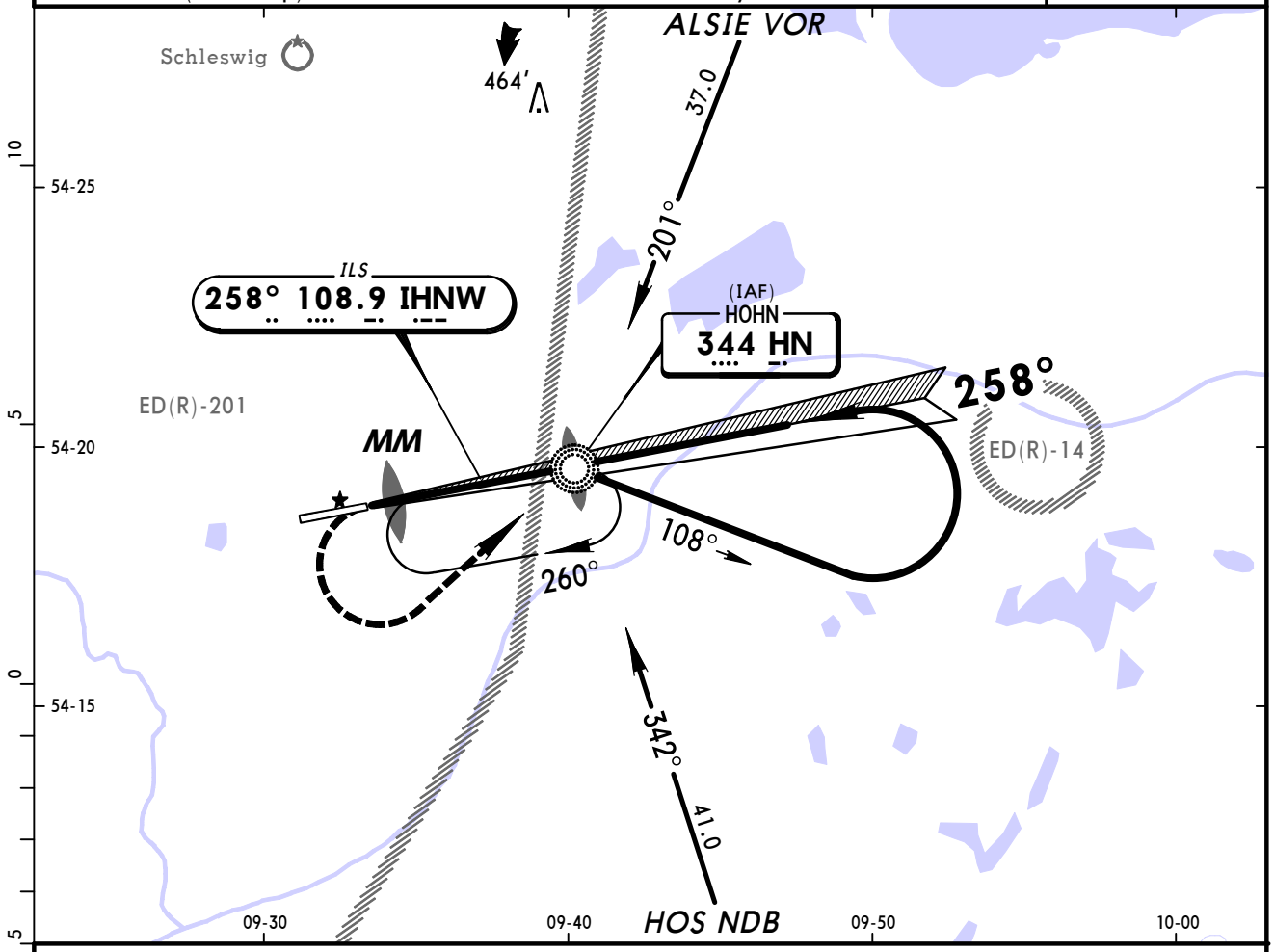
BRIEFING STRIP™

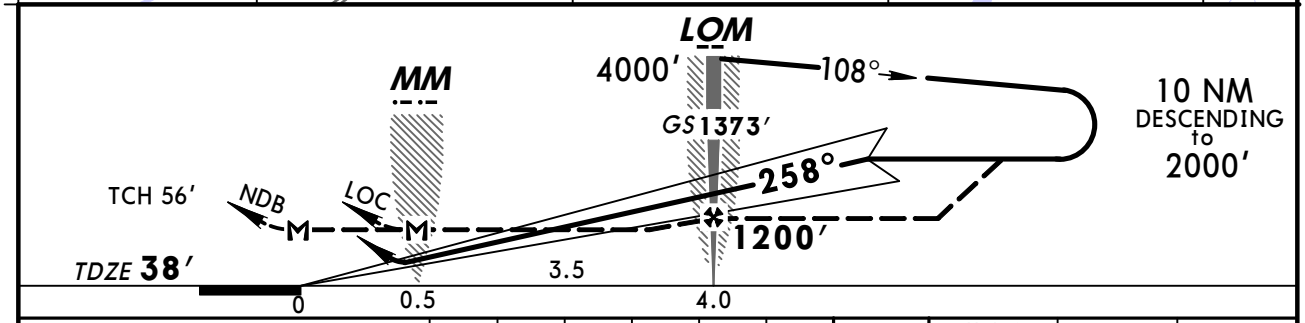
LOC IHNW 108.9	Final Apch Crs 258°	GS LOM 1373′ (1335′)	ILS DA(H) 238′ (200′)	Apt Elev 39′
NDB HN 344		Minimum Alt HN NDB 1200′ (1162′)	NDB MDA(H) 500′ (462′)	TDZE 38′

MISSED APCH: Turn LEFT climb to 2000′ and return to HN NDB.

Alt Set: hPa (IN on rep) TDZ Elev: 1 hPa Trans level: By ATC Trans alt: 5000′

2000′
MSA HN NDB





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	484	538	646	753	861
LOC: MAP at MM or LOM to MAP	3.5	3:00	2:20	2:06	1:45	1:30	1:19
NDB: LOM to MAP	4.0	3:26	2:40	2:24	2:00	1:43	1:30

HIALS
PAPI PAPI

2000′
LT

HN
344

Standard STRAIGHT-IN LANDING RWY **26** **CEILING REQUIRED** CIRCLE-TO-LAND

TERPS

	ILS DA(H) 238′ (200′)		LOC (GS out) MDA(H) 460′ (422′)		NDB MDA(H) 500′ (462′)	
	FULL/Limited	ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	500′- 1500m	500′- 2200m	500′- 1700m	500′- 2400m
B						
C			500′- 1700m	500′- 2400m	500′- 1900m	500′- 2600m
D						

Max Kts	MDA(H)	CEIL-VIS
90	510′ (471′)	500′- 2400m
120	540′ (501′)	500′- 2400m
140	640′ (601′)	500′- 2600m
165	740′ (701′)	600′- 3600m

CHANGES: BREMEN Radar frequency.

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BREMEN Radar 124.07	*HOHN Tower 122.1

For UHF see MIL-101 listing

BRIEFING STRIP ™

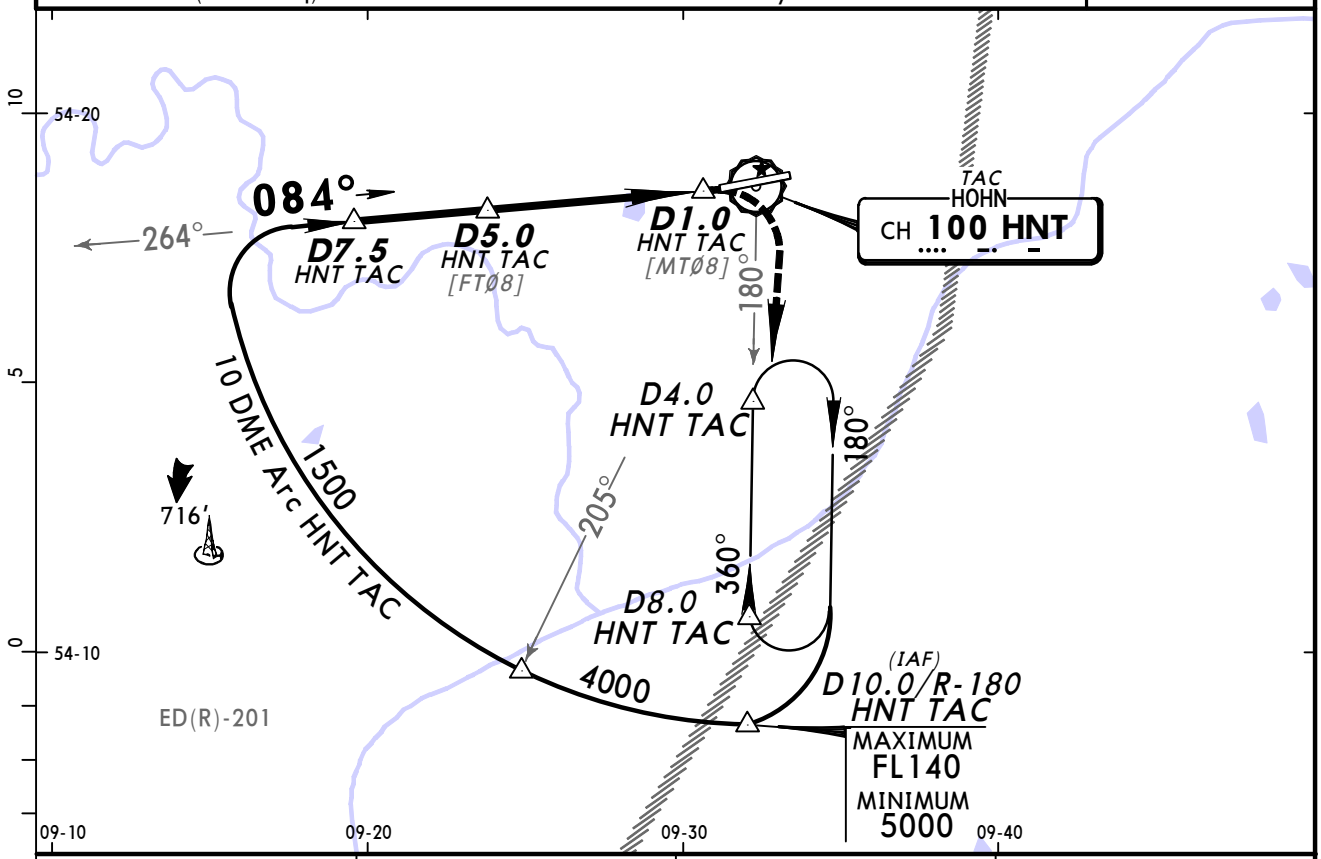
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 39′
HNT CH 100	084°	D5.0 HNT TAC 1500′ (1469′)	440′ (409′)	TDZE 31′

MISSED APCH: Turn RIGHT to IAF climbing to 5000′.

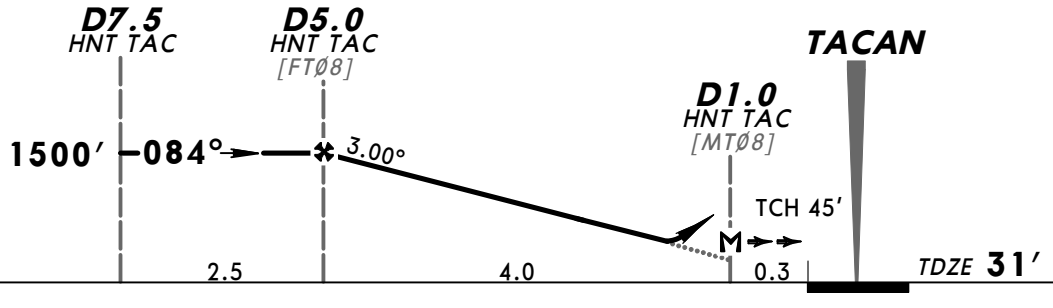
Alt Set: hPa (IN on req) | TDZ Elev: 1 hPa | Trans level: By ATC | Trans alt: 5000′

2000′

MSA HNT TAC



HNT TAC	4.0	3.0	2.0
ALTITUDE	1190′	870′	550′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 HNT TAC						

HIALS
PAPI PAPI

5000′ RT

D10.0/ R-180 HNT TAC

Standard STRAIGHT-IN LANDING RWY **08** **CEILING REQUIRED**

MDA(H) **440′** (409′)

TERPS

	ALS out
A	500′- 1600m
B	
C	500′- 1200m
D	500′- 2000m

CHANGES: BREMEN Radar frequency.

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BREMEN Radar	*HOHN Tower
124.07	122.1

For UHF see MIL-101 listing

BRIEFING STRIP ™

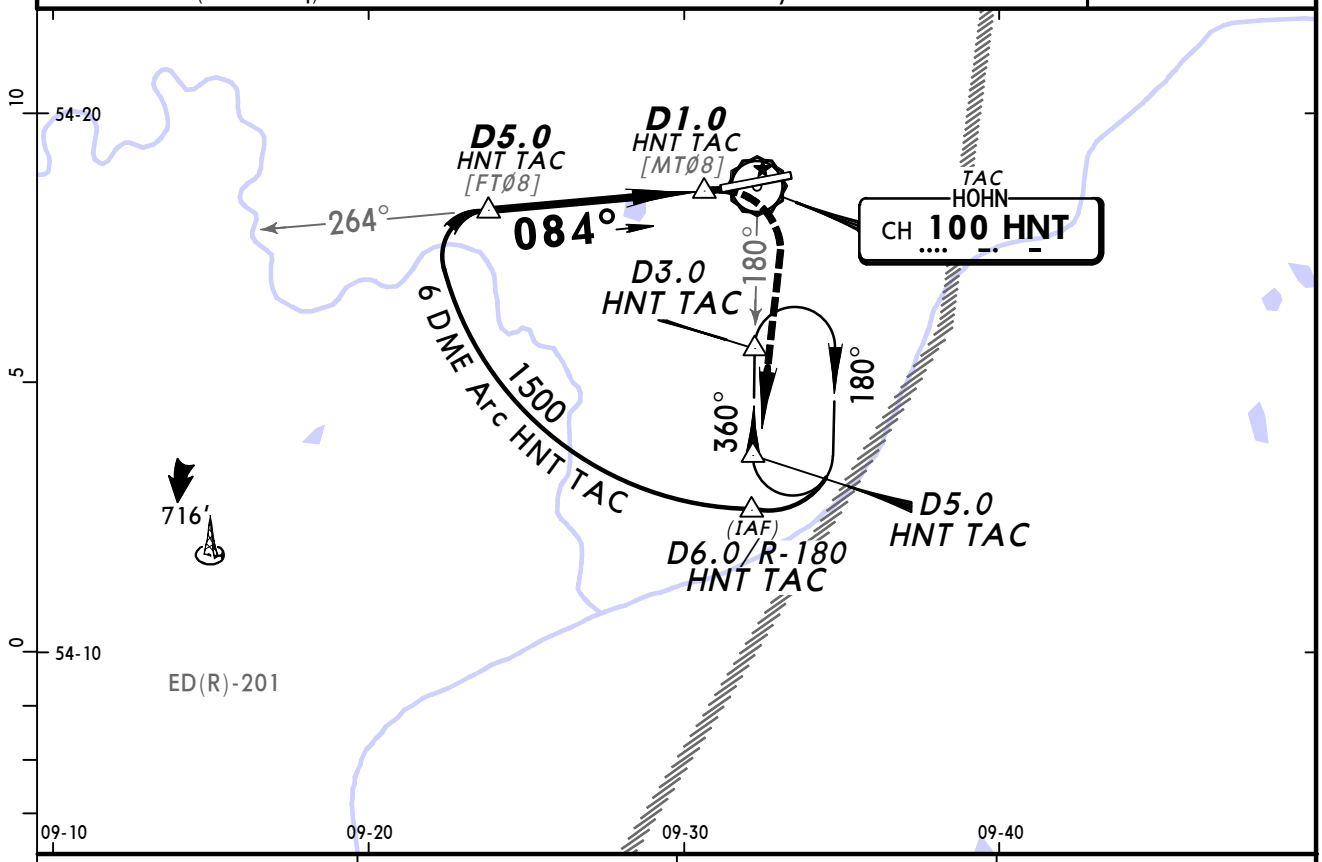
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / TDZE
HNT CH 100	084°	D5.0 HNT TAC 1500′ (1469′)	440′ (409′)	39′ / 31′

MISSED APCH: Turn RIGHT to IAF climbing to 1500′.

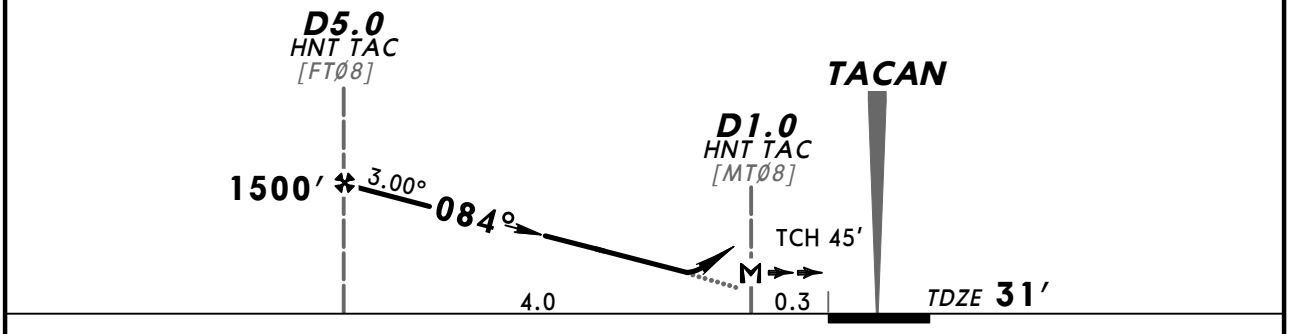
2000′

MSA HNT TAC

Alt Set: hPa (IN on req) TDZ Elev: 1 hPa Trans level: By ATC Trans alt: 5000′



HNT TAC	4.0	3.0	2.0
ALTITUDE	1190′	870′	550′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 HNT TAC						

HIALS
PAPI PAPI

1500′ RT

D6.0/ R-180 HNT TAC

Standard STRAIGHT-IN LANDING RWY **08** **CEILING REQUIRED**

MDA(H) **440′** (409′)

		ALS out
A	500′- *1200m*	500′- *1600m*
B	NOT AUTHORIZED	
C		
D		

TERPS

CHANGES: BREMEN Radar frequency.

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HOHN, GERMANY
TACAN 1 Rwy 26

BREMEN Radar	*HOHN Tower
124.07	122.1

For UHF see MIL-101 listing

BRIEFING STRIP™

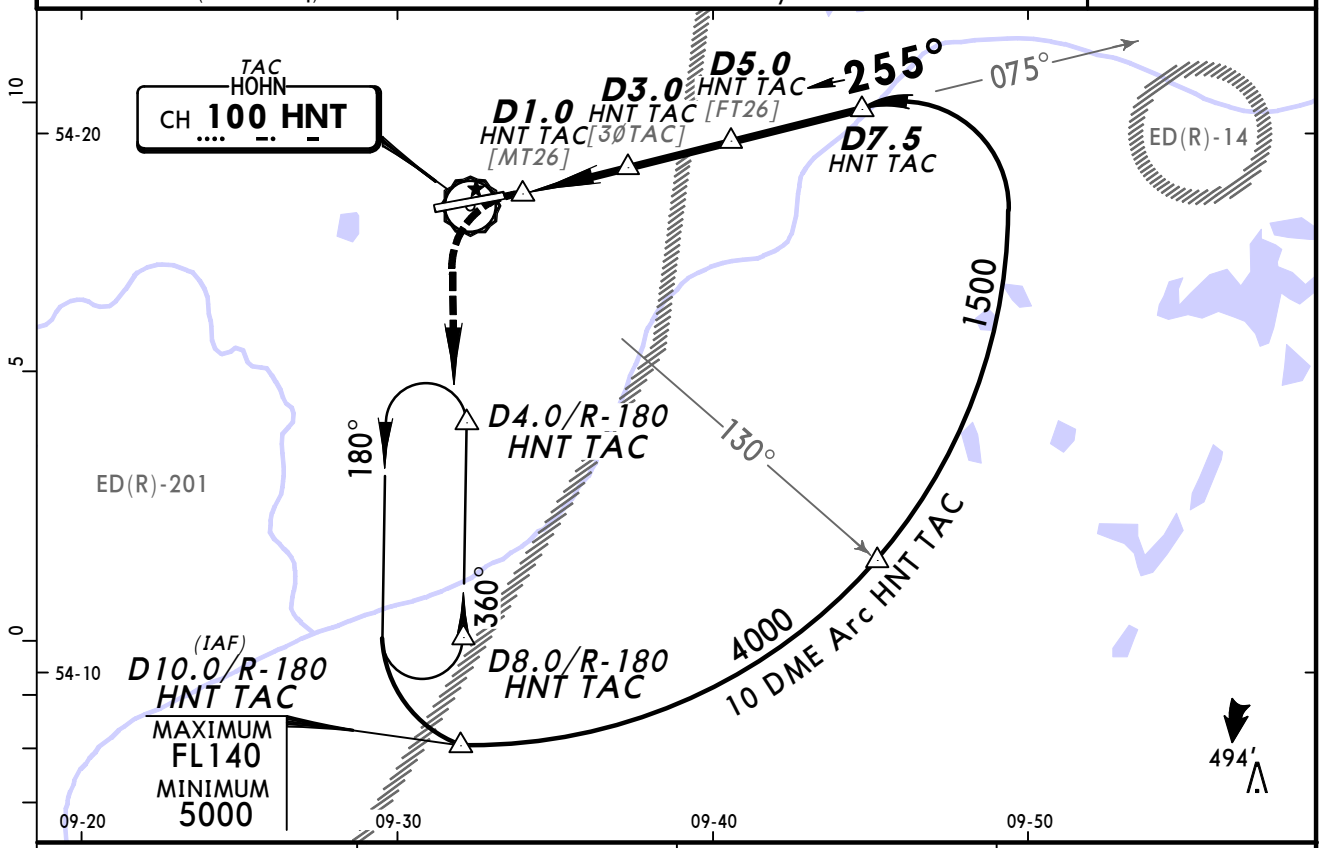
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / TDZE
HNT CH 100	255°	D5.0 HNT TAC 1500′ (1462′)	380′ (342′)	39′ / 38′

MISSED APCH: Turn LEFT to IAF climbing to 5000′.

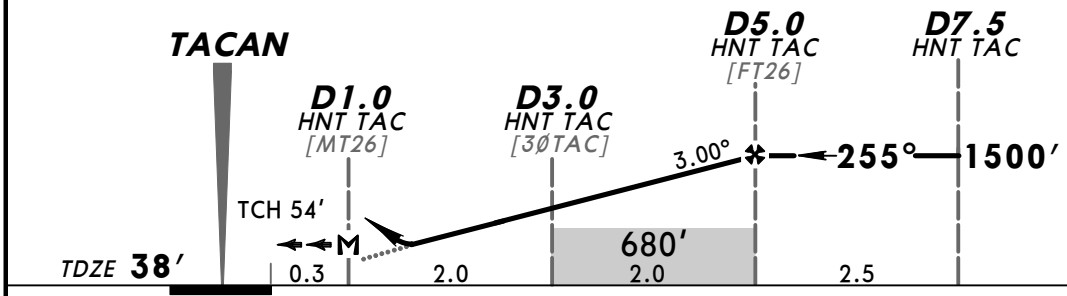
Alt Set: hPa (IN on req) | TDZ Elev: 1 hPa | Trans level: By ATC | Trans alt: 5000′

2000′

MSA HNT TAC



HNT TAC	2.0	3.0	4.0
ALTITUDE	550′	870′	1190′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 HNT TAC						

HIALS
PAPI PAPI

5000′ LT

D10.0/ R-180 HNT TAC

Standard STRAIGHT-IN LANDING RWY **26** **CEILING REQUIRED**

MDA(H) **380′** (342′)

TERPS

		ALS out
A	400′- 900m	
B		400′- 1600m
C	400′- 1200m	
D		400′- 2000m

CHANGES: BREMEN Radar frequency.

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BREMEN Radar	*HOHN Tower
124.07	122.1

For UHF see MIL-101 listing

BRIEFING STRIP™

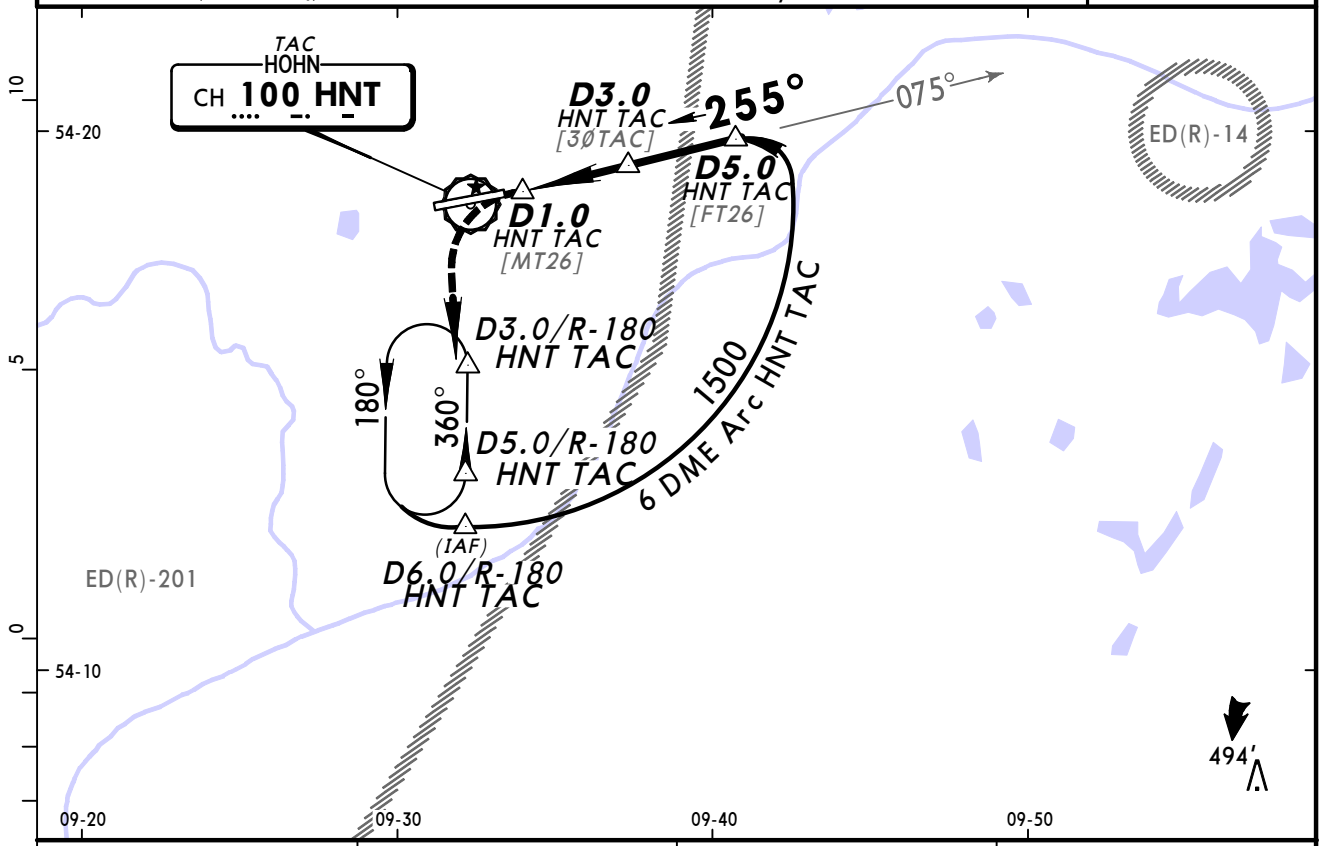
TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 39′
HNT CH 100	Apch Crs 255°	D5.0 HNT TAC 1500′ (1462′)	380′ (342′)	TDZE 38′

MISSED APCH: Turn LEFT to IAF climbing to 1500′.

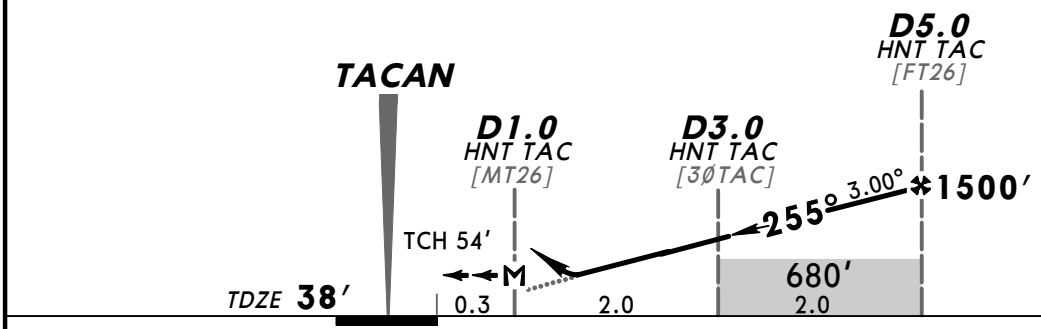
Alt Set: hPa (IN on req) TDZ Elev: 1 hPa Trans level: By ATC Trans alt: 5000′

2000′

MSA HNT TAC



HNT TAC	2.0	3.0	4.0
ALTITUDE	550′	870′	1190′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 HNT TAC						

HIALS
PAPI PAPI

1500′
LT

D6.0/
R-180
HNT TAC

Standard STRAIGHT-IN LANDING RWY **26** **CEILING REQUIRED**

MDA(H) **380′** (342′)

TERPS

		ALS out
A	400′- 900m	400′- 1600m
B	NOT AUTHORIZED	
C		
D		

CHANGES: BREMEN Radar frequency.

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BREMEN Radar	*HOHN Radar	*HOHN Tower
124.07	123.3	122.1

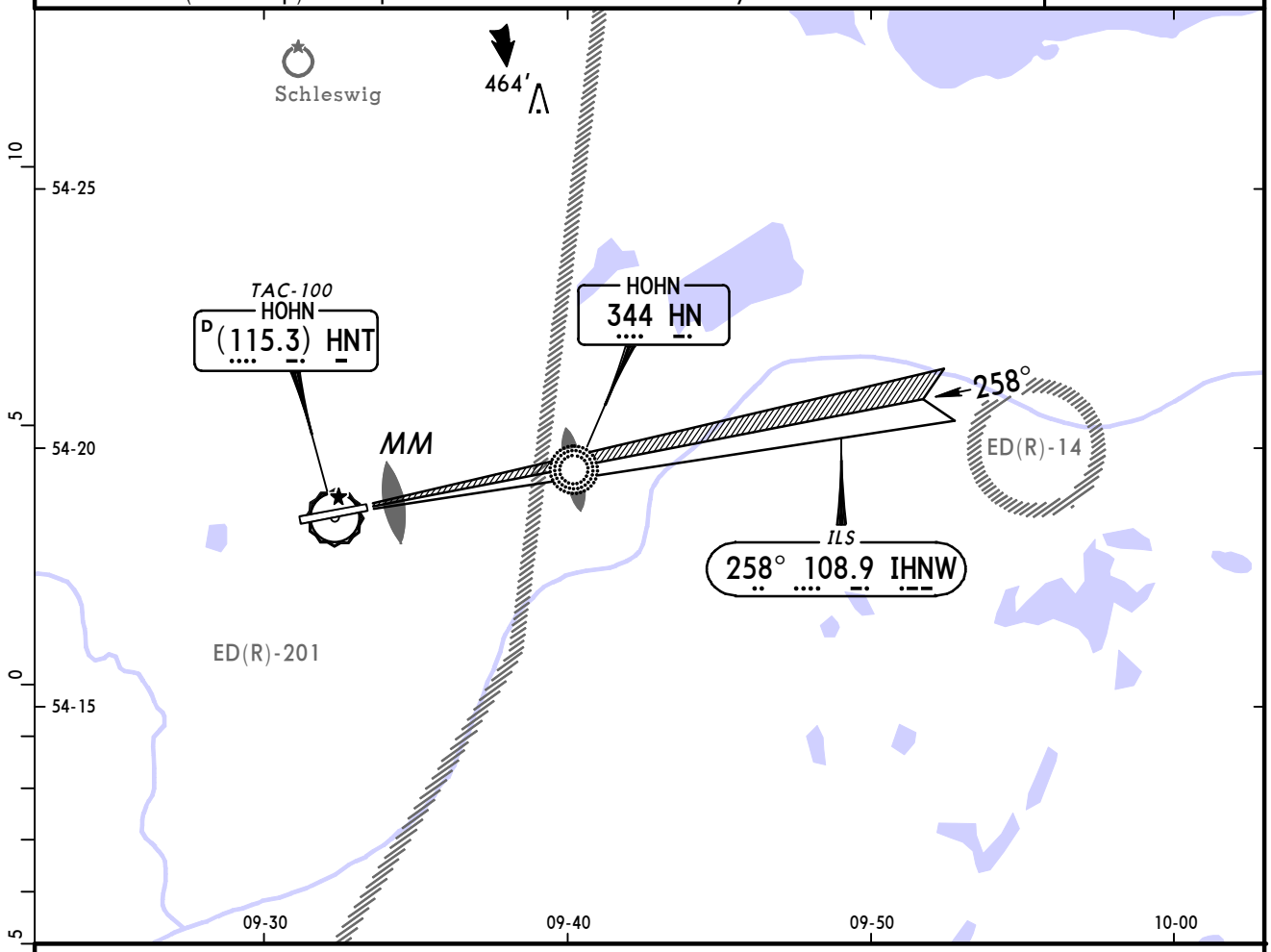
For UHF see MIL-101 listing

BRIEFING STRIP ™

RADAR	Final Apch Crs By ATC	PAR GS No Alt published / Minimum Alt No FAF	DA(H)/MDA(H) Refer to Minimums	Apt Elev 39′ / TDZE RWY 08 31′ / TDZE RWY 26 38′	No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on rep) Apt Elev: 1 hPa Trans level: By ATC Trans alt: 5000′



RWY 08
PAR TCH 45′

RWY 26
PAR TCH 56′

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

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

TERPS

	PAR 08 DA(H) 231′(200′)		PAR 26 DA(H) 238′(200′)		SRA 08 MDA(H) 440′(409′)		SRA 26 MDA(H) 440′(402′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	500′- 1400m	500′- 2100m	500′- 1400m	500′- 2100m
B								
C					500′- 1600m	500′- 2300m	500′- 1600m	500′- 2300m
D								

CHANGES: BREMEN Radar frequency.

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General Information

Location: Jever Deu
IATA Code:
Lat/Long: N53° 32.0' E007° 53.3'
Elevation: 24 ft

Airport Use: Military
Magnetic Variation: 1.2°E

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

Sunrise: 0622 Z
Sunset: 1701 Z,

Runway Information

Runway: 10
Length x Width: 8136 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 20 ft
Lighting: Edge, ALS, REIL

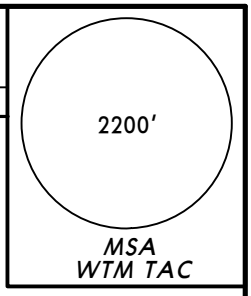
Runway: 28
Length x Width: 8136 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 24 ft
Lighting: Edge, ALS, REIL

Communication Information

Jever Tower 138.15 Military
Jever Tower 122.1 Military
Jever Tower 118.725 Military
Jever Tower 37.925 Military
Jever Tower 25.78 Military
Wittmund Radar 123.6 Military
Wittmund Radar 123.3 Military
Wittmund Radar 38.54 Military
Wittmund Radar 34.4 Military
Wittmund Radar 25.87 Military
Wittmund Radar 24.805 Military

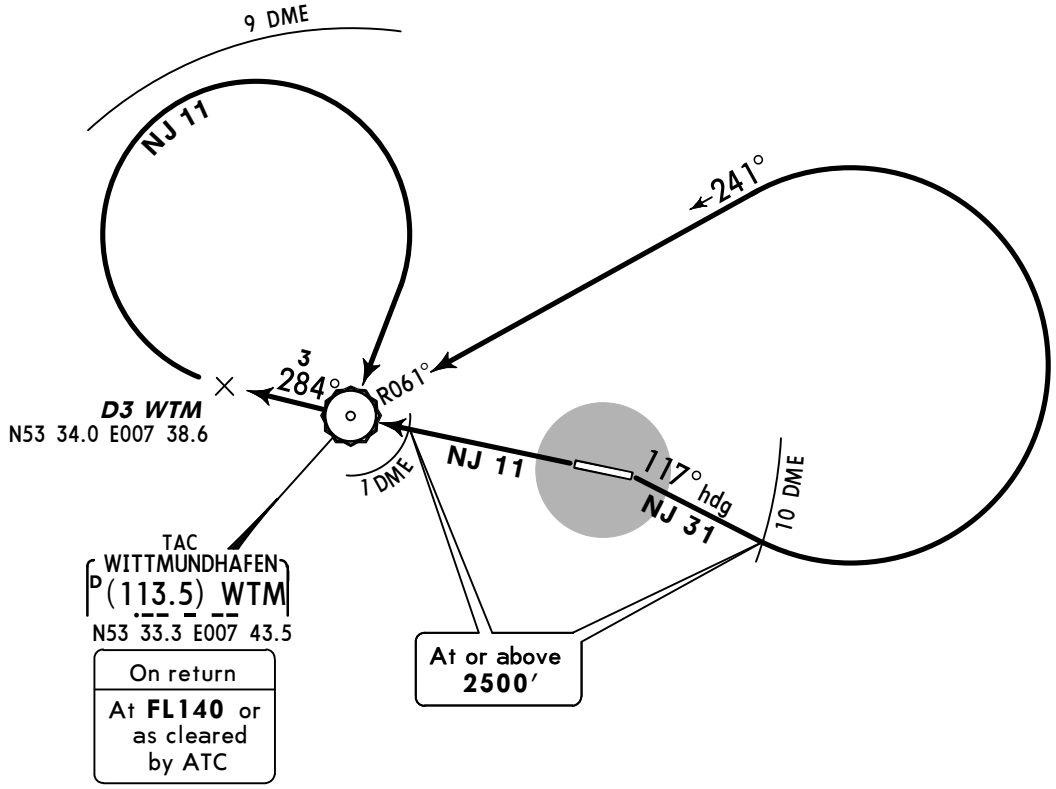
Apt Elev	
24′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Jever 2700′.

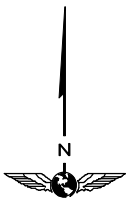
For UHF see MIL-101 listing



NJ 11, NJ 31
RWYS 28, 10 DEPARTURES
TACAN AZIMUTH REQUIRED

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





MINIMUM CLIMB RATE TABLE
NJ 31: up to 300′.

KT	75	100	150	200	250	300
V/V (fpm)	200	267	400	533	667	800

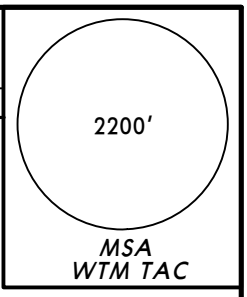
SID	RWY	ROUTING
NJ 11	**28**	Climb to WTM, WTM R-284, at D3 WTM turn RIGHT (remain within WTM 9 DME) to WTM.
NJ 31	**10**	Climb on 117° heading to WTM 10 DME, turn LEFT, intercept WTM R-061 inbound to WTM.

CHANGES: New procedures at this airport.

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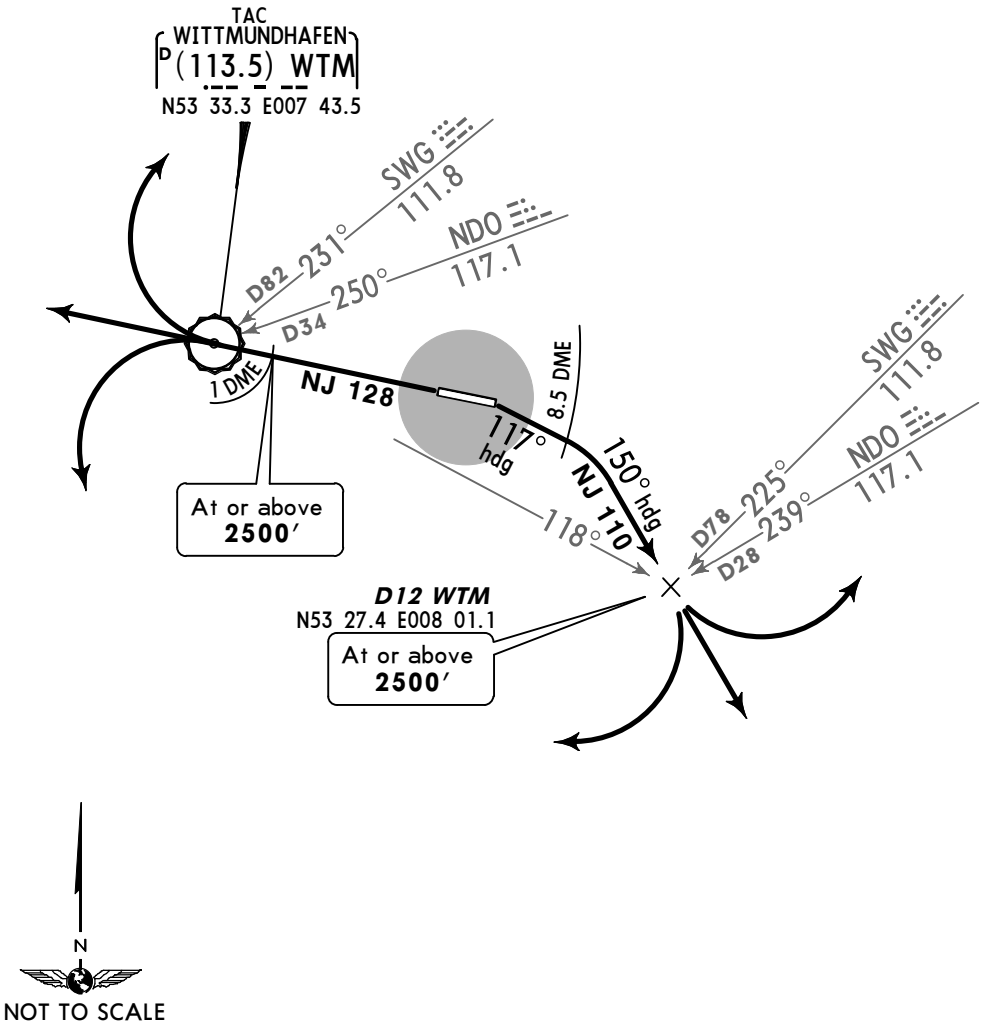
Apt Elev	
24′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Jever 2700′.

For UHF see MIL-101 listing



NJ 110, NJ 128
RWYS 10, 28 DEPARTURES
TACAN AZIMUTH REQUIRED

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



MINIMUM CLIMB RATE TABLE

NJ 110: up to 300′.

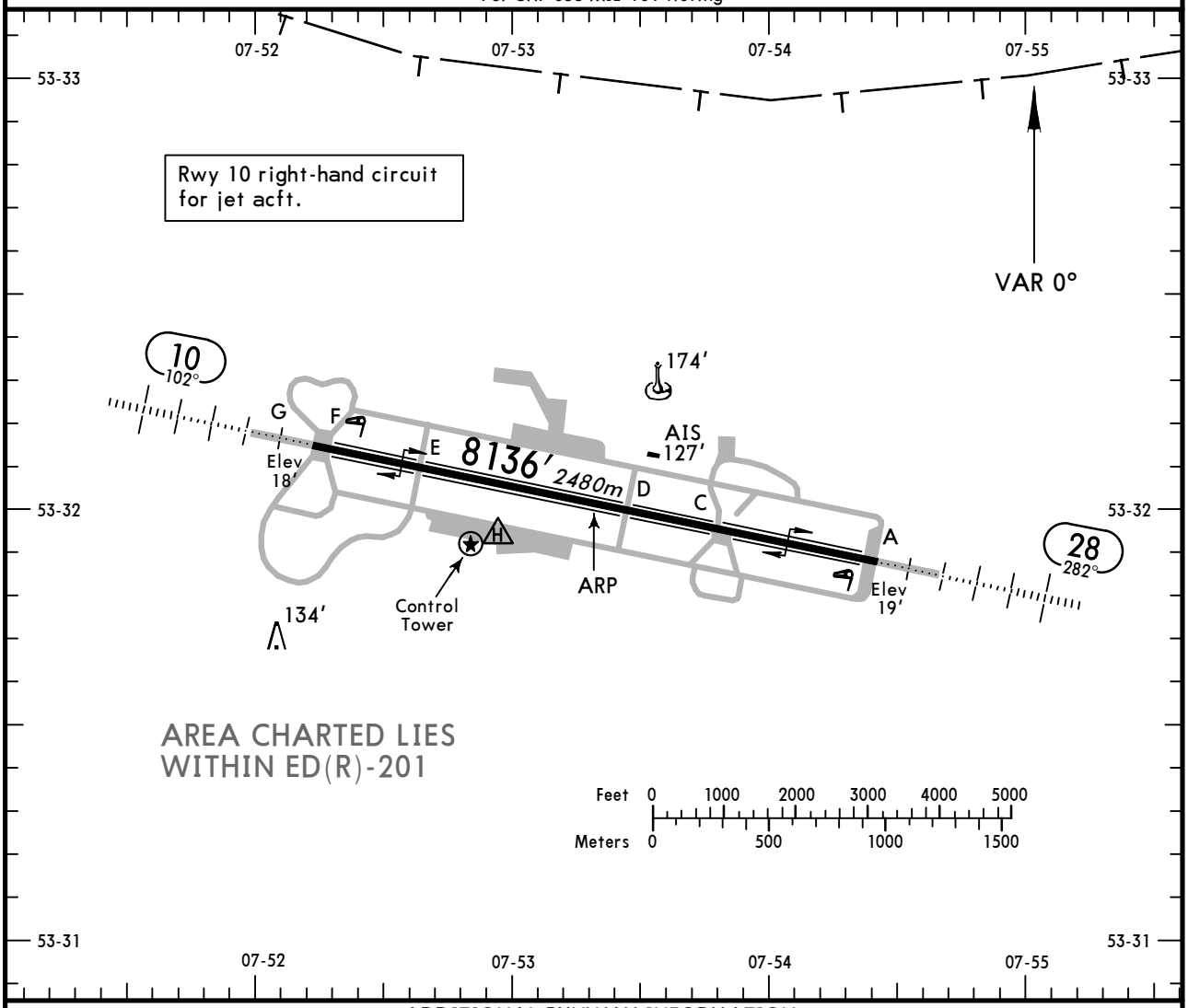
KT	75	100	150	200	250	300
V/V (fpm)	200	267	400	533	667	800

SID	RWY	ROUTING
NJ 110	**10**	Climb on 117° heading to WTM 8.5 DME, turn RIGHT, 150° heading, when passing WTM R-118/D12, continue as cleared by ATC.
NJ 128	**28**	Climb straight ahead to 2500′ within 4NM after take off, continue as cleared by ATC.

CHANGES: New procedures at this airport.

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*JEVER Tower
122.1 118.72
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
10 ❶ 28	HIRL HIALS SFL REIL PAPI (angle 3.0°)				98′ *30m*

❶ Concrete with anti-skid layer.

NOISE ABATEMENT PROCEDURE

Departure Rwy 10 heading 120°.

Standard TAKE-OFF 1

	LVP must be in Force: RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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

CHANGES: Lights.

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JEVER, GERMANY
TACAN Rwy 10

BREMEN Radar	*JEVER Tower	
120.22	122.1	118.72

For UHF see MIL-101 listing

BRIEFING STRIP ™

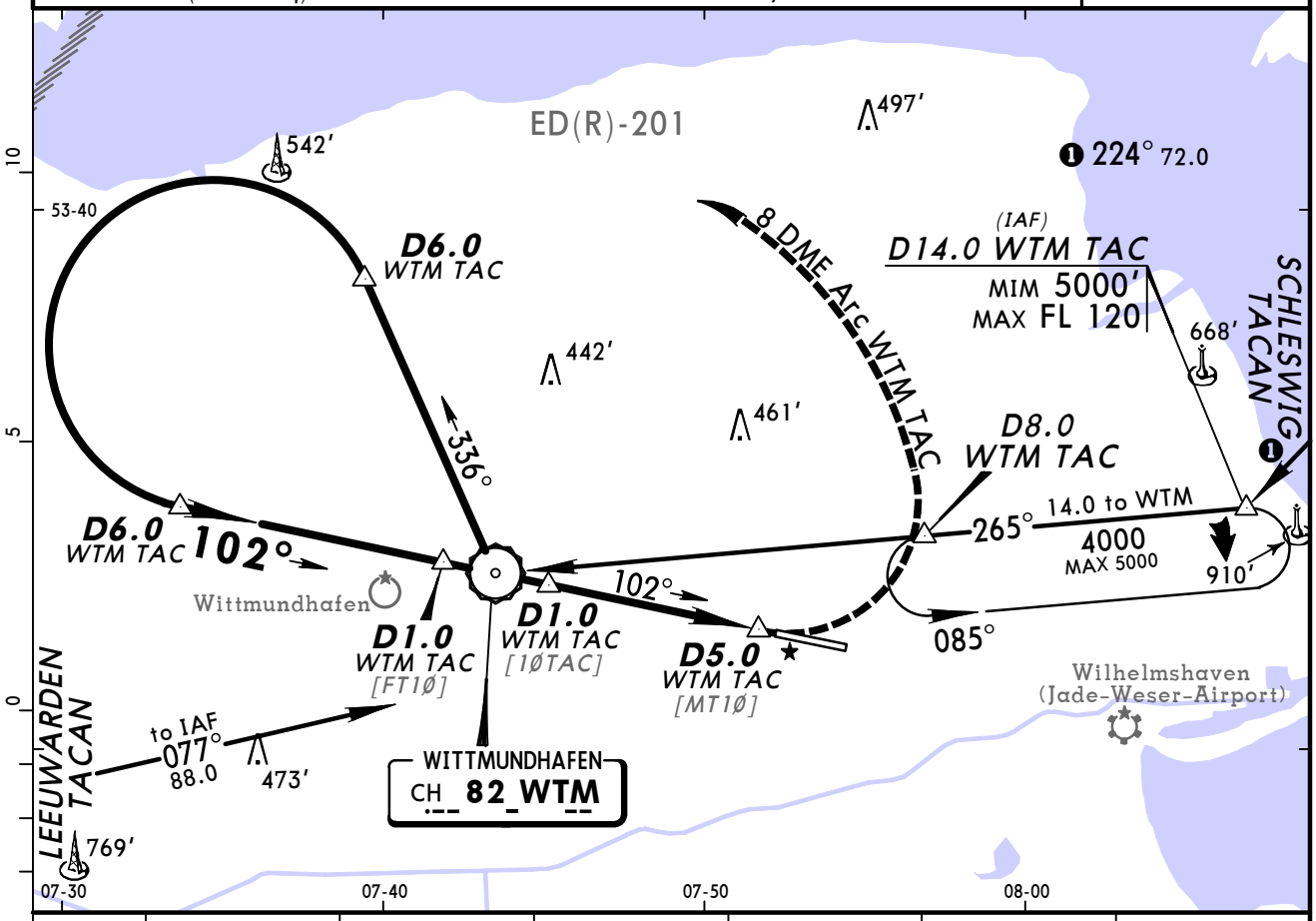
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / TDZE
WTM CH 82	102°	D1.0 WTM TAC 2000′ (1980′)	360′ (340′)	24′ / 20′

MISSED APCH: Turn LEFT climbing to 2500′ on 8 DME Arc WTM TAC.

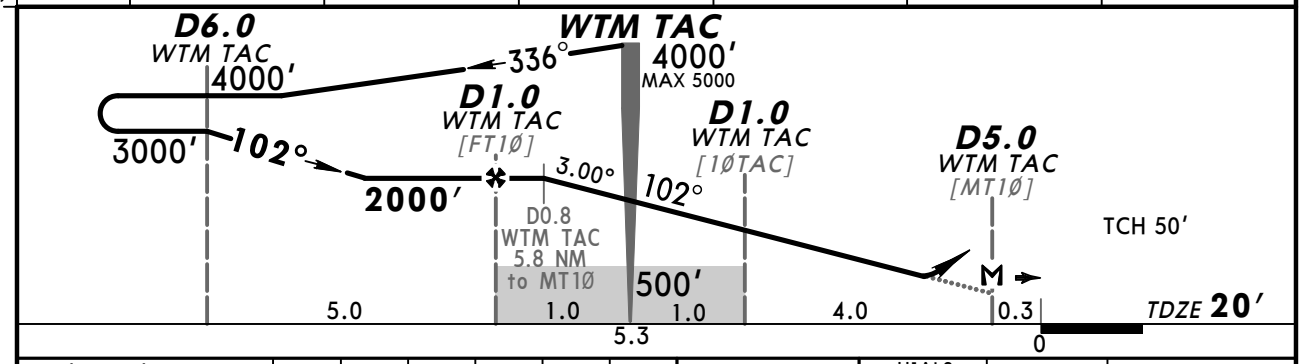
Alt Set: hPa (IN on req) | TDZ Elev: 1 hPa | Trans level: By ATC | Trans alt: 5000′

2200′

MSA WTM TAC



WTM TAC	0.8 BEFORE WTM	WTM TAC	1.0 AFTER WTM	2.0 AFTER WTM	3.0 AFTER WTM	4.0 AFTER WTM
ALTITUDE	2000′	1750′	1430′	1110′	800′	480′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D5.0 WTM TAC						

HIALS
REIL PAPI PAPI

2500′ LT

8 DME Arc
WTM TAC

Standard STRAIGHT-IN LANDING RWY **10** **CEILING REQUIRED**

MDA(H) **360′** (340′)

TERPS

	ALS out
A, B	400′ - 800m
C, D	400′ - 1200m
	400′ - 1600m

CHANGES: BREMEN Radar frequency. Lights. Minimums.

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JEVER, GERMANY
TACAN Rwy 28

BREMEN Radar	*JEVER Tower	
120.22	122.1	118.72

For UHF see MIL-101 listing

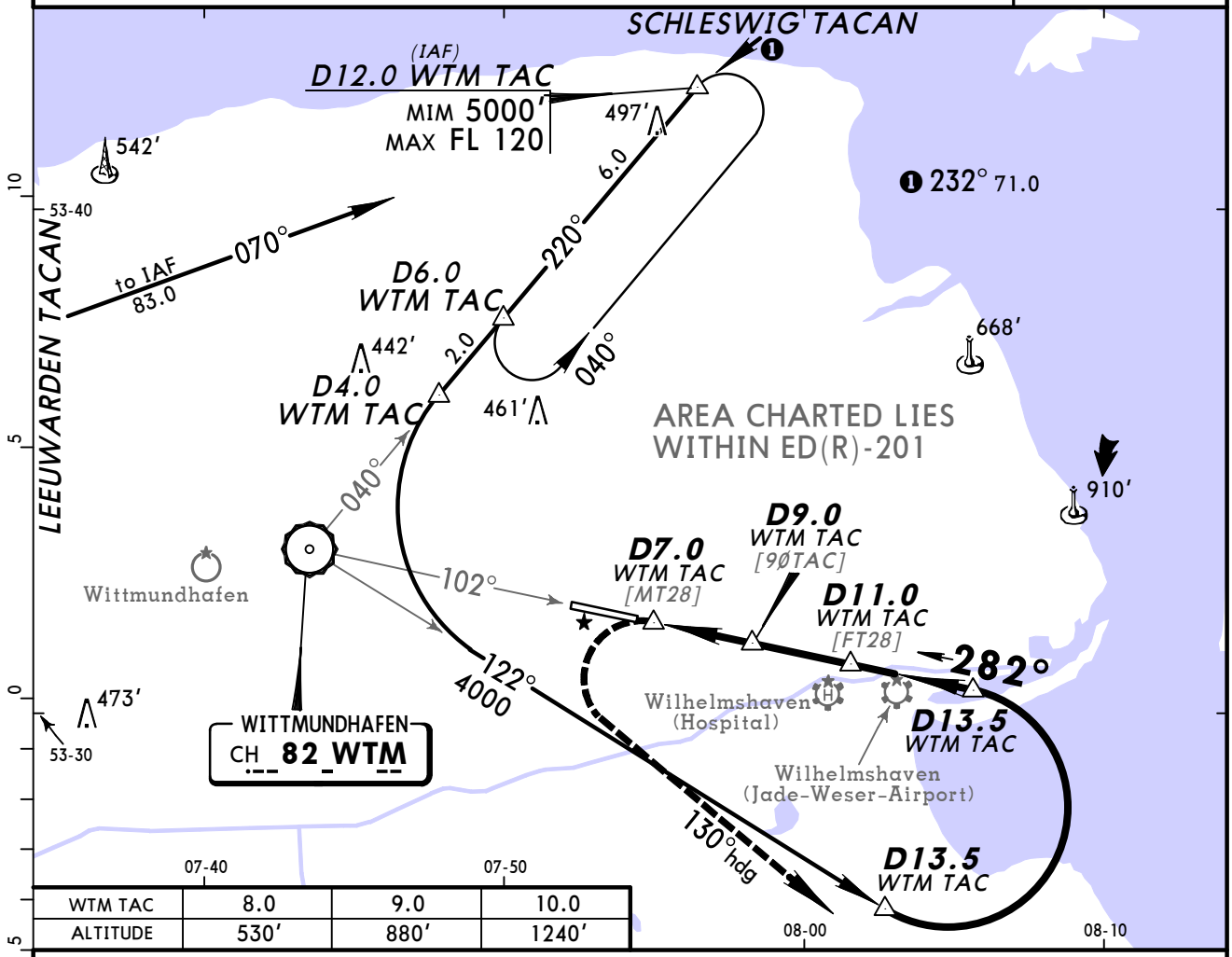
BRIEFING STRIP

TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 24′
WTM CH 82	Apch Crs 282°	D11.0 WTM TAC 1600′ (1576′)	380′ (356′)	TDZE 24′

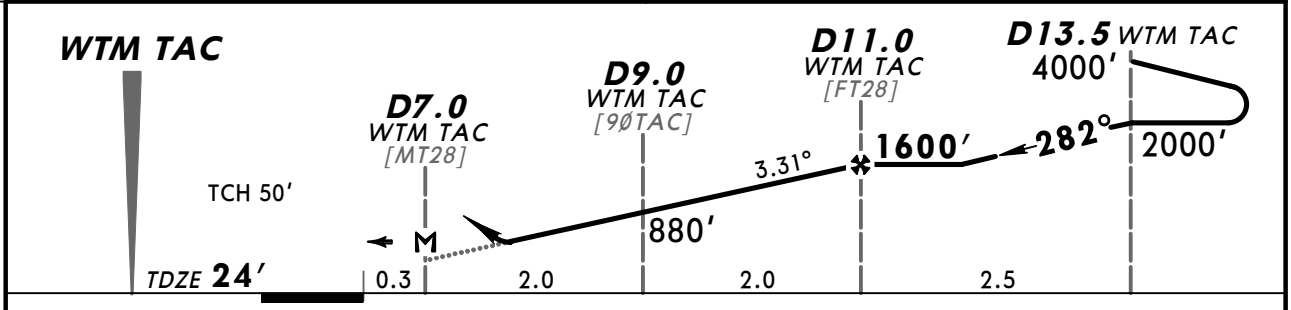
MISSED APCH: Turn LEFT climbing to 2500′ on heading 130° to intercept 16 DME Arc WTM TAC.

Alt Set: hPa (IN on req) TDZ Elev: 1 hPa Trans level: By ATC Trans alt: 5000′
Aircraft have to be RADAR controlled when NIGHT LOW FLYING SYSTEM is active.

2200′
MSA WTM TAC



WTM TAC	8.0	9.0	10.0
ALTITUDE	530′	880′	1240′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.31°	410	527	586	703	820	937
MAP at D7.0 WTM TAC						

HIALS
REIL PAPI PAPI

2500′ on 130° hdg
LT

Standard STRAIGHT-IN LANDING RWY 28 **CEILING REQUIRED**

MDA(H) **380′** (356′)

TERPS

	ALS out
A	400′ - 1600m
B	
C	
D	400′ - 1600m / 400′ - 2000m

CHANGES: BREMEN Radar frequency. Lights.

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General Information

Location: Laage Deu
IATA Code: RLG
Lat/Long: N53° 55.1' E012° 16.8'
Elevation: 140 ft

Airport Use: Joint
Magnetic Variation: 2.6°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0605 Z
Sunset: 1643 Z,

Runway Information

Runway: 10
Length x Width: 8268 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 139 ft
Lighting: Edge, ALS
Stopway: 1000 ft

Runway: 28
Length x Width: 8268 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 133 ft
Lighting: Edge, ALS
Stopway: 1000 ft

Communication Information

Laage Tower 143.925 Military
Laage Tower 122.1
Laage Tower 118.425
Laage Tower 33.64 Military
Laage Tower 25.78 Military
Laage Apron Ground Control 122.6
Laage Radar 142.0 Military
Laage Radar 139.75 Military
Laage Radar 133.625
Laage Radar 123.3

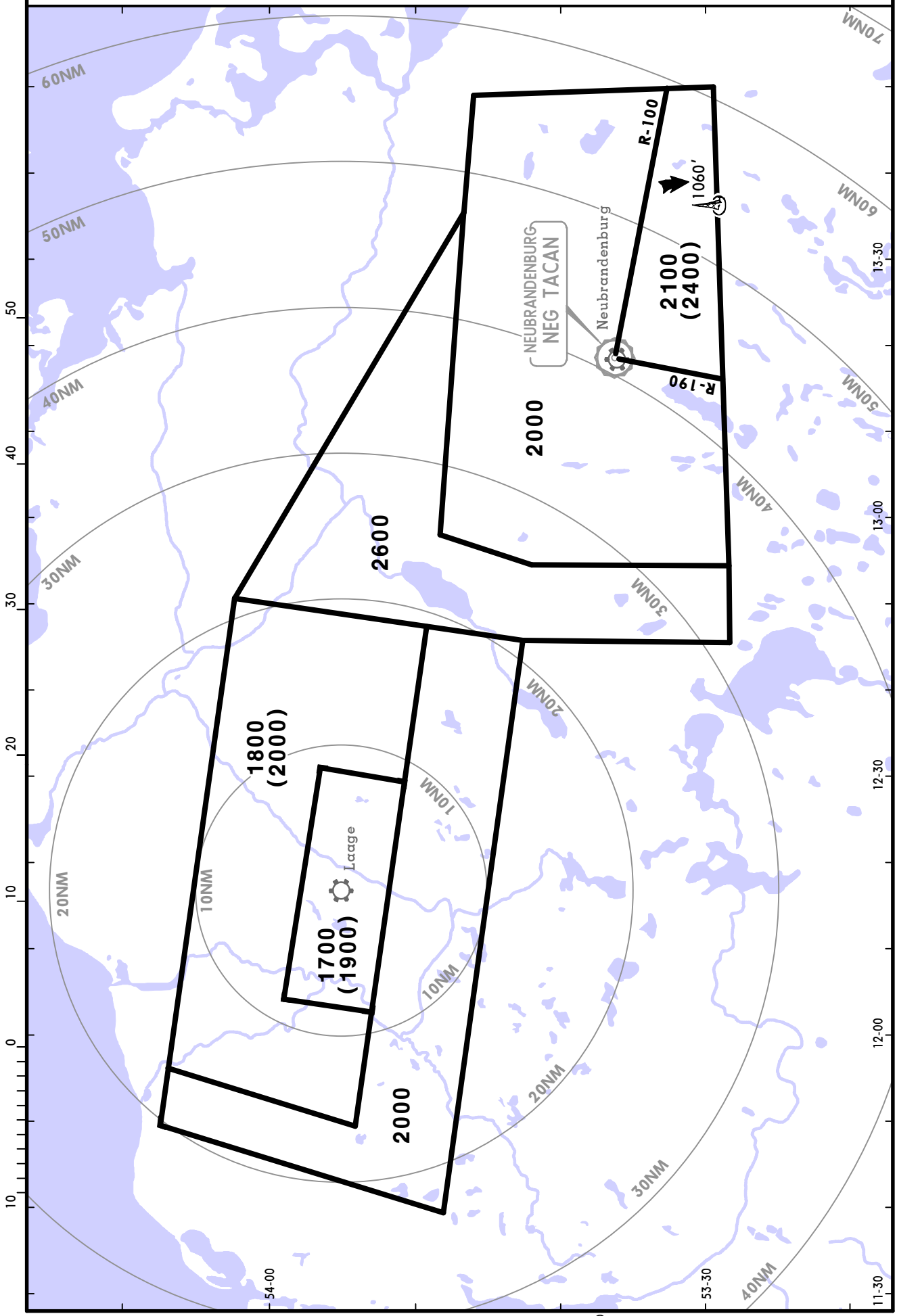
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Laage Radar 38.54 Military
Laage Radar 36.885 Military
Laage Radar 35.865 Military
Laage Radar 34.4 Military
Laage Radar 26.84 Military

*LAAGE Radar	*Apt Elev*	Alt Set: hPa (IN on request)
123.3	140′	Trans level: By ATC Trans alt: 5000′

For UHF see MIL-101 listing

Values in brackets consider additional height margins in order to meet required obstacle clearance at cold temperatures.



CHANGES: Sectors revised.

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Apt Elev
138′

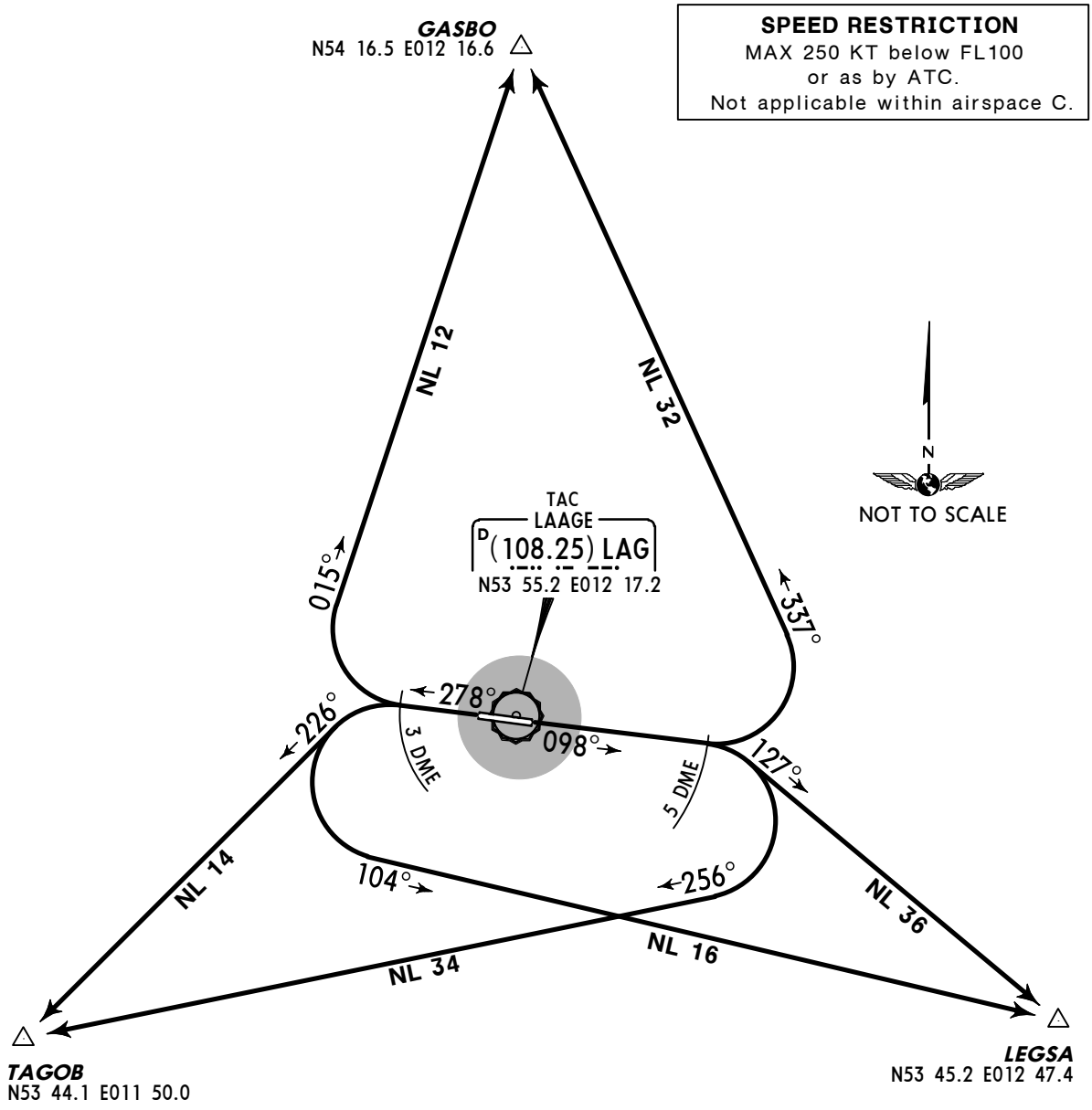
Trans level: By ATC Trans alt: 5000′

1. Emergency safe altitude within 100 NM of Rostock-Laage airport 3500′.
2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.

1800′
MSA
LAG TAC

NL 12, NL 14, NL 16, NL 32, NL 34, NL 36
RWYS 28, 10 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



MINIMUM CLIMB RATE TABLE

	KT	75	100	150	200	250	300
NL 12: up to **1420′**	V/V (fpm)	338	450	675	900	1125	1350
NL 14, NL 16: up to **3500′**	V/V (fpm)	313	417	625	833	1042	1250
NL 32, NL 34, NL 36: up to **1800′**	V/V (fpm)	288	383	575	767	958	1150

Initial climb clearance **4000′**

SID	RWY	ROUTING
NL 12	**28**	Climb on 278° track to LAG 3 DME, turn RIGHT, 015° track to GASBO.
NL 14		Climb on 278° track to LAG 3 DME, turn LEFT, 226° track to TAGOB.
NL 16		Climb on 278° track to LAG 3 DME, turn LEFT, 104° track to LEGSA.
NL 32	**10**	Climb on 098° track to LAG 5 DME, turn LEFT, 337° track to GASBO.
NL 34		Climb on 098° track to LAG 5 DME, turn RIGHT, 256° track to TAGOB.
NL 36		Climb on 098° track to LAG 5 DME, turn RIGHT, 127° track to LEGSA.

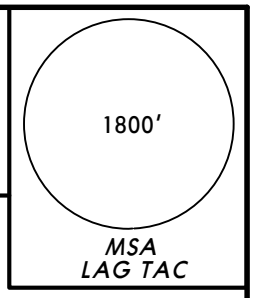
CHANGES: SID NL 12 minimum climb rate revised.

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Apt Elev 138′

Trans level: By ATC Trans alt: 5000′

1. Emergency safe altitude within 100 NM of Rostock-Laage airport 3500′.
2. Standard Instrument Departure Routes are also minimum noise routings. Strict adherence within the limits of performance criteria is mandatory.



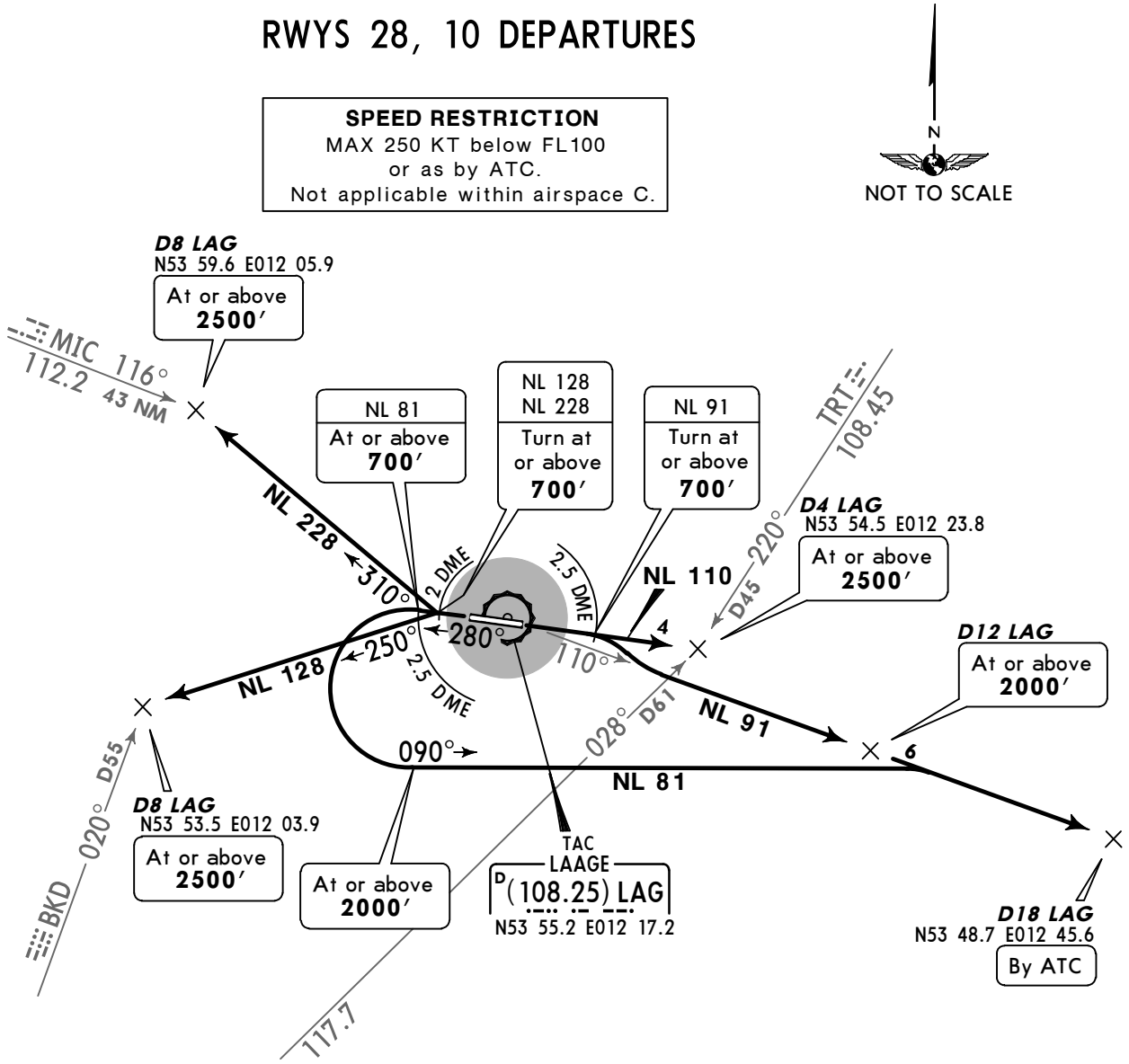
NL 81, NL 91

TACAN AZIMUTH REQUIRED

NL 110, NL 128, NL 228

RWYS 28, 10 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



MINIMUM CLIMB RATE TABLE

KT	75	100	150	200	250	300
NL 81: up to **3500′** V/V (fpm)	570	760	1140	1520	1900	2280
NL 91, NL 110: up to **1800′** V/V (fpm)	339	452	678	903	1129	1355
NL 128, NL 228: up to **1900′** V/V (fpm)	288	383	575	767	958	1150

Initial climb clearance **4000′**

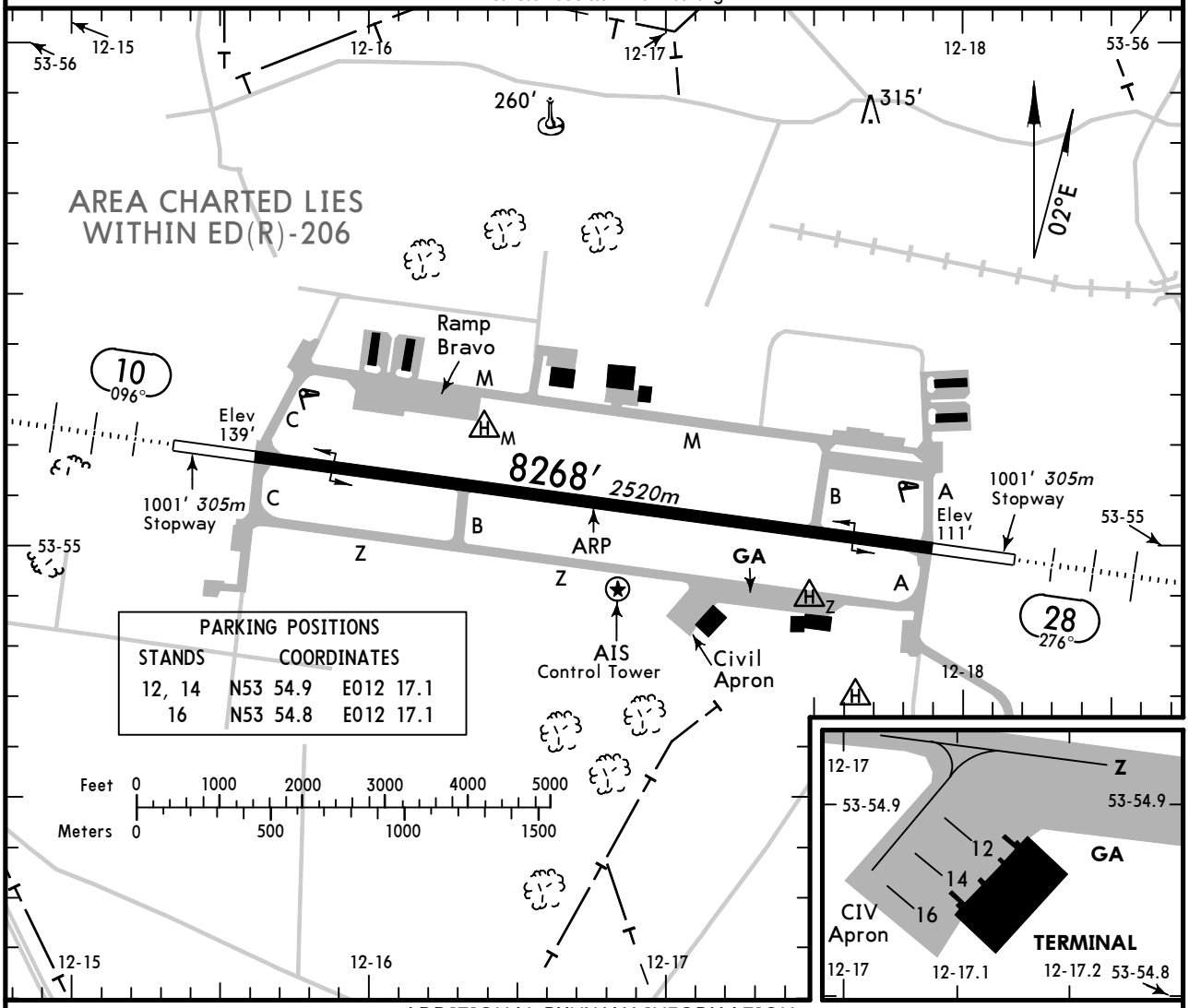
SID	RWY	ROUTING
NL 81	**28**	Climb straight ahead to LAG 2.5 DME, turn LEFT, 090° track, intercept LAG R-110 to D18 LAG.
NL 91	**10**	Climb straight ahead to LAG 2.5 DME, turn RIGHT, intercept LAG R-110 to D18 LAG.
NL 110		Climb straight ahead to D4 LAG, continue as cleared by ATC.
NL 128	**28**	Climb on 280° track to LAG 2 DME, turn LEFT, 250° track to D8 LAG, continue as cleared by ATC.
NL 228		Climb on 280° track to LAG 2 DME, turn RIGHT, 310° track to D8 LAG, continue as cleared by ATC.

CHANGES: None.

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LAAGE Apron	*Tower
122.6 (civ only)	118.42 122.1

For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
10 28	HIRL HIALS SFL PAPI (angle 3.0°)		7235′ *2205m* 7478′ *2279m*	❶	148′ *45m*

❶ Use of stopways rwy 10/28 with lengths of 656′/200m available for take-off on request via backtrack.

Standard TAKE-OFF ❶

	LVP must be in Force RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

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

CHANGES: Twy designations. Parking stands established.

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LAAGE, GERMANY
ROSTOCK-LAAGE

STRAIGHT-IN RWY		A	B	C	D
10	ILS	**339**′(200′)	**339**′(200′)	**339**′(200′)	**339**′(200′)
		ceil200′- 800m	**ceil200′- 800m**	**ceil200′- 800m**	**ceil200′- 800m**
	ALS out	ceil200′- 1200m	ceil200′- 1200m	ceil200′- 1200m	ceil200′- 1200m
	PAR	**339**′(200′)	**339**′(200′)	**339**′(200′)	**339**′(200′)
		ceil200′- 800m	**ceil200′- 800m**	**ceil200′- 800m**	**ceil200′- 800m**
	ALS out	ceil200′- 1200m	ceil200′- 1200m	ceil200′- 1200m	ceil200′- 1200m
	LOC	**560**′(421′)	**560**′(421′)	**560**′(421′)	**560**′(421′)
		ceil500′- 900m	**ceil500′- 1000m**	**ceil500′- 1200m**	**ceil500′- 1400m**
	ALS out	ceil500′- 1600m	ceil500′- 1600m	ceil500′- 2000m	ceil500′- 2000m
	RNAV (GPS)	**560**′(421′)	**560**′(421′)	**560**′(421′)	**560**′(421′)
		ceil500′- 900m	**ceil500′- 1000m**	**ceil500′- 1200m**	**ceil500′- 1400m**
	ALS out	ceil500′- 1600m	ceil500′- 1600m	ceil500′- 2000m	ceil500′- 2000m
	TACAN	**560**′(421′)	**560**′(421′)	**560**′(421′)	**560**′(421′)
		ceil500′- 900m	**ceil500′- 1000m**	**ceil500′- 1200m**	**ceil500′- 1400m**
	ALS out	ceil500′- 1600m	ceil500′- 1600m	ceil500′- 2000m	ceil500′- 2000m
	SRA	**560**′(421′)	**560**′(421′)	**560**′(421′)	**560**′(421′)
		ceil500′- 900m	**ceil500′- 1000m**	**ceil500′- 1200m**	**ceil500′- 1400m**
	ALS out	ceil500′- 1600m	ceil500′- 1600m	ceil500′- 2000m	ceil500′- 2000m
28	ILS	**333**′(200′)	**333**′(200′)	**333**′(200′)	**333**′(200′)
		ceil200′- 800m	**ceil200′- 800m**	**ceil200′- 800m**	**ceil200′- 800m**
	ALS out	ceil200′- 1200m	ceil200′- 1200m	ceil200′- 1200m	ceil200′- 1200m
	PAR	**333**′(200′)	**333**′(200′)	**333**′(200′)	**333**′(200′)
		ceil200′- 800m	**ceil200′- 800m**	**ceil200′- 800m**	**ceil200′- 800m**
	ALS out	ceil200′- 1200m	ceil200′- 1200m	ceil200′- 1200m	ceil200′- 1200m
	LOC	**560**′(427′)	**560**′(427′)	**560**′(427′)	**560**′(427′)
		ceil500′- 900m	**ceil500′- 1000m**	**ceil500′- 1200m**	**ceil500′- 1600m**
	ALS out	ceil500′- 1600m	ceil500′- 1600m	ceil500′- 2000m	ceil500′- 2400m
	RNAV (GPS)	**560**′(449′)	**560**′(449′)	**560**′(449′)	**560**′(449′)
		ceil500′- 900m	**ceil500′- 1000m**	**ceil500′- 1200m**	**ceil500′- 1600m**
	ALS out	ceil500′- 1600m	ceil500′- 1600m	ceil500′- 2000m	ceil500′- 2400m
	TACAN	**560**′(427′)	**560**′(427′)	**560**′(427′)	**560**′(427′)
		ceil500′- 900m	**ceil500′- 1000m**	**ceil500′- 1200m**	**ceil500′- 1600m**
	ALS out	ceil500′- 1600m	ceil500′- 1600m	ceil500′- 2000m	ceil500′- 2400m
	SRA	**560**′(427′)	**560**′(427′)	**560**′(427′)	**560**′(427′)
		ceil500′- 900m	**ceil500′- 1000m**	**ceil500′- 1200m**	**ceil500′- 1600m**
	ALS out	ceil500′- 1600m	ceil500′- 1600m	ceil500′- 2000m	ceil500′- 2000m

CIRCLE-TO-LAND ❶	90 KT	120 KT	140 KT	165 KT
Not authorized North of runway	**580**′(440′)	**640**′(500′)	**740**′(600′)	**940**′(800′)
	ceil500′- V1600m	ceil500′- V1600m	ceil500′- V2400m	ceil800′- V4400m

❶ After PAR, RNAV, TACAN and SRA: NOT APPLICABLE.

TAKE-OFF RWY 10, 28

	LVP must be in force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A, B, C	*250m*	*400m*	*500m*
D	*300m*		

CHANGES: New page.

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ETNL/RLG
ROSTOCK-LAAGE

JEPPESEN
30 APR 10 (11-1)

LAAGE, GERMANY
ILS DME Rwy 10

BREMEN Radar	*LAAGE Tower	APRON (Civ only)
124.17	118.42 122.1	122.6

For UHF see MIL-101 listing

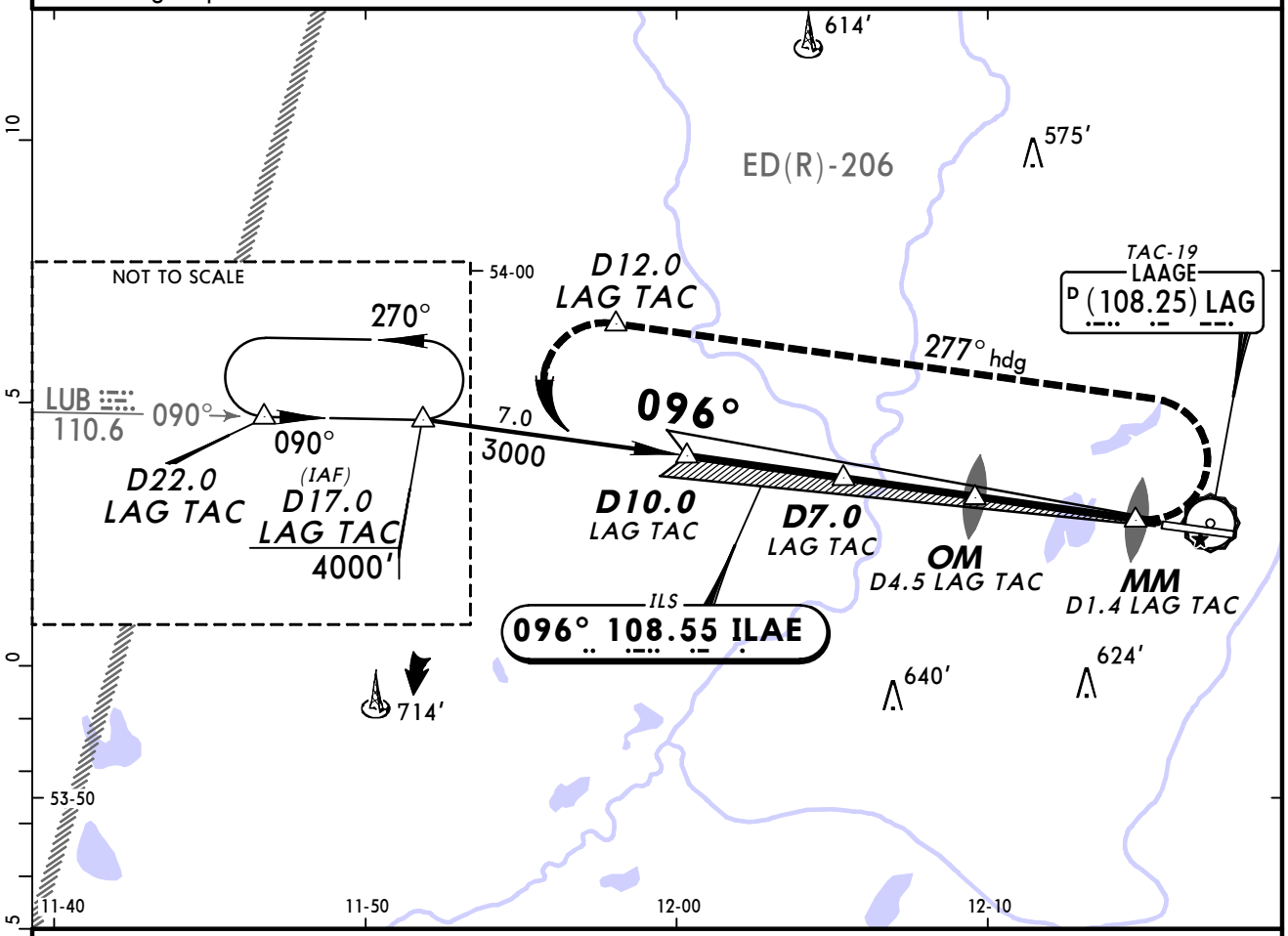
BRIEFING STRIP™

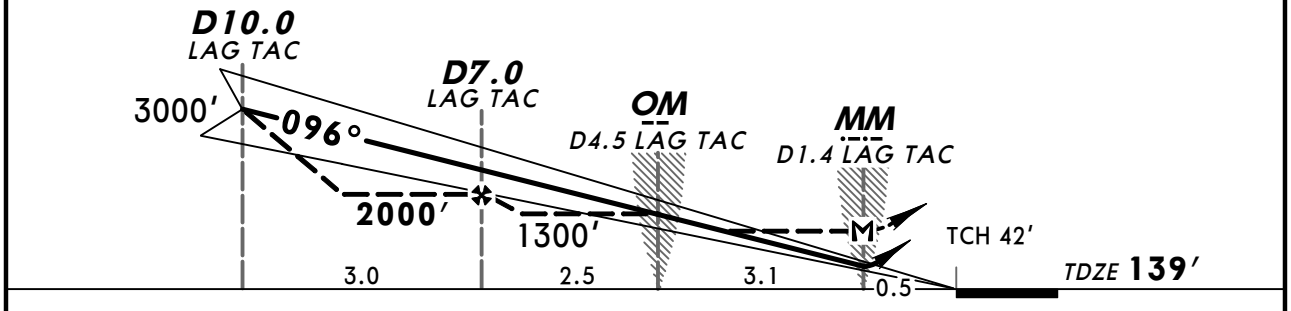
LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 140
ILAE 108.55	096°	No Alt published	339′ (200′)	TDZE 139′

MISSED APCH: Climbing turn LEFT to heading 277° to 3000′.
At D12.0 LAG TAC turn LEFT and return to final approach.

1800′
MSA LAG TAC

Alt Set: hPa (IN on req) TDZ Elev: 5 hPa Trans level: By ATC Trans alt: 5000′
PAPI and glidepath do not coincide.





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	484	538	646	753	861
MAP at MM/D1.4 LAG TAC							

HIALS
PAPI PAPI
3000′ LT on 277° hdg

Standard STRAIGHT-IN LANDING RWY 10 **CEILING REQUIRED** CIRCLE-TO-LAND

TERPS

	ILS DA(H) 339′ (200′)		LOC (GS out) MDA(H) 560′ (421′)	
	FULL/Limited	ALS out		ALS out
A	200′ - 800m	200′ - 1200m	500′ - 1500m	500′ - 2200m
B				
C			500′ - 1700m	500′ - 2400m
D				

Not authorized North of runway

Max Kts	MDA(H)	CEIL-VIS
90	580′ (440′)	500′ - 2200m
120	640′ (500′)	500′ - 2200m
140	740′ (600′)	500′ - 2400m
165	940′ (800′)	800′ - 4400m

CHANGES: Communications. Minimums.

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ETNL/RLG
ROSTOCK-LAAGE

JEPPESEN
30 APR 10 (11-2)

LAAGE, GERMANY
ILS DME Rwy 28

BREMEN Radar	*LAAGE Tower	APRON (Civ only)
124.17	118.42 122.1	122.6

For UHF see MIL-101 listing

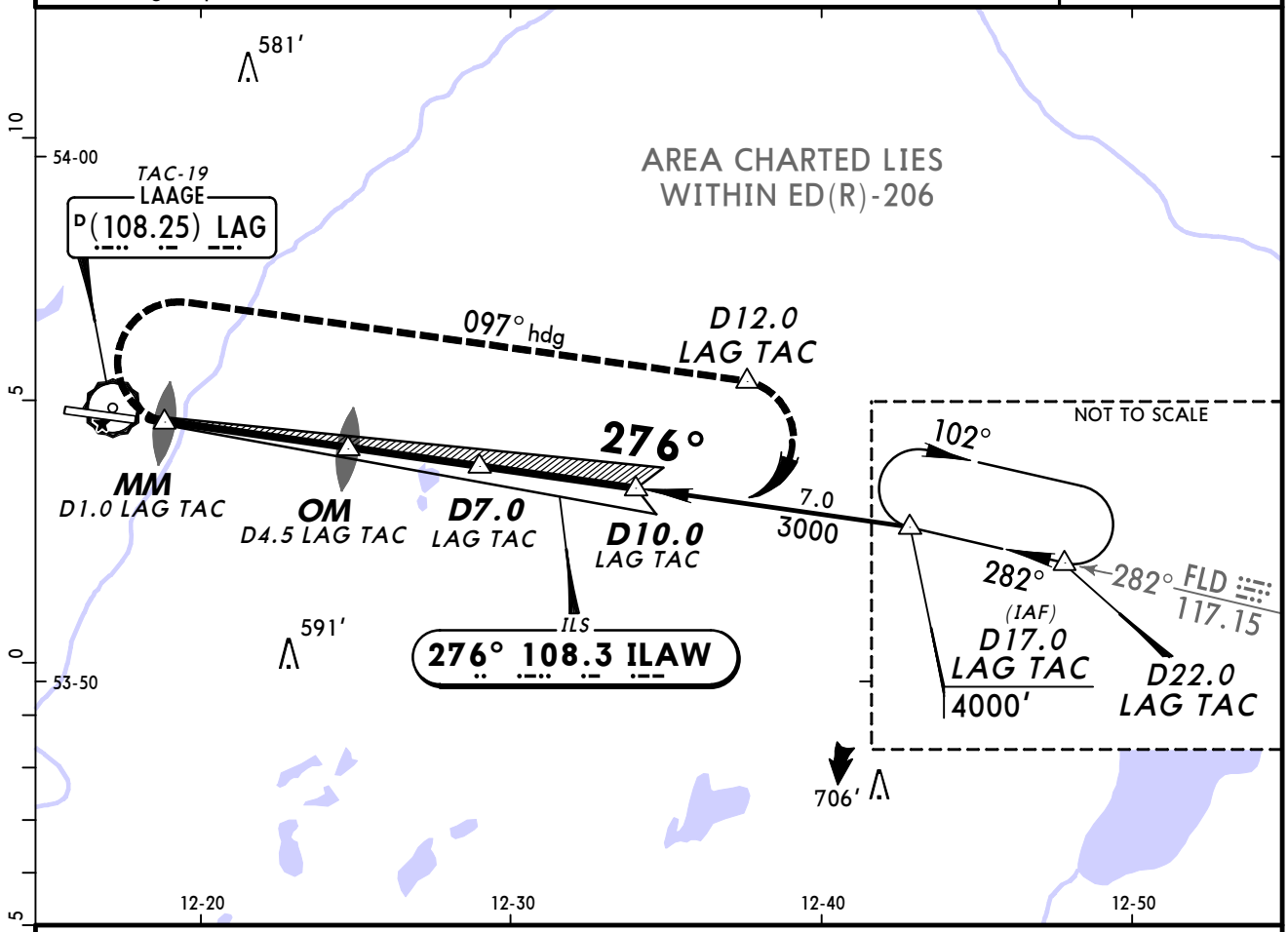
BRIEFING STRIP™

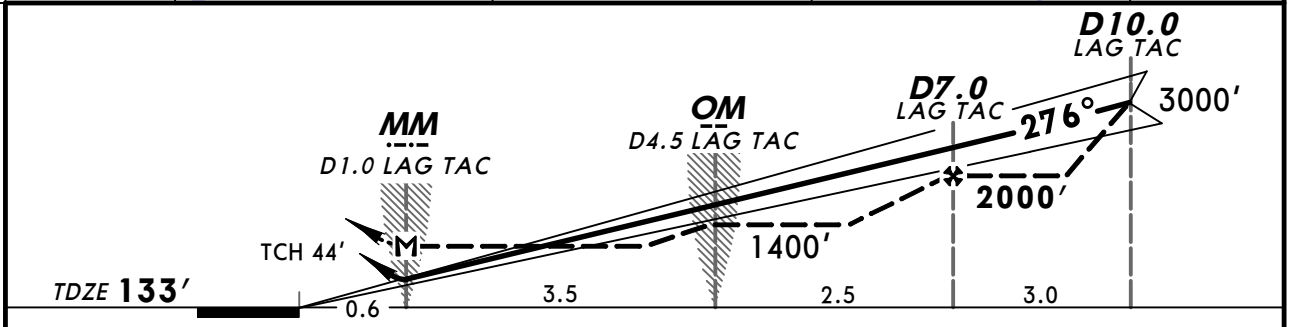
LOC ILAW	Final Apch Crs	GS	ILS DA(H)	Apt Elev 140′
108.3	276°	No Alt published	333′ (200′)	TDZE 133′

MISSED APCH: Climbing turn RIGHT to heading 097° to 3000′.
At D12.0 LAG TAC turn RIGHT and return to final approach.

Alt Set: hPa (IN on req) TDZ Elev: 5 hPa Trans level: By ATC Trans alt: 5000′
PAPI and glidepath do not coincide.

1800′
MSA LAG TAC





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	484	538	646	753	861
MAP at MM/D1.0 LAG TAC							

HIALS
PAPI PAPI

3000′ RT on 097° hdg

Standard STRAIGHT-IN LANDING RWY **28** **CEILING REQUIRED** CIRCLE-TO-LAND

TERPS

	ILS DA(H) 333′ (200′) FULL/Limited	ILS DA(H) 333′ (200′) ALS out	LOC (GS out) MDA(H) 560′ (427′)	LOC (GS out) MDA(H) 560′ (427′) ALS out
A	200′ - 800m	200′ - 1200m	500′ - 1500m	500′- 2200m
B				
C			500′- 1700m	500′- 2400m
D				

Not authorized North of runway

Max Kts.	MDA(H)	CEIL-VIS
90	580′ (440′)	500′ - 2200m
120	640′ (500′)	500′ - 2200m
140	740′ (600′)	500′ - 2400m
165	940′ (800′)	800′ - 4400m

CHANGES: Communications. Minimums.

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ETNL/RLG
ROSTOCK-LAAGE

JEPPESEN
30 APR 10 (12-1)

LAAGE, GERMANY
RNAV (GPS) Rwy 10

BREMEN Radar	*LAAGE Tower	APRON (Civ only)
124.17	118.42 122.1	122.6

For UHF see MIL-101 listing

BRIEFING STRIP ™

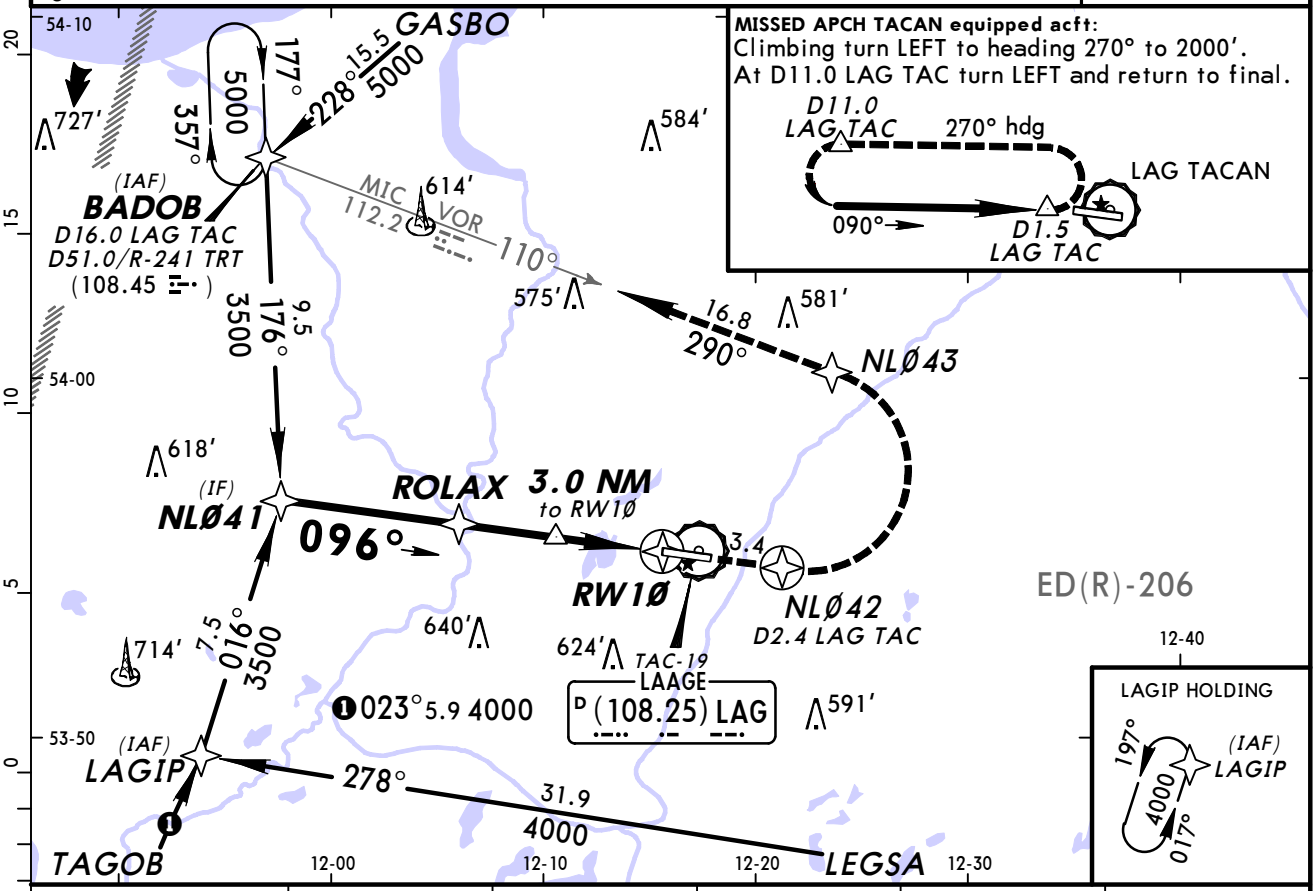
RNAV	Final Apch Crs	Mandatory Alt	DA(H)	Apt Elev / RWY
	096°	ROLAX 2000′ (1861′)	560′ (421′)	Apt Elev 140′ RWY 139′

MISSED APCH non TACAN equipped acft: Climb STRAIGHT AHEAD to NLØ42/D2.4 LAG TAC then turn LEFT(MAX 220 KT, BANK 15°) to NLØ43 to intercept R-110 inbound MIC proceed to BADOB at 5000′.

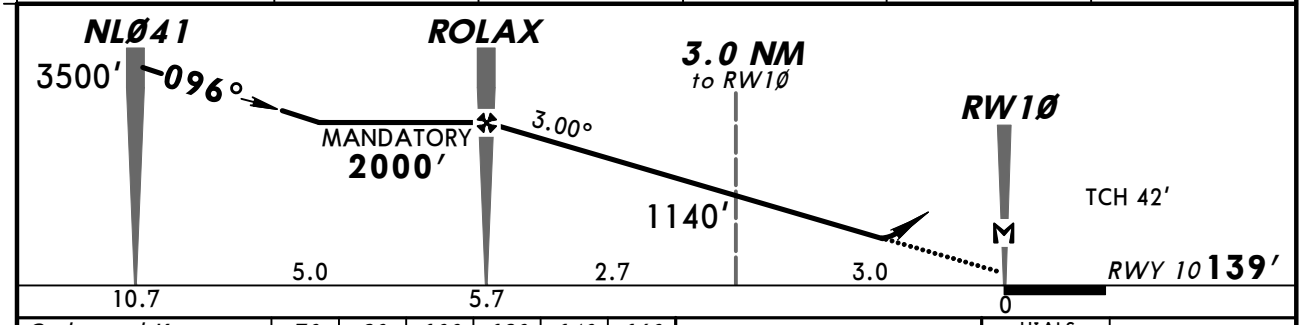
Alt Set: hPa (IN on req) Rwy Elev: 5 hPa Trans level: By ATC Trans alt: 5000′
Ignore PAPI indications.

1800′
MSA
ARP

MISSED APCH TACAN equipped acft:
Climbing turn LEFT to heading 270° to 2000′.
At D11.0 LAG TAC turn LEFT and return to final.



DIST to RW1Ø	5.0	4.0	3.0	2.0	1.0
ALTITUDE	1780′	1460′	1140′	820′	500′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at RW1Ø						

HIALS
PAPI PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **10** **CEILING REQUIRED**

DA(H) **560′** (421′)

PANS OPS 4

	ALS out
A	500′ - 1600m
B	
C	500′ - 1300m
D	500′ - 2000m

CHANGES: Communications. Apt & Rwy elevation. Minimums.

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ETNL/RLG
ROSTOCK-LAAGE

JEPPESEN
30 APR 10 (12-2)

LAAGE, GERMANY
RNAV (GPS) Rwy 28

BREMEN Radar	*LAAGE Tower	APRON (Civ only)
124.17	118.42 122.1	122.6

For UHF see MIL-101 listing

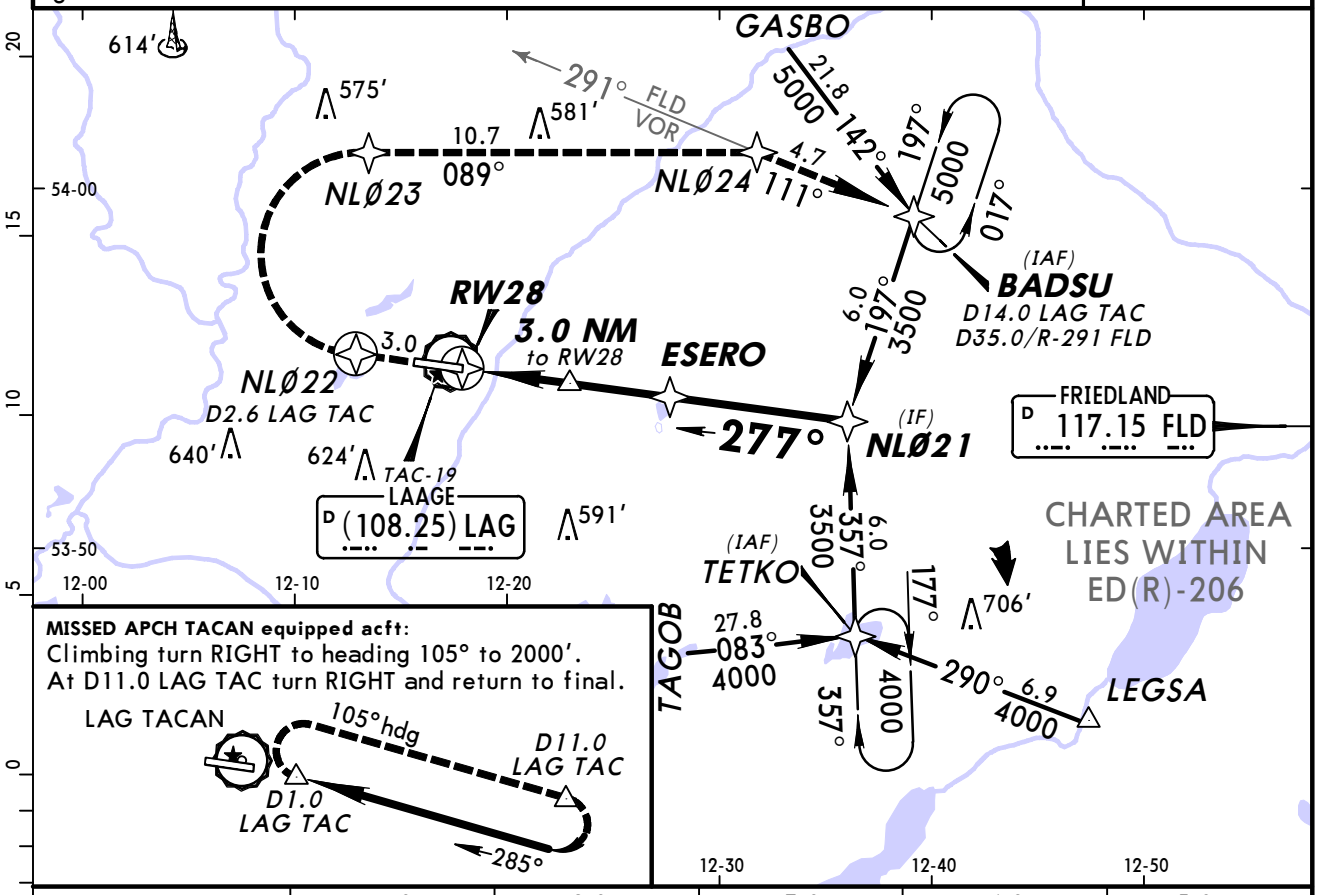
BRIEFING STRIP™

RNAV	Final Apch Crs	Mandatory Alt	DA(H)	Apt Elev / RWY
	277°	ESERO 2000′ (1889′)	560′ (449′)	Apt Elev 140′ RWY 111′

MISSED APCH non TACAN equipped acft: Climb STRAIGHT AHEAD to NLØ22/D2.6 LAG TAC, then turn RIGHT (MAX 220 KT, BANK 15°) to NLØ23, proceed on track 089° to NLØ24 to intercept R-291 inbound FLD proceed to BADSU at 5000′.

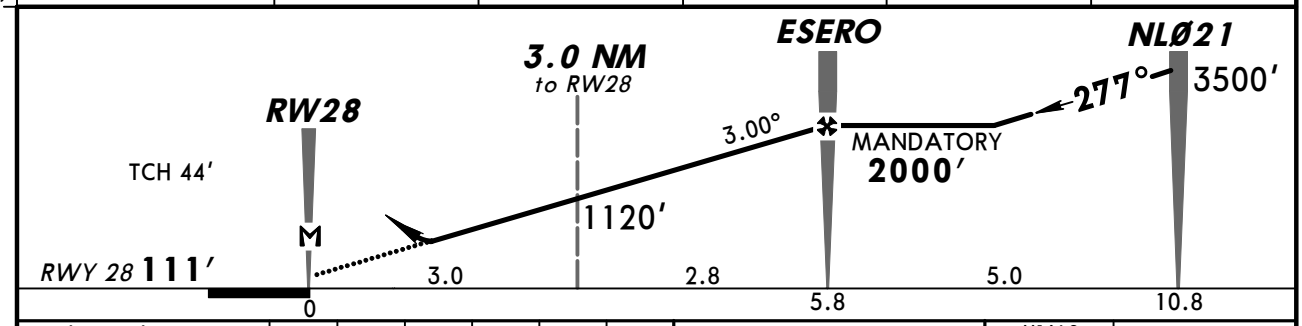
Alt Set: hPa (IN on req) Rwy Elev: 4 hPa Trans level: By ATC Trans alt: 5000′
Ignore PAPI indications.

1800′
MSA
ARP



MISSED APCH TACAN equipped acft:
Climbing turn RIGHT to heading 105° to 2000′.
At D11.0 LAG TAC turn RIGHT and return to final.

DIST to RW28	1.0	2.0	3.0	4.0	5.0
ALTITUDE	480′	800′	1120′	1430′	1750′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at RW28						

HIALS
PAPI PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **28** **CEILING REQUIRED**

DA(H) **560′** (449′)

PANS OPS 4

		ALS out
A	500′ - 1400m	500′ - 1600m
B		
C		500′ - 2100m
D	500′ - 1600m	500′ - 2400m

CHANGES: Communications. Apt & Rwy elevation. Minimums.

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BREMEN Radar	*LAAGE Tower (R)	
124.17	118.42 122.1	
For UHF see MIL-101 listing		

TACAN	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / TDZE
LAG CH 19	090°	Refer to chart 14-1A	Refer to chart 14-1A	140′ / 139′

Alt Set: hPa (IN on req) | TDZ Elev: 5 hPa | Trans level: By ATC | Trans alt: 5000′

1800′ MSA LAG TAC

BRIEFING STRIP™

FOR FINAL APPROACH SEE 14-1A

D25.0 LAG TAC
190°
010°
(IAF 1)
D20.0 LAG TAC
5000′
MAX FL 100
15 DME Arc LAG TAC
3500
727′
619′
584′
614′
575′
581′
310°
010°
3500
TAC
LAAGE
CH 19 LAG
270°
278°
618′
D13.0
LAG TAC
7.0
090°
3500
090°
270°
090°
D25.0
LAG TAC
(IAF 3)
D20.0
LAG TAC
5000′
MAX FL 100
714′
262°
640′
624′
591′
3500
240°
ED(R)-206
15 DME Arc LAG TAC
3500
190°
ED(R)-20
681′
ED(R)-15
(IAF 2)
D20.0 LAG TAC
5000′
MAX FL 100
190°
010°
645′
672′
D25.0
LAG TAC

54-20
54-10
54-00
53-50
53-40
53-30
11-40
11-50
12-00
12-10
12-20
12-30
TERPS

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BREMEN Radar	*LAAGE Tower (R)
124.17	118.42 122.1

For UHF see MIL-101 listing

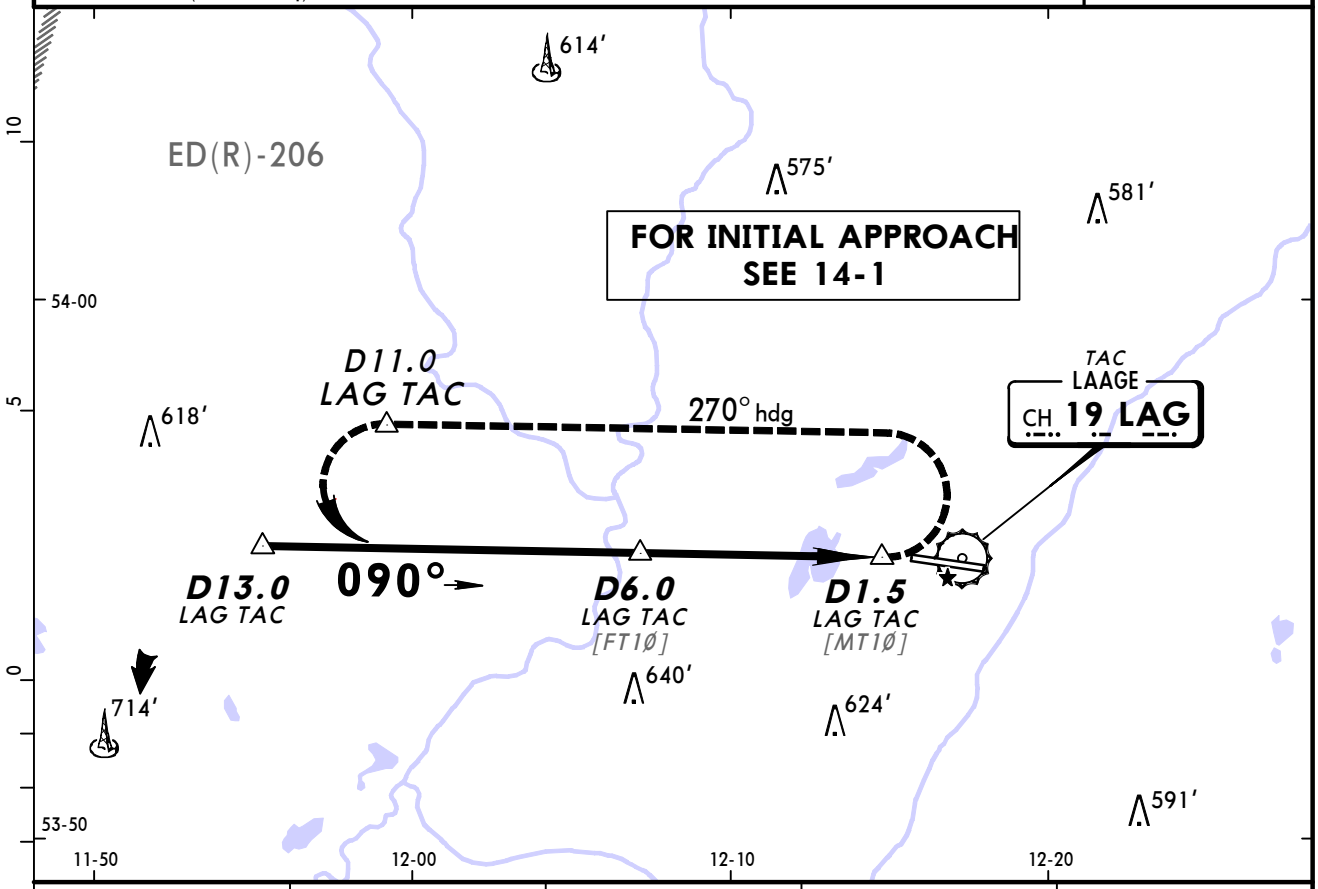
BRIEFING STRIP ™

TACAN	Final	Minimum Alt	DA(H)	Apt Elev 140′
LAG CH 19	Apch Crs 090°	D6.0 LAG TAC 1700′ (1561′)	560′ (421′)	TDZE 139′

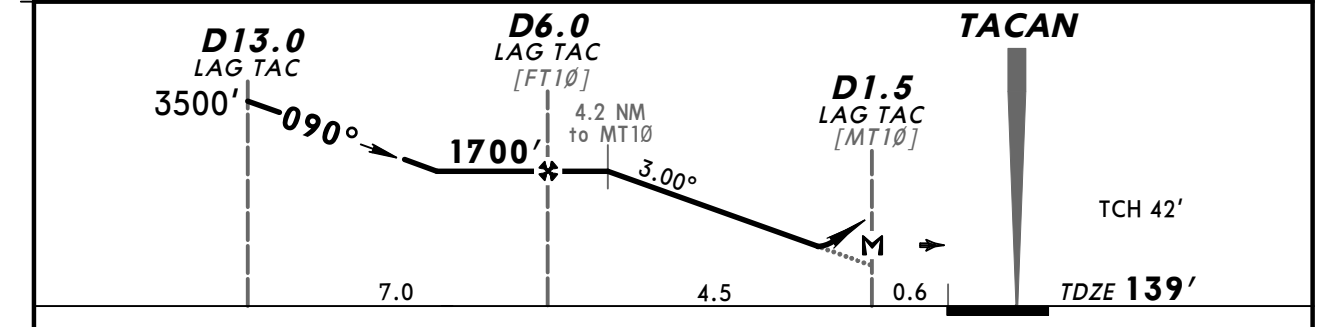
MISSED APCH: Climbing turn LEFT to heading 270° to 2000′.
At D11.0 LAG TAC turn LEFT and return to final.

Alt Set: hPa (IN on req) TDZ Elev: 5 hPa Trans level: By ATC Trans alt: 5000′

1800′
MSA LAG TAC



LAG TAC	5.7	5.0	4.0	3.0
ALTITUDE	1700′	1480′	1160′	850′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.5 LAG TAC						

HIALS
PAPI PAPI
2000′ LT on 270° hdg

Standard STRAIGHT-IN LANDING RWY **10** **CEILING REQUIRED**

DA(H) **560′** (421′)

TERPS

		ALS out
A	500′ - 1300m	500′ - 1600m
B		
C		500′ - 2000m
D		

CHANGES: Radar frequency. Apt & TDZ elevation. Minimums.

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BREMEN Radar 124.17	*LAAGE Tower (R) 118.42 122.1			
For UHF see MIL-101 listing				
TACAN LAG CH **19**	*Final Apch Crs* **285°**	*Minimum Alt* Refer to chart 14-2A	*DA(H)* Refer to chart 14-2A	*Apt Elev* 140′ *TDZE* **133′**
Alt Set: hPa (IN on req)	TDZ Elev: 5 hPa	Trans level: By ATC	Trans alt: 5000′	

1800′
MSA LAG TAC

FOR FINAL APPROACH
SEE 14-2A

D25.0 LAG TAC
190°
(IAF 1)
D20.0 LAG TAC
5000′
MAX FL 100
010°
15 DME Arc LAG TAC
3500
010°
060°
3500
105°
097°
285°
D13.0
LAG TAC
7.0
285°
3500
113°
140°
3500
190°
3500
15 DME Arc LAG TAC
190°
010°
D25.0
LAG TAC
(IAF 2)
D20.0 LAG TAC
5000′
MAX FL 100
(IAF 3)
D20.0
LAG TAC
5000′
MAX FL 100
285°
105°
D25.0
LAG TAC

TAC
LAAGE
CH 19 LAG

CHARTED AREA
LIES WITHIN
ED(R)-206

ED(R)-15

703′ 619′ 584′ 614′ 575′ 581′ 640′ 624′ 591′ 706′ 627′

54-20 54-10 54-00 53-50 53-40 53-30
20 15 10 5 0 5
12-10 12-20 12-30 12-40 12-50 13-00

TERPS

CHANGES: Radar frequency. Apt & TDZ elevation.

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BREMEN Radar	*LAAGE Tower (R)
124.17	118.42 122.1

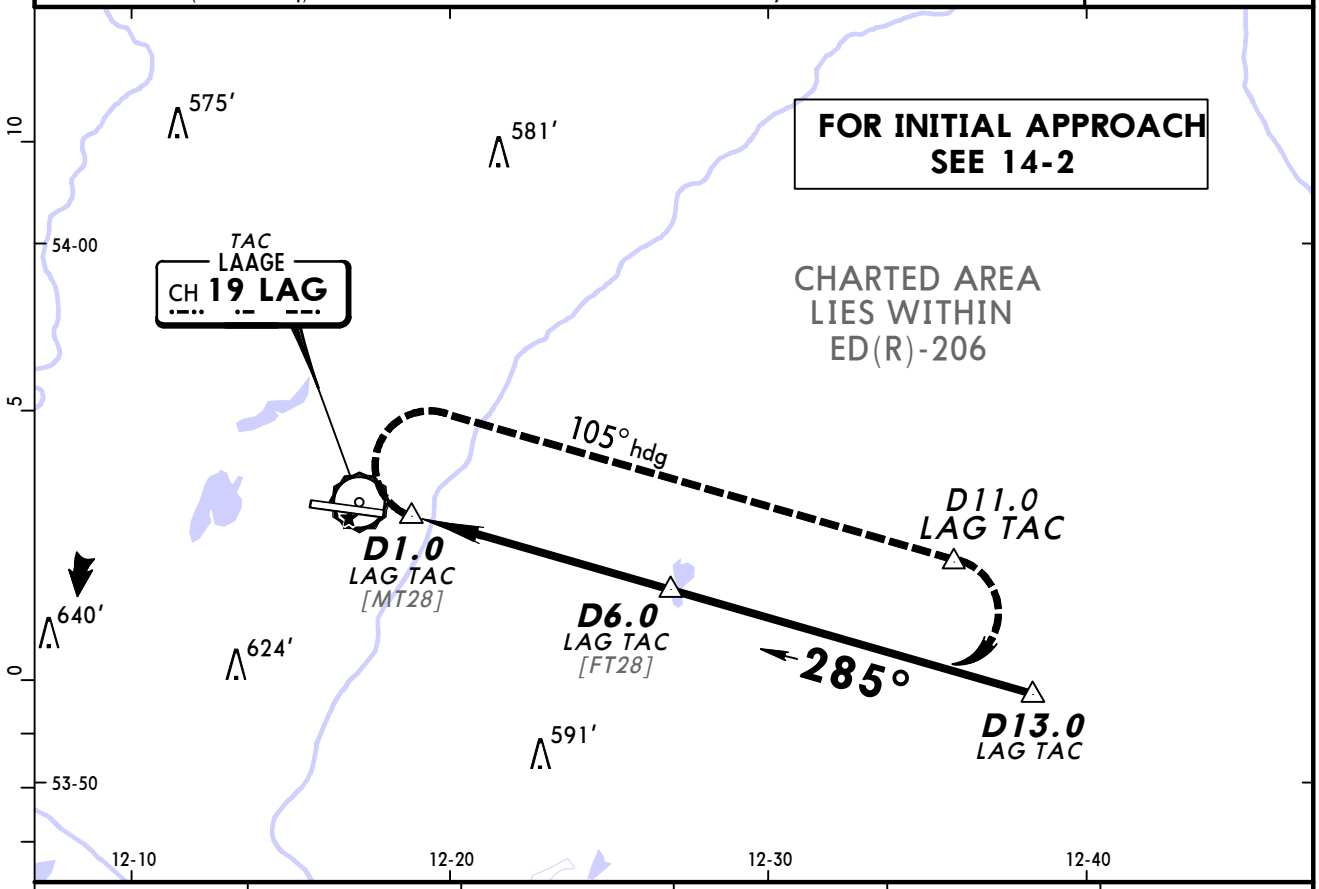
For UHF see MIL-101 listing

TACAN	Final	Minimum Alt	DA(H)	Apt Elev 140′
LAG CH 19	Apch Crs 285°	D6.0 LAG TAC 1800′ (1667′)	560′ (427′)	TDZE 133′

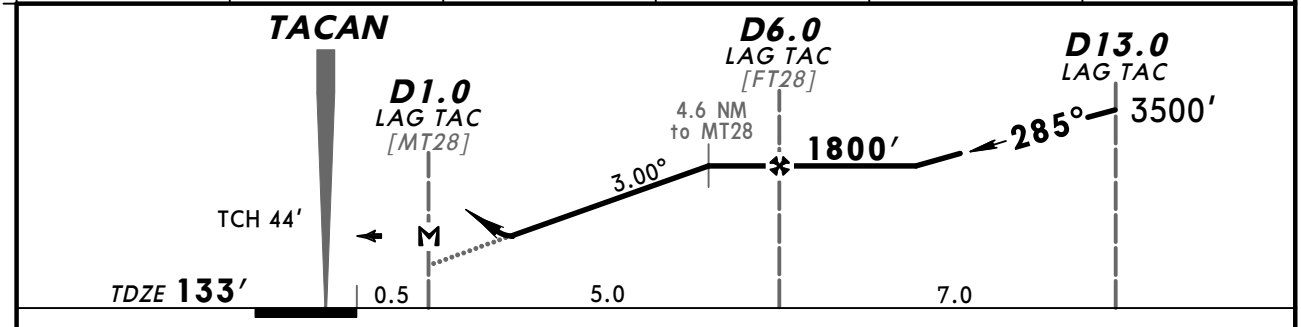
MISSED APCH: Climbing turn RIGHT to heading 105° to 2000′.
At D11.0 LAG TAC turn RIGHT and return to final.

1800′
MSA LAG TAC

Alt Set: hPa (IN on req) TDZ Elev: 5 hPa Trans level: By ATC Trans alt: 5000′



LAG TAC	2.0	3.0	4.0	5.0	5.6
ALTITUDE	660′	980′	1300′	1610′	1800′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 LAG TAC						

HIALS
PAPI PAPI

2000′ on RT 105° hdg

Standard STRAIGHT-IN LANDING RWY **28** **CEILING REQUIRED**

DA(H) **560′** (427′)

		ALS out
A	500′ - 1300m	500′ - 1600m
B		
C		500′ - 2000m
D	500′ - 1600m	500′ - 2400m

TERPS

CHANGES: Radar frequency. Apt & TDZ elevation. Minimums.

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ETNL/RLG
ROSTOCK-LAAGE

JEPPESEN
30 APR 10 (18-1)

LAAGE, GERMANY
*PAR or *SRA All Rwys

*BREMEN Radar	*LAAGE Radar	*LAAGE Tower	APRON (Civ only)
124.17	133.62 123.3	122.1 118.42	122.6

For UHF see MIL-101 listing

BRIEFING STRIP™

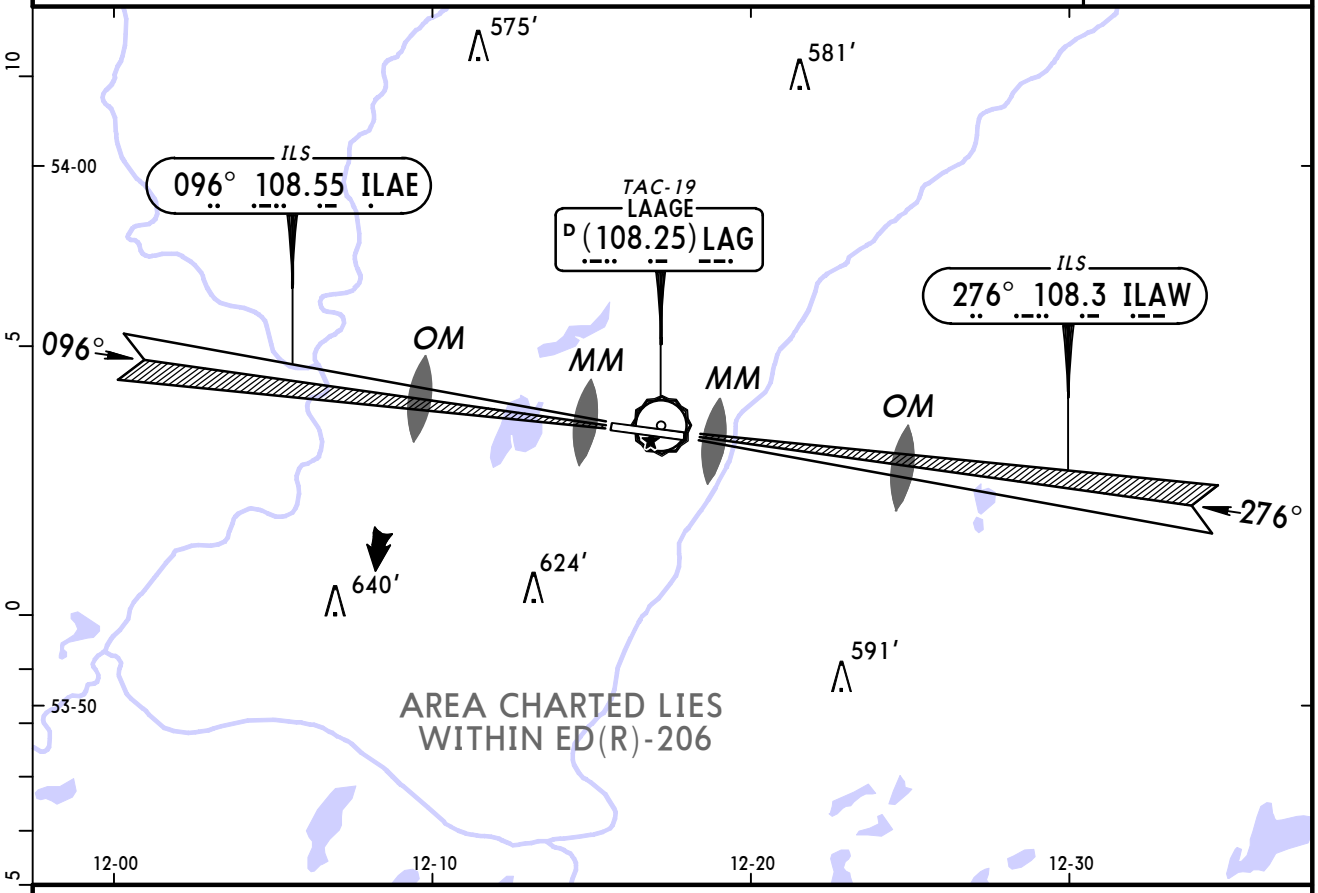
RADAR	Final Apch Crs	PAR GS	Minimum Alt	DA(H)/MDA(H)	
	BY ATC	No Alt published	No FAF	Refer to Minimums	Apt Elev 140′ TDZE RWY 10 139′ TDZE RWY 28 133′

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 5 hPa Trans level: By ATC Trans alt: 5000′

1800′

MSA
LAG TAC



RWY 10
PAR TCH 23′

RWY 28
PAR TCH 29′

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

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

	PAR 10		PAR 28		SRA 10		SRA 28	
	DA(H) 339′(200′)		DA(H) 333′(200′)		MDA(H) 560′(421′)		MDA(H) 560′(427′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	500′- 1500m	500′- 2200m	500′- 1500m	500′- 2200m
B								
C					500′- 1700m	500′- 2400m	500′- 1700m	500′- 2400m
D								

TERPS

CHANGES: Communications. Minimums.

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General Information

Location: Norvenich Deu
IATA Code:
Lat/Long: N50° 49.9' E006° 39.5'
Elevation: 385 ft

Airport Use: Military
Magnetic Variation: 0.9°E

Fuel Types: Jet A-1
Oxygen Types: High Pressure
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0623 Z
Sunset: 1710 Z,

Runway Information

Runway: 07
Length x Width: 8010 ft x 147 ft
Surface Type: asphalt
TDZ-Elev: 385 ft
Lighting: Edge, ALS

Runway: 25
Length x Width: 8010 ft x 147 ft
Surface Type: asphalt
TDZ-Elev: 348 ft
Lighting: Edge, ALS

Communication Information

Norvenich Tower 142.9
Norvenich Tower 136.2 Military
Norvenich Tower 122.1 Military
Norvenich Tower 25.78 Military
Norvenich Tower 25.11 Military
Norvenich Radar 138.2 Military
Norvenich Radar 129.05 Military
Norvenich Radar 123.3 Military
Norvenich Radar 38.54 Military
Norvenich Radar 37.925 Military
Norvenich Radar 34.4 Military
Norvenich Radar 33.807 Military

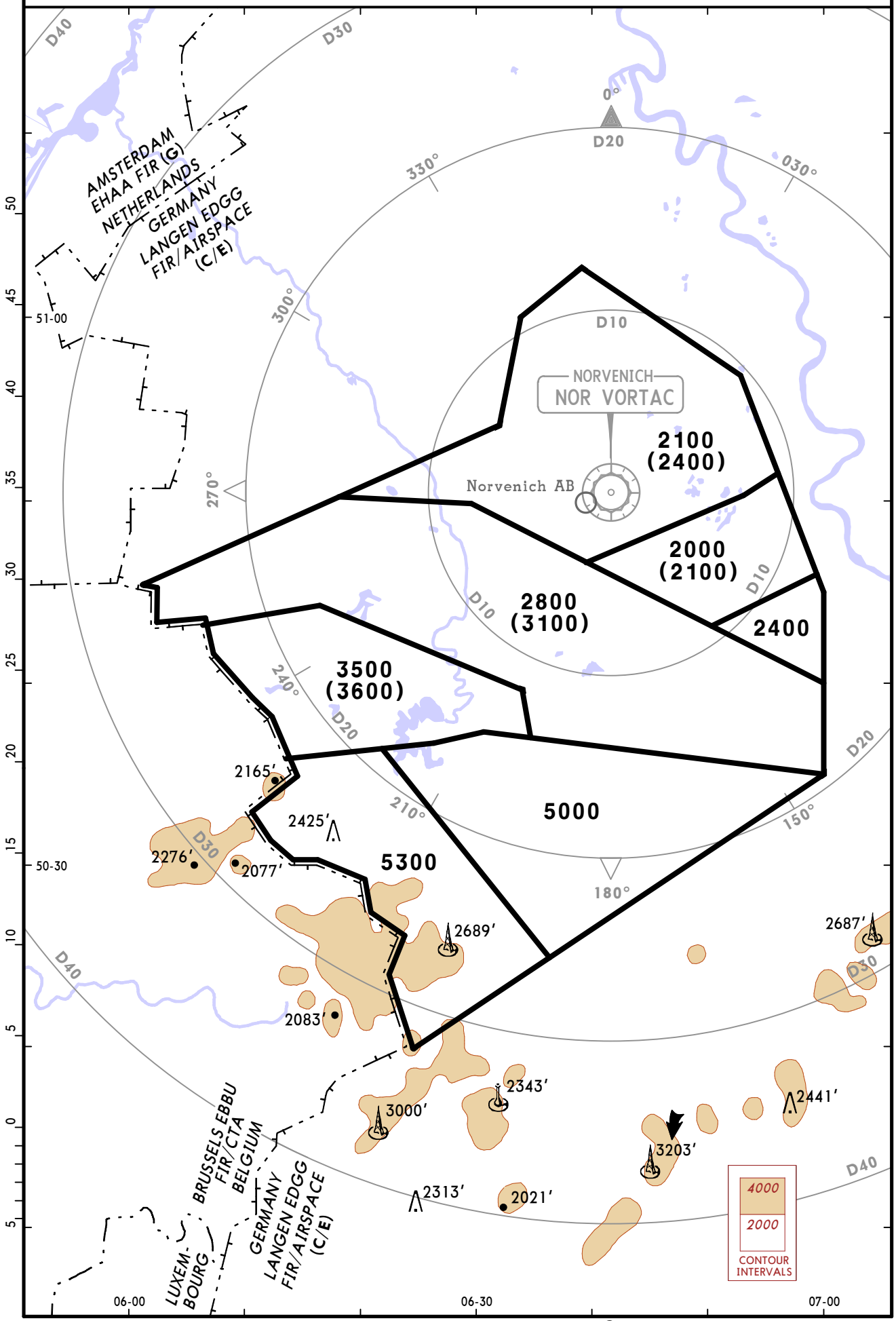
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Norvenich Radar 28.19 Military

*NORVENICH Radar	Apt Elev	Alt Set: hPa (IN on request)
129.05	386′	Trans level: By ATC Trans alt: 5000′

For UHF see MIL-101 listing

Values in brackets consider additional height margins in order to meet required obstacle clearance at cold temperatures.



CHANGES: Communication.

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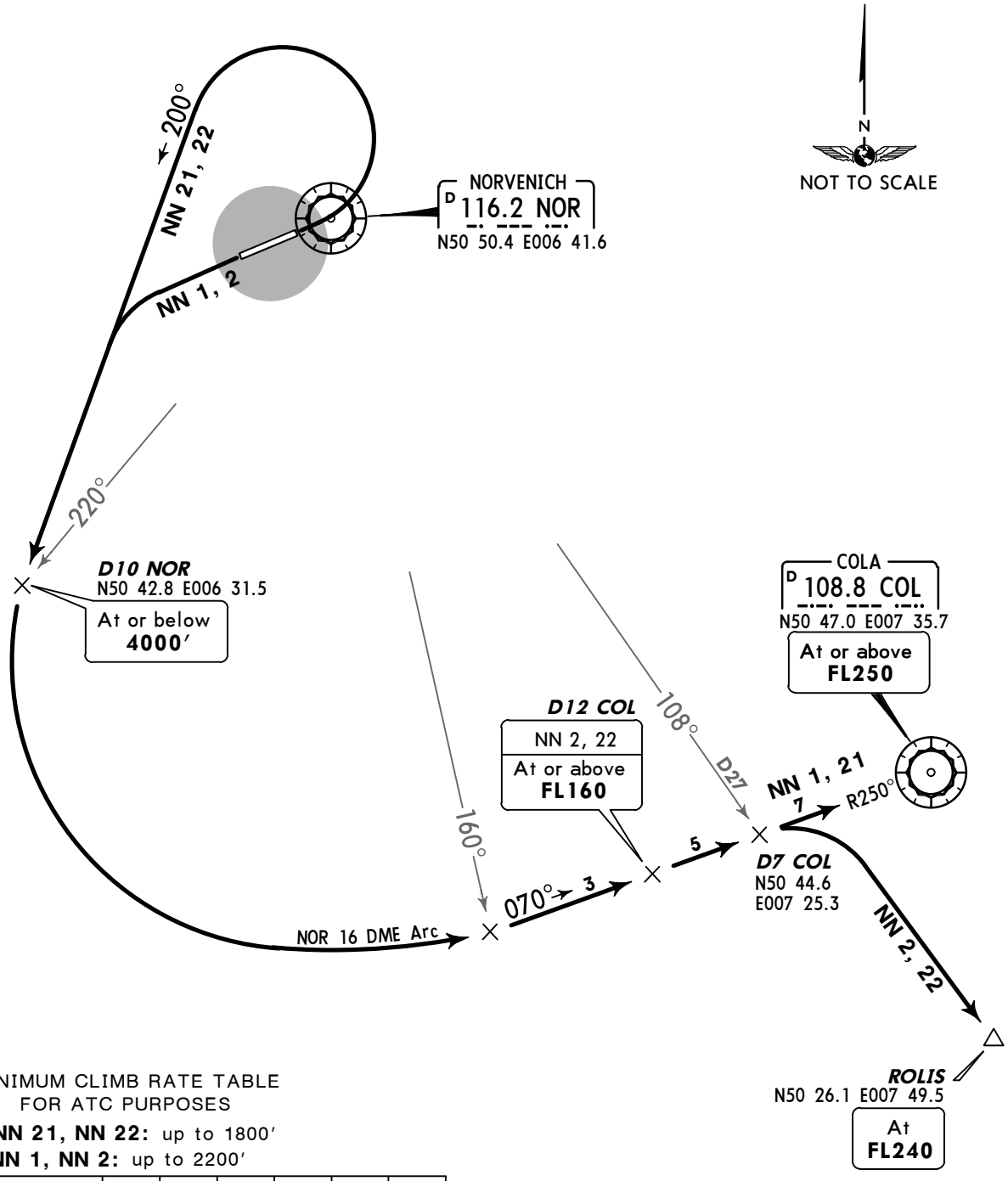
Apt Elev	
385′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100NM of Norvenich 4200′.

For UHF see MIL-101 listing

3700′
MSA
NOR VOR

NN 1, NN 2, NN 21, NN 22
RWYS 25, 07 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



MINIMUM CLIMB RATE TABLE
FOR ATC PURPOSES

❶ **NN 21, NN 22:** up to 1800′
❷ **NN 1, NN 2:** up to 2200′

KT	75	100	150	200	250	300
❶ V/V (fpm)	552	737	1105	1473	1842	2210
❷ V/V (fpm)	456	608	912	1217	1521	1825

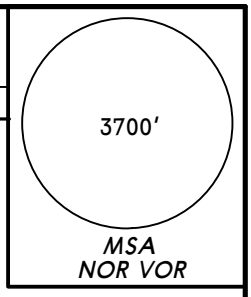
SID	RWY	ROUTING
NN 1	25	Turn LEFT, 200° track, when passing NOR R-220/D10 turn LEFT, along NOR 16 DME arc, at NOR R-160 intercept COL R-250 inbound to COL.
NN 21	07	
NN 2	25	Turn LEFT, 200° track, when passing NOR R-220/D10 turn LEFT, along NOR 16 DME arc, at NOR R-160 intercept COL R-250 inbound to D7 COL, turn RIGHT to ROLIS.
NN 22	07	

CHANGES: New procedures at the airport.

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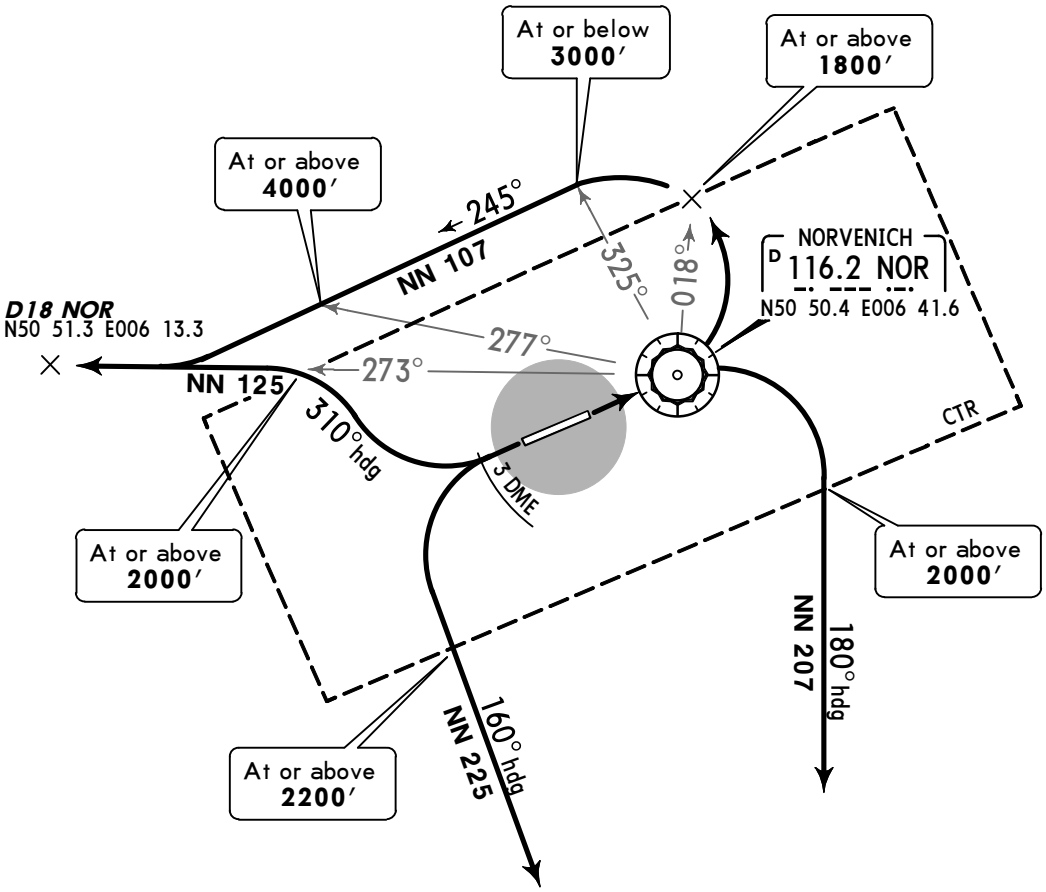
Apt Elev	
385′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100NM of Norvenich 4200′.

For UHF see MIL-101 listing



NN 107, NN 125, NN 207, NN 225
RWYS 07, 25 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





MINIMUM CLIMB RATE TABLE
FOR ATC PURPOSES
❶ **NN 107:** up to 3000′
❷ **NN 125:** up to 4000′
❶ **NN 207:** up to 2000′
❷ **NN 225:** up to 2200′

	KT	75	100	150	200	250	300
❶	V/V (fpm)	552	737	1105	1473	1842	2210
❷	V/V (fpm)	532	710	1065	1420	1775	2130

NN 107, NN 125: Initial climb clearance **4000′**

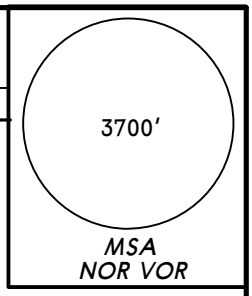
SID	RWY	ROUTING
NN 107	**07**	Climb straight ahead to NOR, turn LEFT, 245° track, intercept NOR R-273 to D18 NOR.
NN 125	**25**	Climb straight ahead, at NOR 3 DME turn RIGHT, 310° heading, intercept NOR R-273 to D18 NOR.
NN 207	**07**	Climb straight ahead to NOR, turn RIGHT, 180° heading, climb to 3000′.
NN 225	**25**	Climb straight ahead, at NOR 3 DME turn LEFT, 160° heading, climb 4000′.

CHANGES: New procedures at the airport.

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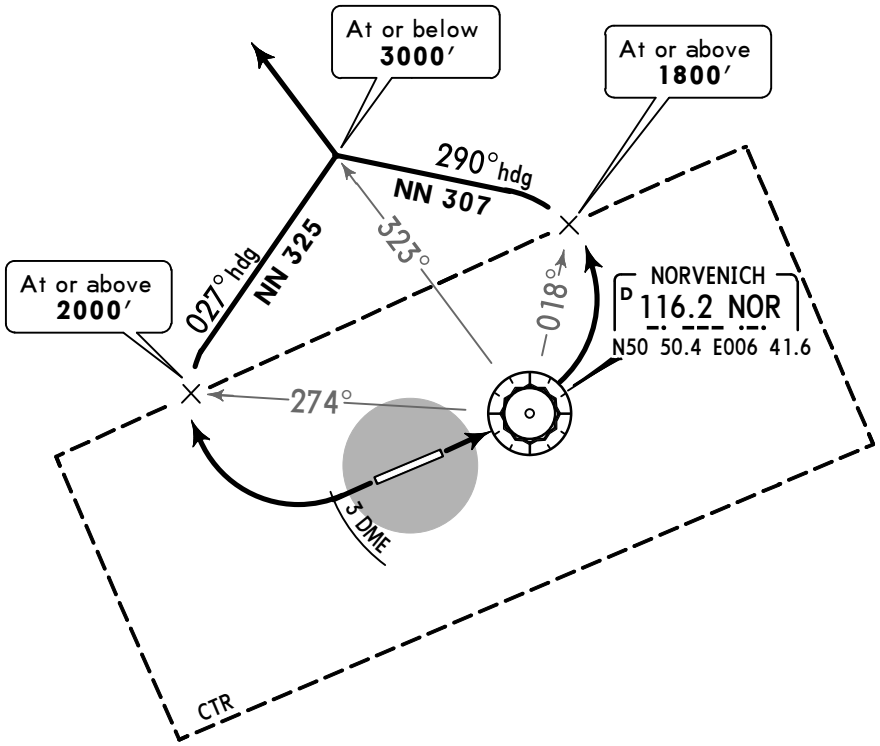
Apt Elev	
385′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100NM of Norvenich 4200′.

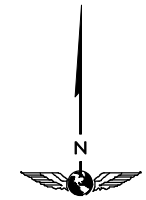
For UHF see MIL-101 listing



NN 307, NN 325
RWYS 07, 25 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





NOT TO SCALE

MINIMUM CLIMB RATE TABLE
FOR ATC PURPOSES UP TO 3000′

RWY	KT	75	100	150	200	250	300
07	V/V (fpm)	549	732	1097	1463	1829	2195
25	V/V (fpm)	531	708	1062	1417	1771	2125

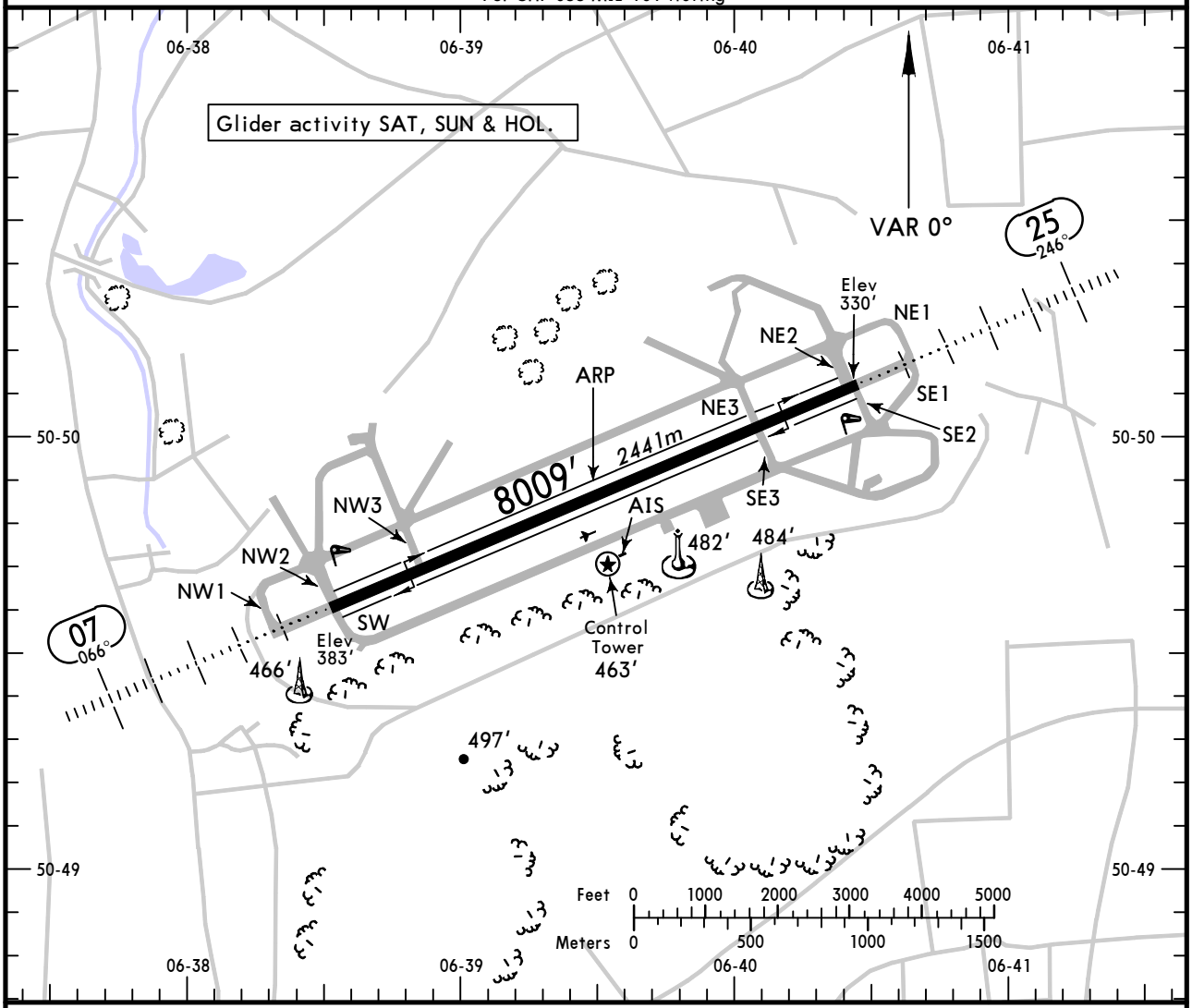
Initial climb clearance **3000′**

SID	RWY	ROUTING
NN 307	**07**	Climb straight ahead to NOR, turn LEFT, 290° heading, intercept NOR R-323, continue as cleared by ATC.
NN 325	**25**	Climb straight ahead, at NOR 3 DME turn RIGHT, 027° heading, intercept NOR R-323, continue as cleared by ATC.

CHANGES: New procedures at the airport.

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*NORVENICH Tower
122.1 136.2X
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
07 ❶ 25	RL HIALS SFL PAPI (angle 3.0°) RVR				148′ *45m*

❶ Rwy with antiskid layer.

Standard

TAKE-OFF 1

	LVP must be in Force: RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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

CHANGES: Twy designations.

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NORVENICH, GERMANY
NORVENICH AB

STRAIGHT-IN RWY		DA(H) / MDA(H)	RVR (ALS/ALS out)
07	PAR	585′ (200′)	800m / 1200m ❶
	TACAN	760′ (375′)	800m / 1600m ❷
	SRA	760′ (375′)	800m / 1600m ❷
25	PAR	548′ (200′)	800m / 1200m ❶
	VOR 251°	740′ (392′)	800m / 1000m ❷
	TACAN	720′ (372′)	800m / 1600m ❷
	SRA	680′ (332′)	800m / 1600m ❷

❶ Ceiling 200′.
❷ Ceiling 400′.

CIRCLE-TO-LAND	MDA(H)	VIS
	820′ (434′) ❸	1600m ❹

❸ After VOR 251° not applicable.
❹ Ceiling 500′.

TAKE-OFF RWY 07, 25

LVP must be in Force ❺				
RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
150m	200m	200m	250m ❻	800m

❺ Without LVP 400m are stipulated.
❻ Or rejected take-off distance whichever is the greater.

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LANGEN Radar (APP)	*NORVENICH Radar	*NORVENICH Tower
128.5 126.32	123.3 129.05X	122.1 136.2X

For UHF see MIL-101 listing

BRIEFING STRIP ™

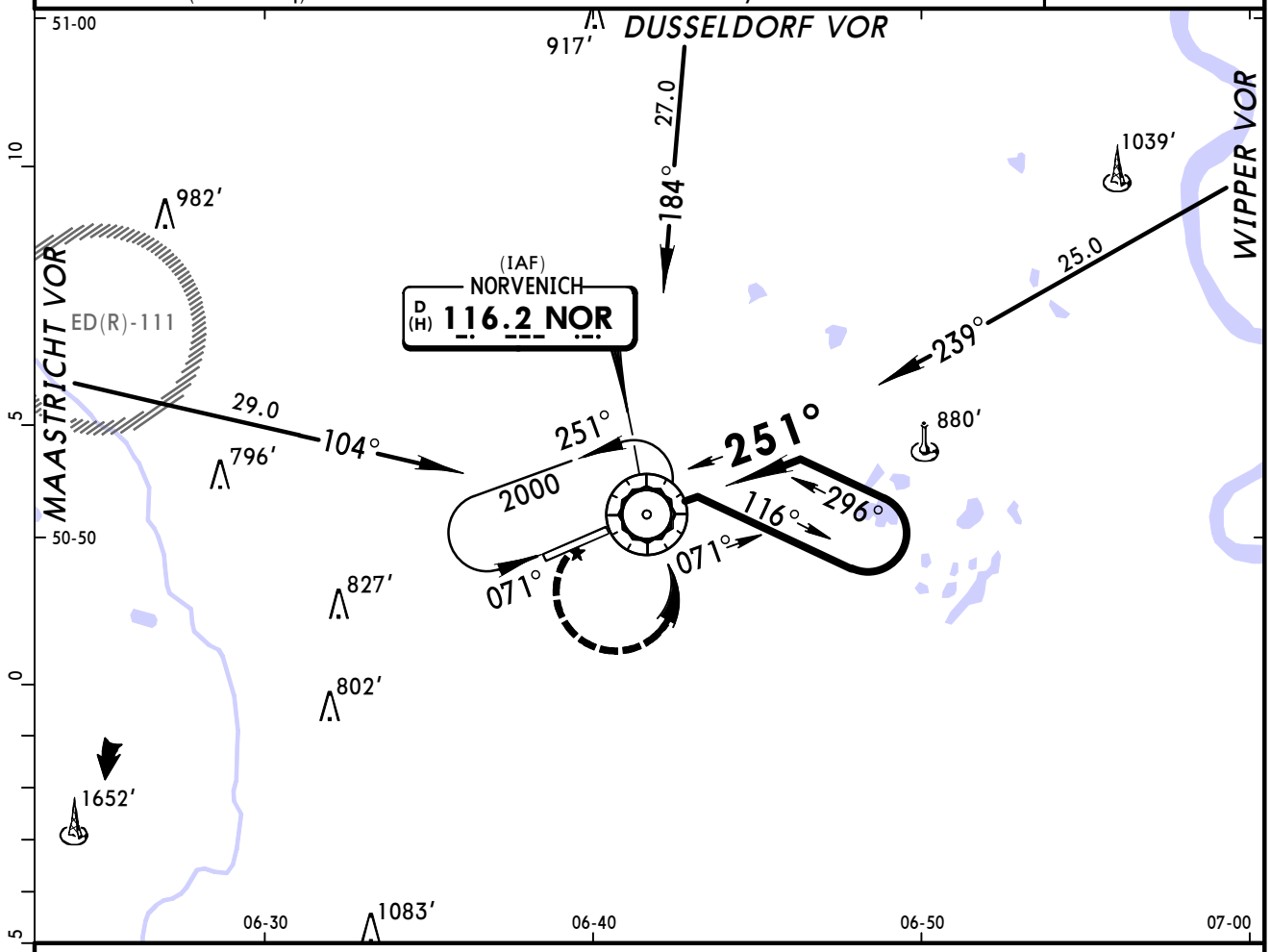
VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / TDZE
NOR 116.2	251°	NOR VOR 1300′ (952′)	740′ (392′)	Apt Elev 386′ TDZE 348′

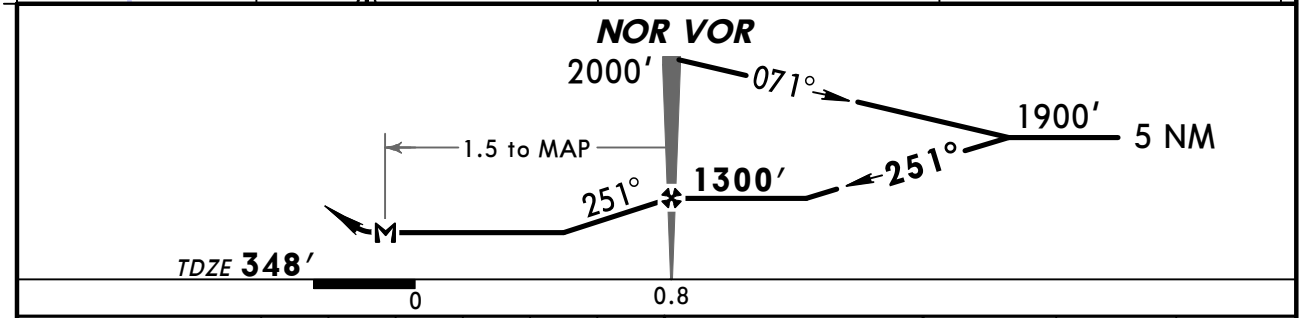
MISSED APCH: Turn LEFT climb inbound NOR VOR to 2000′.

3700′

MSA NOR VOR

Alt Set: hPa (IN on req) TDZ Elev: 13 hPa Trans level: By ATC Trans alt: 5000′





Gnd speed-Kts	70	90	100	120	140	160
NOR VOR to MAP 1.5	1:17	1:00	0:54	0:45	0:39	0:34

HIALS
PAPI PAPI
2000′ LT
NOR 116.2

JAR-OPS COPTER VOR 251° CEILING REQUIRED

MDA(H) 740′ (392′)

	ALS out
COPTER	400′- 800m
	400′- 1000m

TERPS

CHANGES: LANGEN Radar frequency.

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LANGEN Radar (APP)	*NORVENICH Radar	*NORVENICH Tower
128.5 126.32	123.3 129.05X	122.1 136.2X

For UHF see MIL-101 listing

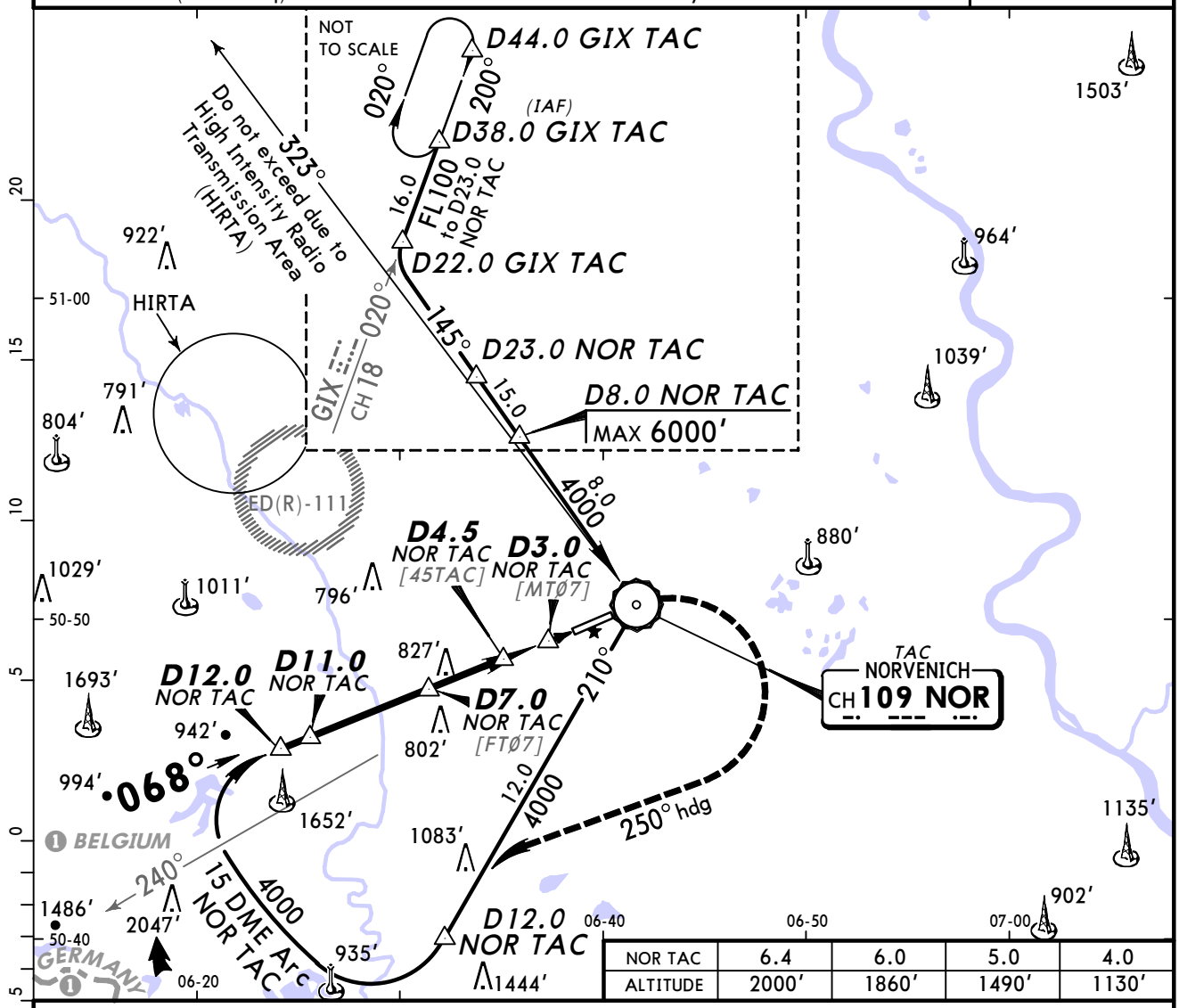
BRIEFING STRIP ™

TACAN	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 386′
NOR CH 109	068°	D7.0 NOR TAC 2000′ (1615′)	760′ (375′)	TDZE 385′

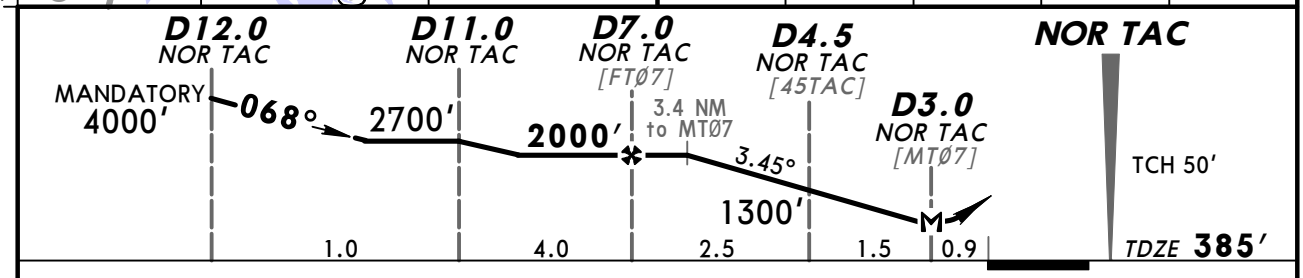
MISSED APCH: Climb inbound NOR TAC. After passing NOR TAC turn RIGHT onto heading 250° to intercept R-210. Climb to 4000′.

Alt Set: hPa (IN on req) TDZ Elev: 14 hPa Trans level: By ATC Trans alt: 5000′

3700′
MSA
NOR TAC



NOR TAC	6.4	6.0	5.0	4.0
ALTITUDE	2000′	1860′	1490′	1130′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.45°	427	549	611	733	855	977
MAP at D3.0 NOR TAC						

HIALS
PAPI PAPI
NOR CH 109

TERPS

Standard STRAIGHT-IN LANDING RWY **07** **CEILING REQUIRED** CIRCLE-TO-LAND

DA(H) 760′ (375′)

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	400′- 1000m	90	820′ (434′)	500′- 1600m
B		120	890′ (504′)	500′- 1600m
C	400′- 1200m	140	990′ (604′)	500′- 2400m
D		165	1090′ (704′)	600′- 3600m

CHANGES: LANGEN Radar frequency. Minimums.

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BRIEFING STRIP

LANGEN Radar (APP)	*NORVENICH Radar	*NORVENICH Tower
128.5 126.32	123.3 129.05X	122.1 136.2X

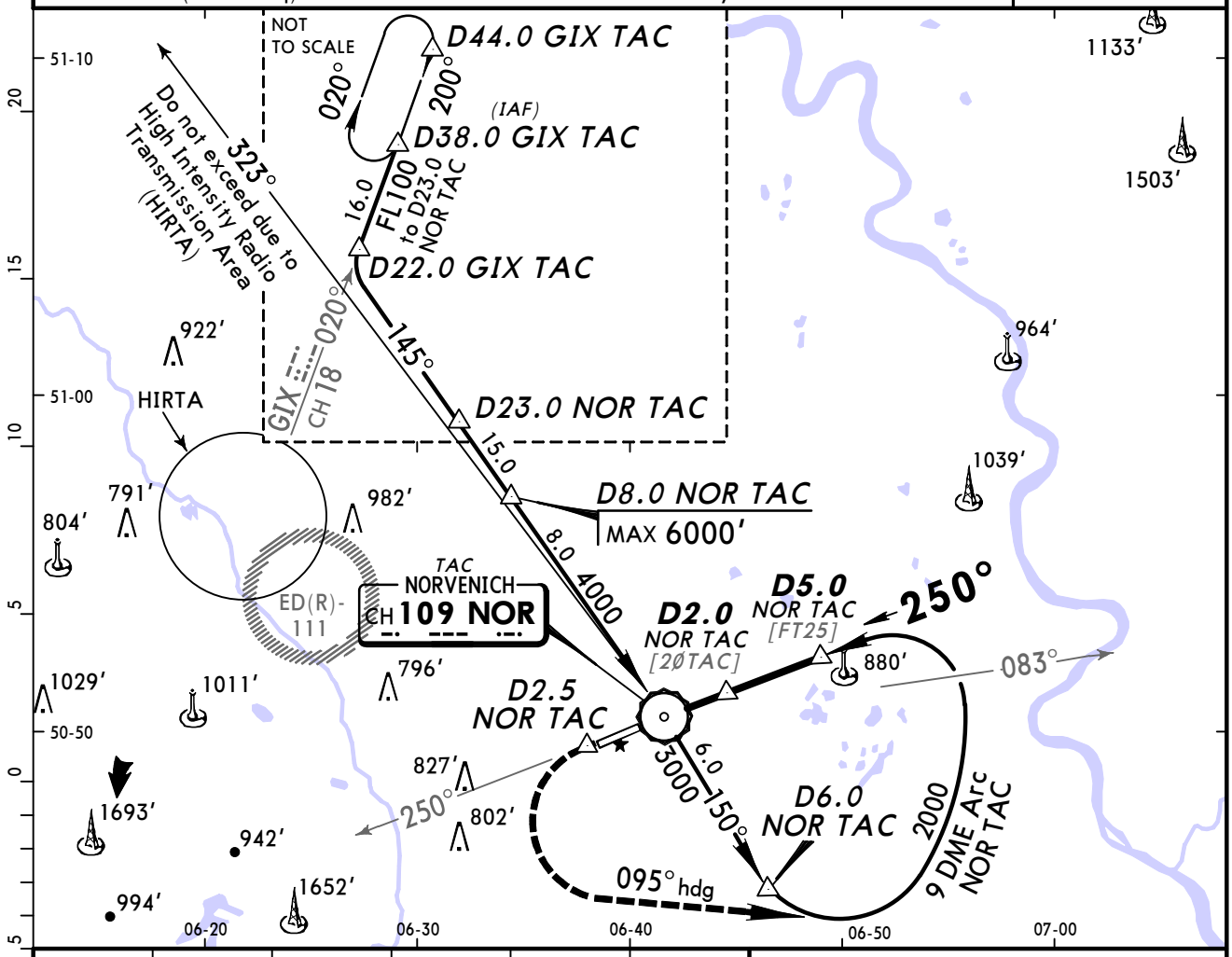
For UHF see MIL-101 listing

TACAN	Final	Minimum Alt	DA(H)	Apt Elev 386′
NOR CH 109	Apch Crs 250°	D5.0 NOR TAC 2000′ (1652′)	720′ (372′)	TDZE 348′

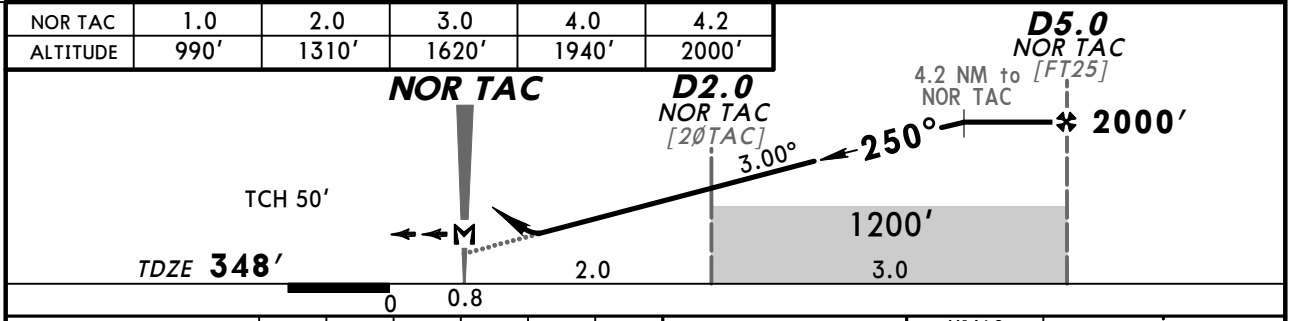
MISSED APCH: Climb on R-250 outbound NOR TAC. At D2.5 NOR TAC turn LEFT onto hdg 095° to intercept 9 DME Arc NOR TAC climbing to 2000′.

Alt Set: hPa (IN on req) TDZ Elev: 13 hPa Trans level: By ATC Trans alt: 5000′

3700′
MSA
NOR TAC



NOR TAC	1.0	2.0	3.0	4.0	4.2
ALTITUDE	990′	1310′	1620′	1940′	2000′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at NOR TAC						

HIALS
PAPI PAPI

D2.5 NOR TAC on NOR CH 109 R-250

TERPS

Standard STRAIGHT-IN LANDING RWY 25 **CEILING REQUIRED** CIRCLE-TO-LAND

DA(H) 720′ (372′)

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	400′- 1000m	90	820′ (434′)	500′- 1600m
B	400′- 1600m	120	890′ (504′)	500′- 1600m
C	400′- 1700m	140	990′ (604′)	500′- 2400m
D	400′- 2000m	165	1090′ (704′)	600′- 3600m

CHANGES: LANGEN Radar frequency. Minimums.

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ETNN
NORVENICH

JEPPESEN
7 MAY 10 18-1

NORVENICH, GERMANY
*PAR or *SRA All Rwys

LANGEN Radar (APP)	*NORVENICH Radar	*NORVENICH Tower
128.5 126.32	123.3 129.05X	122.1 136.2X

For UHF see MIL-101 listing

BRIEFING STRIP ™

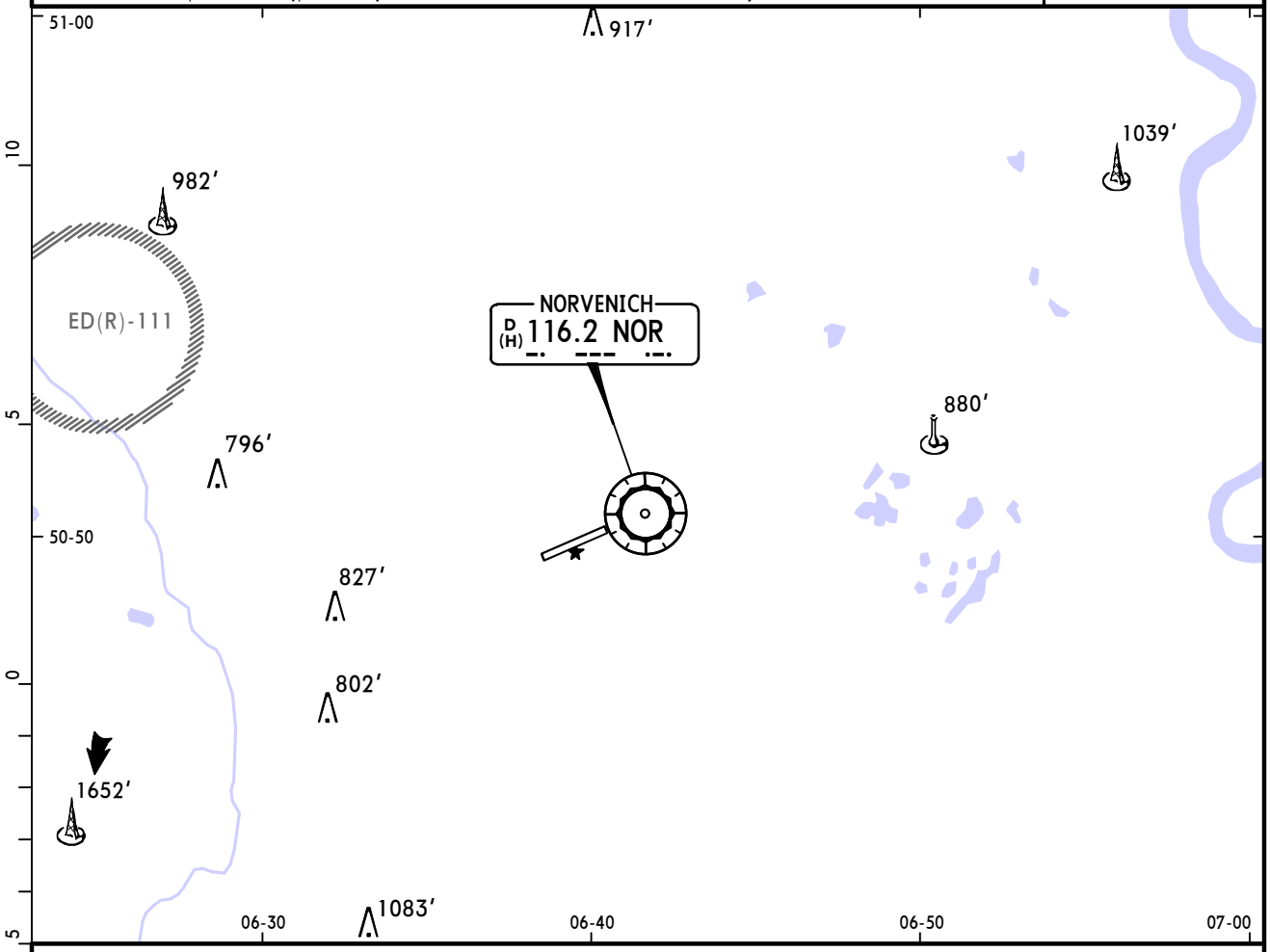
RADAR	Final Apch Crs BY ATC	PAR GS Not published / Minimum Alt No FAF	DA(H)/MDA(H) Refer to Minimums	Apt Elev 386′ TDZE RWY 07 385′ TDZE RWY 25 348′

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 14 hPa Trans level: By ATC Trans alt: 5000′

3700′

MSA NOR VOR



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

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

	PAR 07		PAR 25		SRA 07		SRA 25	
	DA(H) 585′ (200′)		DA(H) 548′ (200′)		MDA(H) 760′ (375′)		MDA(H) 700′ (352′)	
		ALS out		ALS out		ALS out		ALS out
TERPS A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	400′- 1200m	400′- 1900m	400′- 1100m	400′- 1800m
TERPS B								
TERPS C					400′- 1400m	400′- 2100m	400′- 1300m	400′- 2000m
TERPS D								

CHANGES: LANGEN Radar frequency. Minimums.

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General Information

Location: Schleswig Deu
IATA Code:
Lat/Long: N54° 27.6' E009° 31.0'
Elevation: 70 ft

Airport Use: Military
Magnetic Variation: 1.7°E

Fuel Types: Jet A-1
Oxygen Types: High Pressure
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0617 Z
Sunset: 1653 Z,

Runway Information

Runway: 05
Length x Width: 8003 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 69 ft
Lighting: Edge, ALS, REIL

Runway: 23
Length x Width: 8003 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 69 ft
Lighting: Edge, ALS, REIL

Communication Information

Schleswig Tower 135.15 Military
Schleswig Tower 122.1 Military
Schleswig Tower 35.89 Military
Schleswig Tower 25.78 Military
Schleswig Radar 142.05 Military
Schleswig Radar 139.65 Military
Schleswig Radar 135.15 Military
Schleswig Radar 123.3 Military
Schleswig Radar 118.55
Schleswig Radar 38.54 Military
Schleswig Radar 34.4 Military
Schleswig Radar 31.347 Military

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Schleswig Radar 24.445 Military
Schleswig Radar 24.097 Military

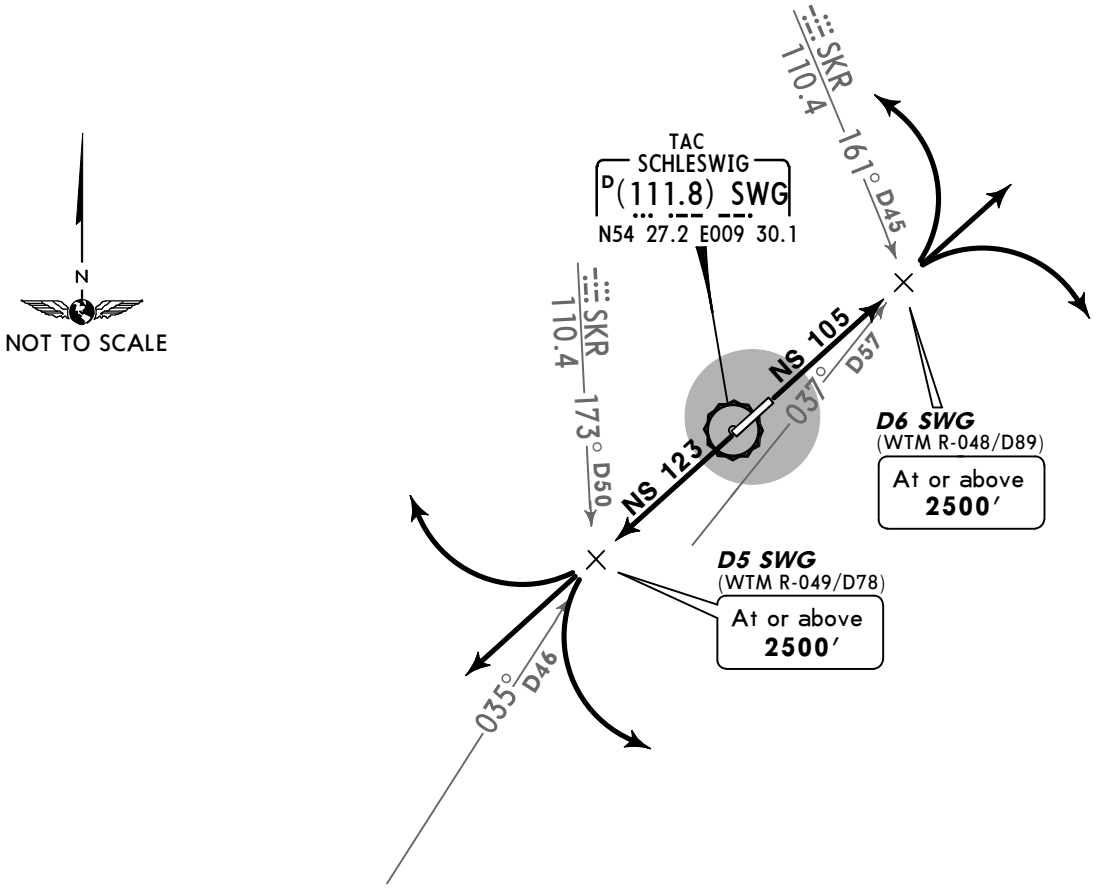
Apt Elev	
70′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Schleswig 2300′.

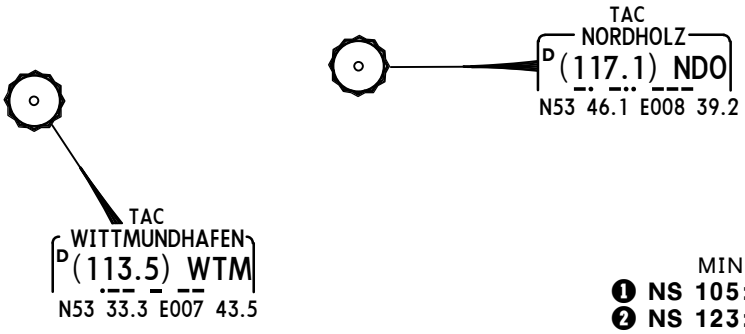
For UHF see MIL-101 listing

2000′
MSA
SWG TAC

NS 105, NS 123
RWYS 05, 23 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





MINIMUM CLIMB RATE TABLE
❶ **NS 105:** up to **2500′.**
❷ **NS 123:** up to **2500′.**

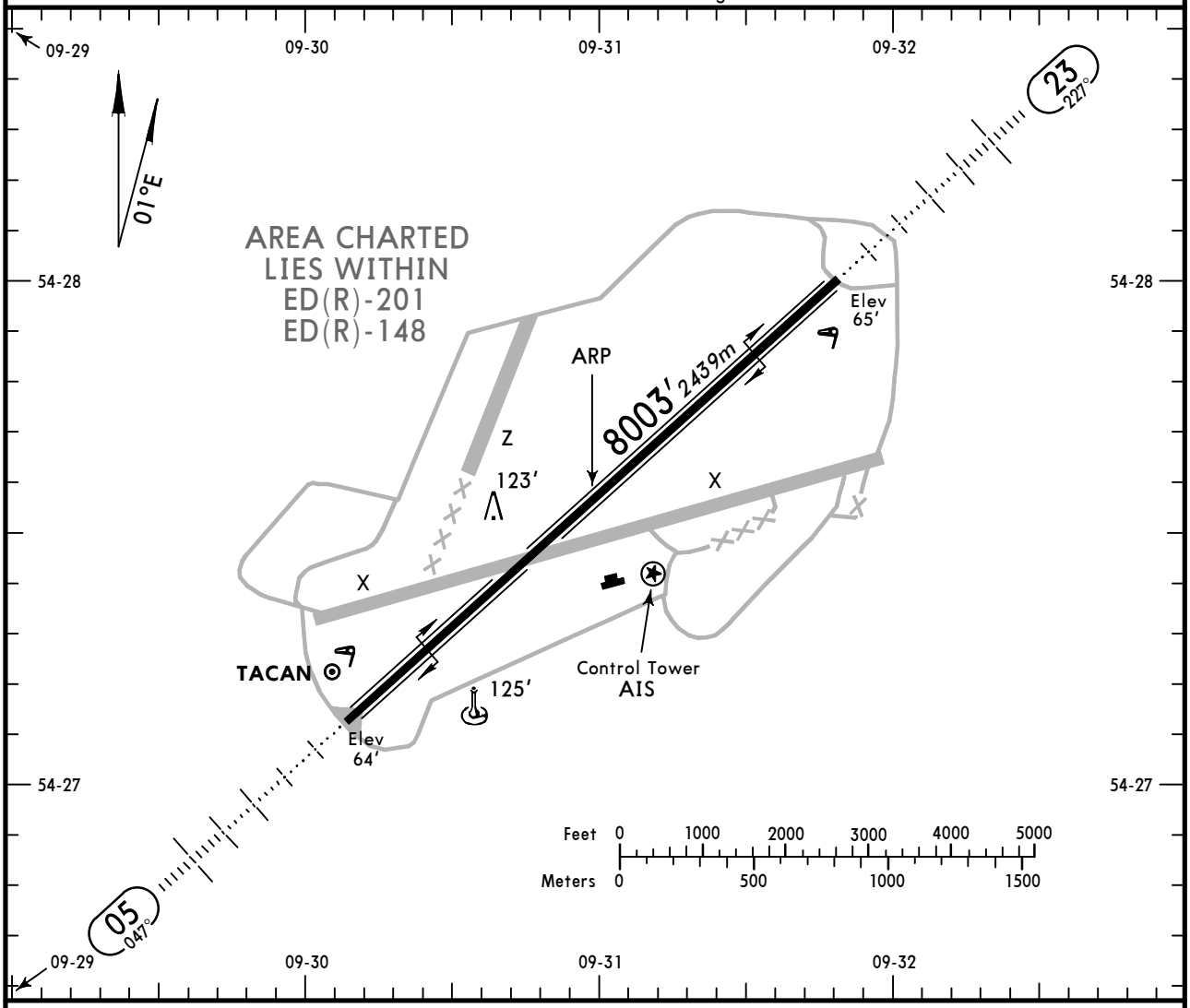
KT	75	100	150	200	250	300
❶ V/V (fpm)	645	860	1290	1720	2150	2580
❷ V/V (fpm)	616	822	1233	1643	2054	2465

SID	RWY	ROUTING
NS 105	**05**	Climb straight ahead to **2500′** within D6 SWG, continue as cleared by ATC.
NS 123	**23**	Climb straight ahead to **2500′** within D5 SWG, continue as cleared by ATC.

CHANGES: New chart.

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*SCHLESWIG Tower
122.1 135.15
For UHF see MIL-101 Listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
05 ❶ 23	HIRL HIALS SFL REIL PAPI (angle 3.0°)				98′ *30m*

❶ Asphalt with antiskid layer and concrete.

Standard TAKE-OFF 1

	LVP must be in Force RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

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

CHANGES: None.

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BREMEN Radar	*SCHLESWIG Tower
124.07	122.1 135.15

For UHF see MIL-101 Listing

BRIEFING STRIP™

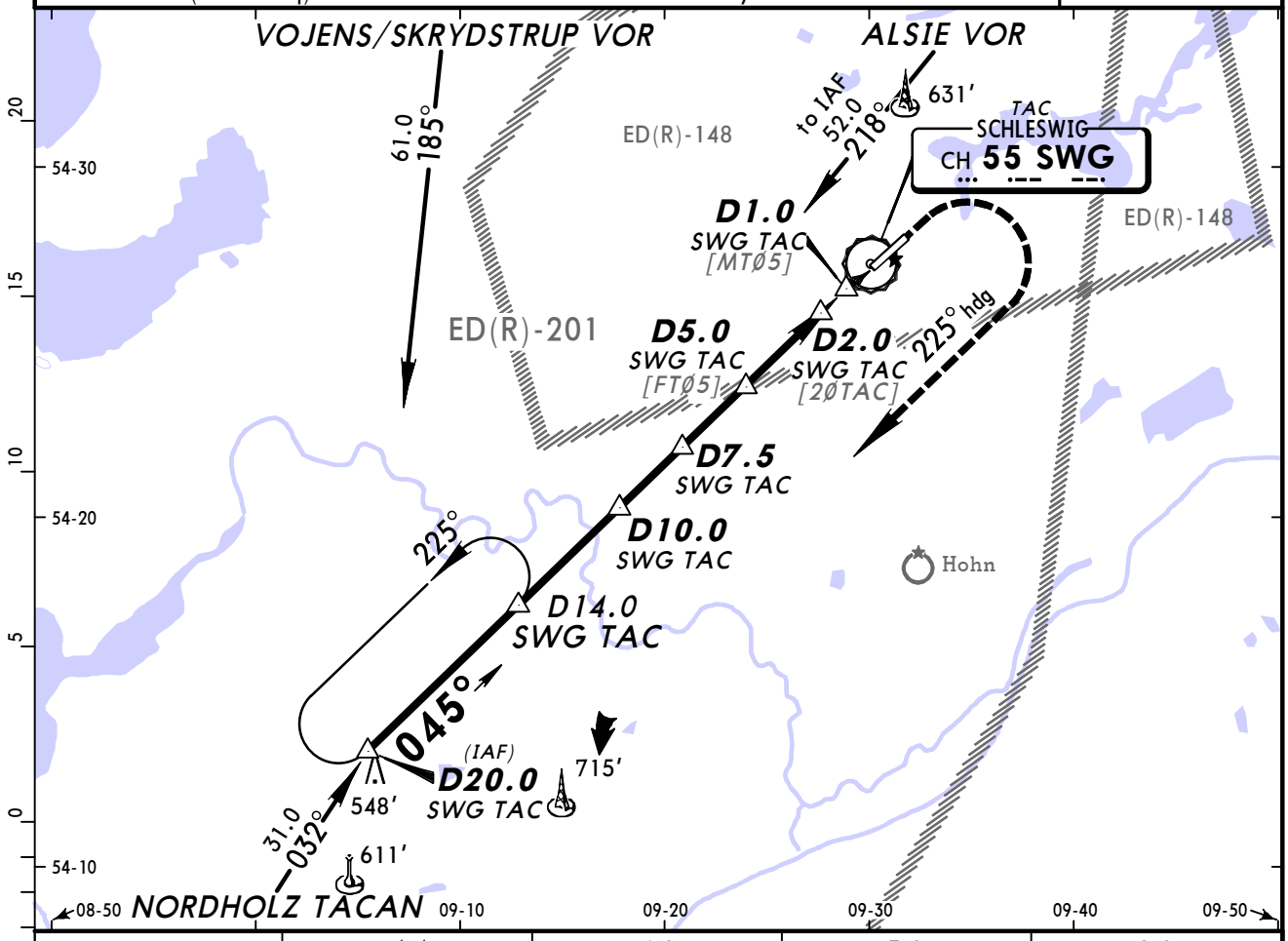
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / TDZE
SWG CH 55	045°	D5.0 SWG TAC 1500′ (1431′)	440′ (371′)	70′ / 69′

MISSED APCH: Climb STRAIGHT AHEAD to 2000′, then climbing turn RIGHT onto heading 225° to 3000′ to intercept 10 DME Arc SWG TAC and rehome.

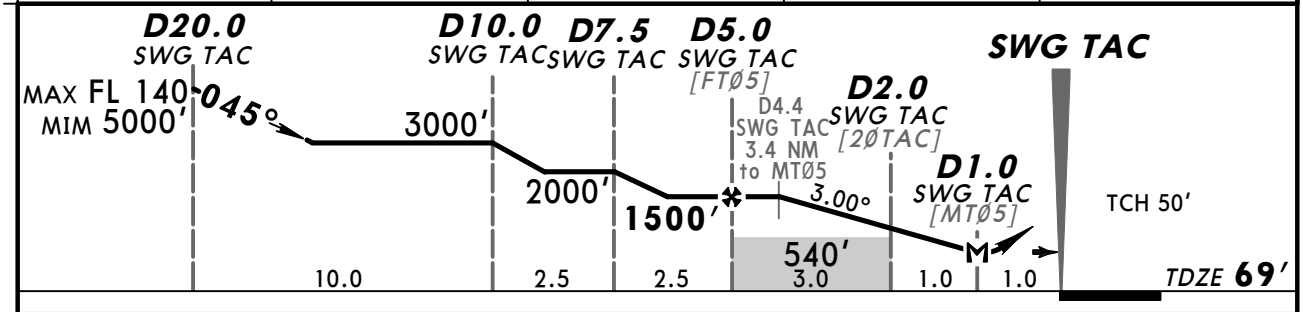
2000′

MSA SWG TAC

Alt Set: hPa (IN on req) TDZ Elev: 3 hPa Trans level: By ATC Trans alt: 5000′



SWG TAC	4.4	4.0	3.0	2.0
ALTITUDE	1500′	1380′	1060′	740′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 SWG TAC						

HIALS
REIL
PAPI PAPI

2000′

Standard STRAIGHT-IN LANDING RWY **05** **CEILING REQUIRED**

MDA(H) **440′** (371′)

TERPS

		ALS out
A	400′- 1000m	400′- 1600m
B		
C		400′- 1700m
D	400′- 1200m	400′- 2000m

CHANGES: BREMEN Radar frequency.

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BREMEN Radar	*SCHLESWIG Radar	*SCHLESWIG Tower
124.07	123.3 118.55X 135.15X	122.1 135.15

For UHF see MIL-101 Listing

BRIEFING STRIP™

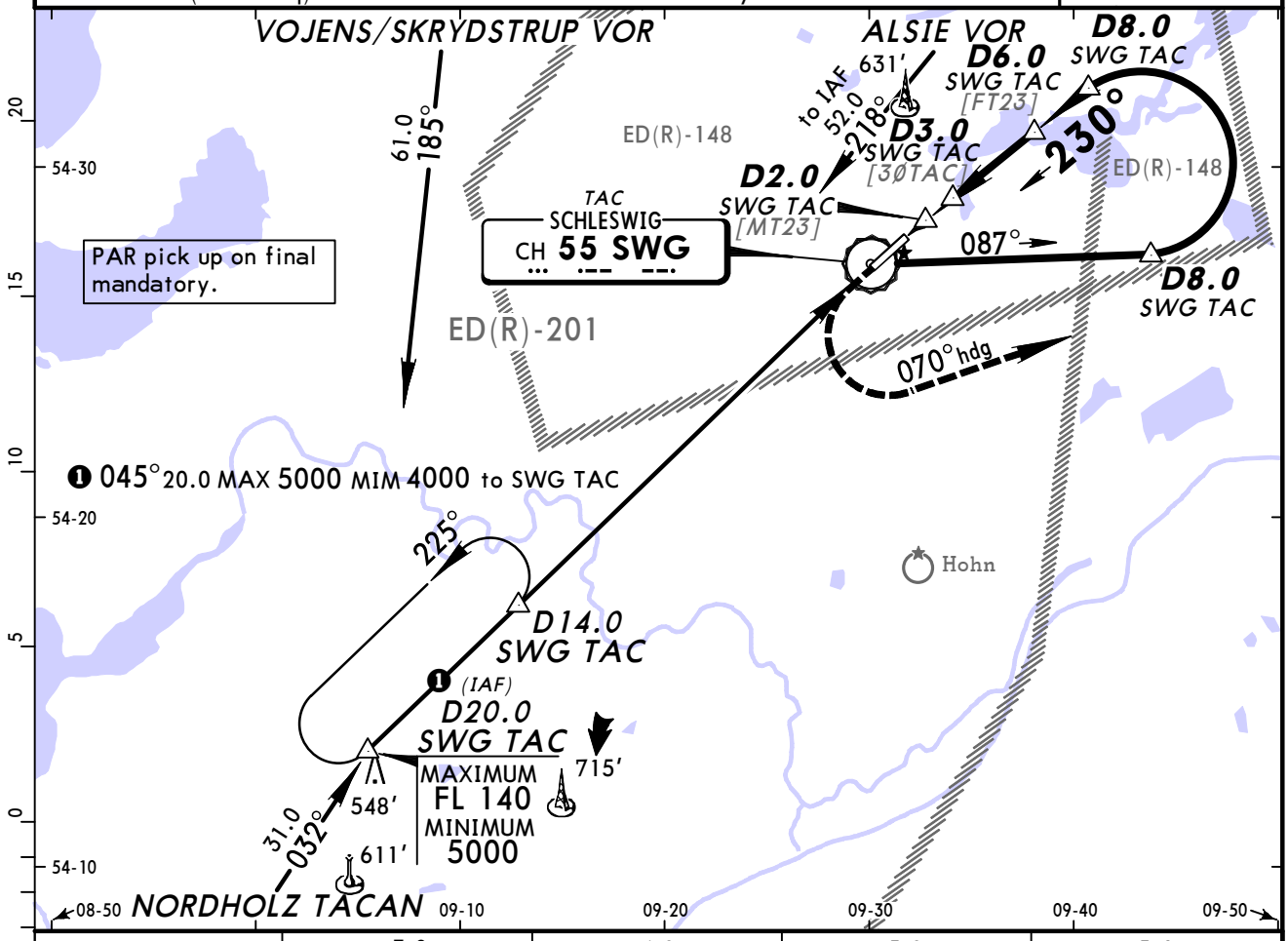
TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 70′
SWG CH 55	Apch Crs 230°	D6.0 SWG TAC 1500′ (1431′)	500′ (431′)	TDZE 69′

MISSED APCH: Climb STRAIGHT AHEAD to 2000′, then climbing turn LEFT onto heading 070° to 3000′ to intercept 10 DME Arc SWG TAC and rehome.

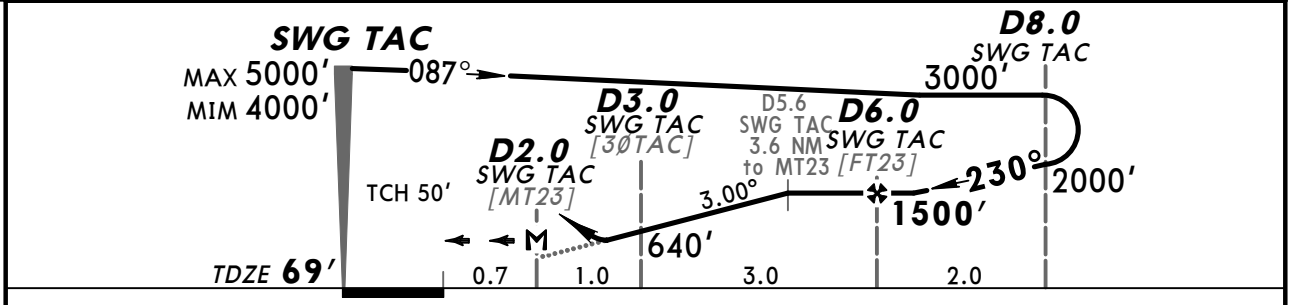
Alt Set: hPa (IN on req) TDZ Elev: 3 hPa Trans level: By ATC Trans alt: 5000′

2000′

MSA SWG TAC



SWG TAC	3.0	4.0	5.0	5.6
ALTITUDE	640′	970′	1300′	1500′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D2.0 SWG TAC						

HIALS
REIL
PAPI PAPI

2000′

Standard STRAIGHT-IN LANDING RWY 23 **CEILING REQUIRED**

MDA(H) 500′ (431′)

TERPS

		ALS out
A	500′- 1300m	500′- 1600m
B		
C		500′- 2000m
D	500′- 1600m	500′- 2400m

CHANGES: BREMEN Radar frequency.

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SCHLESWIG, GERMANY
*PAR or *SRA Rwys 05, 23

BREMEN Radar	*SCHLESWIG Radar	*SCHLESWIG Tower
124.07	123.3 118.55X 135.15X	122.1 135.15

For UHF see MIL-101 Listing

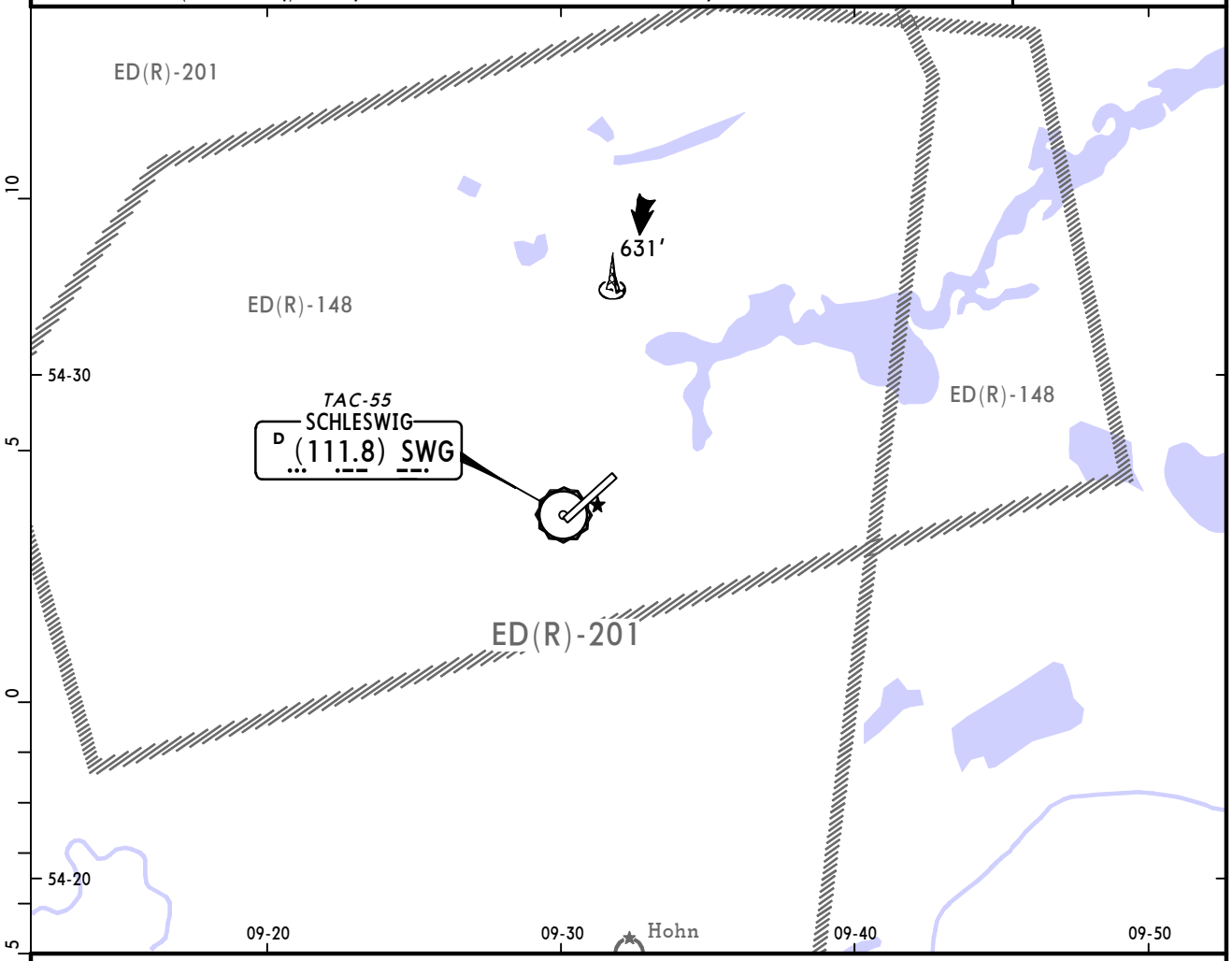
BRIEFING STRIP™

RADAR	Final Apch Crs By ATC	PAR GS No Alt published / Minimum Alt No FAF	DA(H)/MDA(H) Refer to Minimums	Apt Elev 70′ / TDZE RWY 05 69′ / TDZE RWY 23 69′

No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 3 hPa Trans level: By ATC Trans alt: 5000′



RWY 05
PAR TCH 40′

RWY 23
PAR TCH 38′

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

Lighting - Refer to Airport Chart

Refer to Missed apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

TERPS

	PAR 05 DA(H) 269′ (200′)		PAR 23 DA(H) 269′ (200′)		SRA 05 MDA(H) 440′ (371′)		SRA 23 MDA(H) 500′ (431′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	400′- 1200m	400′- 1900m	500′- 1500m	500′- 2200m
B								
C					400′- 1400m	400′- 2100m	500′- 1700m	500′- 2400m
D								

CHANGES: BREMEN Radar frequency.

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General Information

Location: Wittmundhafen Deu
IATA Code:
Lat/Long: N53° 32.9' E007° 40.1'
Elevation: 26 ft

Airport Use: Military
Magnetic Variation: 1.1°E

Fuel Types: Jet A-1
Oxygen Types: High Pressure
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0623 Z
Sunset: 1702 Z,

Runway Information

Runway: 08
Length x Width: 8005 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 26 ft
Lighting: Edge, ALS, REIL

Runway: 26
Length x Width: 8005 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 23 ft
Lighting: Edge, ALS, REIL

Communication Information

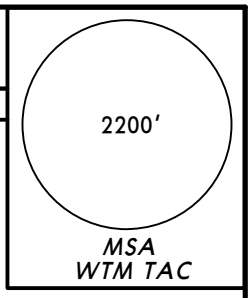
Wittmund Tower 140.4 Military
Wittmund Tower 122.1 Military
Wittmund Tower 118.725 Military
Wittmund Tower 38.687 Military
Wittmund Tower 25.78 Military
Wittmund Radar 140.9 Military
Wittmund Radar 138.55 Military
Wittmund Radar 123.6 Military
Wittmund Radar 123.3 Military
Wittmund Radar 38.54 Military
Wittmund Radar 36.89 Military
Wittmund Radar 34.4 Military

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Wittmund Radar 27.717 Military
Wittmund Radar 25.902 Military
Wittmund Radar 25.87 Military
Wittmund Radar 24.805 Military

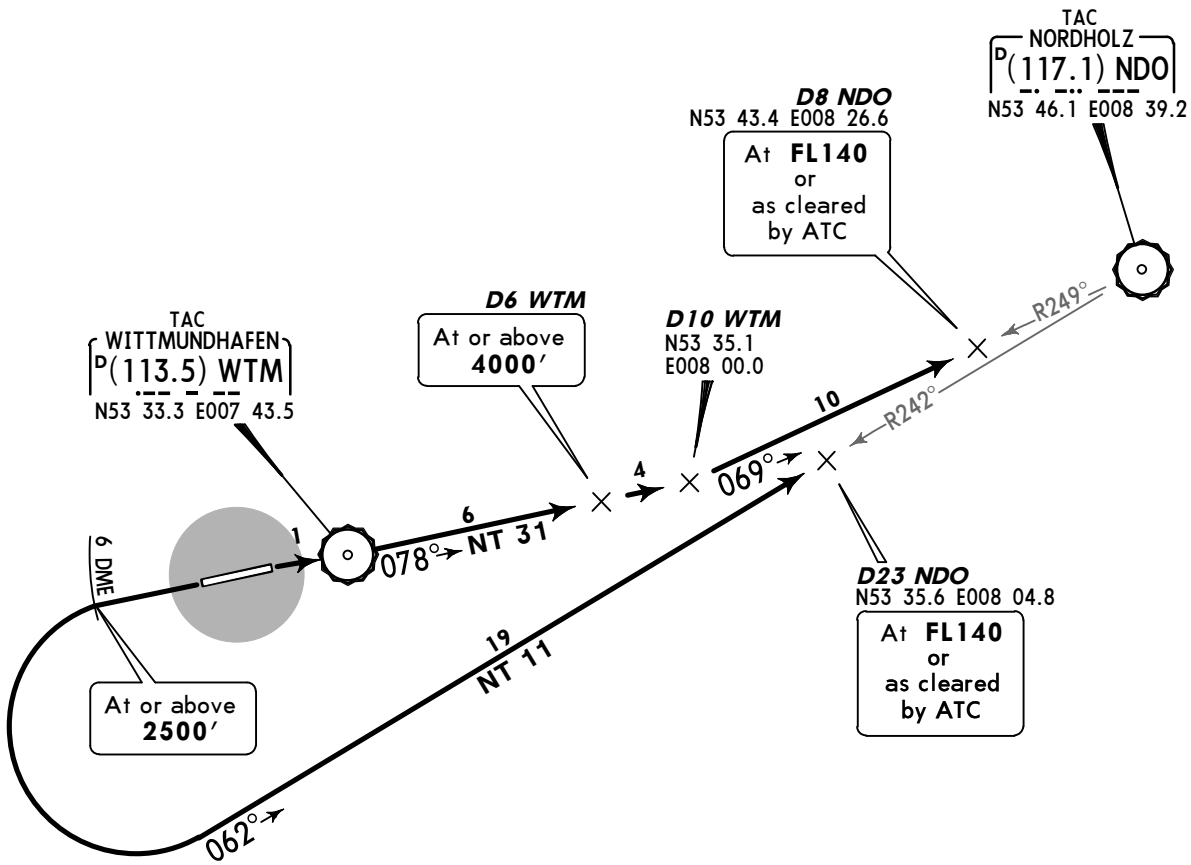
Apt Elev	
26′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Wittmundhafen 2700′.

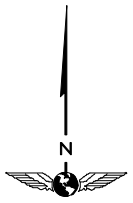
For UHF see MIL-101 listing



NT 11, NT 31
RWYS 26, 08 DEPARTURES
TACAN AZIMUTH REQUIRED

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





NOT TO SCALE

MINIMUM CLIMB RATE TABLE
❶ **NT 11:** Up to **1300′**
❷ **NT 31:** Up to **100′**

KT	75	100	150	200	250	300
❶ V/V (fpm)	300	400	600	800	1000	1200
❷ V/V (fpm)	266	355	533	710	888	1065

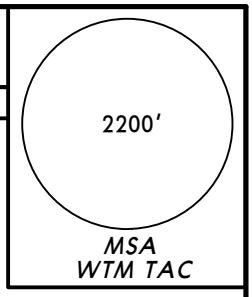
SID	RWY	ROUTING
NT 11	**26**	Climb straight ahead to WTM 6 DME, turn LEFT, intercept NDO R-242 inbound to D23 NDO.
NT 31	**08**	Climb straight ahead to WTM, WTM R-078 to D10 WTM, turn LEFT, intercept NDO R-249 inbound to D8 NDO.

CHANGES: NT 11 & 31 established; NT 208 transferred.

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Apt Elev	
26′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Wittmundhafen 2700′.

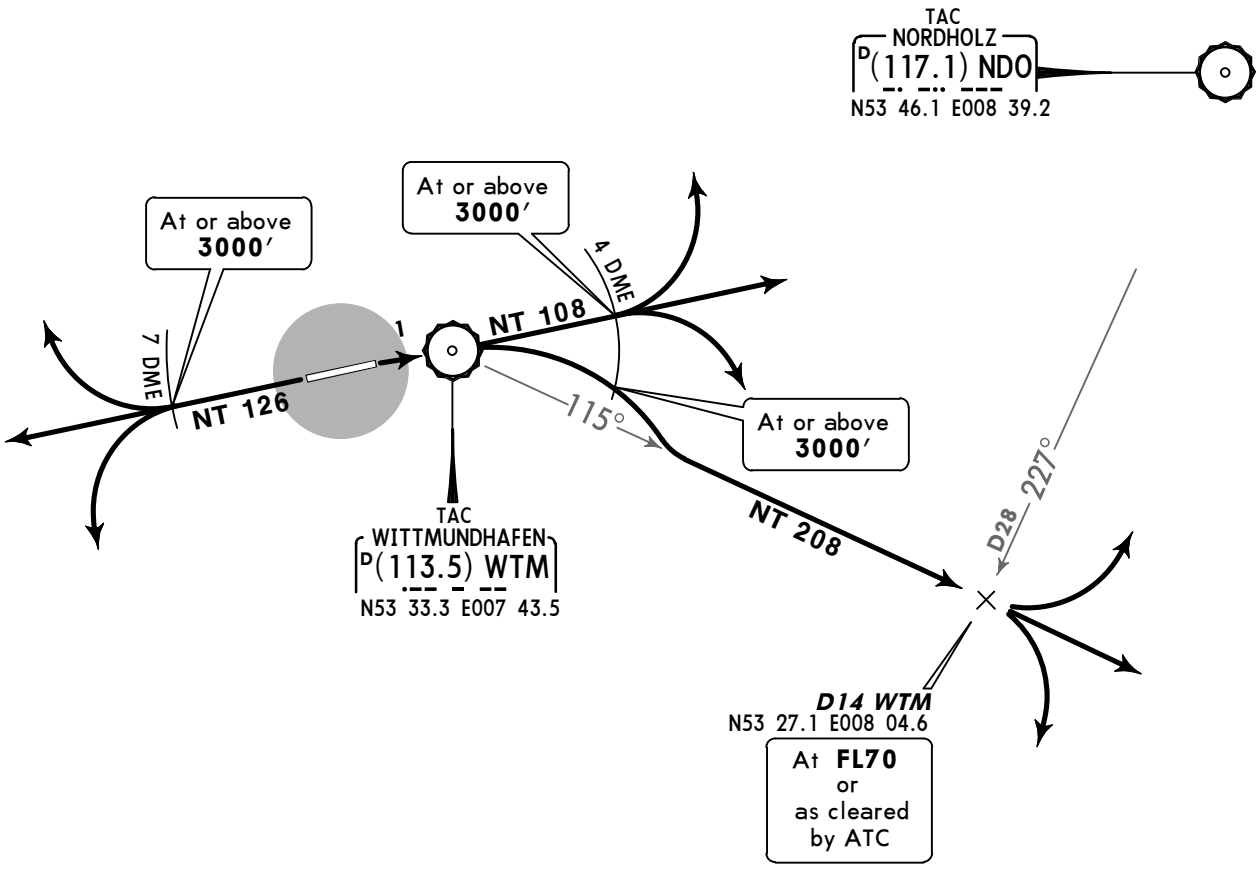
For UHF see MIL-101 listing



NT 108❶, NT 126❷, NT 208
RWY 08, 26 DEPARTURES
TACAN AZIMUTH REQUIRED

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ For homebased ACFT only.
❷ MAX 300 KT.





MINIMUM CLIMB RATE TABLE
❸ **NT 126:** Up to **3000′**
❹ **NT 108, NT 208:** Up to **3000′** for ATC purposes.
❺ **NT 208: 3000′- FL70** for ATC purposes.

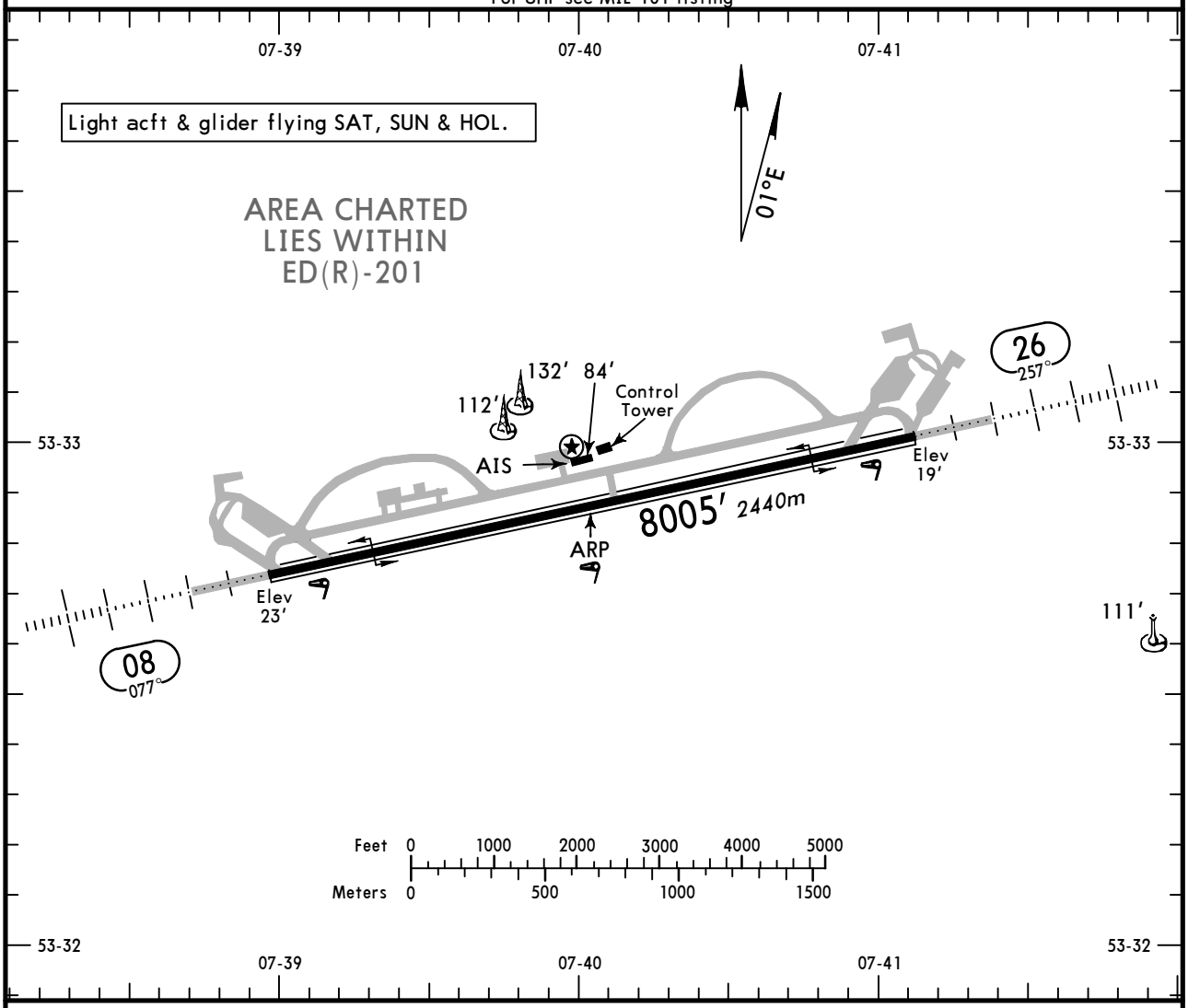
KT	75	100	150	200	250	300
❸ V/V (fpm)	873	1163	1745	2327	2908	3490
❹ V/V (fpm)	681	908	1363	1817	2271	2725
❺ V/V (fpm)	500	667	1000	1333	1667	2000

SID	RWY	ROUTING
NT 108 ❶	**08**	Climb straight ahead to **3000′** within WTM 4 DME, continue as cleared by ATC.
NT 126 ❷	**26**	Climb straight ahead to **3000′** within WTM 7 DME, continue as cleared by ATC.
NT 208	**08**	Climb straight ahead to WTM, turn RIGHT, intercept WTM R-115 to D14 WTM.

CHANGES: New chart (SIDs transferred & established).

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*WITTMUND Tower
118.72 122.1
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
08 ❶ 26	HIRL ❷ HIALS SFL REIL PAPI (angle 3.0°)				98′ *30m*

❶ Rwy with anti-skid layer. ❷ Distance from rwy edge: 10′/3m.

Standard TAKE-OFF 1

	LVP must be in Force: RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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

CHANGES: None.

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WITTMUNDHAFEN, GERMANY

WITTMUNDHAFEN

STRAIGHT-IN RWY		DA(H) / MDA(H)	RVR (ALS/ALS out)
08	PAR	226′ (200′)	800m / 1200m ❶
	TACAN	440′ (414′)	800m / 1600m ❷
26	PAR	223′ (200′)	800m / 1200m ❶
	TACAN	440′ (417′)	800m / 1600m ❷

❶ Ceiling 200′.
❷ Ceiling 500′.

TAKE-OFF RWY 08, 26

LVP must be in Force ❸				
RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
150m	200m	200m	250m ❹	800m

❸ Without LVP 400m are stipulated.
❹ Or rejected take-off distance whichever is the greater.

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ETNT
WITTMUNDHAFEN

JEPPESEN 23 SEP 11 14-1

WITTMUNDHAFEN, GERMANY
TACAN Rwy 08

BREMEN Radar	*WITTMUND Tower	
120.22	118.72	122.1

For UHF see MIL-101 listing

BRIEFING STRIP™

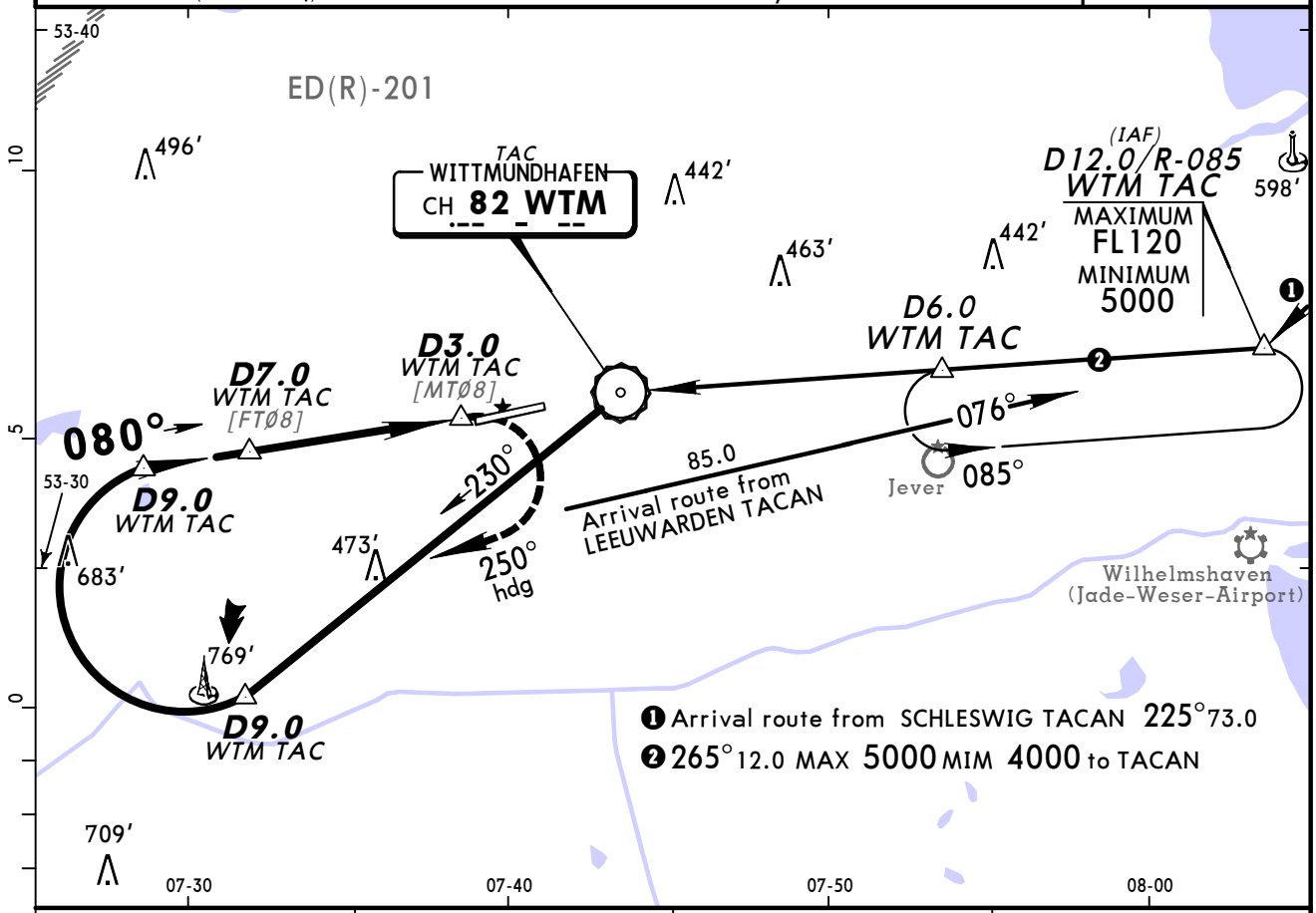
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev	26′
WTM CH 82	080°	D7.0 WTM TAC 1600′ (1574′)	440′ (414′)	TDZE	26′

MISSED APCH: Climbing turn RIGHT onto heading 250° to 2500′ and intercept 12 DME Arc WTM TAC.

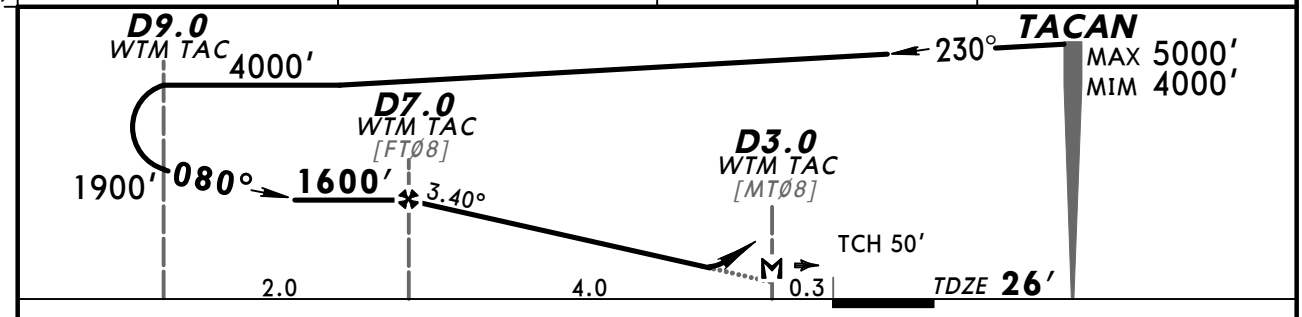
Alt Set: hPa (IN on req) TDZ Elev: 1 hPa Trans level: By ATC Trans alt: 5000′

2200′

MSA WTM TAC



WTM TAC	6.0	5.0	4.0
ALTITUDE	1240′	880′	520′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.40°	421	541	602	722	842	963
MAP at D3.0 WTM TAC						

HIALS
REIL PAPI PAPI

2500′ RT onto 250° hdg

Standard STRAIGHT-IN LANDING RWY **08** **CEILING REQUIRED**

MDA(H) **440′** (414′)

TERPS

	ALS out
A	500′- 1600m
B	
C	500′- 1200m
D	500′- 2000m

CHANGES: BREMEN Radar frequency.

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WITTMUNDHAFEN, GERMANY
TACAN Rwy 26

BREMEN Radar	*WITTMUND Tower	
120.22	118.72	122.1

For UHF see MIL-101 listing

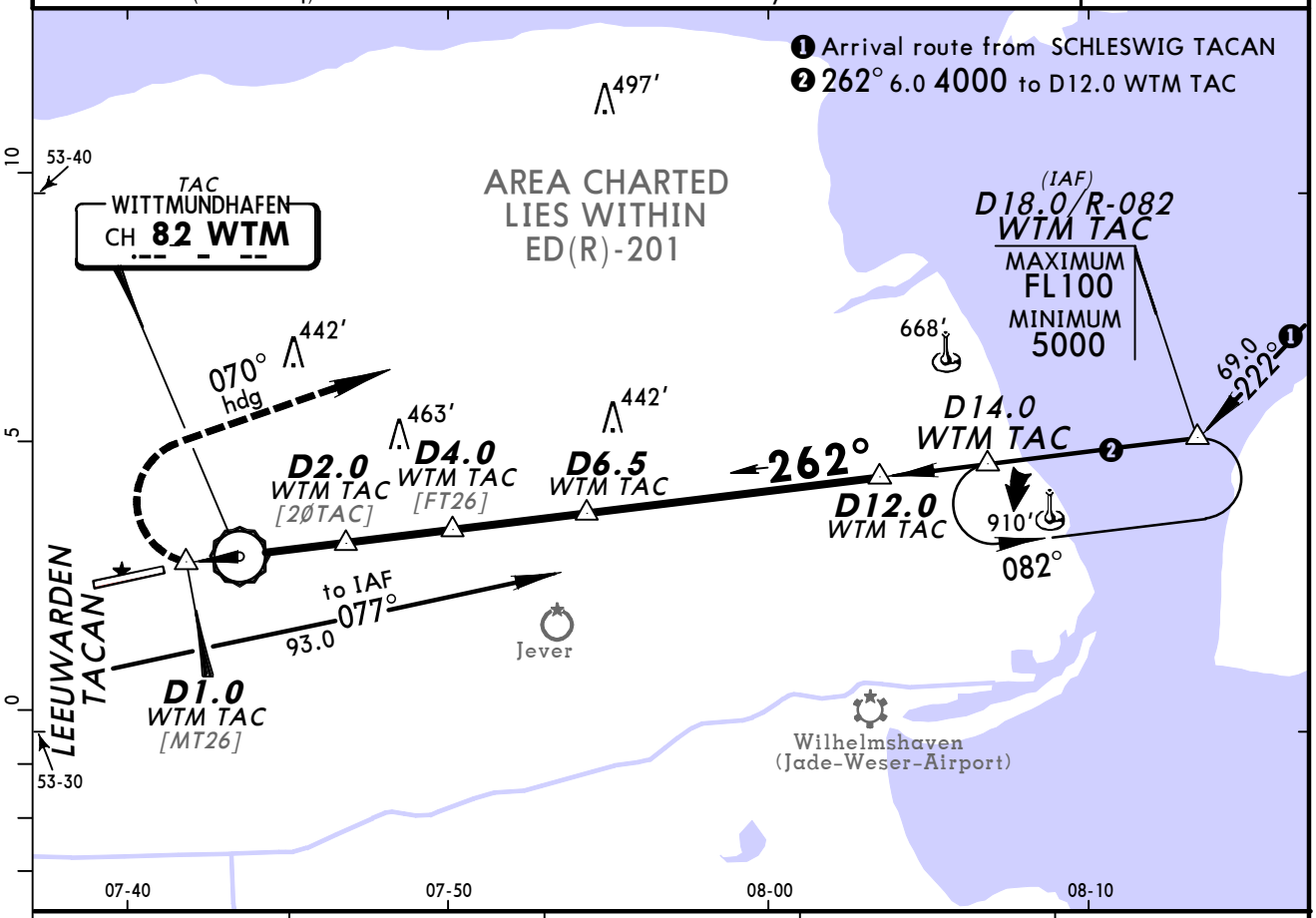
BRIEFING STRIP™

TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / TDZE
WTM CH 82	262°	D4.0 WTM TAC 1900′ (1877′)	440′ (417′)	26′ / 23′

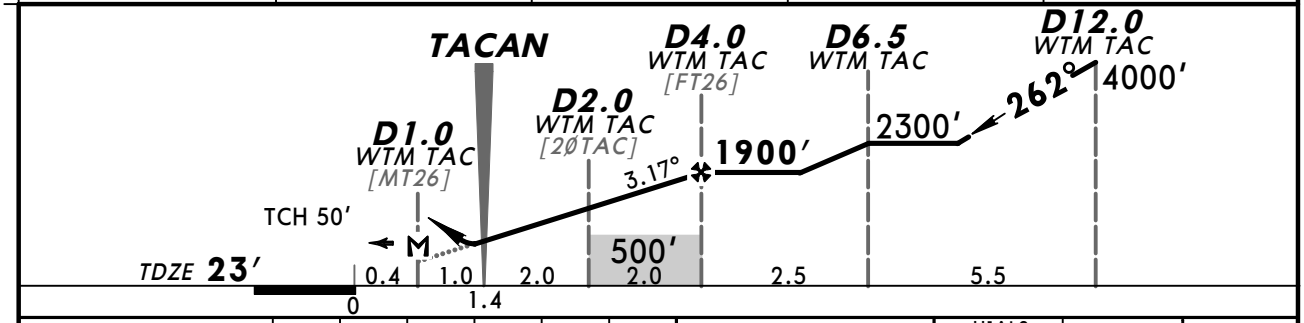
MISSED APCH: Climbing turn RIGHT onto heading 070° to 2500′ and intercept 10 DME Arc WTM TAC.

2200′ — MSA WTM TAC

Alt Set: hPa (IN on req) | TDZ Elev: 1 hPa | Trans level: By ATC | Trans alt: 5000′



WTM TAC	0.0	1.0	2.0	3.0
ALTITUDE	560′	890′	1230′	1570′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.17°	393	505	561	673	785	897
MAP at D1.0 WTM TAC						

HIALS
REIL PAPI PAPI

2500′ RT onto 070° hdg

Standard — STRAIGHT-IN LANDING RWY 26 — **CEILING REQUIRED**

MDA(H) 440′ (417′)

TERPS

	ALS out
A	500′- 1600m
B	
C	500′- 1200m
D	500′- 2000m

CHANGES: BREMEN Radar frequency.

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ETNT
WITTMUNDHAFEN

JEPPESEN 23 SEP 11 18-1

WITTMUNDHAFEN, GERMANY
*PAR Rwys 08, 26

BREMEN Radar	*WITTMUND Radar		*WITTMUND Tower	
120.22	123.3	123.6X	118.72	122.1

For UHF see MIL-101 listing

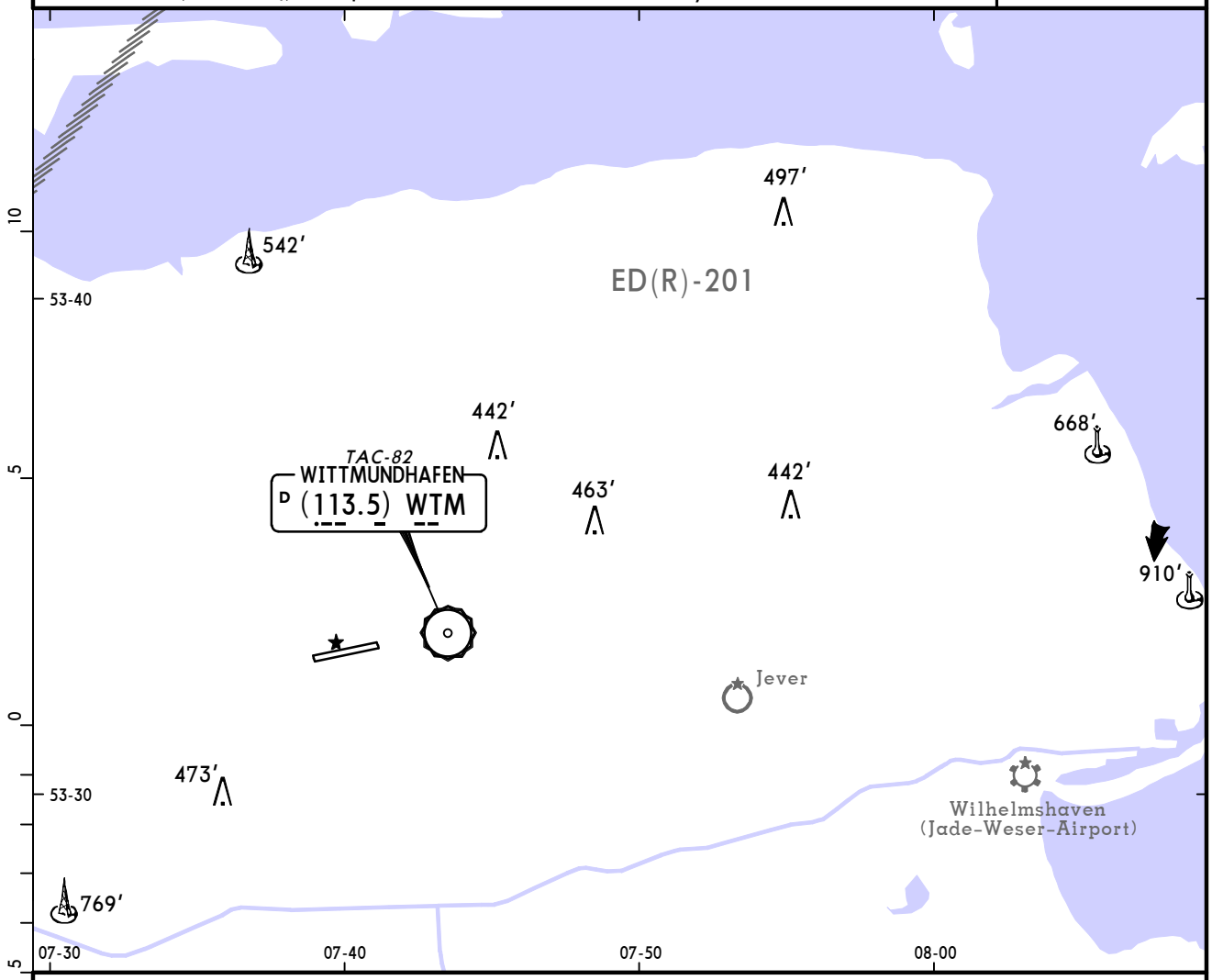
BRIEFING STRIP™

RADAR	Final Apch Crs By ATC	PAR GS No Alt published	DA(H) Refer to Minimums	Apt Elev 26′ / TDZE RWY 08 26′ / TDZE RWY 26 23′

No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 1 hPa Trans level: By ATC Trans alt: 5000′



RWY 08
PAR TCH 32′

RWY 26
PAR TCH 32′

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

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

TERPS

	PAR 08 DA(H) 226′(200′)		PAR 26 DA(H) 223′(200′)	
		ALS out		ALS out
A B C D	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m

CHANGES: BREMEN Radar frequency.

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General Information

Location: Neubrandenburg Deu
IATA Code: FNB
Lat/Long: N53° 36.1' E013° 18.4'
Elevation: 228 ft

Airport Use: Joint
Magnetic Variation: 2.9°E

Fuel Types: 100 Octane (LL), Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes
Pattern Altitude: 772 ft AGL

Sunrise: 0600 Z
Sunset: 1639 Z,

Runway Information

Runway: 09
Length x Width: 7522 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 225 ft
Lighting: Edge, ALS

Runway: 27
Length x Width: 7522 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 228 ft
Lighting: Edge, ALS

Communication Information

Neubrandenburg Tower 122.1
Neubrandenburg Tower 119.175
Neubrandenburg Tower 36.935 Military
Neubrandenburg Tower 25.78 Military
Neubrandenburg Apron Ramp/Taxi Control 122.05
Neubrandenburg Radar 143.75 Military
Neubrandenburg Radar 134.425
Neubrandenburg Radar 123.3
Neubrandenburg Radar 38.54 Military
Neubrandenburg Radar 37.242 Military
Neubrandenburg Radar 35.875 Military

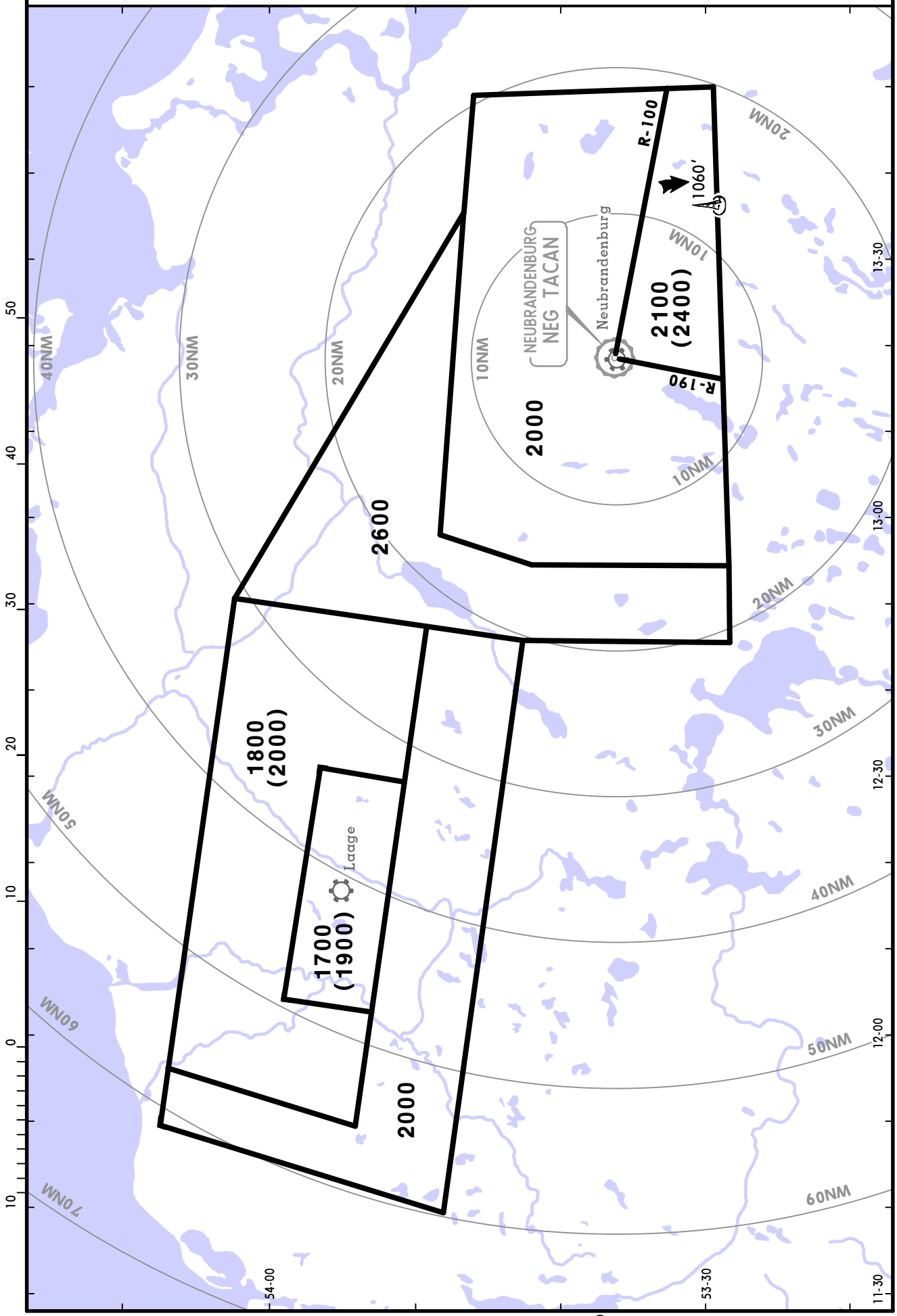
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Neubrandenburg Radar 34.4 Military
Neubrandenburg Radar 24.2 Military
Neubrandenburg Information 122.05 At or below 3000 ft Out to 15 mi.

*NEUBRANDENBURG Radar 123.3	Apt Elev 228′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′

For UHF see MIL-101 listing

Values in brackets consider additional height margins in order to meet required obstacle clearance at cold temperatures.

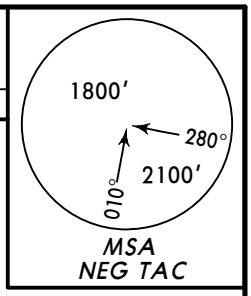


CHANGES: Sectors revised.

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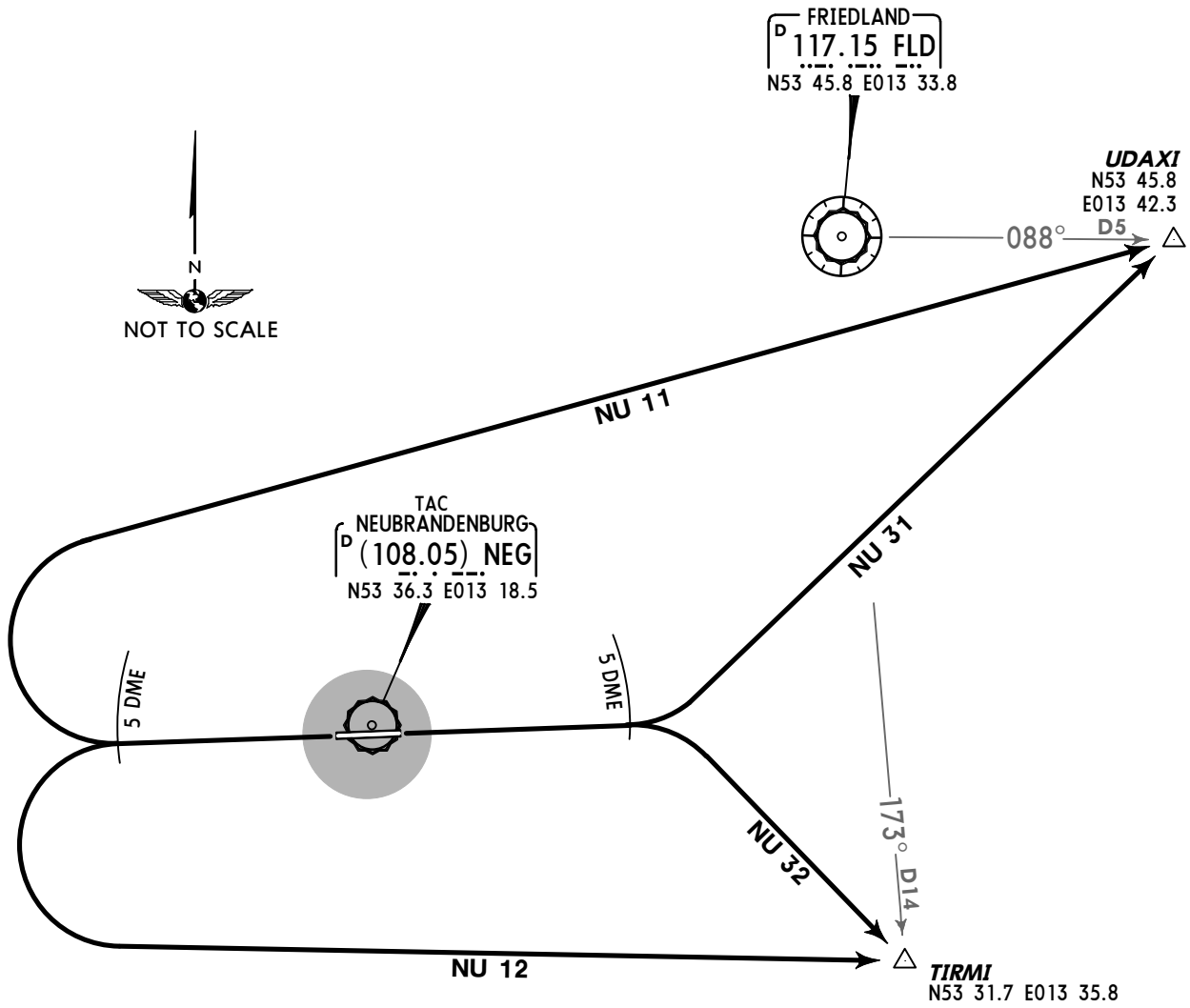
Apt Elev	
228′	Trans level: By ATC Trans alt: 5000′ Emergency Safe Altitude within 100 NM of Neubrandenburg 3100′.

For UHF see MIL-101 listing



NU 11, NU 12
NU 31, NU 32
RWYS 27, 09 DEPARTURES
TO NORTHEAST & SOUTHEAST
TACAN AZIMUTH REQUIRED

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



MINIMUM CLIMB RATE TABLE

	KT	75	100	150	200	250	300
NU 11, 31, 32: up to **1800′**	V/V (fpm)	313	417	625	833	1042	1250
NU 12: up to **4000′**	V/V (fpm)	400	533	800	1067	1333	1600

Initial climb clearance **4000′**

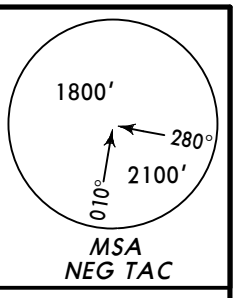
SID	RWY	ROUTING
NU 11	**27**	Climb on runway heading to NEG 5 DME, turn RIGHT to UDAXI.
NU 12		Climb on runway heading to NEG 5 DME, turn LEFT to TIRMI.
NU 31	**09**	Climb on runway heading to NEG 5 DME, turn LEFT to UDAXI.
NU 32		Climb on runway heading to NEG 5 DME, turn RIGHT to TIRMI.

CHANGES: Reissue.

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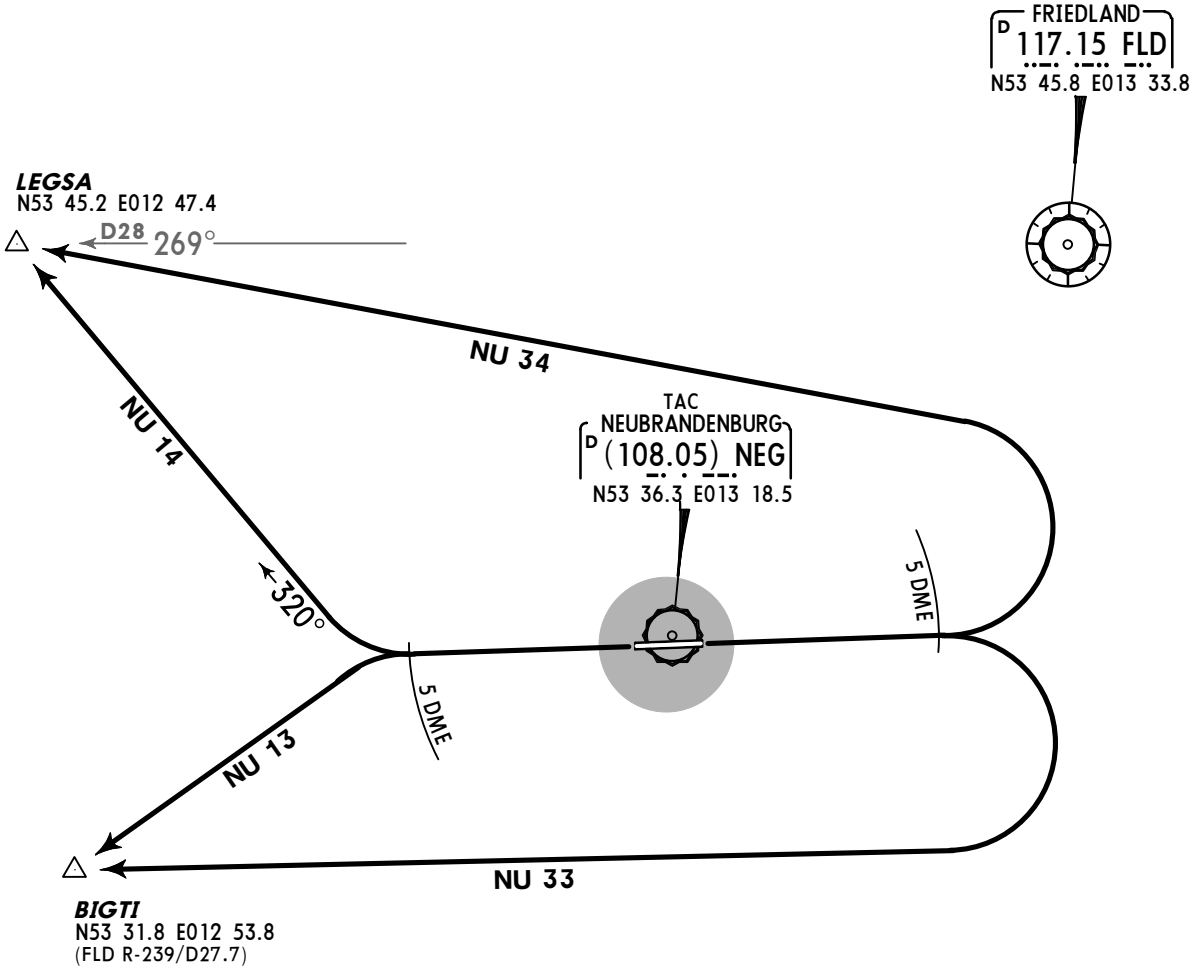
Apt Elev	
228′	Trans level: By ATC Trans alt: 5000′ Emergency Safe Altitude within 100 NM of Neubrandenburg 3100′.

For UHF see MIL-101 listing



NU 13, NU 14
NU 33, NU 34
RWYS 27, 09 DEPARTURES
TO SOUTHWEST & NORTHWEST
TACAN AZIMUTH REQUIRED

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



MINIMUM CLIMB RATE TABLE up to **1800′**

KT	75	100	150	200	250	300
V/V (fpm)	313	417	625	833	1042	1250



NOT TO SCALE

Initial climb clearance **4000′**

SID	RWY	ROUTING
NU 13	**27**	Climb on runway heading to NEG 5 DME, turn LEFT to BIGTI.
NU 14		Climb on runway heading to NEG 5 DME, turn RIGHT, 320° track to LEGSA.
NU 33	**09**	Climb on runway heading to NEG 5 DME, turn RIGHT to BIGTI.
NU 34		Climb on runway heading to NEG 5 DME, turn LEFT to LEGSA.

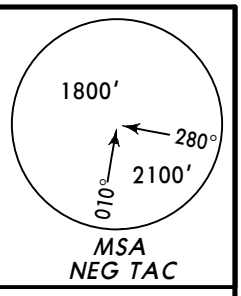
CHANGES: Reissue.

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Apt Elev 228′

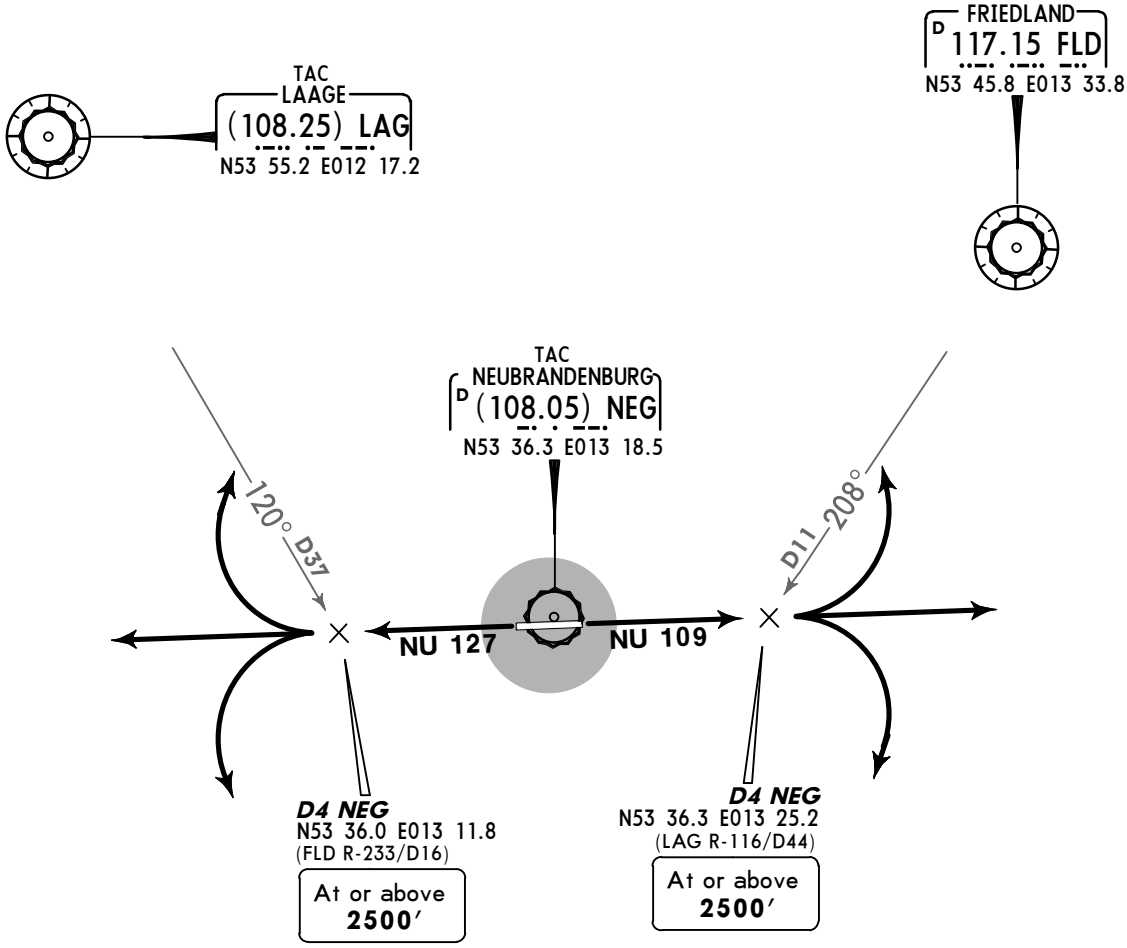
Trans level: By ATC Trans alt: 5000′
Emergency Safe Altitude within 100 NM of Neubrandenburg 3100′.

For UHF see MIL-101 listing



NU 109, NU 127
RWYS 27, 09 DEPARTURES
TO EAST & WEST
TACAN AZIMUTH REQUIRED

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.



MINIMUM CLIMB RATE TABLE up to **1800′**

KT	75	100	150	200	250	300
V/V (fpm)	313	417	625	833	1042	1250



NOT TO SCALE

Initial climb clearance **4000′**

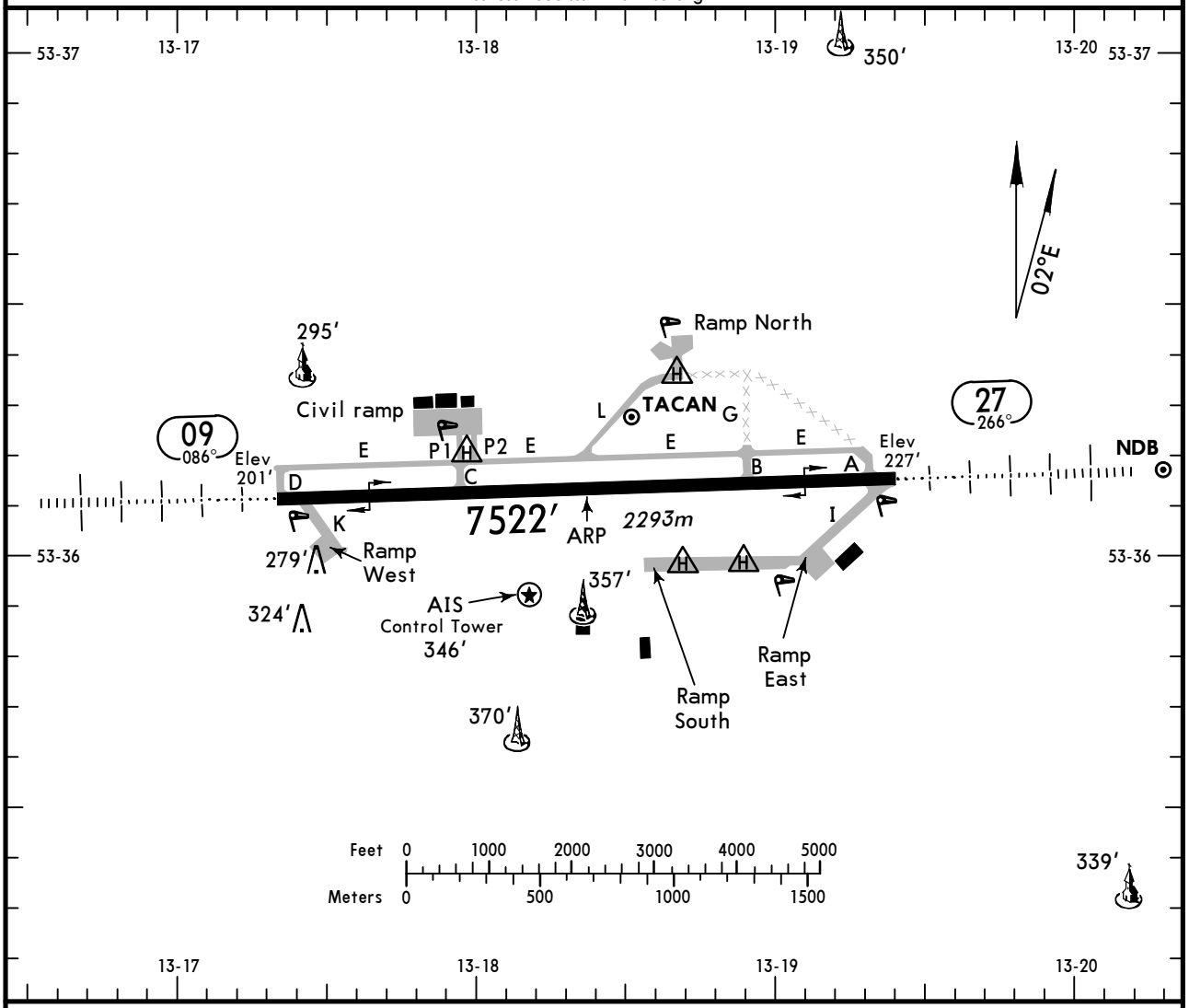
SID	RWY	ROUTING
NU 109	**09**	Climb straight ahead to **2500′** within D4 NEG, continue as cleared by ATC.
NU 127	**27**	Climb straight ahead to **2500′** within D4 NEG, continue as cleared by ATC.

CHANGES: New procedures at this airport.

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*NEUBRANDENBURG Apron	*Tower	
122.05	119.17	122.1

For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
09 ❶ 27	HIRL HIALS SFL PAPI(angle 3.0°)		6352′ *1936m*		148′ *45m*

❶ Concrete with anti-skid layer.

Standard TAKE-OFF ❶

	LVP must be in Force: RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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

CHANGES: None.

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ETNU/FNB
NEUBRANDENBURG

JEPPESEN 25 NOV 11 (11-1)

NEUBRANDENBURG, GERMANY
ILS Rwy 27

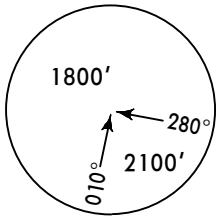
BREMEN Radar	*NEUBRANDENBURG Tower		*Apron
134.65	119.17	122.1	122.05

For UHF see MIL-101 listing

BRIEFING STRIP™

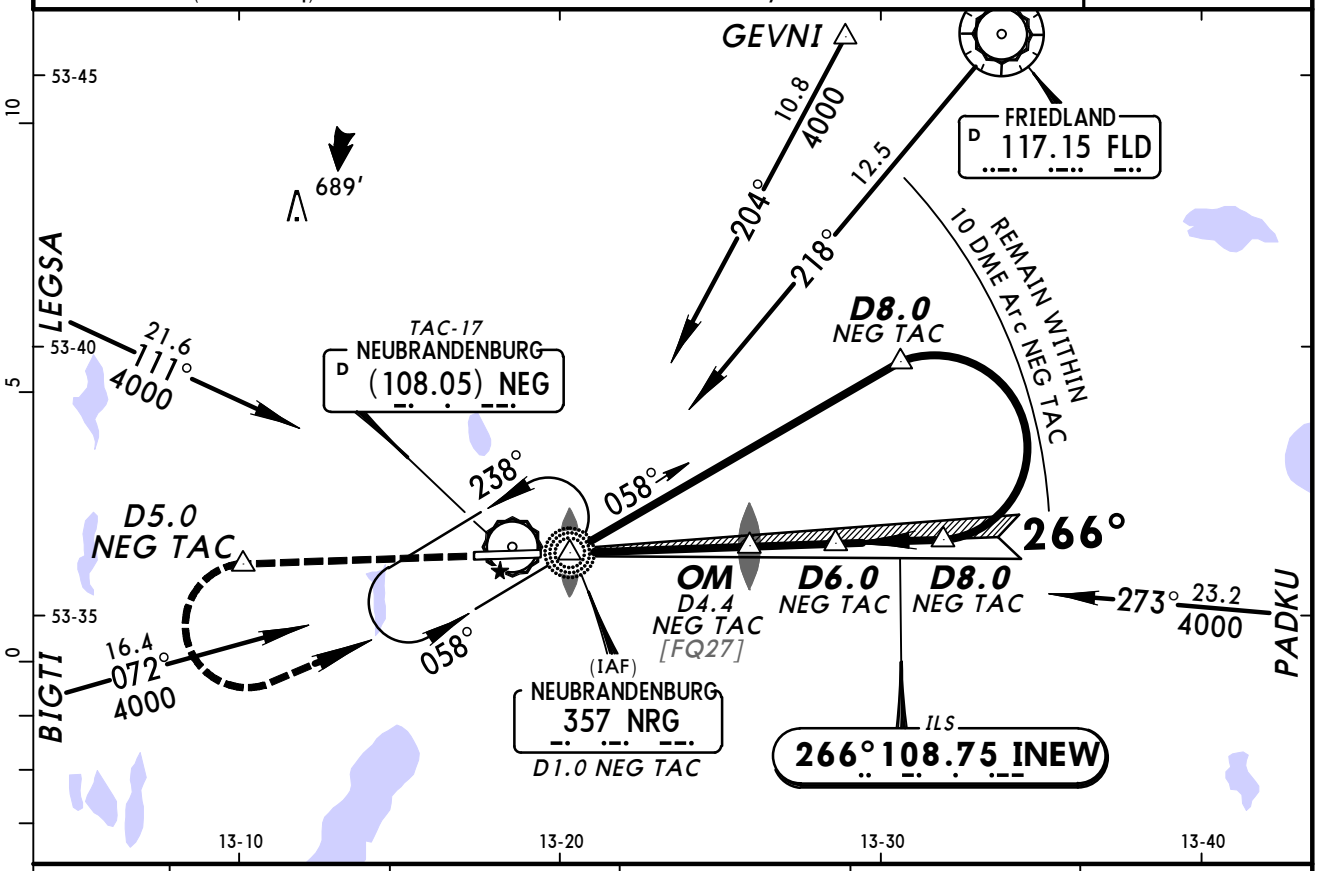
LOC	Final	GS	ILS	
INEW	Apch Crs	OM	DA(H)	Apt Elev 228′
108.75	266°	1526′ (1298′)	428′ (200′)	TDZE 228′

MISSED APCH: Climb on RWY heading to 3000′. When passing D5.0 NEG TAC turn LEFT, rehome NDB and enter holding.

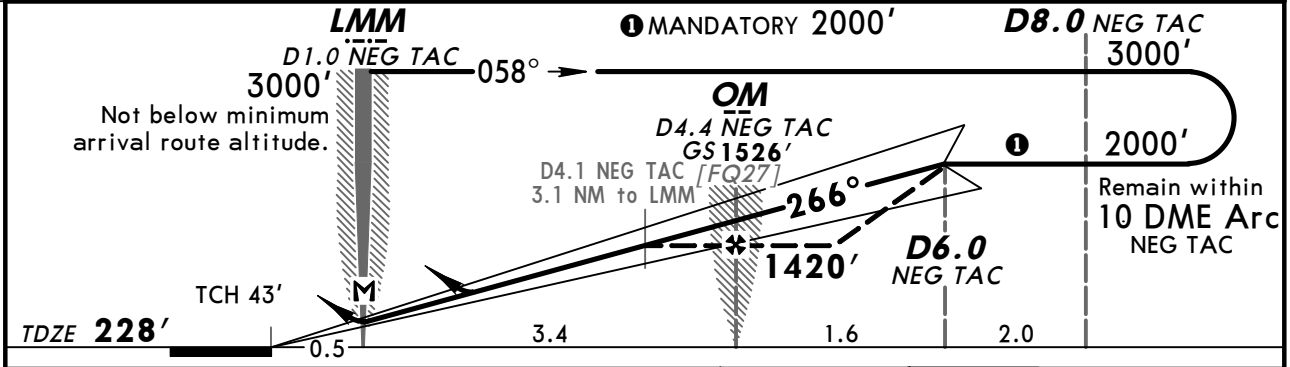


MSA NEG TAC

Alt Set: hPa (IN on req) TDZ Elev: 8 hPa Trans level: By ATC Trans alt: 5000′



LOC (GS out)	NEG TAC	2.0	3.0	4.0	4.1
	ALTITUDE	760′	1070′	1390′	1420′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent angle	3.00°	377	484	538	646	753	861
MAP at LMM/D1.0 NEG TAC							

HIALS
PAPI PAPI

D5.0 NEG TAC on RWY hdg

TERPS

Standard STRAIGHT-IN LANDING RWY 27 **CEILING REQUIRED**

	ILS DA(H) 428′ (200′) FULL/Limited	ILS DA(H) 428′ (200′) ALS out	LOC (GS out) DA(H) 580′ (352′)	LOC (GS out) DA(H) 580′ (352′) ALS out
A	200′- 800m	200′- 1200m	400′- 900m	400′- 1600m
B				
C				
D			400′- 1200m	

CIRCLE-TO-LAND
Not authorized South of airport

Max Kts	MDA(H)	CEIL-VIS
90	660′ (432′)	500′ - 1600m
120	760′ (532′)	600′ - 1600m
140	830′ (602′)	600′ - 2400m
165	930′ (702′)	600′ - 3600m

CHANGES: Radar frequency.

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NEUBRANDENBURG, GERMANY
TACAN Rwy 09

BREMEN Radar	*NEUBRANDENBURG Tower		*Apron
134.65	119.17	122.1	122.05

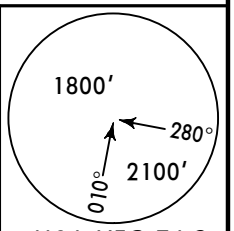
For UHF see MIL-101 listing

BRIEFING STRIP™

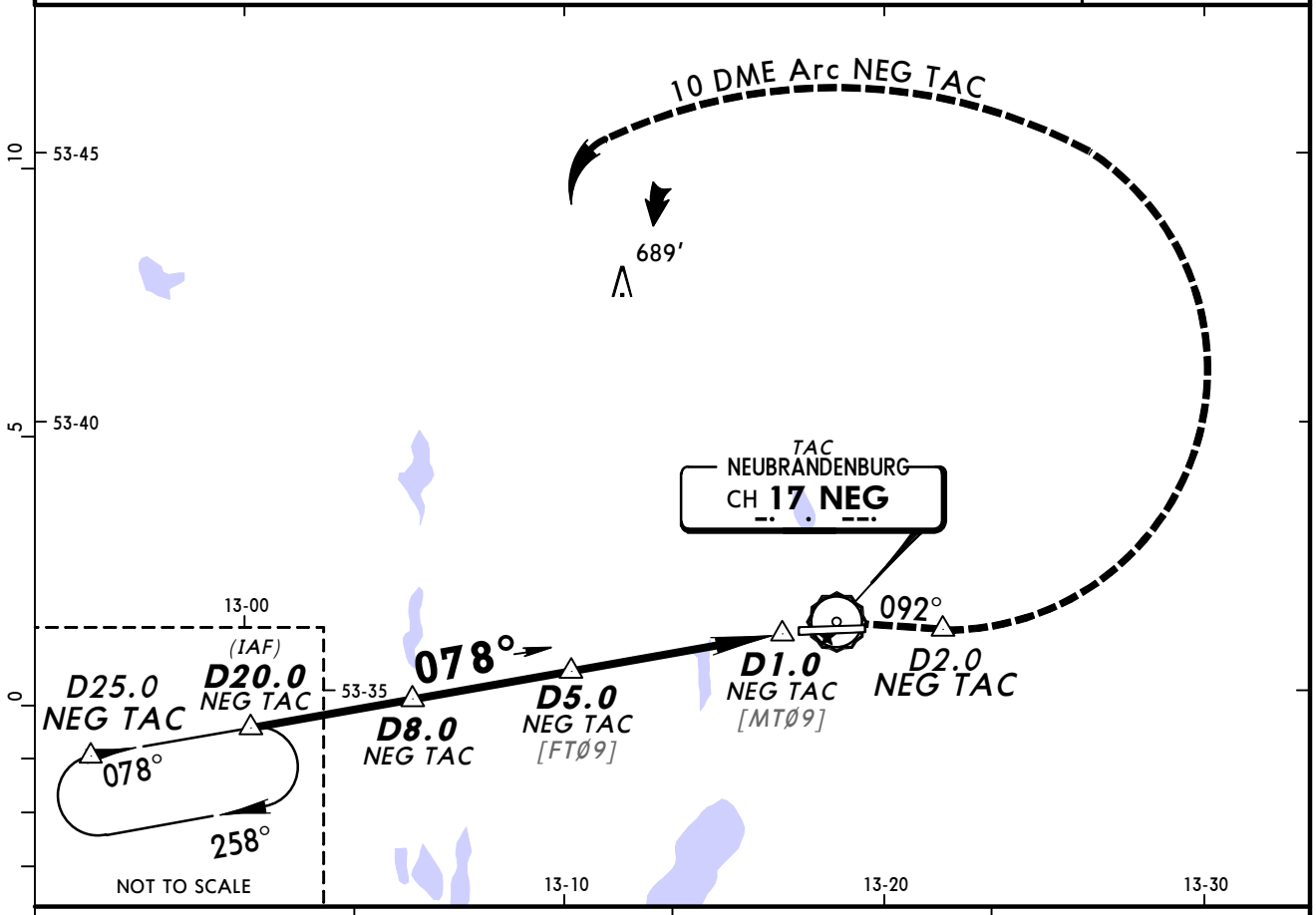
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 228′
NEG CH 17	078°	D5.0 NEG TAC 1800′ (1575′)	520′ (295′)	TDZE 225′

MISSED APCH: Climb on R-092 NEG TAC outbound to D2.0 NEG TAC, then turn LEFT to intercept 10 DME Arc NEG TAC. Climb to 3500′ and return to final.

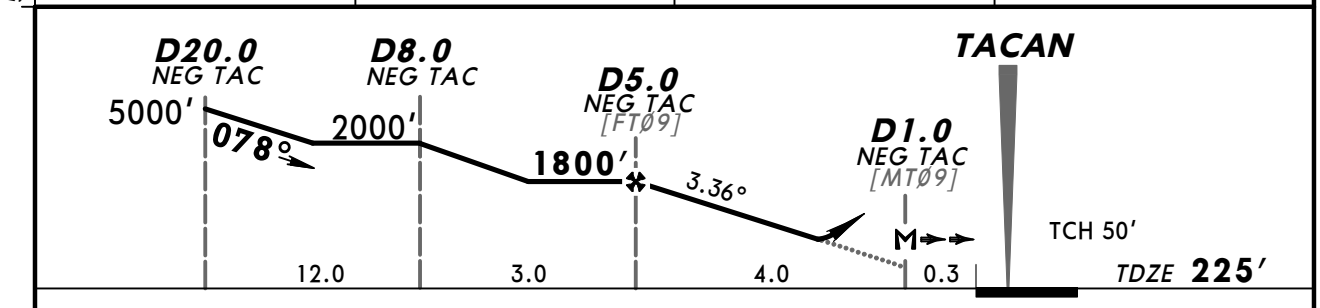
Alt Set: hPa (IN on req) TDZ Elev: 8 hPa Trans level: By ATC Trans alt: 5000′



MSA NEG TAC



NEG TAC	4.0	3.0	2.0
ALTITUDE	1450′	1090′	730′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.36°	416	535	595	713	832	951
MAP at D1.0 NEG TAC						

HIALS
PAPI PAPI
D2.0 NEG TAC RT
NEG on CH 17 R-092

TERPS

Standard STRAIGHT-IN LANDING RWY 09 **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 520′ (295′)

Not authorized South of airport

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	300′ - 800m	90	660′ (432′)	500′ - 1600m
B		120	760′ (532′)	600′ - 1600m
C	300′ - 1200m	140	830′ (602′)	600′ - 2400m
D		165	930′ (702′)	600′ - 3600m

CHANGES: Radar frequency.

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ETNU/FNB
NEUBRANDENBURG

25 NOV 11 (14-2)

JEPPESEN NEUBRANDENBURG, GERMANY
TACAN Rwy 27

BREMEN Radar	*NEUBRANDENBURG Tower	*Apron
134.65	119.17 122.1	122.05

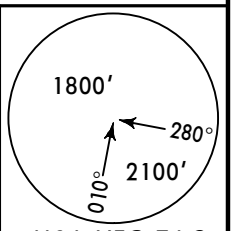
For UHF see MIL-101 listing

BRIEFING STRIP™

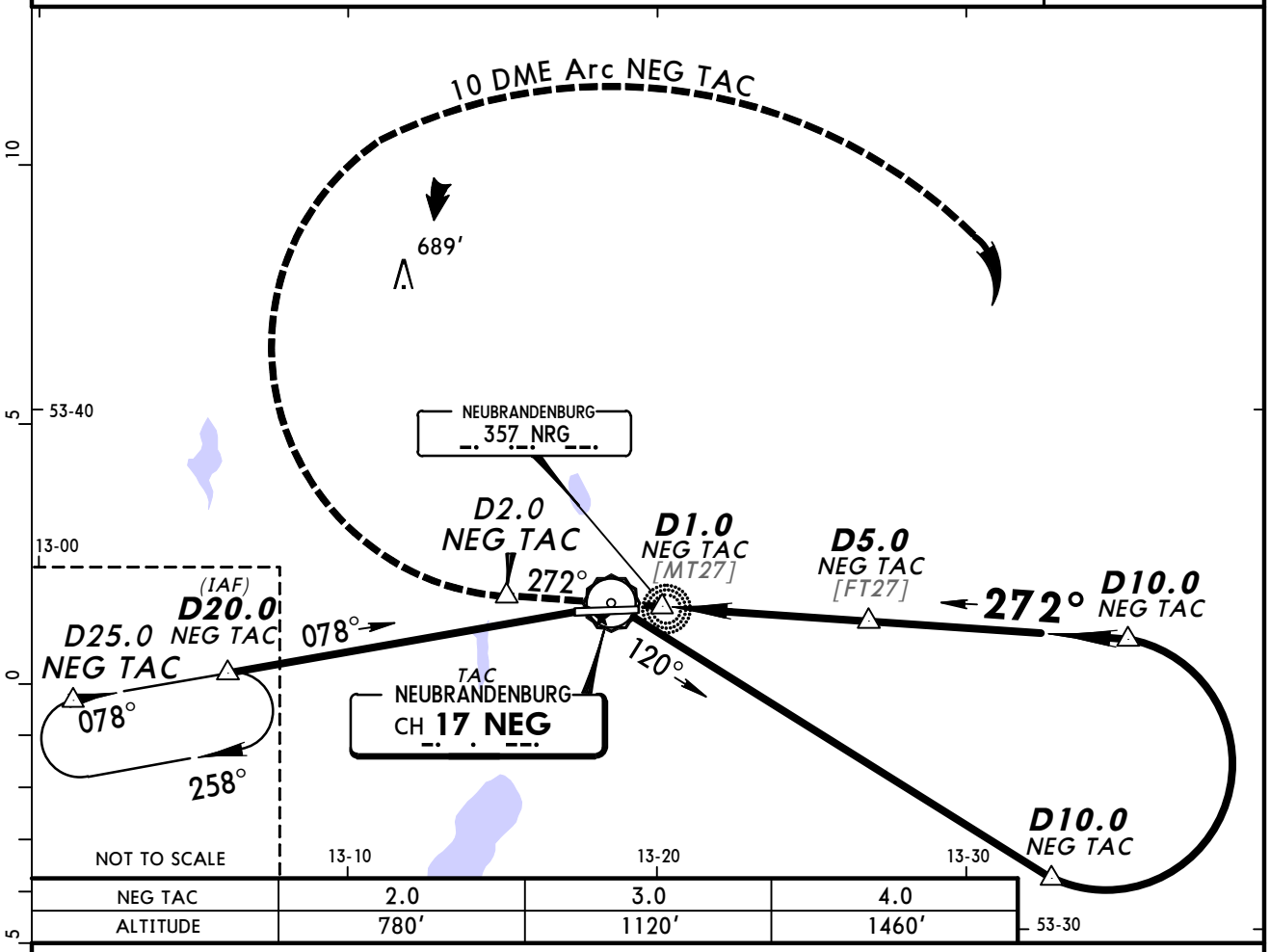
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 228′
NEG CH 17	272°	D5.0 NEG TAC 1800′ (1572′)	600′ (372′)	TDZE 228′

MISSED APCH: Climb on R-272 NEG TAC outbound to D2.0 NEG TAC, then turn RIGHT to intercept 10 DME Arc NEG TAC. Climb to 3500′ and return to final.

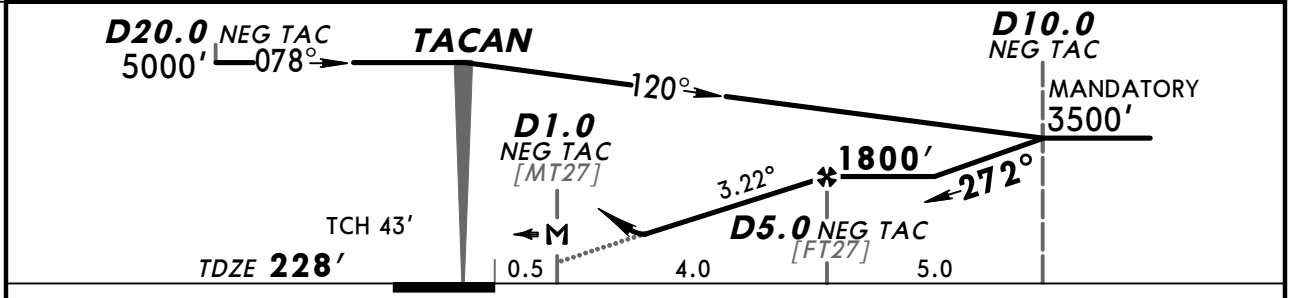
Alt Set: hPa (IN on req) TDZ Elev: 8 hPa Trans level: By ATC Trans alt: 5000′



MSA NEG TAC



NEG TAC	2.0	3.0	4.0
ALTITUDE	780′	1120′	1460′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.22°	399	513	570	684	798	912
MAP at D1.0 NEG TAC						

HIALS
PAPI PAPI

D2.0 NEG TAC on NEG CH 17 R-272

Standard STRAIGHT-IN LANDING RWY 27 **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 600′ (372′)

Not authorized South of airport

		ALS out	Max Kts	MDA(H)	CEIL-VIS
A	400′- 1000m	400′- 1600m	90	660′ (432′)	500′ - 1600m
B			120	760′ (532′)	600′ - 1600m
C	400′- 1200m	400′- 1700m	140	830′ (602′)	600′ - 2400m
D		400′- 2000m	165	930′ (702′)	600′ - 3600m

TERPS

CHANGES: Radar frequency.

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ETNU/FNB
NEUBRANDENBURG

JEPPESEN 25 NOV 11 (16-1)

NEUBRANDENBURG, GERMANY
NDB DME Rwy 09

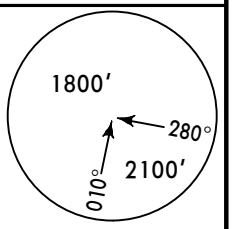
BREMEN Radar	*NEUBRANDENBURG Tower	*Apron
134.65	119.17 122.1	122.05

For UHF see MIL-101 listing

BRIEFING STRIP TM

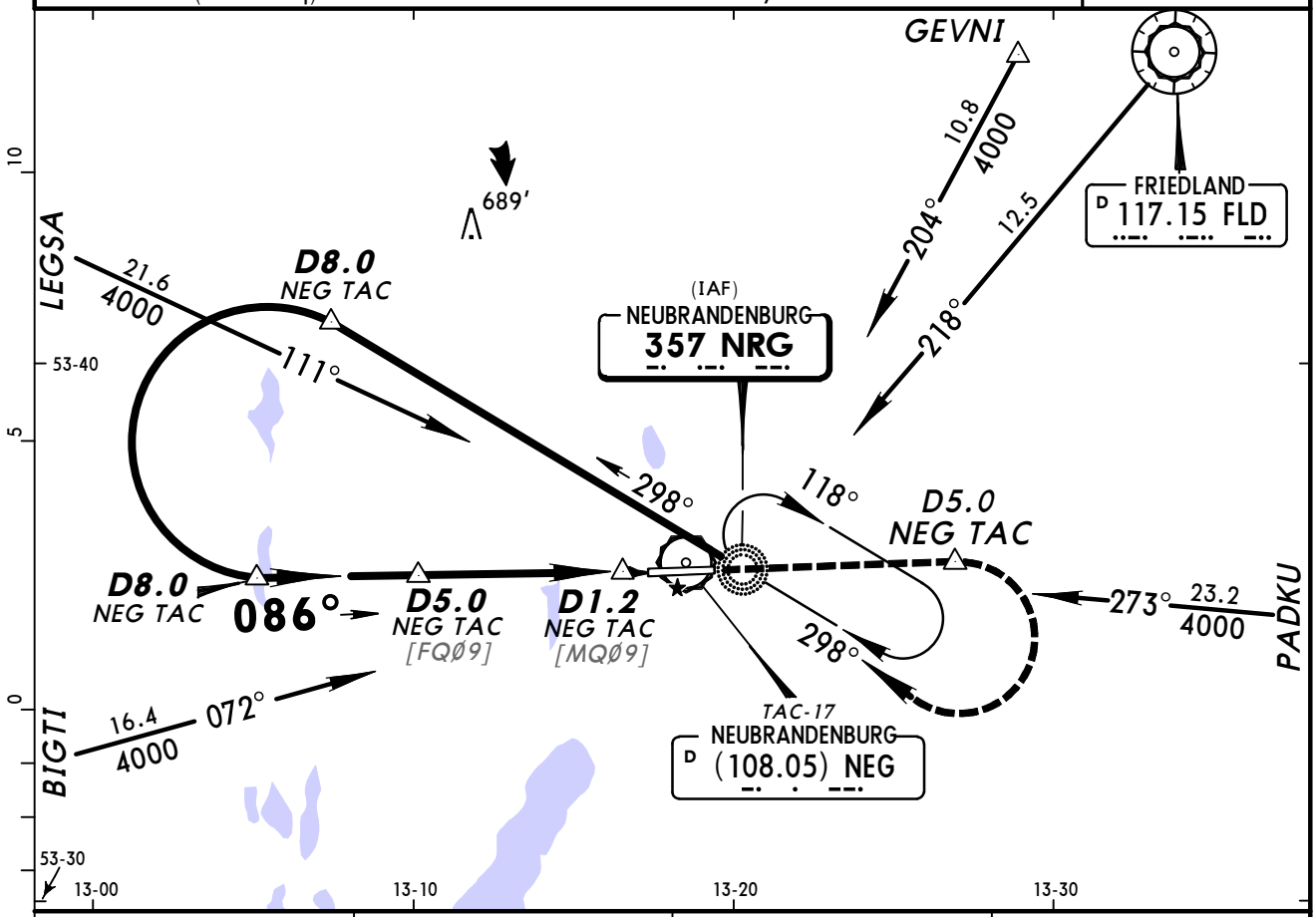
NDB NRG 357	Final Apch Crs 086°	Minimum Alt D5.0 NEG TAC 1800′ (1575′)	MDA(H) 600′ (375′)	Apt Elev 228′ TDZE 225′

MISSED APCH: Climb on RWY heading to 3000′. When passing D5.0 NEG TAC turn RIGHT, rehome NDB and enter holding.

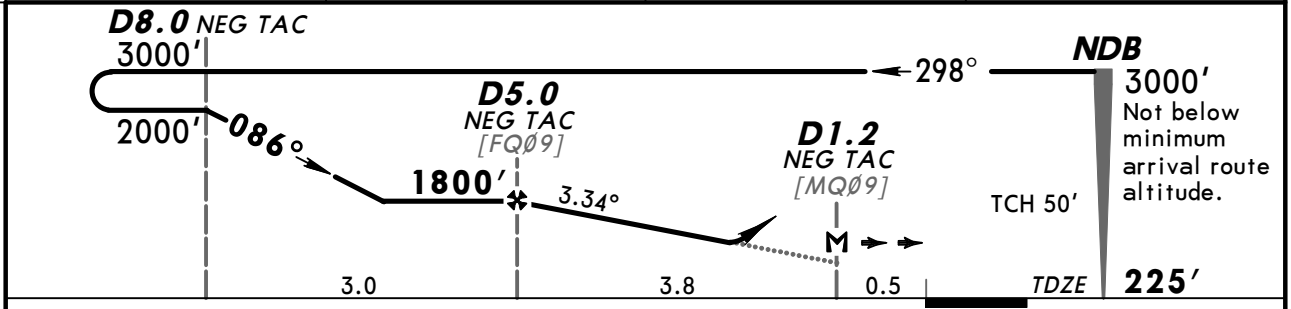


MSA NEG TAC

Alt Set: hPa (IN on req) | TDZ Elev: 8 hPa | Trans level: By ATC | Trans alt: 5000′



NEG TAC	4.0	3.0	2.0
ALTITUDE	1450′	1100′	740′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.34°	414	532	591	709	827	946
MAP at D1.2 NEG TAC						

HIALS
PAPI PAPI

D5.0 NEG TAC on RWY hdg

TERPS

Standard STRAIGHT-IN LANDING RWY 09 **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 600′ (375′)

	ALS out
A	400′- 1000m
B	400′- 1600m
C	400′- 1200m
C	400′- 1700m
D	400′- 2000m
D	400′- 2000m

Not authorized South of airport

Max Kts	MDA(H)	CEIL-VIS
90	660′ (432′)	500′ - 1600m
120	760′ (532′)	600′ - 1600m
140	830′ (602′)	600′ - 2400m
165	930′ (702′)	600′ - 3600m

CHANGES: Radar frequency.

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ETNU/FNB
NEUBRANDENBURG

JEPPESEN 25 NOV 11 (16-2)

NEUBRANDENBURG, GERMANY
NDB DME Rwy 27

BREMEN Radar	*NEUBRANDENBURG Tower	*Apron
134.65	119.17 122.1	122.05

For UHF see MIL-101 listing

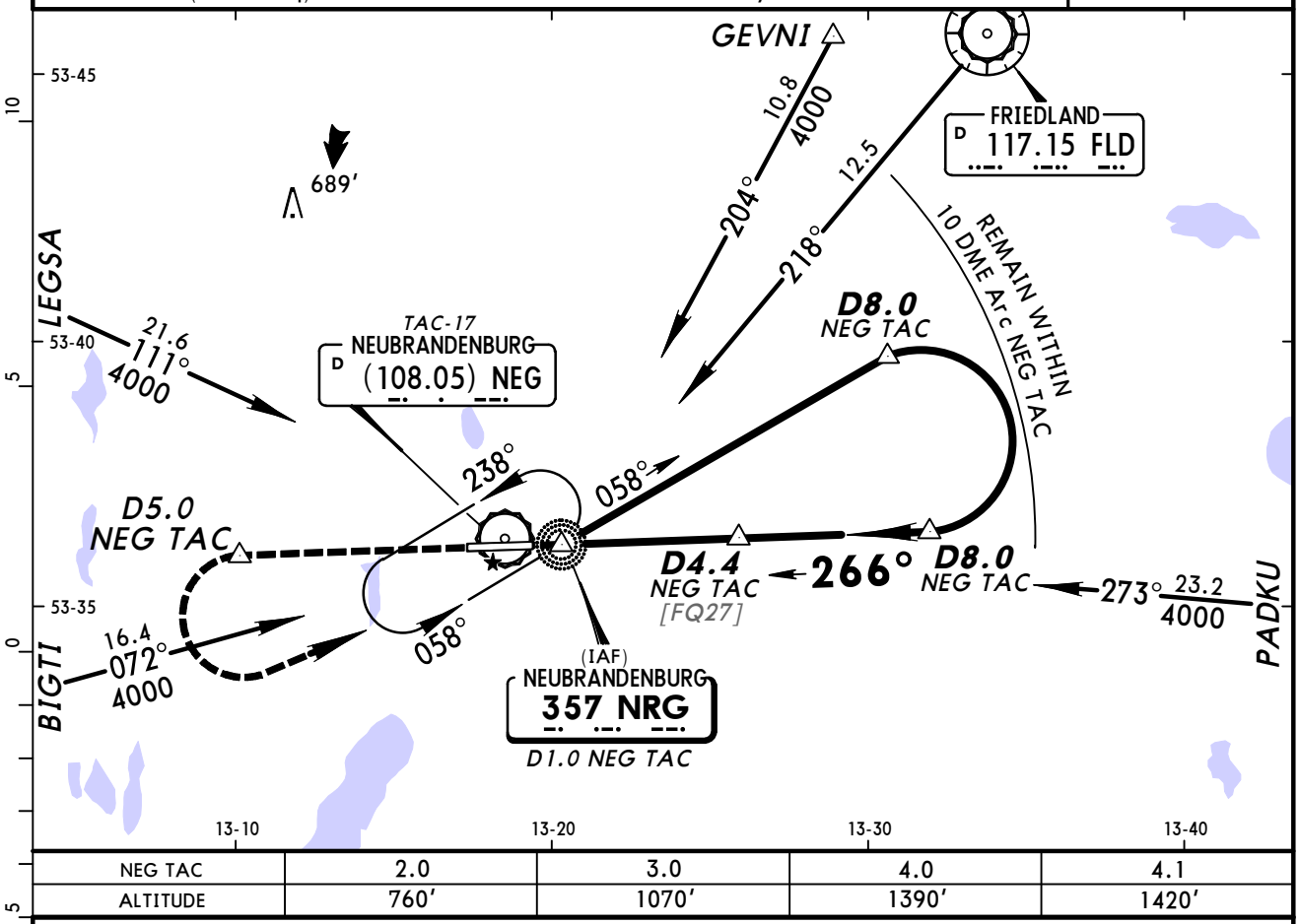
BRIEFING STRIP™

NDB NRG 357	Final Apch Crs 266°	Minimum Alt D4.4 NEG TAC 1420′ (1192′)	MDA(H) 600′ (372′)	Apt Elev 228′ TDZE 228′

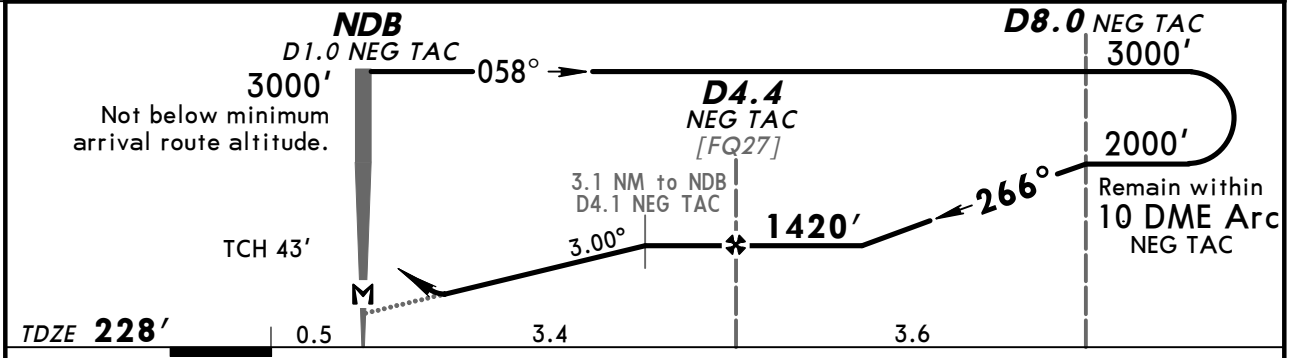
MISSED APCH: Climb on RWY heading to 3000′. When passing D5.0 NEG TAC turn LEFT, rehome NDB and enter holding.

MSA NEG TAC: 1800′ (280°–010°) 2100′

Alt Set: hPa (IN on req) TDZ Elev: 8 hPa Trans level: By ATC Trans alt: 5000′



NEG TAC	2.0	3.0	4.0	4.1
ALTITUDE	760′	1070′	1390′	1420′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
MAP at NDB/D1.0 NEG TAC							

HIALS
PAPI PAPI

3000′ on RWY hdg

TERPS

Standard STRAIGHT-IN LANDING RWY 27 **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 600′ (372′)

	ALS out	
A	400′- 1000m	400′- 1600m
B		
C	400′- 1200m	400′- 1700m
D		400′- 2000m

Not authorized South of airport

Max Kts	MDA(H)	CEIL-VIS
90	660′ (432′)	500′ - 1600m
120	760′ (532′)	600′ - 1600m
140	830′ (602′)	600′ - 2400m
165	930′ (702′)	600′ - 3600m

CHANGES: Radar frequency.

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ETNU/FNB
NEUBRANDENBURG

JEPPESEN 25 NOV 11 (18-1)

NEUBRANDENBURG, GERMANY
*PAR or *SRA Rwys 09, 27

BREMEN Radar	*NEUBRANDENBURG Radar	*NEUBRANDENBURG Tower	*Apron
134.65	134.42 123.3	119.17 122.1	122.05

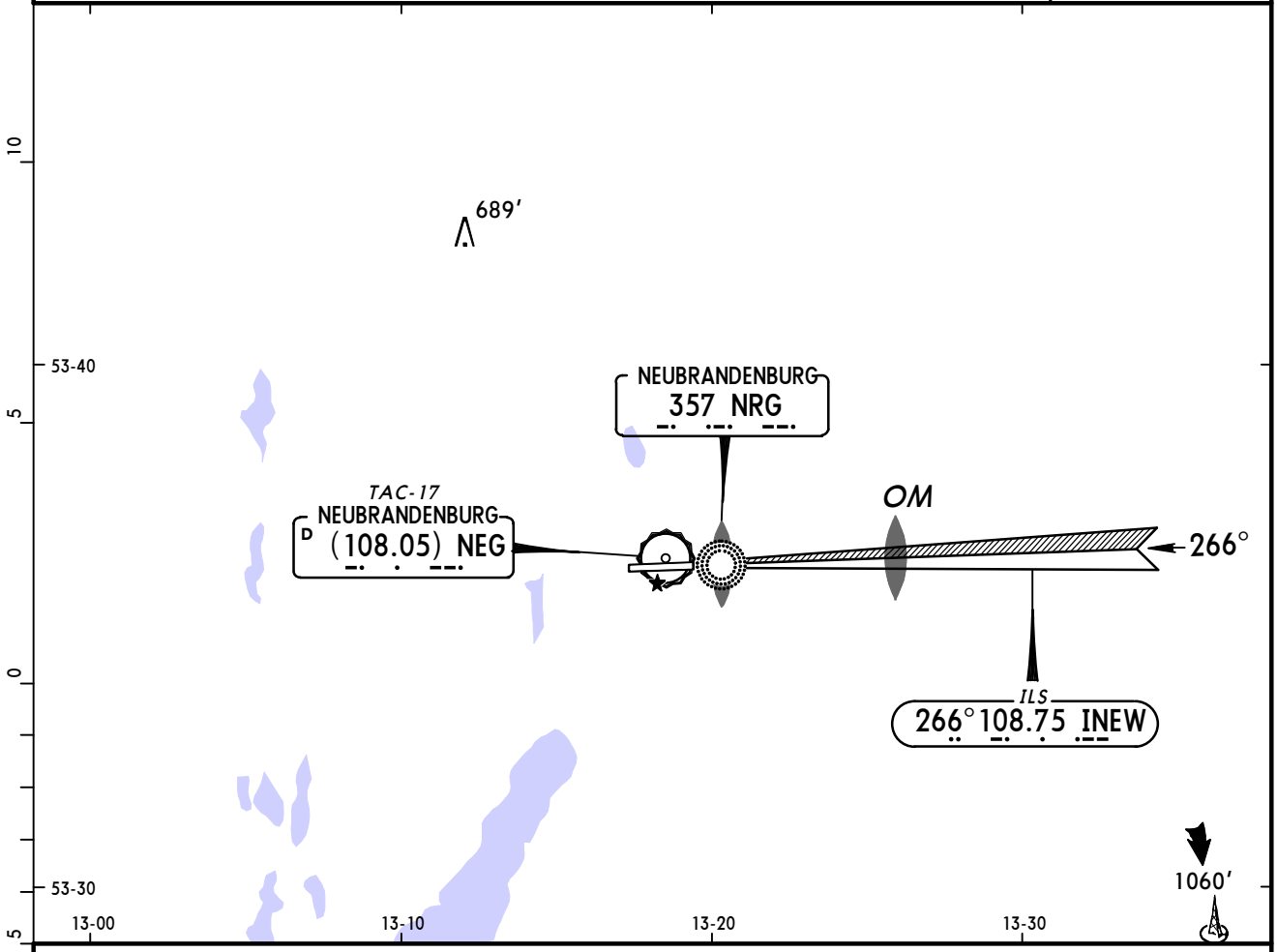
For UHF see MIL-101 listing

BRIEFING STRIP TM

RADAR	Final Apch Crs	PAR GS	Minimum Alt	DA(H)/MDA(H)		
	BY ATC	No Alt published	No FAF	Refer to Minimums	Apt Elev 228′ TDZE 09 225′ TDZE 27 228′	No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 8 hPa Trans level: By ATC Trans alt: 5000′



RWY 09
PAR TCH 43′

RWY 27
PAR TCH 34′

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

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

	PAR 09		PAR 27		SRA 09		SRA 27	
	DA(H) 425′(200′)		DA(H) 428′(200′)		MDA(H) 620′(395′)		MDA(H) ABC: 610′(382′) D: 620′(392′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	400′- 1600m	400′- 2000m	400′- 1300m	400′- 2000m
B								
C						400′- 2200m	400′- 1500m	400′- 2200m
D					400′- 2000m			

TERPS

CHANGES: Bremen Radar frequency.

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General Information

Location: Landsberg Deu
IATA Code:
Lat/Long: N48° 04.2' E010° 54.4'
Elevation: 2044 ft

Airport Use: Military
Magnetic Variation: 2.1°E

Fuel Types: Jet A-1
Oxygen Types: High Pressure, Low Pressure
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0602 Z
Sunset: 1656 Z,

Runway Information

Runway: 07
Length x Width: 6778 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 2035 ft
Lighting: Edge, ALS

Runway: 25
Length x Width: 6778 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 2043 ft
Lighting: Edge, ALS

Communication Information

Landsberg Tower 140.075 Military
Landsberg Tower 122.1 Military
Landsberg Tower 31.57 Military
Landsberg Tower 25.78 Military
Landsberg Radar 138.2 Military
Landsberg Radar 130.5 Military
Landsberg Radar 123.3 Military
Landsberg Radar 38.54 Military
Landsberg Radar 34.4 Military
Landsberg Radar 30.92 Military
Landsberg Radar 29.675 Military
Landsberg Radar 29.47 Military

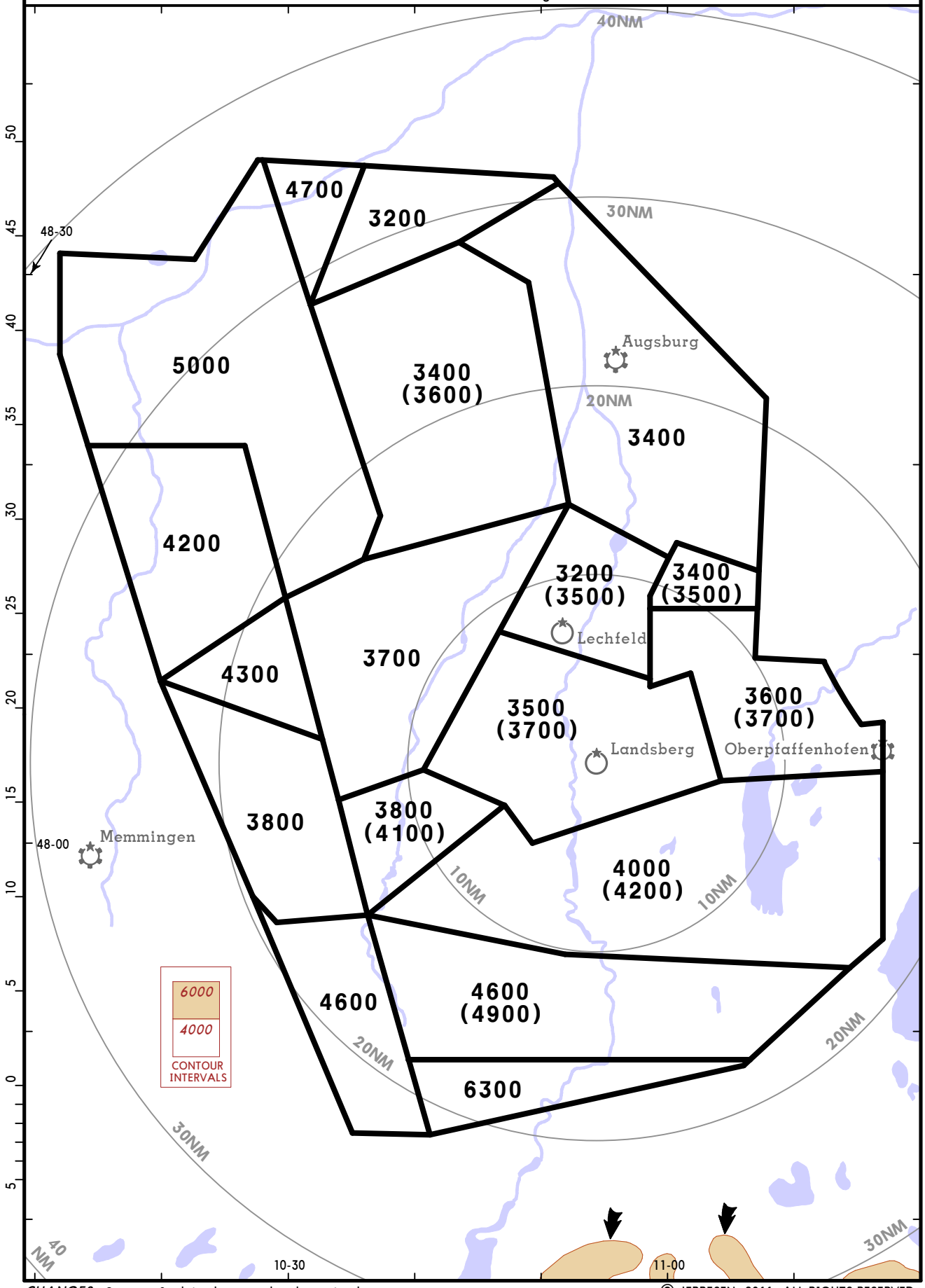
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Landsberg Radar 27.89 Military

Apt Elev
2044′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000′ above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500′). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only.
Altitudes in brackets apply for the period from AIRAC date in November until AIRAC date in March in order to meet required obstacle clearance at cold temperatures.

For UHF see MIL-101 listing

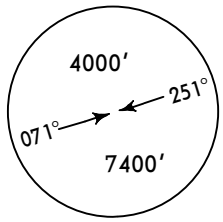


CHANGES: Sectors & altitudes completely revised.

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Apt Elev	
2044′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Landsberg 15300′.

For UHF see MIL-101 listing

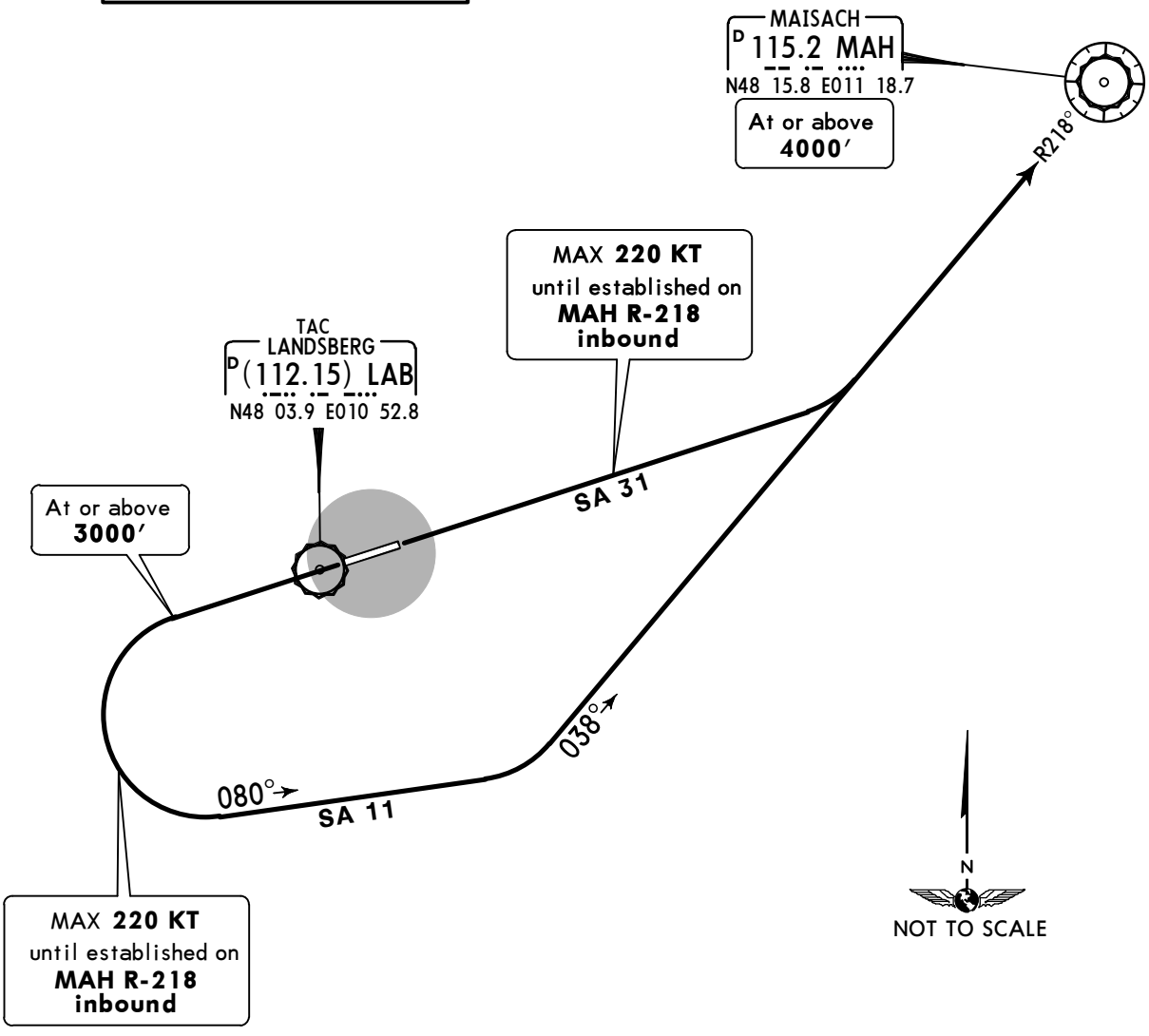


MSA
LAB TAC

SA 11 ❶
SA 31
RWYS 25, 07 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ HIRTA-sensitive aircraft check your limitations.



MINIMUM CLIMB RATE TABLE
SA 11: up to 4000′ for ATC purposes.
SA 31: up to 3500′ for ATC purposes.

KT	75	100	150	200	250	300
V/V (fpm)	327	437	655	873	1092	1310

Rwy 25: No turn before DER.

Initial climb clearance **4000′**

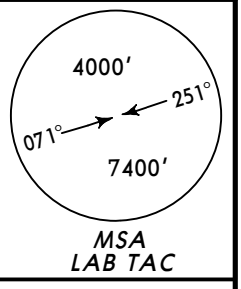
SID	RWY	ROUTING
SA 11	**25**	Climb straight ahead to 3000′, turn LEFT, 080° track, intercept MAH R-218 inbound to MAH.
SA 31	**07**	Climb straight ahead, intercept MAH R-218 inbound to MAH.

CHANGES: New procedures at this airport.

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Apt Elev	Trans level: By ATC Trans alt: 5000′
2044′	Emergency safe altitude within 100 NM of Landsberg 15300′.

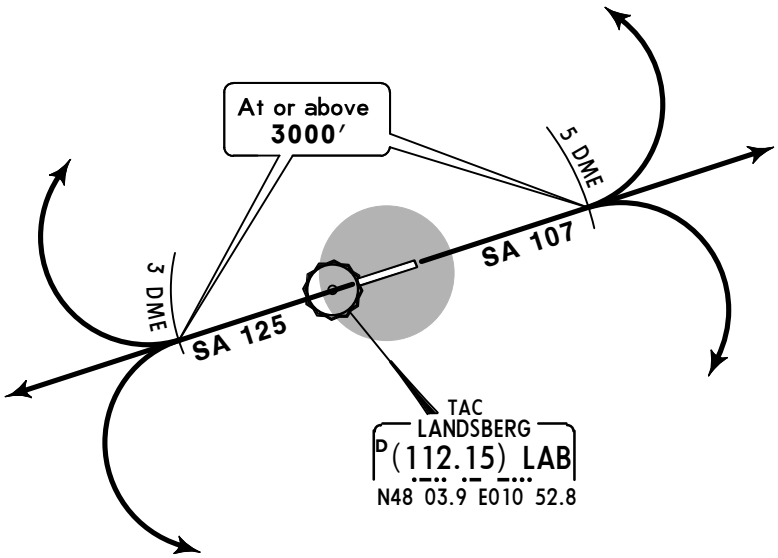
For UHF see MIL-101 listing

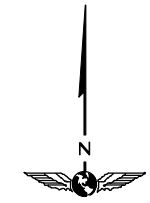


SA 107
SA 125 ❶
RWYS 07, 25 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ HIRTA-sensitive aircraft check your limitations.





MINIMUM CLIMB RATE TABLE
SA 107: up to 3500′ for ATC purposes.
SA 125: up to 4000′ for ATC purposes.

KT	75	100	150	200	250	300
V/V (fpm)	327	437	655	873	1092	1310

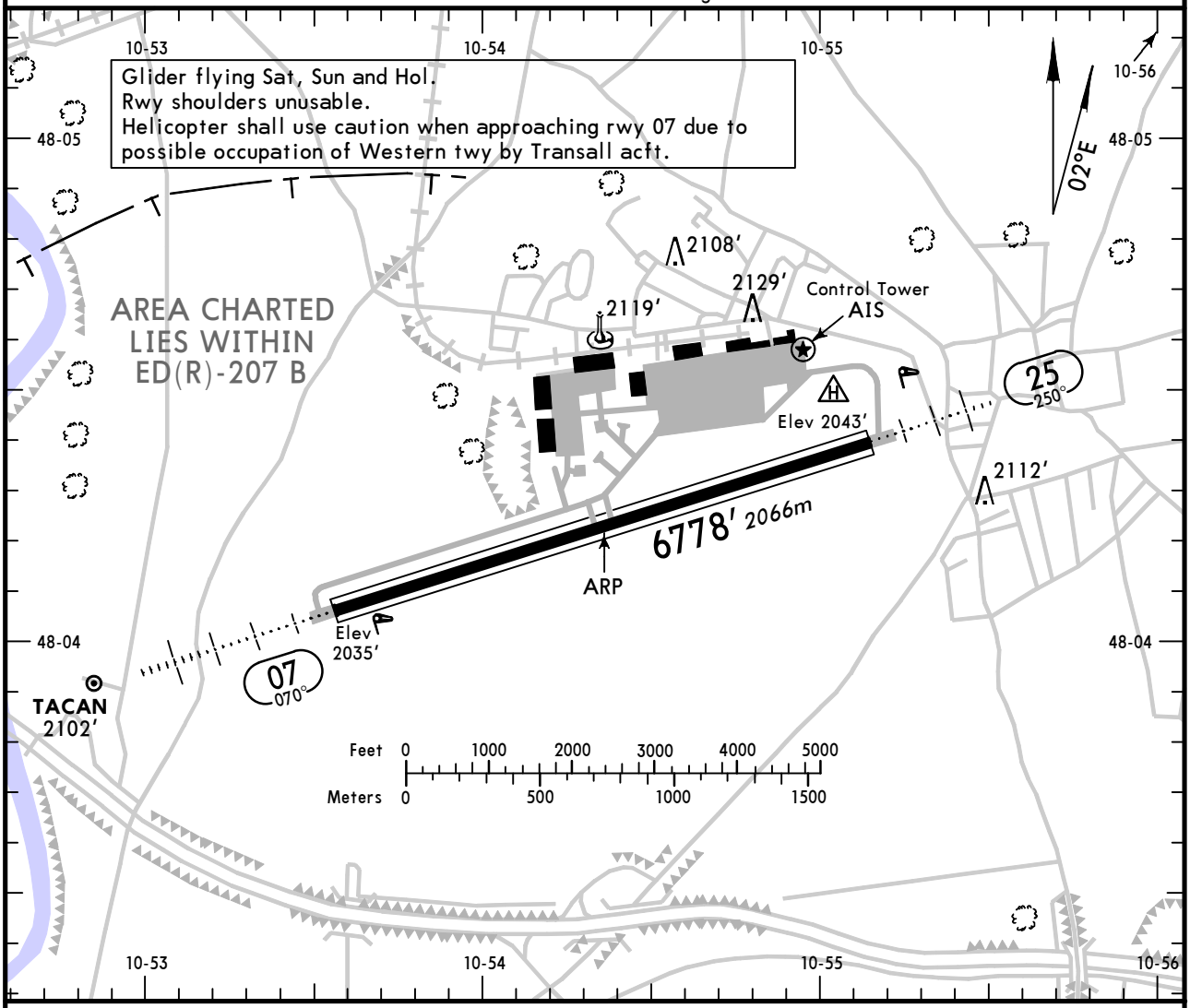
SID	RWY	ROUTING
SA 107	07	Climb straight ahead to LAB 5 DME, continue as cleared by ATC.
SA 125	25	Climb straight ahead to LAB 3 DME, continue as cleared by ATC.

NON-TACAN equipped aircraft: Climb straight ahead to 3000′, then proceed according to ACC.

CHANGES: New procedures at this airport.

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*LANDSBERG Tower
122.1
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
07 25	HIRL HIALS SFL PAPI (3.0°)		5838′ *1779m*		98′ *30m*

Standard

TAKE-OFF [1]

	LVP must be in force [2] RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

[1] Operators applying U.S. Ops Specs: CL required below 300m.
[2] C-160 acft only.

JAR-OPS

TAKE-OFF

	LVP must be in force [3] [4] RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
COPTER	*200m*	*200m*	*200m*	*250m* [5]	*800m*

[3] UH-1D acft only.
[4] Without LVP 400m are stipulated.
[5] Or rejected take-off distance whichever is the greater.

CHANGES: Swy rwy 07 withdrawn. Landing beyond GS.

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ETSA
LANDSBERG

JEPPESEN
14 JAN 11 | 11-1

LANDSBERG, GERMANY
ILS or NDB Rwy 25

MUNICH Radar	*LANDSBERG Tower
129.45	122.1

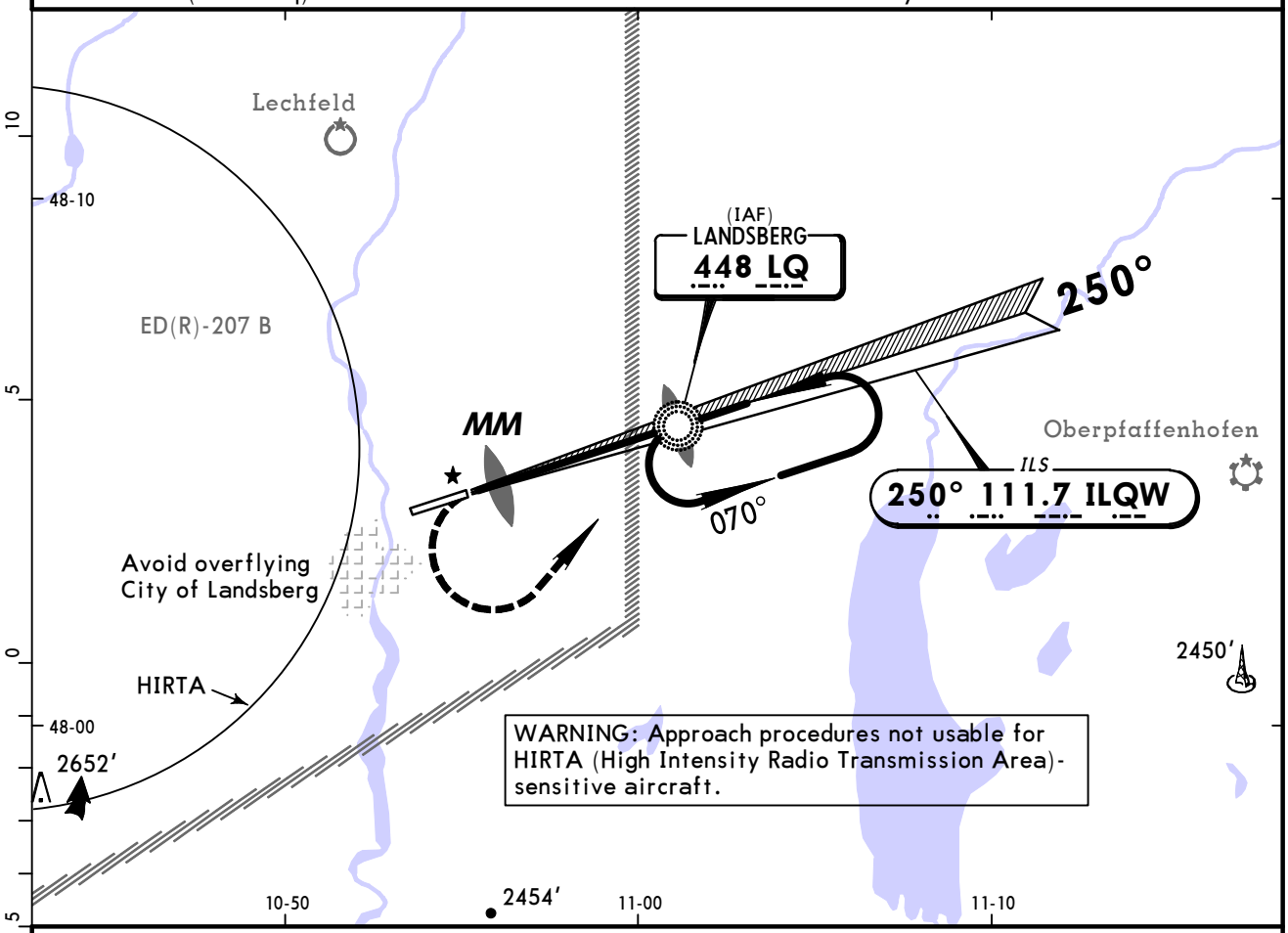
For UHF see MIL-101 listing

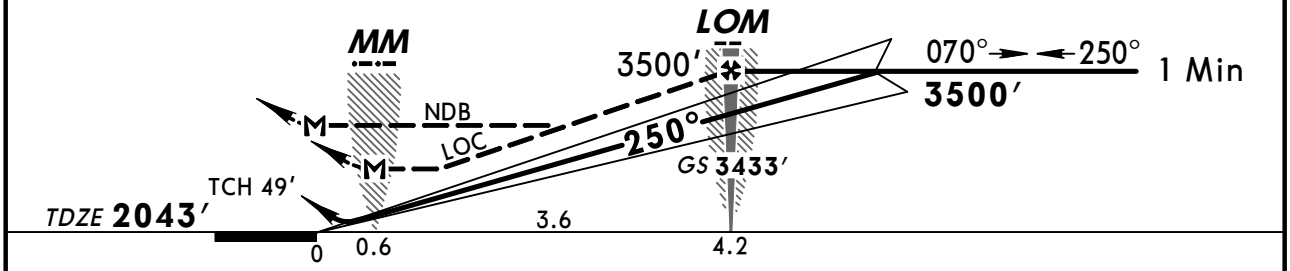
BRIEFING STRIP TM

LOC ILQW 111.7	Final Apch Crs 250°	GS LOM 3433′ (1390′)	ILS DA(H) 2243′ (200′)	Apt Elev 2044′	4000′ 250° 070° 7400′
NDB LQ 448		Minimum Alt LOM 3500′ (1457′)	NDB MDA(H) 2480′ (437′)	TDZE 2043′	MSA LQ NDB

MISSED APCH: Turn LEFT climbing to 3500′ and return to NDB.

Alt Set: hPa (IN on req) | TDZ Elev: 73 hPa | Trans level: By ATC | Trans alt: 5000′





Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	377	484	538	646	753	861
LOC: MAP at MM or LOM to MAP	3.6	3:05	2:24	2:10	1:48	1:33	1:21
NDB: LOM to MAP	4.2	3:36	2:48	2:31	2:06	1:48	1:35

HIALS
PAPI PAPI
3500′
LT
LQ
448

Standard STRAIGHT-IN LANDING RWY 25 **CEILING REQUIRED** CIRCLE-TO-LAND

	ILS DA(H) 2243′ (200′)		LOC (GS out) MDA(H) 2450′ (407′)		NDB MDA(H) 2480′ (437′)	
	FULL/Limited	ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	500′- 1700m	500′- 2100m	500′- 1800m	500′- 2200m
B						
C			500′- 1900m	500′- 2300m	500′- 2000m	500′- 2400m
D						

Max Kts	MDA(H)	CEIL-VIS
90	2520′ (476′)	500′- 2200m
120	2550′ (506′)	500′- 2200m
140	2650′ (606′)	500′- 2400m
165	2750′ (706′)	600′- 3600m

APATC-1(A)

CHANGES: None.

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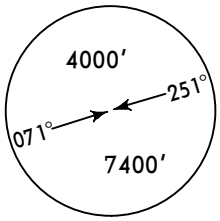
MUNICH Radar	*LANDSBERG Tower
129.45	122.1

For UHF see MIL-101 listing

BRIEFING STRIP™

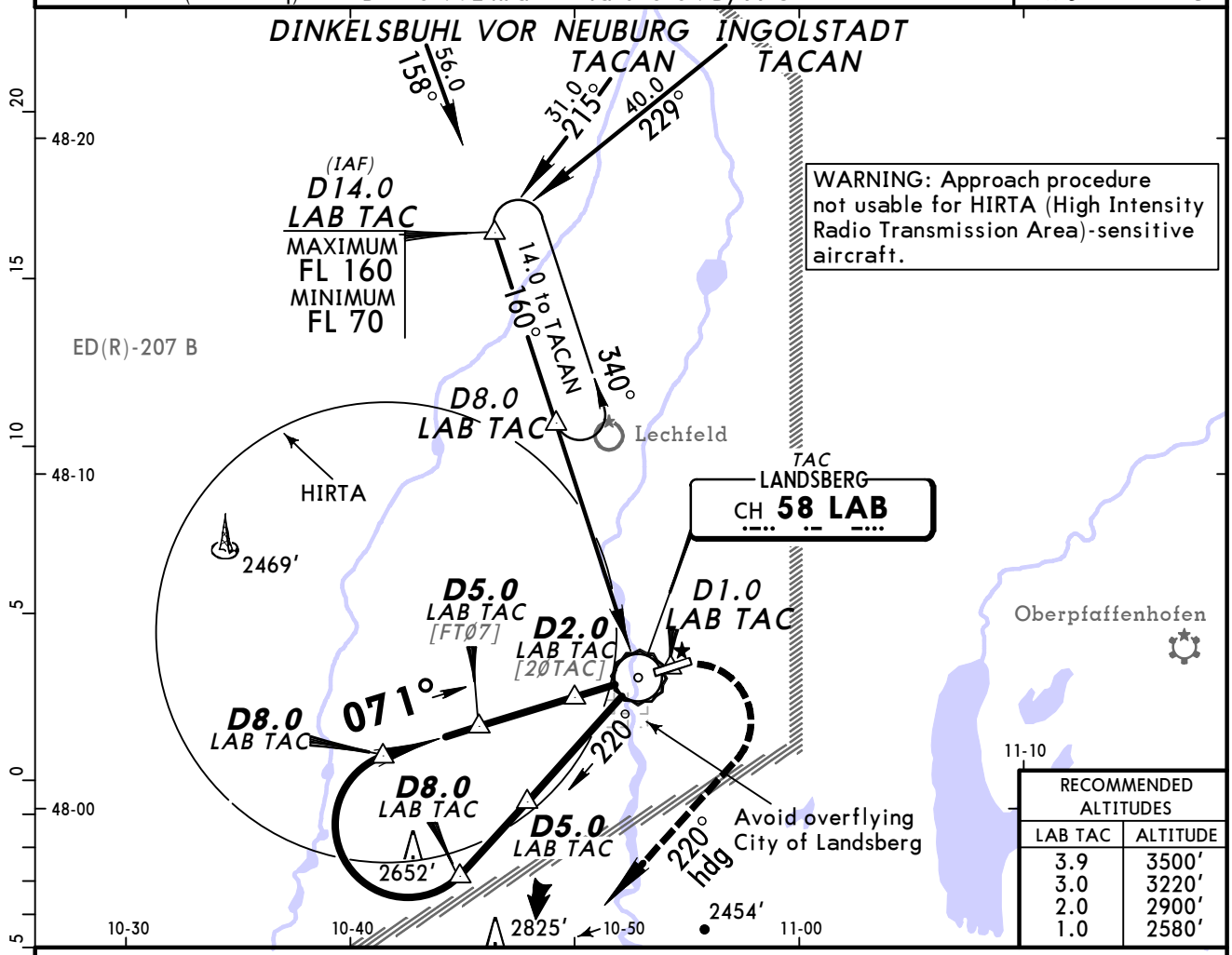
TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 2044′
LAB CH 58	Apch Crs 071°	D5.0 LAB TAC 3500′ (1465′)	2480′ (445′)	TDZE 2035′

MISSED APCH: Climb STRAIGHT AHEAD on R-071 LAB TAC to D1.0 LAB TAC, then climbing turn RIGHT onto heading 220° to 4000′ to intercept 8 DME Arc LAB TAC.

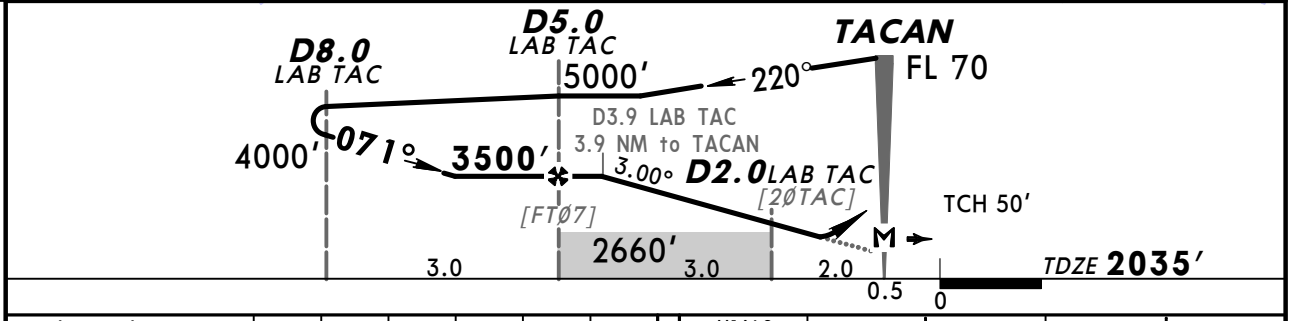


MSA LAB TAC

Alt Set: hPa (IN on req) TDZ Elev: 72 hPa Trans level: By ATC Trans alt: 5000′



RECOMMENDED ALTITUDES	
LAB TAC	ALTITUDE
3.9	3500′
3.0	3220′
2.0	2900′
1.0	2580′



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

HIALS
PAPI PAPI

D1.0 LAB TAC

LAB CH 58 R-071

4000′ RT onto 220° hdg

Standard STRAIGHT-IN LANDING RWY **07** **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) **2480′** (445′)

		ALS out
A	500′- 1400m	500′- 1600m
B		
C		500′- 2100m
D	500′- 1600m	500′- 2400m

Max Kts	MDA(H)	CEIL-VIS
90	2520′ (476′)	500′- 1600m
120	2550′ (506′)	500′- 1600m
140	2650′ (606′)	500′- 2400m
165	2750′ (706′)	600′- 3600m

APATC-1(A)

CHANGES: New procedure.

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MUNICH Radar	*LANDSBERG Tower
129.45	122.1

For UHF see MIL-101 listing

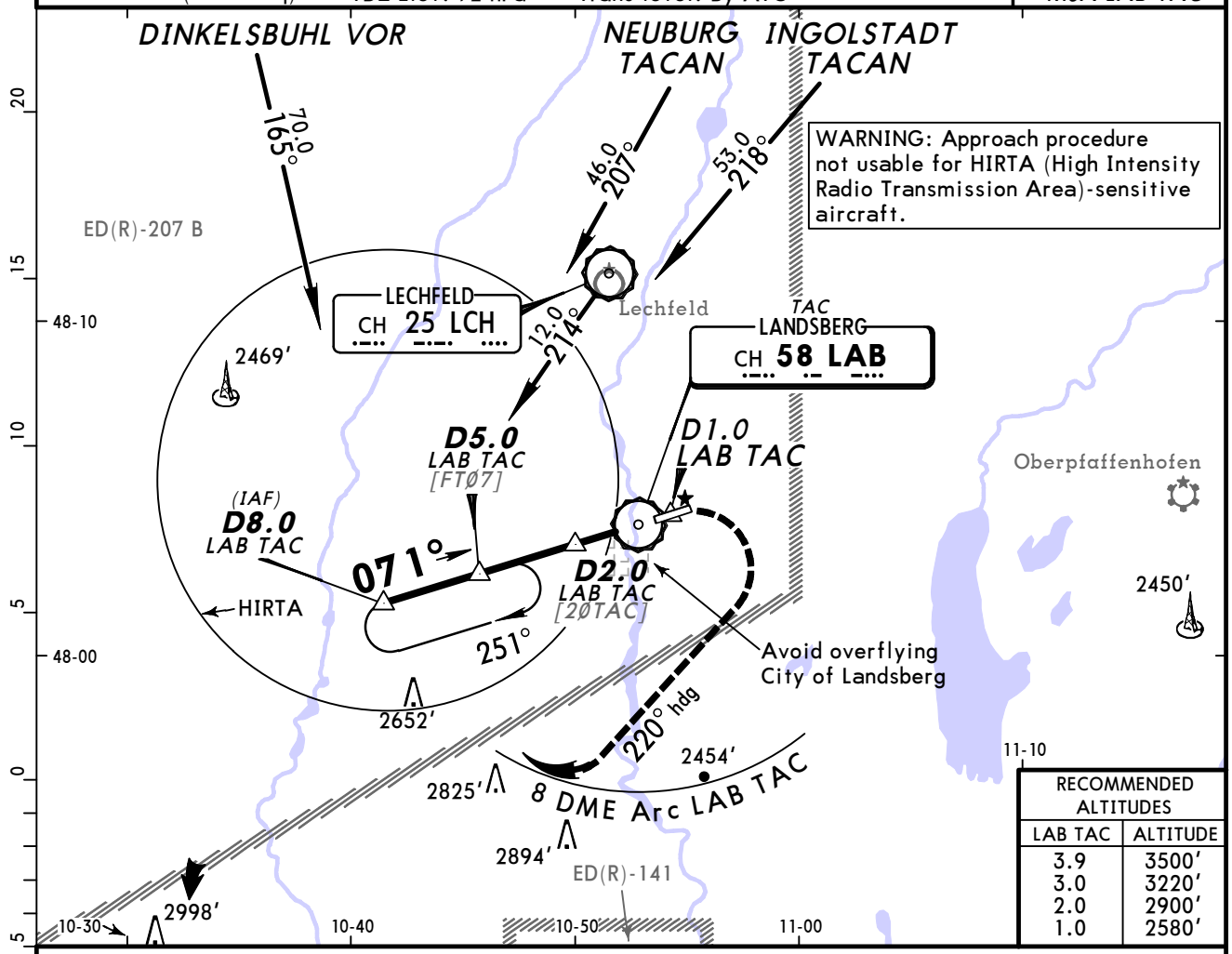
BRIEFING STRIP™

TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 2044′
LAB CH 58	Apch Crs 071°	D5.0 LAB TAC 3500′ (1465′)	2480′ (445′)	TDZE 2035′

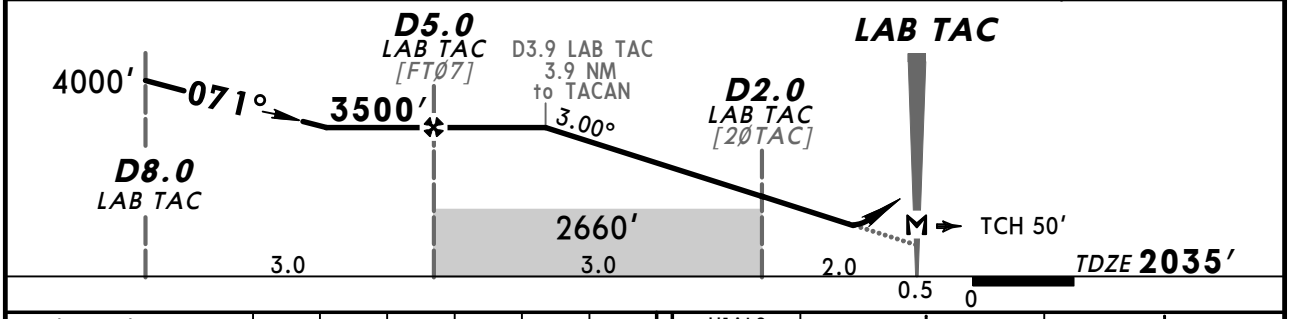
MISSED APCH: Climb STRAIGHT AHEAD on R-071 LAB TAC to D1.0 LAB TAC, then climbing turn RIGHT onto heading 220° to 4000′ to intercept 8 DME Arc LAB TAC.

4000′ 251° 071° 7400′
MSA LAB TAC

Alt Set: hPa (IN on req) | TDZ Elev: 72 hPa | Trans level: By ATC | Trans alt: 5000′



RECOMMENDED ALTITUDES	
LAB TAC	ALTITUDE
3.9	3500′
3.0	3220′
2.0	2900′
1.0	2580′



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

HIALS
PAPI PAPI

D1.0 LAB TAC

LAB on CH 58 R-071

4000′ RT onto 220° hdg

Standard STRAIGHT-IN LANDING RWY **07** **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) **2480′** (445′)

		ALS out	Max Kts	MDA(H)	CEIL-VIS
A	500′- 1400m	500′- 1600m	90	2520′ (476′)	500′- 1600m
B			120	2550′ (506′)	500′- 1600m
C		500′- 2100m	140	2650′ (606′)	500′- 2400m
D	500′- 1600m	500′- 2400m	165	2750′ (706′)	600′- 3600m

APATC-1(A)

CHANGES: New procedure.

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MUNICH Radar	*LANDSBERG Tower
129.45	122.1

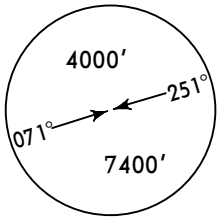
For UHF see MIL-101 listing

BRIEFING STRIP™

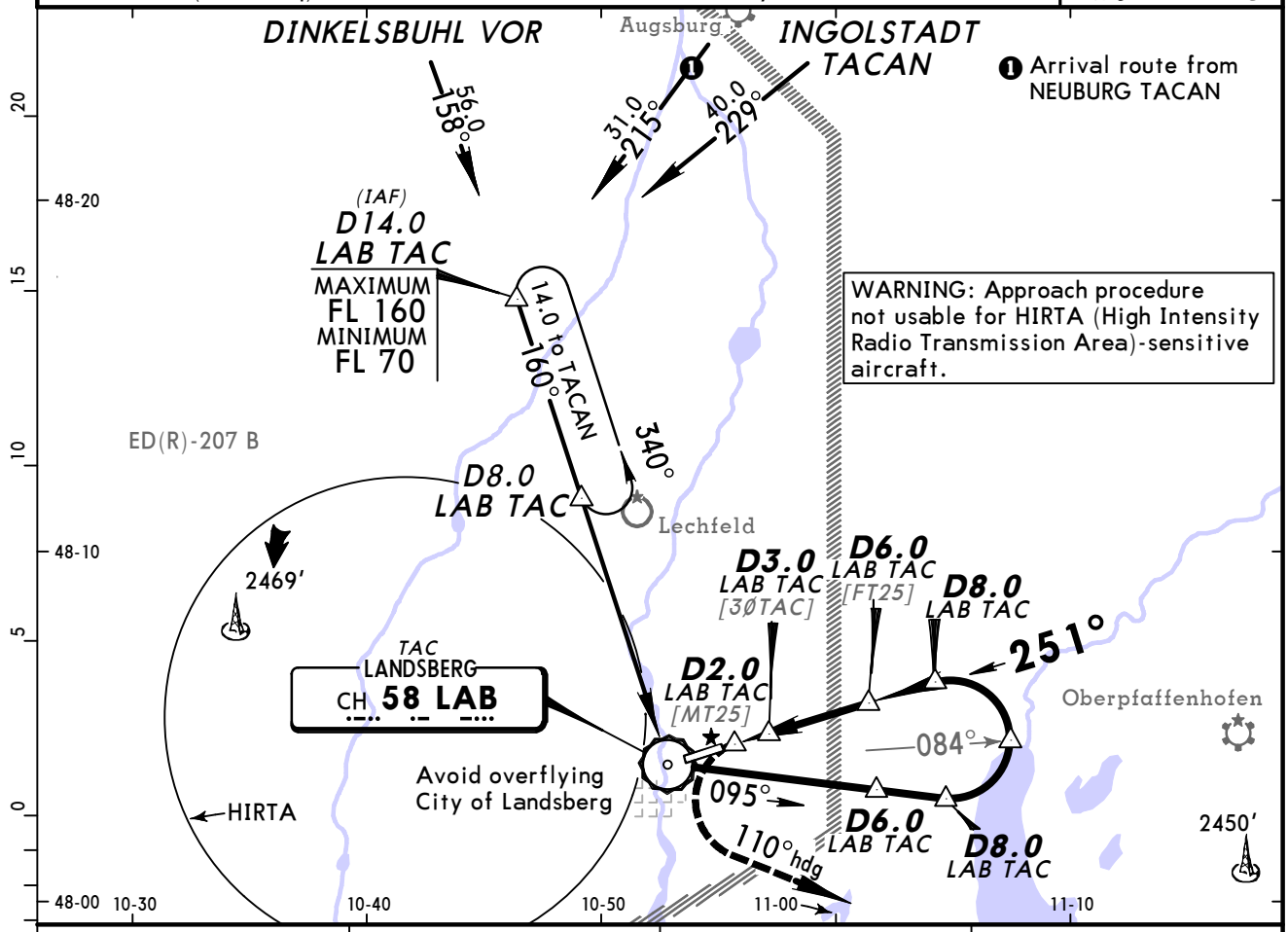
TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 2044′
LAB	Apch Crs	D6.0 LAB TAC	2420′ (377′)	TDZE 2043′
CH 58	251°	3500′ (1457′)		

MISSED APCH: Climbing turn LEFT onto heading 110° to 4000′ to intercept 10 DME Arc LAB TAC.

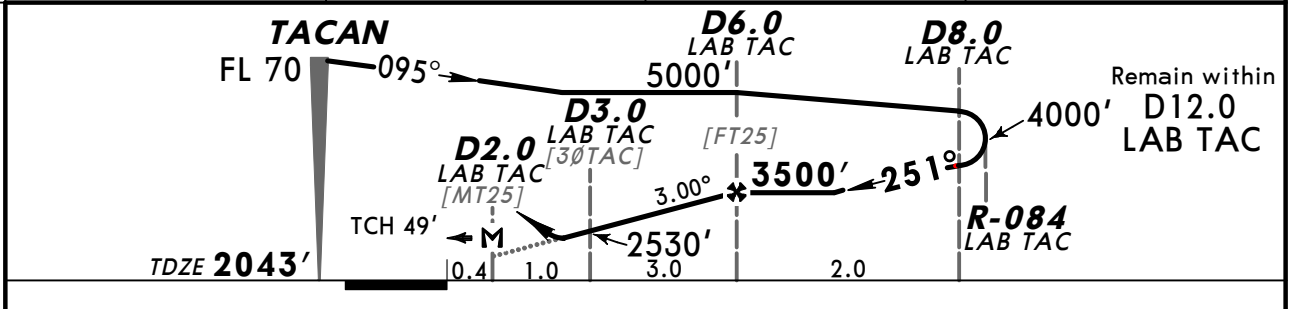
Alt Set: hPa (IN on req) TDZ Elev: 73 hPa Trans level: By ATC Trans alt: 5000′



MSA LAB TAC



LAB TAC	3.0	4.0	5.0
ALTITUDE	2530′	2850′	3170′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D2.0 LAB TAC						

HIALS
PAPI PAPI
4000′ LT onto 110° hdg

Standard STRAIGHT-IN LANDING RWY 25 **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 2420′ (377′)

		ALS out	Max Kts	MDA(H)	CEIL-VIS
A	400′ - 1300m	400′ - 1600m	90	2520′ (476′)	500′ - 1600m
B			120	2550′ (506′)	500′ - 1600m
C		400′ - 1700m	140	2650′ (606′)	500′ - 2400m
D		400′ - 2000m	165	2750′ (706′)	600′ - 3600m

APATC-1(A)

CHANGES: New procedure.

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BRIEFING STRIP™

MUNICH Radar	*LANDSBERG Tower
129.45	122.1

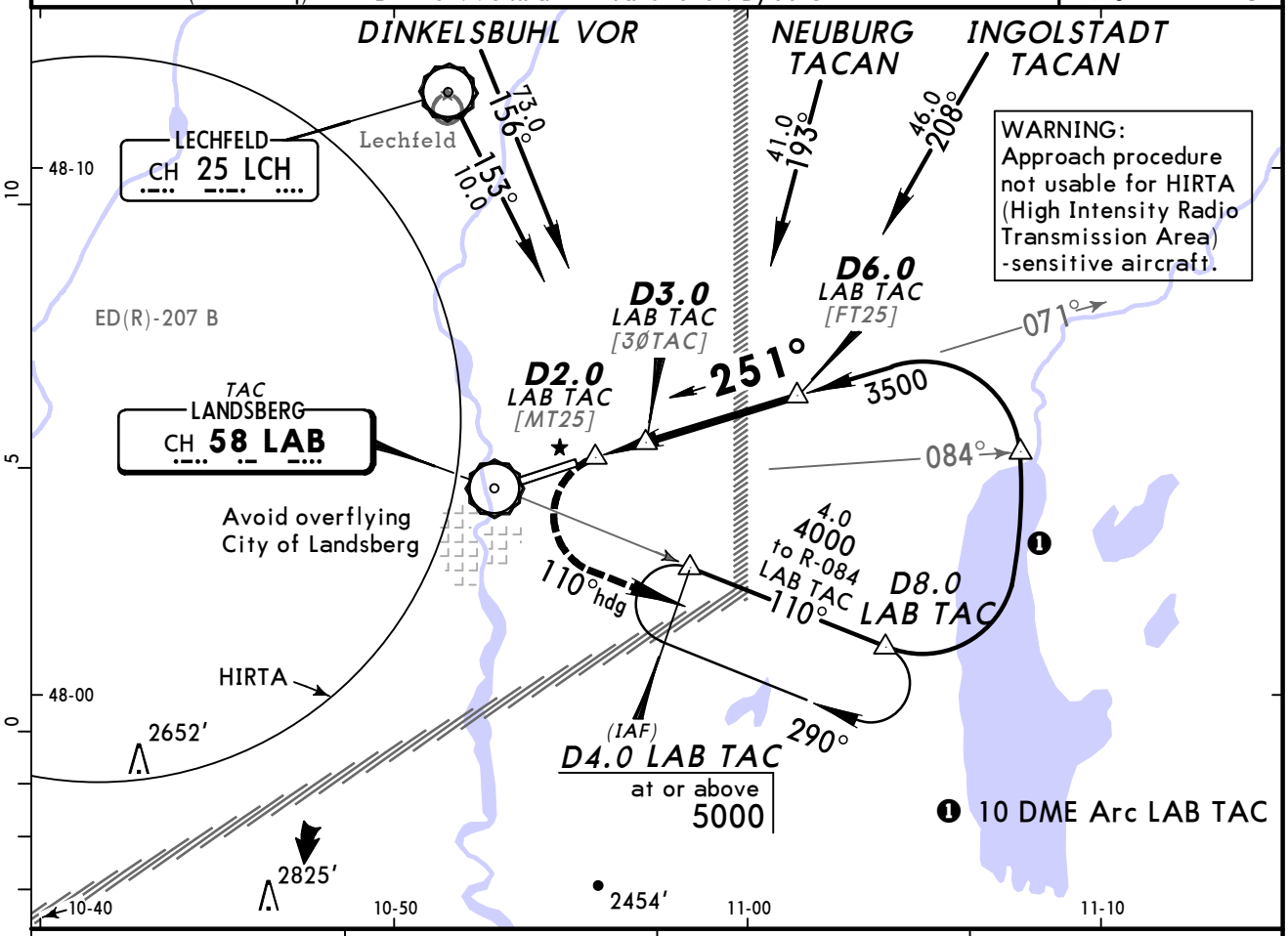
For UHF see MIL-101 listing

TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 2044′
LAB CH 58	Apch Crs 251°	D6.0 LAB TAC 3500′ (1457′)	2420′ (377′)	TDZE 2043′

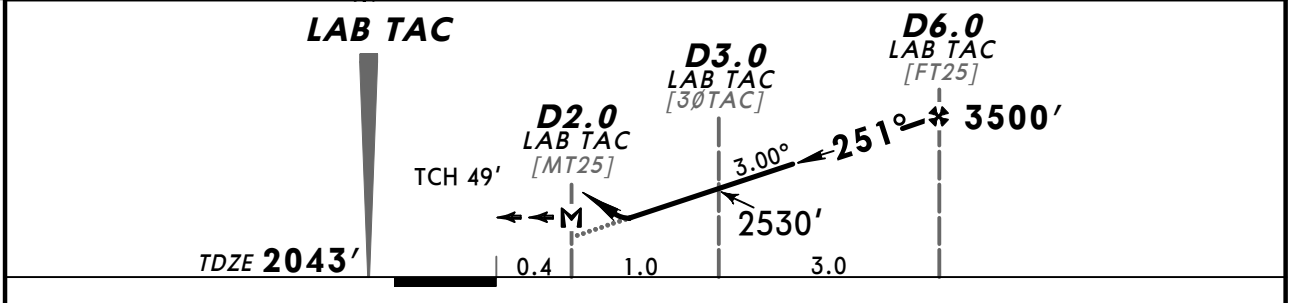
MISSED APCH: Climbing turn LEFT onto heading 110° to 4000′ to intercept 10 DME Arc LAB TAC.

4000′ 251° 071° 7400′
MSA LAB TAC

Alt Set: hPa (IN on req) TDZ Elev: 73 hPa Trans level: By ATC Trans alt: 5000′



LAB TAC	3.0	4.0	5.0
ALTITUDE	2530′	2850′	3170′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D2.0 LAB TAC						

HIALS
PAPI PAPI

4000′ LT onto 110° hdg

Standard STRAIGHT-IN LANDING RWY 25 **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 2420′ (377′)

		ALS out	Max Kts	MDA(H)	CEIL-VIS
A	400′- 1300m	400′- 1600m	90	2520′ (476′)	500′- 1600m
B			120	2550′ (506′)	500′- 1600m
C		400′- 1700m	140	2650′ (606′)	500′- 2400m
D		400′- 2000m	165	2750′ (706′)	600′- 3600m

APATC-1(A)

CHANGES: New procedure.

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ETSA
LANDSBERG

JEPPESEN
14 JAN 11 14-5

LANDSBERG, GERMANY
COPTER TACAN 251°

MUNICH Radar	*LANDSBERG Tower
129.45	122.1

For UHF see MIL-101 listing

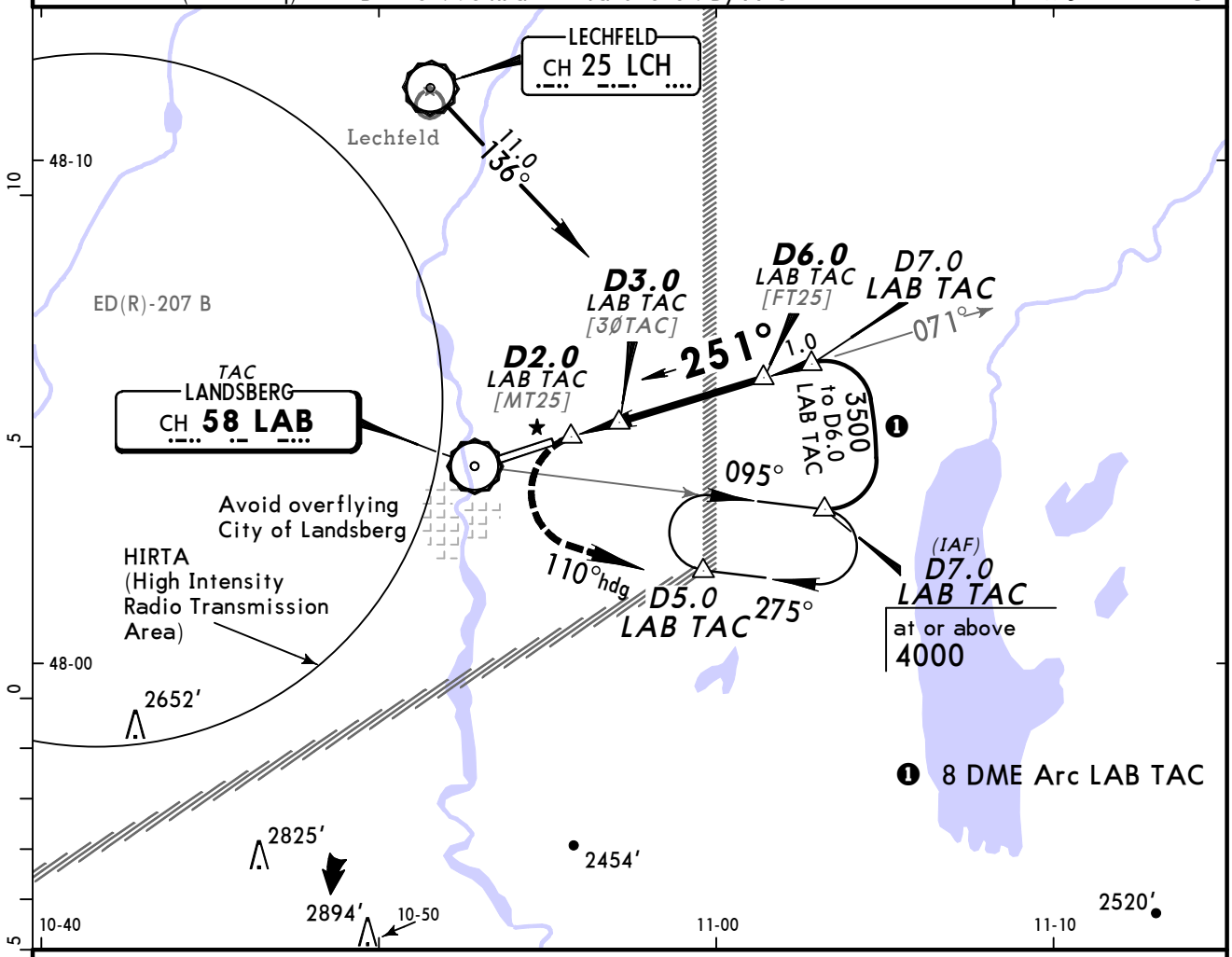
BRIEFING STRIP™

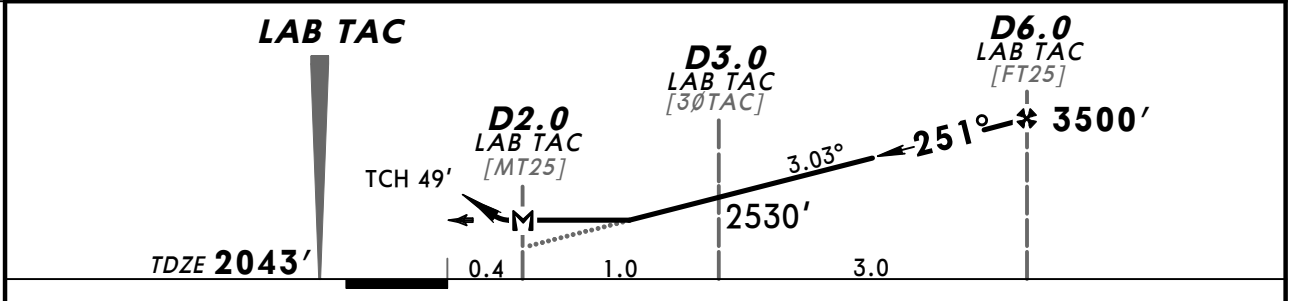
TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 2044′
LAB CH 58	Apch Crs 251°	D6.0 LAB TAC 3500′ (1457′)	2420′ (377′)	TDZE 2043′

MISSED APCH: Climbing turn LEFT onto heading 110° to 4000′ to intercept 8 DME Arc LAB TAC.

4000′ 251° 071° 7400′ MSA LAB TAC

Alt Set: hPa (IN on req) TDZ Elev: 73 hPa Trans level: By ATC Trans alt: 5000′





Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.03°	375	482	536	643	750	858
MAP at D2.0 LAB TAC						

HIALS
PAPI PAPI

4000′ onto 110° hdg
LT

JAR-OPS STRAIGHT-IN LANDING RWY 25 **CEILING REQUIRED**

MDA(H) 2420′ (377′)

APATC-1(A)

COPTER	ALS out
400′- 800m	400′- 1000m

CHANGES: New procedure.

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MUNICH Radar	*LANDSBERG Radar	*LANDSBERG Tower
129.45	130.5 123.3	122.1

For UHF see MIL-101 listing

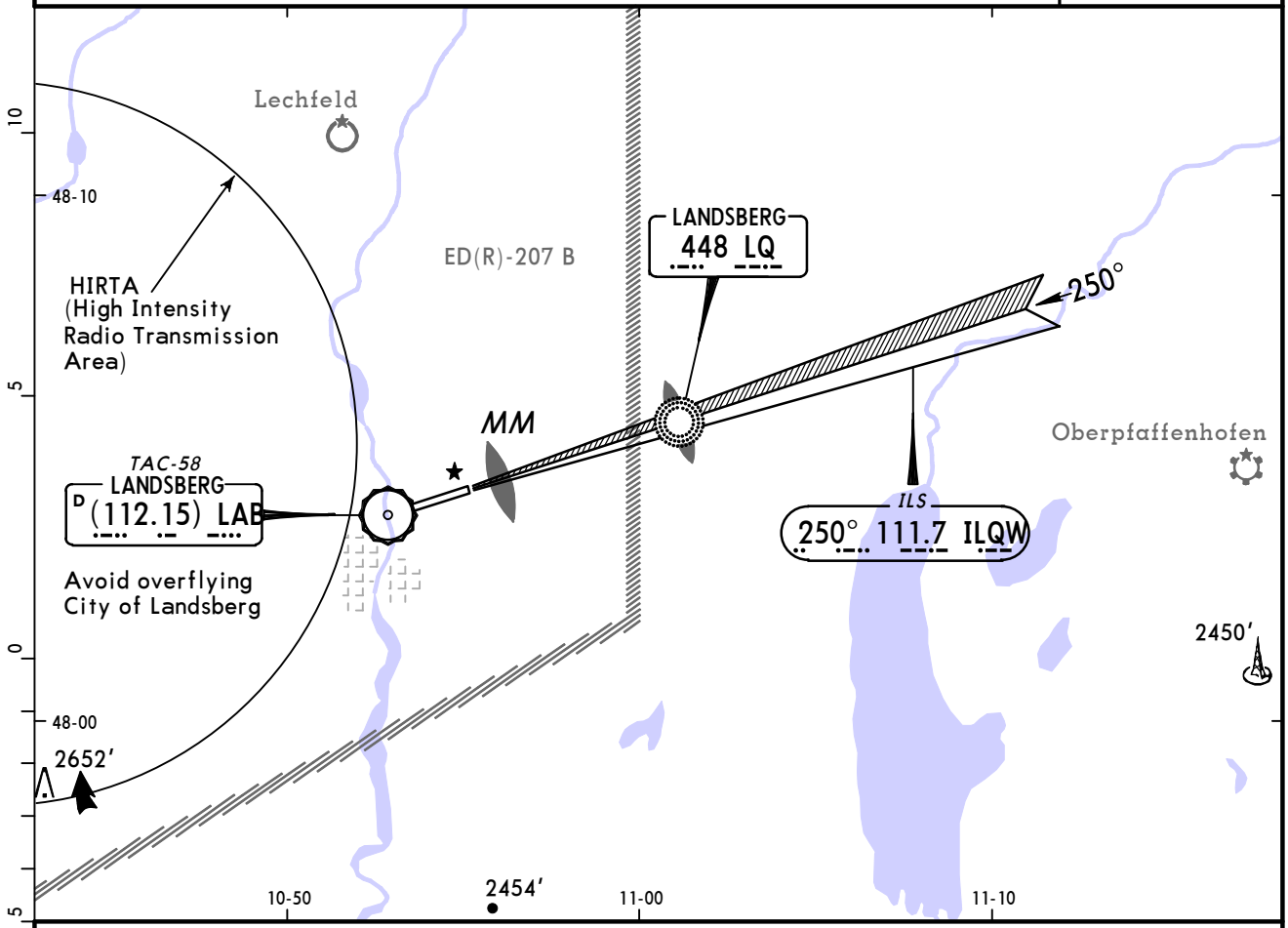
BRIEFING STRIP ™

RADAR	Final Apch Crs	PAR GS	DA(H)/MDA(H)	Apt Elev 2044′
	BY ATC	Not published	Refer to Minimums	TDZE RWY 07 2035′
		Minimum Alt No FAF		TDZE RWY 25 2043′

No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 73 hPa Trans level: By ATC Trans alt: 5000′



RWY 07
PAR TCH 32′

RWY 25
PAR TCH 50′

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

Lighting-Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

	PAR 07 DA(H) 2235′(200′)		PAR 25 DA(H) 2243′(200′)		SRA 07 MDA(H) 2480′(445′)		SRA 25 MDA(H) 2420′(377′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	500′- 1600m	500′- 2300m	400′- 1500m	400′- 1900m
B								
C					500′- 1800m	500′- 2500m	400′- 1700m	400′- 2100m
D								

APATC-1(A)

CHANGES: None.

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ETSA
LANDSBERG

JEPPESEN
14 JAN 11 18-2

LANDSBERG, GERMANY
COPTER *PAR 070° & 250°

MUNICH Radar	*LANDSBERG Radar	*LANDSBERG Tower
129.45	130.5 123.3	122.1

For UHF see MIL-101 listing

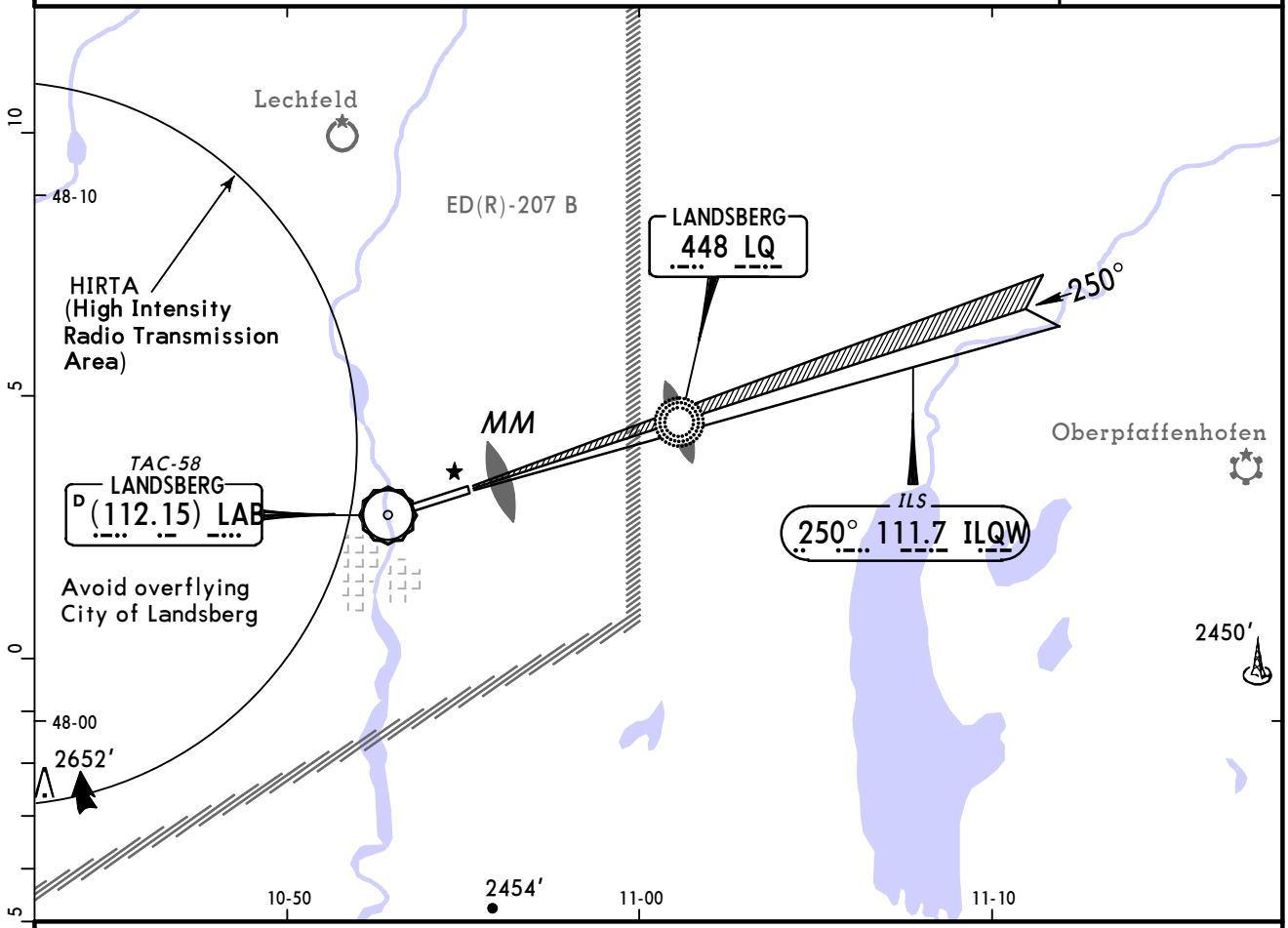
BRIEFING STRIP ™

RADAR	Final Apch Crs	PAR GS	DA(H)	Apt Elev / TDZE RWY 07 / TDZE RWY 25
	BY ATC	No Alt published	Refer to Minimums	2044′ / 2035′ / 2043′

MISSED APCH: As directed by RADAR CONTROLLER.

No MSA published

Alt Set: hPa (IN on req) Apt Elev: 73 hPa Trans level: By ATC Trans alt: 5000′



RWY 07
PAR TCH not published

RWY 25
PAR TCH 50′

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

Lighting-Refer to Airport Chart

Refer to Missed Apch above

JAR-OPS STRAIGHT-IN LANDING **CEILING REQUIRED**

	PAR 070° DA(H) 2235′(200′)		PAR 250° DA(H) 2243′(200′)	
		ALS out		ALS out
COPTER	200′- 500m	200′- 1000m	100′- 600m	100′- 1000m

APATC-1(A)

CHANGES: New procedure.

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JEPPESEN
JeppView for Windows

General Information

Location: Buchel Deu
IATA Code:
Lat/Long: N50° 10.4' E007° 03.8'
Elevation: 1568 ft

Airport Use: Military
Magnetic Variation: 1.1°E

Fuel Types: Jet A-1
Oxygen Types: Low Pressure
Customs: No
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0620 Z
Sunset: 1709 Z,

Runway Information

Runway: 03
Length x Width: 8225 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1556 ft
Lighting: Edge, ALS

Runway: 21
Length x Width: 8225 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 1568 ft
Lighting: Edge, ALS

Communication Information

Buchel Tower 140.45 Military
Buchel Tower 122.1 Military
Buchel Tower 27.545 Military
Buchel Tower 25.78 Military
Buchel Radar 139.25 Military
Buchel Radar 130.15 Military
Buchel Radar 123.3 Military
Buchel Radar 38.54 Military
Buchel Radar 37.135 Military
Buchel Radar 34.462 Military
Buchel Radar 34.4 Military
Buchel Radar 33.685 Military

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Buchel Radar 25.455 Military
Buchel Radar 25.33 Military

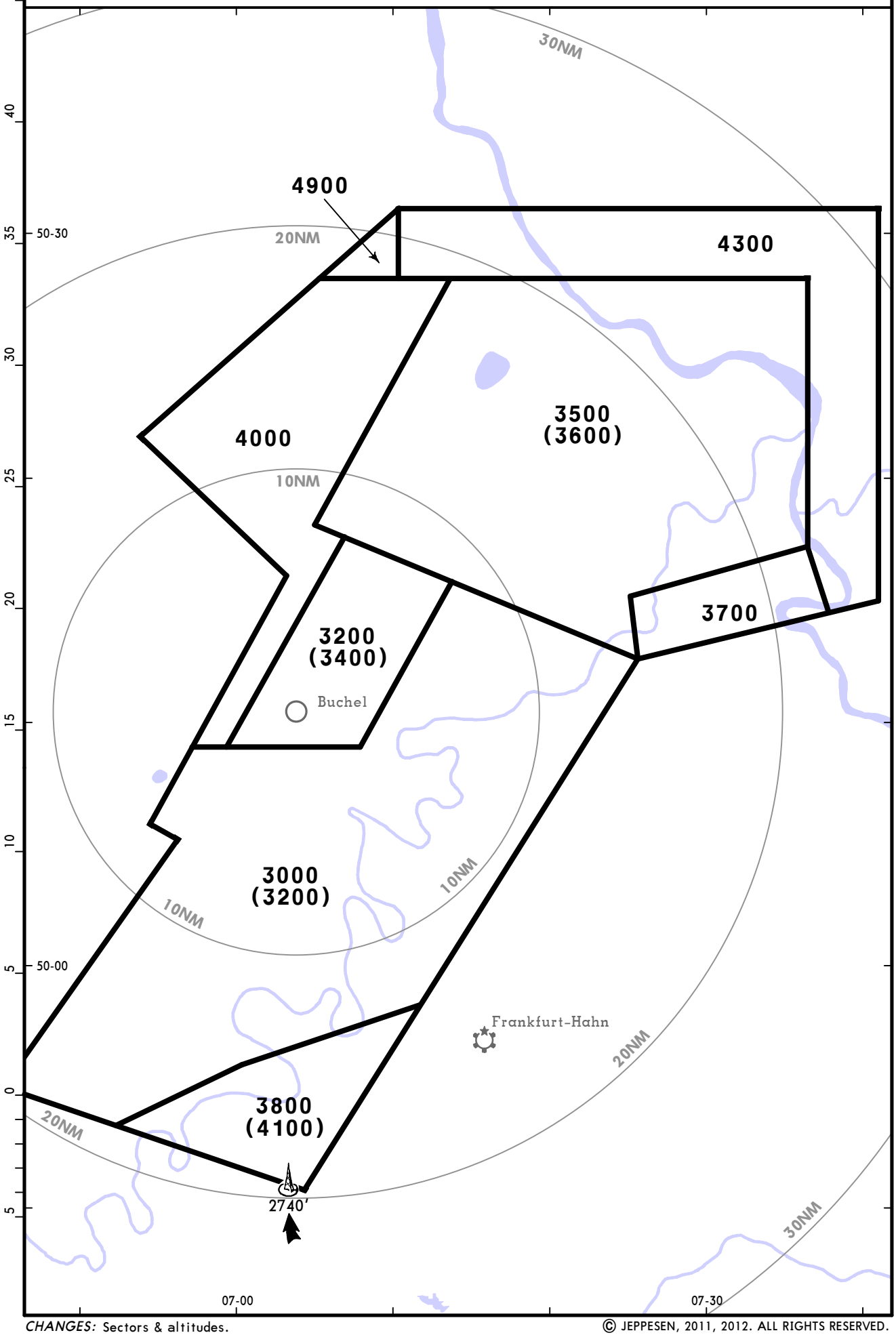
BUCHEL, GERMANY

RADAR MINIMUM ALTITUDES

*BUCHEL Radar	*Apt Elev*	Alt Set: hPa (IN on request)
123.3	1568′	Trans level: By ATC Trans alt: 5000′

For UHF see MIL-101 listing

Values in brackets consider additional height margins in order to meet required obstacle clearance at cold temperatures.

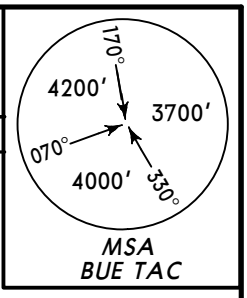


CHANGES: Sectors & altitudes.

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Apt Elev	
1568′	Trans level: By ATC Trans alt: 5000′ 1. Emergency safe altitude within 100 NM of Buchel 5400′ 2. RWY 03: EXPECT close-in obstacle E of THR

For UHF see MIL-101 listing

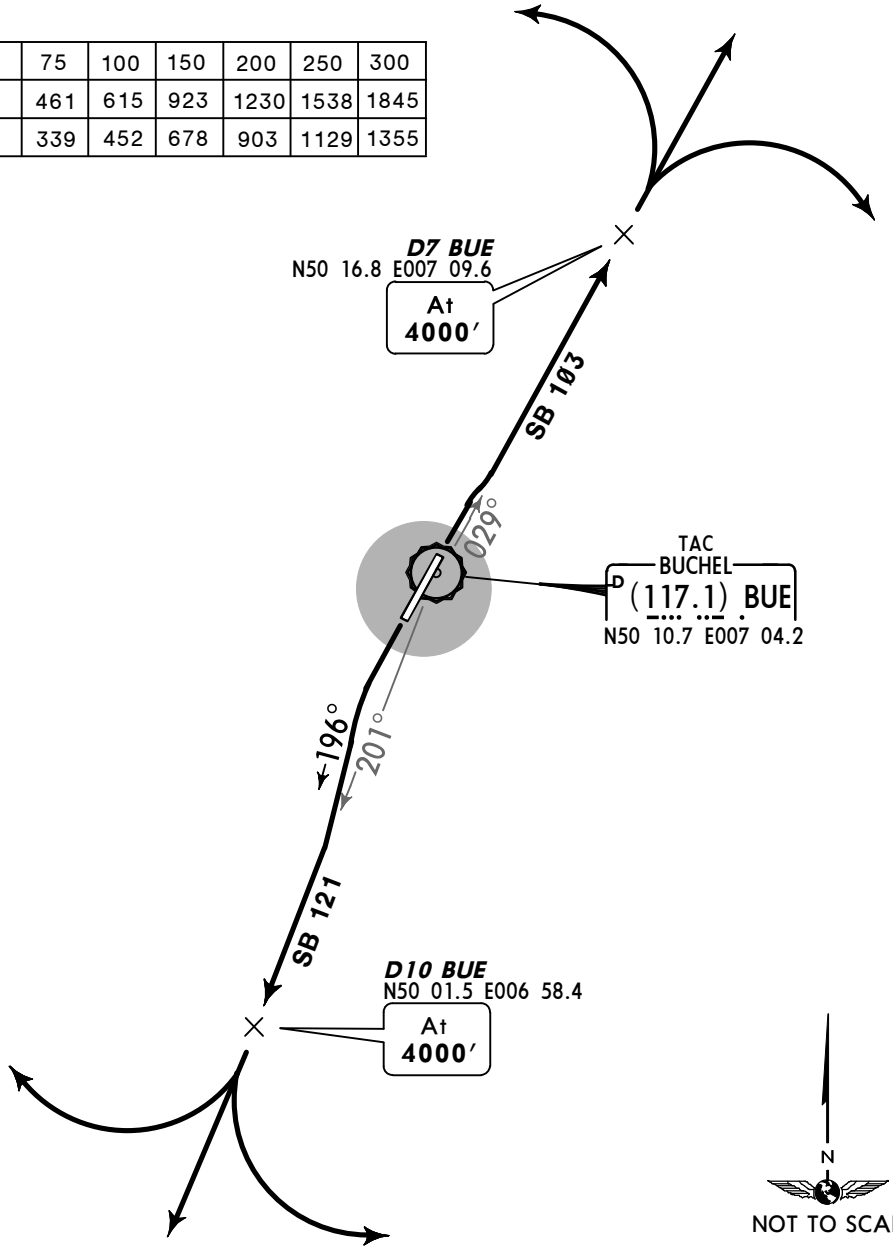


SB 1Ø3, SB 121
RWYS 03, 21 DEPARTURES
TACAN AZIMUTH REQUIRED

MINIMUM CLIMB RATE TABLE
FOR ATC PURPOSES up to 4000′

❶ **SB 1Ø3**
❷ **SB 121**

KT	75	100	150	200	250	300
❶ V/V (fpm)	461	615	923	1230	1538	1845
❷ V/V (fpm)	339	452	678	903	1129	1355

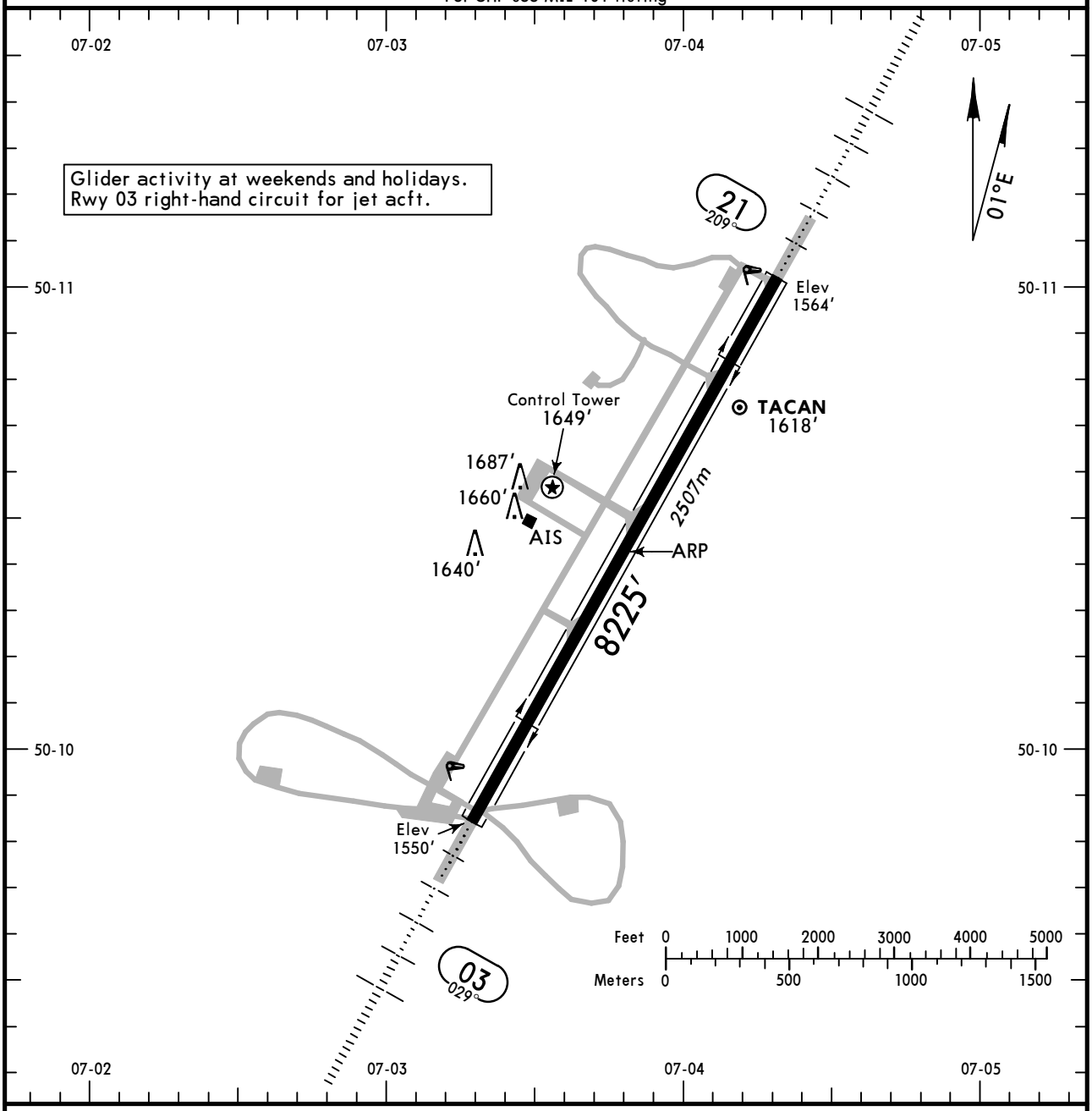


SID	RWY	ROUTING
SB 1Ø3	**03**	Turn RIGHT, climb on BUE R-029 to D7 BUE, continue as cleared by ATC.
SB 121	**21**	Climb on 196° track to 4000′, intercept BUE R-201 to D10 BUE, continue as cleared by ATC.

CHANGES: New procedures at this airport

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*BUCHEL Tower
122.1
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
03 ❶ 21	HIRL HIALS SFL PAPI (angle 3.0°)				148′ *45m*

❶ Anti-skid layer.

Standard TAKE-OFF **1**

	LVP must be in Force: RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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

CHANGES: None.

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BRIEFING STRIP™

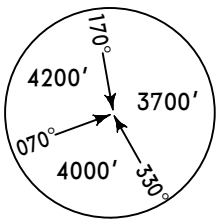
LANGEN Radar	*BUCHEL Tower
125.6	122.1

For UHF see MIL-101 listing

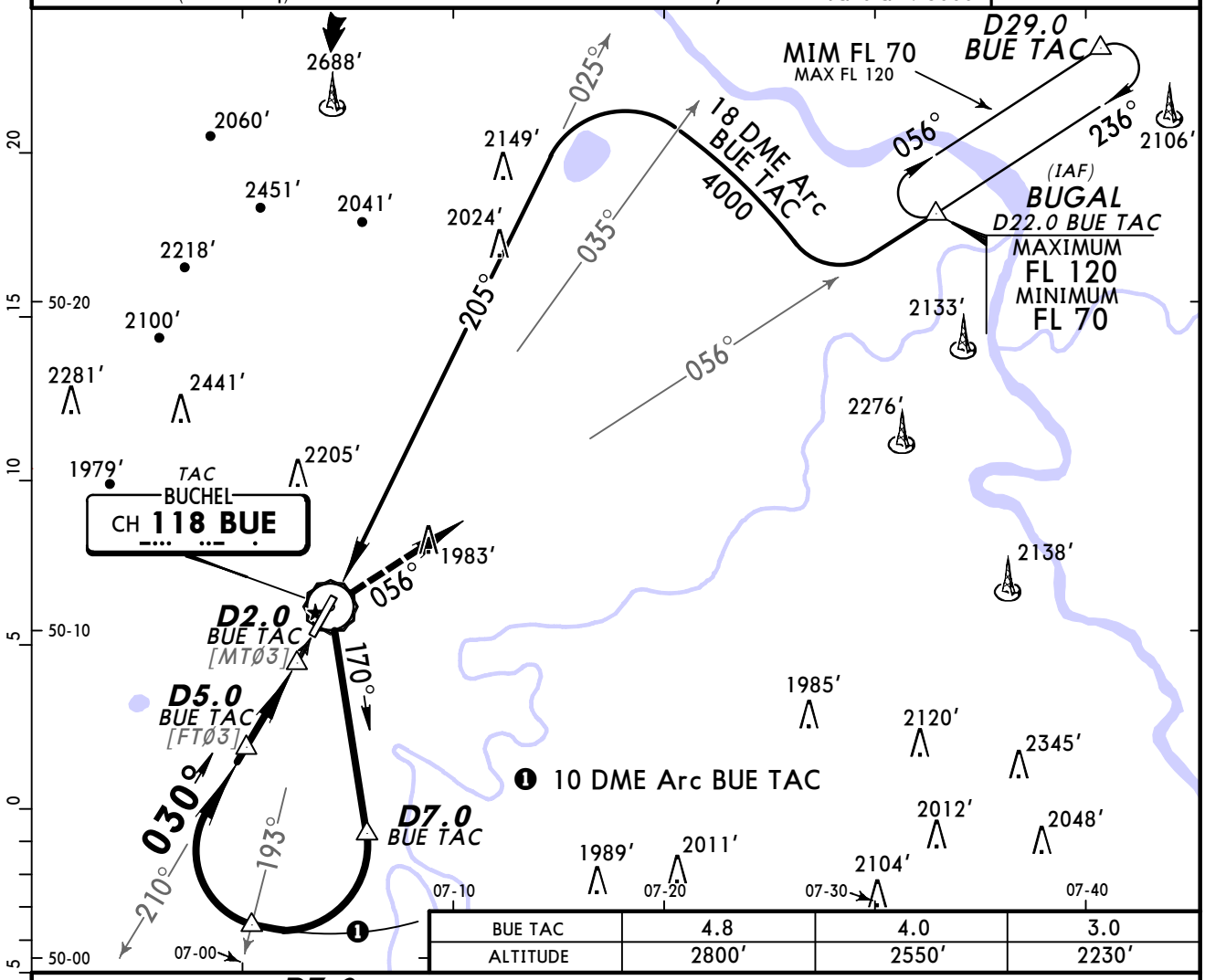
TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 1568′
BUE CH 118	Apch Crs 030°	D5.0 BUE TAC 2800′ (1244′)	1900′ (344′)	TDZE 1556′

MISSED APCH: Climbing turn RIGHT (MAX 250 KT) to intercept R-056 BUE TAC outbound to 4000′. Do not turn before MAP.

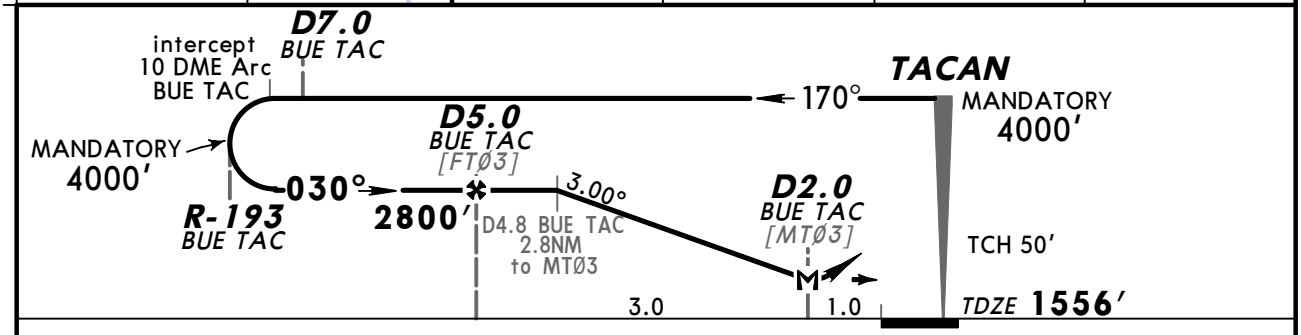
Alt Set: hPa (IN on req) TDZ Elev: 56 hPa Trans level: By ATC Trans alt: 5000′



MSA BUE TAC



BUE TAC	4.8	4.0	3.0
ALTITUDE	2800′	2550′	2230′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D2.0 BUE TAC						

HIALS
PAPI PAPI

250 KT MAX RT

BUE CH 118 on R-056

4000′

Standard STRAIGHT-IN LANDING RWY 03 **CEILING REQUIRED**

MDA(H) 1900′ (344′)

CIRCLE-TO-LAND
Not authorized
West of rwy 03/21

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	400′- 1200m	100	1970′ (402′)	500′- 1800m
B	400′- 1800m	135	2230′ (662′)	700′- 1800m
C		180	2380′ (812′)	900′- 4000m
D	400′- 2000m	205	2380′ (812′)	900′- 4400m

MIPS

CHANGES: Procedure. Circling minimums.

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ETSB
BUCHEL

JEPPESEN
16 SEP 11 | 14-2 | Eff 22 Sep

BUCHEL, GERMANY
TACAN Rwy 21

LANGEN Radar	*BUCHEL Tower
125.6	122.1

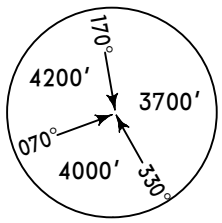
For UHF see MIL-101 listing

BRIEFING STRIP™

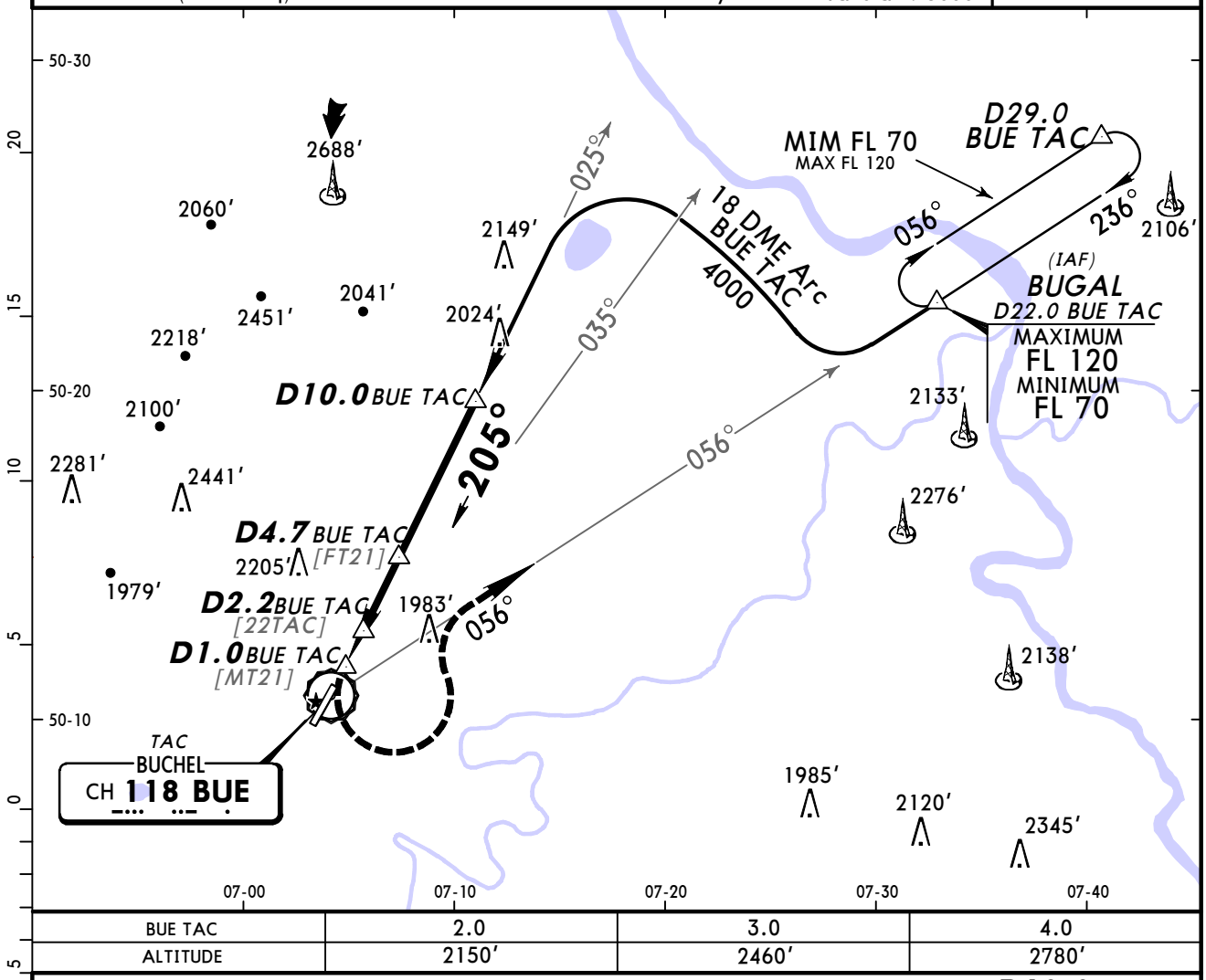
TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 1568′
BUE CH 118	Apch Crs 205°	D4.7 BUE TAC 3000′ (1432′)	1910′ (342′)	TDZE 1568′

MISSED APCH: Climbing turn LEFT (MAX 250 KT) to intercept R-056 BUE TAC outbound to 4000′. Do not turn before MAP.

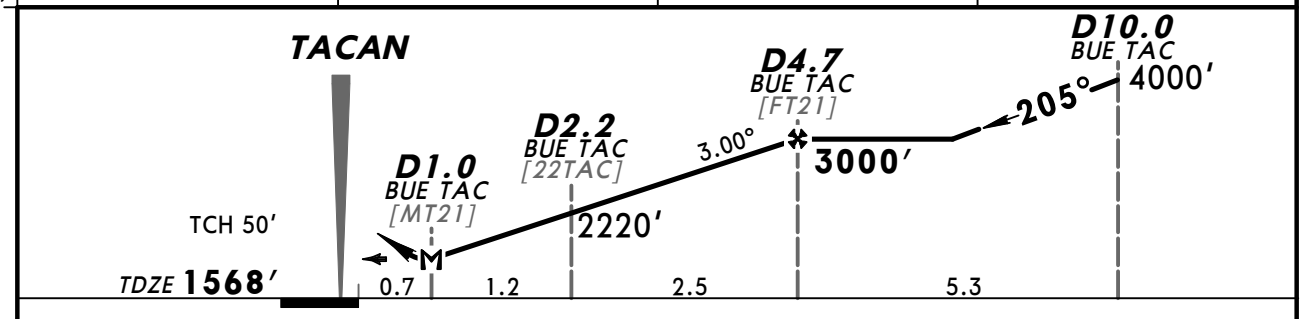
Alt Set: hPa (IN on req) TDZ Elev: 56 hPa Trans level: By ATC Trans alt: 5000′



MSA BUE TAC



BUE TAC	2.0	3.0	4.0
ALTITUDE	2150′	2460′	2780′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 BUE TAC						

HIALS
PAPI PAPI

250 KT MAX
LT

BUE on CH 118
R-056

4000′

Standard STRAIGHT-IN LANDING RWY 21 **CEILING REQUIRED** CIRCLE-TO-LAND Not authorized West of rwy 03/21

MDA(H) 1910′ (342′)

MIPS

		ALS out
A	400′- 1200m	400′- 1600m
B		
C		
D		400′- 2000m

Max Kts	MDA(H)	CEIL-VIS
100	1970′ (402′)	500′- 1600m
135	2230′ (662′)	700′- 1600m
180	2380′ (812′)	900′- 4000m
205	2380′ (812′)	900′- 4400m

CHANGES: Procedure. Minimums.

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BUCHEL, GERMANY
*PAR or *SRA Rwys 03, 21

LANGEN Radar	*BUCHEL Radar	*BUCHEL Tower
125.6	123.3 130.15X	122.1

For UHF see MIL-101 listing

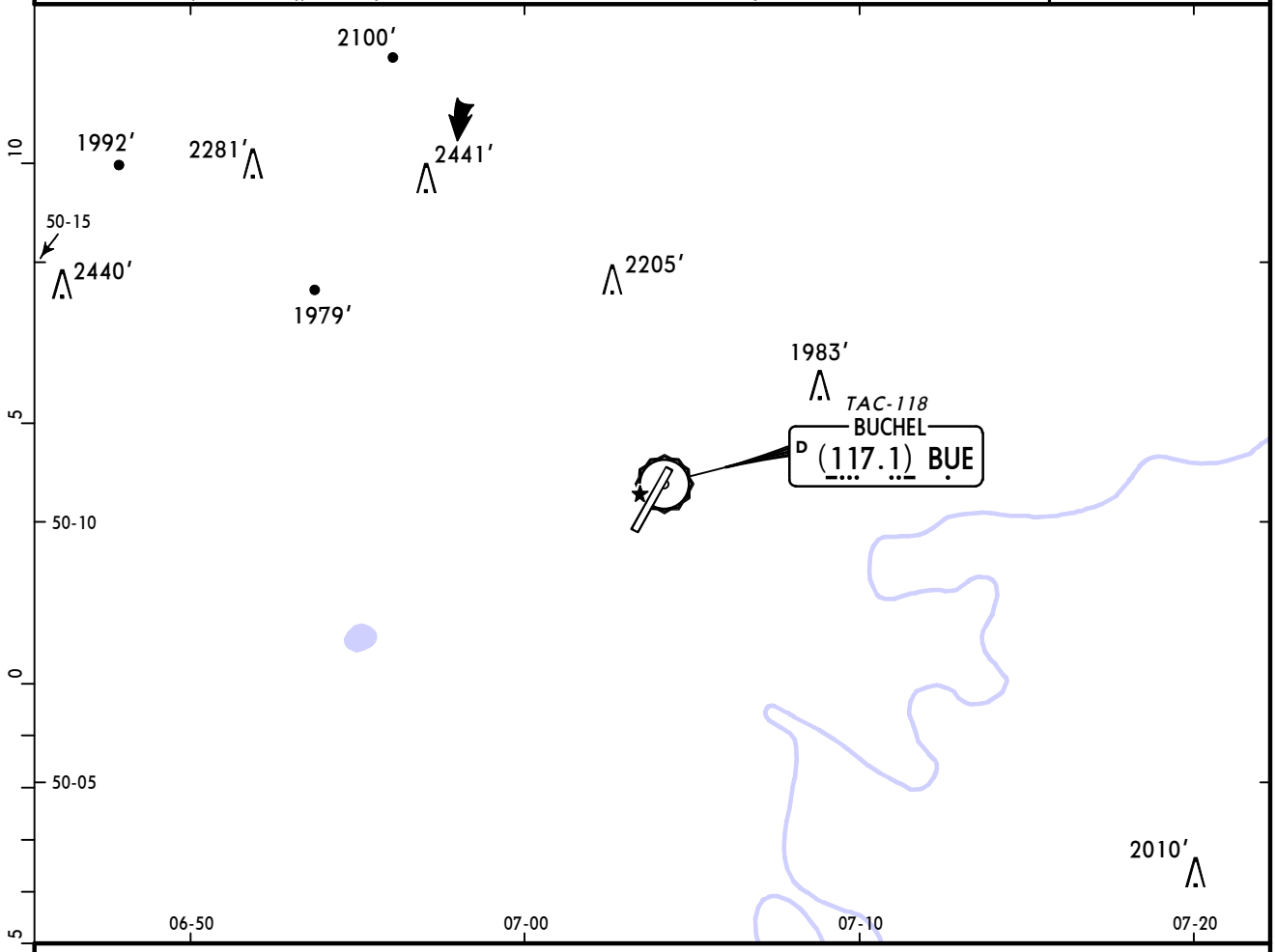
BRIEFING STRIP™

RADAR	Final Apch Crs BY ATC	PAR GS Not published / Minimum Alt No FAF	DA(H)/MDA(H) Refer to Minimums	Apt Elev 1568′ / TDZE RWY 03 1556′ / TDZE RWY 21 1568′

No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 56 hPa Trans level: By ATC Trans alt: 5000′



RWY 03
PAR TCH not published

RWY 21
PAR TCH not published

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

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

TERPS

	PAR 03 DA(H) 1756′(200′)		PAR 21 DA(H) 1768′(200′)		SRA 03 MDA(H) 1910′(354′)		SRA 21 MDA(H) 1920′(352′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 1200m	200′- 1600m	200′- 800m	200′- 1200m	400′- 1200m	400′- 1800m	300′- 1100m	300′- 1800m
B								
C					400′- 1300m	400′- 2000m	300′- 1300m	300′- 2000m
D								

CHANGES: None.

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General Information

Location: Erding Deu
IATA Code:
Lat/Long: N48° 19.3' E011° 56.9'
Elevation: 1515 ft

Airport Use: Military
Magnetic Variation: 2.4°E

Fuel Types: Jet A-1
Oxygen Types: Low Pressure
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0558 Z
Sunset: 1652 Z,

Runway Information

Runway: 08
Length x Width: 8254 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 1515 ft
Lighting: Edge, ALS

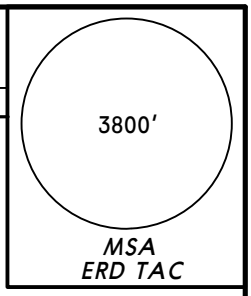
Runway: 26
Length x Width: 8254 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 1502 ft
Lighting: Edge, ALS

Communication Information

Erding Tower 122.1 Military
Erding Tower 120.2 Military
Erding Tower 36.945 Military
Erding Tower 25.78 Military

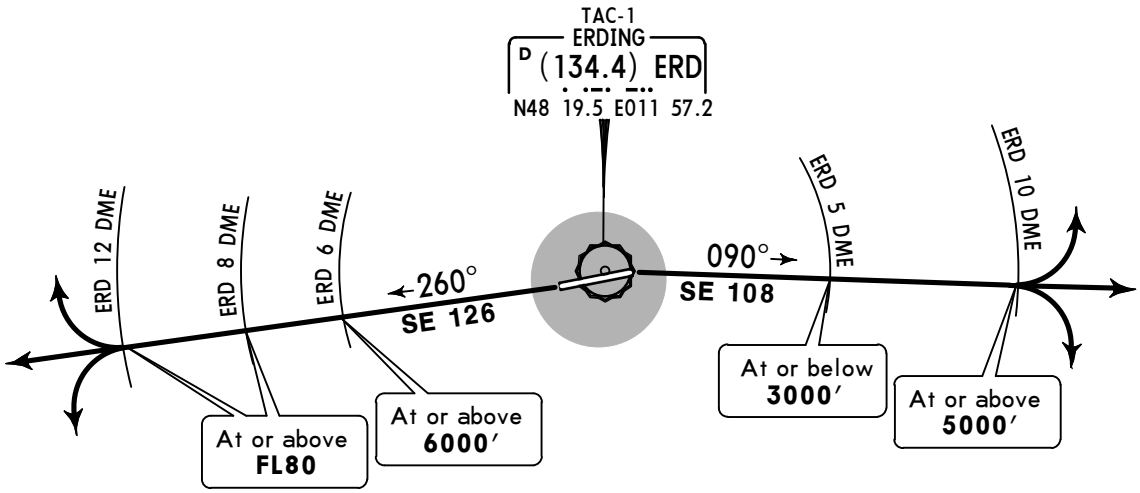
Apt Elev	
1515′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Erding 14600′.

For UHF see MIL-101 listing



SE 108, SE 126
RWYS 08, 26 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





NOT TO SCALE

MINIMUM CLIMB RATE TABLE
FOR ATC PURPOSES
❶ **SE 108:** 3000′ to 5000′
❷ **SE 126:** up to FL80

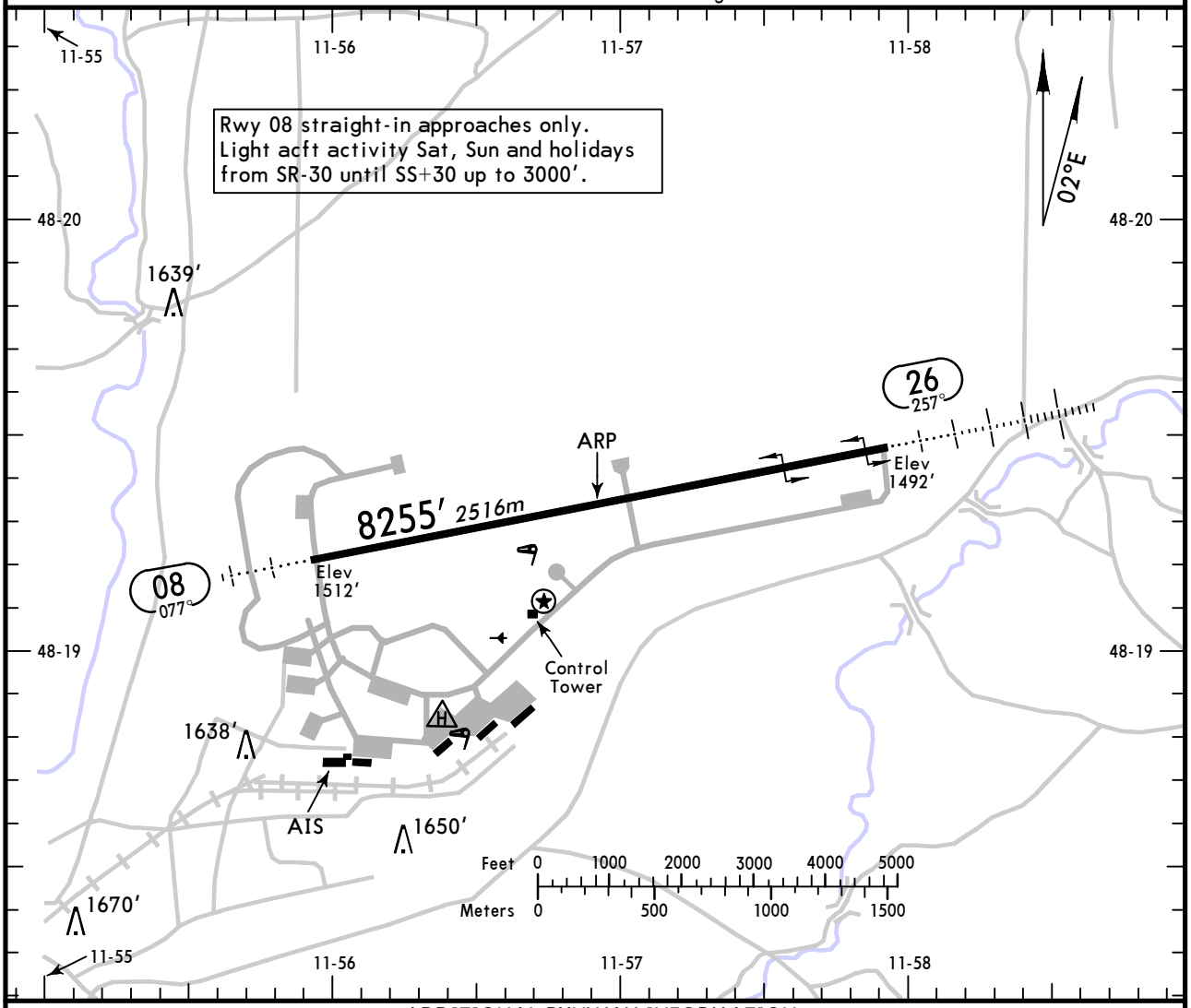
KT	75	100	150	200	250	300
❶ V/V (fpm)	500	667	1000	1333	1667	2000
❷ V/V (fpm)	1137	1517	2275	3033	3792	4550

SID	RWY	ROUTING
SE 108	**08**	Climb on 090° track to ERD 10 DME, continue as cleared by ATC.
SE 126	**26**	Climb on 260° track to ERD 12 DME, continue as cleared by ATC.

CHANGES: New procedures at this airport.

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*ERDING Tower
122.1 120.2
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
08 ❶ 26	HIRL HIALS SFL PAPI (angle 3.0°)				98′ *30m*

❶ Anti-skid layer.

Standard TAKE-OFF 1

	All Rwys		
	LVP must be in Force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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

CHANGES: Minimums.

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MUNICH Radar (APP)	*ERDING Tower (R)	
127.95	122.1	120.2

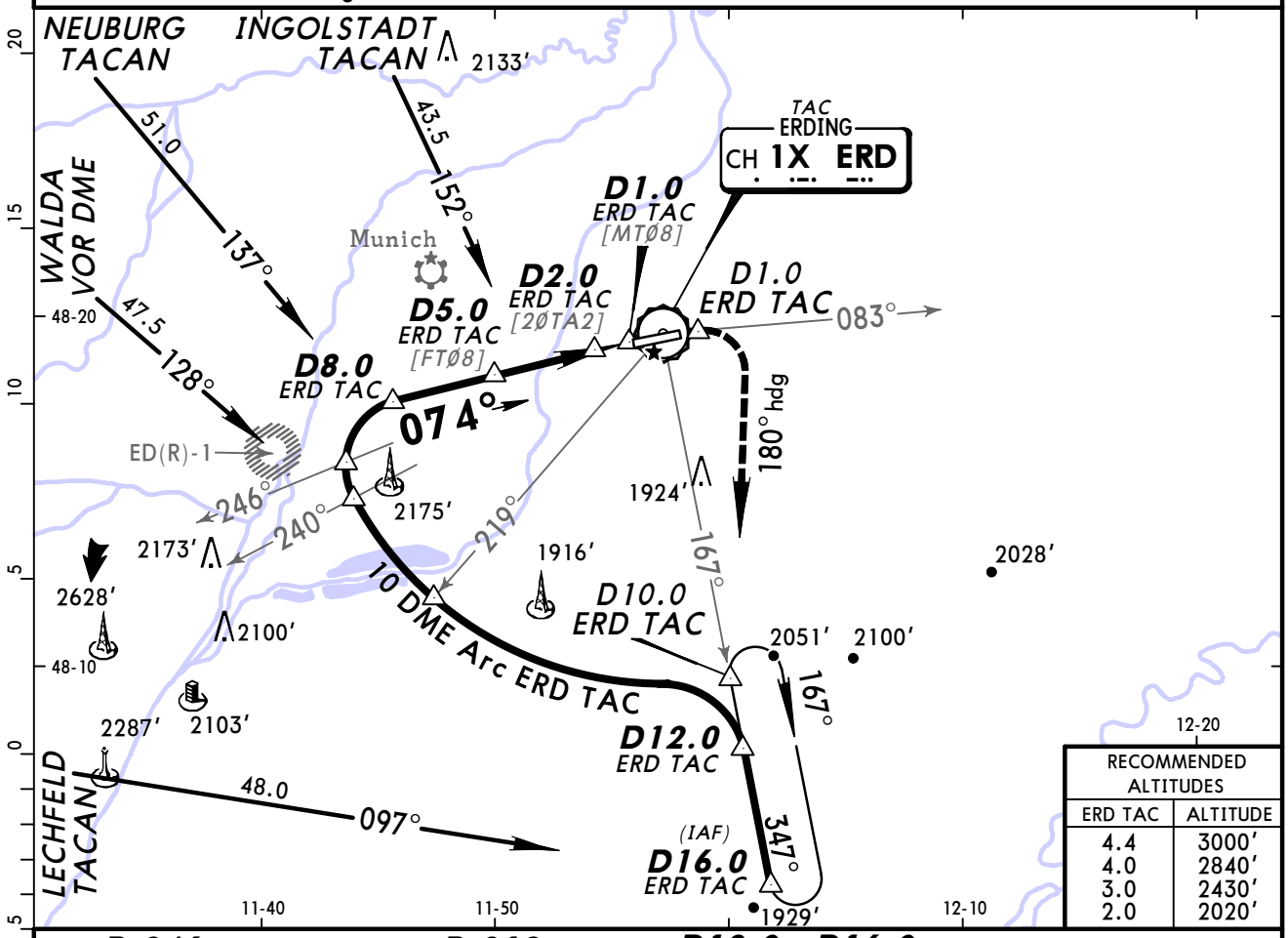
For UHF see MIL-101 listing

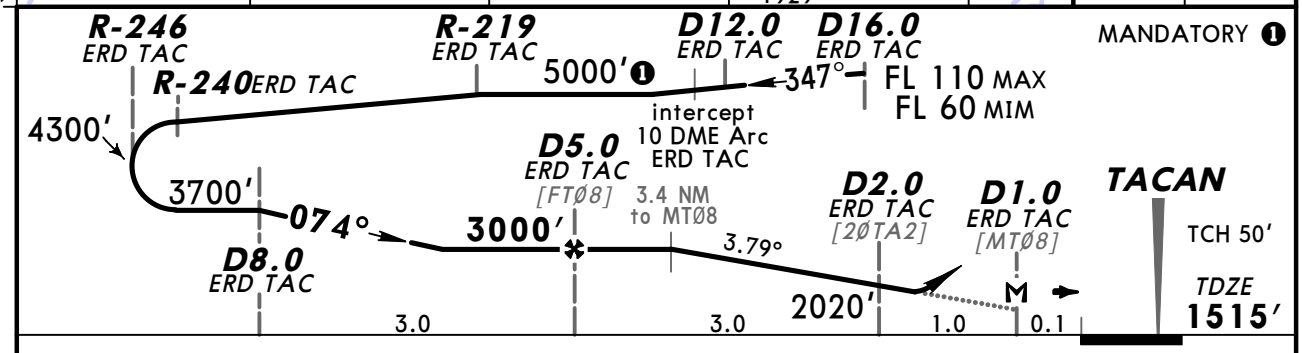
TACAN	Final	Minimum Alt	DA(H)	Apt Elev 1515′
ERD CH 1X	Apch Crs 074°	D5.0 ERD TAC 3000′ (1485′)	1940′ (425′)	TDZE 1515′

3800′
MSA
ERD TACAN

MISSED APCH: Climb STRAIGHT AHEAD. After passing ERD TACAN climb on R-083 to D1.0 ERD TAC, then turn RIGHT onto heading 180°, climb to 4000′ and intercept 10 DME Arc ERD TAC.

Alt Set: hPa (IN on req) TDZ Elev: 54 hPa Trans level: By ATC Trans alt: 5000′
WARNING: HIRTA Ismaning at D7.0/R-250 ERD TAC.





Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.79°	470	604	671	805	939	1073
MAP at D1.0 ERD TAC						

HIALS
PAPI PAPI

ERD CH 1X

D1.0 ERD TAC RT

ERD CH 1X on R-083

Standard STRAIGHT-IN LANDING RWY **08** **CEILING REQUIRED**

DA(H) **1940′** (425′)

	ALS out
A B	500′- 1600m
C D	500′- 2000m

TERPS

CHANGES: MSA.

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MUNICH Radar (APP)	*ERDING Tower (R)	
127.95	122.1	120.2

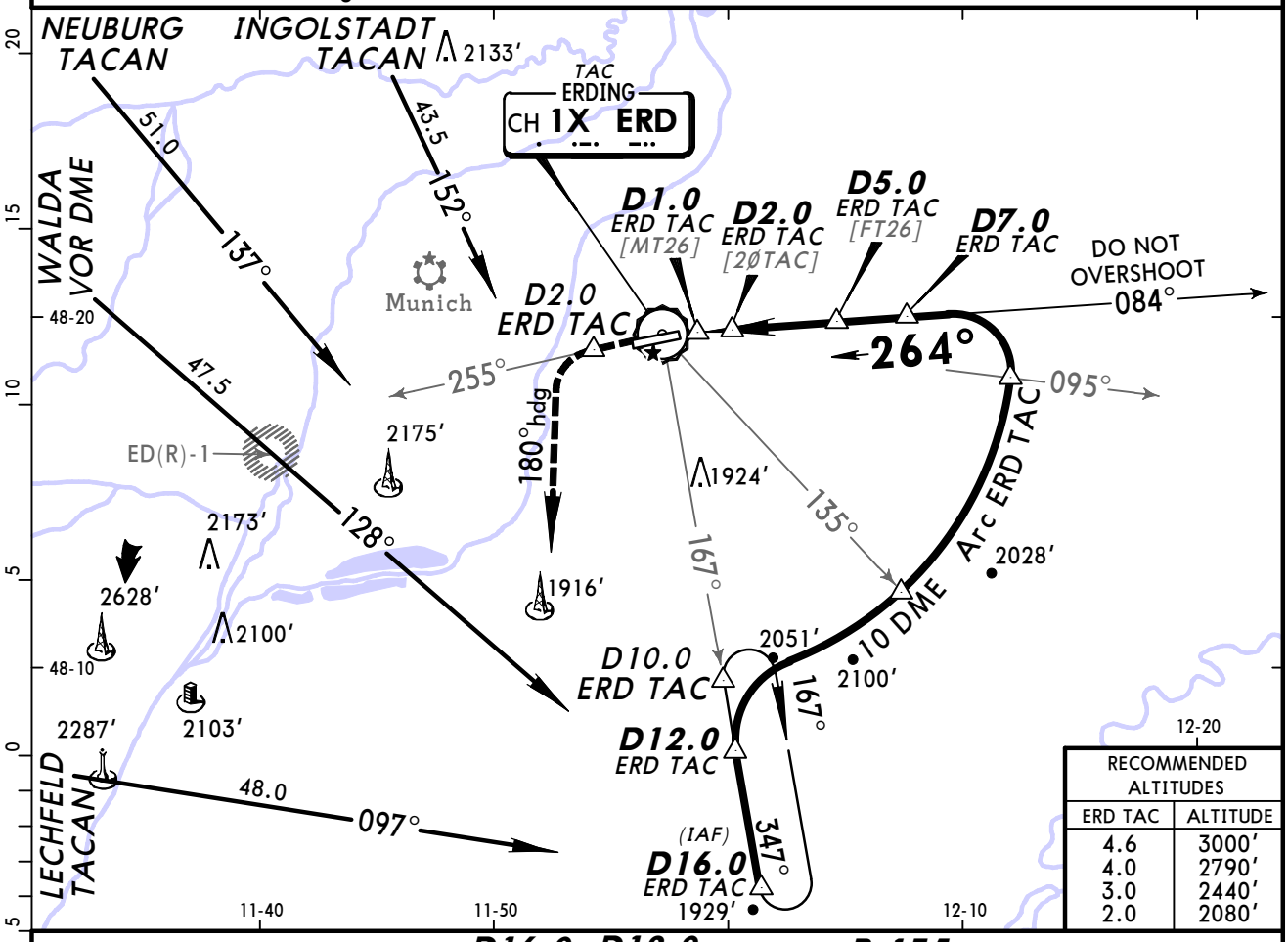
For UHF see MIL-101 listing

TACAN	Final Apch Crs	Mandatory Alt	DA(H)	Apt Elev / TDZE
ERD CH 1X	264°	D5.0 ERD TAC 3000′ (1498′)	1960′ (458′)	Apt Elev 1515′ TDZE 1502′

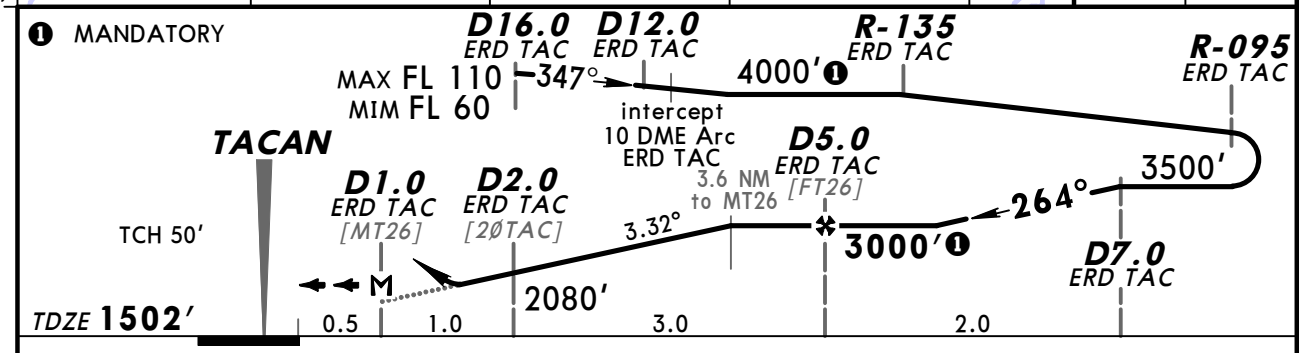
MISSED APCH: Climb STRAIGHT AHEAD. After passing ERD TACAN climb on R-255 to D2.0 ERD TAC, then turn LEFT onto heading 180°, climb to 4000′ and intercept 10 DME Arc ERD TAC.

3800′
MSA
ERD TACAN

Alt Set: hPa (IN on req) TDZ Elev: 54 hPa Trans level: By ATC Trans alt: 5000′
WARNING: HIRTA Ismaning at D7.0/R-250 ERD TAC.



RECOMMENDED ALTITUDES	
ERD TAC	ALTITUDE
4.6	3000′
4.0	2790′
3.0	2440′
2.0	2080′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.32°	411	529	587	705	822	940
MAP at D1.0 ERD TAC						

HIALS
PAPI PAPI
ERD CH 1X
D2.0 ERD TAC LT
ERD CH 1X on R-255

Standard STRAIGHT-IN LANDING RWY **26** **CEILING REQUIRED**

DA(H) **1960′** (458′)

TERPS

		ALS out
A	500′- 1400m	500′- 1600m
B		
C		500′- 2100m
D	500′- 1600m	500′- 2400m

CHANGES: MSA.

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General Information

Location: Holzdorf Deu
IATA Code:
Lat/Long: N51° 46.1' E013° 10.1'
Elevation: 265 ft

Airport Use: Military
Magnetic Variation: 2.8°E

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

Sunrise: 0558 Z
Sunset: 1642 Z,

Runway Information

Runway: 09
Length x Width: 7936 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 260 ft
Lighting: Edge, ALS

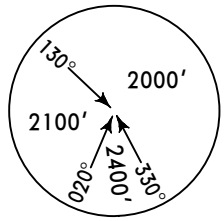
Runway: 27
Length x Width: 7936 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 265 ft
Lighting: Edge, ALS

Communication Information

Holzdorf Tower 130.5 Military
Holzdorf Tower 122.1 Military
Holzdorf Tower 26.74 Military
Holzdorf Tower 25.78 Military
Holzdorf Radar 129.85 Military
Holzdorf Radar 123.3 Military
Holzdorf Radar 38.54 Military
Holzdorf Radar 34.4 Military
Holzdorf Radar 27.807 Military
Holzdorf Radar 27.71 Military

Apt Elev	
265′	Trans level: By ATC Trans alt: 5000′ Emergency Safe Altitude within 100 NM of Holzdorf 6400′.

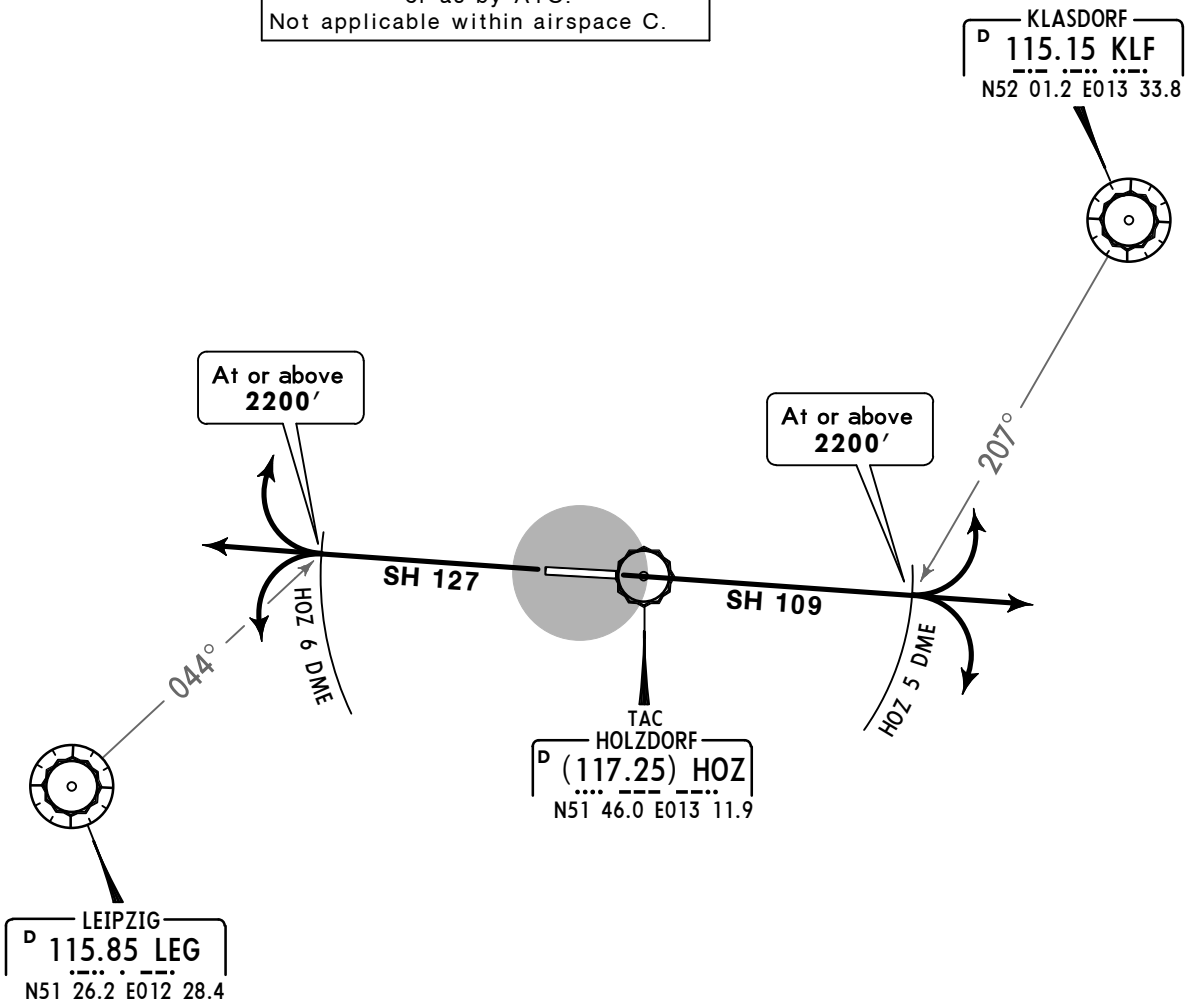
For UHF see MIL-101 listing

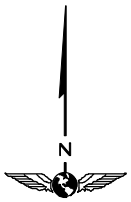


MSA
HOZ TAC

SH 109
SH 127
RWYS 09, 27 DEPARTURES

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





NOT TO SCALE

MINIMUM CLIMB RATE TABLE
FOR ATC PURPOSES

❶ **SH 109:** up to 2200′
❷ **SH 127:** up to 2200′

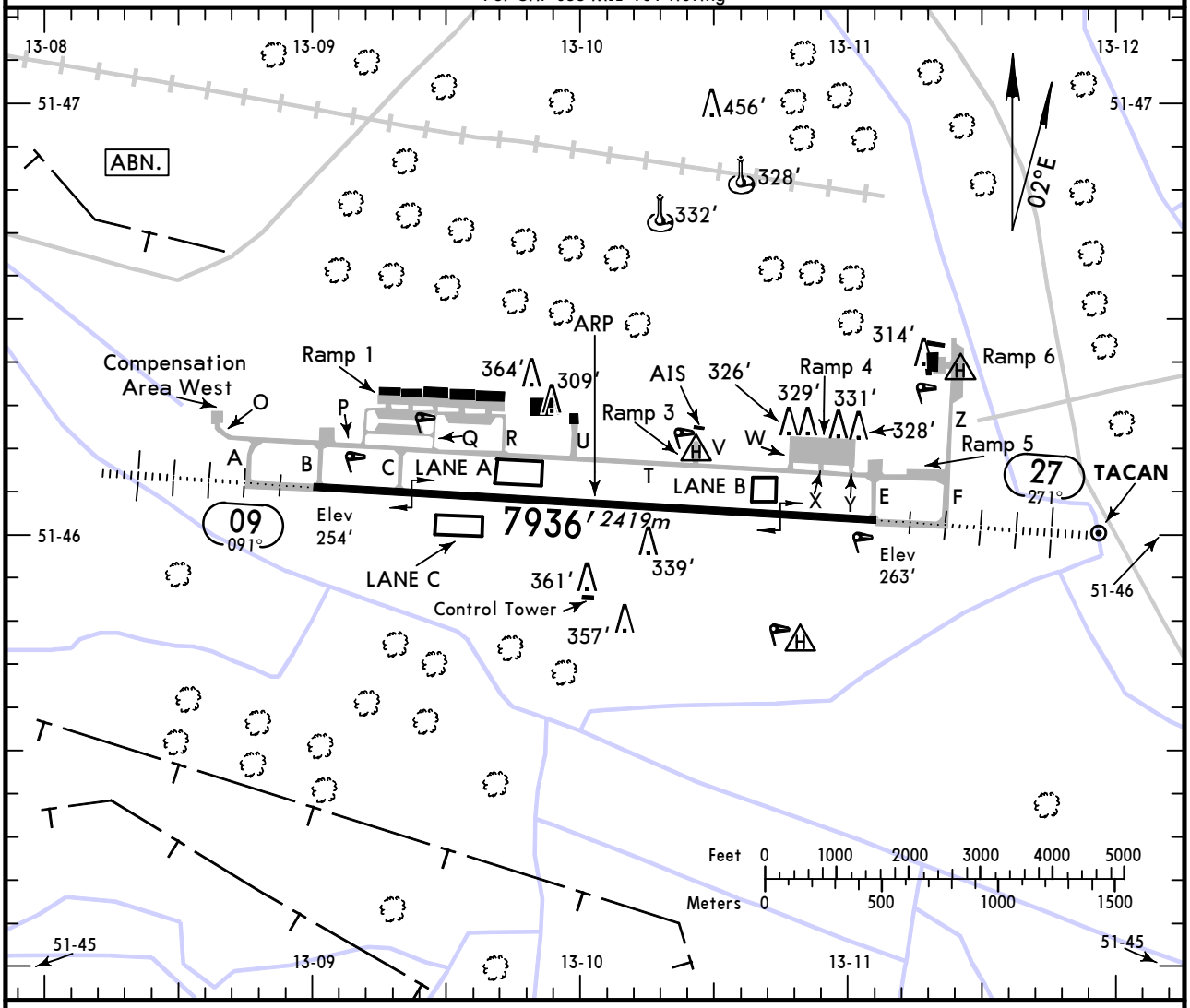
KT	75	100	150	200	250	300
❶ V/V (fpm)	438	583	875	1167	1458	1750
❷ V/V (fpm)	588	783	1175	1567	1958	2350

SID	RWY	ROUTING
SH 109	09	Climb straight ahead to HOZ 5 DME, continue as cleared by ATC.
SH 127	27	Climb straight ahead to HOZ 6 DME, continue as cleared by ATC.

CHANGES: New procedures at this airport.

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*HOLZDORF Tower
130.5 122.1
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
09 ❶ 27	HIRL HIALS SFL PAPI (angle 3.0)		6971′ 2125m		98′ 30m

❶ Anti-skid layer.

Standard TAKE-OFF ❶

	LVP must be in force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	250m	400m	500m
D	300m		

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

JAR-OPS TAKE-OFF

	LVP must be in force ❷				
	RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
COPTER	150m	200m	200m	250m ❸	800m

❷ Without LVP 400m are stipulated.
❸ Or rejected take-off distance whichever is the greater.

CHANGES: New airport.

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BREMEN Radar	*HOLZDORF Tower	
126.42	130.5	122.1

For UHF see MIL-101 listing

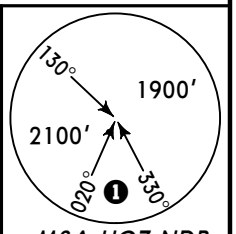
BRIEFING STRIP ™

LOC	Final	GS	ILS		
IHDW	Apch Crs	D4.0 IHDW	DA(H)	Apt Elev	265′
111.7	271°	1533′ (1268′)	465′ (200′)	TDZE	265′

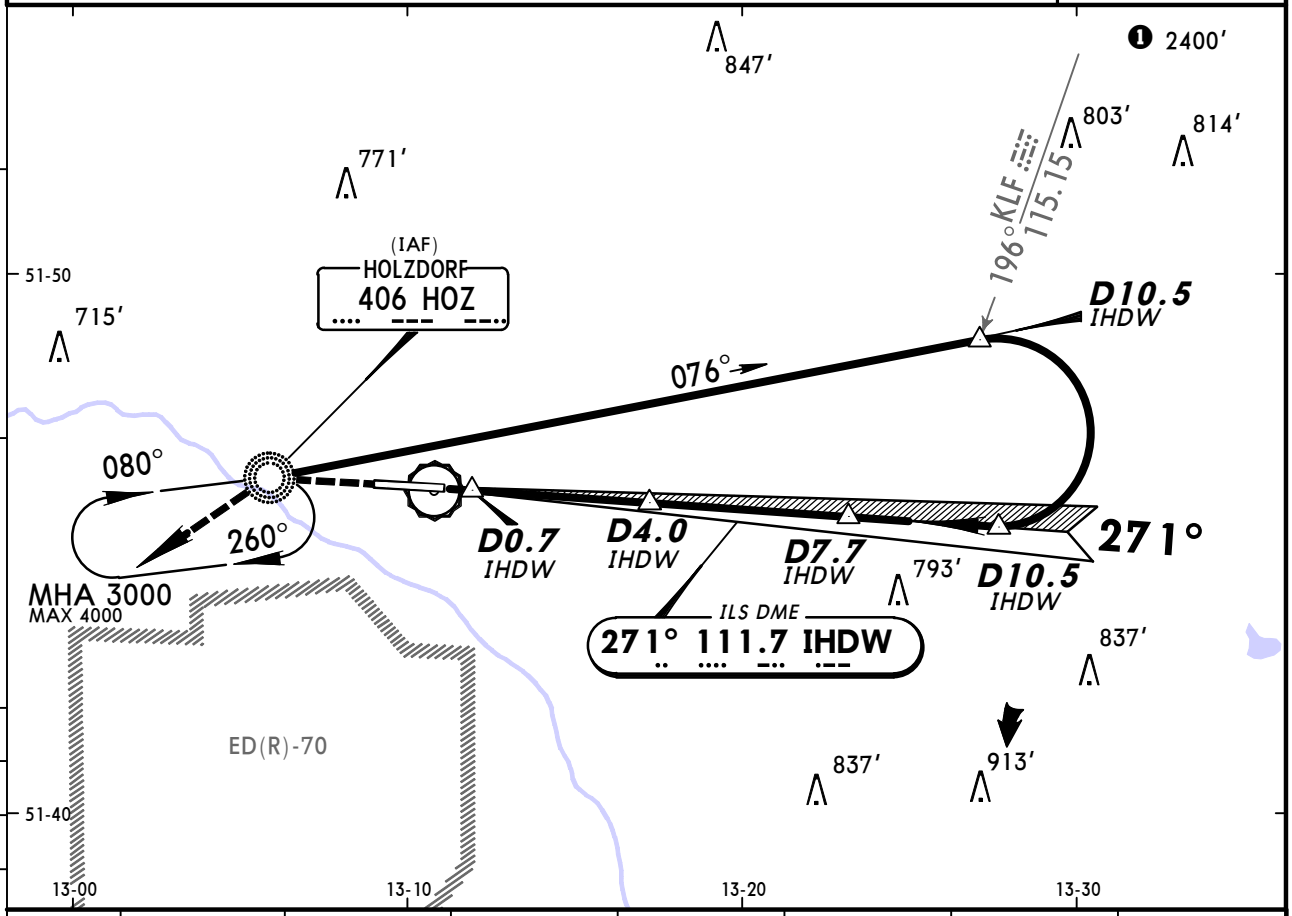
MISSED APCH: Climb to NDB to 3000′ and enter holding.

Alt Set: hPa (IN on req) TDZ Elev: 10 hPa Trans level: By ATC Trans alt: 5000′

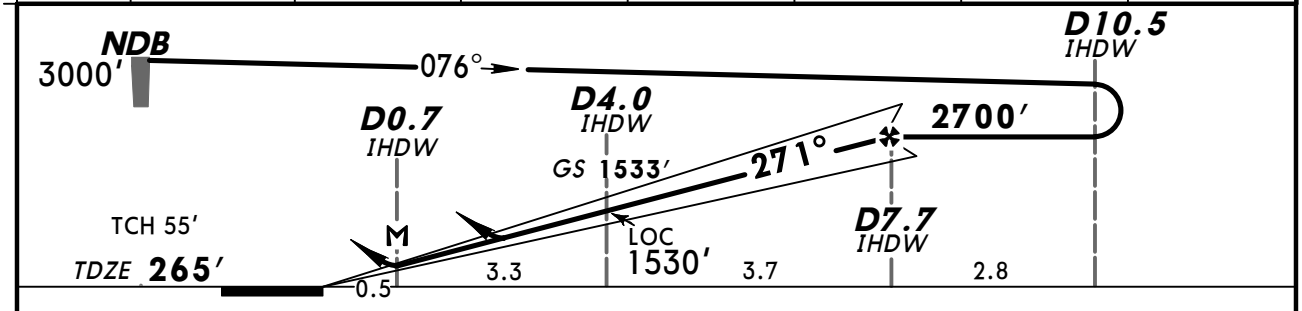
1. **NDB required.** 2. Baseturn restricted to MAX 220 KT.



MSA HOZ NDB



LOC (GS out)	IHDW DME	2.0	3.0	4.0	5.0	6.0	7.0
	ALTITUDE	890′	1210′	1530′	1850′	2160′	2480′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	484	538	646	753	861
MAP at D0.7 IHDW						

HIALS
PAPI PAPI

HOZ 406

Standard STRAIGHT-IN LANDING RWY 27 **CEILING REQUIRED** CIRCLE-TO-LAND

	ILS DA(H) 465′ (200′) FULL/Limited	ILS DA(H) 465′ (200′) ALS out	LOC (GS out) DA(H) 650′ (385′)	LOC (GS out) DA(H) 650′ (385′) ALS out
A	200′- 800m	200′- 1200m	400′- 1100m	400′- 1600m
B				
C			400′- 1200m	400′- 1800m
D	NOT APPLICABLE			400′- 2000m

CAT B not authorized South of rwy 09/27

Max Kts	MDA(H)	CEIL-VIS
100	760′ (495′)	500′ -1600m
135	770′ (505′)	500′ -1600m
C	NOT APPLICABLE	
D		

AATCP-1(C)

CHANGES: New procedure.

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BREMEN Radar 126.42 | *HOLZDORF Tower 130.5 122.1

For UHF see MIL-101 listing

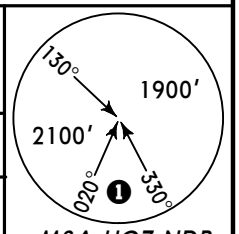
BRIEFING STRIP™

LOC	Final	GS	ILS	
IHDW	Apch Crs	D4.2 IHDW	DA(H)	Apt Elev 265′
111.7	271°	1600′ (1335′)	465′ (200′)	TDZE 265′

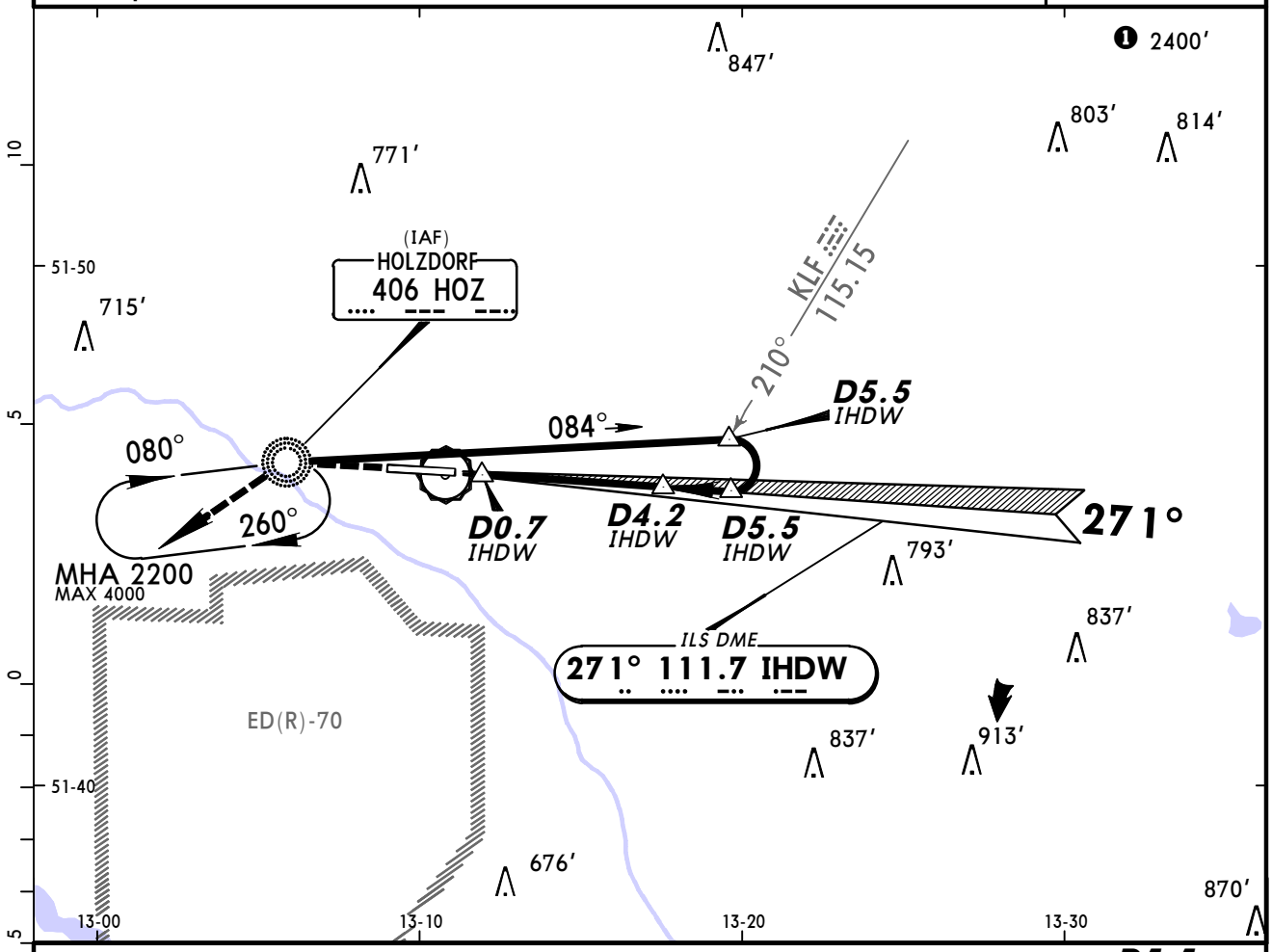
MISSED APCH: Climb to NDB to 2200′ and enter holding.

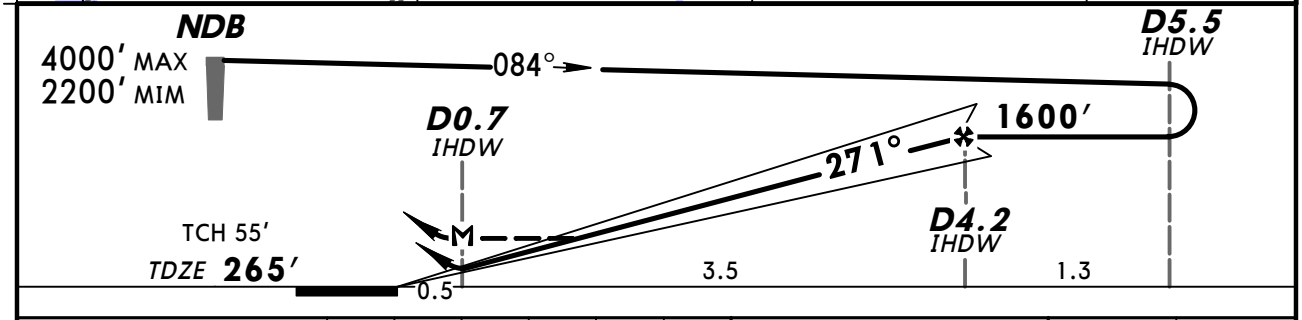
Alt Set: hPa (IN on req) TDZ Elev: 10 hPa Trans level: By ATC Trans alt: 5000′

NDB required.



MSA HOZ NDB





Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	377	484	538	646	753	861
MAP at D0.7 IHDW							

HIALS
PAPI PAPI

HOZ 406

JAR-OPS STRAIGHT-IN LANDING RWY **27** **CEILING REQUIRED**

	ILS DA(H) 465′ (200′)		LOC (GS out) MDA(H) 650′ (385′)	
	FULL	ALS out		ALS out
COPTER	200′- 600m	200′- 1000m	400′- 800m	400′- 1000m

AATCP-1(C)

CHANGES: New procedure.

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BREMEN Radar	*HOLZDORF Tower	
126.42	130.5	122.1

For UHF see MIL-101 listing

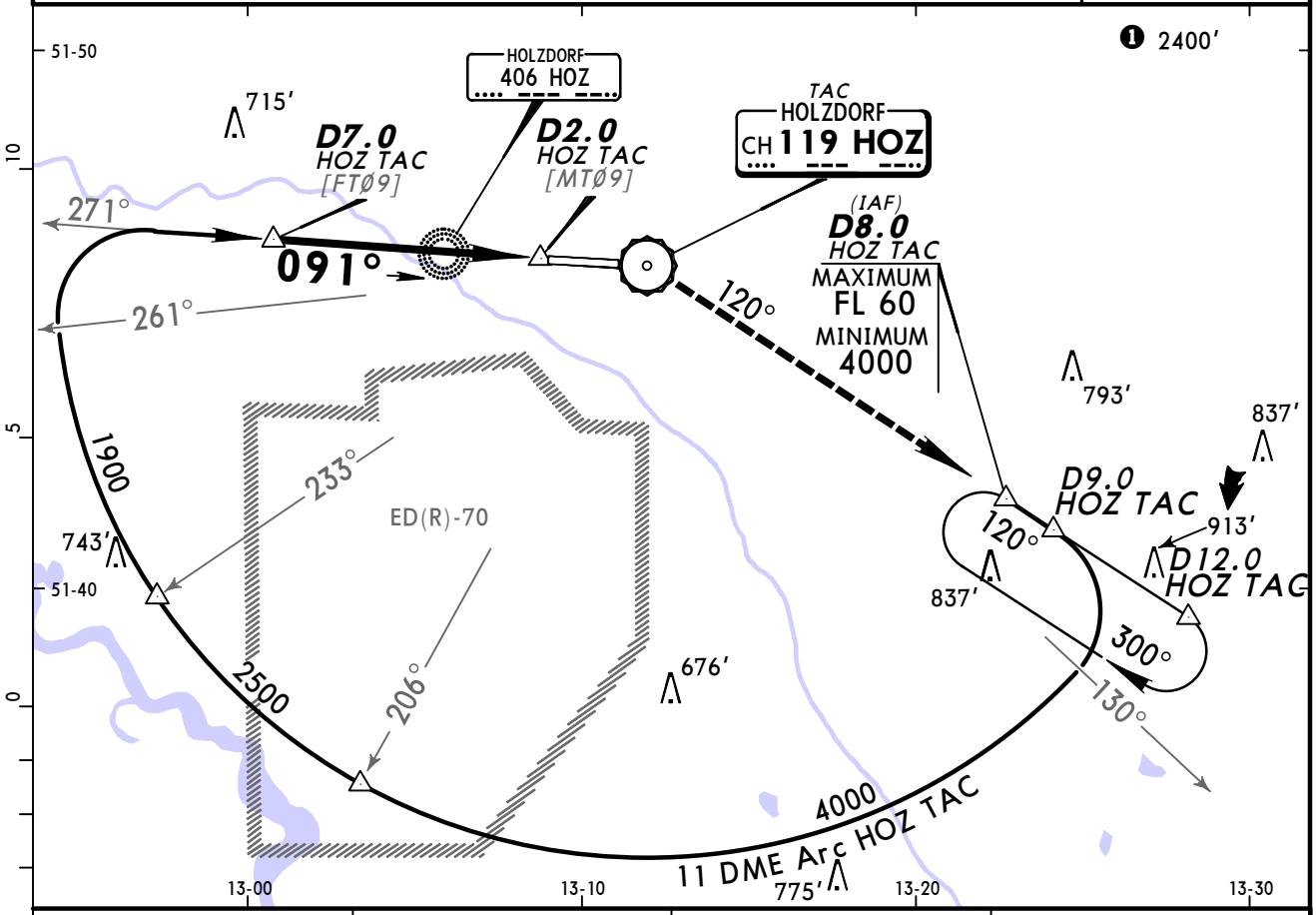
BRIEFING STRIP™

TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / TDZE
HOZ CH 119	091°	D7.0 HOZ TAC 1900′ (1640′)	670′ (410′)	265′ / 260′

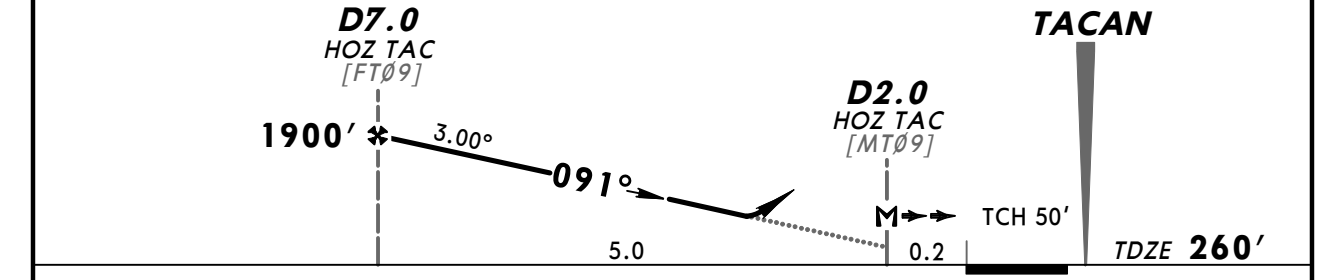
MISSED APCH: Climb STRAIGHT AHEAD to TACAN, then turn RIGHT onto R-120 HOZ TAC outbound to IAF climbing to 4000′.

MSA HOZ TAC: 130°–020° 2000′; 020°–330° 2100′; 330°–130° ❶ 2400′

Alt Set: hPa (IN on req) TDZ Elev: 9 hPa Trans level: By ATC Trans alt: 5000′



HOZ TAC	6.0	5.0	4.0
ALTITUDE	1590′	1270′	950′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D2.0 HOZ TAC						

HIALS PAPI PAPI — HOZ CH 119

Standard STRAIGHT-IN LANDING RWY **09** **CEILING REQUIRED** CIRCLE-TO-LAND

CAT B not authorized South of rwy 09/27

MDA(H) **670′ (410′)**

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	500′ - 1600m	100	760′ (495′)	500′ - 1600m
B		135	770′ (505′)	500′ - 1600m
C	500′ - 2000m	C	NOT APPLICABLE	
D		D		

AATCP-1(C)

CHANGES: New procedure.

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BREMEN Radar	*HOLZDORF Tower	
126.42	130.5	122.1

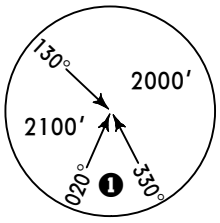
For UHF see MIL-101 listing

BRIEFING STRIP™

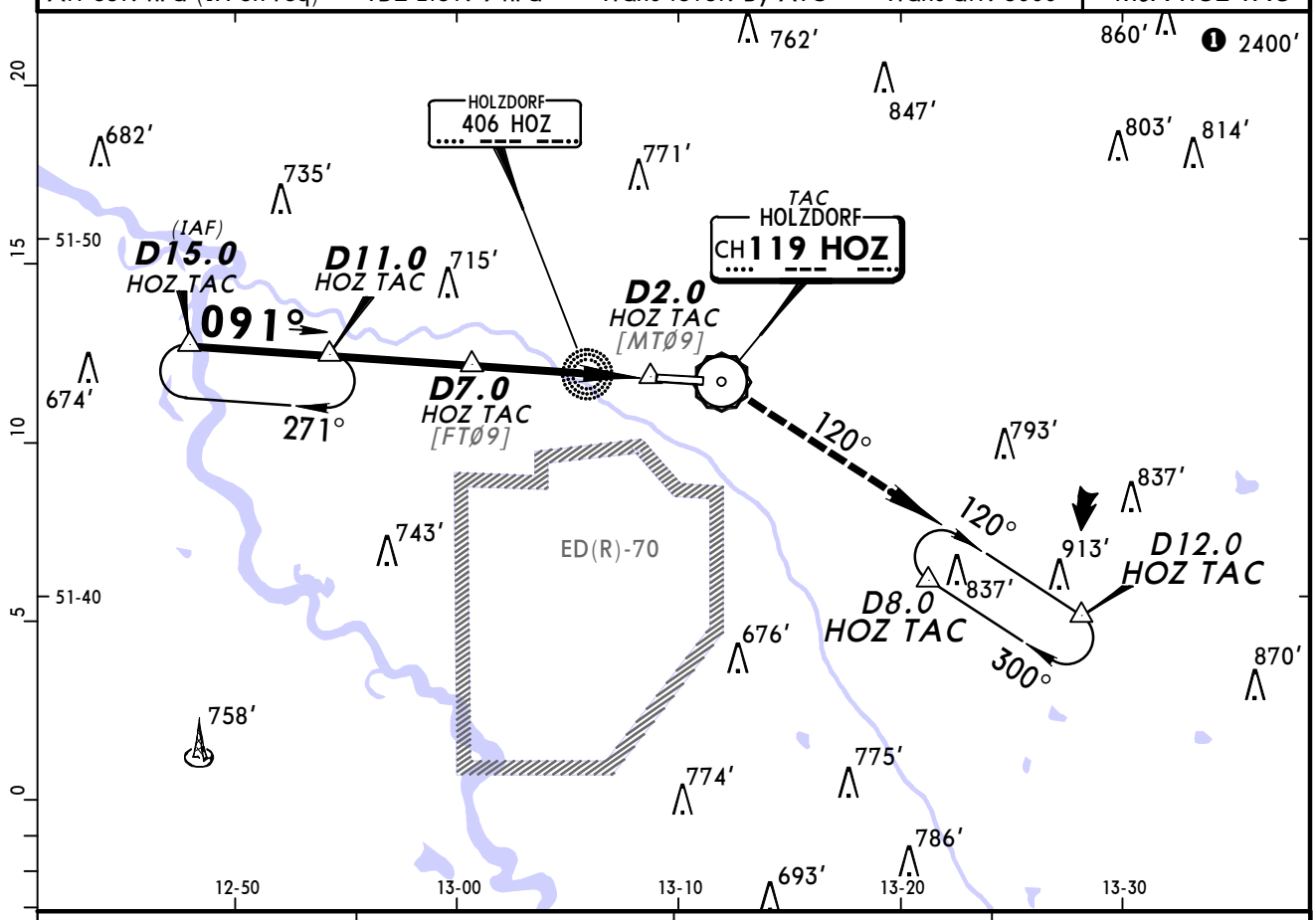
TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 265′
HOZ CH 119	Apch Crs 091°	D7.0 HOZ TAC 1900′ (1640′)	670′ (410′)	TDZE 260′

MISSED APCH: Climb STRAIGHT AHEAD to TACAN, then turn RIGHT onto R-120 HOZ TAC outbound climbing to 4000′ and join holding.

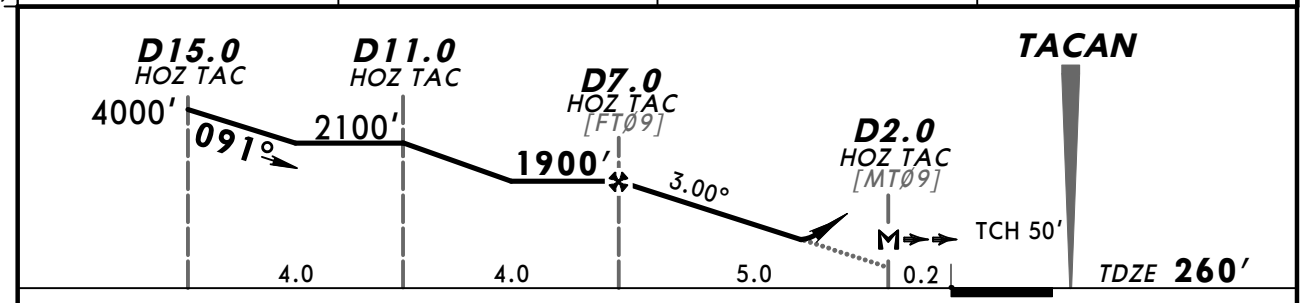
Alt Set: hPa (IN on req) TDZ Elev: 9 hPa Trans level: By ATC Trans alt: 5000′



MSA HOZ TAC



HOZ TAC	6.0	5.0	4.0
ALTITUDE	1590′	1270′	950′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
MAP at D2.0 HOZ TAC							

HIALS PAPI PAPI HOZ CH119

Standard STRAIGHT-IN LANDING RWY **09** **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) **670′** (410′)

	ALS out
A	500′ - 1600m
B	
C	500′ - 1200m
D	500′ - 2000m

CAT B not authorized South of rwy 09/27

Max Kts	MDA(H)	CEIL-VIS
100	760′ (495′)	500′ -1600m
135	770′ (505′)	500′ -1600m
C	NOT APPLICABLE	
D		

AATCP-1(C)

CHANGES: New procedure.

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BREMEN Radar	*HOLZDORF Tower	
126.42	130.5	122.1

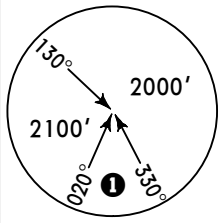
For UHF see MIL-101 listing

BRIEFING STRIP™

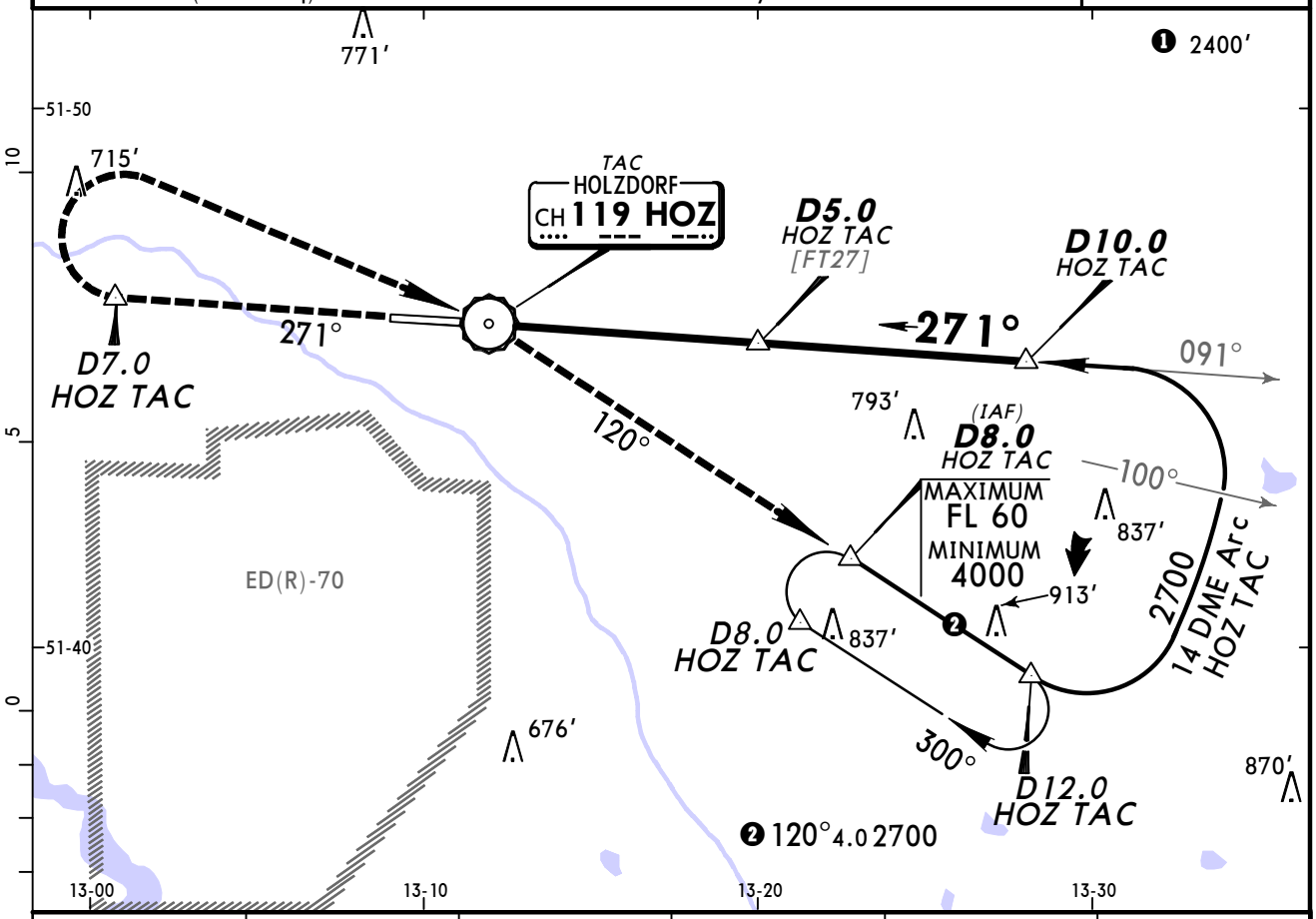
TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 265′
HOZ CH 119	Apch Crs 271°	D5.0 HOZ TAC 2000′ (1735′)	650′ (385′)	TDZE 265′

MISSED APCH: Climb on R-271 HOZ TAC to 4000′. At D7.0 HOZ TAC turn RIGHT (MAX 250 KT, MIM bank 20° for speeds more than 210 KT) to TACAN. At TACAN proceed on R-120 HOZ TAC outbound to IAF.

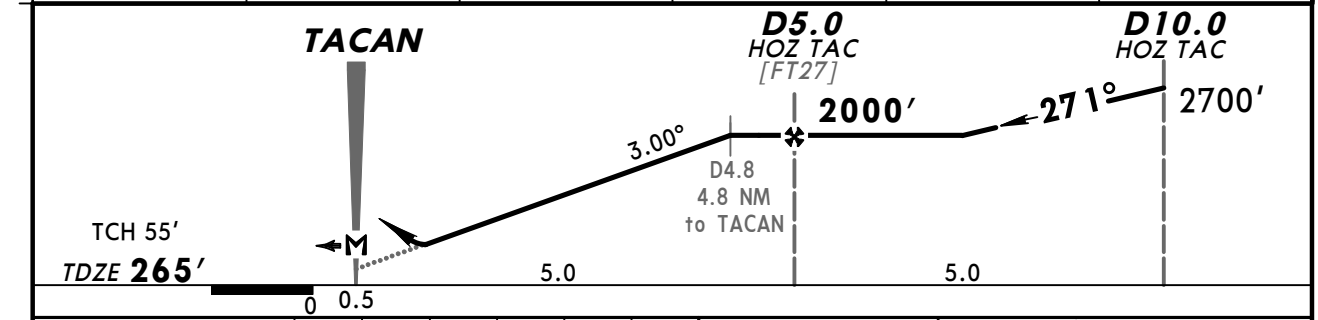
Alt Set: hPa (IN on req) TDZ Elev: 10 hPa Trans level: By ATC Trans alt: 5000′



MSA HOZ TAC



HOZ TAC	1.0	2.0	3.0	4.0	4.8
ALTITUDE	800′	1110′	1430′	1750′	2000′



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

HIALS
PAPI PAPI

D7.0 HOZ TAC

HOZ CH 119 on R-271

Standard STRAIGHT-IN LANDING RWY 27 **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 650′ (385′)

	ALS out
A	400′- 1100m
B	400′- 1600m
C	400′- 1200m
C	400′- 1800m
D	400′- 2000m
D	400′- 2000m

CAT B not authorized South of rwy 09/27

Max Kts	MDA(H)	CEIL-VIS
100	760′ (495′)	500′ -1600m
135	770′ (505′)	500′ -1600m
C	NOT APPLICABLE	
D		

AATCP-1(C)

CHANGES: New procedure.

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HOLZDORF, GERMANY
COPTER TACAN Rwy 27

BREMEN Radar	*HOLZDORF Tower	
126.42	130.5	122.1

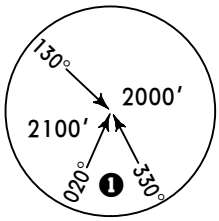
For UHF see MIL-101 listing

BRIEFING STRIP ™

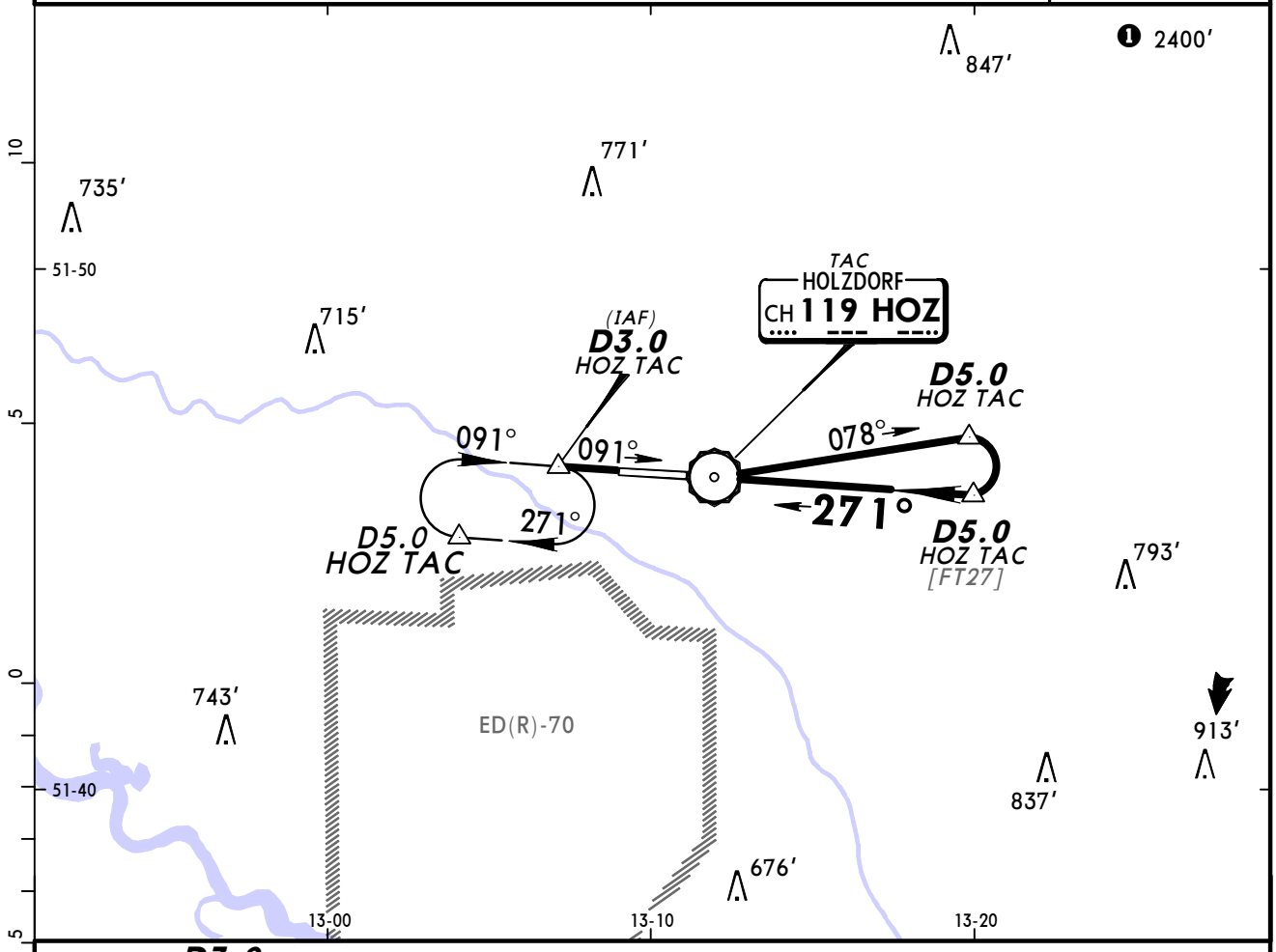
TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 265′
HOZ CH 119	Apch Crs 271°	D5.0 HOZ TAC 2000′ (1735′)	650′ (385′)	TDZE 265′

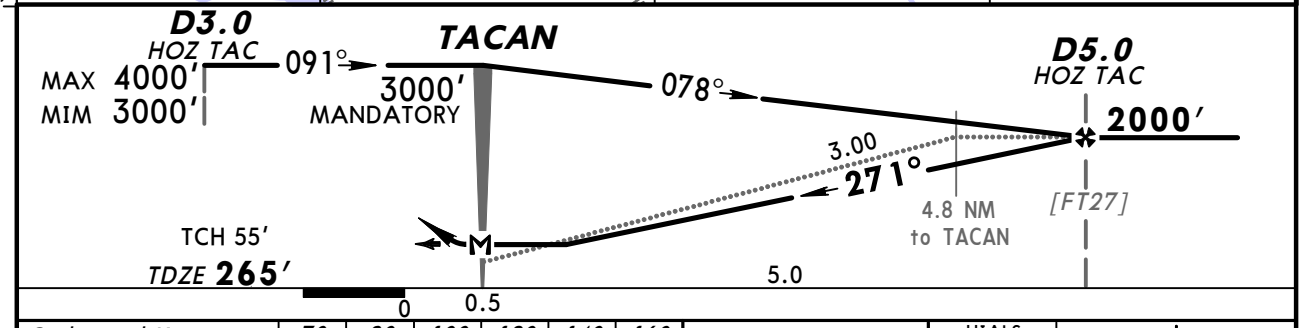
MISSED APCH: Climb on R-271 HOZ TAC to 3000′ and enter holding.

Alt Set: hPa (IN on req) TDZ Elev: 10 hPa Trans level: By ATC Trans alt: 5000′



MSA HOZ TAC





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

HIALS
PAPI PAPI

3000′ HOZ TAC on CH 119 R-271

JAR-OPS STRAIGHT-IN LANDING RWY 27 **CEILING REQUIRED**

MDA(H) 650′ (385′)

	ALS out
COPTER	400′- 800m
	400′- 1000m

AATCP-1(C)

CHANGES: New procedure.

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BREMEN Radar	*HOLZDORF Tower	
126.42	130.5	122.1

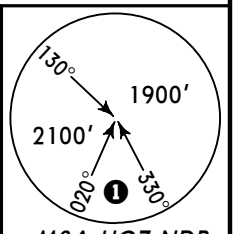
For UHF see MIL-101 listing

BRIEFING STRIP ™

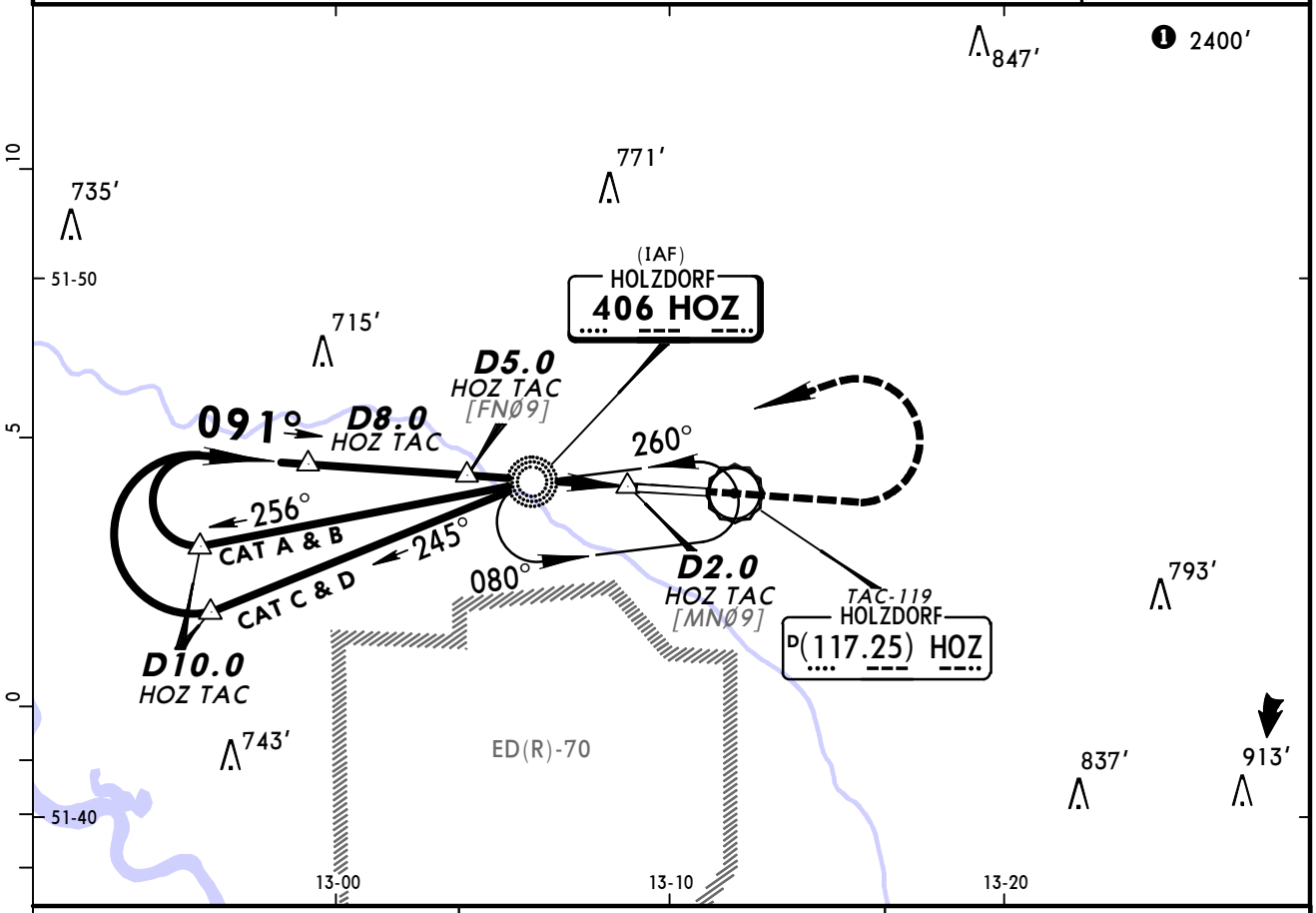
NDB HOZ	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / TDZE
406	091°	D5.0 HOZ TAC 1400′ (1140′)	640′ (380′)	Apt Elev 265′ / TDZE 260′

MISSED APCH: Climb STRAIGHT AHEAD to 1500′, then turn LEFT to NDB climbing to 2200′. MAX 200 KT

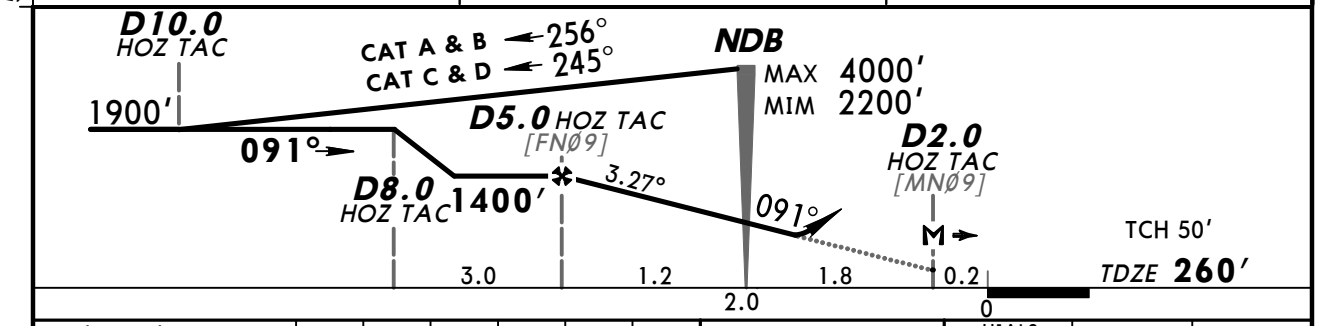
Alt Set: hPa (IN on req) TDZ Elev: 9 hPa Trans level: By ATC Trans alt: 5000′
1. DME required. 2. Procedure restricted to MAX 200 KT.



MSA HOZ NDB



HOZ TAC		4.0	3.0
ALTITUDE		1060′	710′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.27°	405	521	579	694	810	926
MAP at D2.0 HOZ TAC						

HIALS
PAPI PAPI

200 KT MAX

1500′

Standard STRAIGHT-IN LANDING RWY **09** **CEILING REQUIRED** CIRCLE-TO-LAND

CAT B not authorized
South of rwy 09/27

MDA(H) **640′** (380′)

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	400′- 1000m	100	760′ (495′)	500′ -1600m
B		135	770′ (505′)	500′ -1600m
C	400′- 1200m			
D				

	ALS out		
C	400′- 1700m	C	NOT APPLICABLE
D	400′- 2000m	D	

AATCP-1(C)

CHANGES: New procedure.

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BREMEN Radar 126.42 | *HOLZDORF Tower 130.5 122.1

For UHF see MIL-101 listing

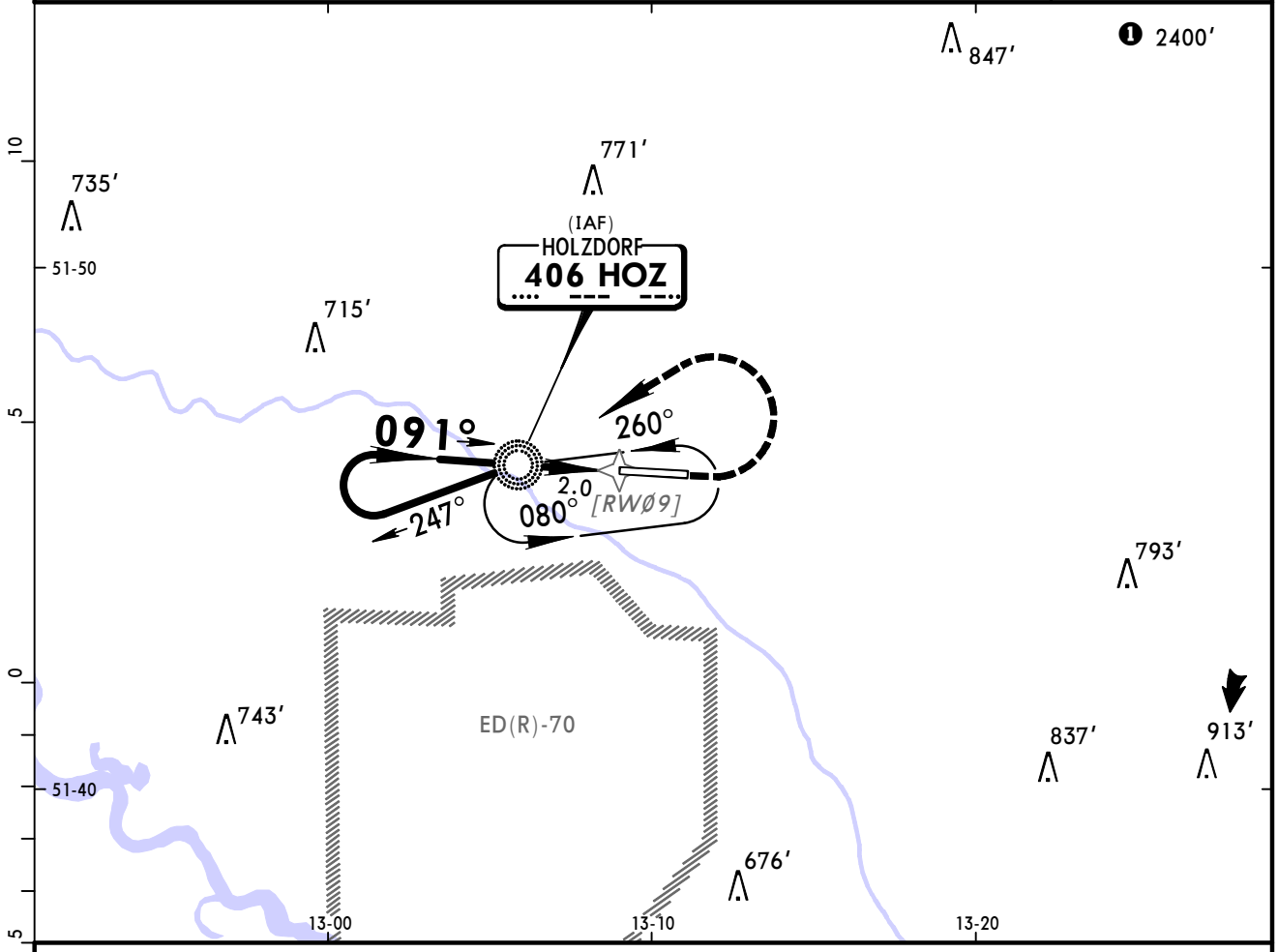
BRIEFING STRIP ™

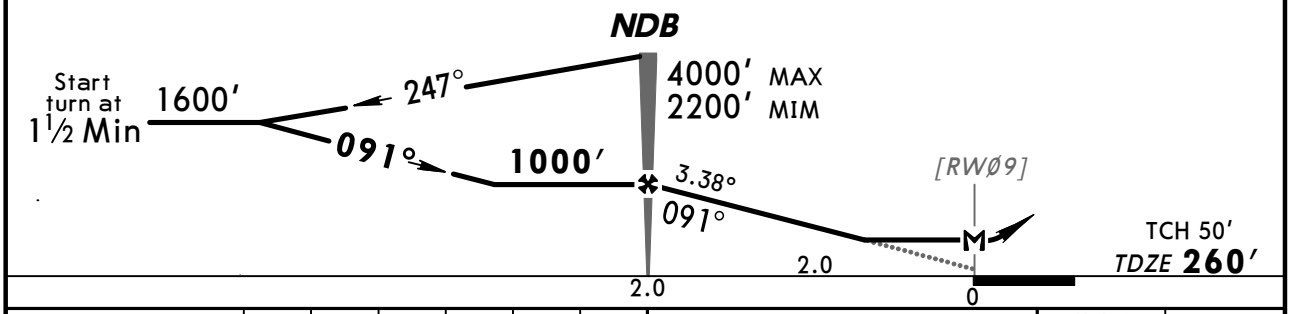
NDB HOZ 406	Final Apch Crs 091°	Minimum Alt NDB 1000′ (740′)	MDA(H) 640′ (380′)	Apt Elev 265′ TDZE 260′

MISSED APCH: Climb STRAIGHT AHEAD to 1000′, then turn LEFT to NDB climbing to 2200′.

MSA HOZ NDB: 130°–020° 1900′; 020°–330° 2100′; 330°–130° 2400′

Alt Set: hPa (IN on req) | TDZ Elev: 9 hPa | Trans level: By ATC | Trans alt: 5000′





Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.38°	419	538	598	718	837	957
NDB to MAP 2.0	1:43	1:20	1:12	1:00	0:51	0:45

HIALS PAPI PAPI 1000′

JAR-OPS STRAIGHT-IN LANDING RWY **09** **CEILING REQUIRED**

MDA(H) **640′** (380′)

	ALS out
COPTER	400′- 800m
	400′- 1000m

AATCP-1(C)

CHANGES: New procedure.

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HOLZDORF, GERMANY
*PAR or *SRA Rwys 09, 27

BREMEN Radar	*HOLZDORF Radar		*HOLZDORF Tower	
126.42	129.85	123.3	130.5	122.1

For UHF see MIL-101 listing

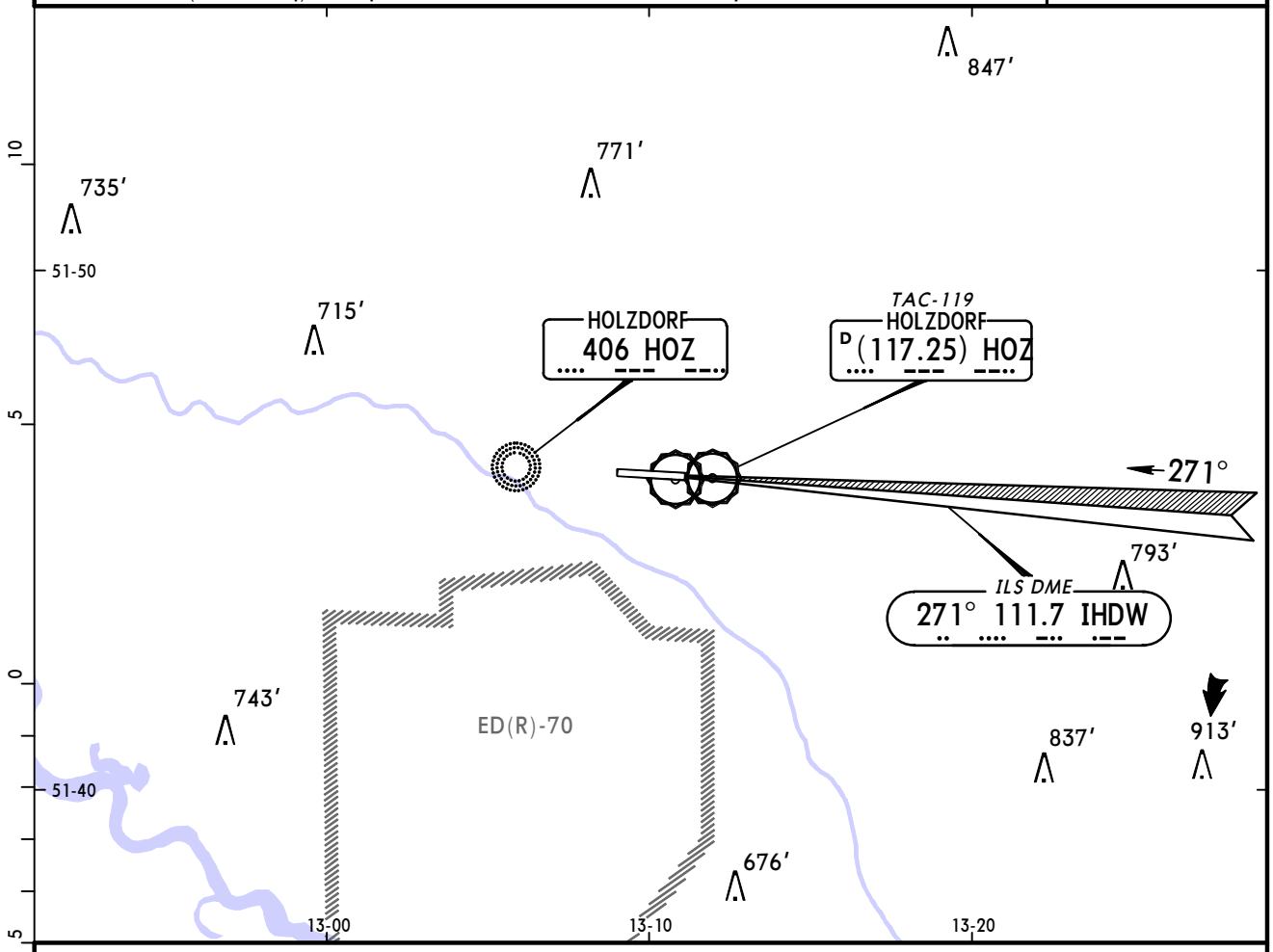
BRIEFING STRIP™

RADAR	Final Apch Crs BY ATC	PAR GS Not published / Minimum Alt No FAF	DA(H)/MDA(H) Refer to Minimums	Apt Elev 265′ / TDZE RWY 09 260′ / TDZE RWY 27 265′

No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 10 hPa Trans level: By ATC Trans alt: 5000′



	RWY 09 PAR TCH 46′	RWY 27 PAR TCH 47′					
Gnd speed-Kts		70	90	100	120	140	160
PAR GS	3.00°	377	484	538	646	753	861

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

	PAR 09 DA(H) 460′(200′)		PAR 27 DA(H) 465′(200′)		SRA 09 MDA(H) 660′(400′)		SRA 27 MDA(H) 660′(395′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	400′- 1300m	400′- 2000m	400′- 1300m	400′- 2000m
B								
C					400′- 1500m	400′- 2200m	400′- 1500m	400′- 2200m
D								

APATC-1(A)

CHANGES: New procedure.

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HOLZDORF, GERMANY
COPTER *PAR 091° & 271°

BREMEN Radar	*HOLZDORF Radar		*HOLZDORF Tower	
126.42	129.85	123.3	130.5	122.1

For UHF see MIL-101 listing

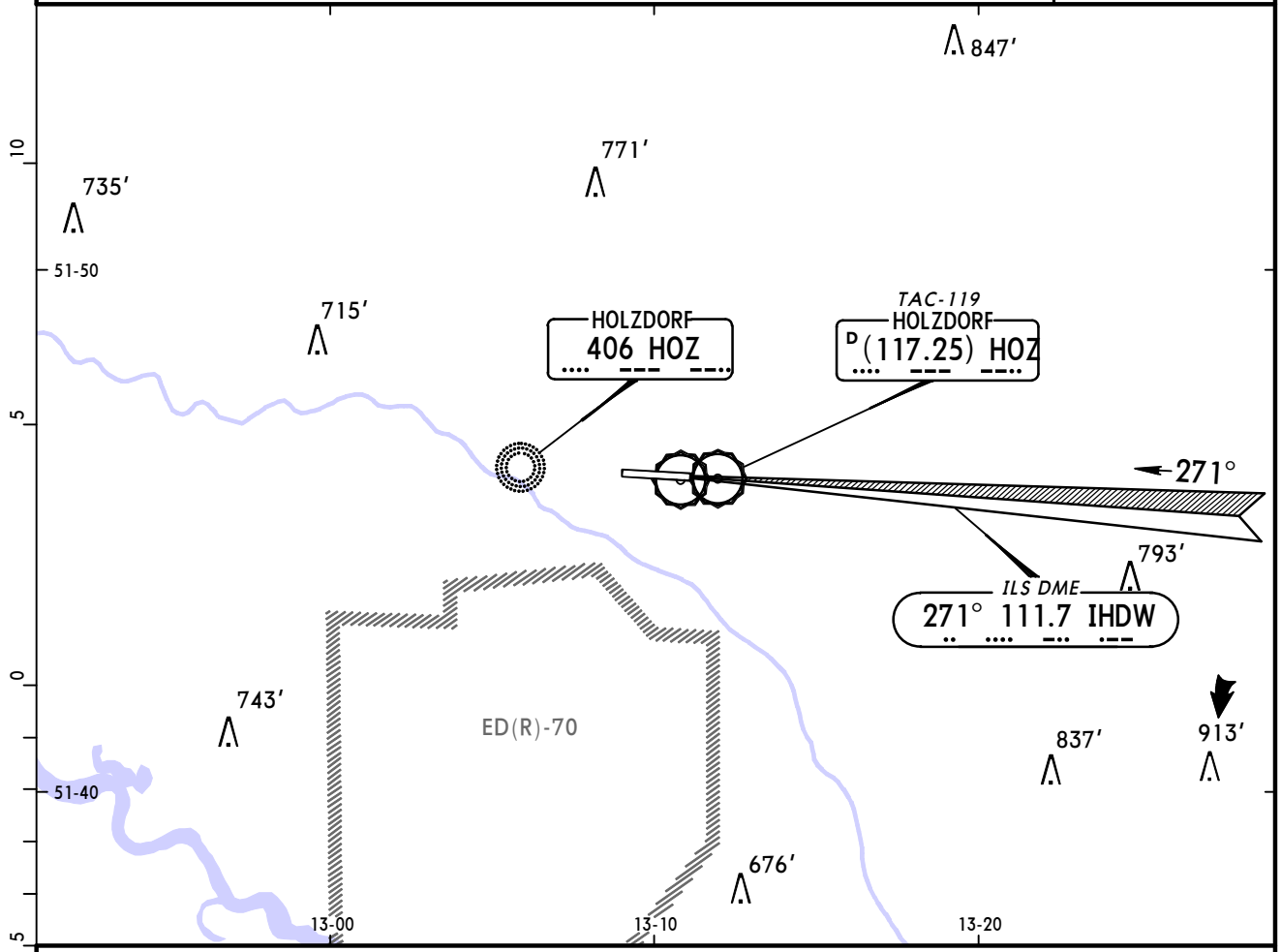
BRIEFING STRIP™

RADAR	Final Apch Crs	PAR GS	DA(H)	Apt Elev / TDZE RWY 09 / TDZE RWY 27
	BY ATC	Not published	Refer to Minimums	265′ / 260′ / 265′

No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 10 hPa Trans level: By ATC Trans alt: 5000′



								Lighting - Refer to Airport Chart	Refer to Missed Apch above

JAR-OPS **CEILING REQUIRED**

	PAR 091° DA(H) 460′ (200′)		PAR 271° DA(H) 465′ (200′)	
	FULL	ALS out	FULL	ALS out
COPTER	100′- 500m	100′- 1000m	100′- 500m	100′- 1000m

APATC-1(A)

CHANGES: New procedure.

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General Information

Location: Ingolstadt Deu
IATA Code: IGS
Lat/Long: N48° 42.9' E011° 32.0'
Elevation: 1203 ft

Airport Use: Joint
Magnetic Variation: 2.3°E

Fuel Types: 100 Octane (LL), Jet A-1, Jet 4
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 0601 Z
Sunset: 1653 Z,

Runway Information

Runway: 07L
Length x Width: 8000 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 1196 ft
Lighting: Edge, ALS

Runway: 07R
Length x Width: 9646 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 1201 ft
Lighting: Edge, ALS
Stopway: 797 ft

Runway: 25L
Length x Width: 9646 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 1197 ft
Lighting: Edge, ALS
Stopway: 1020 ft

Runway: 25R
Length x Width: 8000 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 1192 ft
Lighting: Edge, ALS
Stopway: 1312 ft

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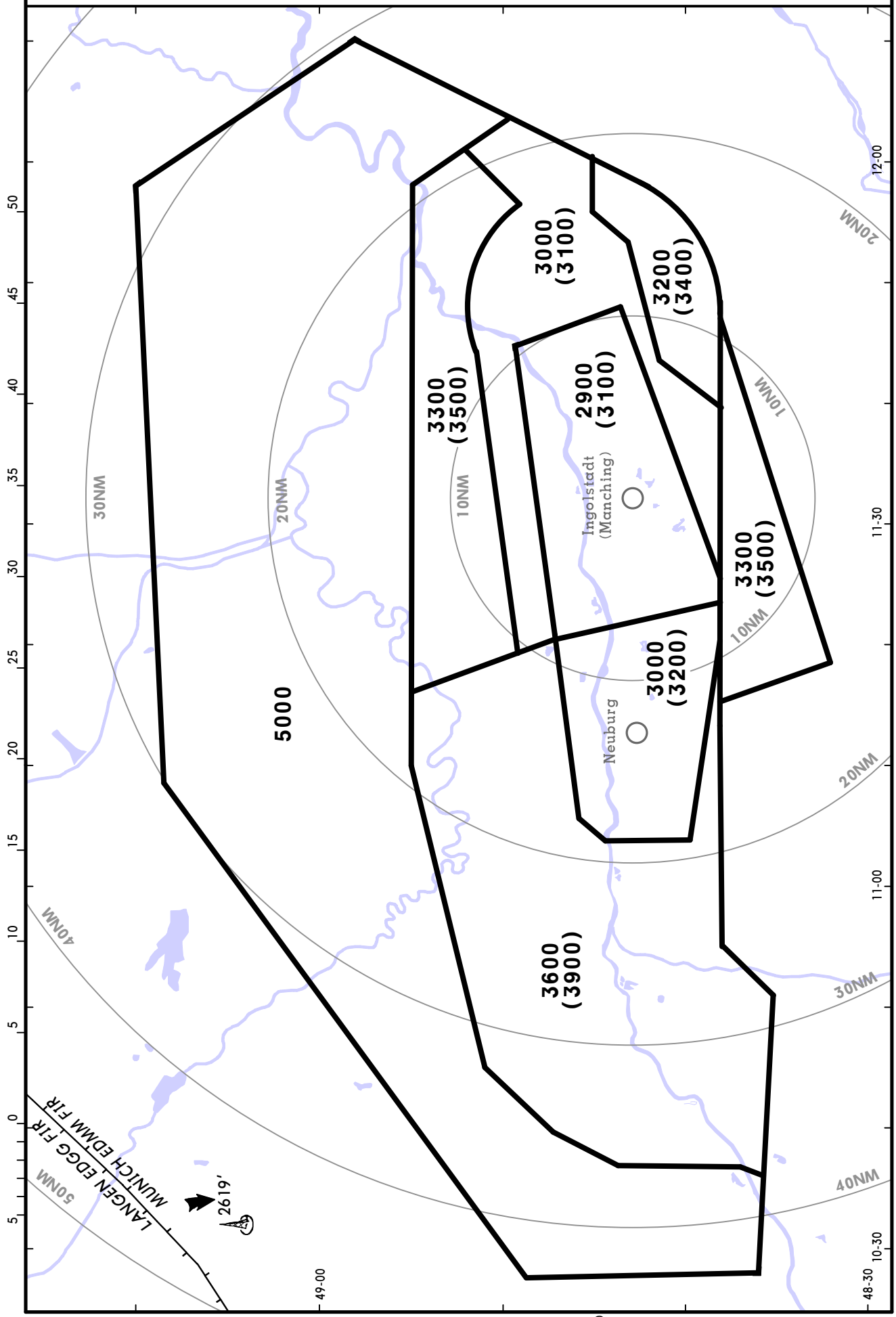
Communication Information

Ingo Tower 139.4 Military
Ingo Tower 125.25
Ingo Tower 122.1
Ingo Tower 37.32 Military
Ingo Tower 28.21 Military
Ingo Tower 25.78 Military
Ingo Tower 24.095 Military
Ingo Radar 139.4 Military
Ingo Radar 125.575
Ingo Radar 123.3
Ingo Radar 122.1
Ingo Radar 120.6
Ingo Radar 38.54 Military
Ingo Radar 37.975 Military
Ingo Radar 36.937 Military
Ingo Radar 34.4 Military
Ingo Radar 31.347 Military
Ingo Radar 27.81 Military

*INGO Radar	*Apt Elev*	Alt Set: hPa (IN on request)
120.6	1203′	Trans level: By ATC Trans alt: 5000′

For UHF see MIL-101 listing

Values in brackets consider additional height margins in order to meet required obstacle clearance at cold temperatures.

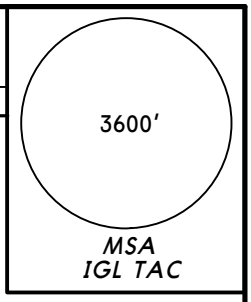


CHANGES: Sectors.

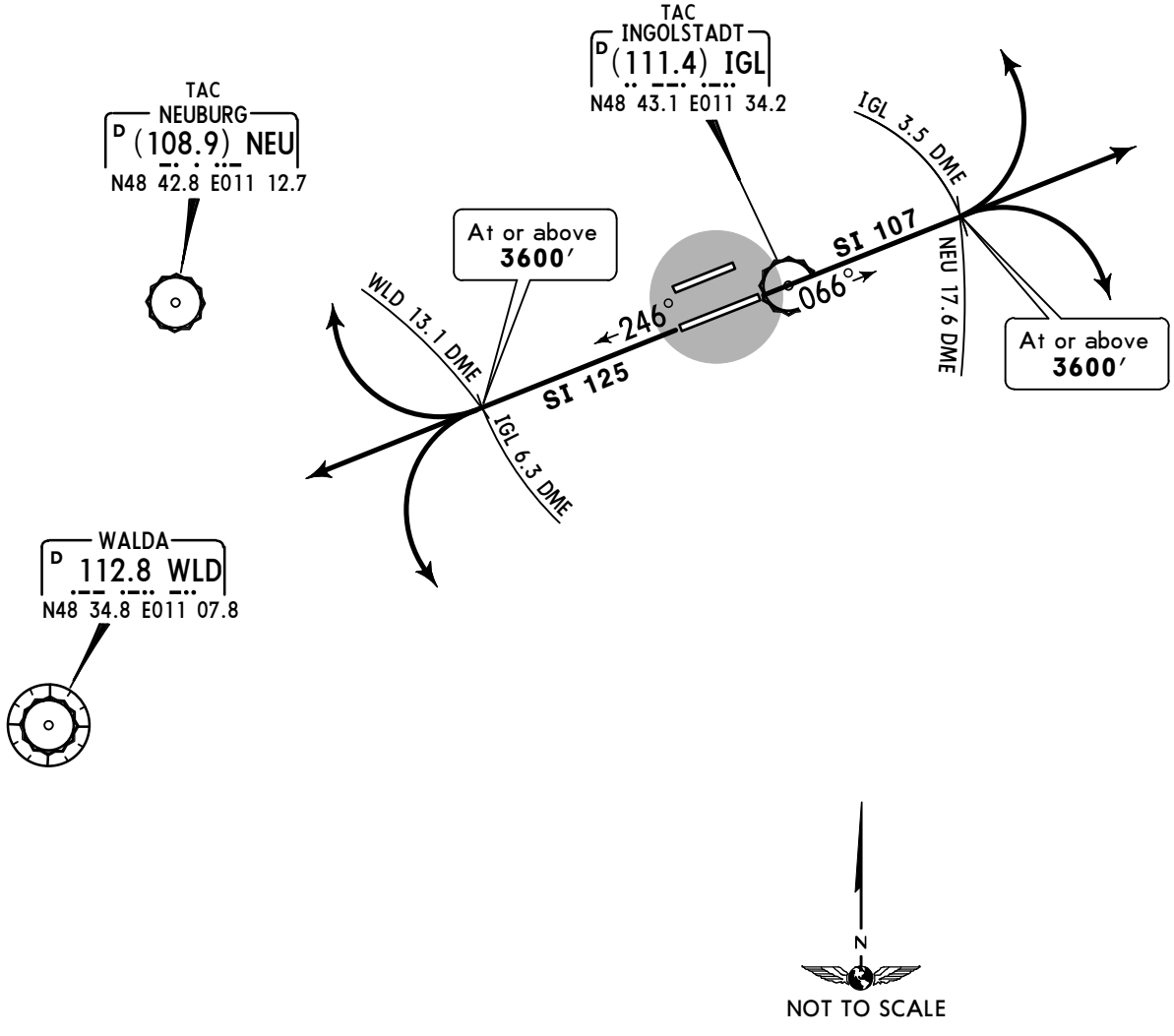
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Apt Elev	Trans level: By ATC Trans alt: 5000′
1203′	Emergency safe altitude within 100 NM of Manching 13500′.

For UHF see MIL-101 listing



SI 107, SI 125
RWYS 07R, 25L DEPARTURES



MINIMUM CLIMB RATE TABLE
FOR ATC PURPOSES up to **3600′**

KT	75	100	150	200	250	300
V/V (fpm)	760	1013	1520	2026	2533	3040

SID	RWY	ROUTING
SI 107	**07R**	Climb on 066° track to IGL 3.5 DME or NEU 17.6 DME, continue as cleared by ATC.
SI 125	**25L**	Climb on 246° track to IGL 6.3 DME or WLD 13.1 DME, continue as cleared by ATC.

CHANGES: None.

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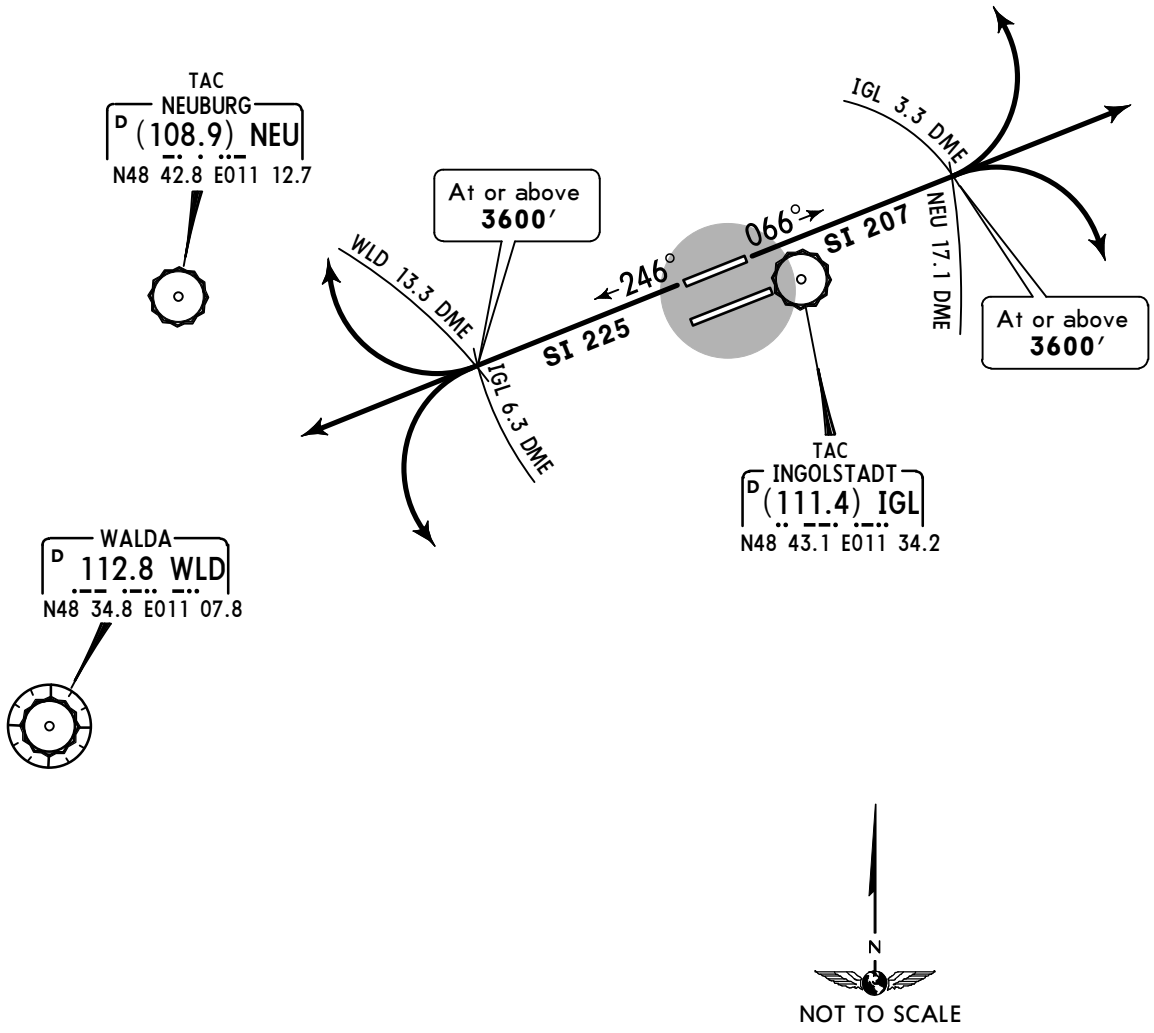
Apt Elev	
1203′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Manching 13500′.

For UHF see MIL-101 listing

3600′

MSA
IGL TAC

SI 207, SI 225
RWYS 07L, 25R DEPARTURES



MINIMUM CLIMB RATE TABLE
FOR ATC PURPOSES up to **3600′**

KT	75	100	150	200	250	300
V/V (fpm)	760	1013	1520	2026	2533	3040

SID	RWY	ROUTING
SI 207	**07L**	Climb on 066° track to IGL 3.3 DME or NEU 17.1 DME, continue as cleared by ATC.
SI 225	**25R**	Climb on 246° track to IGL 6.3 DME or WLD 13.3 DME, continue as cleared by ATC.

CHANGES: SID SI 225 revised.

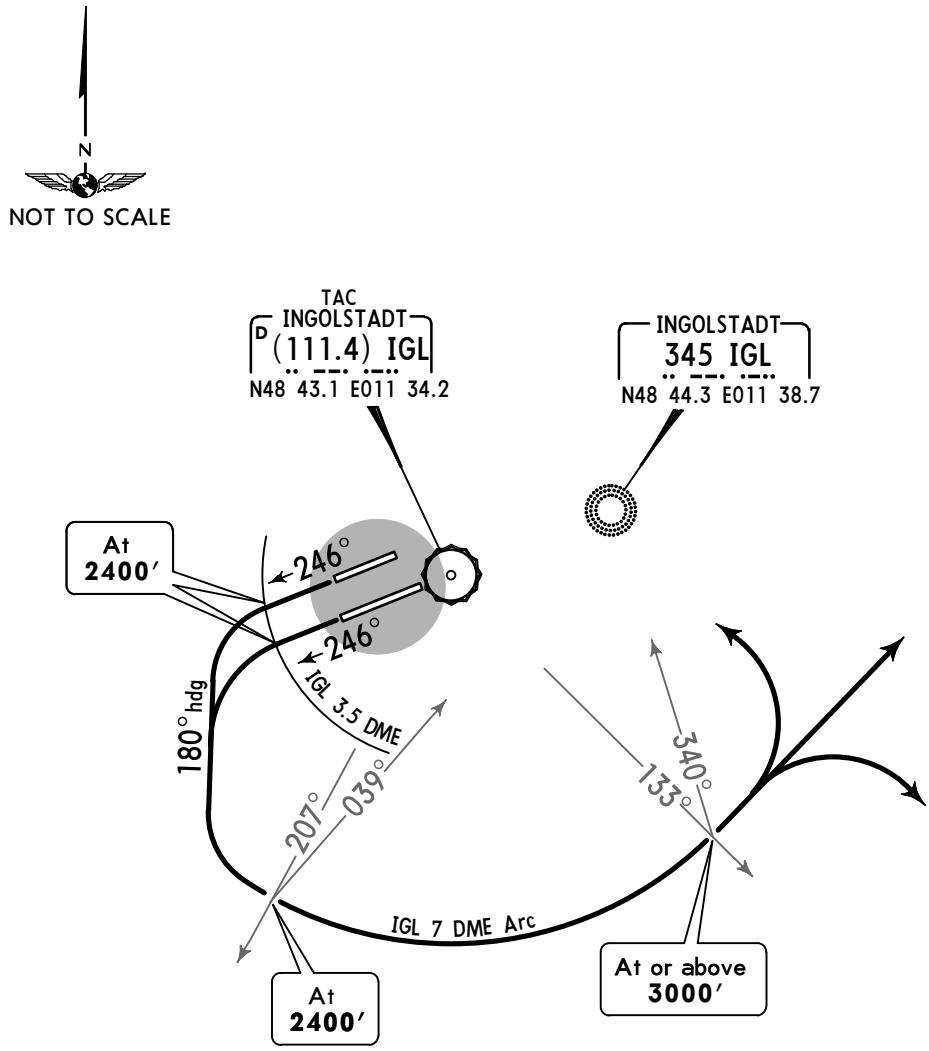
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Apt Elev	
1203′	Trans level: By ATC Trans alt: 5000′ 1. Not for civil use. 2. Emergency safe altitude within 100 NM of Manching 13500′.

For UHF see MIL-101 listing

3600′
MSA
IGL TAC

SI 325, SI 425
RWYS 25L/R DEPARTURES
NON-TACAN EQUIPPED AIRCRAFT HAVE TO BE RADAR MONITORED



MINIMUM CLIMB RATE TABLE

❶ **SI 325:** up to **2400′** for ATC purposes.
❷ **SI 425:** 486′ per NM (8%).

KT	75	100	150	200	250	300
❷ V/V (fpm)	608	810	1215	1620	2025	2430
❶ V/V (fpm)	570	760	1140	1520	1900	2280

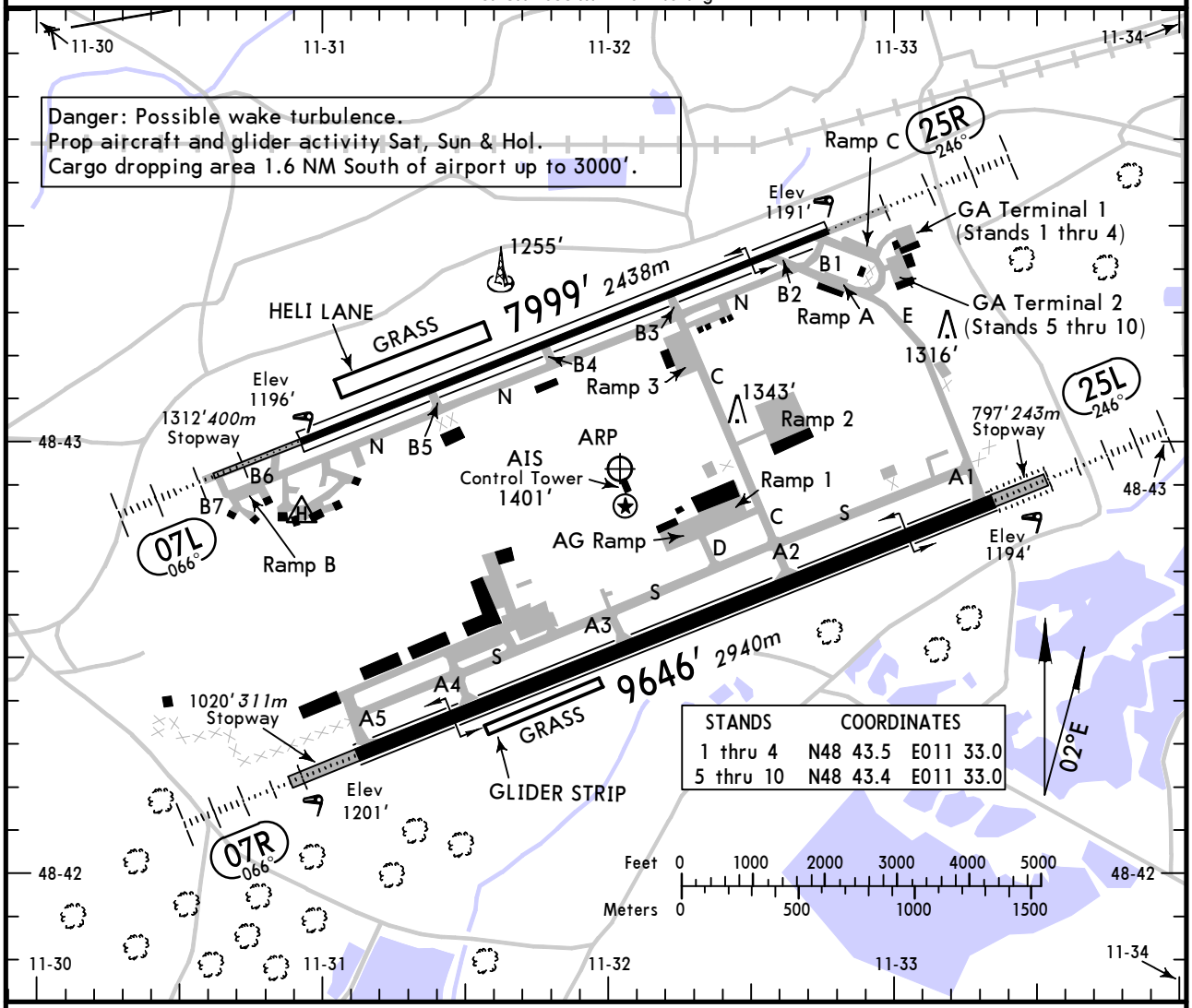
Execute turns after take-off with MAX 250 KT

SID	RWY	ROUTING
SI 325	25L	Climb on 246° track to **2400′**, at IGL 3.5 DME turn LEFT, 180° heading, along IGL 7 DME arc, continue as cleared by ATC.
SI 425	25R	

CHANGES: New procedures at this airport.

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*INGO Tower
125.25 122.1
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
07L ❶ 25R	HIRL HIALS PAPI (angle 3.0°)				98′ *30m*
07R ❶ 25L	HIRL HIALS SFL PAPI (angle 3.0°)				197′ *60m*
	HIRL HIALS-II SFL PAPI (angle 3.0°)		8492′ *2588m*		

❶ Rwy with anti-skid layer.

Standard TAKE-OFF **1**

	LVP must be in force RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	*250m*	*400m*	*500m*
D	*300m*		

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

CHANGES: Rwy 07R/25L stopways.

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INGOLSTADT, GERMANY
MANCHING

STRAIGHT-IN RWY		A	B	C	D
07L	PAR	**1396′**(200′)	**1396′**(200′)	**1396′**(200′)	**1396′**(200′)
		ceil 200′- **800m**	ceil 200′- **800m**	ceil 200′- **800m**	ceil 200′- **800m**
	ALS out	ceil 200′- 1200m	ceil 200′- 1200m	ceil 200′- 1200m	ceil 200′- 1200m
	RNAV	**1580′**(384′)	**1580′**(384′)	**1590′**(394′)	**1610′**(414′)
		ceil 400′- **900m**	ceil 400′- **1000m**	ceil 400′- **1200m**	ceil 500′- **1400m**
	ALS out	ceil 400′- 1600m	ceil 400′- 1600m	ceil 400′- 1800m	ceil 500′- 2000m
	SRA	**1580′**(384′)	**1580′**(384′)	**1580′**(384′)	**1580′**(384′)
		ceil 400′- **900m**	ceil 400′- **1000m**	ceil 400′- **1200m**	ceil 400′- **1400m**
	ALS out	ceil 400′- 1600m	ceil 400′- 1600m	ceil 400′- 1800m	ceil 400′- 2000m
07R	PAR	**1401′**(200′)	**1401′**(200′)	**1401′**(200′)	**1401′**(200′)
		ceil 200′- **800m**	ceil 200′- **800m**	ceil 200′- **800m**	ceil 200′- **800m**
	ALS out	ceil 200′- 1200m	ceil 200′- 1200m	ceil 200′- 1200m	ceil 200′- 1200m
	RNAV	**1560′**(359′)	**1560′**(359′)	**1560′**(359′)	**1580′**(379′)
		ceil 400′- **900m**	ceil 400′- **1000m**	ceil 400′- **1200m**	ceil 400′- **1400m**
	ALS out	ceil 400′- 1600m	ceil 400′- 1600m	ceil 400′- 1800m	ceil 400′- 2000m
	SRA	**1620′**(419′)	**1620′**(419′)	**1620′**(419′)	**1620′**(419′)
		ceil 500′- **1600m**	ceil 500′- **1600m**	ceil 500′- **2000m**	ceil 500′- **2000m**
25L	ILS	**1397′**(200′)	**1397′**(200′)	**1397′**(200′)	**1397′**(200′)
		ceil 200′- **R550m V800m**	ceil 200′- **R550m V800m**	ceil 200′- **R550m V800m**	ceil 200′- **R550m V800m**
	ALS out	ceil 200′- 1200m	ceil 200′- 1200m	ceil 200′- 1200m	ceil 200′- 1200m
	PAR	**1397′**(200′)	**1397′**(200′)	**1397′**(200′)	**1397′**(200′)
		ceil 200′- **800m**	ceil 200′- **800m**	ceil 200′- **800m**	ceil 200′- **800m**
	ALS out	ceil 200′- 1200m	ceil 200′- 1200m	ceil 200′- 1200m	ceil 200′- 1200m
	LOC	**1550′**(353′)	**1550′**(353′)	**1550′**(353′)	**1550′**(353′)
		ceil 400′- **900m**	ceil 400′- **1000m**	ceil 400′- **1200m**	ceil 400′- **1400m**
	ALS out	ceil 400′- 1600m	ceil 400′- 1600m	ceil 400′- 1800m	ceil 400′- 2000m
	RNAV ❶	**1570′**(373′)	**1570′**(373′)	**1570′**(373′)	**1570′**(373′)
		ceil 400′- **900m**	ceil 400′- **1000m**	ceil 400′- **1200m**	ceil 400′- **1400m**
	ALS out	ceil 400′- 1600m	ceil 400′- 1600m	ceil 400′- 1800m	ceil 400′- 2000m
	NDB	**1650′**(453′)	**1650′**(453′)	**1650′**(453′)	**1650′**(453′)
		ceil 500′- **1000m**	ceil 500′- **1200m**	ceil 500′- **1200m**	ceil 500′- **1600m**
	ALS out	ceil 500′- 1600m	ceil 500′- 1600m	ceil 500′- 2000m	ceil 500′- 2400m
	SRA	**1560′**(363′)	**1560′**(363′)	**1560′**(363′)	**1560′**(363′)
		ceil 400′- **1600m**	ceil 400′- **1600m**	ceil 400′- **1600m**	ceil 400′- **1600m**
	ALS out	ceil 400′- 1600m	ceil 400′- 1600m	ceil 300′- 1800m	ceil 400′- 2000m
25R	PAR	**1442′**(250′)	**1442′**(250′)	**1442′**(250′)	**1442′**(250′)
		ceil 300′- **1600m**	ceil 300′- **1600m**	ceil 300′- **1600m**	ceil 300′- **1600m**
	RNAV ❶	**1590′**(399′)	**1590′**(399′)	**1590′**(399′)	**1610′**(419′)
		ceil 400′- **1600m**	ceil 400′- **1600m**	ceil 400′- **1600m**	ceil 400′- **2000m**
	ALS out	ceil 400′- 1600m	ceil 400′- 1600m	ceil 400′- 1800m	ceil 400′- 2000m
	SRA	**1570′**(378′)	**1570′**(378′)	**1570′**(378′)	**1570′**(378′)
		ceil 400′- **1600m**	ceil 400′- **1600m**	ceil 400′- **1600m**	ceil 400′- **1600m**
	ALS out	ceil 400′- 1600m	ceil 400′- 1600m	ceil 400′- 1800m	ceil 400′- 2000m

❶ Missed apch climb gradient mim 3.0%.

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INGOLSTADT, GERMANY
MANCHING

CIRCLE-TO-LAND ❶	100 KT	135 KT	180 KT	205 KT
	1700′(497′)	**1710**′(507′)	**1970**′(767′)	**2120**′(917′)
	ceil 500′- 1600m	ceil 600′- 1600m	ceil 800′- 3600m	ceil 1000′- 4800m

❶ Not authorized North of runway 07L/25R.

TAKE-OFF RWY 07L/R, 25L/R

	LVP must be in force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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ETSI/IGS
MANCHING

JEPPESEN
10 JUN 11 (11-1)

INGOLSTADT, GERMANY
ILS Z or LOC Z Rwy 25L

BRIEFING STRIP™

*INGO Tower	Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.
125.25 122.1	
For UHF see MIL-101 listing	

LOC	Final Apch Crs	GS LOM	ILS DA(H)	Apt Elev 1203′
IIGW				TDZE 1197′
108.1	246°	2470′ (1273′)	1397′ (200′)	

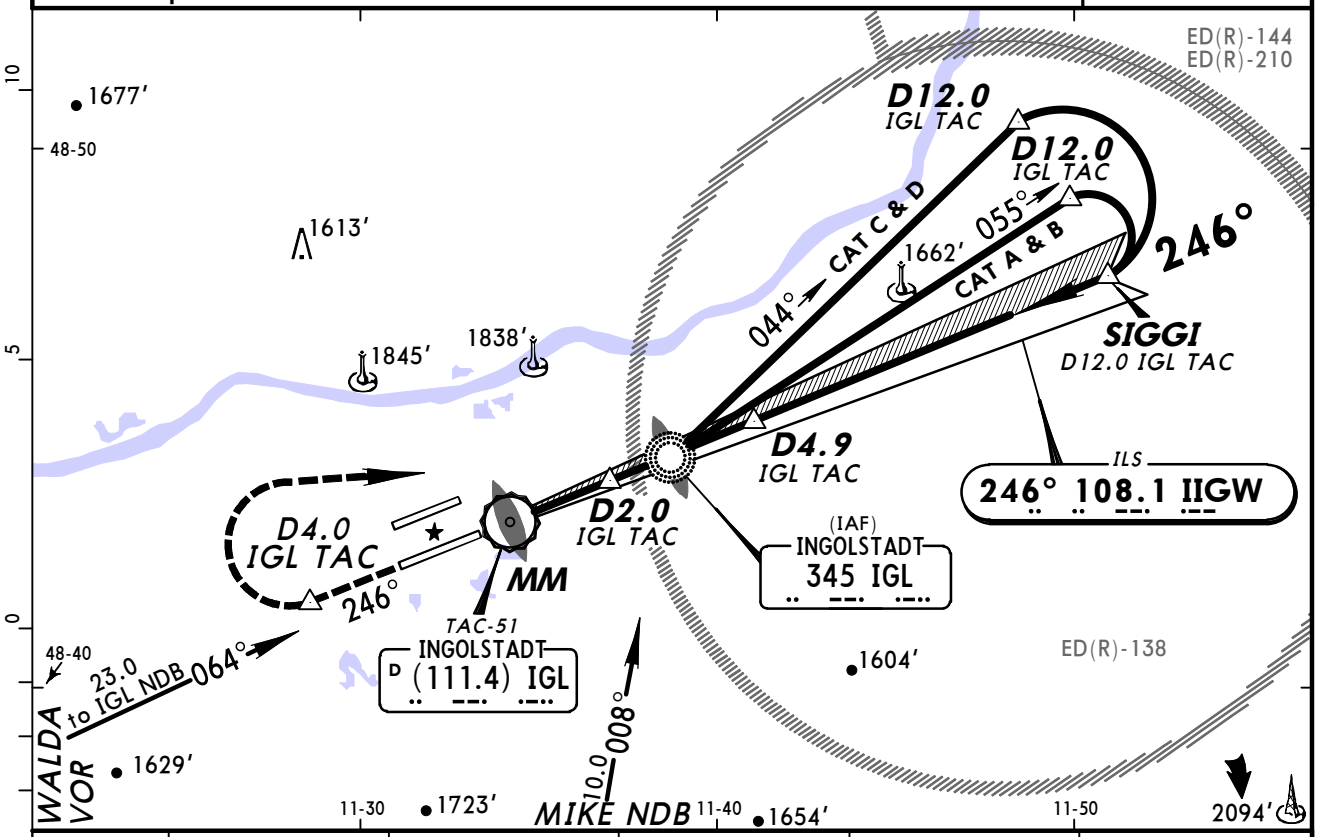
MISSED APCH: Climb on 246° from IGL NDB to 4000′. Passing D4.0 IGL TAC turn RIGHT (MAX 210 KT) to IGL NDB.

Alt Set: hPa (IN on req) TDZ Elev: 43 hPa Trans level: By ATC Trans alt: 5000′

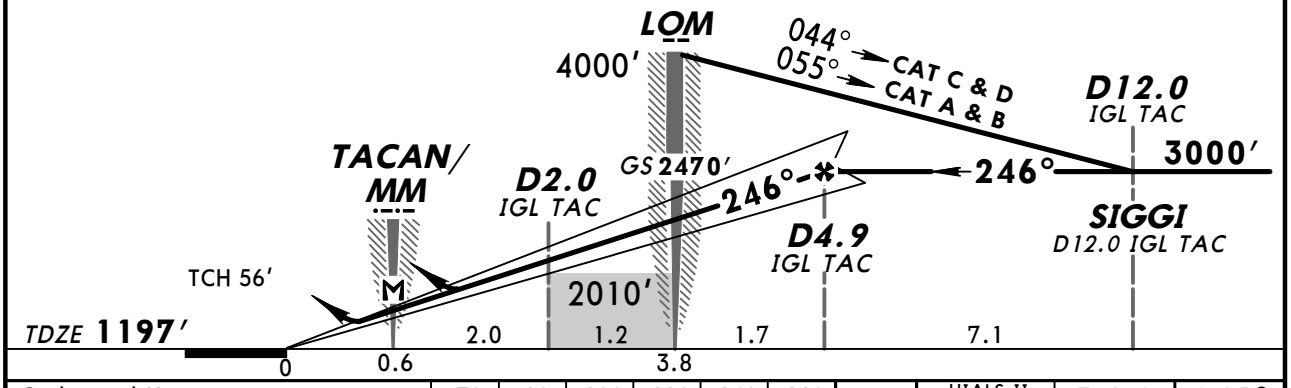
1. **DME required.** 2. Baseturn restricted to MAX 210 KT.

3600′

MSA IGL NDB



LOC (GS out)	IGL TAC	1.0	2.0	3.0	4.0
	ALTITUDE	1760′	2080′	2400′	2720′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent angle	3.00°	377	484	538	646	753	861
MAP at TACAN/MM or FAF to MAP	4.9	4:12	3:16	2:56	2:27	2:06	1:50

HIALS-II PAPI PAPI

D4.0 IGL TAC on 246° from IGL 345

Standard STRAIGHT-IN LANDING RWY **25L** **CEILING REQUIRED** CIRCLE-TO-LAND

Not authorized North of rwy 07L/25R

	ILS DA(H) 1397′ (200′) FULL	ILS DA(H) 1397′ (200′) Limited	ILS DA(H) 1397′ (200′) ALS out	LOC (GS out) DA(H) 1550′ (353′)	LOC (GS out) DA(H) 1550′ (353′) ALS out
A	200′- RVR 550m VIS 800m	200′- RVR 750m VIS 800m	200′- 1200m	400′- 900m	400′- 1600m
B					
C				400′- 1200m	
D					400′- 2000m

Max Kts	MDA(H) CEIL-VIS
100	1700′ (497′) 500′- 1600m
135	1710′ (507′) 600′- 1600m
180	1970′ (767′) 800′- 3600m
205	2120′ (917′) 1000′- 4800m

AATCP-1(C)

CHANGES: Waypoint established.

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BRIEFING STRIP TM

*INGO Tower 125.25 122.1 For UHF see MIL-101 listing	Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.

LOC IIGW 108.1	Final Apch Crs 246°	GS LOM 2470′ (1273′)	ILS DA(H) 1397′ (200′)	Apt Elev 1203′ TDZE 1197′

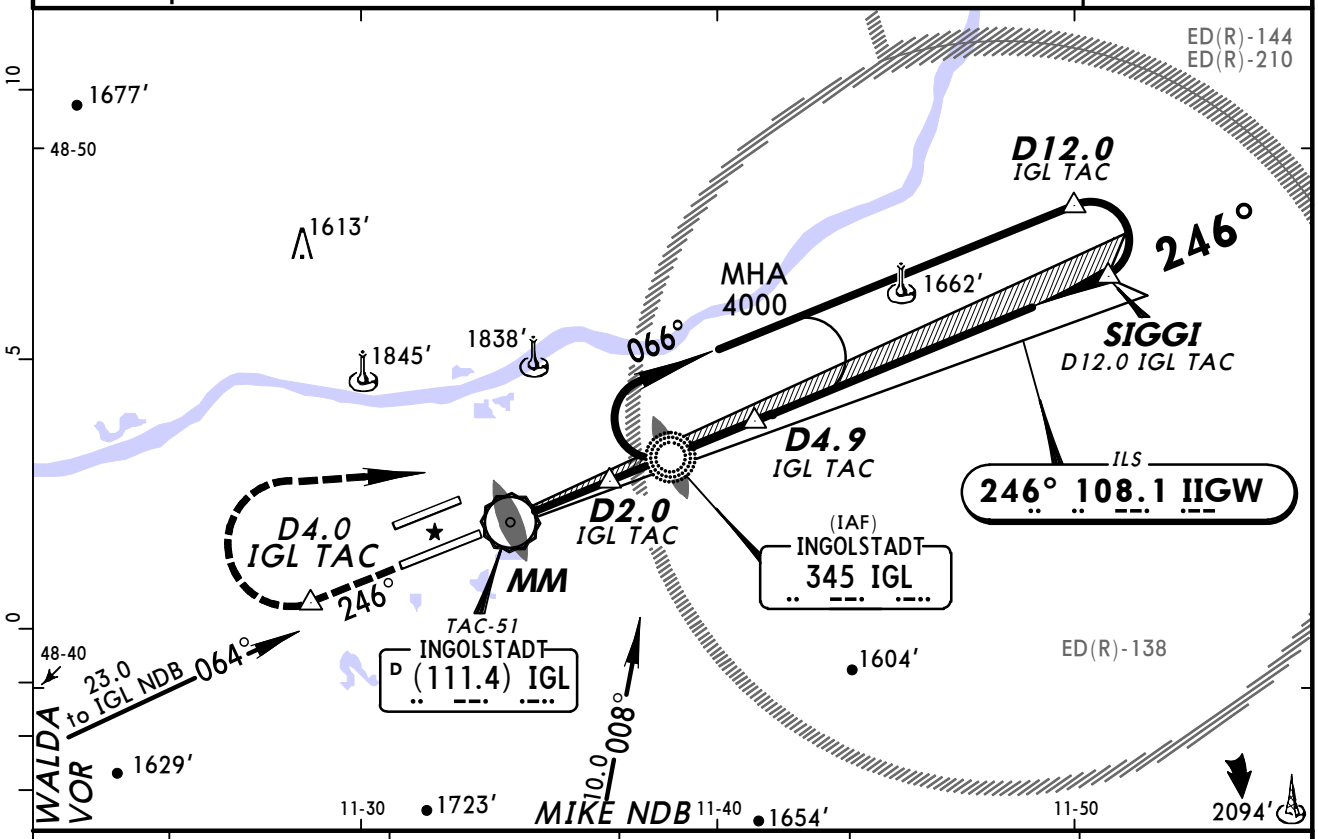
MISSED APCH: Climb on 246° from IGL NDB to 4000′. Passing D4.0 IGL TAC turn RIGHT (MAX 210 KT) to IGL NDB.

Alt Set: hPa (IN on req) TDZ Elev: 43 hPa Trans level: By ATC Trans alt: 5000′

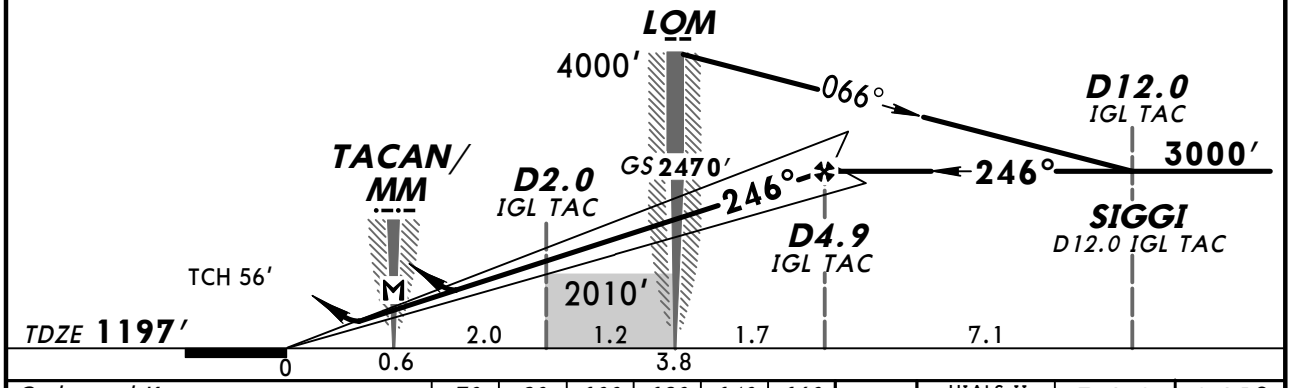
1. **DME required.** 2. Racetrack restricted to MAX 210 KT.

3600′

MSA IGL NDB



LOC (GS out)	IGL TAC	1.0	2.0	3.0	4.0
	ALTITUDE	1760′	2080′	2400′	2720′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent angle	3.00°	377	484	538	646	753	861
MAP at TACAN/MM or FAF to MAP	4.9	4:12	3:16	2:56	2:27	2:06	1:50

HIALS-II PAPI PAPI

D4.0 IGL TAC on 246° from IGL 345

Standard STRAIGHT-IN LANDING RWY **25L** **CEILING REQUIRED** CIRCLE-TO-LAND

	ILS DA(H) 1397′ (200′) FULL	ILS DA(H) 1397′ (200′) Limited	ILS DA(H) 1397′ (200′) ALS out	LOC (GS out) DA(H) 1550′ (353′)	LOC (GS out) DA(H) 1550′ (353′) ALS out
A	200′- RVR 550m VIS 800m	200′- RVR 750m VIS 800m	200′- 1200m	400′- 900m	400′- 1600m
B					
C				400′- 1200m	
D					400′- 2000m

Not authorized North of rwy 07L/25R

Max Kts	MDA(H)	CEIL-VIS
100	1700′ (497′)	500′- 1600m
135	1710′ (507′)	600′- 1600m
180	1970′ (767′)	800′- 3600m
205	2120′ (917′)	1000′- 4800m

AATCP-1(C)

CHANGES: Waypoint established.

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BRIEFING STRIP

*INGO Tower
125.25 122.1
For UHF see MIL-101 listing

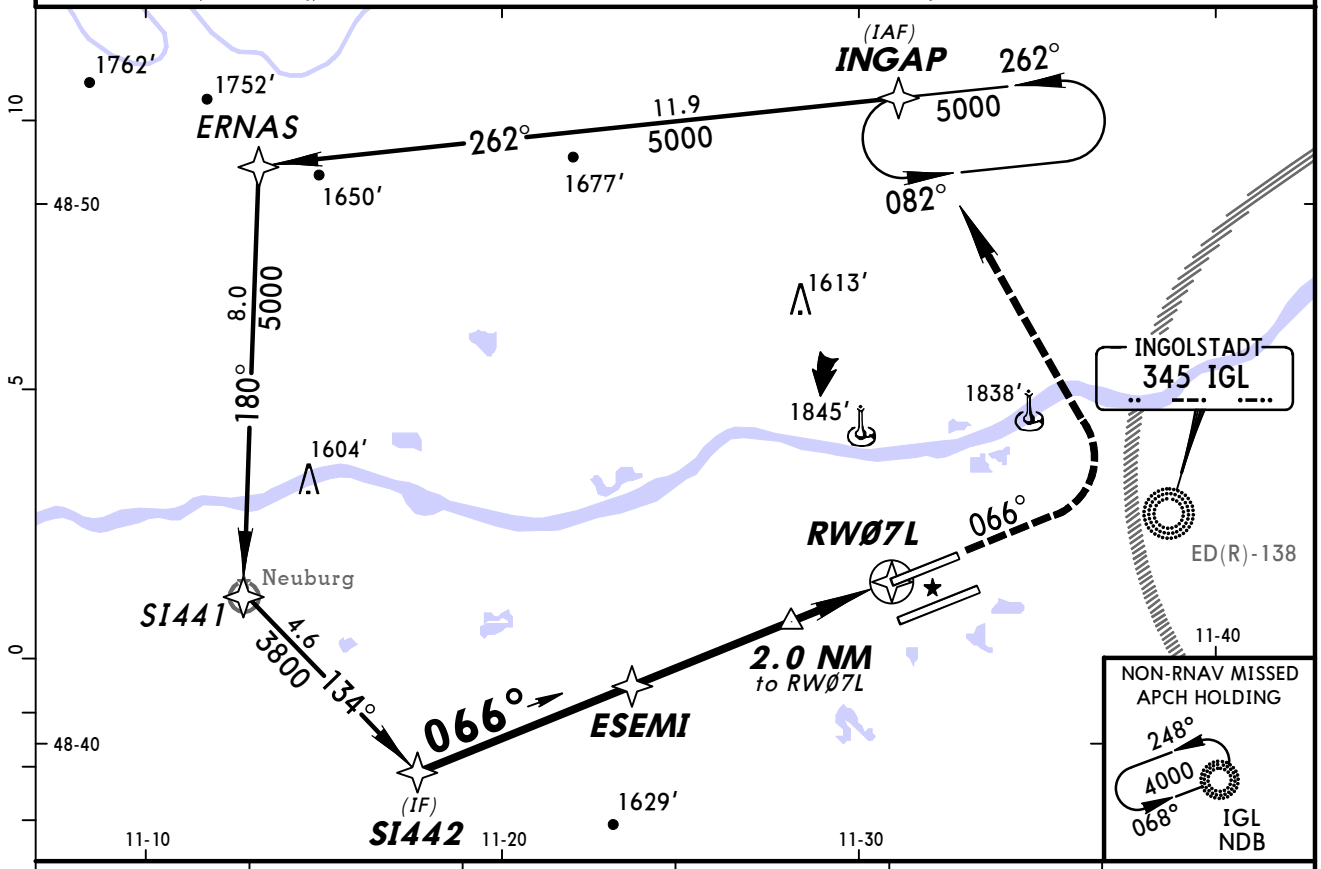
Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.

RNAV	Final Apch Crs 066°	Minimum Alt ESEMI 3000′ (1804′)	DA(H) Refer to Minimums	Apt Elev 1203′ TDZE 1196′

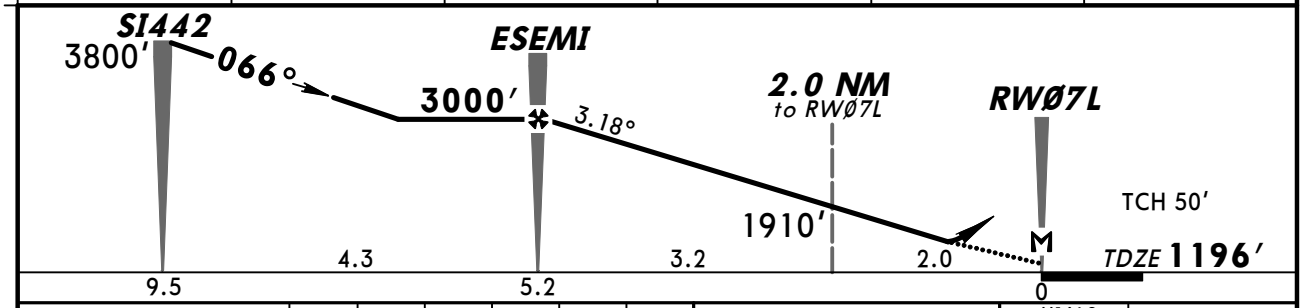
RNAV MISSED APCH: Climb on track 066° to 2500′, then turn LEFT (MAX 220 KT) direct to INGAP. Climb to 5000′ and hold.
NON-RNAV: Climb to NDB to enter holding. Climb to 4000′.
Do not turn before passing MAP.

3600′
MSA
ARP

Alt Set: hPa (IN on req) | TDZ Elev: 43 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RWØ7L	5.0	4.0	3.0	2.0	1.0
ALTITUDE	2930′	2590′	2250′	1910′	1570′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.18°	394	506	563	675	788	900
MAP at RWØ7L							

HIALS

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **07L** **CEILING REQUIRED** CIRCLE-TO-LAND

DA(H) AB: **1580′** (384′) C: **1590′** (394′) D: **1610′** (414′)

	ALS out	
A	400′- 1100m	400′- 1600m
B		
C	400′- 1200m	400′- 1800m
D	500′- 1200m	500′- 2000m

Not authorized North of rwy 07L/25R

Max Kts	MDA(H)	CEIL-VIS
100	1700′ (497′)	500′- 1600m
135	1710′ (507′)	600′- 1600m
180	1970′ (767′)	800′- 3600m
205	2120′ (917′)	1000′- 4800m

PANS OPS

CHANGES: Circling Minimums.

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INGOLSTADT, GERMANY
RNAV (GNSS) Rwy 07R

BRIEFING STRIP TM

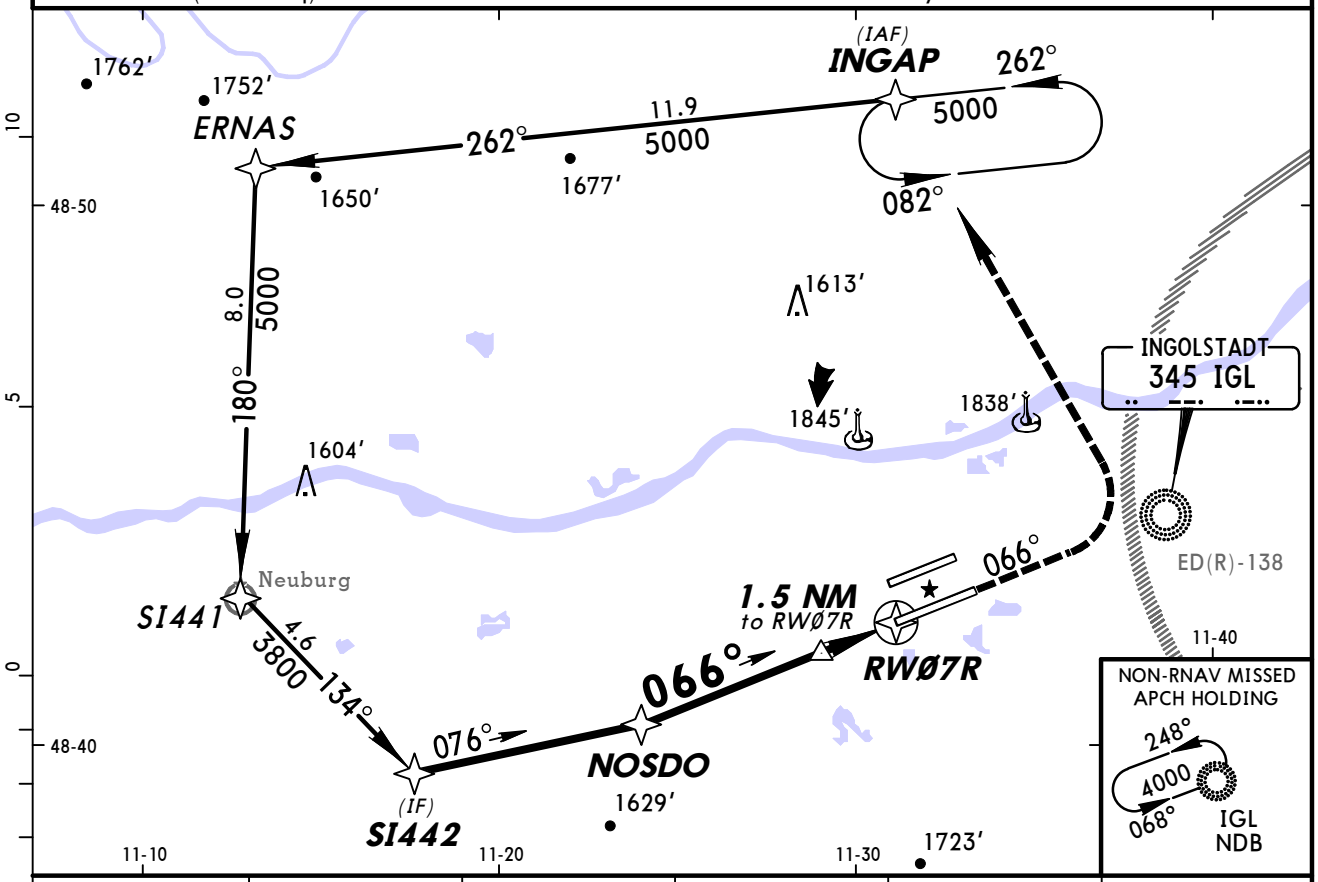
*INGO Tower	Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.
125.25 122.1	
For UHF see MIL-101 listing	

RNAV	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / TDZE
	066°	NOSDO 3000′ (1799′)	Refer to Minimums	Apt Elev 1203′ TDZE 1201′

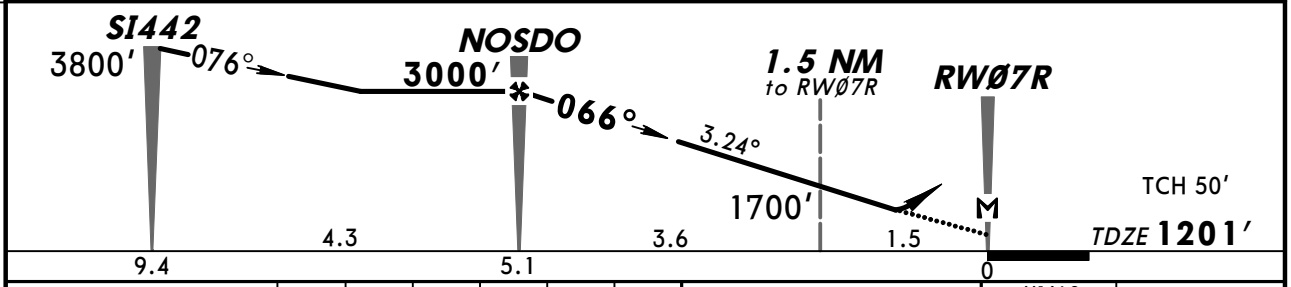
RNAV MISSED APCH: Climb on track 066° to 2500′, then turn LEFT (MAX 220 KT) direct to INGAP. Climb to 5000′ and hold.
NON-RNAV: Climb STRAIGHT AHEAD to NDB to enter holding. Climb to 4000′. Do not turn before passing MAP.

3600′
MSA
ARP

Alt Set: hPa (IN on req) | TDZ Elev: 43 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RWØ7R	5.0	4.0	3.0	2.0	1.0
ALTITUDE	2960′	2620′	2280′	1940′	1600′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.24°	401	516	573	688	803	917
MAP at RWØ7R							

HIALS
PAPI PAPI

Refer to Missed Apch above

PANS OPS

Standard STRAIGHT-IN LANDING RWY **07R** **CEILING REQUIRED** CIRCLE-TO-LAND

DA(H) ABC: **1560′** (359′) D: **1580′** (379′)

	ALS out		Max Kts	MDA(H)	CEIL-VIS
A	400′ - 900m	400′- 1600m	100	1700′ (497′)	500′- 1600m
B			135	1710′ (507′)	600′- 1600m
C	400′- 1200m		180	1970′ (767′)	800′- 3600m
D		400′- 2000m	205	2120′ (917′)	1000′- 4800m

Not authorized North of rwy 07L/25R

CHANGES: Circling Minimums.

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BRIEFING STRIP

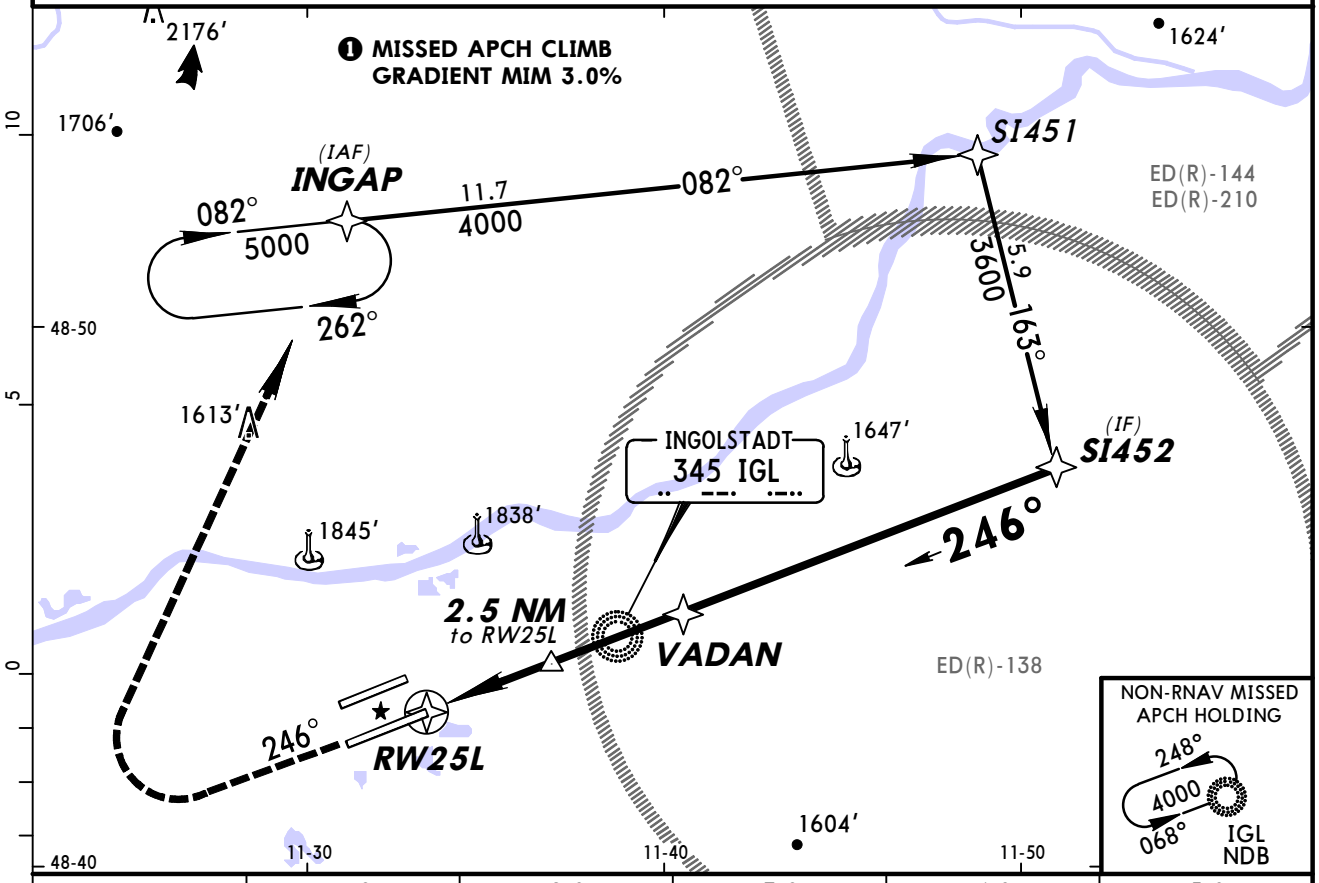
*INGO Tower 125.25 122.1	Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.
For UHF see MIL-101 listing	

RNAV	Final Apch Crs 246°	Minimum Alt VADAN 2900′ (1703′)	DA(H) 1570′ (373′)	Apt Elev 1203′ TDZE 1197′

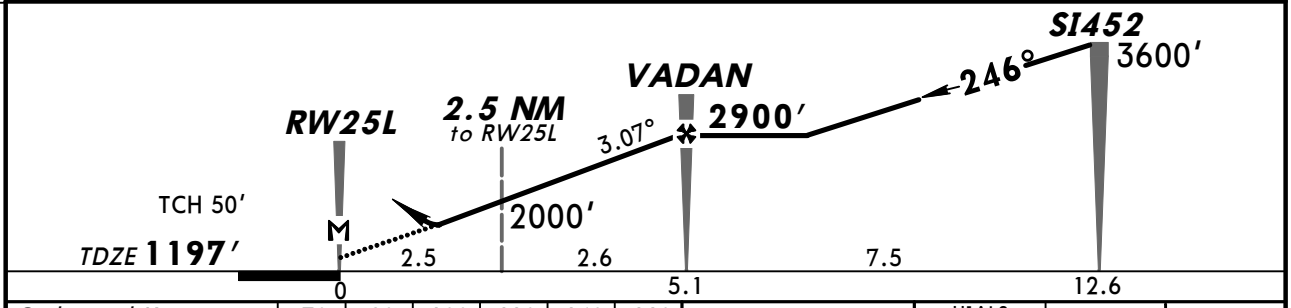
RNAV MISSED APCH: Climb on track 246° to 2500′, then turn RIGHT (MAX 250 KT) direct to INGAP. Climb to 5000′ and hold.
NON-RNAV: Climb on track 246° to 2500′, then turn RIGHT (MAX 250 KT) to NDB and enter holding at 4000′. Do not turn before passing MAP.

3600′
MSA ARP

Alt Set: hPa (IN on req) | TDZ Elev: 43 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RW25L	1.0	2.0	3.0	4.0	5.0
ALTITUDE	1550′	1880′	2210′	2540′	2870′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.07°	380	489	543	652	760	869
MAP at RW25L						

HIALS
PAPI PAPI
2500′ on 246°

PANS OPS

Standard STRAIGHT-IN LANDING RWY **25L**
Missed apch climb gradient mim 3.0%
DA(H) **1570′** (373′)

	ALS out
A	400′- 1000m
B	400′- 1600m
C	400′- 1200m / 400′- 1700m
D	400′- 2000m

CEILING REQUIRED CIRCLE-TO-LAND
Not authorized North of rwy 07L/25R

Max Kts	MDA(H)	CEIL-VIS
100	1700′ (497′)	500′- 1600m
135	1710′ (507′)	600′- 1600m
180	1970′ (767′)	800′- 3600m
205	2120′ (917′)	1000′- 4800m

CHANGES: Circling Minimums.

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INGOLSTADT, GERMANY
❶ RNAV (GNSS) Rwy 25R

*INGO Tower	Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing
125.25 122.1	
For UHF see MIL-101 listing	

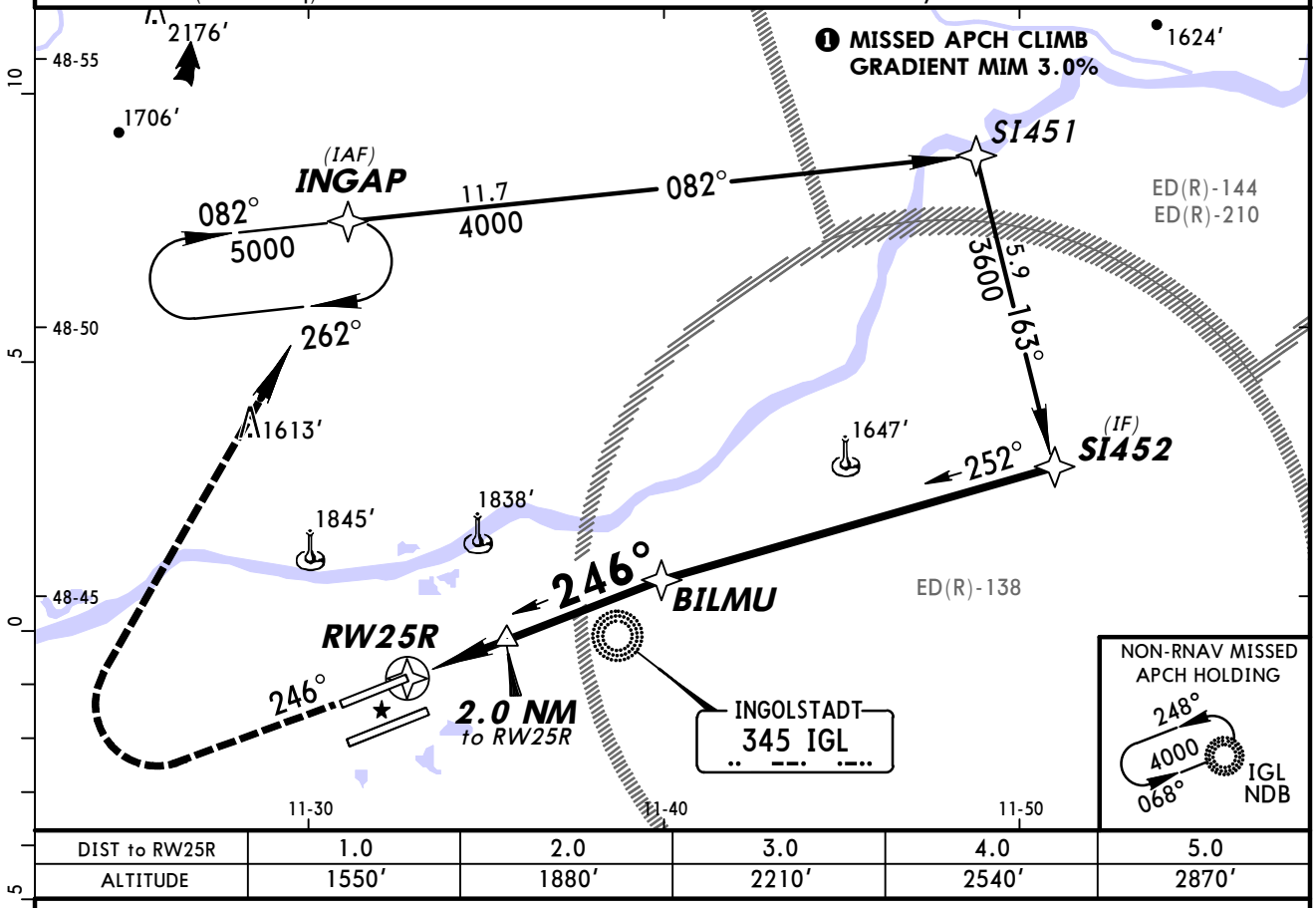
BRIEFING STRIP ™

RNAV	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 1203′
	246°	BILMU 2900′ (1709′)	Refer to Minimums	TDZE 1191′

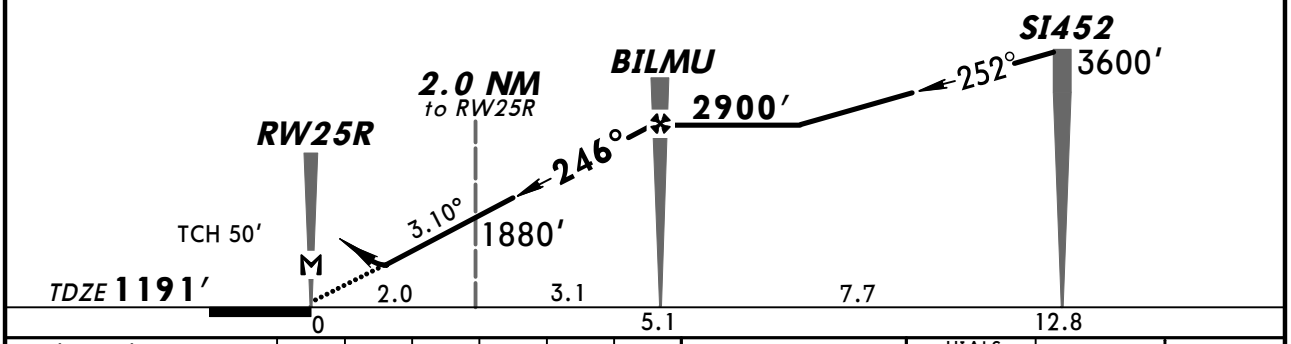
RNAV MISSED APCH: Climb on track 246° to 2500′, then turn RIGHT (MAX 250 KT) direct to INGAP. Climb to 5000′ and hold.
NON-RNAV: Climb on track 246° to 2500′, then turn RIGHT (MAX 250 KT) to NDB and enter holding at 4000′. Do not turn before passing MAP.

3600′
MSA ARP

Alt Set: hPa (IN on req) | TDZ Elev: 43 hPa | Trans level: By ATC | Trans alt: 5000′



DIST to RW25R	1.0	2.0	3.0	4.0	5.0
ALTITUDE	1550′	1880′	2210′	2540′	2870′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.10°	384	494	548	658	768	878
MAP at RW25R							

HIALS
PAPI PAPI
2500′ on 246°

PANS OPS

Standard STRAIGHT-IN LANDING RWY **25R**

Missed apch climb gradient mim 3.0%

DA(H) ABC: **1590′** (399′) D: **1610′** (419′)

	ALS out	
A	400′- 1600m	
B		
C	400′- 1600m	400′- 1800m
D	400′- 2000m	

CEILING REQUIRED CIRCLE-TO-LAND

Not authorized North of rwy 07L/25R

Max Kts	MDA(H)	CEIL-VIS
100	1700′ (497′)	500′- 1600m
135	1710′ (507′)	600′- 1600m
180	1970′ (767′)	800′- 3600m
205	2120′ (917′)	1000′- 4800m

CHANGES: Circling Minimums.

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INGOLSTADT, GERMANY
TACAN Rwy 07R

*INGO Tower	Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.
125.25 122.1	
For UHF see MIL-101 listing	

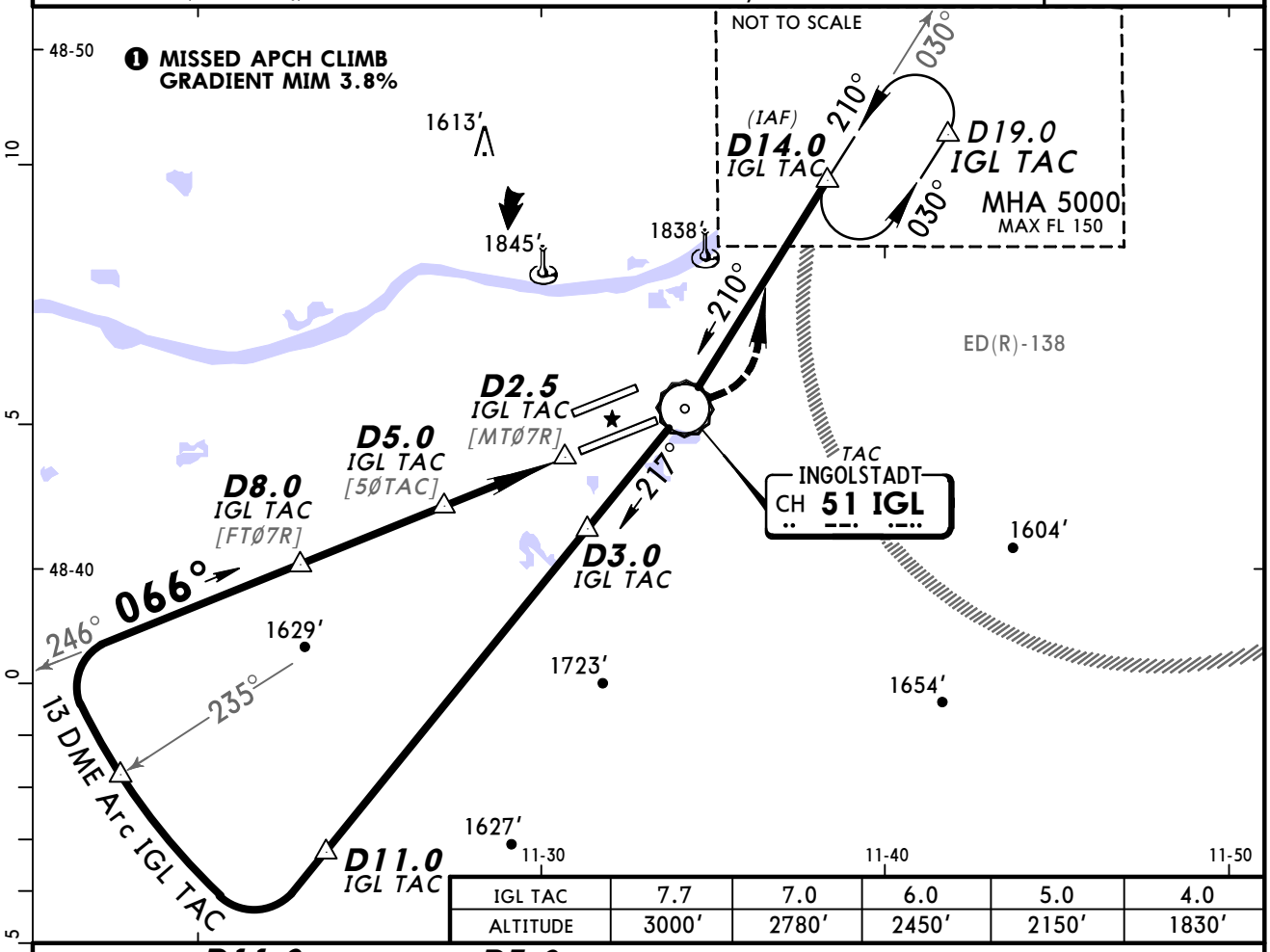
BRIEFING STRIP

TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 1203′
IGL CH 51	Apch Crs 066°	D8.0 IGL TAC 3000′ (1799′)	1560′ (359′)	TDZE 1201′

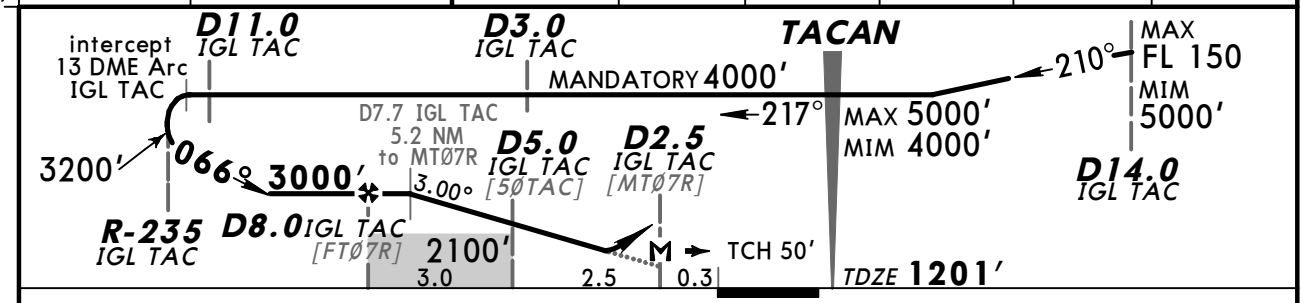
MISSED APCH: Climb on R-246 inbound to IGL TAC, then turn LEFT to intercept R-030 IGL TAC and proceed to IAF. Climb to 5000′.

Alt Set: hPa (IN on req) TDZ Elev: 43 hPa Trans level: By ATC Trans alt: 5000′

3600′ MSA IGL TAC



IGL TAC	7.7	7.0	6.0	5.0	4.0
ALTITUDE	3000′	2780′	2450′	2150′	1830′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D2.5 IGL TAC						

HIALS PAPI PAPI

IGL CH 51

IGL CH 51 on R-246

Standard STRAIGHT-IN LANDING RWY **07R** **CEILING REQUIRED** CIRCLE-TO-LAND

Missed approach climb gradient mim 3.8%

MDA(H) **1560′** (359′)

Not authorized North of rwy 07L/25R

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	400′- 900m	100	1700′ (497′)	500′- 1600m
B	400′- 1600m	135	1710′ (507′)	600′- 1600m
C	400′- 1200m	180	1970′ (767′)	800′- 3600m
D	400′- 2000m	205	2120′ (917′)	1000′- 4800m

AATCP-1(C)

CHANGES: New procedure.

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ETSI/IGS
MANCHING

JEPPESEN
17 DEC 10 14-2

INGOLSTADT, GERMANY
TACAN Rwy 25L

*INGO Tower
125.25 122.1
For UHF see MIL-101 listing

Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.

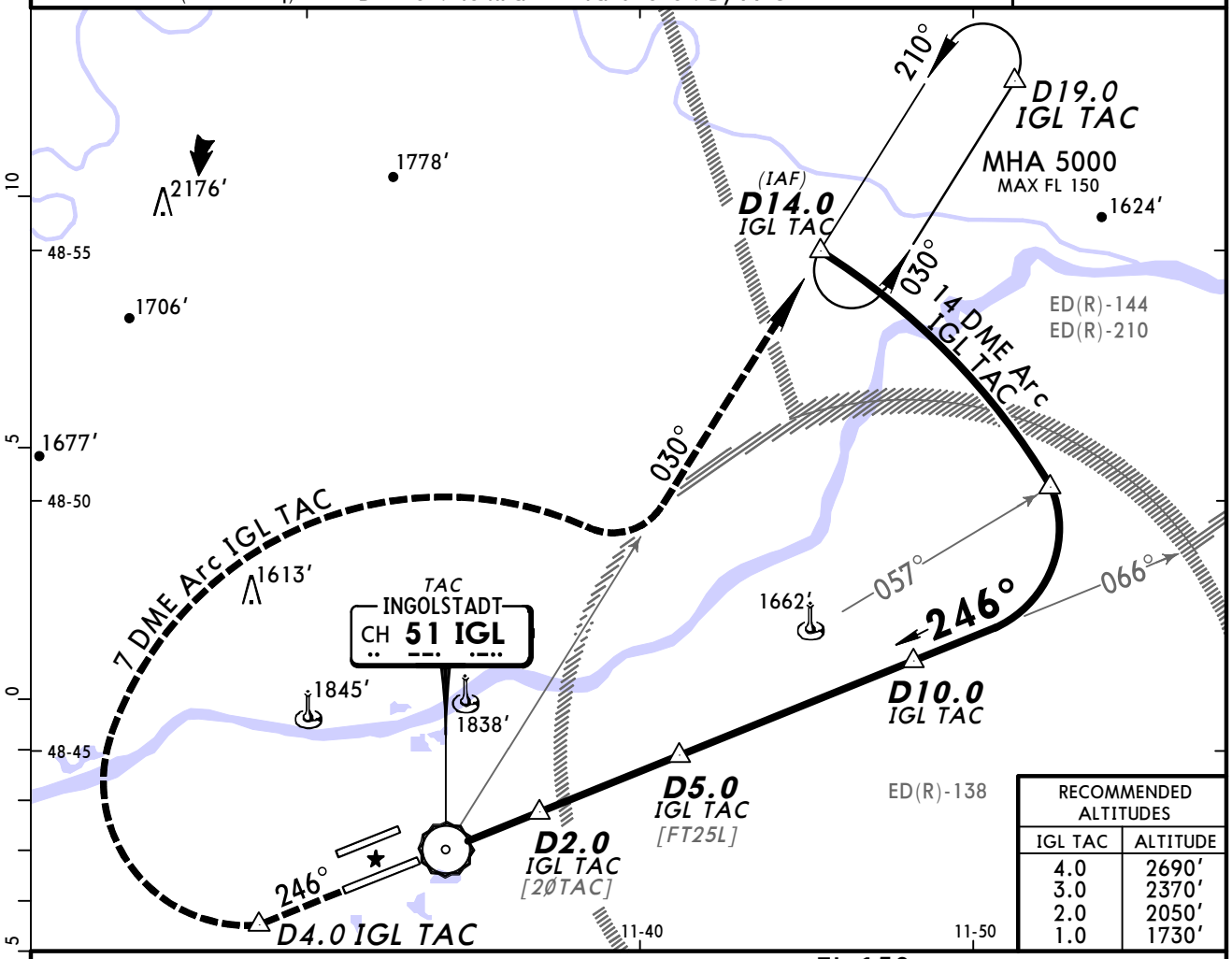
BRIEFING STRIP™

TACAN	Final	Minimum Alt	MDA(H)	Apt Elev 1203′
IGL CH 51	Apch Crs 246°	D5.0 IGL TAC 3000′ (1803′)	1570′ (373′)	TDZE 1197′

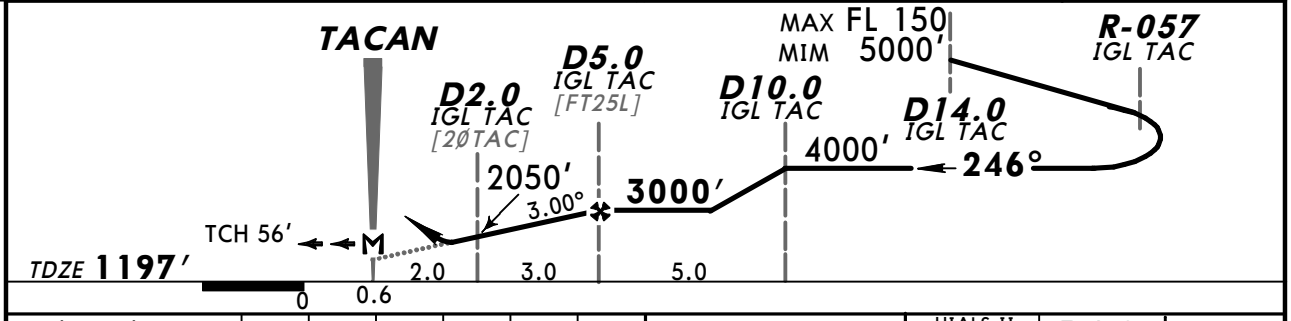
MISSED APCH: Climb on R-246 IGL TAC to 5000′. Passing D4.0 IGL TAC turn RIGHT (MAX 230 KT) to intercept 7 DME Arc IGL TAC. Intercept R-030 IGL TAC and proceed to IAF.

3600′
MSA IGL TAC

Alt Set: hPa (IN on req) TDZ Elev: 43 hPa Trans level: By ATC Trans alt: 5000′



RECOMMENDED ALTITUDES	
IGL TAC	ALTITUDE
4.0	2690′
3.0	2370′
2.0	2050′
1.0	1730′



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

HIALS-II
PAPI PAPI

D4.0 IGL TAC on IGL CH 51 R-246

Standard STRAIGHT-IN LANDING RWY 25L **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 1570′ (373′)

Not authorized North of rwy 07L/25R

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	400′- 1000m	100	1700′ (497′)	500′- 1600m
B		135	1710′ (507′)	600′- 1600m
C	400′- 1200m	180	1970′ (767′)	800′- 3600m
D		205	2120′ (917′)	1000′- 4800m

AATCP-1(C)

CHANGES: New procedure.

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INGOLSTADT, GERMANY
TACAN Rwy 25R

*INGO Tower
125.25 122.1
For UHF see MIL-101 listing

Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.

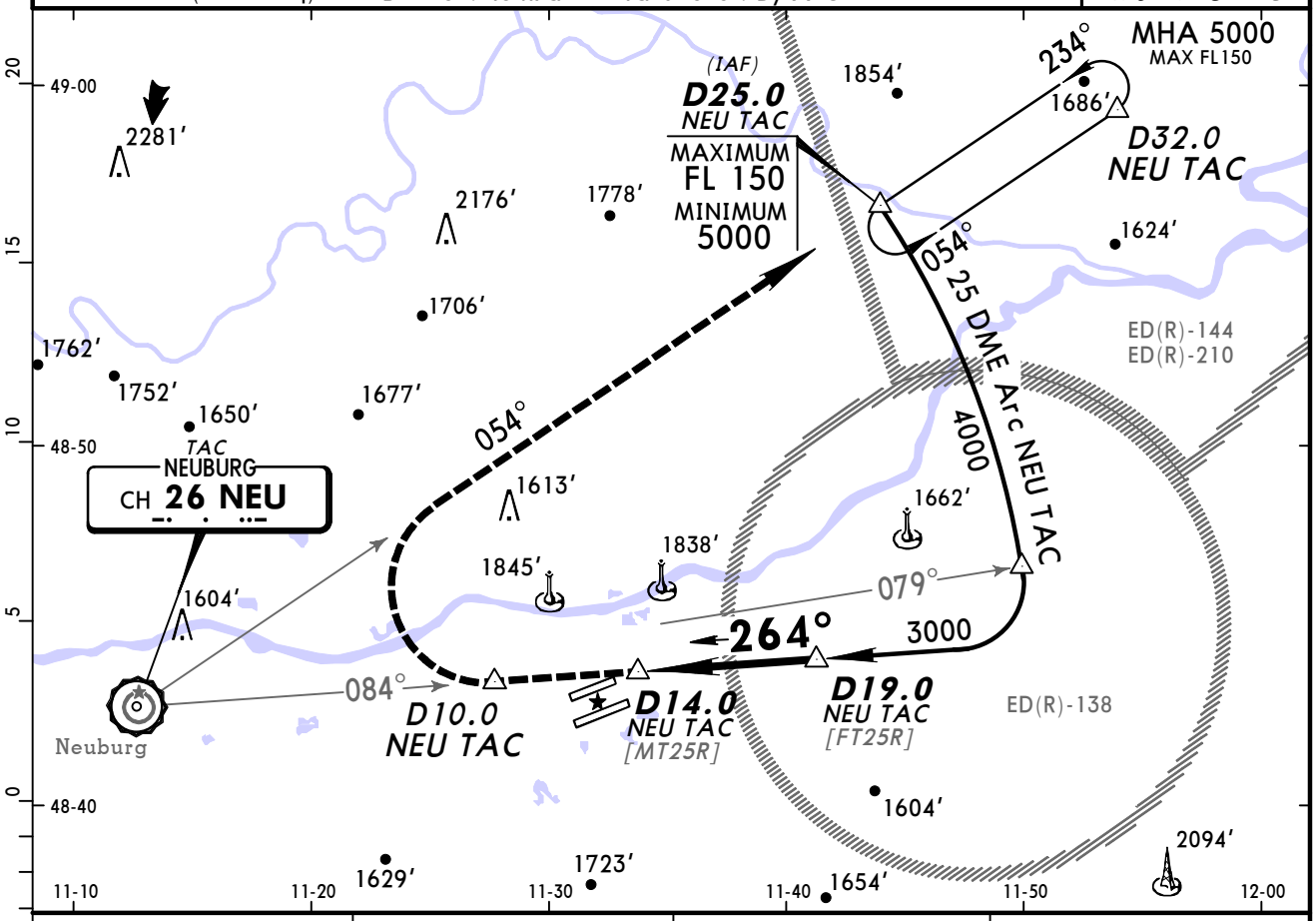
BRIEFING STRIP™

TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 1203′
NEU CH 26	264°	D19.0 NEU TAC 3000′ (1808′)	1960′ (768′)	TDZE 1192′

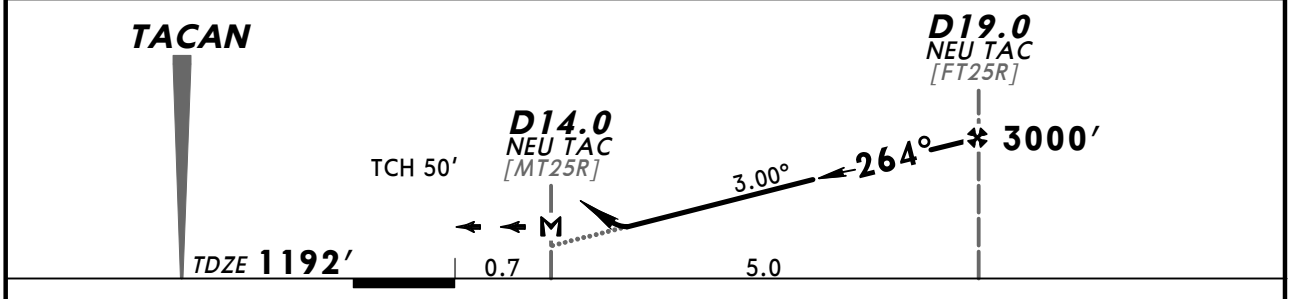
MISSED APCH: Climb on R-084 NEU TAC inbound to D10.0 NEU TAC, then turn RIGHT to intercept R-054 NEU TAC outbound and proceed to IAF. Climb to 5000′.

3600′
MSA NEU TAC

Alt Set: hPa (IN on req) TDZ Elev: 43 hPa Trans level: By ATC Trans alt: 5000′



NEU TAC	16.0	17.0	18.0
ALTITUDE	2050′	2370′	2690′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D14.0 NEU TAC						

HIALS
PAPI PAPI

D10.0 NEU TAC on NEU CH 26 R-084

Standard STRAIGHT-IN LANDING RWY 25R **CEILING REQUIRED** CIRCLE-TO-LAND

Not authorized North of Rwy 07L/25R

MDA(H) 1960′(768′)

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	800′- 2900m	100		
B		135	1980′(777′)	800′- 3600m
C	800′- 3600m	180		
D	800′- 4000m	205	2120′(917′)	1000′- 4800m

AATCP-1(C)

CHANGES: New procedure.

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BRIEFING STRIP TM

*INGO Tower 125.25 122.1 For UHF see MIL-101 listing	Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.

NDB IGL 345	Final Apch Crs 246°	Minimum Alt IGL NDB 2400′ (1203′)	MDA(H) 1650′ (453′)	Apt Elev 1203′ TDZE 1197′

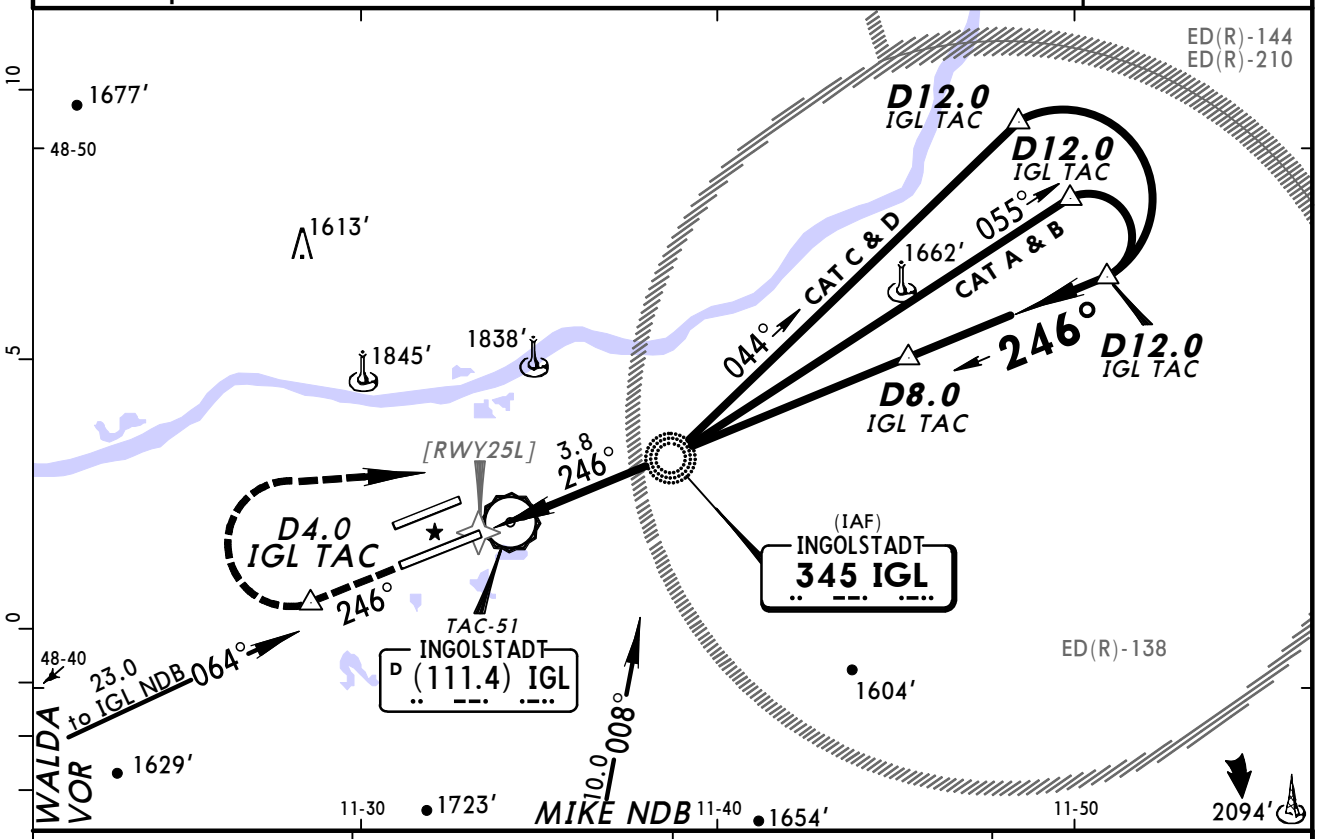
MISSED APCH: Climb on 246° from IGL NDB to 4000′. Passing D4.0 IGL TAC turn RIGHT (MAX 210 KT) to IGL NDB.

Alt Set: hPa (IN on req) TDZ Elev: 43 hPa Trans level: By ATC Trans alt: 5000′

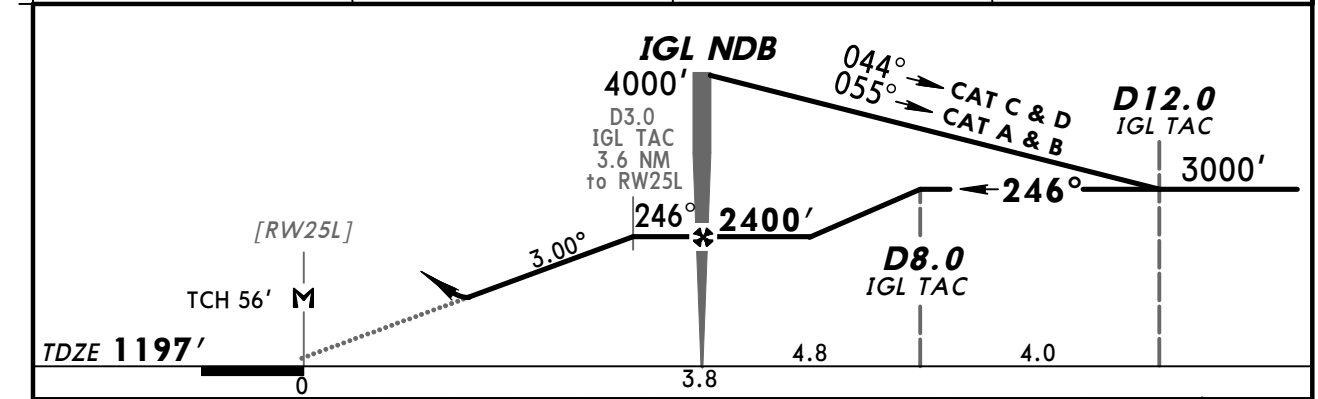
1. **DME required.** 2. Baseturn restricted to MAX 210 KT.

3600′

MSA IGL NDB



IGL TAC	1.0	2.0	3.0
ALTITUDE	1770′	2090′	2400′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
IGL NDB to MAP	3.8	3:15	2:32	2:17	1:54	1:38	1:26

HIALS-II PAPI PAPI

D4.0 IGL TAC on 246° from IGL 345

Standard STRAIGHT-IN LANDING RWY **25L** **CEILING REQUIRED** CIRCLE-TO-LAND

Not authorized North of rwy 07L/25R

MDA(H) **1650′** (453′)

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	500′- 1400m	100	1700′ (497′)	500′- 1600m
B		135	1710′ (507′)	600′- 1600m
C	500′- 2100m	180	1970′ (767′)	800′- 3600m
D	500′- 1600m	205	2120′ (917′)	1000′- 4800m

AATCP-1(C)

CHANGES: Procedure. Minimums.

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BRIEFING STRIP TM

*INGO Tower	Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.
125.25 122.1	
For UHF see MIL-101 listing	

NDB IGL 345	Final Apch Crs 246°	Minimum Alt IGL NDB 2400′ (1203′)	MDA(H) 1650′ (453′)	Apt Elev 1203′ TDZE 1197′

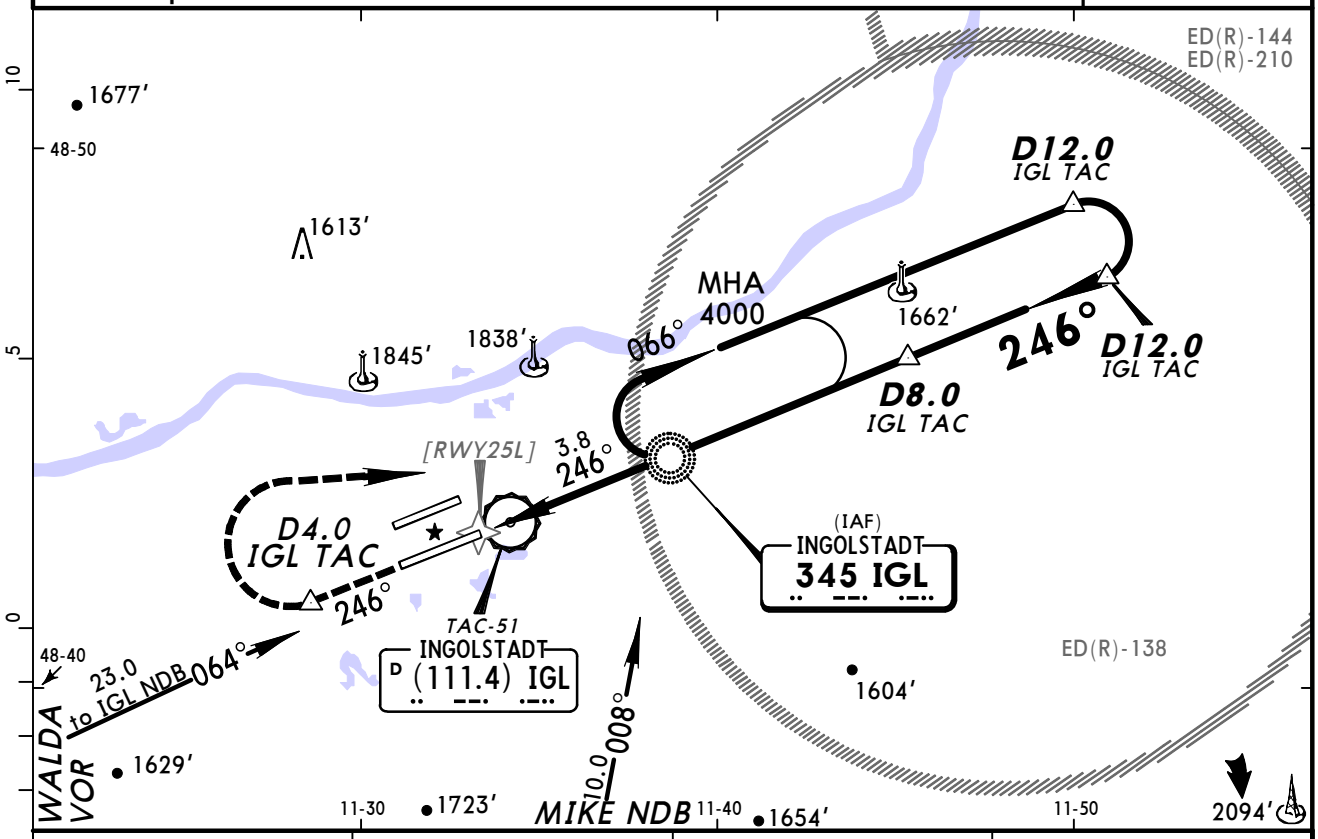
MISSED APCH: Climb on 246° from IGL NDB to 4000′. Passing D4.0 IGL TAC turn RIGHT (MAX 210 KT) to IGL NDB.

3600′

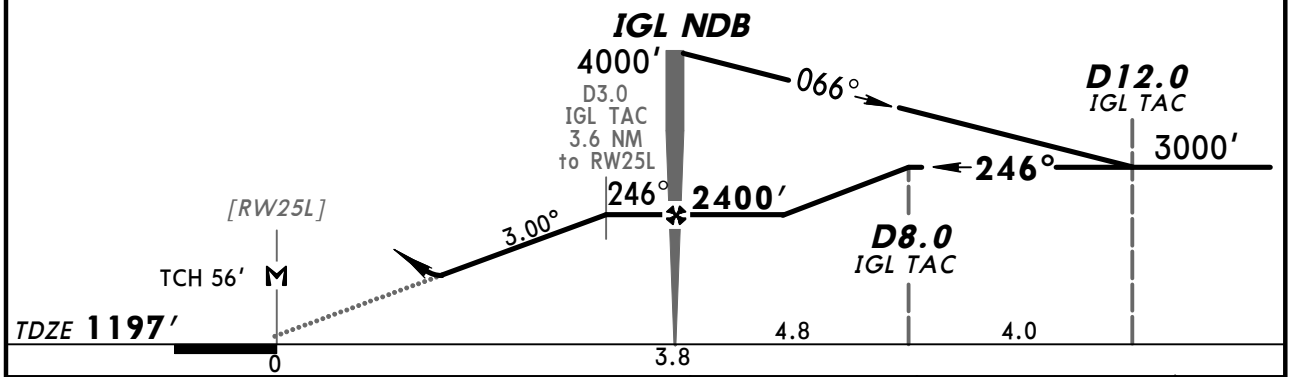
MSA IGL NDB

Alt Set: hPa (IN on req) TDZ Elev: 43 hPa Trans level: By ATC Trans alt: 5000′

1. DME required. 2. Racetrack restricted to MAX 210 KT.



IGL TAC	1.0	2.0	3.0
ALTITUDE	1770′	2090′	2400′



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	3.00°	372	478	531	637	743	849
IGL NDB to MAP	3.8	3:15	2:32	2:17	1:54	1:38	1:26

HIALS-II
PAPI PAPI

D4.0 IGL TAC on 246° from IGL 345

Standard STRAIGHT-IN LANDING RWY **25L** **CEILING REQUIRED** CIRCLE-TO-LAND

Not authorized North of rwy 07L/25R

MDA(H) 1650′ (453′)

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	500′- 1400m	100	1700′ (497′)	500′- 1600m
B		135	1710′ (507′)	600′- 1600m
C	500′- 2100m	180	1970′ (767′)	800′- 3600m
D	500′- 1600m	205	2120′ (917′)	1000′- 4800m

AATCP-1(C)

CHANGES: New procedure.

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INGOLSTADT, GERMANY
*PAR or *SRA Rwys 07L, 07R, 25L, 25R

*INGO Radar	*INGO Tower	
120.6 125.57 123.3X 122.1X	125.25 122.1	Acft using the civil part of the aerodrome have to contact IMA DISPATCH on 131.7 10 min prior to landing.
For UHF see MIL-101 listing		

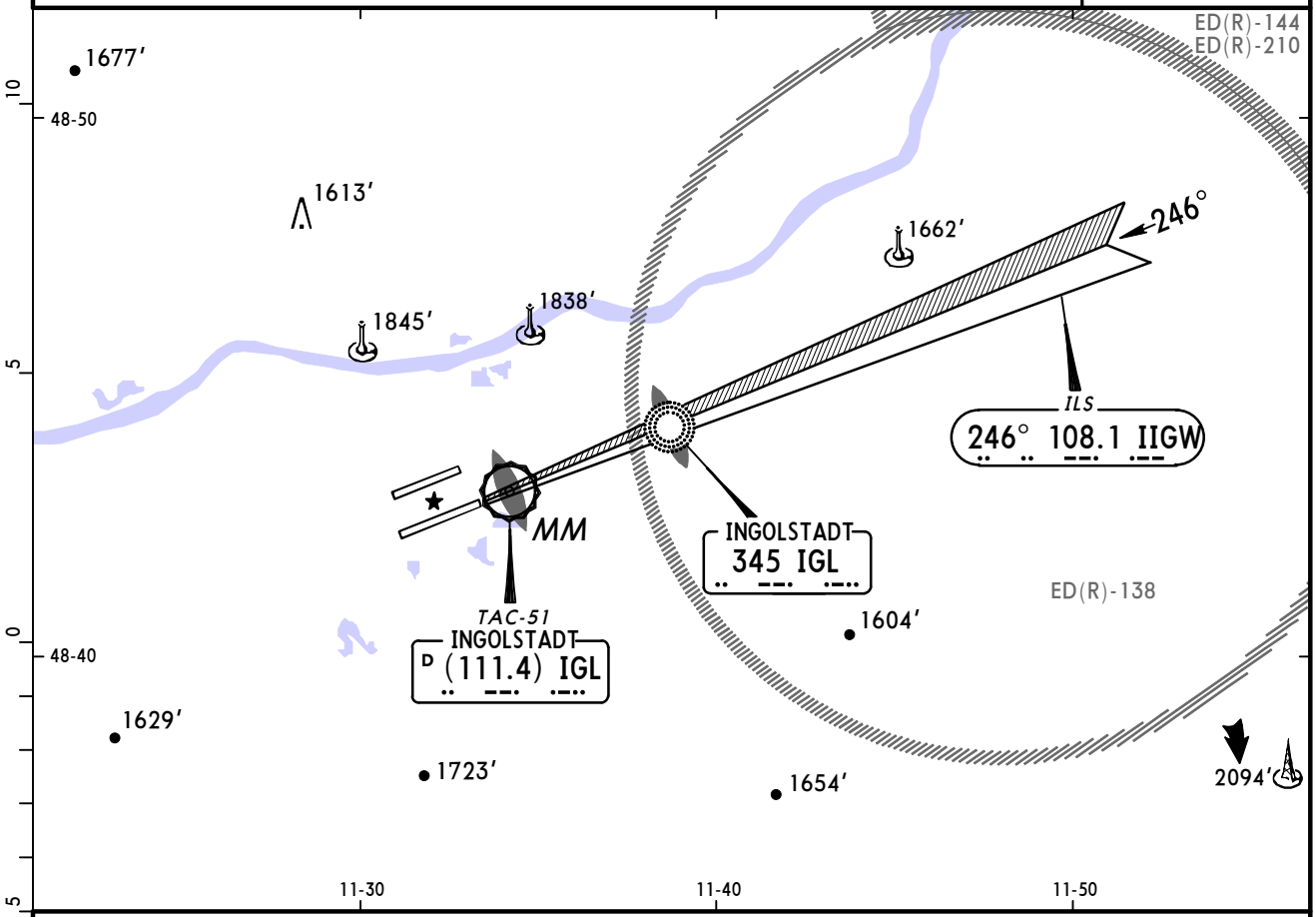
RADAR	Final Apch Crs BY ATC	PAR GS Not published / Minimum Alt No FAF	DA(H)/MDA(H) Refer to Minimums	Apt Elev 1203′ / TDZE See below

No MSA published

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 43 hPa Trans level: By ATC Trans alt: 5000′

BRIEFING STRIP™



RWY 07L	RWY 07R	RWY 25L	RWY 25R
PAR TCH 39′	PAR TCH 52′	PAR TCH 56′	PAR TCH 32′
TDZE 1196′	TDZE 1201′	TDZE 1197′	TDZE 1192′

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

Lighting - Refer to Airport Chart

Refer to Missed apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

	PAR 07L DA(H) 1396′ (200′)		PAR 07R DA(H) 1401′ (200′)		PAR 25L DA(H) 1397′ (200′)		PAR 25R DA(H) 1442′ (250′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	300′- 1600m	
B								
C								
D								

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

	SRA 07L MDA(H) 1580′ (384′)		SRA 07R MDA(H) 1620′ (419′)		SRA 25L MDA(H) 1560′ (363′)		SRA 25R MDA(H) 1570′ (378′)	
		ALS out		ALS out		ALS out		ALS out
A	400′- 1300m	400′- 2000m	500′- 1600m	500′- 2100m	400′- 1600m	400′- 1900m	400′- 1600m	400′- 1900m
B								
C	400′- 1500m	400′- 2200m	500′- 2000m	500′- 2300m		400′- 2100m		400′- 2100m
D								

APATC-1(A)

CHANGES: None.

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General Information

Location: Lechfeld Deu
IATA Code:
Lat/Long: N48° 11.1' E010° 51.7'
Elevation: 1822 ft

Airport Use: Military
Magnetic Variation: 2.1°E

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

Sunrise: 0603 Z
Sunset: 1656 Z,

Runway Information

Runway: 03
Length x Width: 8784 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 1822 ft
Lighting: Edge, ALS

Runway: 21
Length x Width: 8784 ft x 98 ft
Surface Type: concrete
TDZ-Elev: 1796 ft
Lighting: Edge, ALS

Communication Information

Lechfeld Tower 135.15 Military
Lechfeld Tower 122.1 Military
Lechfeld Tower 29.672 Military
Lechfeld Tower 25.78 Military
Lechfeld Radar 138.9 Military
Lechfeld Radar 138.35 Military
Lechfeld Radar 129.025 Military
Lechfeld Radar 123.3 Military
Lechfeld Radar 38.54 Military
Lechfeld Radar 36.23 Military
Lechfeld Radar 35.865 Military
Lechfeld Radar 34.4 Military

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Lechfeld Radar 33.797 Military
Lechfeld Radar 27.805 Military

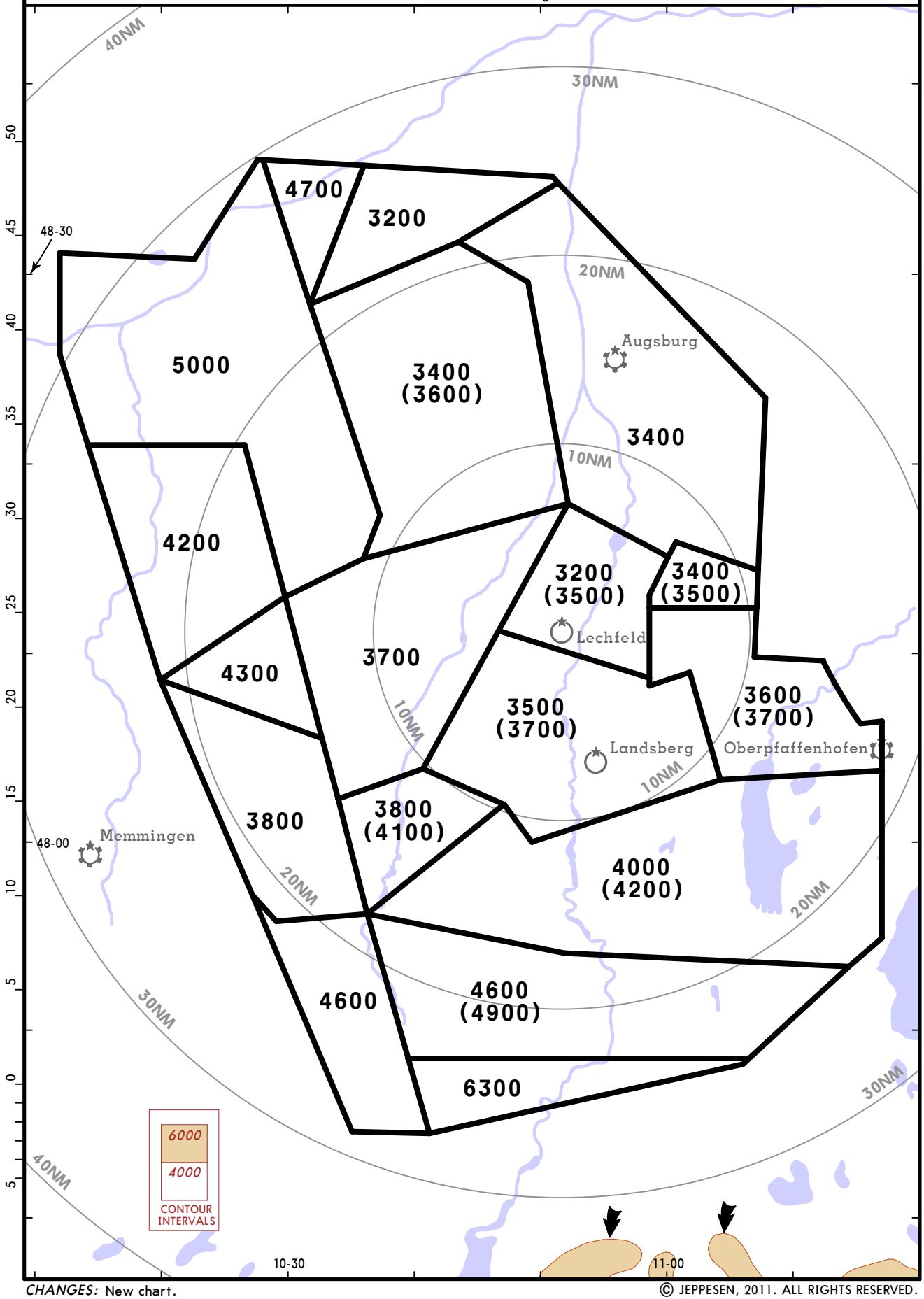
LECHFELD, GERMANY

RADAR MINIMUM ALTITUDES

Apt Elev
1822′

Alt Set: hPa (IN on request)
Trans level: By ATC Trans alt: 5000′
The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000′ above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500′). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only.
Altitudes in brackets apply for the period from AIRAC date in November until AIRAC date in March in order to meet required obstacle clearance at cold temperatures.

For UHF see MIL-101 listing

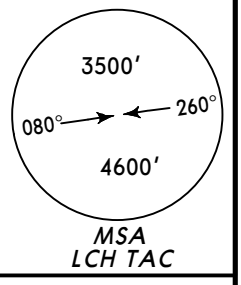


CHANGES: New chart.

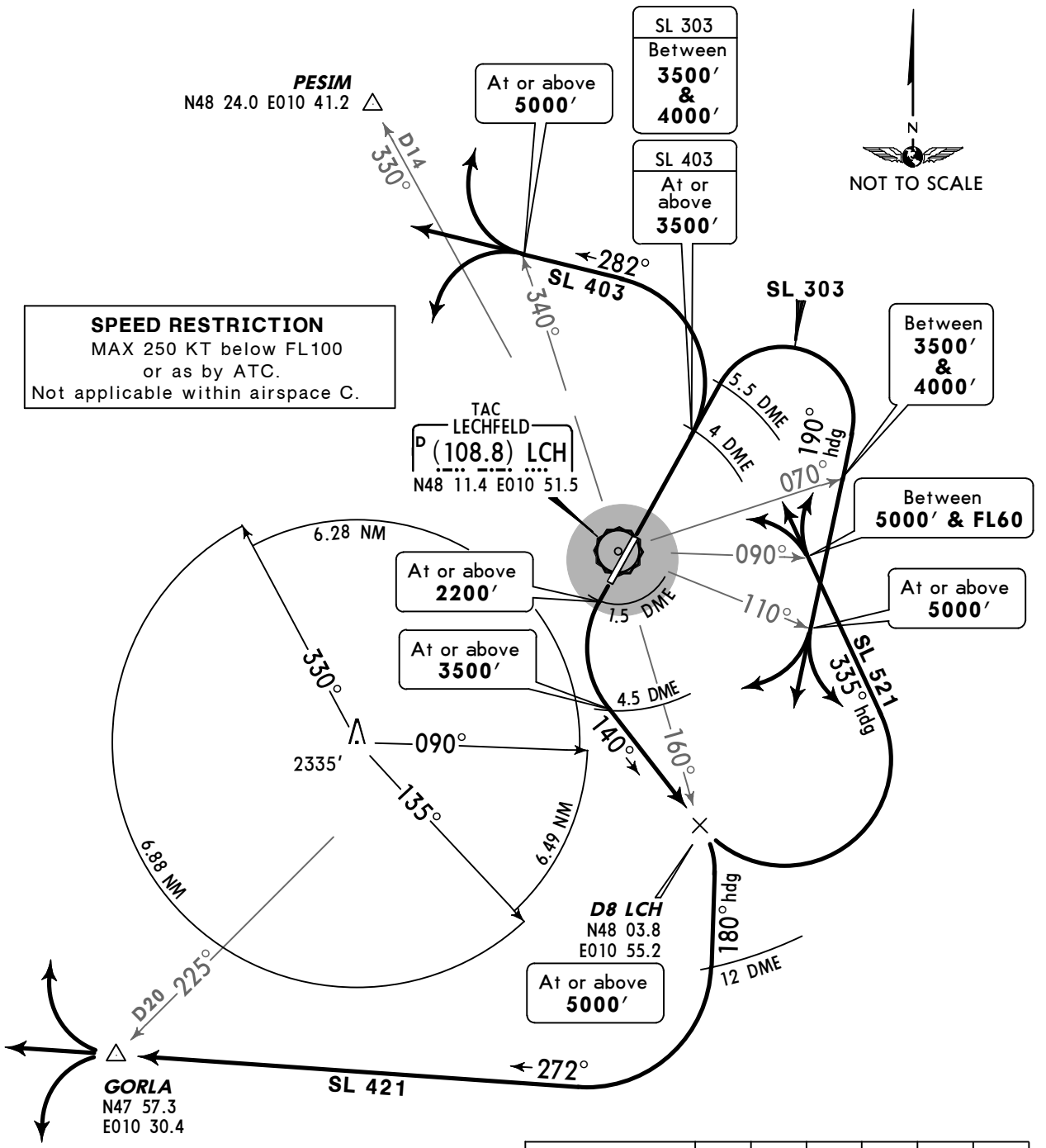
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Apt Elev	
1822′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Lechfeld 14800′.

For UHF see MIL-101 listing



SL 303, SL 403, SL 421, SL 521
RWYS 03, 21 DEPARTURES
TACAN AZIMUTH REQUIRED



MINIMUM CLIMB RATE TABLE

❶ **RWY 03:** up to 3500′ for ATC purposes.
❷ **RWY 21:** up to 2200′ for ATC purposes,
❸ **RWY 21:** 2200′ - 5000′ for ATC purposes.

KT	75	100	150	200	250	300
❶ V/V (fpm)	620	827	1240	1653	2067	2480
❷ V/V (fpm)	758	1010	1515	2020	2525	3030
❸ V/V (fpm)	494	658	988	1317	1646	1975

Execute turns after take-off with MAX 300 KT, bank angle 30°.

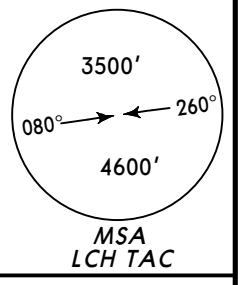
SID	RWY	ROUTING
SL 303	03	Climb straight ahead to LCH 5.5 DME, turn RIGHT, 190° heading.
SL 403	03	Climb straight ahead to LCH 4 DME, turn LEFT, 282° track.
SL 421	21	Climb straight ahead to LCH 1.5 DME, turn LEFT, 140° track to D8 LCH, turn RIGHT, 180° heading to LCH 12 DME, turn RIGHT, 272° track to GORLA.
SL 521	21	Climb straight ahead to LCH 1.5 DME, turn LEFT, 140° track to D8 LCH, turn LEFT, 335° heading to LCH R-090.

CHANGES: SID SL 303 crossings at LCH 4 DME and LCH R-070.

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Apt Elev	
1822′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Lechfeld 14800′.

For UHF see MIL-101 listing

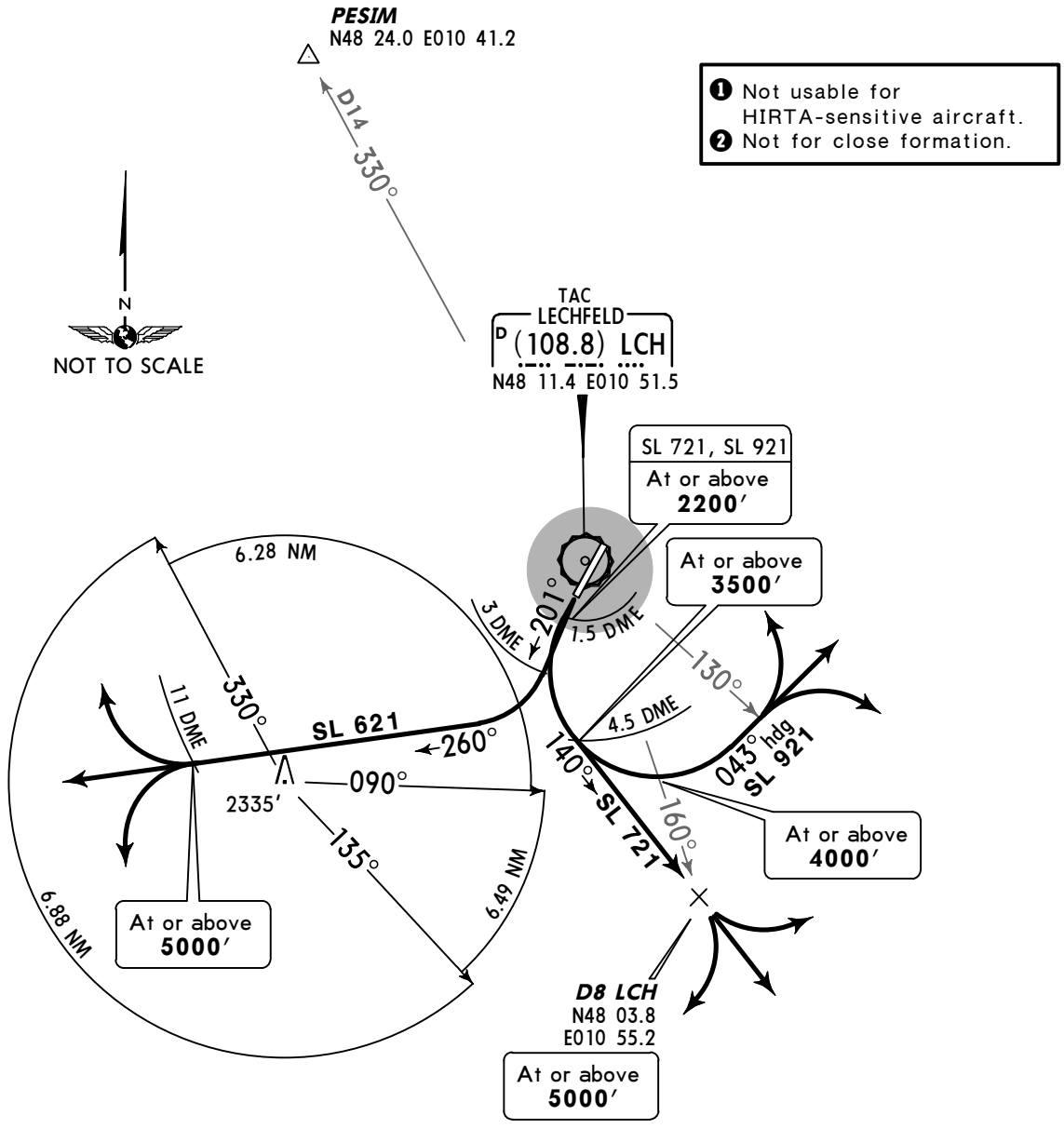


MSA
LCH TAC

SL 621❶ , SL 721, SL 921❷
RWY 21 DEPARTURES
TACAN AZIMUTH REQUIRED

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

❶ Not usable for HIRTA-sensitive aircraft.
❷ Not for close formation.



MINIMUM CLIMB RATE TABLE

❸ **SL 621:** up to 5000′ for ATC purposes.
❹ **SL 721:** up to 2200′ for ATC purposes,
❺ **SL 721:** 2200′ - 5000′ for ATC purposes.
❻ **SL 921:** up to 2200′ for ATC purposes,
❺ **SL 921:** 2200′ - 4000′ for ATC purposes.

KT	75	100	150	200	250	300
❸ V/V (fpm)	348	463	695	927	1158	1390
❹ V/V (fpm)	758	1010	1515	2020	2525	3030
❺ V/V (fpm)	494	658	988	1317	1646	1975
❻ V/V (fpm)	488	650	975	1300	1625	1950

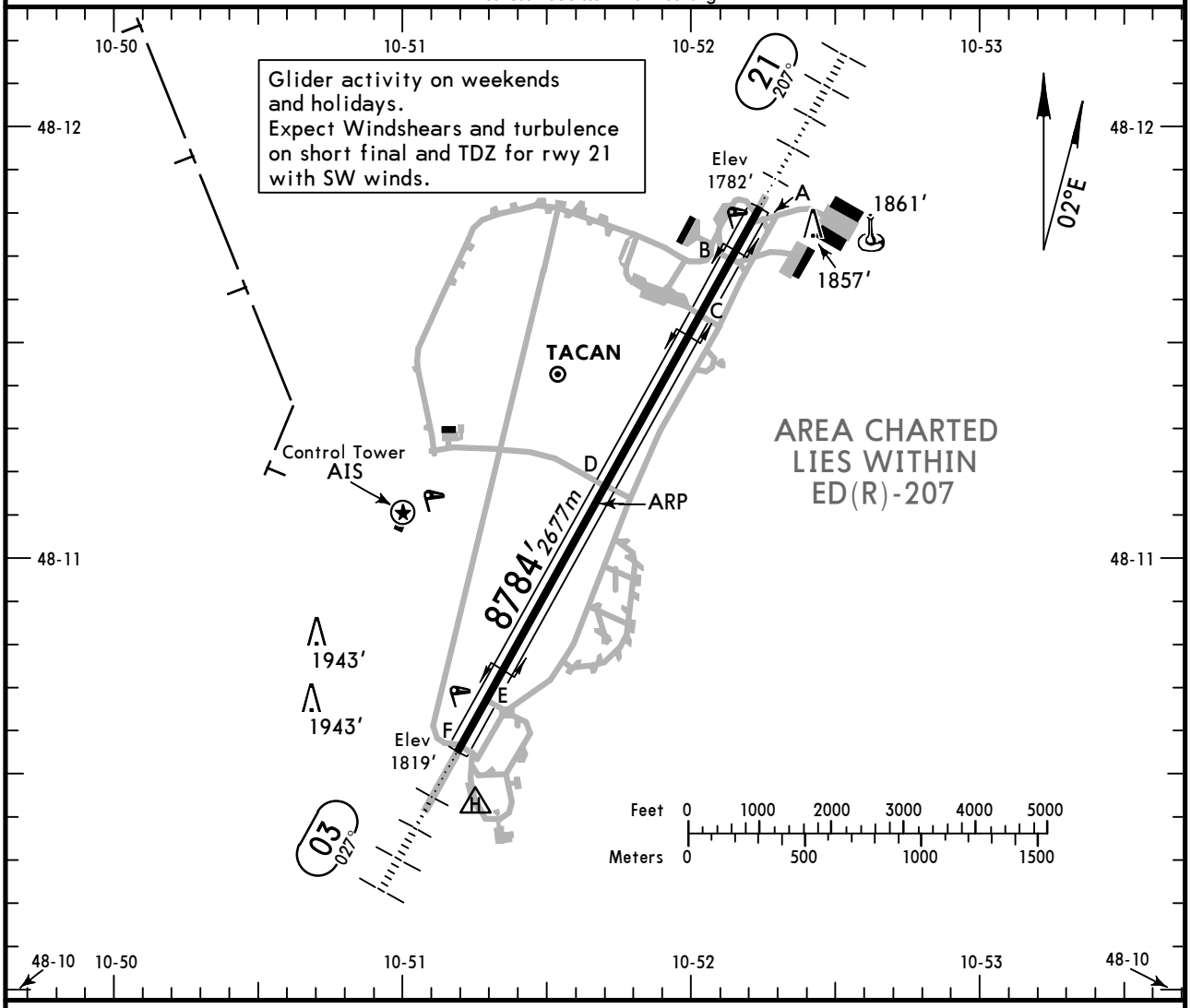
❼ Execute turns after take-off with MAX 300 KT, bank angle 30°.

SID	ROUTING
SL 621 ❶	Turn LEFT, 201° track to LCH 3 DME, turn RIGHT, 260° track to LCH 11 DME, proceed to PESIM and climb to FL70 or continue as cleared by ATC.
SL 721 ❼	Climb straight ahead to LCH 1.5 DME, turn LEFT, 140° track to D8 LCH.
SL 921 ❷❼	Climb straight ahead to LCH 1.5 DME, turn LEFT, 043° heading to LCH R-130.

CHANGES: None.

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*LECHFELD Tower
122.1 135.15
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
03 ❶ 21	HIRL HIALS SFL PAPI (angle 3.0°)				98′ *30m*

❶ Anti-skid layer.

Standard TAKE-OFF 1

	LVP must be in Force		
	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	*250m*	*400m*	*500m*
B			
C			
D	*300m*		

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

CHANGES: None.

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MUNICH Radar	*LECHFELD Tower	
129.45	122.1	135.15

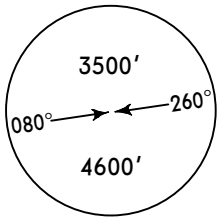
For UHF see MIL-101 listing

BRIEFING STRIP™

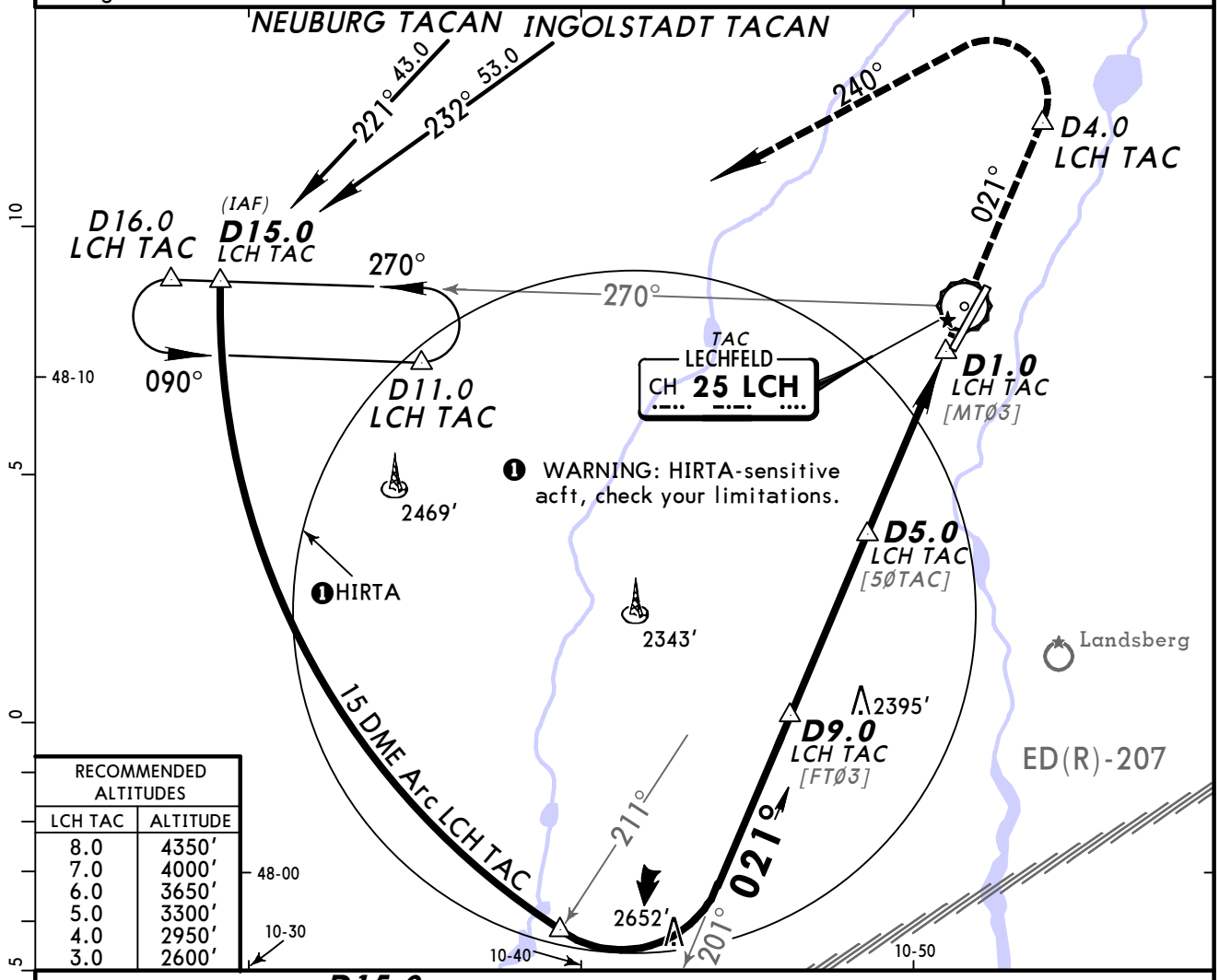
TACAN	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 1822′
LCH CH 25	021°	D9.0 LCH TAC 4700′ (2878′)	2260′ (438′)	TDZE 1822′

MISSED APCH: Climb on R-021 LCH TAC to D4.0 LCH TAC, then turn LEFT on track 240° to intercept R-270 LCH TAC to enter holding. Climb to 6000′.

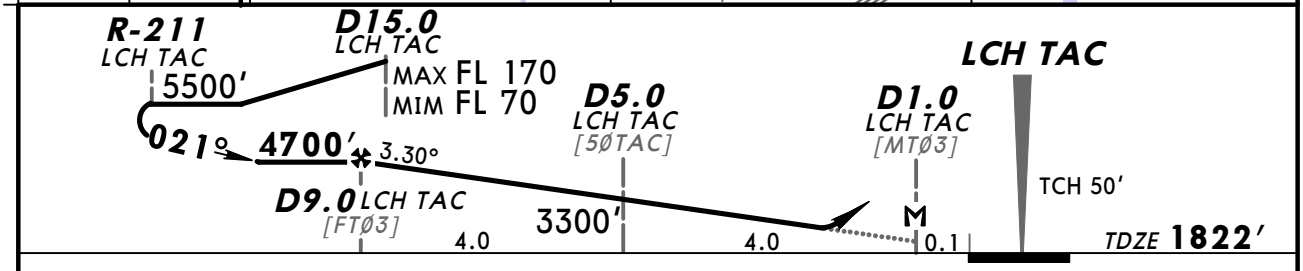
Alt Set: hPa (IN on req) TDZ Elev: 65 hPa Trans level: By ATC Trans alt: 5000′
Disregard PAPI indication.



MSA LCH TAC



RECOMMENDED ALTITUDES	
LCH TAC	ALTITUDE
8.0	4350′
7.0	4000′
6.0	3650′
5.0	3300′
4.0	2950′
3.0	2600′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.30°	409	526	584	701	817	934
MAP at D1.0 LCH TAC						

HIALS
PAPI PAPI

D4.0 LCH TAC on LCH CH 25 R-021

Standard STRAIGHT-IN LANDING RWY 03 **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 2260′ (438′)

	ALS out
A, B	500′- 1500m
C, D	500′- 1600m
	500′- 2000m
	500′- 2400m

Max Kts	MDA(H)	CEIL-VIS
A, B	NOT AUTHORIZED	
180	2430′ (608′)	500′- 2400m
205	2530′ (708′)	600′- 3600m

MIPS

CHANGES: Holding.

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MUNICH Radar	*LECHFELD Tower	
129.45	122.1	135.15

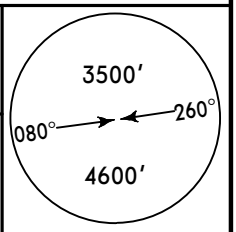
For UHF see MIL-101 listing

BRIEFING STRIP™

TACAN	Final Apch Crs	Mandatory Alt	MDA(H)	Apt Elev 1822′
LCH CH 25	220°	D6.0 LCH TAC 3500′ (1704′)	2140′ (344′)	TDZE 1796′

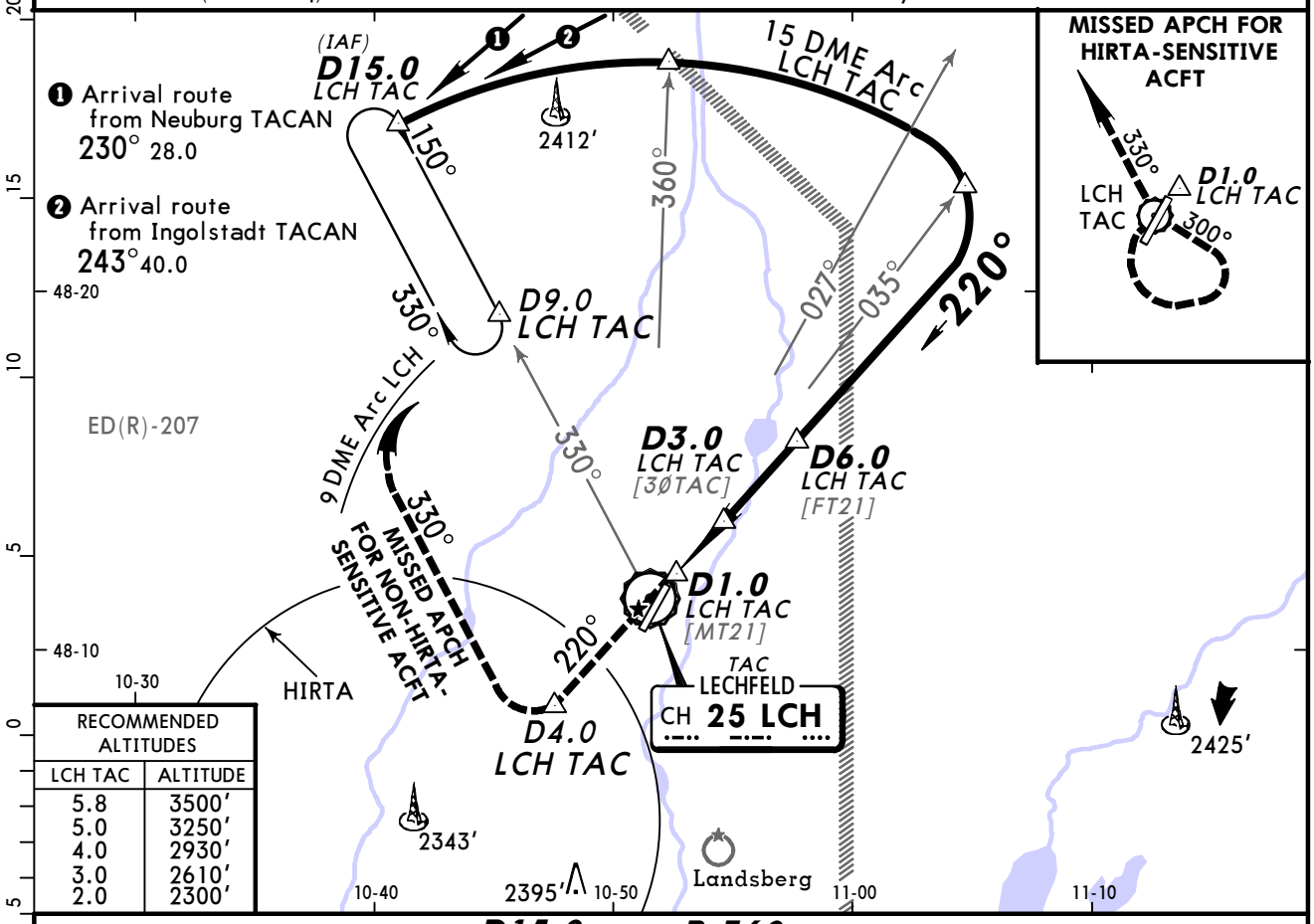
MISSED APCH FOR NON-HIRTA-SENSITIVE ACFT: Climb on R-220 LCH TAC to D4.0 LCH TAC, then turn RIGHT on track 330° to intercept 9 DME Arc LCH TAC to enter holding. Climb to 5000′.

MISSED APCH FOR HIRTA-SENSITIVE ACFT: Turn LEFT (MAX 250 KT, bank angle 20°) on track 300° to intercept R-330 LCH TAC to enter holding. Climb to 5000′.

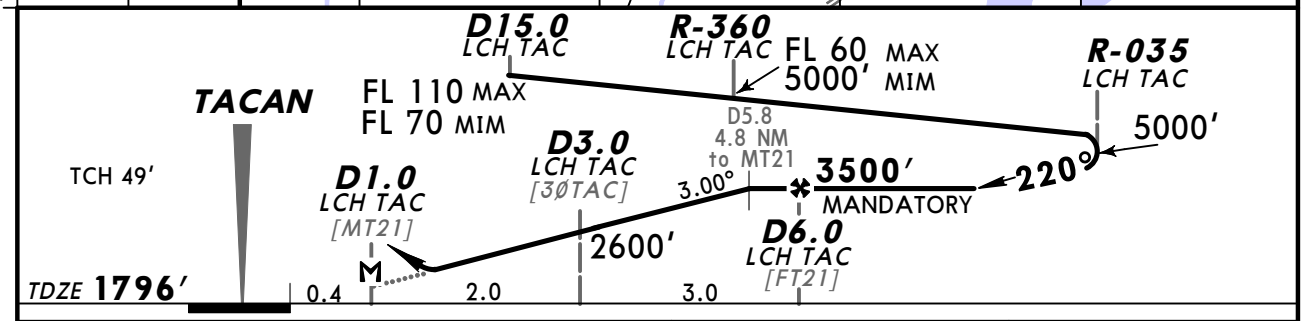


MSA LCH TAC

Alt Set: hPa (IN on req) | TDZ Elev: 64 hPa | Trans level: By ATC | Trans alt: 5000′



RECOMMENDED ALTITUDES	
LCH TAC	ALTITUDE
5.8	3500′
5.0	3250′
4.0	2930′
3.0	2610′
2.0	2300′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 LCH TAC						

HIALS
PAPI PAPI

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY 21 **CEILING REQUIRED** CIRCLE-TO-LAND

MDA(H) 2140′ (344′)

	ALS out
A	400′ - 900m
B	400′ - 1600m
C	400′ - 1200m
D	400′ - 2000m

Max Kts	MDA(H) CEIL-VIS
A	NOT AUTHORIZED
B	
180	2430′ (608′) 500′ - 2400m
205	2530′ (708′) 600′ - 3600m

AATCP-1(C)

CHANGES: New procedure.

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ETSL
LECHFELD

JEPPESEN
22 OCT 10 18-1

LECHFELD, GERMANY
*PAR or *SRA Rwys 03, 21

MUNICH Radar	*LECHFELD Radar		*LECHFELD Tower	
129.45	123.3	129.02	135.15	122.1

For UHF see MIL-101 listing

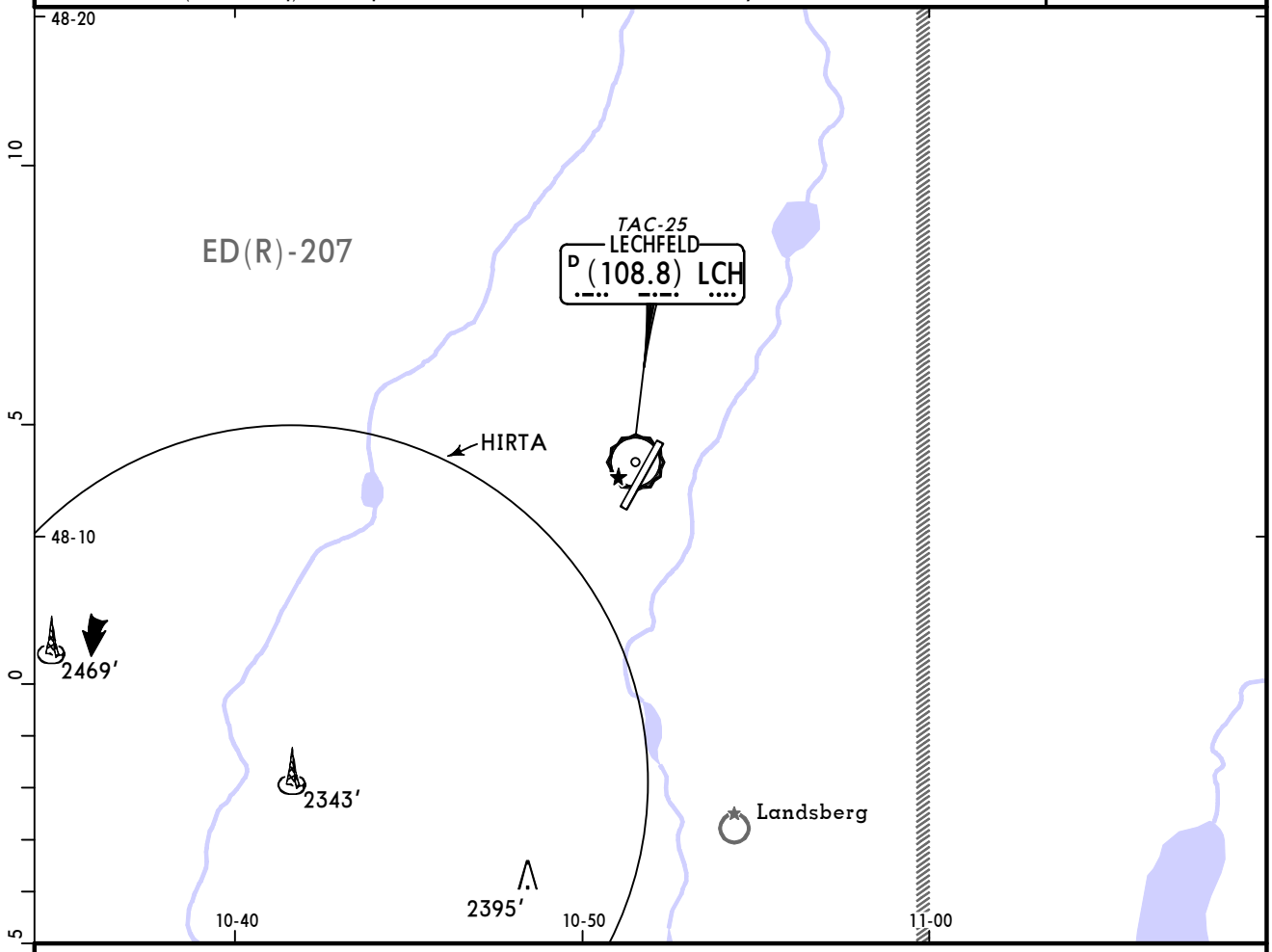
BRIEFING STRIP™

RADAR	Final Apch Crs	PAR GS	Minimum Alt	DA(H)/MDA(H)		
	BY ATC	No Alt published	No FAF	Refer to Minimums	Apt Elev	1822′
					TDZE RWY 03	1822′
					TDZE RWY 21	1796′

MISSED APCH: As directed by RADAR CONTROLLER.

No MSA published

Alt Set: hPa (IN on req) Apt Elev: 65 hPa Trans level: By ATC Trans alt: 5000′



RWY 03
TCH not published

RWY 21
PAR TCH 49′

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

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING **CEILING REQUIRED**

TERPS

	PAR 03 DA(H) 2022′(200′)		PAR 21 DA(H) 1996′(200′)		SRA 03 MDA(H) 2280′(458′)		SRA 21 MDA(H) 2220′(424′)	
		ALS out		ALS out		ALS out		ALS out
A	200′- 800m	200′- 1200m	200′- 800m	200′- 1200m	500′- 1900m	500′- 2300m	400′- 1500m	400′- 2200m
B								
C					500′- 2100m	500′- 2500m	400′- 1700m	400′- 2400m
D								

CHANGES: New procedure.

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JeppView for Windows

General Information

Location: Neuburg Deu
IATA Code:
Lat/Long: N48° 42.7' E011° 12.7'
Elevation: 1250 ft

Airport Use: Military
Magnetic Variation: 2.2°E

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

Sunrise: 0602 Z
Sunset: 1654 Z,

Runway Information

Runway: 09
Length x Width: 8005 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 1250 ft
Lighting: Edge, ALS, REIL

Runway: 27
Length x Width: 8005 ft x 98 ft
Surface Type: asphalt
TDZ-Elev: 1247 ft
Lighting: Edge, ALS, REIL

Communication Information

Donau Tower 138.15 Military
Donau Tower 129.85 Military
Donau Tower 122.1
Donau Tower 36.91 Military
Donau Tower 25.78 Military
Donau Tower 24.04 Military
Donau Radar 139.15 Military
Donau Radar 138.8 Military
Donau Radar 130.15 Military
Donau Radar 123.3 Military
Donau Radar 38.54 Military
Donau Radar 34.4 Military
Donau Radar 31.437 Military

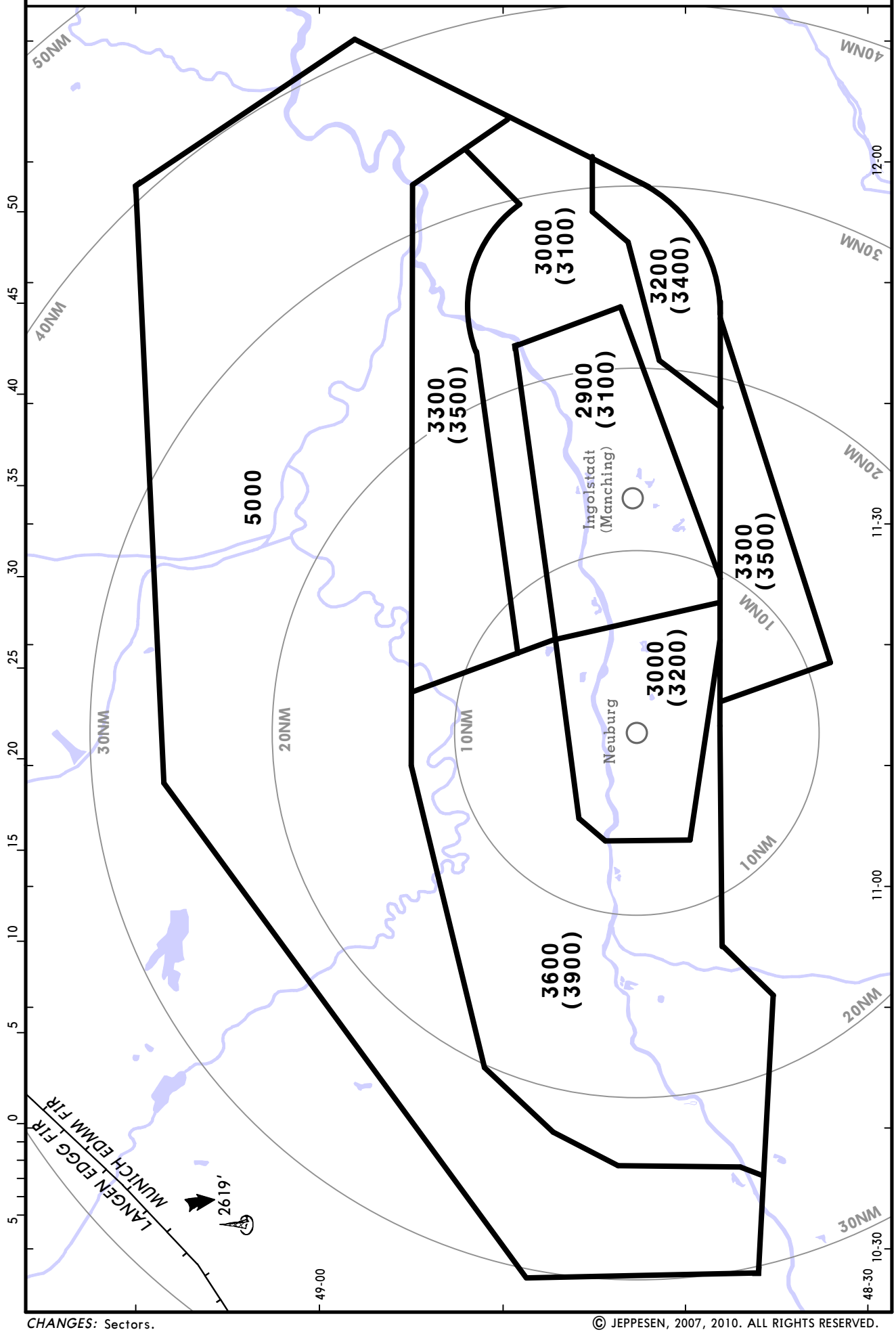
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Donau Radar 28.427 Military
Donau Radar 28.147 Military
Donau Radar 27.565 Military

Apt Elev	Alt Set: hPa (IN on request)
1249′	Trans level: By ATC Trans alt: 5000′

For UHF see MIL-101 listing

Values in brackets consider additional height margins in order to meet required obstacle clearance at cold temperatures.

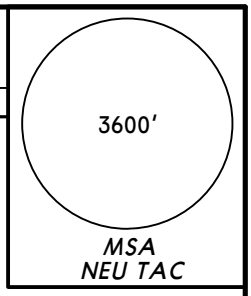


CHANGES: Sectors.

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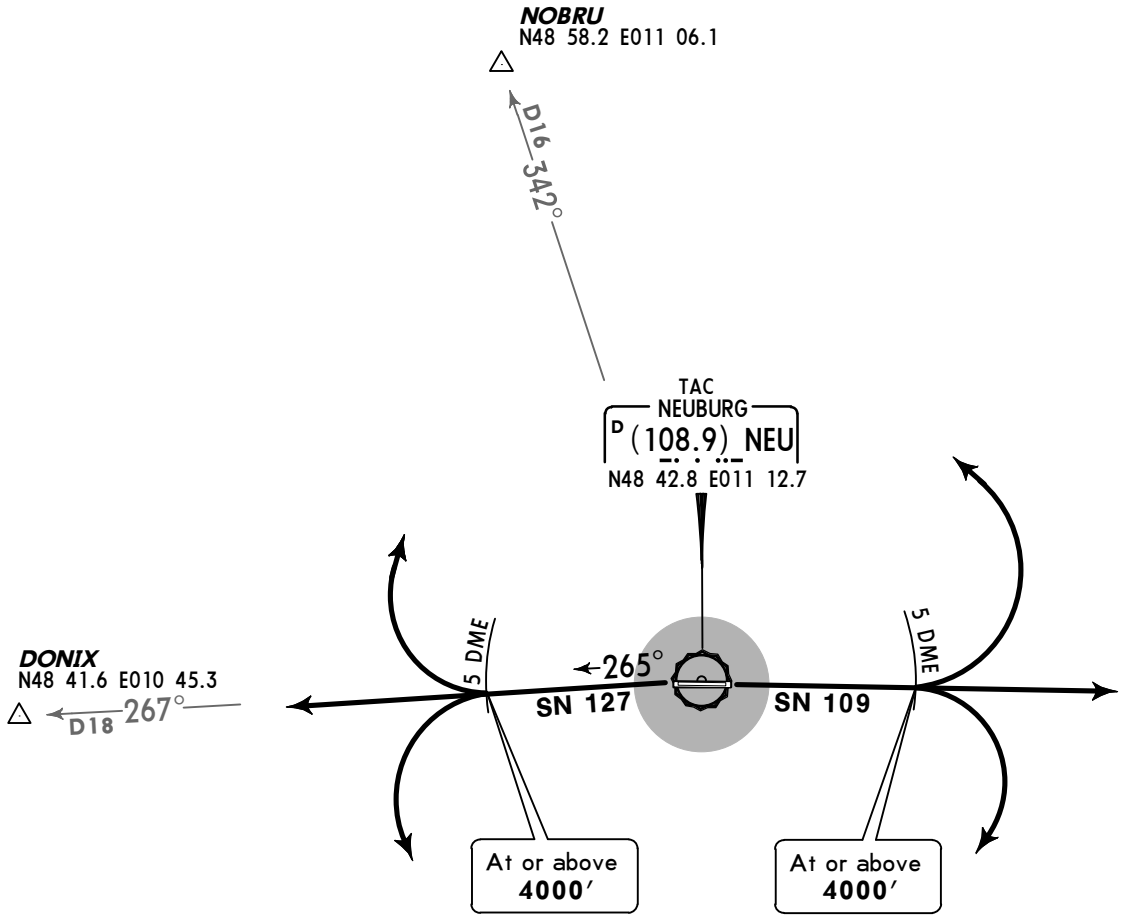
Apt Elev	
1250′	Trans level: By ATC Trans alt: 5000′ Emergency safe altitude within 100 NM of Neuburg 13500′.

For UHF see MIL-101 listing



SN 109, SN 127
RWYS 09, 27 DEPARTURES
TACAN AZIMUTH REQUIRED

SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.





MINIMUM CLIMB RATE TABLE
❶ **SN 109:** up to **4000′** for ATC purposes.
❷ **SN 127:** up to **4000′** for ATC purposes.

KT	75	100	150	200	250	300
❶ V/V (fpm)	658	877	1316	1755	2193	2632
❷ V/V (fpm)	627	836	1254	1672	2090	2508

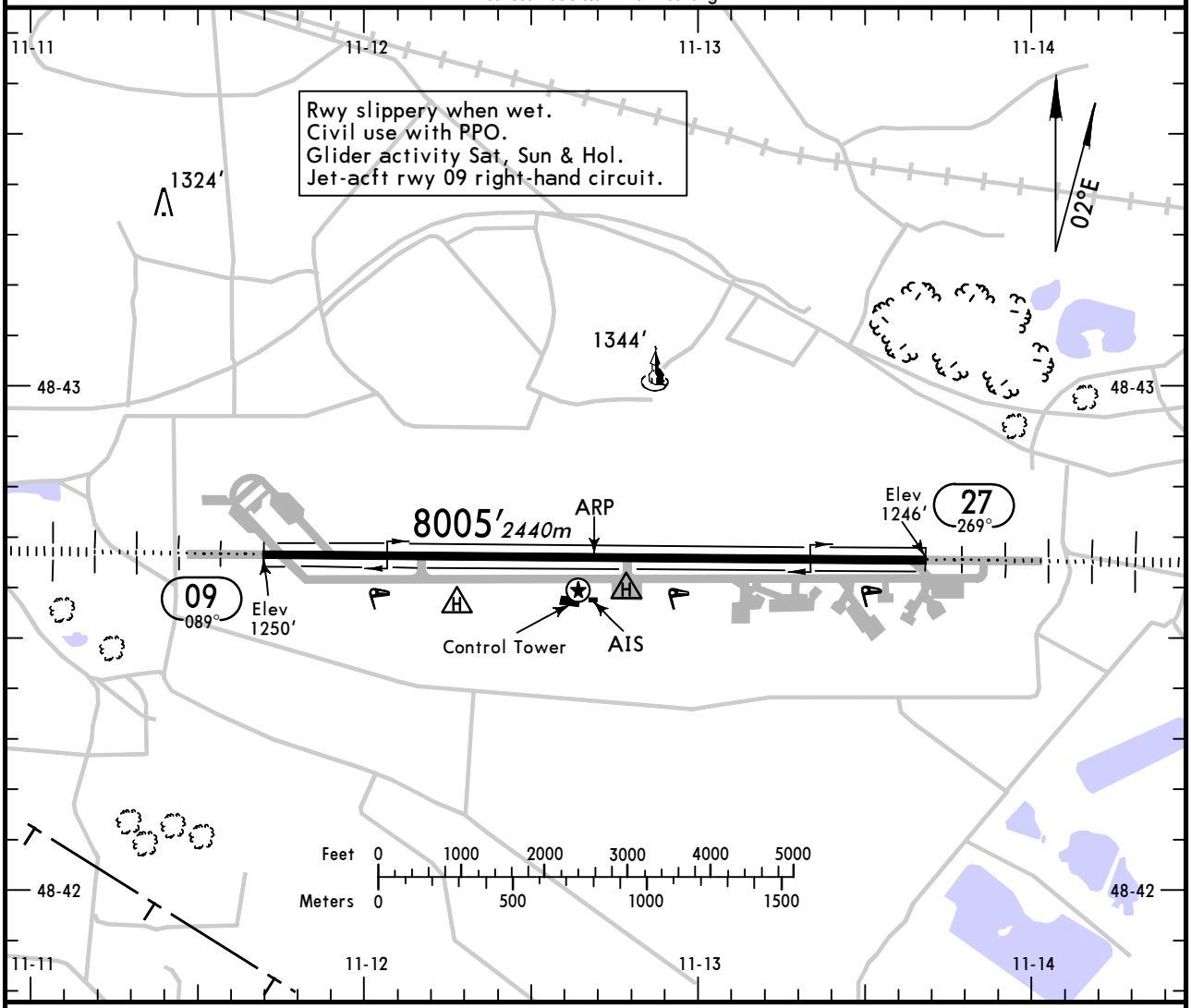
Rwy 27: No turn before DER.

SID	RWY	ROUTING
SN 109	**09**	Climb straight ahead to NEU 5 DME, continue as cleared by ATC.
SN 127	**27**	Climb on 265° track to NEU 5 DME, continue as cleared by ATC.

CHANGES: New procedure at this airport.

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*DONAU Tower
129.85 122.1
For UHF see MIL-101 listing



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
09 ❶ 27	HIRL HIALS REIL SFL PAPI (angle 3.0°) RVR				98′ 30m

❶ Asphalt with anti-skid layer.

Standard TAKE-OFF 1

	LVP must be in Force RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	250m	400m	500m
B			
C			
D	300m		

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

CHANGES: Lights.

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BRIEFING STRIP

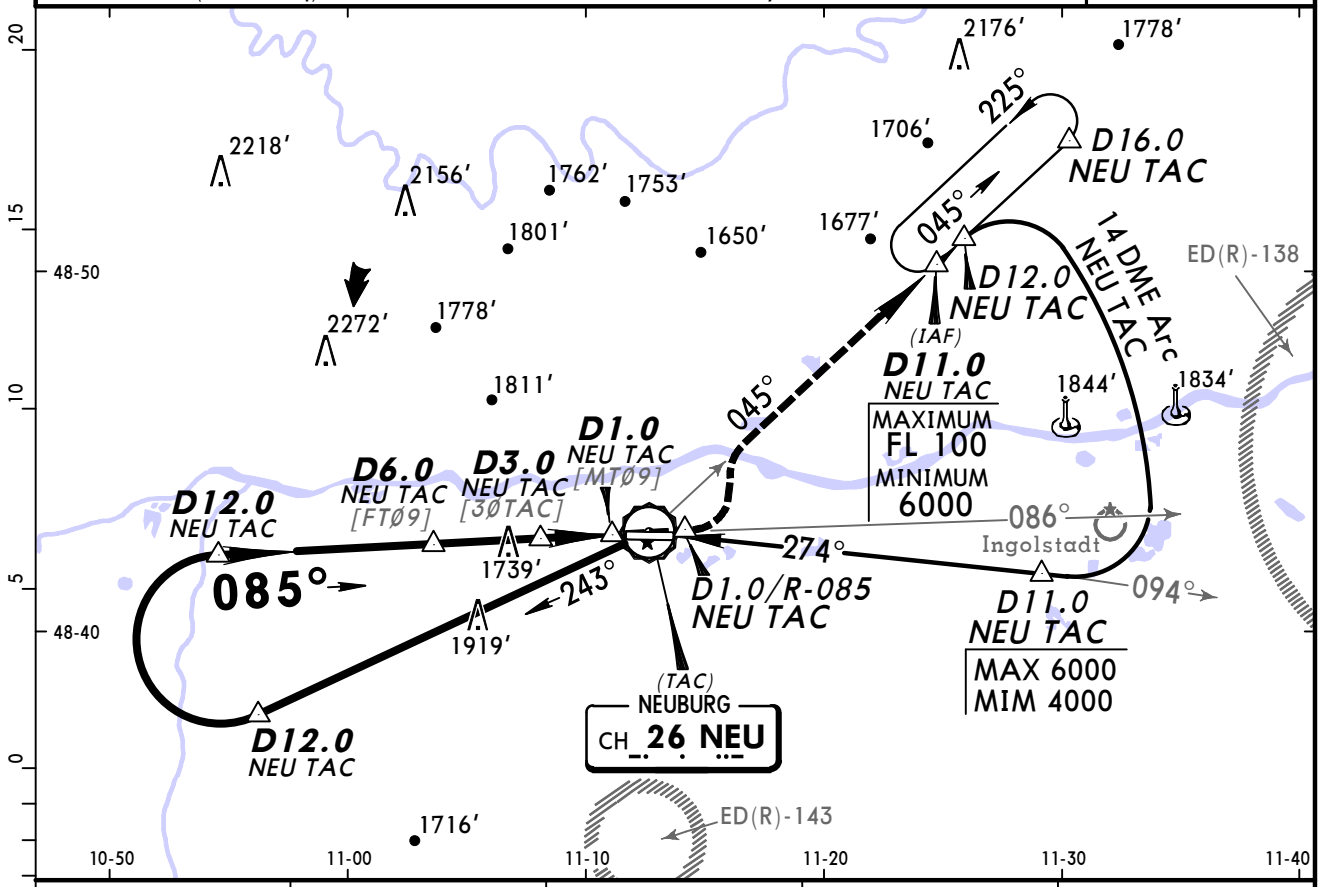
*DONAU Tower
129.85 122.1
For UHF see MIL-101 listing

TACAN	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev / TDZE
NEU CH 26	085°	D6.0 NEU TAC 2900′ (1650′)	1810′ (560′)	1250′ / 1250′

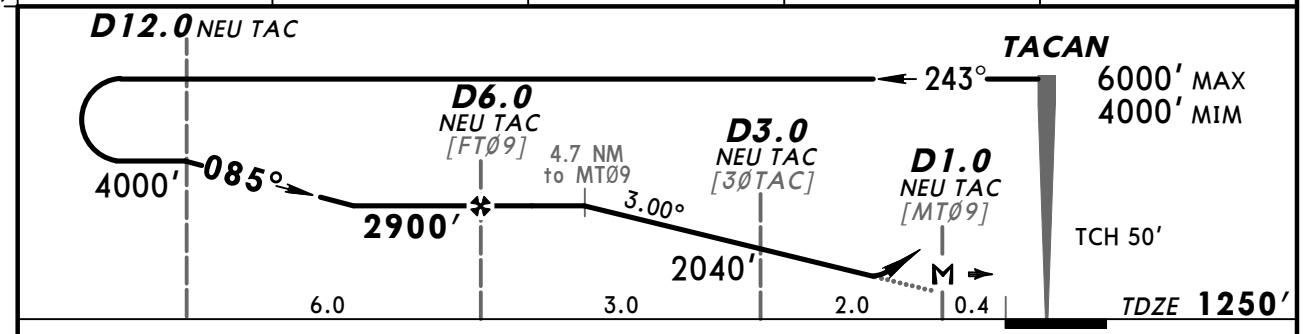
MISSED APCH: Climb STRAIGHT AHEAD. At D1.0/R-085 NEU TAC turn LEFT to intercept R-045 NEU TAC outbound. Enter holding and climb to FL 60.

3600′
MSA NEU TAC

Alt Set: hPa (IN on req) TDZ Elev: 45 hPa Trans level: By ATC Trans alt: 5000′



NEU TAC	5.7	5.0	4.0	3.0
ALTITUDE	2900′	2680′	2360′	2050′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 NEU TAC						

HIALS
REIL PAPI PAPI

D1.0/ R-085 NEU TAC

LT

on NEU CH 26 R-045

Standard STRAIGHT-IN LANDING RWY **09** **CEILING REQUIRED** CIRCLE-TO-LAND

DA(H) 1810′ (560′)

Not authorized North of rwy

	ALS out	Max Kts	MDA(H)	CEIL-VIS
A	600′ - 1500m	100	1810′ (560′)	600′ - 1600m
B	600′ - 1600m	135	1960′ (710′)	800′ - 1600m
C	600′ - 1800m	170	2140′ (890′)	900′ - 4400m
D	600′ - 2000m	205	2520′ (1270′)	1300′ - 4800m

TERPS

CHANGES: Minimum altitude.

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BRIEFING STRIP™

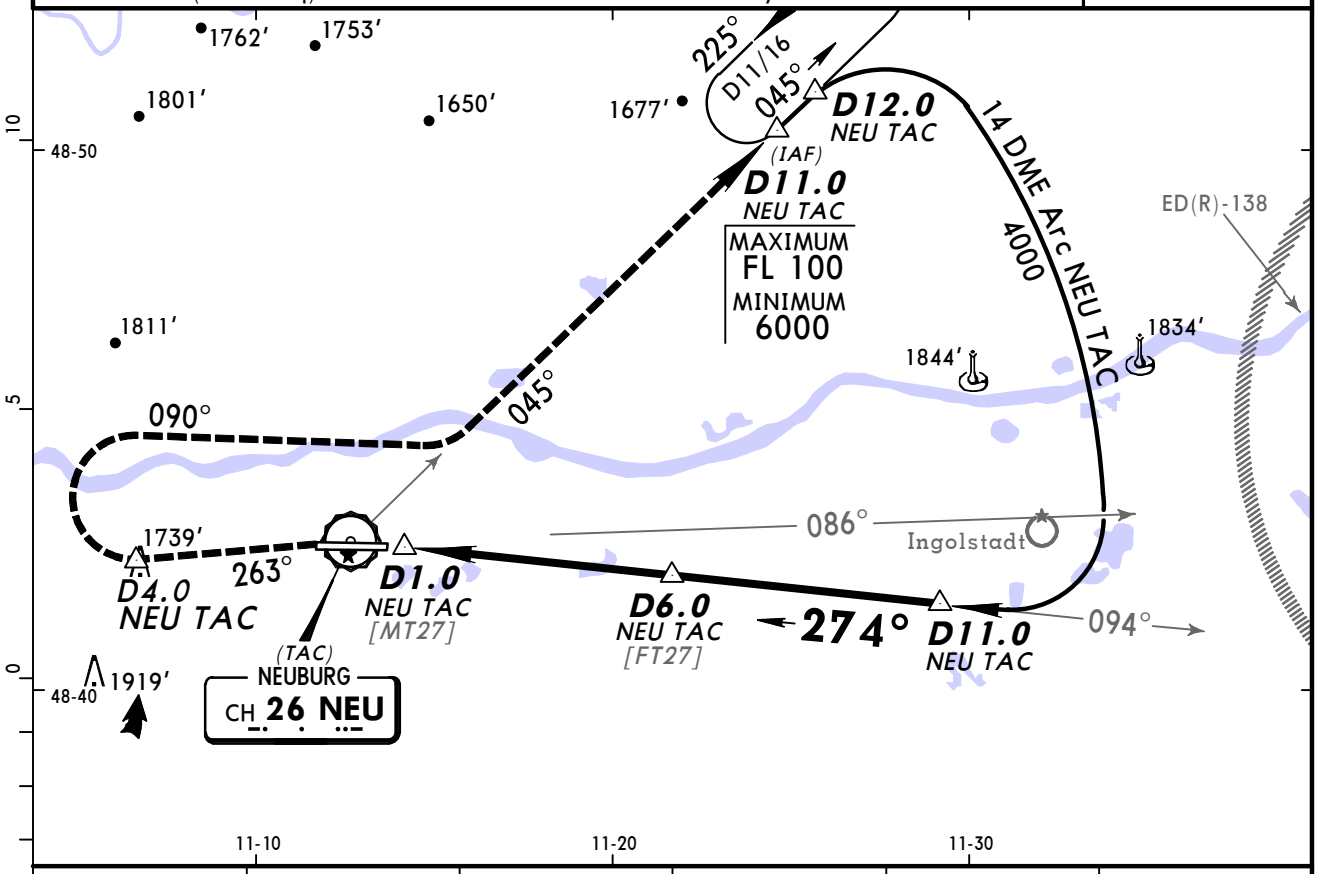
*DONAU Tower
129.85 122.1
For UHF see MIL-101 listing

TACAN	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 1250′
NEU CH 26	274°	D6.0 NEU TAC 2900′ (1653′)	1590′ (343′)	TDZE 1247′

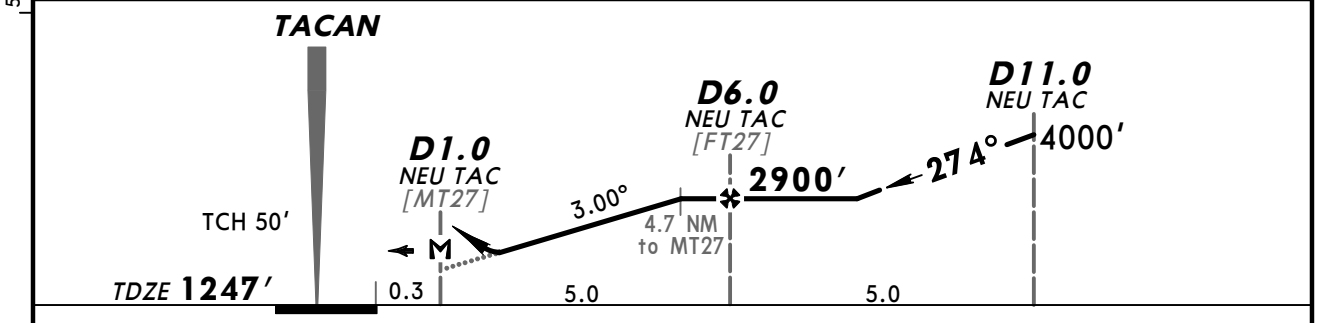
MISSED APCH: Climb to TACAN, then turn LEFT and proceed on R-263 NEU TAC outbound climbing to FL 60. When passing D4.0 NEU TAC turn RIGHT on track 090° to intercept and follow R-045 NEU TAC and enter holding.

3600′
MSA
NEU TAC

Alt Set: hPa (IN on req) TDZ Elev: 45 hPa Trans level: By ATC Trans alt: 5000′



NEU TAC	2.0	3.0	4.0	5.0	5.7
ALTITUDE	1730′	2050′	2360′	2680′	2900′



Gnd speed-Kts	70	90	100	120	140	160
Descent angle 3.00°	372	478	531	637	743	849
MAP at D1.0 NEU TAC						

HIALS
REIL
PAPI PAPI

NEU CH 26

FL 60 LT

NEU CH 26 on R-263

Standard STRAIGHT-IN LANDING RWY 27 **CEILING REQUIRED** CIRCLE-TO-LAND

Not authorized North of rwy

DA(H) 1590′ (343′)

	ALS out
A	400′ - 900m
B	400′ - 1600m
C	400′ - 1200m
D	400′ - 2000m

Max Kts	MDA(H)	CEIL-VIS
100	1740′ (490′)	500′ - 1600m
135	1960′ (710′)	800′ - 1600m
170	2140′ (890′)	900′ - 4400m
205	2520′ (1270′)	1300′ - 4800m

TERPS

CHANGES: Airport Elevation. Procedure. Minimums.

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NEUBURG, GERMANY
*PAR or *SRA All Rwys

*DONAU Radar	*DONAU Tower (R)
130.15 123.3	129.85 122.1

For UHF see MIL-101 listing

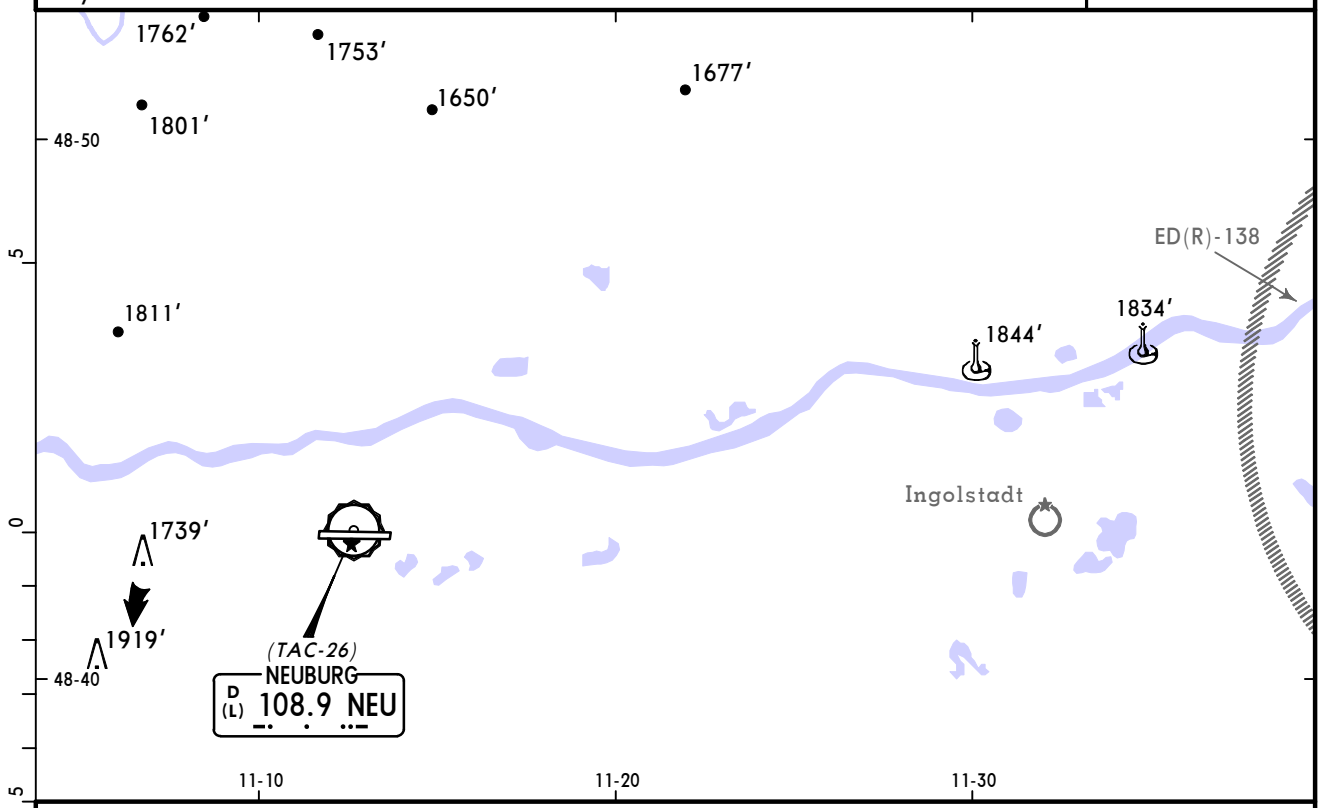
BRIEFING STRIP ™

RADAR	Final Apch Crs By ATC	PAR GS No Alt published	DA(H) Refer to Minimums	Apt Elev 1250′ TDZE - See below
		Minimum Alt No FAF	MDA(H) Refer to Minimums	

MISSED APCH: As directed by RADAR CONTROLLER.

Alt Set: hPa (IN on req) Apt Elev: 45 hPa Trans level: By ATC Trans alt: 5000′
Rwy 27 PAR GS and PAPI not coincidental.

3600′
MSA
NEU TAC



RWY 09
PAR TCH 38′
TDZE 1250′

RWY 27
PAR TCH 38′
TDZE 1247′

Gnd speed-Kts	70	90	100	120	140	160
Rwy 09, 27 PAR GS 3.00°	377	484	538	646	753	861

Lighting - Refer to Airport Chart

Refer to Missed Apch above

Standard STRAIGHT-IN LANDING RWY **CEILING REQUIRED**

TERPS

	PAR 09 DA(H) 1450′ (200′)		PAR 27 DA(H) 1447′ (200′)		SRA 09 MDA(H) 1860′ (610′)		SRA 27 MDA(H) 1650′ (403′)	
		ALS out		ALS out		ALS out		ALS out
A	200′ - 800m	200′ - 1200m	200′ - 800m	200′ - 1200m	700′ - 2300m	700′ - 3000m	400′ - 1400m	400′ - 2100m
B								
C					700′ - 2500m	700′ - 3200m	400′ - 1600m	400′ - 2300m
D								

CHANGES: Airport & TDZE elevation. Minimums.

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Chart changes since cycle 03-2012

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE
BAUTZEN, (BAUTZEN - EDAB)				
LEIPZIG-ALTENBURG, (LEIPZIG-ALTENBURG - EDAC)				
HERINGSDORF, (HERINGSDORF - EDAH)				
REV	PENET 2H & UDAXI 1H ARRS	10-2	10 Feb 2012	
REV	MASOR 1A & 1B, PENET 2A &...	10-3	10 Feb 2012	
REV	AIRPORT, AIRPORT INFO, TA...	10-9	10 Feb 2012	
REV	ILS OR LOC RWY 28	11-1	10 Feb 2012	
REV	NDB RWY 10	16-1	10 Feb 2012	
REV	NDB RWY 28	16-2	10 Feb 2012	
MAGDEBURG/COCHSTEDT, (MAGDEBURG/COCHSTEDT - EDBC)				
COTTBUS-DREWITZ, (COTTBUS-DREWITZ - EDCD)				
BERLIN, (SCHONEFELD - EDDB)				
DRESDEN, (DRESDEN - EDDC)				
ERFURT-WEIMAR, (ERFURT-WEIMAR - EDDE)				
FRANKFURT/MAIN, (FRANKFURT/MAIN - EDDF)				
REV	AIRPORT	10-9	10 Feb 2012	
REV	TAXI CHART	10-9A	10 Feb 2012	
REV	PARKING STANDS (EAST)	10-9B	10 Feb 2012	
REV	PARKING STANDS (WEST)	10-9C	10 Feb 2012	
MUNSTER/OSNABRUCK, (MUNSTER/OSNABRUCK - EDDG)				
HAMBURG, (HAMBURG - EDDH)				
COLOGNE-BONN, (COLOGNE-BONN - EDDK)				
DUSSELDORF, (DUSSELDORF - EDDL)				
MUNICH, (MUNICH - EDDM)				
REV	AIRPORT BRIEFING (GEN CON...	10-1P2	10 Feb 2012	
REV	AIRPORT BRIEFING (ARR)	10-1P3	10 Feb 2012	
REV	AIRPORT BRIEFING (ARR CON...	10-1P4	10 Feb 2012	
REV	AIRPORT BRIEFING (ARR CON...	10-1P5	10 Feb 2012	
REV	AIRPORT BRIEFING (DEP CON...	10-1P8	10 Feb 2012	
REV	AIRPORT BRIEFING (DEP CON...	10-1P9	10 Feb 2012	
REV	AIRPORT	10-9	10 Feb 2012	
REV	AIRPORT INFO, TAKE-OFF MN...	10-9A	10 Feb 2012	
REV	TAXI CHART	10-9A1	10 Feb 2012	
REV	PARKING STANDS WEST	10-9B	10 Feb 2012	
REV	PARKING STANDS EAST	10-9C	10 Feb 2012	
REV	PARKING STAND COORDS	10-9D	10 Feb 2012	
REV	VISUAL DOCKING GUIDANCE S...	10-9E	10 Feb 2012	
NURNBERG, (NURNBERG - EDDN)				
LEIPZIG-HALLE, (LEIPZIG-HALLE - EDDP)				
SAARBRUCKEN, (SAARBRUCKEN - EDDR)				

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STUTTGART, (STUTTGART - EDDS)

BERLIN, (TEGEL - EDDT)

HANNOVER, (HANNOVER - EDDV)

BREMEN, (BREMEN - EDDW)

REV	JAA MNMS	10-9X	17 Feb 2012
REV	JAA MNMS CONTD	10-9X1	17 Feb 2012
REV	JAA COPTER MNMS	10-9Y	17 Feb 2012
ADD	GLS RWY 09	12-40	17 Feb 2012
ADD	GLS RWY 27	12-41	17 Feb 2012

FRANKFURT-HAHN, (FRANKFURT-HAHN - EDFH)

REV	AIRPORT BRIEFING (GEN)	20-1P	17 Feb 2012
REV	AIRPORT BRIEFING (ARR, DE...	20-1P1	17 Feb 2012

HAMBURG, (FINKENWERDER - EDHI)

LUBECK, (BLANKENSEE - EDHL)

MEMMINGEN, (MEMMINGEN - EDJA)

PADERBORN/LIPPSTADT, (PADERBORN/LIPPSTADT - EDLP)

NIEDERRHEIN, (NIEDERRHEIN - EDLV)

DORTMUND, (DORTMUND - EDLW)

OBERPFAFFENHOFEN, (OBERPFAFFENHOFEN - EDMO)

FRIEDRICHSHAFEN, (FRIEDRICHSHAFEN - EDNY)

SCHWERIN-PARCHIM, (SCHWERIN-PARCHIM - EDOP)

GIEBELSTADT, (GIEBELSTADT - EDQG)

ZWEIBRUCKEN, (ZWEIBRUCKEN - EDRZ)

KARLSRUHE/BADEN-BADEN, (KARLSRUHE/BADEN-BADEN - EDSB)

LAHR, (LAHR - EDTL)

SYLT, (SYLT - EDXW)

SPANGDAHLEM, (SPANGDAHLEM AB - ETAD)

RAMSTEIN, (RAMSTEIN AB - ETAR)

NORDHOLZ, (NORDHOLZ - ETMN)

GEILENKIRCHEN, (GEILENKIRCHEN - ETNG)

HOHN, (HOHN - ETNH)

JEVER, (JEVER - ETNJ)

LAAGE, (ROSTOCK-LAAGE - ETNL)

NORVENICH, (NORVENICH - ETNN)

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SCHLESWIG, (SCHLESWIG - ETNS)

WITTMUNDHAFEN, (WITTMUNDHAFEN - ETNT)

NEUBRANDENBURG, (NEUBRANDENBURG - ETNU)

LANDSBERG, (LANDSBERG - ETSA)

BUCHEL, (BUCHEL - ETSB)

ERDING, (ERDING - ETSE)

HOLZDORF, (HOLZDORF - ETSH)

INGOLSTADT, (MANCHING - ETSI)

LECHFELD, (LECHFELD - ETSL)

NEUBURG, (NEUBURG - ETSN)

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TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport EDAB

No Chart Change Notices for Airport EDAC

No Chart Change Notices for Airport EDAH

No Chart Change Notices for Airport EDBC

No Chart Change Notices for Airport EDCD

No Chart Change Notices for Airport EDDB

Chart Change Notices for Airport EDDC

Type: Terminal
Effectivity: Permanent
Begin Date: Immediately
End Date: No end date

SIDs are also noise abatement procedures (refer to 10-4).

No Chart Change Notices for Airport EDDE

Chart Change Notices for Airport EDDF

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

SIDs from rwy 18 with designator LIMA, ROMEO, SIERRA, TANGO and UNIFORM contact LANGEN Radar when advised by Tower.

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

SIDs from rwy 07C/R with designator DELTA and ECHO contact LANGEN Radar when advised by Tower.

No Chart Change Notices for Airport EDDG

No Chart Change Notices for Airport EDDH

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Chart Change Notices for Airport EDDK

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

From NOV 09 due to construction works intersection of twy A and rwy 06/24 closed.

No Chart Change Notices for Airport EDDL

No Chart Change Notices for Airport EDDM

Chart Change Notices for Airport EDDN

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

(12-2) LNAV/VNAV Rwy 28 suspended.

No Chart Change Notices for Airport EDDP

No Chart Change Notices for Airport EDDR

No Chart Change Notices for Airport EDDS

Chart Change Notices for Airport EDDT

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

(10-3F/G) note 2 in chart heading should read: SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

Chart Change Notices for Airport EDDV

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

(11-4/11-4A) OM rwy 27R perm withdrawn.

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

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Ufn construction works in progress on northern portion of airport resulting in closure of rwy 09L/27R, rwy 09C/27C, helipad H2 and the following twys: G (from Run-up test area to rwy 09L), H, J, K , K(to), L from M to rwy 09L/27R, M from Q to Rwy 27R, and N.

No Chart Change Notices for Airport EDDW

Chart Change Notices for Airport EDFH

Type: Terminal
Effectivity: Permanent
Begin Date: Immediately
End Date: No end date

Stand C added for large acft, covering stand B1 thru B3; stand G5 added to northeastern end of main apron.

No Chart Change Notices for Airport EDHI

Chart Change Notices for Airport EDHL

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

(10-9) GA parking area restricted to 2 tons MTOW.

No Chart Change Notices for Airport EDJA

No Chart Change Notices for Airport EDLP

No Chart Change Notices for Airport EDLV

Chart Change Notices for Airport EDLW

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

(16-1, 16-2) Ufn IAPs NDB rwy 06/24 suspended.

No Chart Change Notices for Airport EDMO

No Chart Change Notices for Airport EDNY

No Chart Change Notices for Airport EDOP

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No Chart Change Notices for Airport EDQG

No Chart Change Notices for Airport EDRZ

No Chart Change Notices for Airport EDSB

No Chart Change Notices for Airport EDTL

No Chart Change Notices for Airport EDXW

No Chart Change Notices for Airport ETAD

No Chart Change Notices for Airport ETAR

No Chart Change Notices for Airport ETMN

No Chart Change Notices for Airport ETNG

No Chart Change Notices for Airport ETNH

No Chart Change Notices for Airport ETNJ

Chart Change Notices for Airport ETNL

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

(11-1, 11-2) LOC ILAE/ILAW brg chgd to 095°/275°.

No Chart Change Notices for Airport ETNN

No Chart Change Notices for Airport ETNS

No Chart Change Notices for Airport ETNT

No Chart Change Notices for Airport ETNU

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No Chart Change Notices for Airport ETSA

No Chart Change Notices for Airport ETSB

No Chart Change Notices for Airport ETSE

No Chart Change Notices for Airport ETSH

No Chart Change Notices for Airport ETSI

No Chart Change Notices for Airport ETSL

No Chart Change Notices for Airport ETSN