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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: 1.7°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: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 0340 Z
Sunset: 1925 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

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Runway: 25C
Length x Width: 13123 ft x 197 ft
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 121.7
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):

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.

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 (Landeplatz-LaermschutzV) 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.

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 and conversely not authorized.

TWYs N blue and N orange MAX wingspan 118 '/36m.
TWYs N South and S20 MAX wingspan 171 '/52m.
TWY N8 starting ABEAM stand A94 MAX wingspan 200'/61m.

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 A40, A50 thru A69, B20 thru B48, C4 thru C16, D1 thru D8A, E2 thru E9A, F211 thru F238, G1 thru G16, S501 thru S705, V92 thru V130 and V266 thru V323 push-back required.
Enter remote waiting area V135 by guidance with marshaller only.

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.
Bird strike warning system for rwy 07L apch available.

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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 and/or N11.

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 and DP2 Center MAX wingspan less than 262'/80m.
De-icing on DP2 East and DP2 West MAX wingspan less than 118'/36m.
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 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.

ACFT will be positioned on de-icing pad DP1 by an eyeline to the LEFT of centerline, which depicts the exact holding position to the pilot optically. This taxiing-aid is made up of 5 amber surface lights with single-sided beams. If the surface lighting or the eyeline is out of order, ACFT will be guided by a marshaller.

ACFT will be positioned on de-icing pad DP2 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** for **3- and 4-engined HEAVY and SUPER** ACFT and all **MEDIUM** and **LIGHT** ACFT **able to comply** with the climb restrictions;
- **JULIETT** for **2-engined HEAVY** ACFT **able to comply** with the climb restrictions, if unable file **GOLF**;
- **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 between 0500-0600LT 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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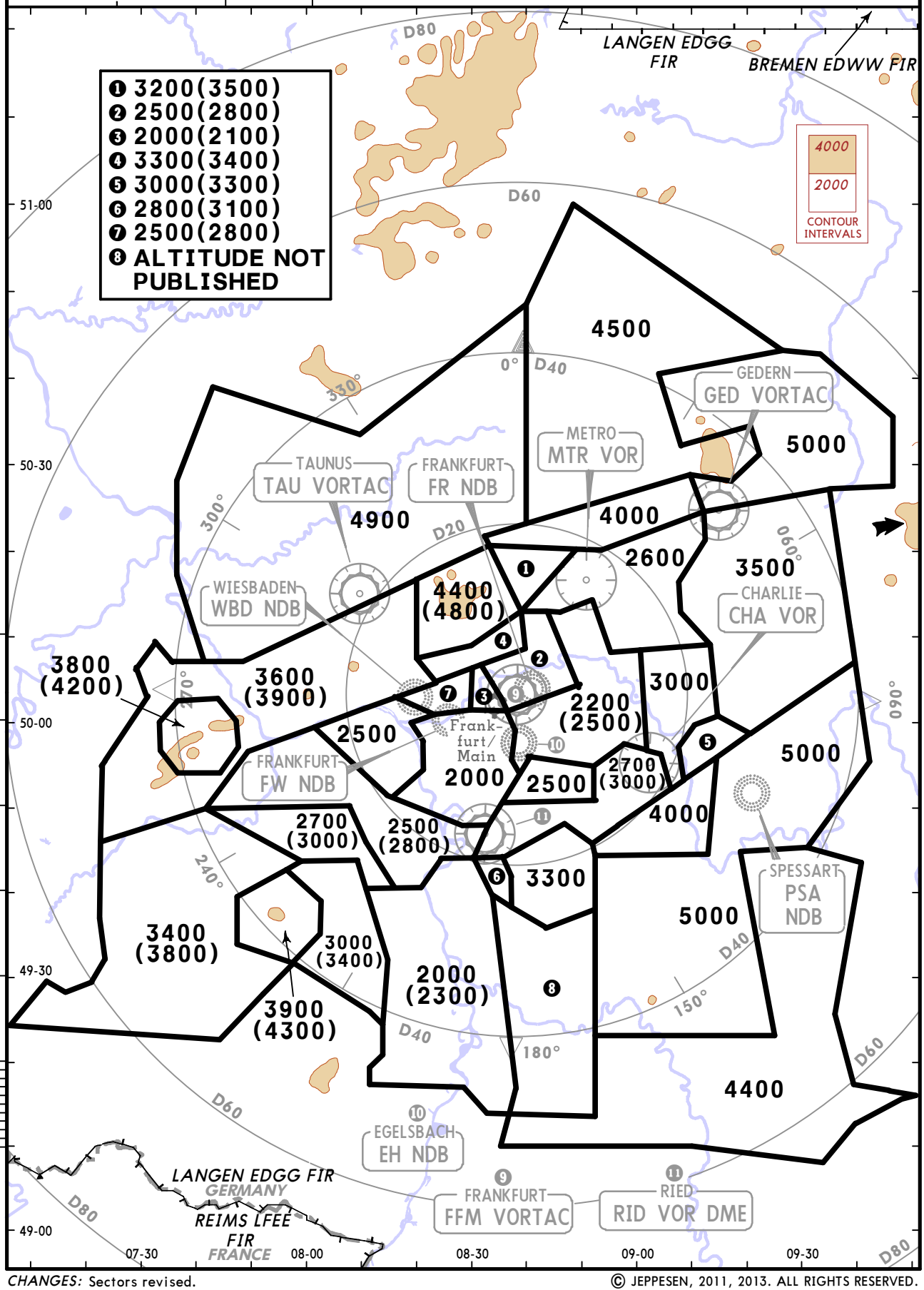
LANGEN Radar (APP) ARRIVAL	DEPARTURE	Apt Elev	
*119.02 North 120.8 South *125.35	*120.15 136.12 *126.55	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for RADAR vectors for IFR flights taking 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.



CHANGES: Sectors revised.

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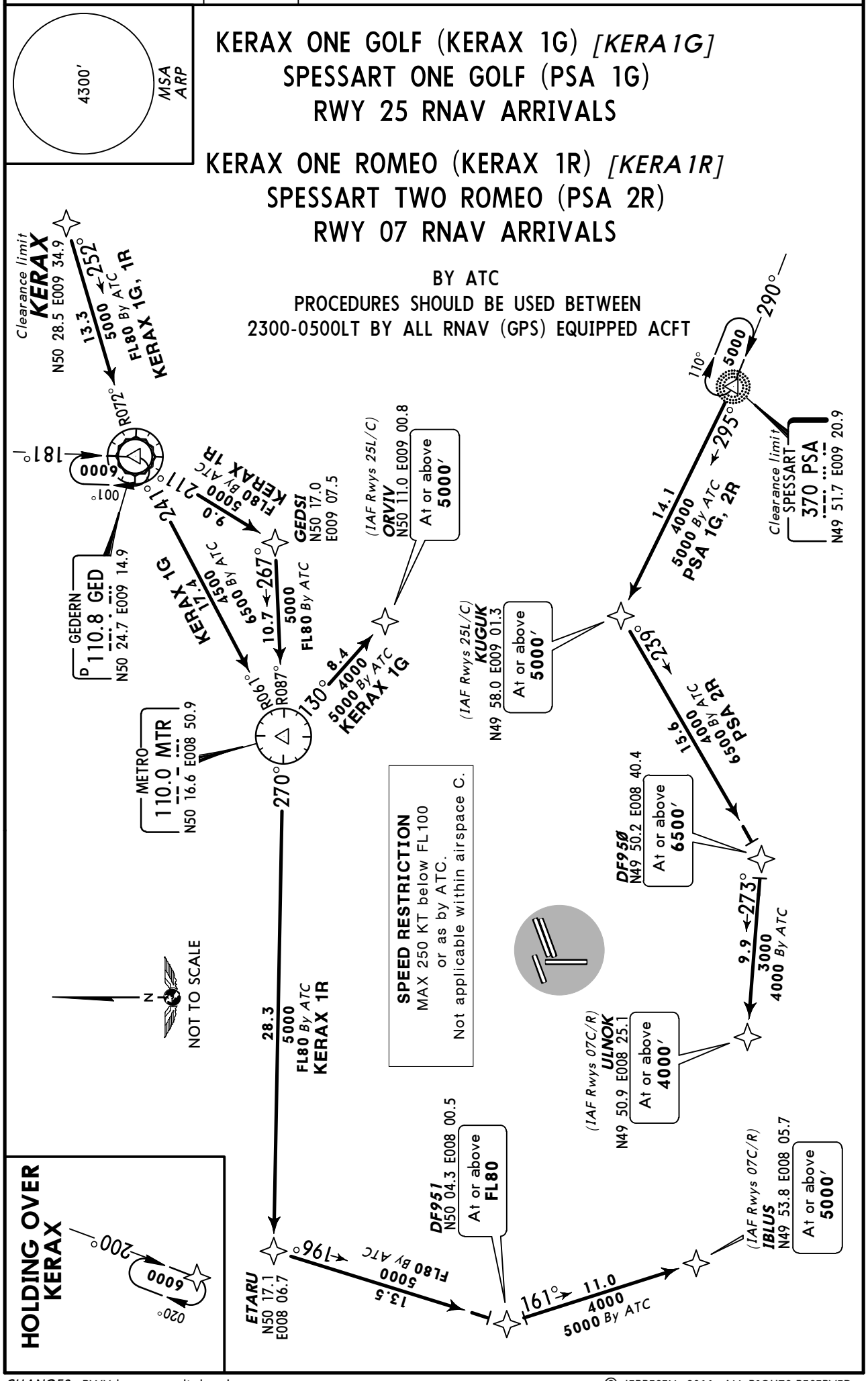
*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′



CHANGES: RWY layout; radial update.

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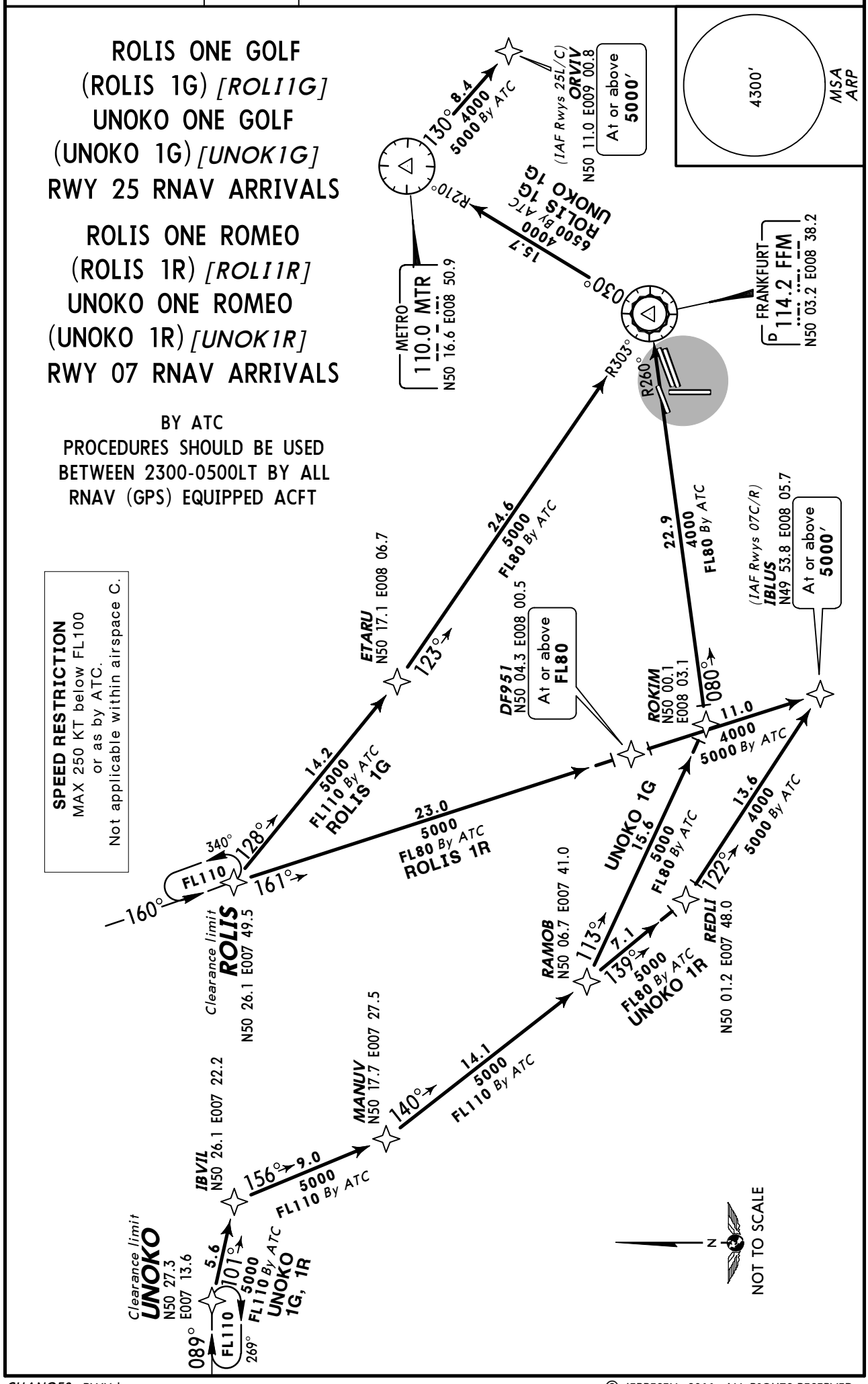
*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′



CHANGES: RWY layout.

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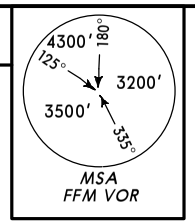
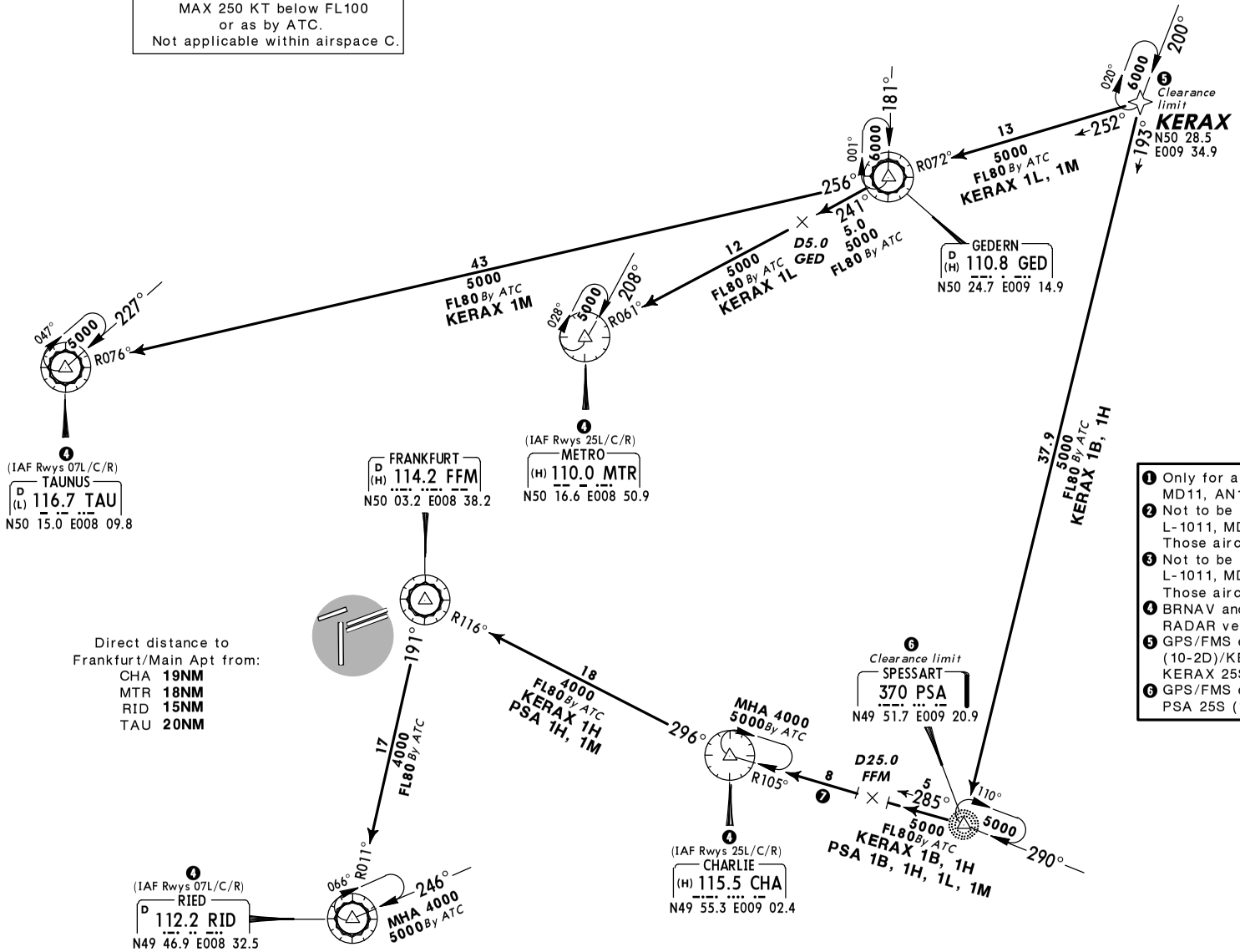
*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
118.02	364′	Trans level: By ATC Trans alt: 5000′



KERAX ONE BRAVO
(KERAX 1B) *[KERA1B]* ❶
KERAX ONE LIMA
(KERAX 1L) *[KERA1L]* ❷
SPESSART ONE BRAVO (PSA 1B)❶
SPESSART ONE LIMA (PSA 1L)❷
RWYS 25L/C/R ARRIVALS

KERAX ONE HOTEL
(KERAX 1H) *[KERA1H]* ❶
KERAX ONE MIKE
(KERAX 1M) *[KERA1M]* ❸
SPESSART ONE HOTEL (PSA 1H)❶
SPESSART ONE MIKE (PSA 1M)❸
RWYS 07L/C/R ARRIVALS

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



Direct distance to
Frankfurt/Main Apt from:
CHA **19NM**
MTR **18NM**
RID **15NM**
TAU **20NM**

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 25S (10-2G) Transition.

❼ **KERAX 1B, PSA 1B, 1L:**
4000
FL80 *By ATC*
KERAX 1H, PSA 1H, 1M:
5000
FL80 *By ATC*

CHANGES: Holding over MTR.

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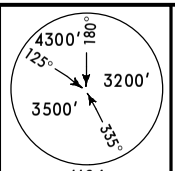
*D-ATIS	Apt Elev	Alt Set: hPa (IN on request)
118.02	364'	Trans level: By ATC Trans alt: 5000'

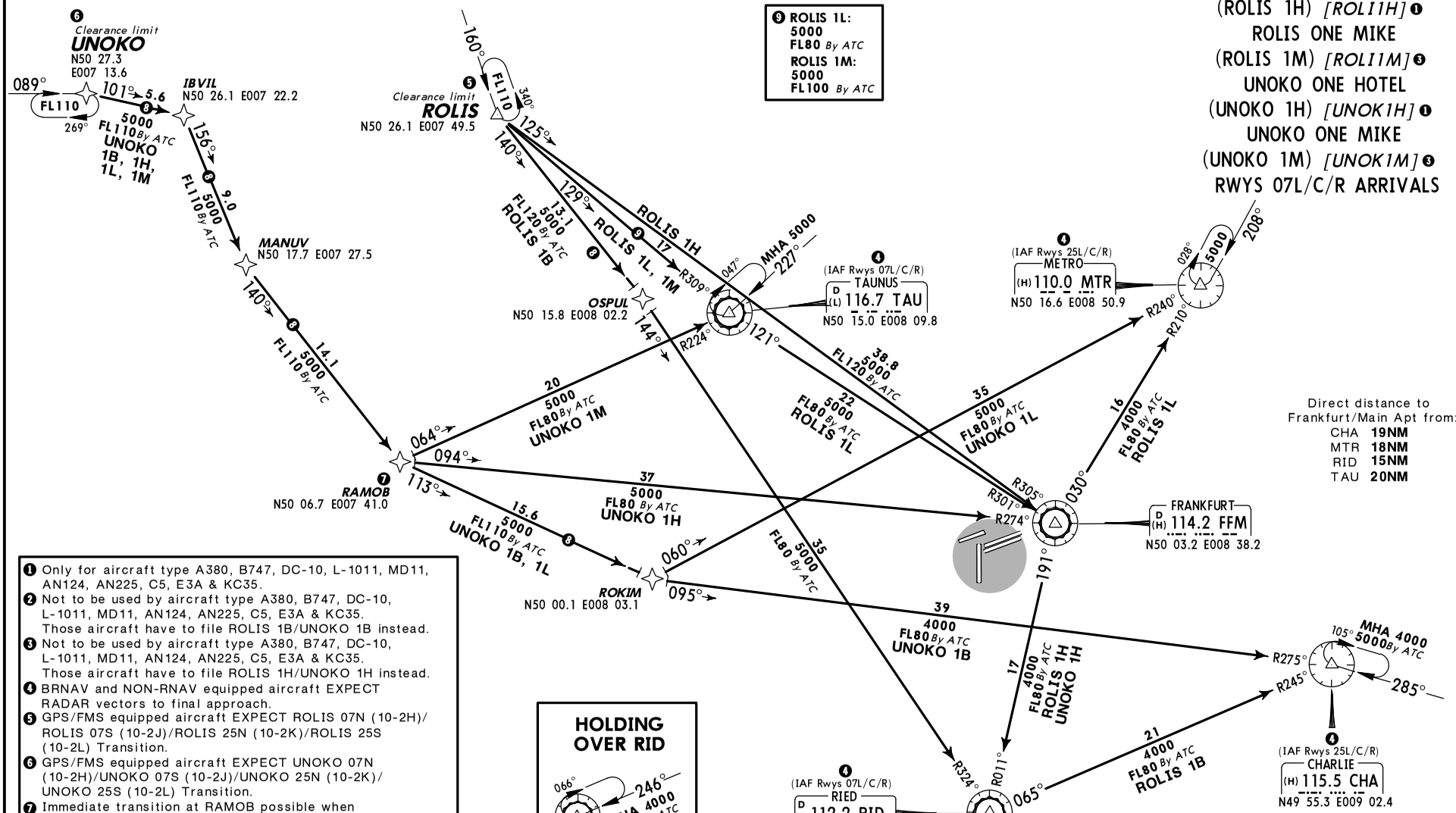


SPEED RESTRICTION
MAX 250 KT below FL100
or as by ATC.
Not applicable within airspace C.

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



Direct distance to
Frankfurt/Main Apt from:
CHA **19NM**
MTR **18NM**
RID **15NM**
TAU **20NM**

HOLDING OVER RID

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: Holding over MTR.

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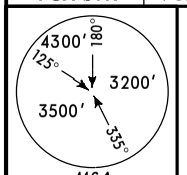
*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

TRANSITION	ROUTING
KERAX Ø7N	KERAX - GED - DF437 - DF439 (FL80+) - DF444 - DF454 - DF452 (5000′+).
PSA Ø7N	PSA - DF436 - DF437 - DF439 (FL80+) - DF444 - DF454 - DF452 (5000′+).

KERAX Ø7N *[KERØ7N]*
PSA Ø7N
RWY 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.

N
NOT TO SCALE

GEDERN
D (H) 110.8 GED
N50 24.7 E009 14.9

Clearance limit
KERAX
N50 28.5 E009 34.9

200° 6000 020° 252° 13.3 5000 KERAX Ø7N R072° 181° 6000 100° 210° 9.9 4000

DF437
N50 16.3 E009 06.8

249° 6.9 4000 289°

DF436
N50 13.9 E009 16.9

14.2

RIPKU
N49 59.8 E009 19.5

PSA Ø7N 8.2 5000 352° 110° 290° MHA 5000

Clearance limit
SPESSART
370 PSA
N49 51.7 E009 20.9

27.5 4000

DF439
N50 06.8 E008 26.5
At or above
FL80

248° 13.9 4000

FRANKFURT
D (H) 114.2 FFM
N50 03.2 E008 38.2

ILS DME
D (T) (110.30) IFEL
N50 02.3 E008 30.0
D (T) (111.75) IFNE
N50 02.3 E008 30.0

DF441
N50 01.9
E008 06.3

DF442
N50 00.4
E008 00.5

4.0

DF443
N49 59.0
E007 54.7

4.0

DF444
N49 57.6
E007 48.9

4.0

5.0 5000 158°

DF454
N49 52.9 E007 51.7

4.0 5000 068°

DF453
N49 54.3
E007 57.5

4.0

(IF)
DF452
(ILS Y)
D18.5 IFEL
(ILS Z)
D18.5 IFNE
N49 55.8 E008 03.3
At or above
5000′

CHANGES: RNAV transitions revised.

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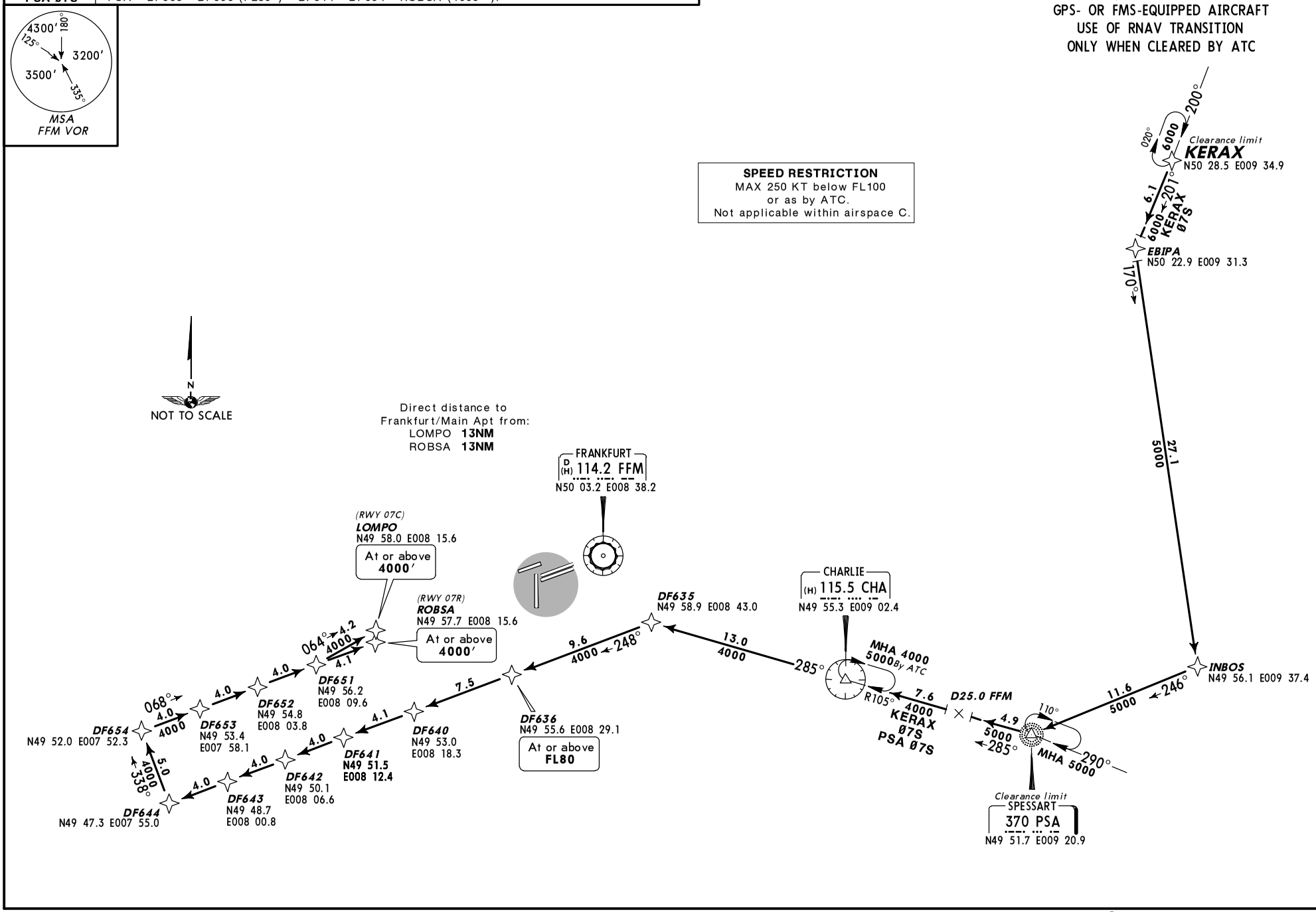
*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

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



CHANGES: DF640 established.

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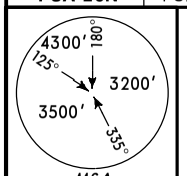
*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

TRANSITION	ROUTING
KERAX 25N	KERAX - GED - DF407 - DF408 - DF409 (FL80+) - DF416 - DF426 - DF422 (5000′+).
PSA 25N	PSA - DF406 - DF407 - DF408 - DF409 (FL80+) - DF416 - DF426 - DF422 (5000′+).

KERAX 25N *[KER25N]*
PSA 25N
RWY 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.

GEDERN
D (H) 110.8 GED
N50 24.7 E009 14.9

Clearance limit
KERAX
N50 28.5 E009 34.9

200° 6000 020° 252° 13.3 5000 KERAX 25N R072°

181° 6000 001° 249° 3.0 5000 3.7 5000 300° 248°

DF407 N50 23.7 E009 10.5

DF406 N50 21.7 E009 15.5

DF416 N50 19.8 E009 21.9

DF415 N50 18.4 E009 16.0

DF414 N50 17.0 E009 10.1

DF413 N50 15.7 E009 04.2

DF412 N50 14.3 E008 58.4

DF411 N50 12.9 E008 52.5

DF410 N50 11.6 E008 46.7

DF409 N50 10.2 E008 41.0

DF408 N50 16.0 E008 37.6

22.5 4000 158° 6.2 4000 3.9 068° 4.0 159° 5.0 5000 249° 4.0 5000 22.1 5000

DF426 N50 15.1 E009 24.5

DF425 N50 13.7 E009 18.6

DF424 N50 12.3 E009 12.8

DF423 N50 11.0 E009 06.9

At or above
FL80

Optional
DF421 N50 08.2 E008 55.2

(IF)
DF422
(ILS Y)
D20.2 IFWR
(ILS Z)
D20.2 IFNW
N50 09.6 E009 01.0

At or above
5000′

ILS DME
D (T) (111.35) IFNW
N50 02.7 E008 31.7
D (T) (109.75) IFWR
N50 02.7 E008 31.7

FRANKFURT
D (H) 114.2 FFM
N50 03.2 E008 38.2

RIPKU N49 59.8 E009 19.5

5000 PSA 25N 8.2 352° 110° 5000 290°

Clearance limit
SPESSART
370 PSA
N49 51.7 E009 20.9

N
NOT TO SCALE

Direct distance from DF421 to:
Fankfurt/Main Apt **15NM**

CHANGES: RNAV transitions revised.

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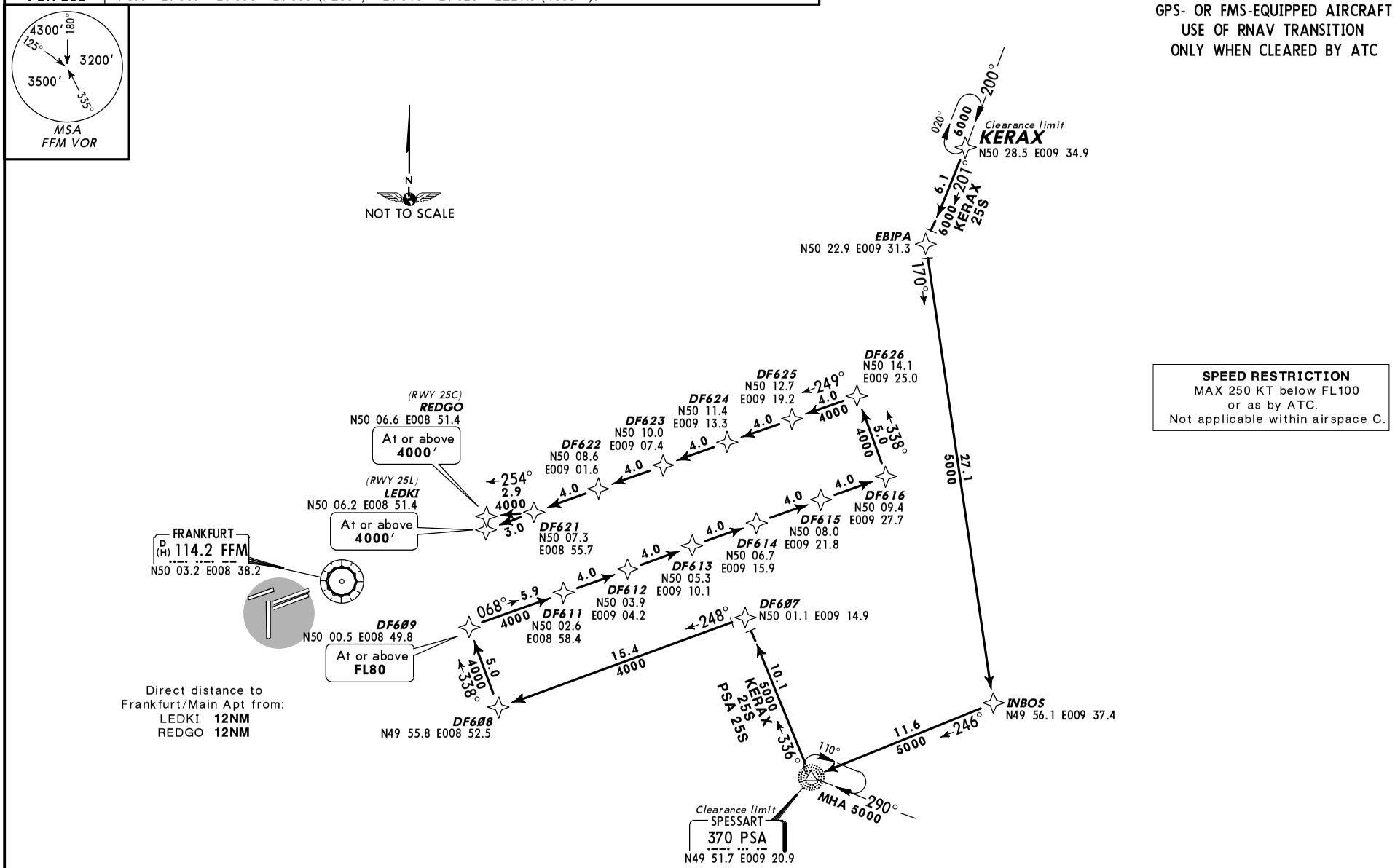
*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

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: None.

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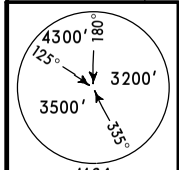
*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

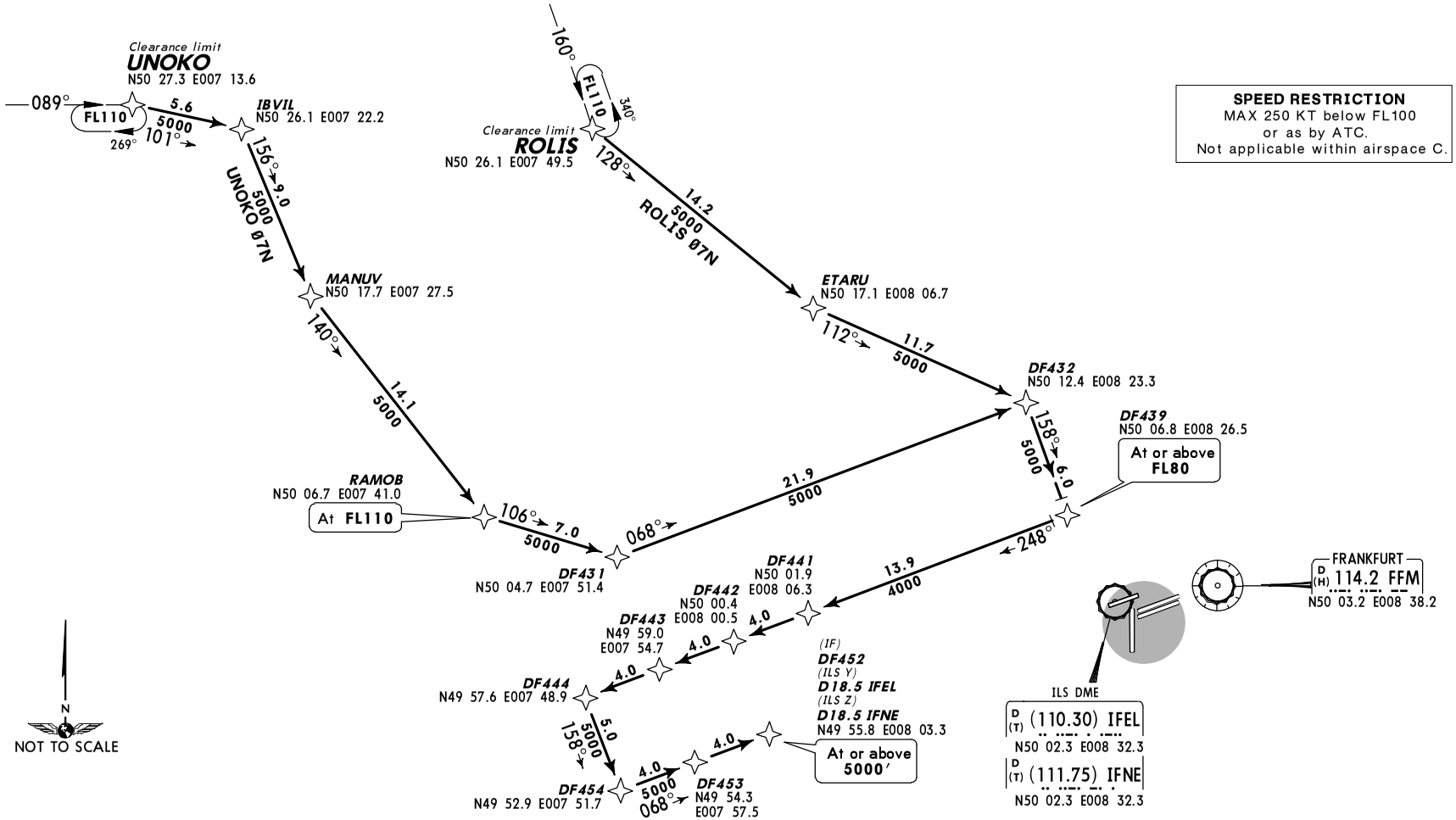
TRANSITION	ROUTING
ROLIS Ø7N	ROLIS - ETARU - DF432 - DF439 (FL80+) - DF444 - DF454 - DF452 (5000′+).
UNOKO Ø7N	UNOKO - IBVIL - MANUV - RAMOB (FL110) - DF431 - DF432 - DF439 (FL80+) - DF444 - DF454 - DF452 (5000′+).

ROLIS Ø7N *[ROLØ7N]*
UNOKO Ø7N *[UNOØ7N]*
RWY 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.



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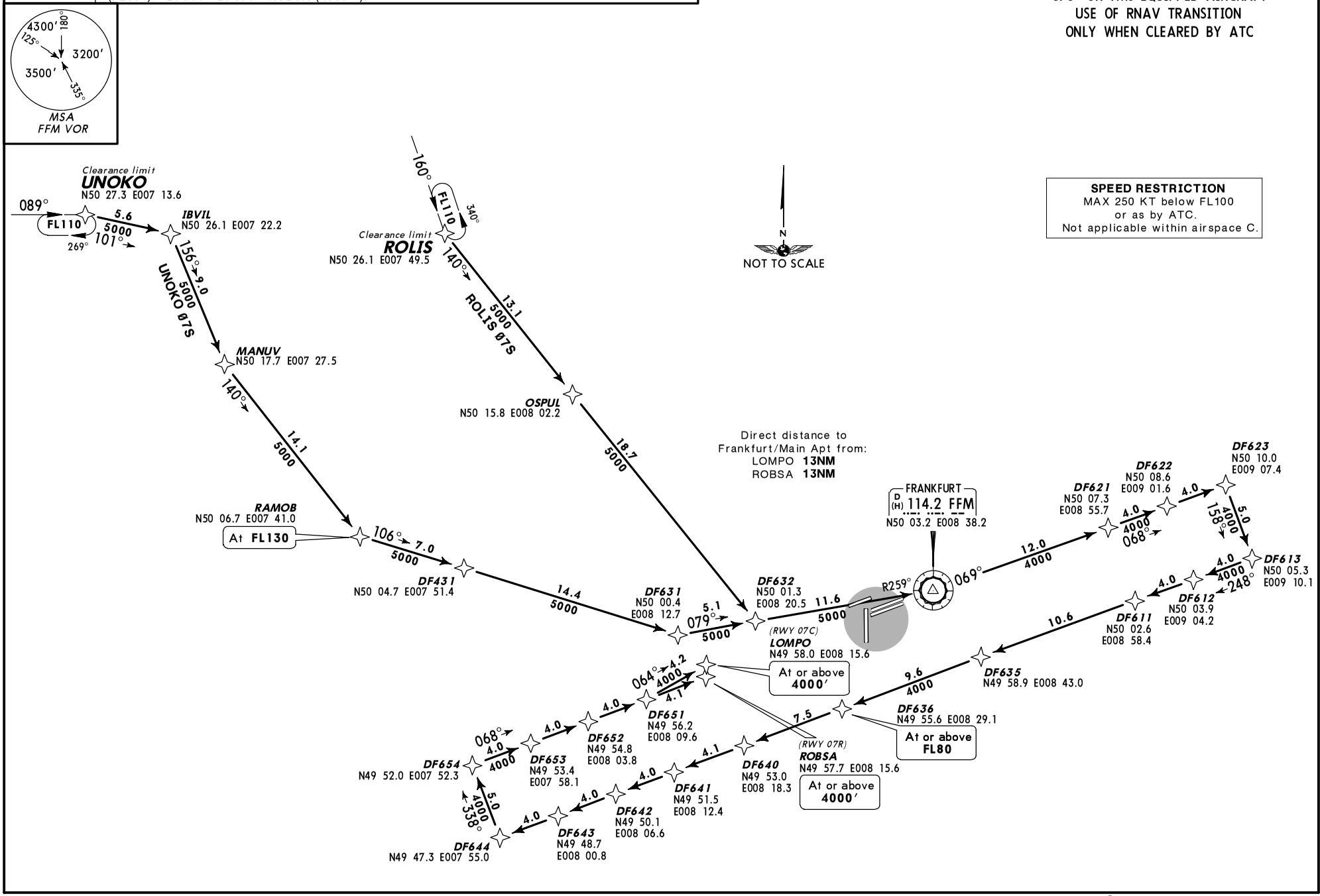
*D-ATIS	Apt Elev	
118.02	364′	Alt Set: hPa (IN on request) Trans level: By ATC Trans alt: 5000′ On downwind transition EXPECT vectors to final.

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: DF640 established.

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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.

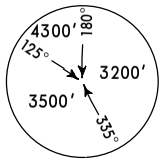
TRANSITION	ROUTING
ROLIS 25N	ROLIS - ETARU - DF403 - DF409 (FL80+) - DF416 - DF426 - DF422 (5000′+).
UNOKO 25N	UNOKO - IBVIL - MANUV - RAMOB (FL110) - DF401 - DF409 (FL80+) - DF416 - DF426 - DF422 (5000′+).

HOLDING OVER UNOKO

—089° FL110 269°

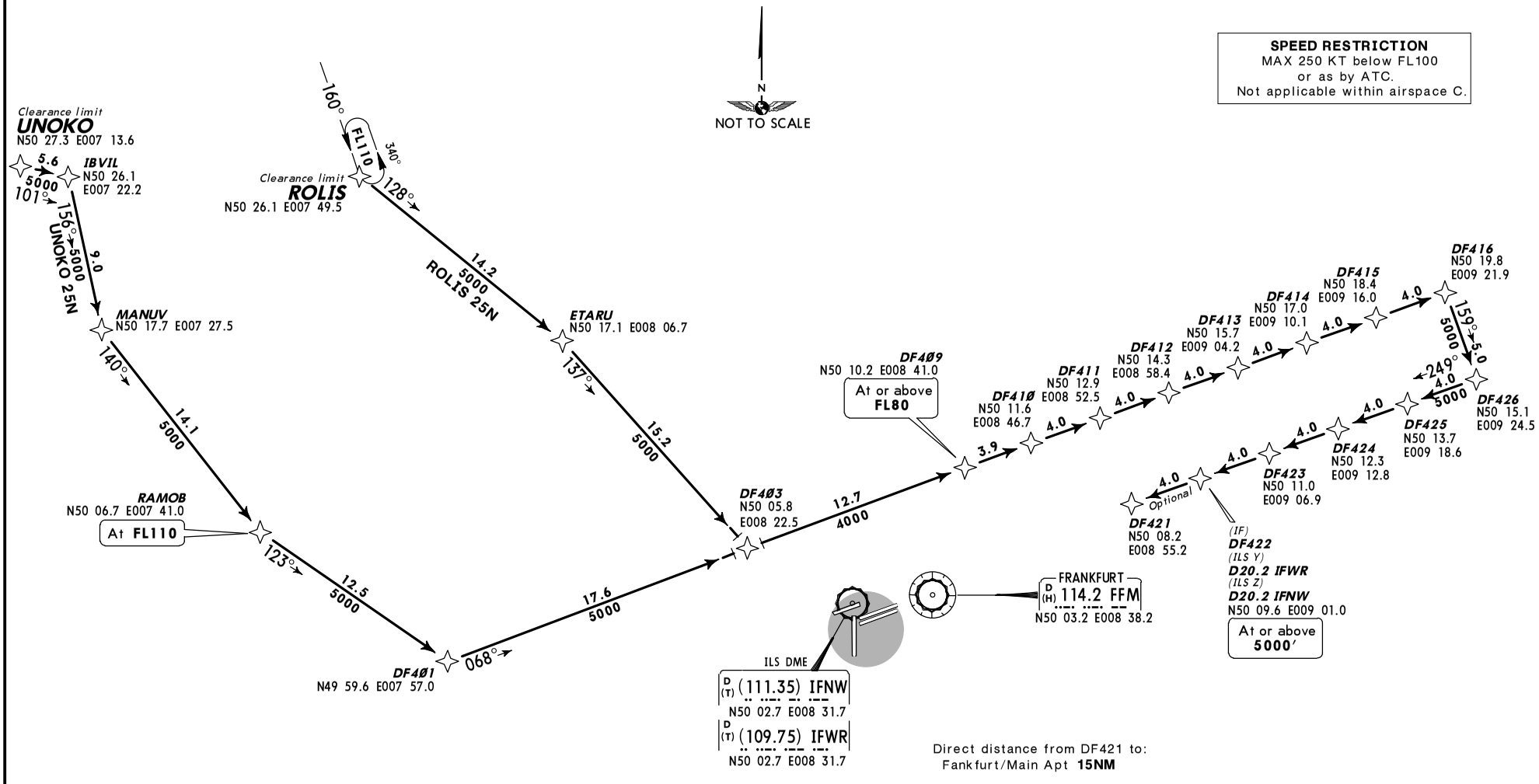
ROLIS 25N *[ROL25N]*
UNOKO 25N *[UNO25N]*
RWY 25R RNAV TRANSITIONS

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.



CHANGES: RNAV transitions revised.

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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.

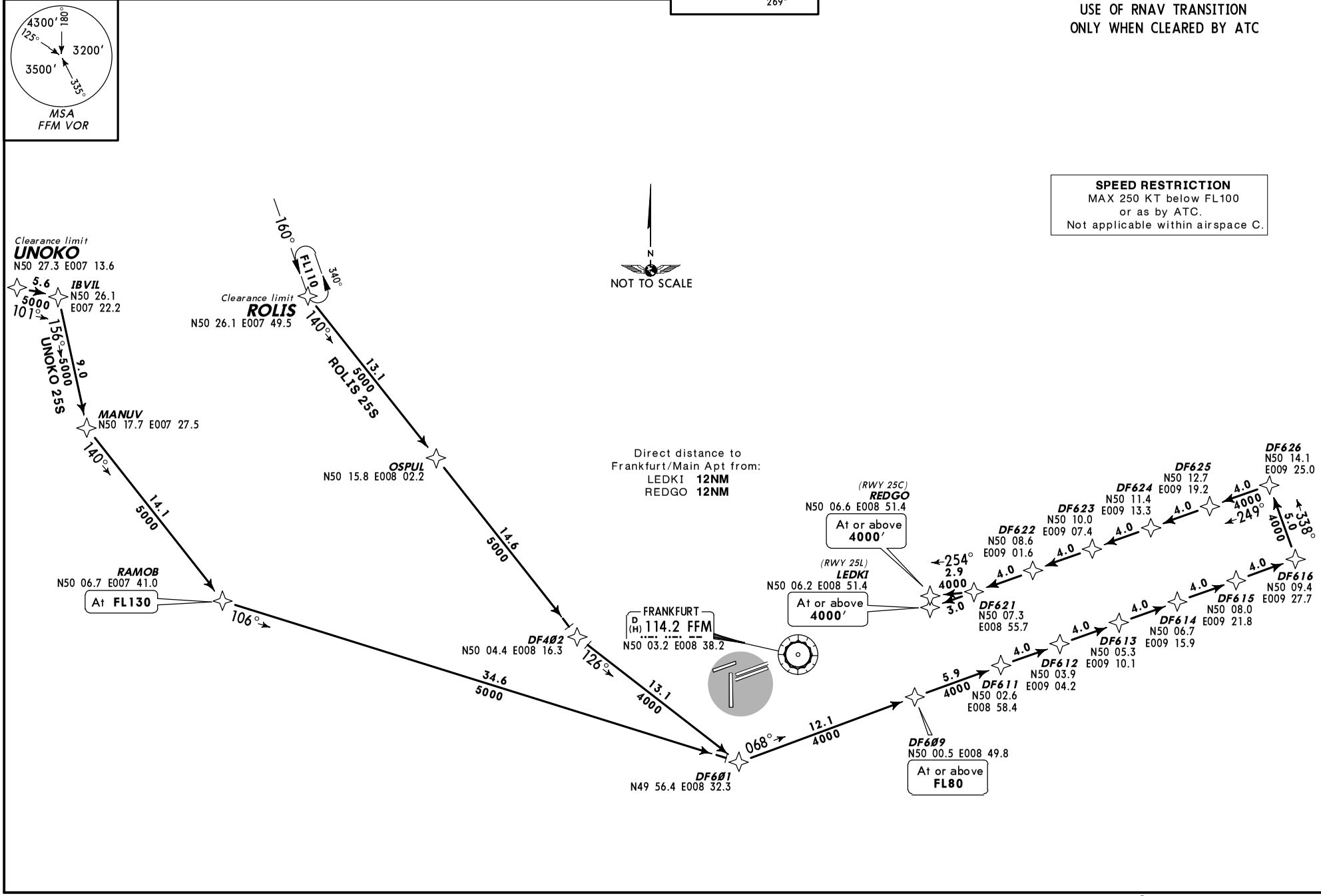
TRANSITION	ROUTING
ROLIS 25S	ROLIS - DF402 - DF601 - DF609 (FL80+) - DF616 - DF626 - LEDKI (4000′+).
UNOKO 25S	UNOKO - IBVIL - MANUV - RAMOB (FL130) - DF601 - DF609 (FL80+) - DF616 - DF626 - LEDKI (4000′+).

HOLDING OVER UNOKO

089° FL110 269°

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



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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 2M	10-3E1
BIBTI 4N	10-3E2
BIBTI 2L, 4S	10-3E3
BIBTI 2R	10-3E4
BIBTI 2T	10-3E5
DINKELSBUHL 9D, 7E	10-3E6
DINKELSBUHL 6F, 7G	10-3E7
DINKELSBUHL 5L, 7S	10-3E8
KOMIB 1D, 1E	10-3F
MARUN 8D, 4E	10-3G
MARUN 3F, 4G, 3J	10-3G1
MARUN 2M	10-3G2
MARUN 5N	10-3G3
MARUN 2R	10-3G4
MARUN 4S	10-3G5
MARUN 2T	10-3G6
METRO 4C	10-3G7
NOMBO 9D, 8E	10-3G8
NOMBO 7F, 8G	10-3H
NOMBO 7L, 7S	10-3J
RATIM 5D, 5E	10-3J1
RATIM 5F, 5G	10-3J2
RATIM 4S	10-3J3
RIED 6C, 3Q	10-3J4
ROTEN 6F, 5G	10-3J5
ROTEN 4L, 6S	10-3J6
SOBRA 4D	10-3J7
SOBRA 4E	10-3K
SOBRA 4F, 4G, 5N, 3P	10-3L

FOR FURTHER SID DESIGNATION REFER TO PAGE 10-3A

CHANGES: SID KOENIG 6C withdrawn.

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SID DESIGNATION	REFER TO CHART
SOBRA 4L, 4U	10-3L1
SULUS 8D, 6E	10-3L2
SULUS 7F, 8G	10-3L3
SULUS 7L, 7S	10-3L4
TAUNUS 4Q	10-3L5
TOBAK 8D, 7E	10-3L6
TOBAK 4F, 5G, 4J	10-3L7
TOBAK 2M	10-3L8
TOBAK 7N	10-3M
TOBAK 2R	10-3N
TOBAK 6S	10-3N1
TOBAK 4T	10-3N2
ULKIG 1S, 5U	10-3N3

CHANGES: None.

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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 2M	10-3N8
BIBTI 4N	10-3P
BIBTI 2L, 4S	10-3Q
BIBTI 2R	10-3Q1
BIBTI 2T	10-3Q2
DINKELSBUHL 9D, 7E	10-3Q3
DINKELSBUHL 6F, 7G	10-3Q4
DINKELSBUHL 5L, 7S	10-3Q5
KOMIB 1D, 1E	10-3Q6
MARUN 8D, 4E	10-3Q7
MARUN 3F, 4G, 3J	10-3Q8
MARUN 2M	10-3Q9
MARUN 5N	10-3S
MARUN 2R	10-3T
MARUN 4S	10-3T1
MARUN 2T	10-3T2
NOMBO 9D, 8E	10-3T3
NOMBO 7F, 8G	10-3T4
NOMBO 7L, 7S	10-3T5
RATIM 5D, 5E	10-3T6
RATIM 5F, 5G	10-3T7
RATIM 4S	10-3U
ROTEN 6F, 5G	10-3V
ROTEN 4L, 6S	10-3V1
SOBRA 4D	10-3V2
SOBRA 4E	10-3V3
SOBRA 4F, 4G, 5N, 3P	10-3V4
SOBRA 4L, 4U	10-3V5
SULUS 8D, 6E	10-3V6
SULUS 7F, 8G	10-3V7
SULUS 7L, 7S	10-3V8
TOBAK 8D, 7E	10-3W
TOBAK 4F, 5G, 4J	10-3X
TOBAK 2M	10-3X1
TOBAK 7N	10-3X2
TOBAK 2R	10-3X3
TOBAK 6S	10-3X4
TOBAK 4T	10-3X5
ULKIG 1S, 5U	10-3X6

CHANGES: RNAV SIDs DINKELSBUHL, NOMBO, RATIM, ROTEN & SULUS renumbered.

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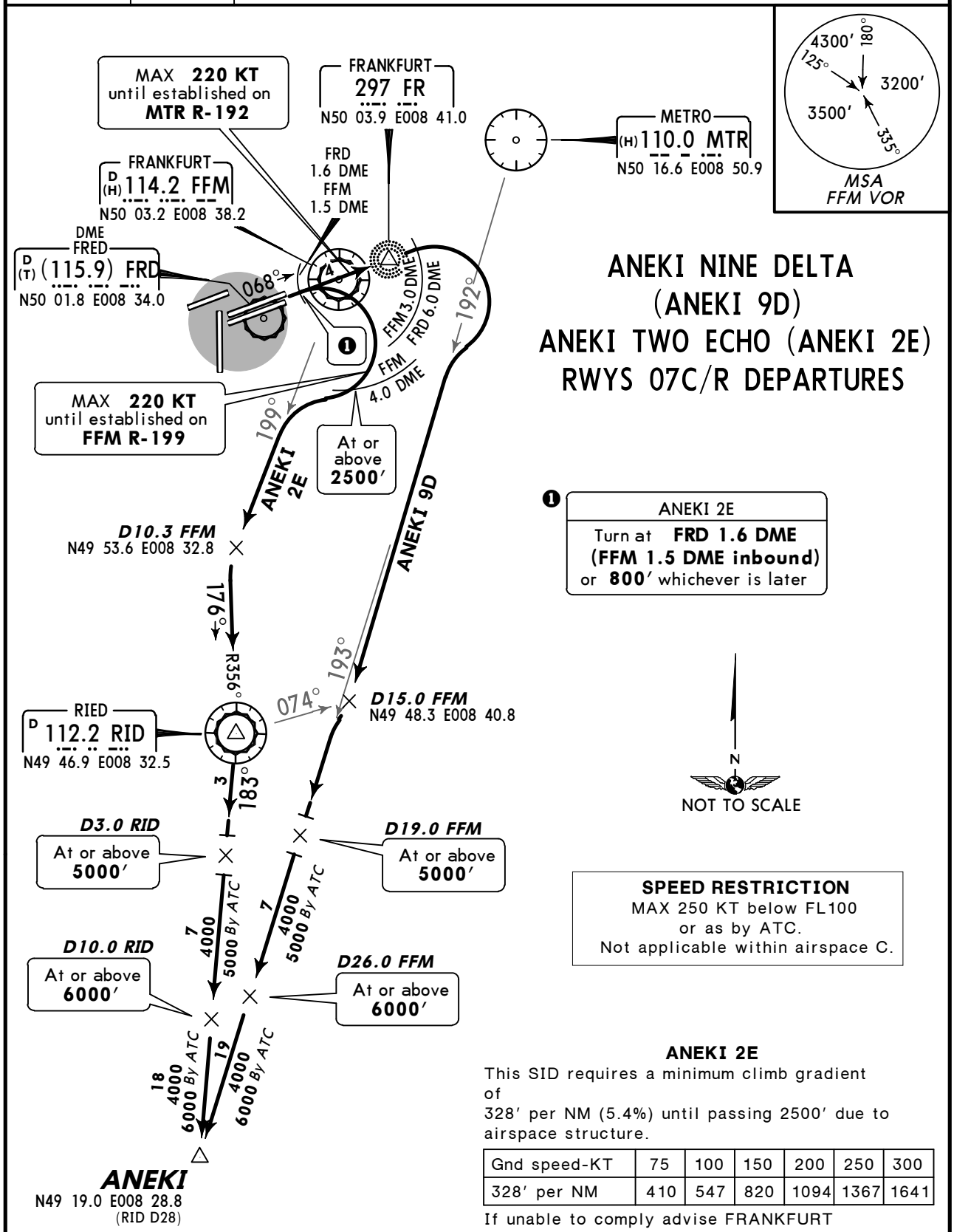
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



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: Initial contact.

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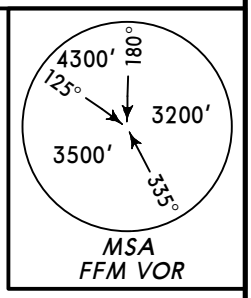
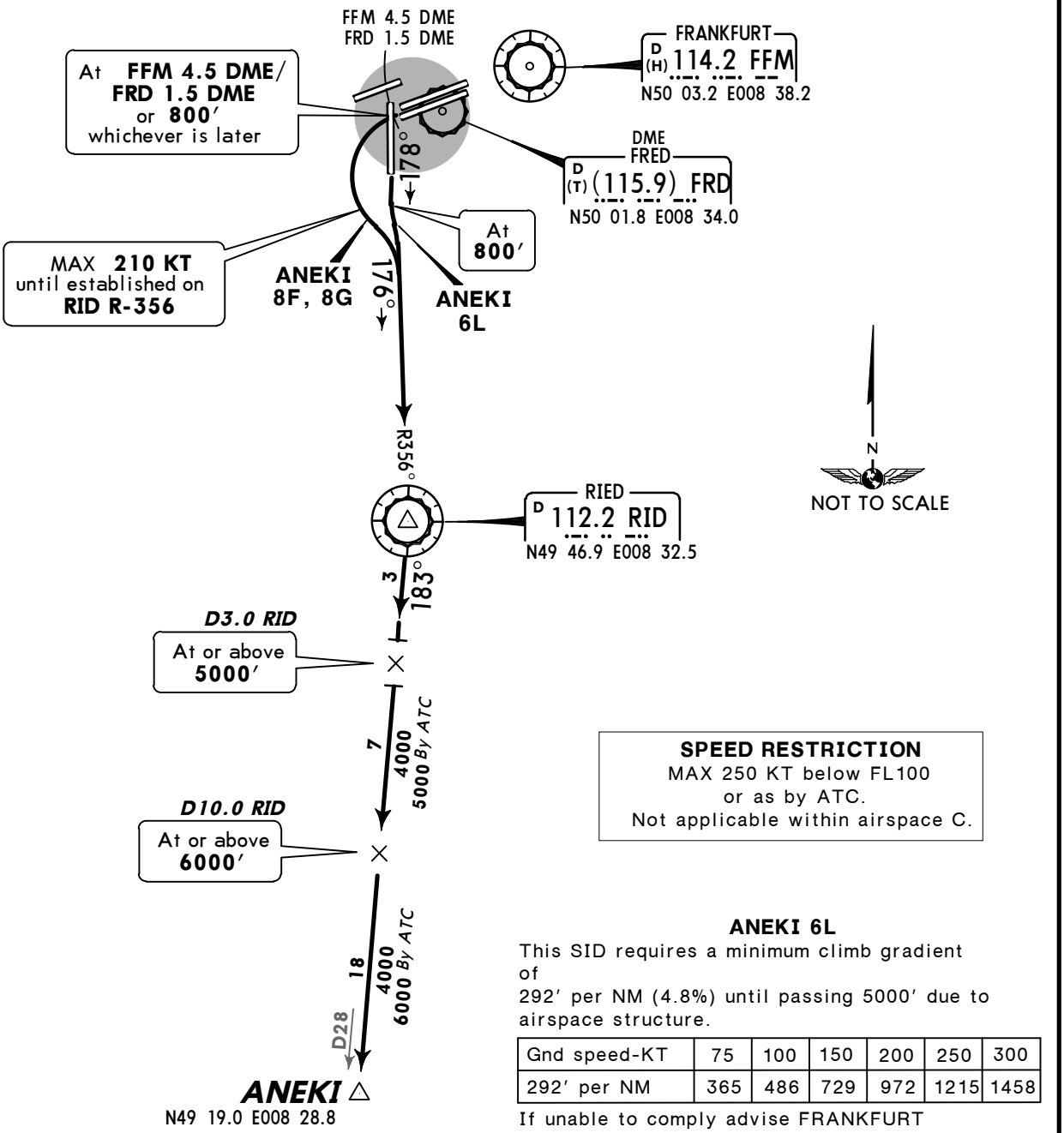
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 18: EXPECT close-in obstacles. 4. RWY 18: 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: Initial contact.

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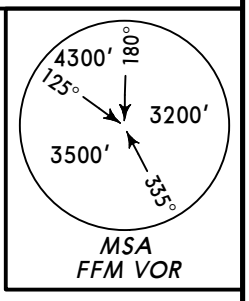
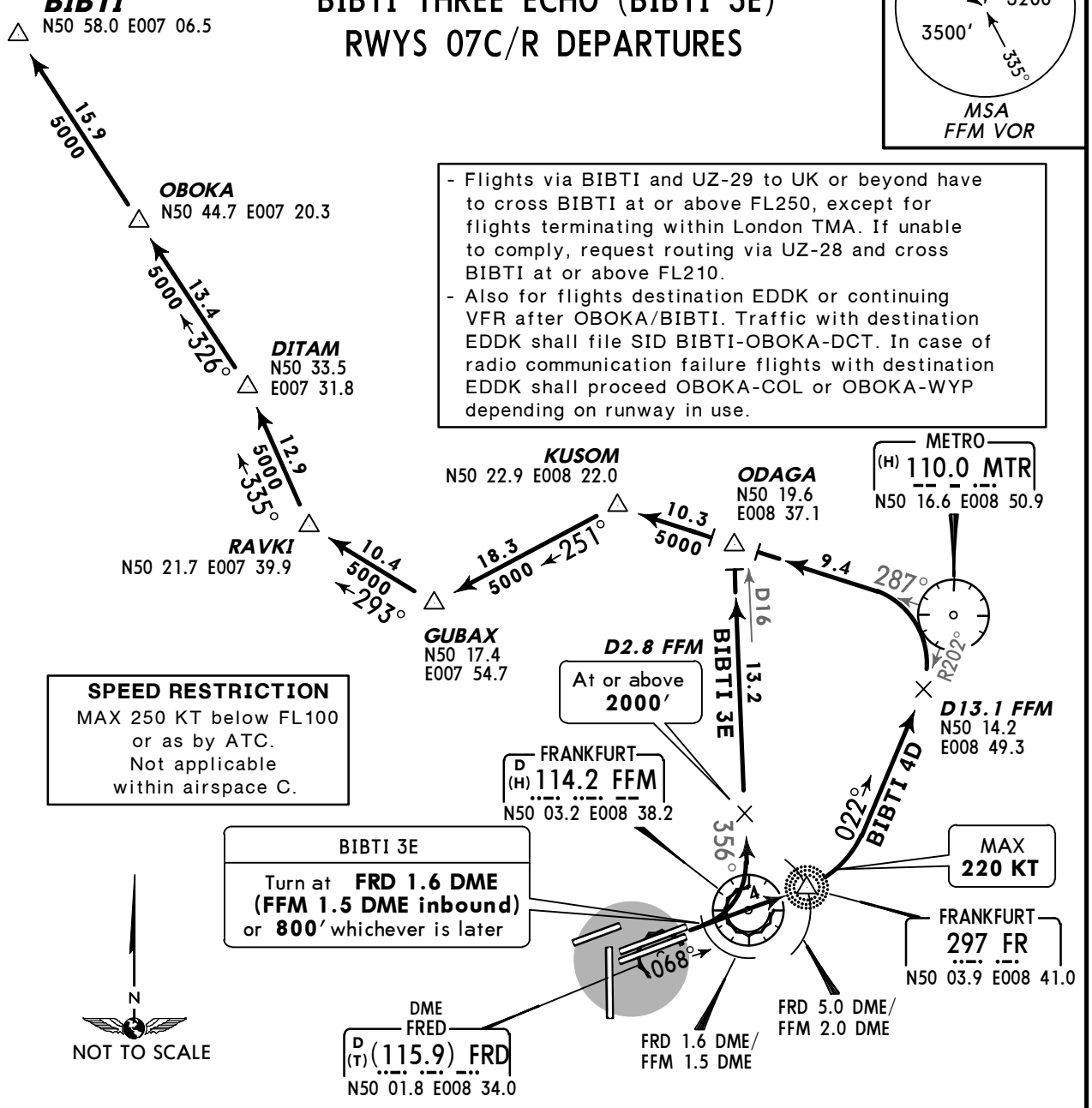
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

BIBTI FOUR DELTA (BIBTI 4D)
BIBTI THREE ECHO (BIBTI 3E)
RWYS 07C/R DEPARTURES



- 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. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.



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

BIBTI 3E
Turn at **FRD 1.6 DME**
(FFM 1.5 DME inbound)
or **800′** whichever is later

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: None.

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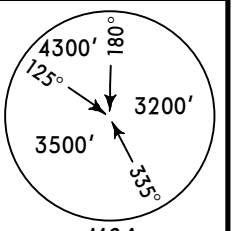
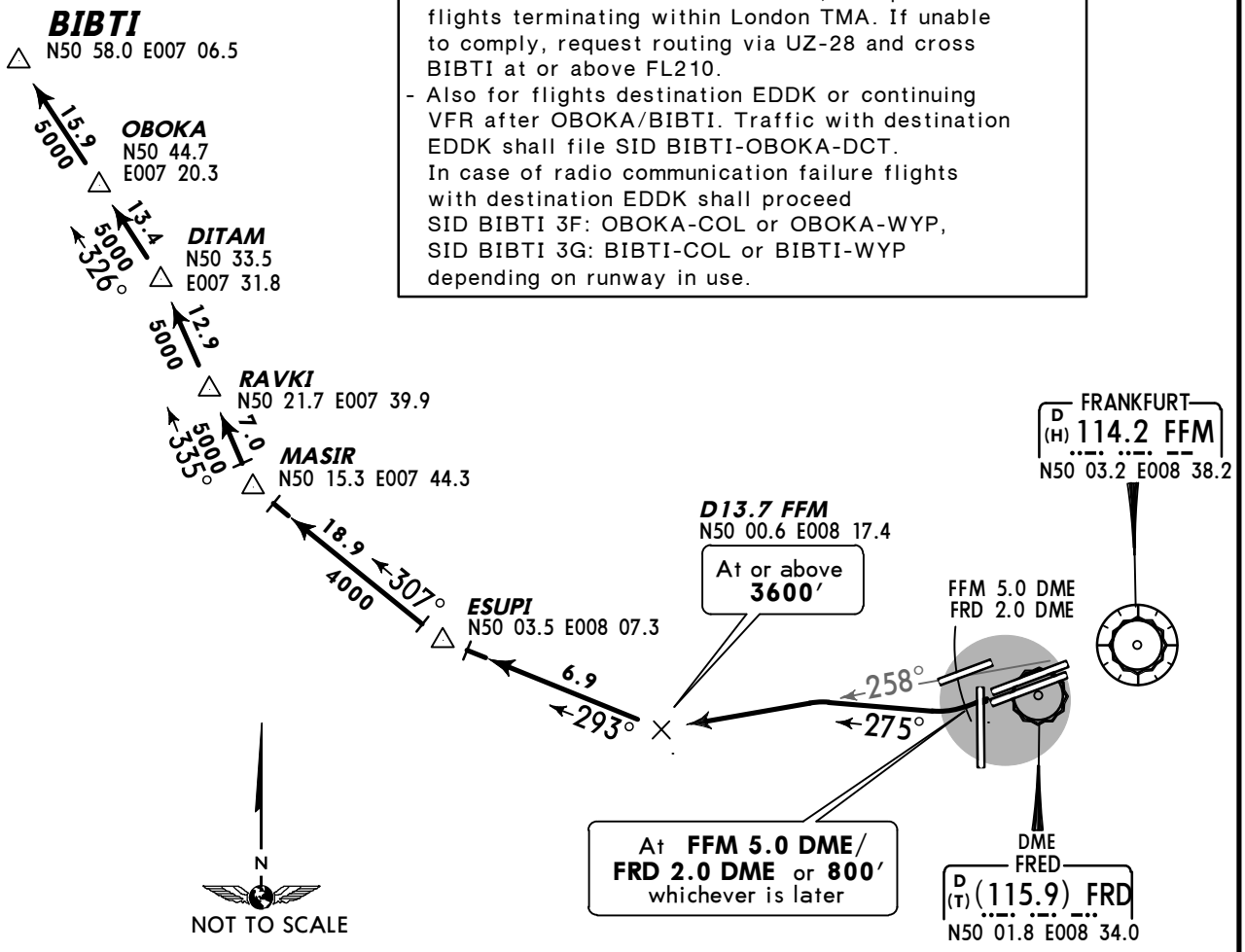
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT.
  In case of radio communication failure flights with destination EDDK shall proceed
  SID BIBTI 3F: OBOKA-COL or OBOKA-WYP,
  SID BIBTI 3G: 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: SID BIBTI 3G com failure note.

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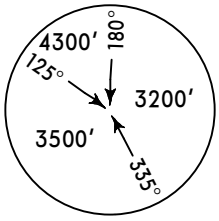
*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



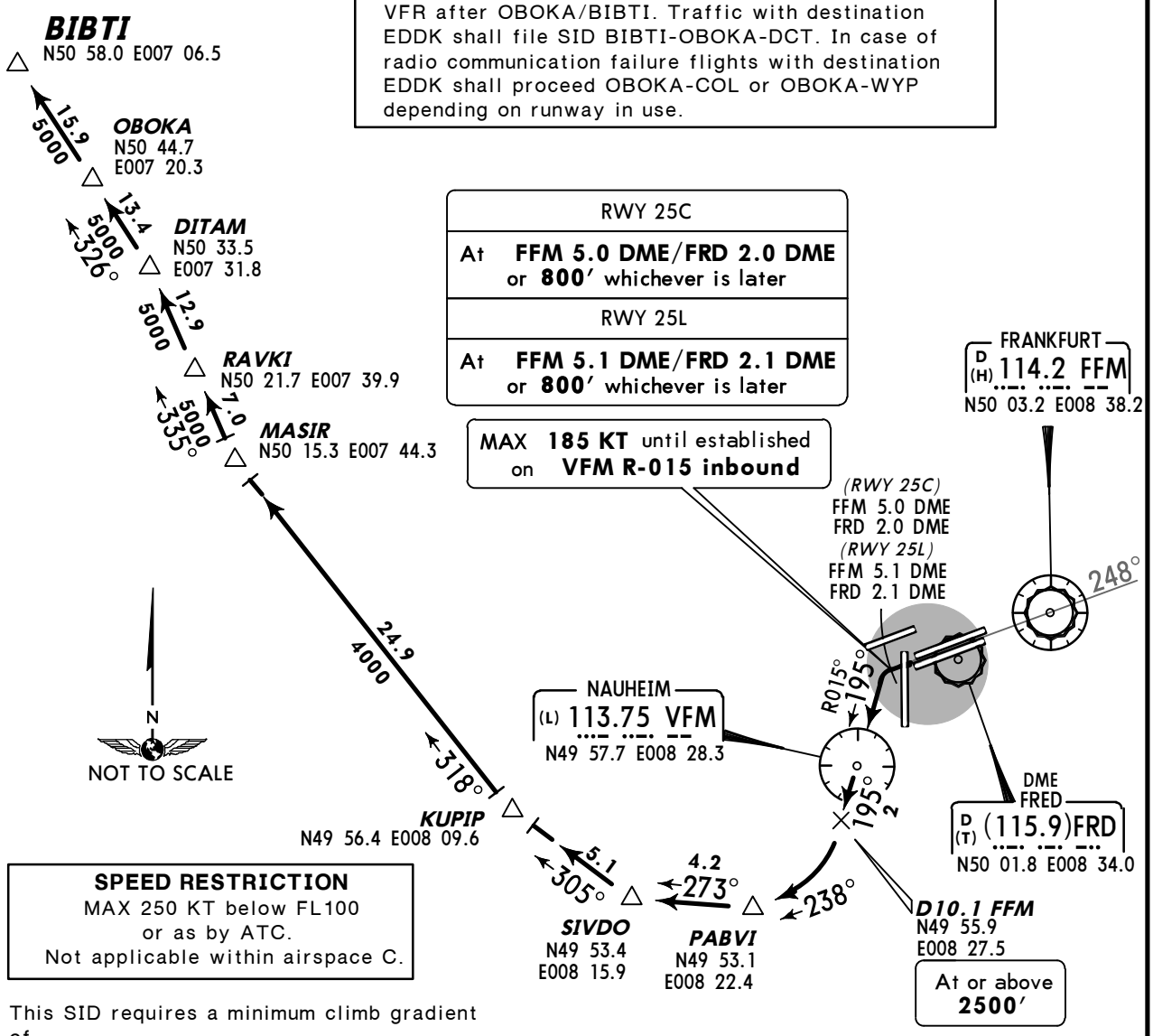
MSA
FFM VOR

BIBTI TWO MIKE (BIBTI 2M)
RWYS 25L/C DEPARTURE

- 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. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.

RWY 25C
At **FFM 5.0 DME/FRD 2.0 DME** or **800′** whichever is later
RWY 25L
At **FFM 5.1 DME/FRD 2.1 DME** or **800′** whichever is later

MAX **185 KT** until established on **VFM R-015 inbound**



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

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.

CAUTION RWY 25C:
Avoid to operate SOUTH of FFM R-248 before FFM 5.0 DME/FRD 2.0 DME and avoid to operate EAST of VFM R-015 inbound after turning direct VFM.

Initial climb clearance **5000′**

ROUTING

Climb on runway track to FFM 5.0 DME/FRD 2.0 DME (Rwy 25C)/FFM 5.1 DME/FRD 2.1 DME (Rwy 25L) or 800′, whichever is later, turn LEFT, intercept VFM R-015 inbound via VFM to D10.1 FFM ❶, 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.

❶ After D10.1 FFM BRNAV equipment necessary.

CHANGES: Caution note established.

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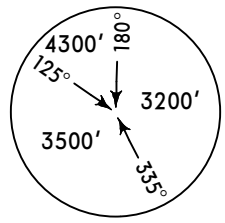
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

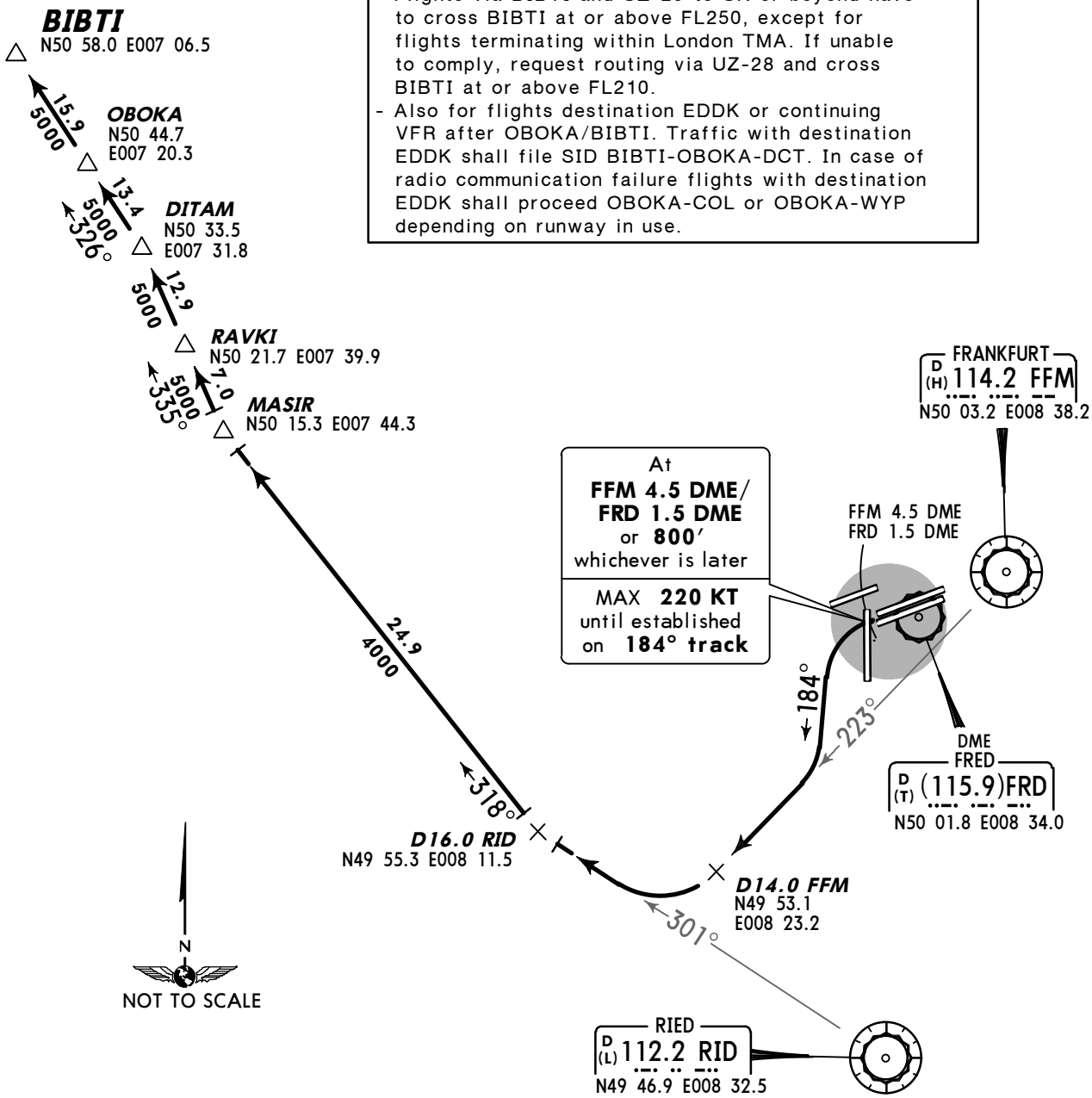
BIBTI FOUR NOVEMBER (BIBTI 4N)
RWYS 25L/C DEPARTURE

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



MSA
FFM VOR

- 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. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-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: None.

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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. 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.

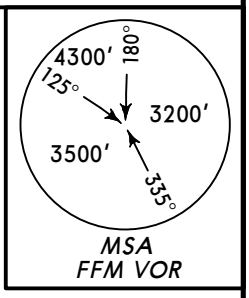
BIBTI TWO LIMA (BIBTI 2L)

BIBTI FOUR SIERRA (BIBTI 4S)

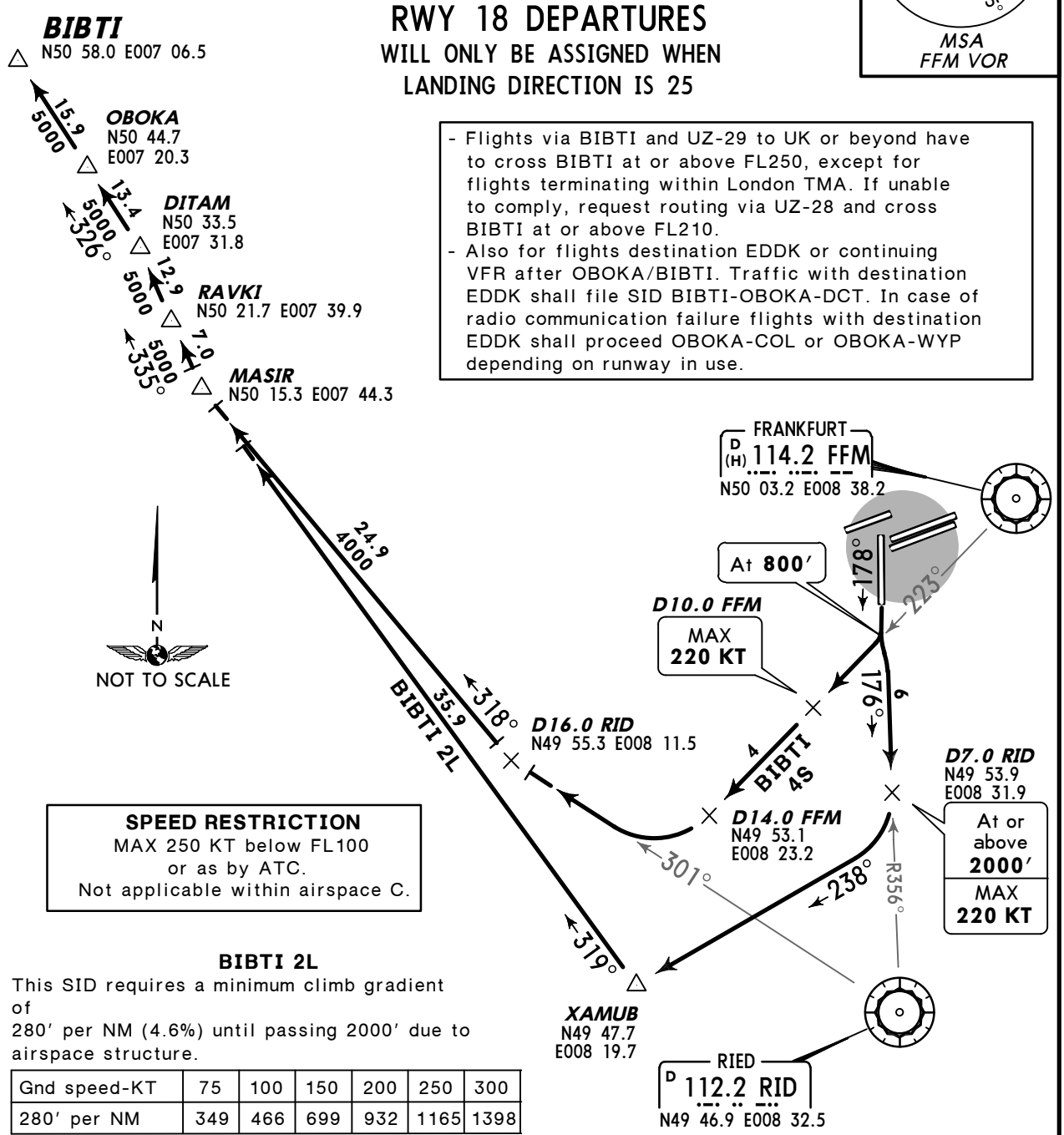
BY ATC

RWY 18 DEPARTURES

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. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.



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 4S	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: Availability.

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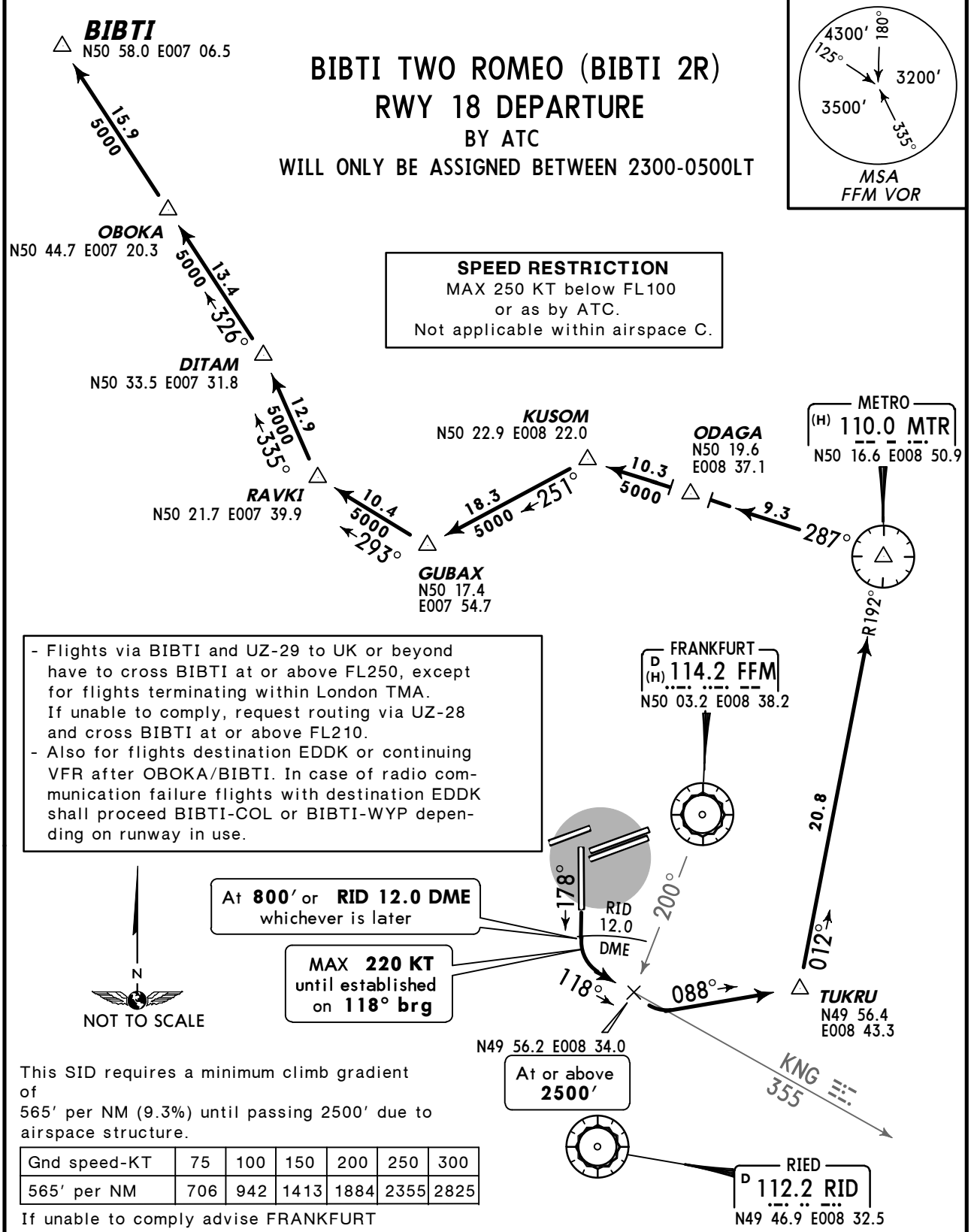
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and 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: None.

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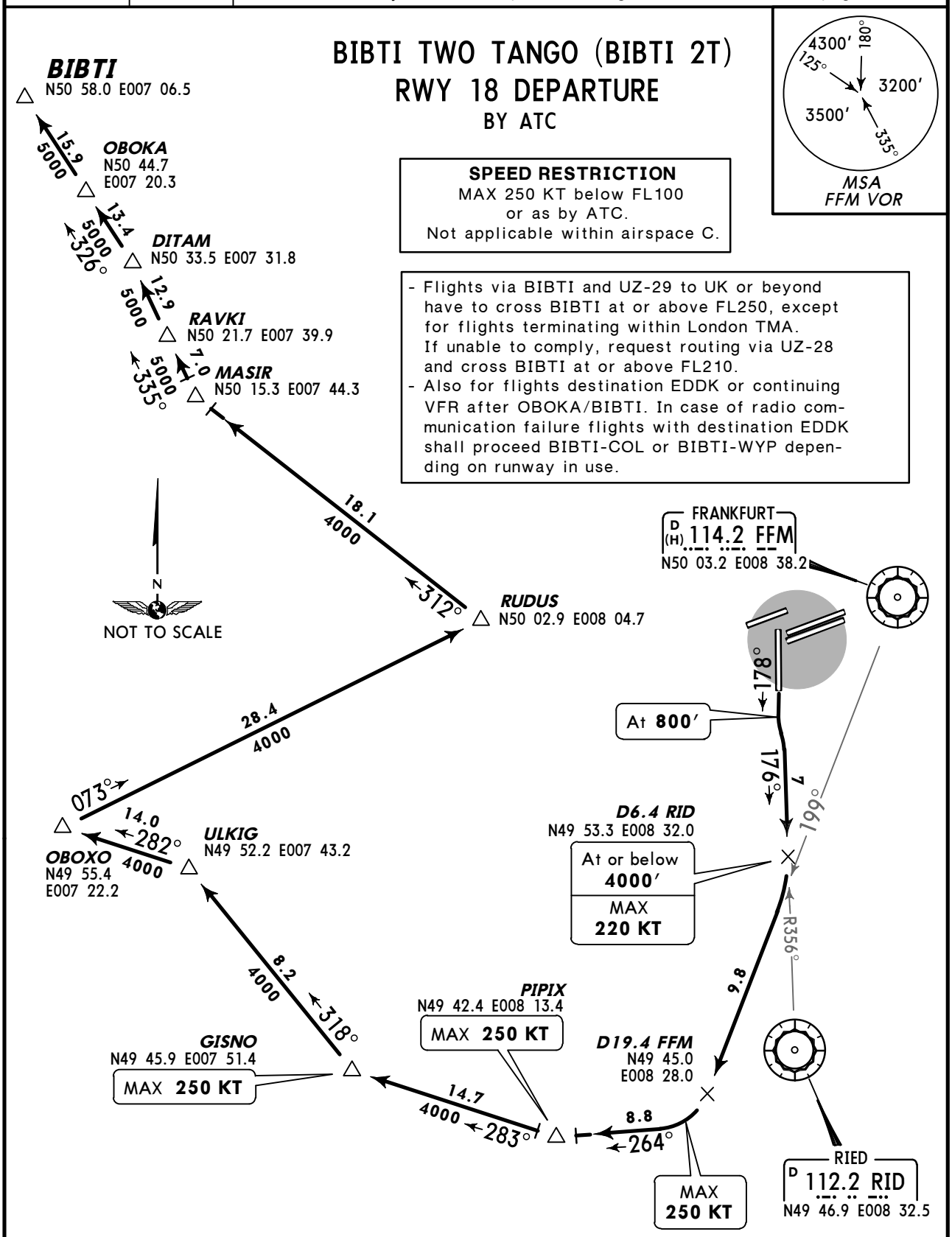
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

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: None.

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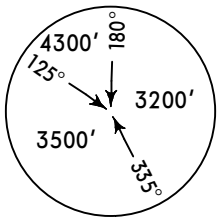
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

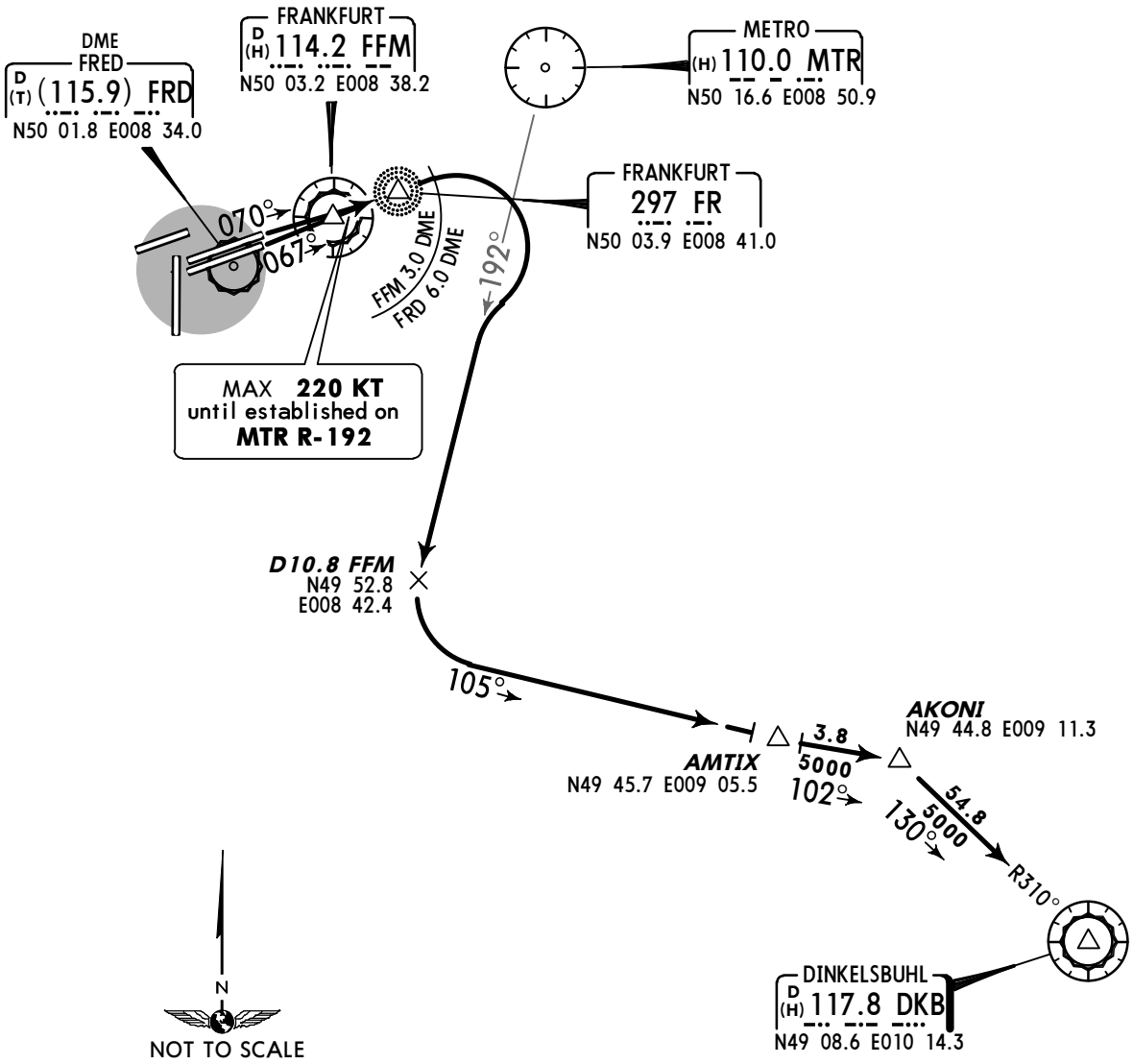
DINKELSBUHL NINE DELTA (DKB 9D)
DINKELSBUHL SEVEN ECHO (DKB 7E)
RWYS 07C/R DEPARTURES

ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR



MSA
FFM VOR

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 ❶ turn LEFT, 105° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, intercept DKB R-310 inbound to DKB.

❶ After D10.8 FFM BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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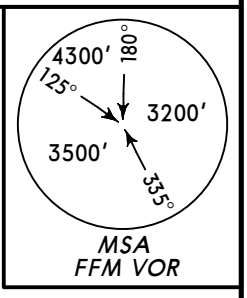
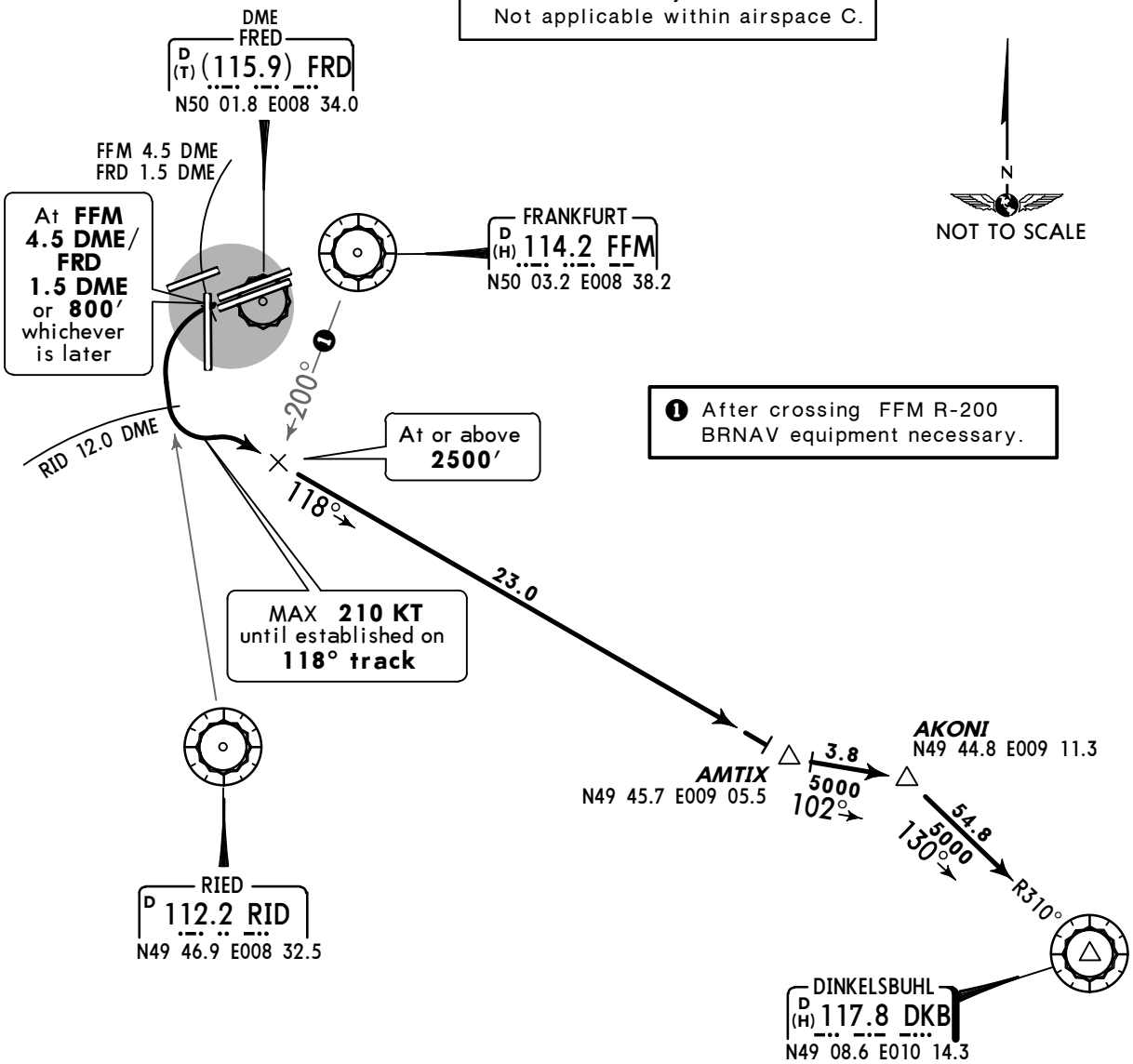
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

DINKELSBUHL SIX FOXTROT (DKB 6F)
DINKELSBUHL SEVEN GOLF (DKB 7G)
RWYS 25L/C DEPARTURES
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR



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



❶ After crossing FFM R-200 BRNAV equipment necessary.

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, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, intercept DKB R-310 inbound to DKB.

CHANGES: SIDs renumbered & revised.

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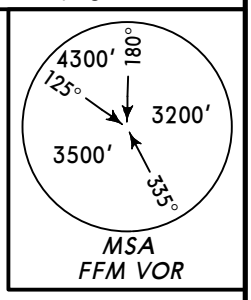
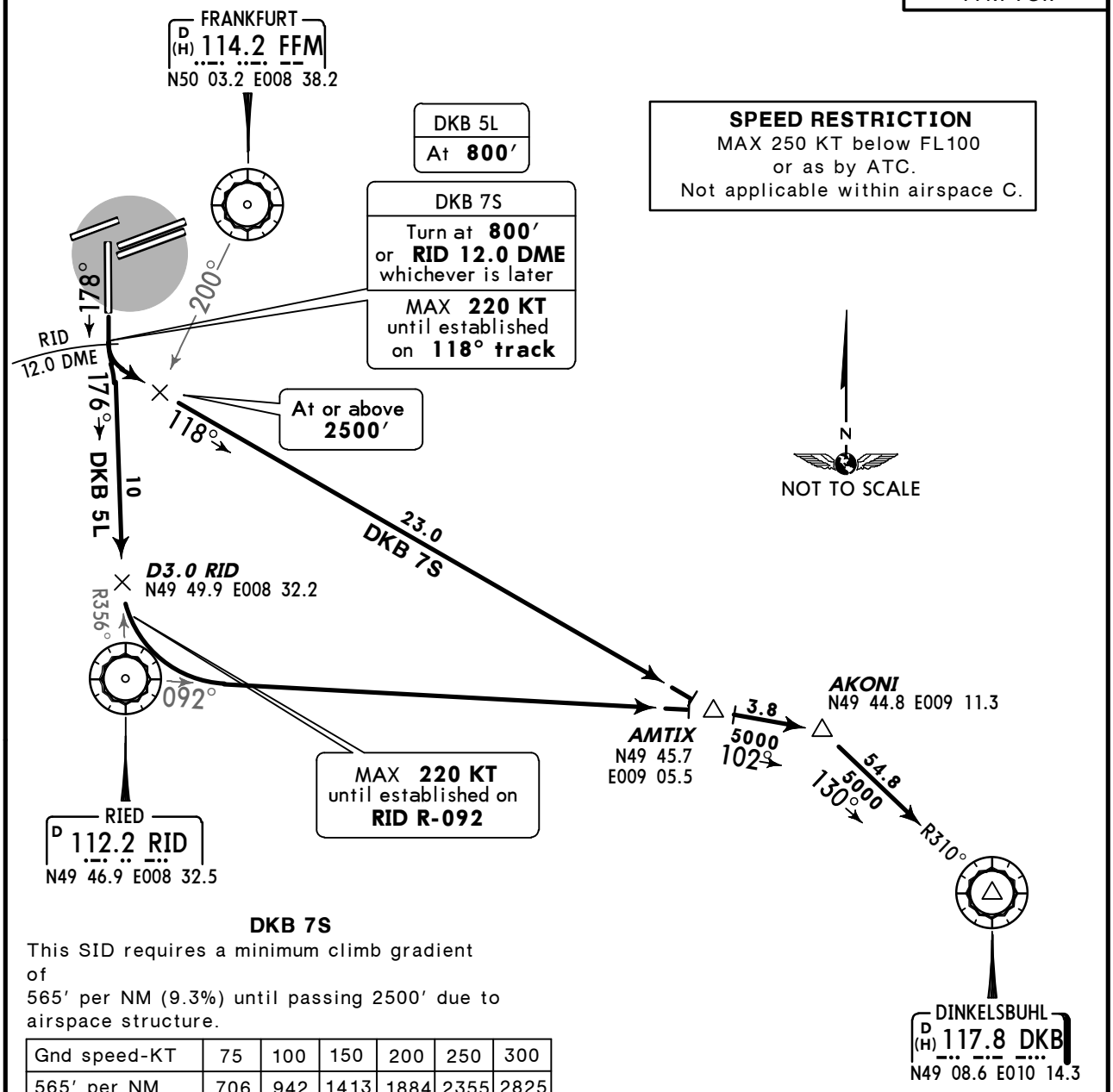
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

DINKELSBUHL FIVE LIMA (DKB 5L)
DINKELSBUHL SEVEN SIERRA (DKB 7S)
RWY 18 DEPARTURES

ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR





DKB 7S

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 5L.

Initial climb clearance **4000′**

SID	ROUTING
DKB 5L	Climb on runway track to 800′, intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to AMTIX ❶, turn RIGHT, 102° track to AKONI, turn RIGHT, intercept DKB R-310 inbound to DKB.
DKB 7S ❷	Climb on runway track to 800′ or RID 12.0 DME, whichever is later, turn LEFT, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, intercept DKB R-310 inbound to DKB.

After AMTIX ❶/passing FFM R-200 ❷ BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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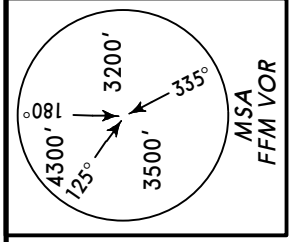
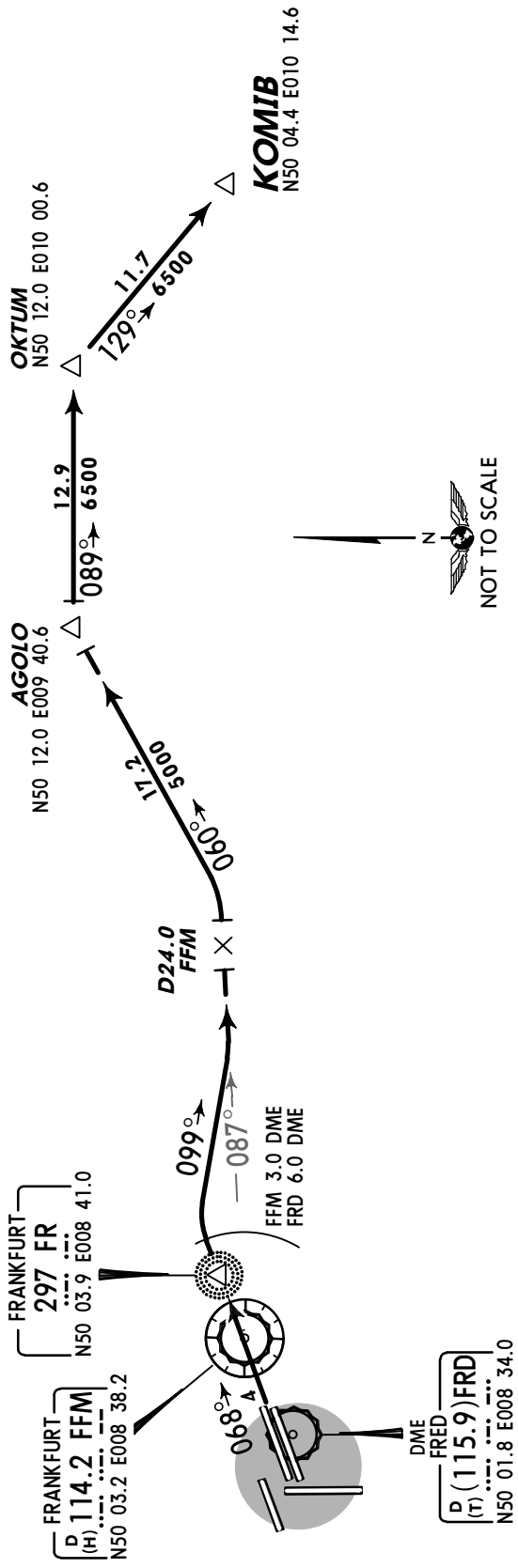
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



KOMIB ONE DELTA (KOMIB 1D)
KOMIB ONE ECHO (KOMIB 1E)
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 D24.0 FFM ❶, turn LEFT, 060° track to AGOLO, turn RIGHT, 089° track to OKTUM, turn RIGHT, 129° track to KOMIB.

❶ After D24.0 FFM BRNAV equipment necessary.

CHANGES: Speed restriction at turn after FFM 3.0 DME withdrawn.

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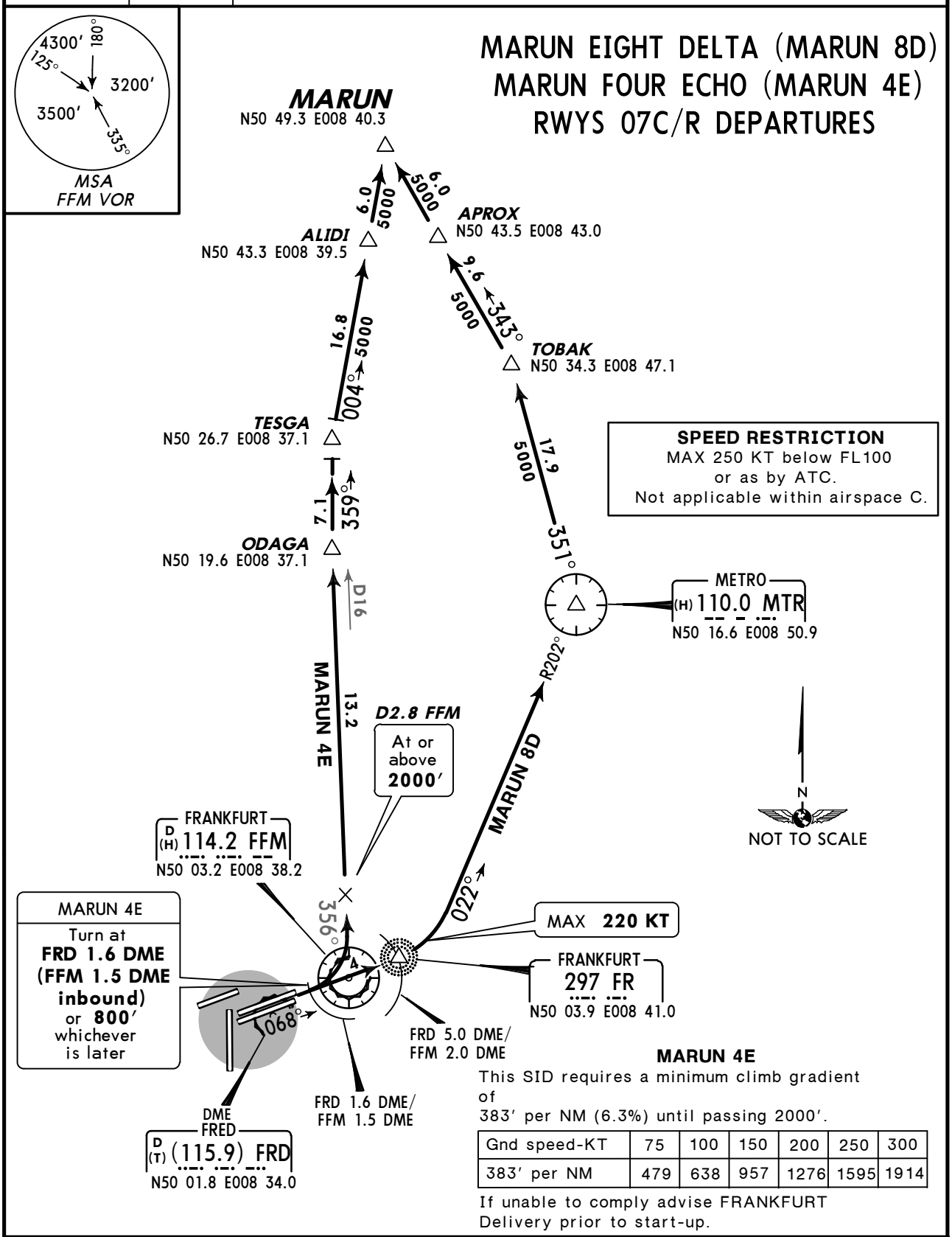
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

MARUN 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
Turn at
FRD 1.6 DME
(FFM 1.5 DME inbound)
or **800′**
whichever is later

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: None.

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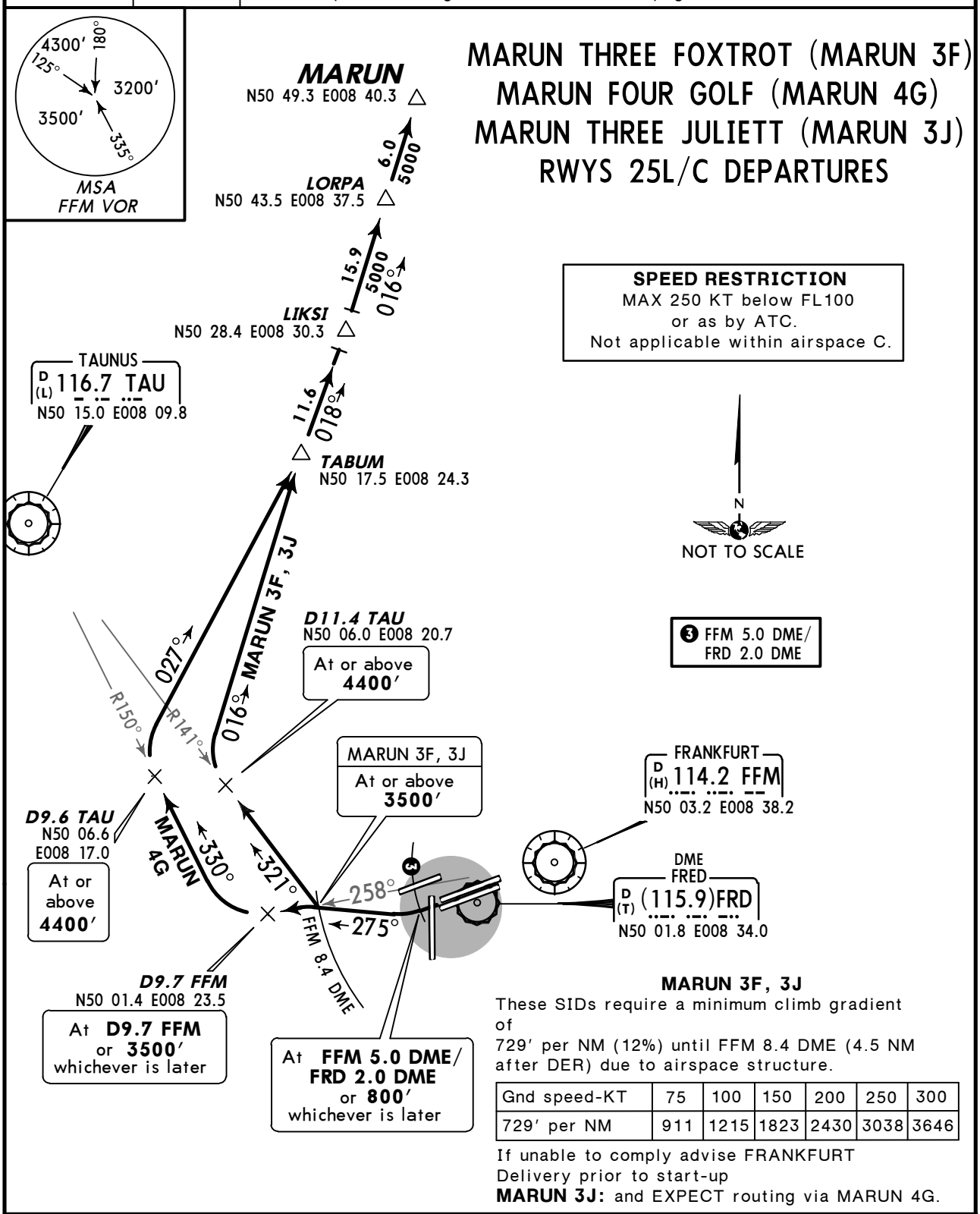
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



MARUN THREE FOXTROT (MARUN 3F)
MARUN FOUR GOLF (MARUN 4G)
MARUN THREE JULIETT (MARUN 3J)
RWYS 25L/C DEPARTURES

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

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: None.

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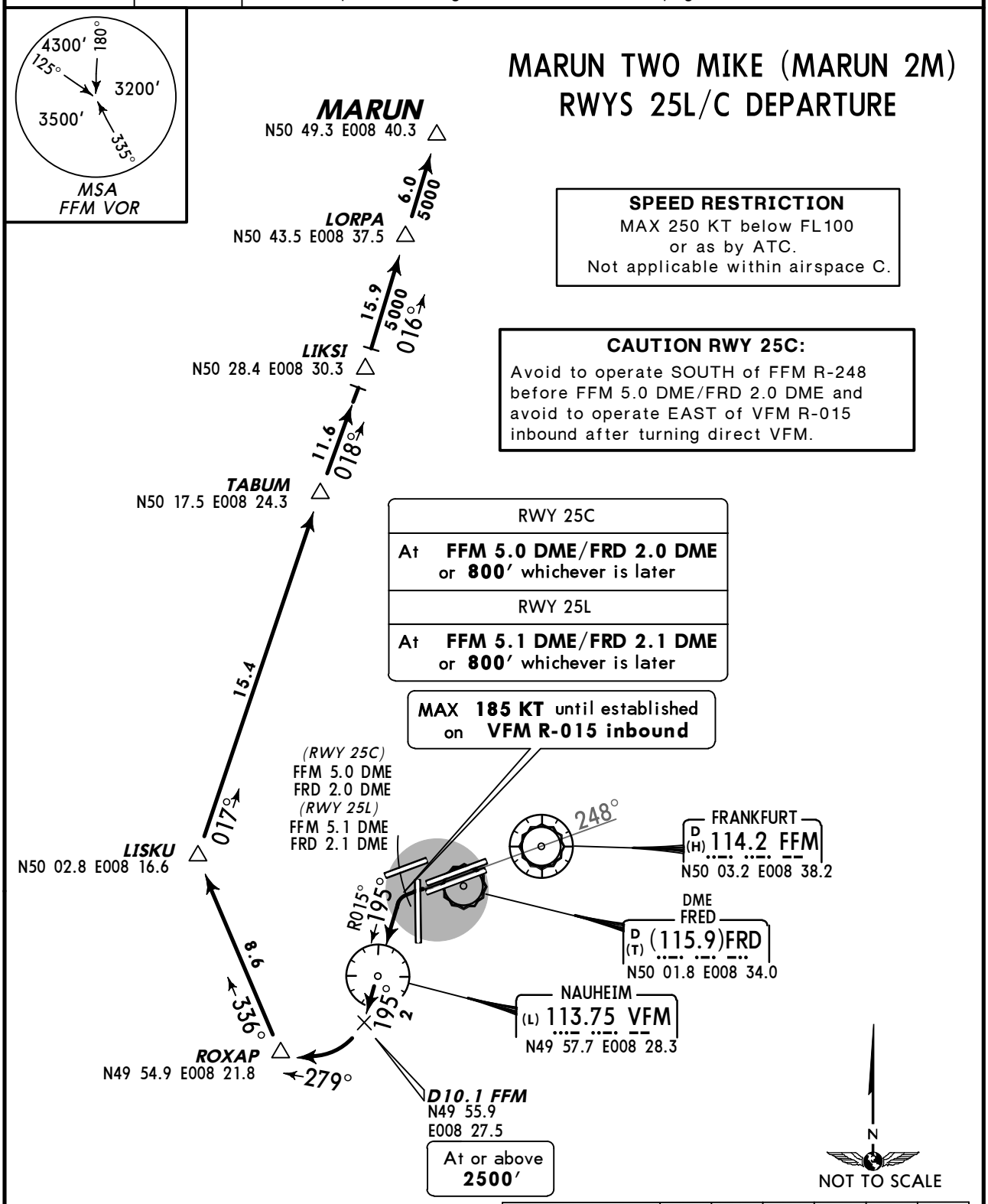
*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



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.

Initial climb clearance **5000′**

ROUTING

Climb on runway track to FFM 5.0 DME/FRD 2.0 DME (Rwy 25C)/FFM 5.1 DME/FRD 2.1 DME (Rwy 25L) or 800′, whichever is later, turn LEFT, intercept VFM R-015 inbound via VFM to D10.1 FFM ❶ 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.

❶ After D10.1 FFM BRNAV equipment necessary.

CHANGES: Caution note established.

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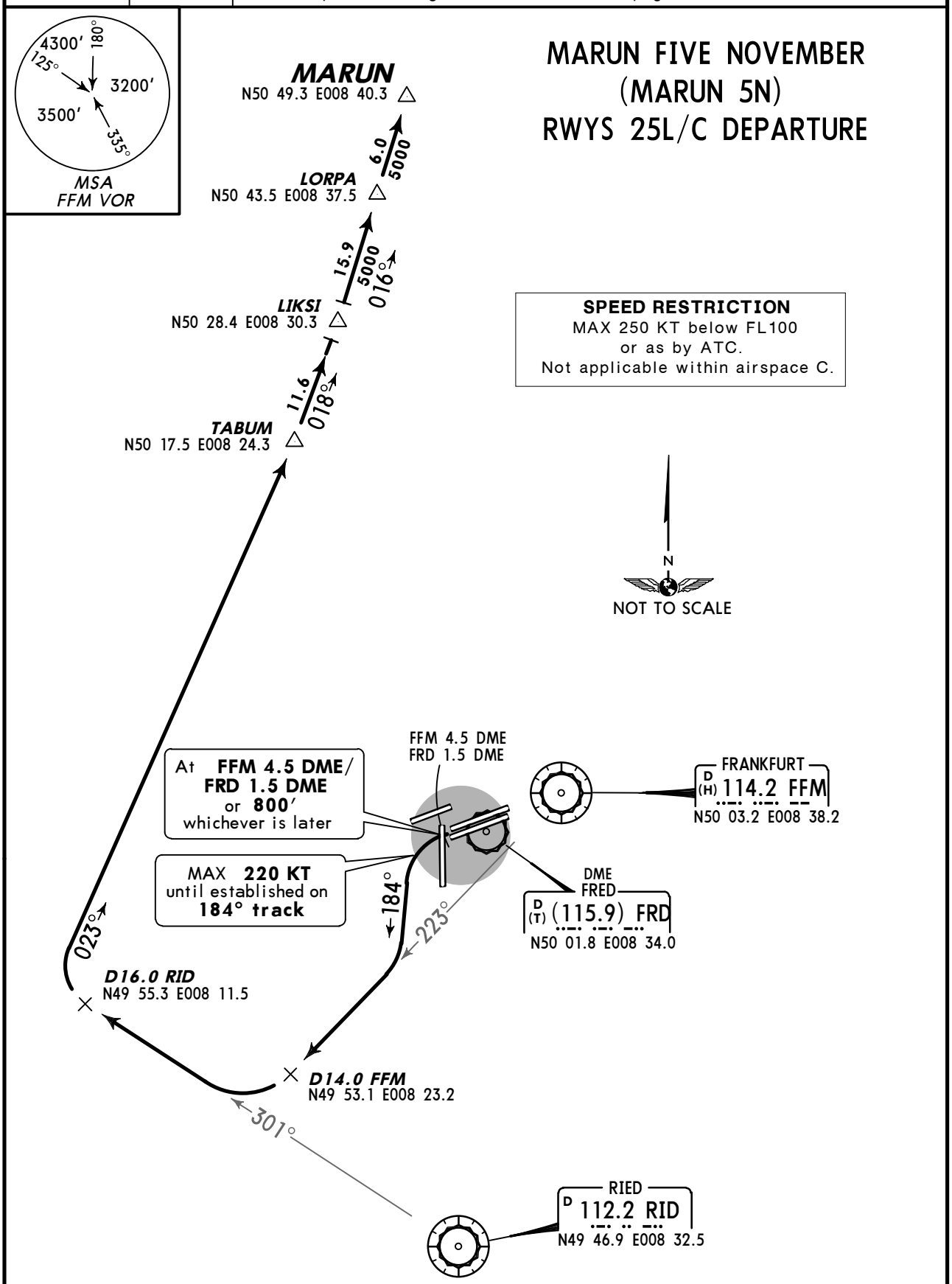
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



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: None.

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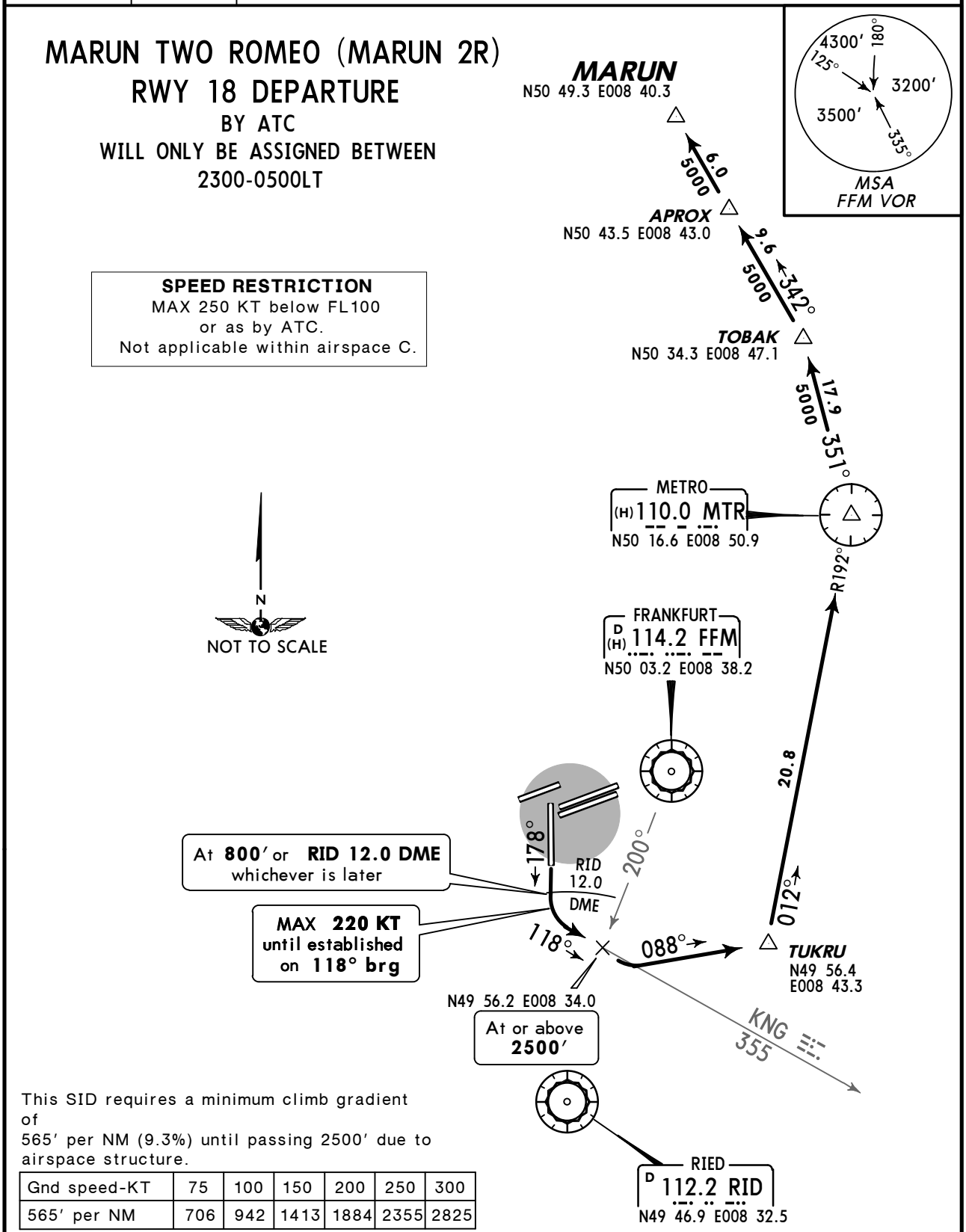
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and 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: Initial contact.

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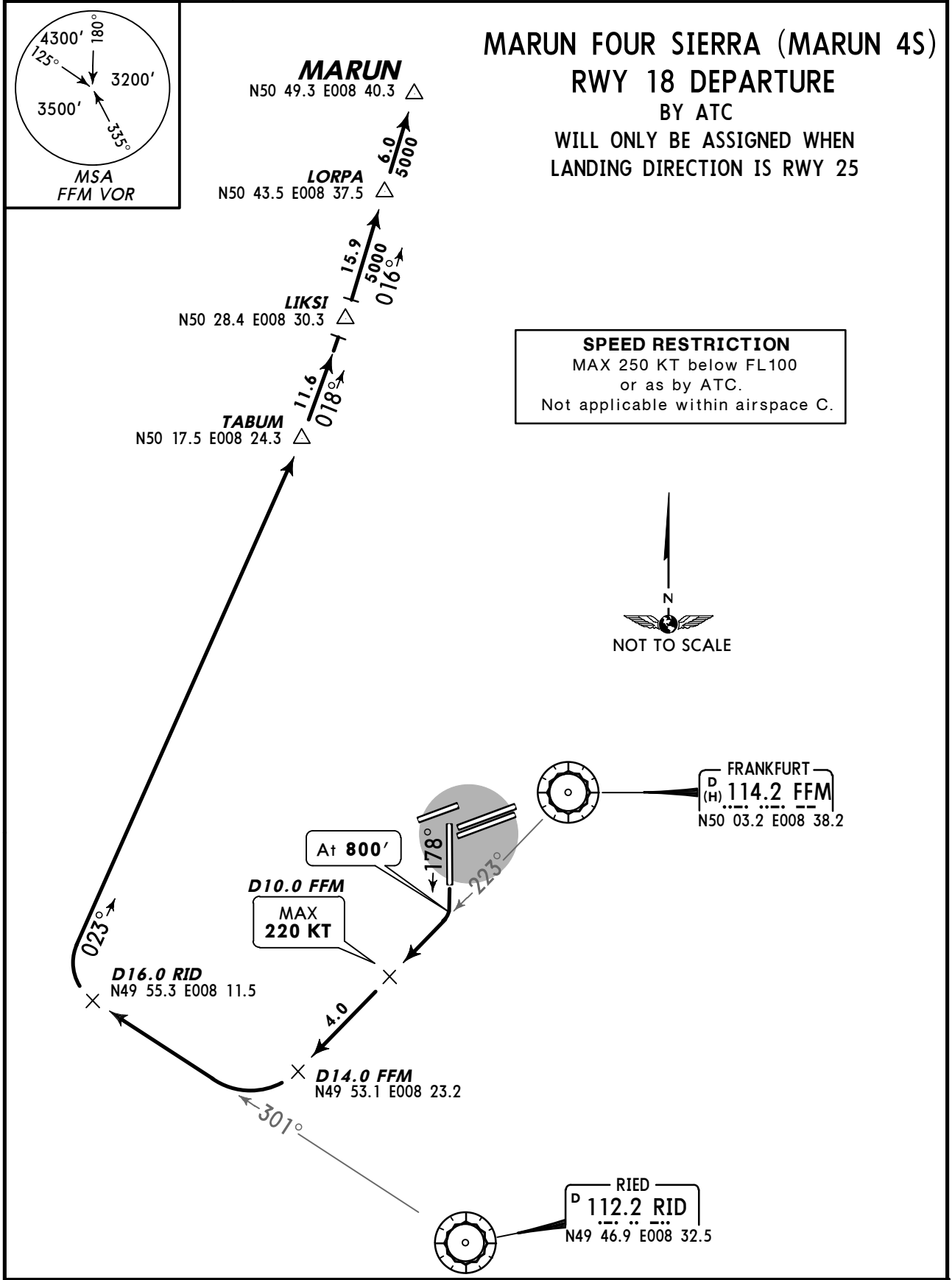
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

MARUN FOUR SIERRA (MARUN 4S) 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: SID renumbered; initial contact.

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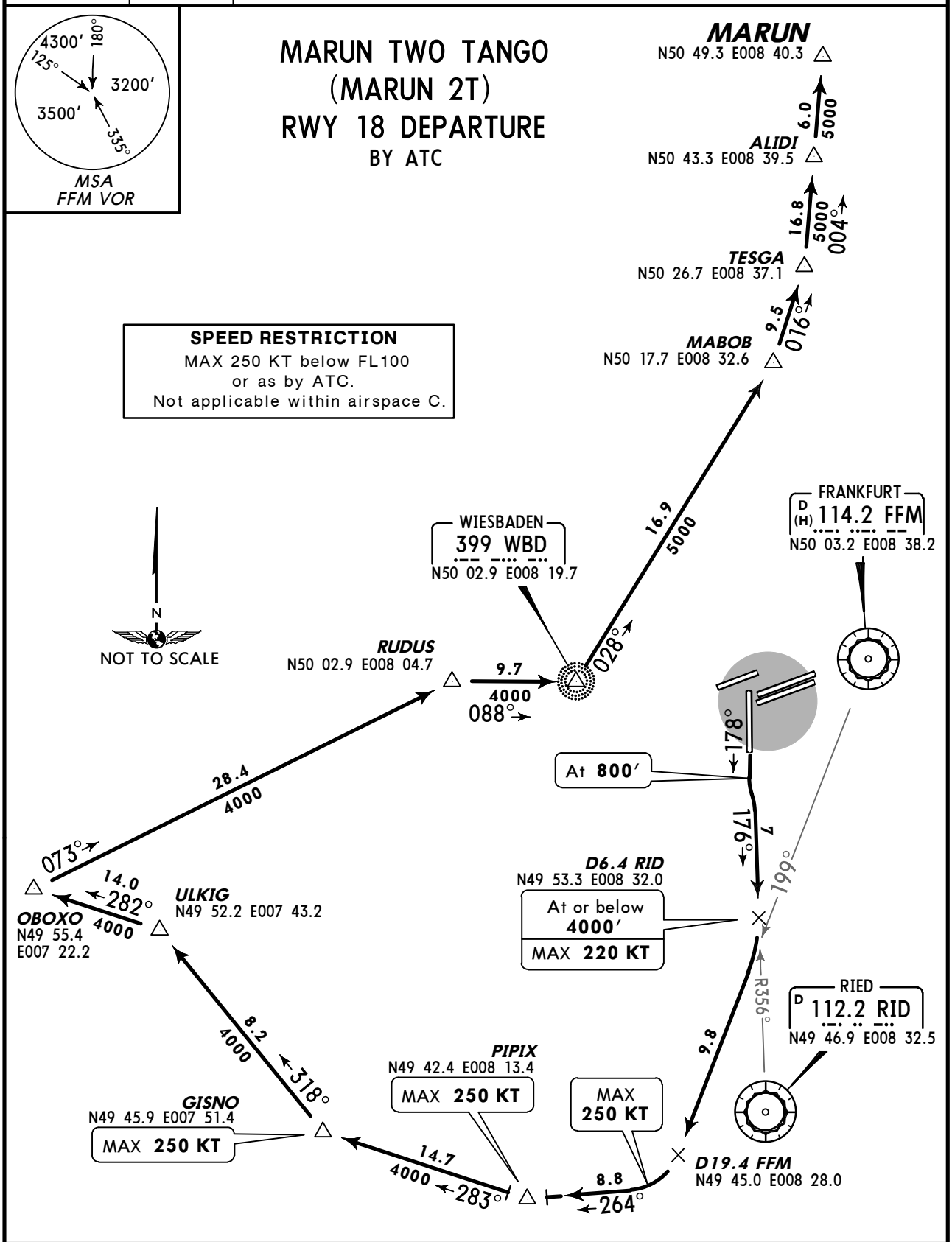
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.



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: Initial contact.

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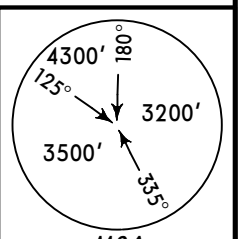
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

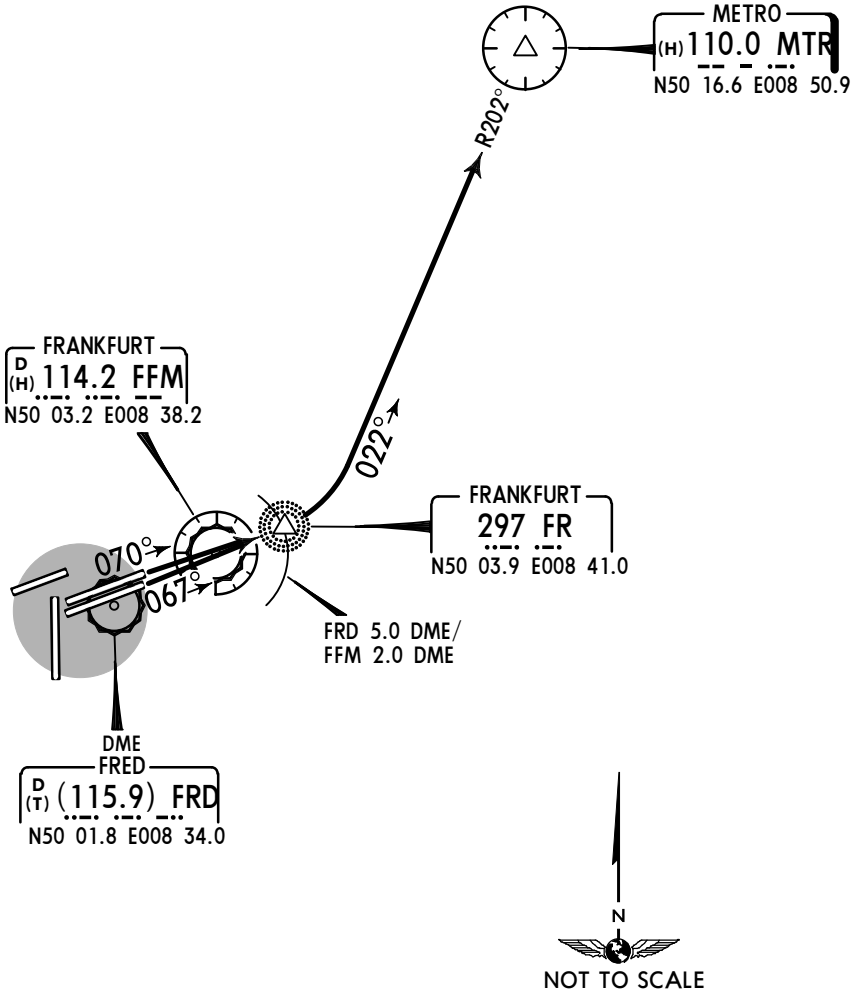
METRO FOUR CHARLIE (MTR 4C)
RWYS 07C/R DEPARTURE

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



MSA
FFM VOR

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: None.

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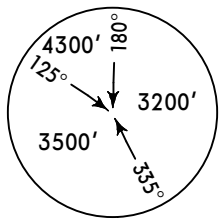
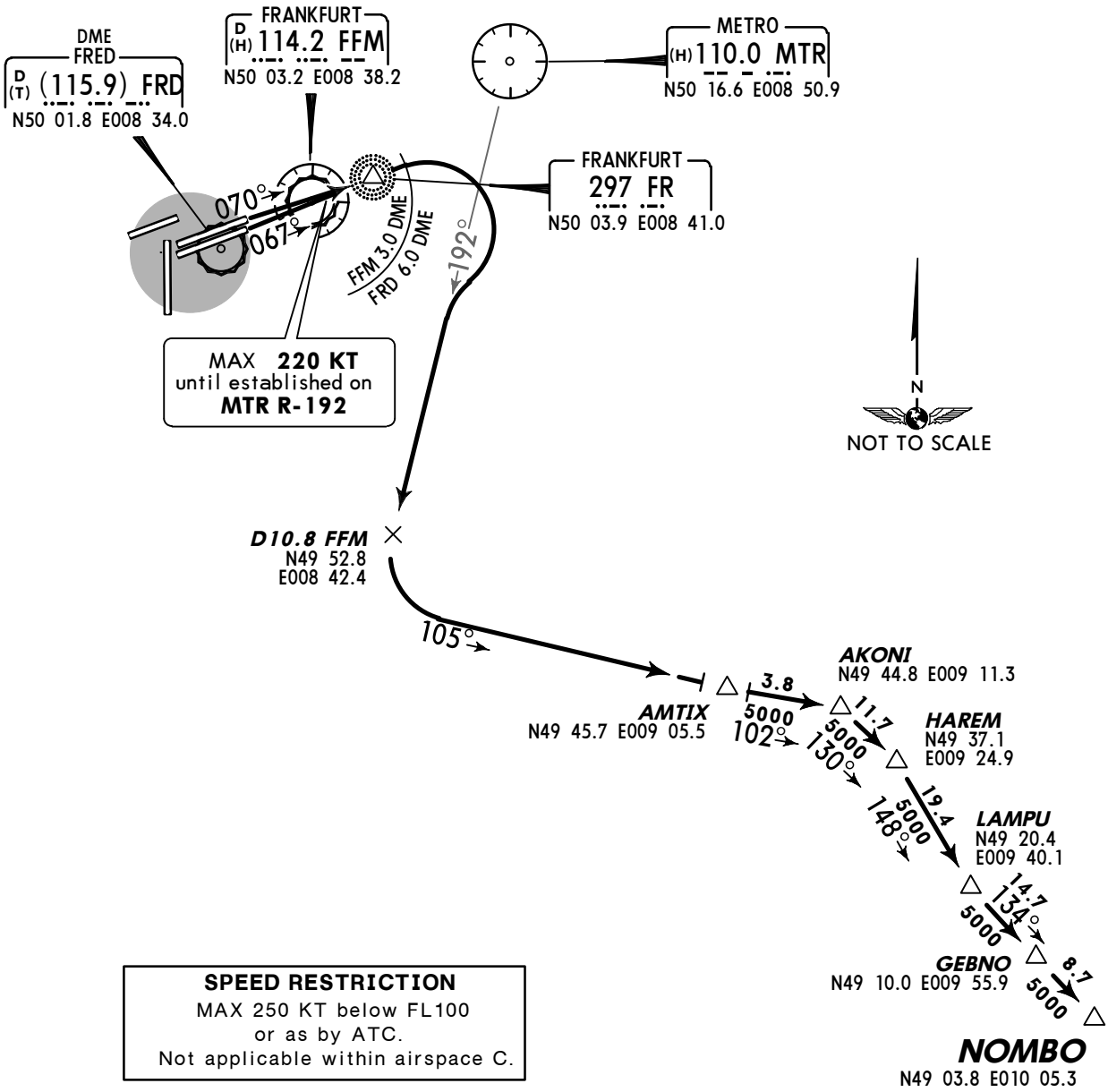
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

NOMBO NINE DELTA (NOMBO 9D)
NOMBO EIGHT ECHO (NOMBO 8E)
RWYS 07C/R DEPARTURES

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



MSA
FFM VOR



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 ❶ turn LEFT, 105° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, 130° track to HAREM, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track via GEBNO to NOMBO.

❶ After D10.8 FFM BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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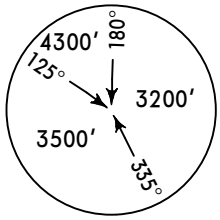
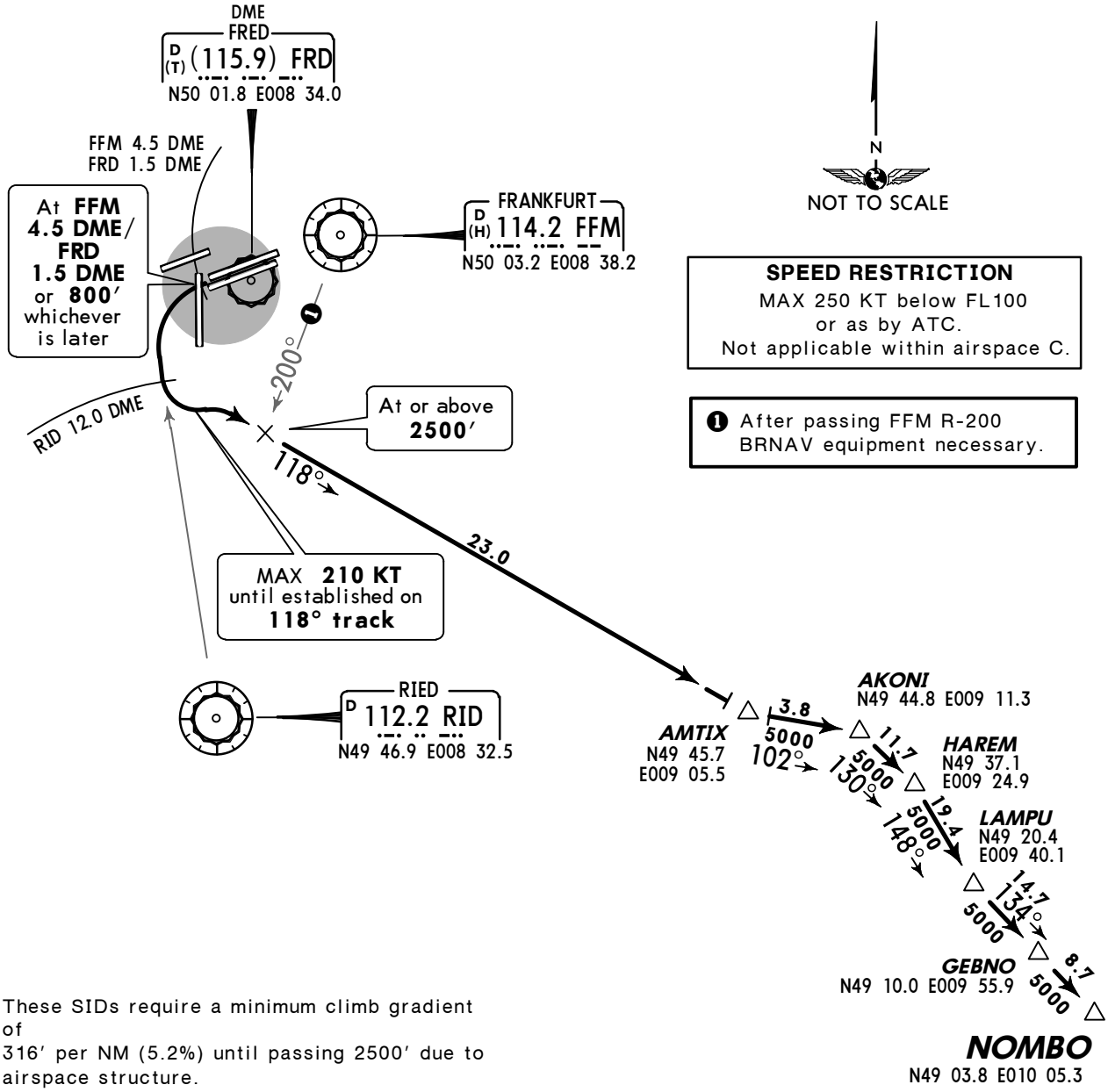
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

NOMBO SEVEN FOXTROT (NOMBO 7F)
NOMBO EIGHT GOLF (NOMBO 8G)
RWYS 25L/C DEPARTURES

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



MSA
FFM VOR



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

❶ After passing FFM R-200
BRNAV equipment necessary.

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, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, 130° track to HAREM, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track via GEBNO to NOMBO.

CHANGES: SIDs renumbered & revised.

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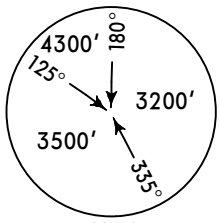
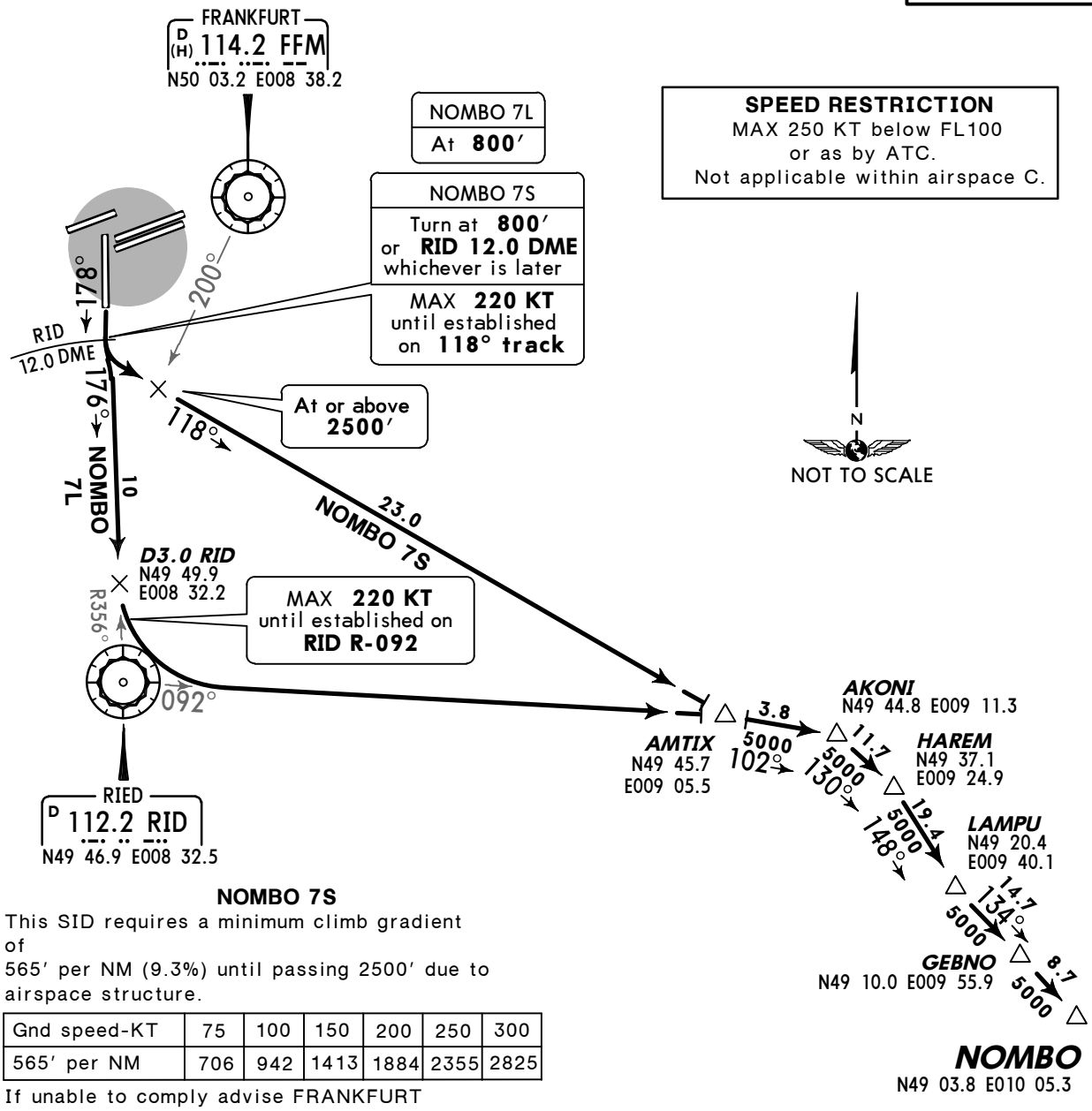
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

NOMBO SEVEN LIMA (NOMBO 7L)
NOMBO SEVEN SIERRA (NOMBO 7S)
RWY 18 DEPARTURES

NOT FOR PROP ACFT, THESE FLIGHTS SHALL FILE RATIM SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



MSA
FFM VOR



NOMBO 7S

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 7L.

Initial climb clearance **4000′**

SID	ROUTING
NOMBO 7L	Climb on runway track to 800′, intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to AMTIX ❶, turn RIGHT, 102° track to AKONI, turn RIGHT, 130° track to HAREM, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° track via GEBNO to NOMBO.
NOMBO 7S ❷	Climb on runway track to 800′, or RID 12.0 DME, whichever is later, turn LEFT, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, 130° track to HAREM, turn RIGHT, 148° track to LAMPU, turn LEFT, 134° via GEBNO to NOMBO.

After AMTIX ❶ /passing FFM R-200 ❷ BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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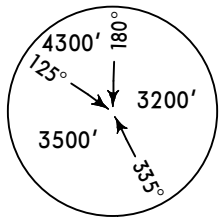
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

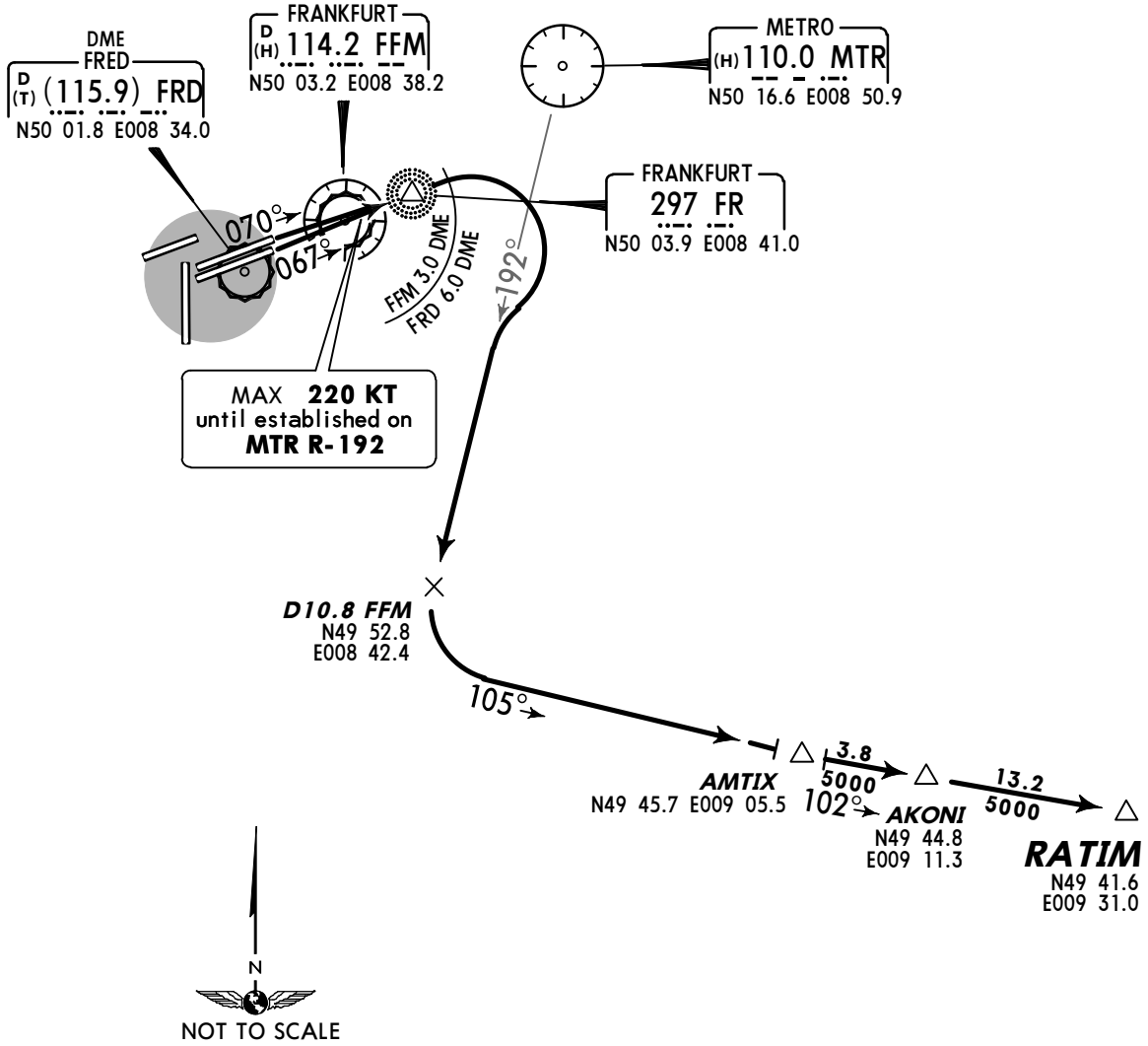
RATIM FIVE DELTA (RATIM 5D)
RATIM FIVE ECHO (RATIM 5E)
RWYS 07C/R DEPARTURES

ONLY PROP ACFT WITH MAX FL230 REQUESTED INSTEAD OF NOMBO SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



MSA
FFM VOR

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 ❶ turn LEFT, 105° track to AMTIX, turn LEFT, 102° track via AKONI to RATIM.

❶ After D10.8 FFM BRNAV equipment necessary.

CHANGES: SIDs renumbered & revised.

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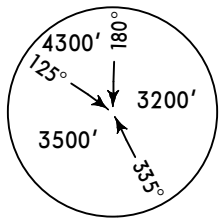
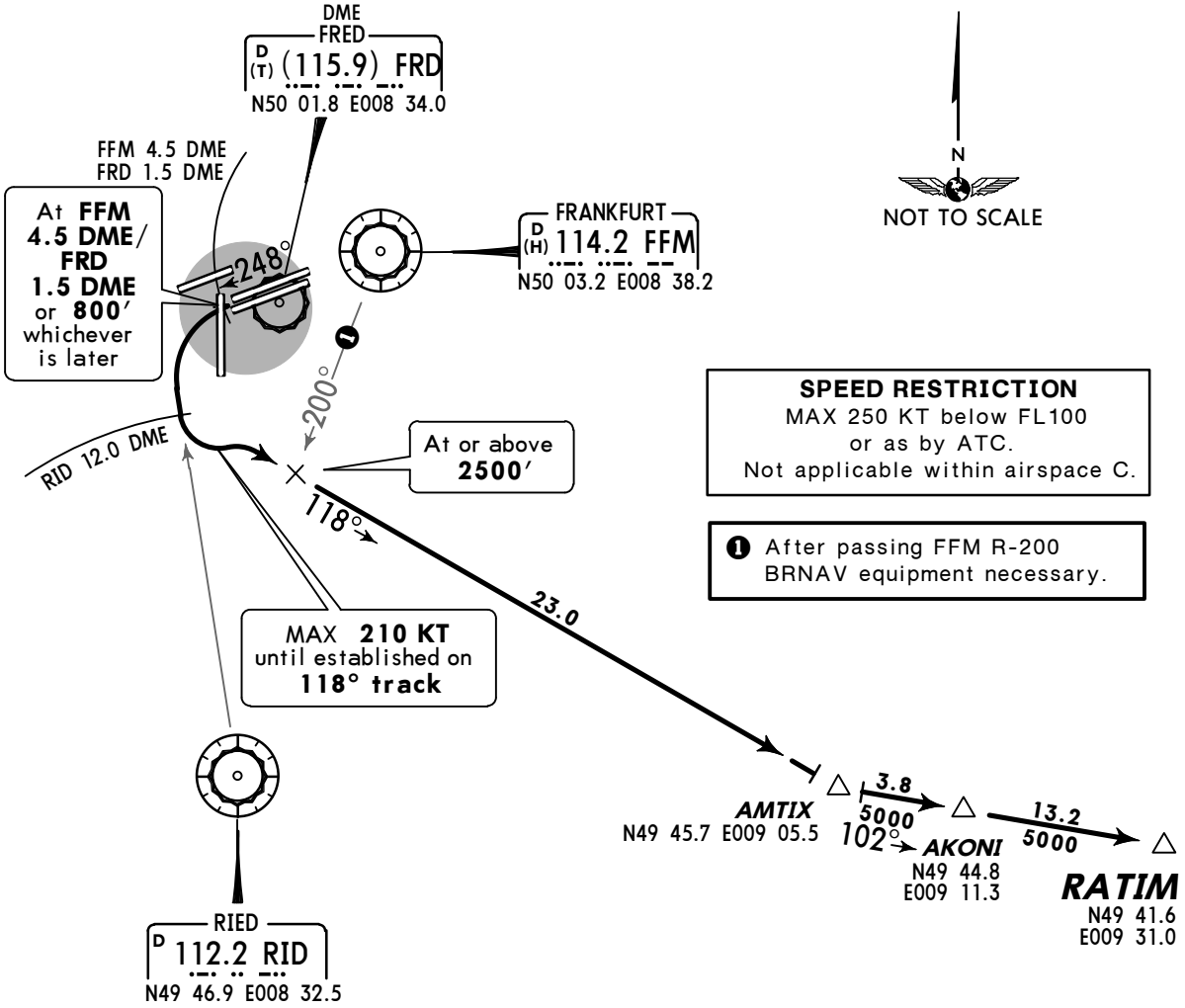
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

RATIM FIVE FOXTROT (RATIM 5F)
RATIM FIVE GOLF (RATIM 5G)
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



MSA
FFM VOR



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

❶ After passing FFM R-200
BRNAV equipment necessary.

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, 118° track to AMTIX, turn LEFT, 102° track via AKONI to RATIM.

CHANGES: SIDs renumbered & revised.

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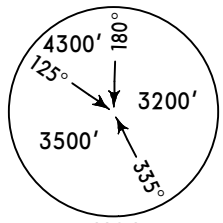
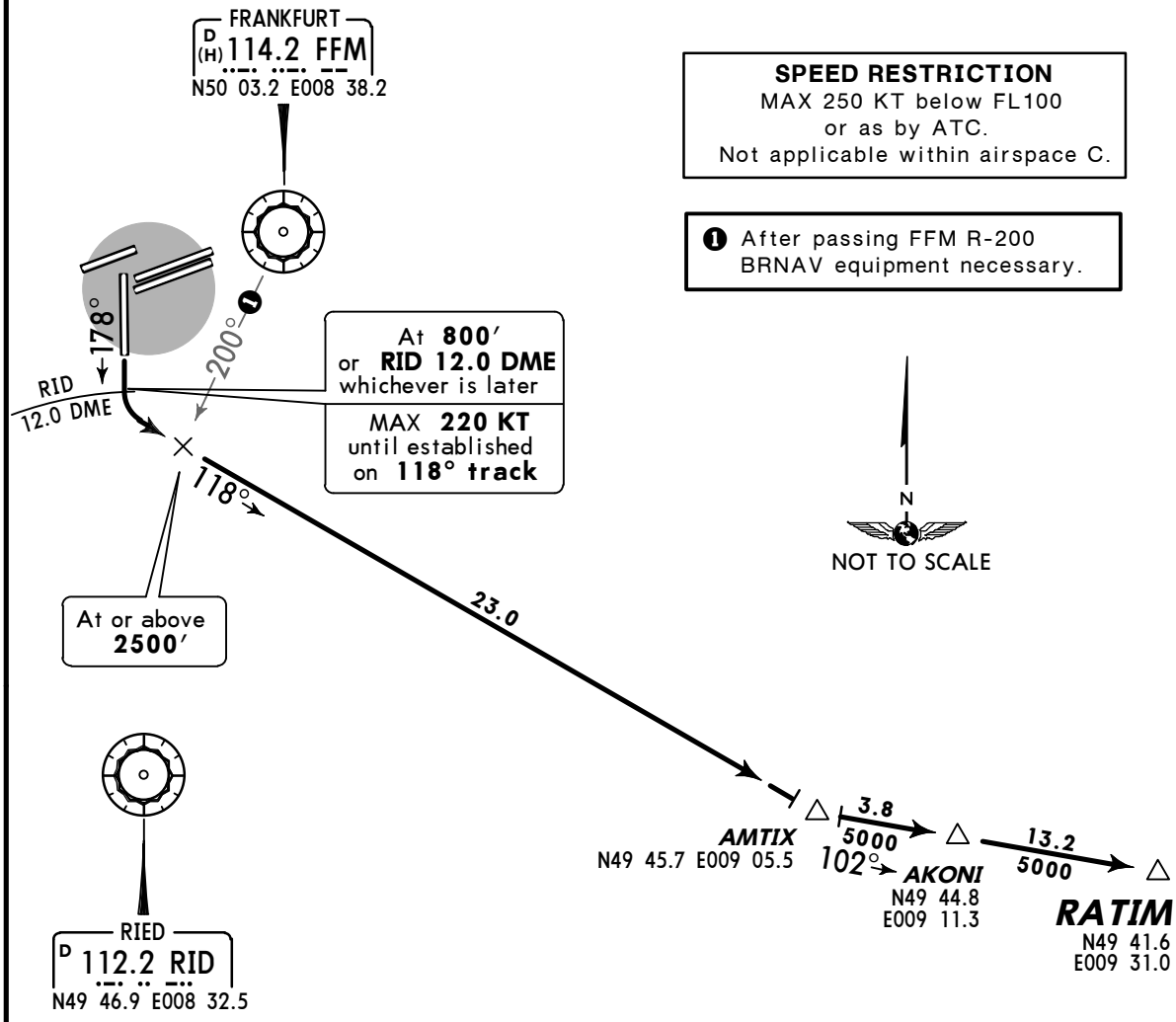
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

RATIM FOUR SIERRA (RATIM 4S)
RWY 18 DEPARTURE

ONLY PROP ACFT WITH MAX FL230 REQUESTED INSTEAD OF NOMBO SIDS
NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA OR EDMM FIR



MSA
FFM VOR



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

❶ After passing FFM R-200
BRNAV equipment necessary.

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, 118° track to AMTIX, turn LEFT, 102° track via AKONI to RATIM.

CHANGES: SID RATIM 4S renumbered 5S & revised.

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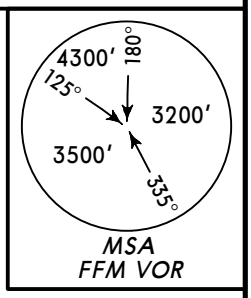
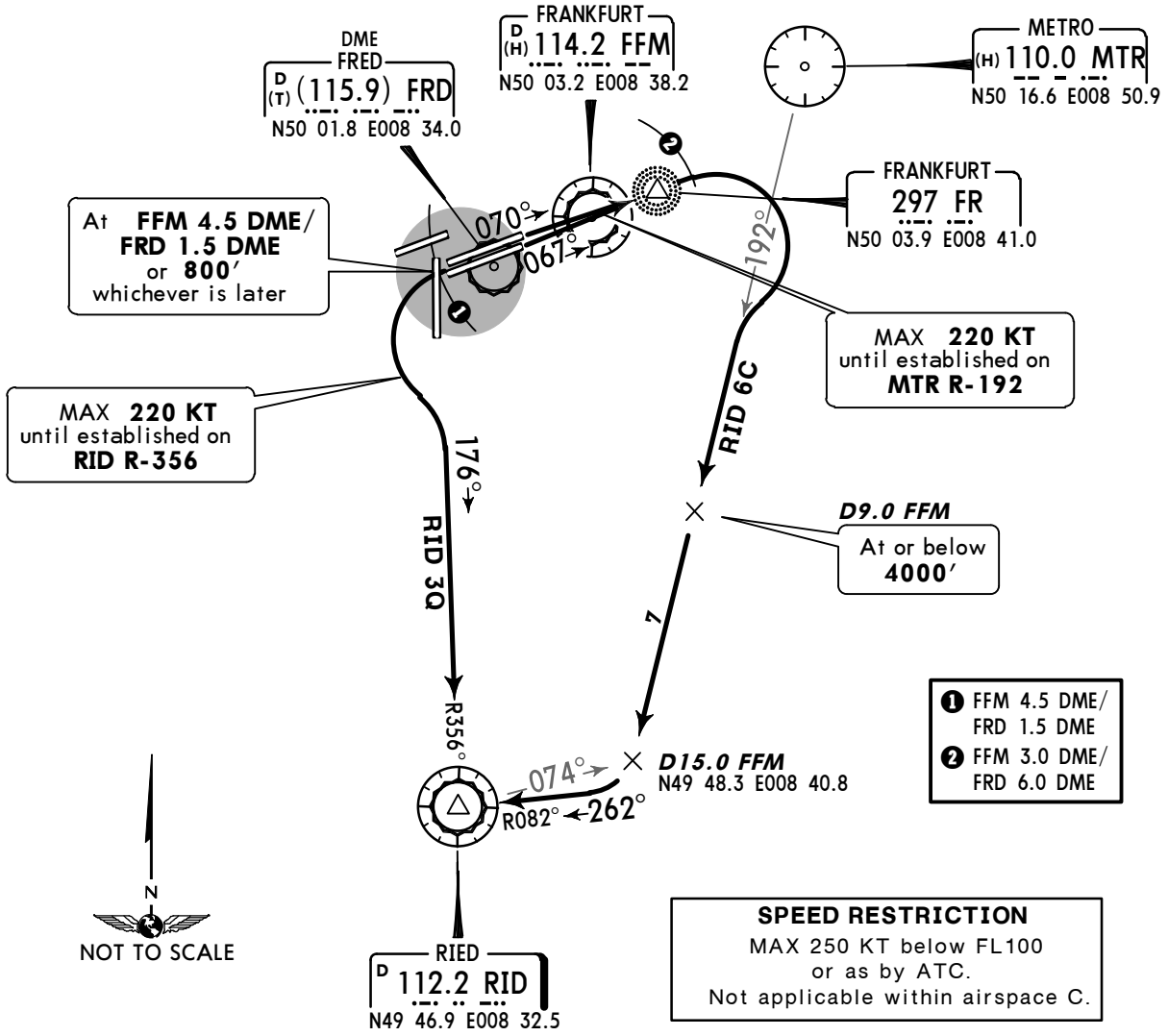
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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





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: None.

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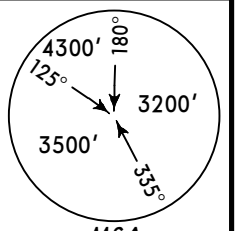
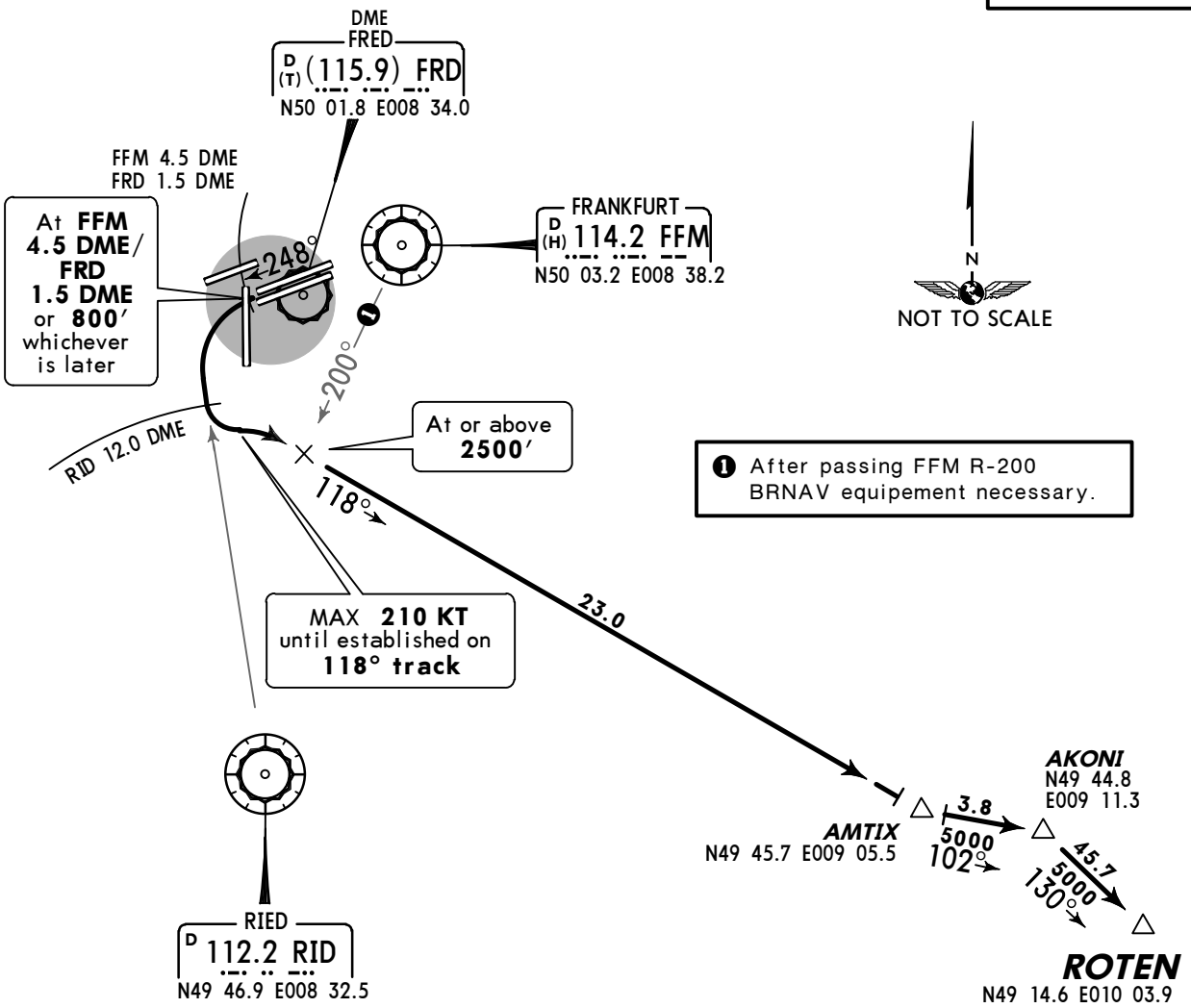
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

ROTEN SIX FOXTROT (ROTEN 6F)
ROTEN FIVE GOLF (ROTEN 5G)
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, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, 130° track to ROTEN.

CHANGES: SIDs renumbered & revised.

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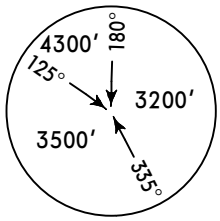
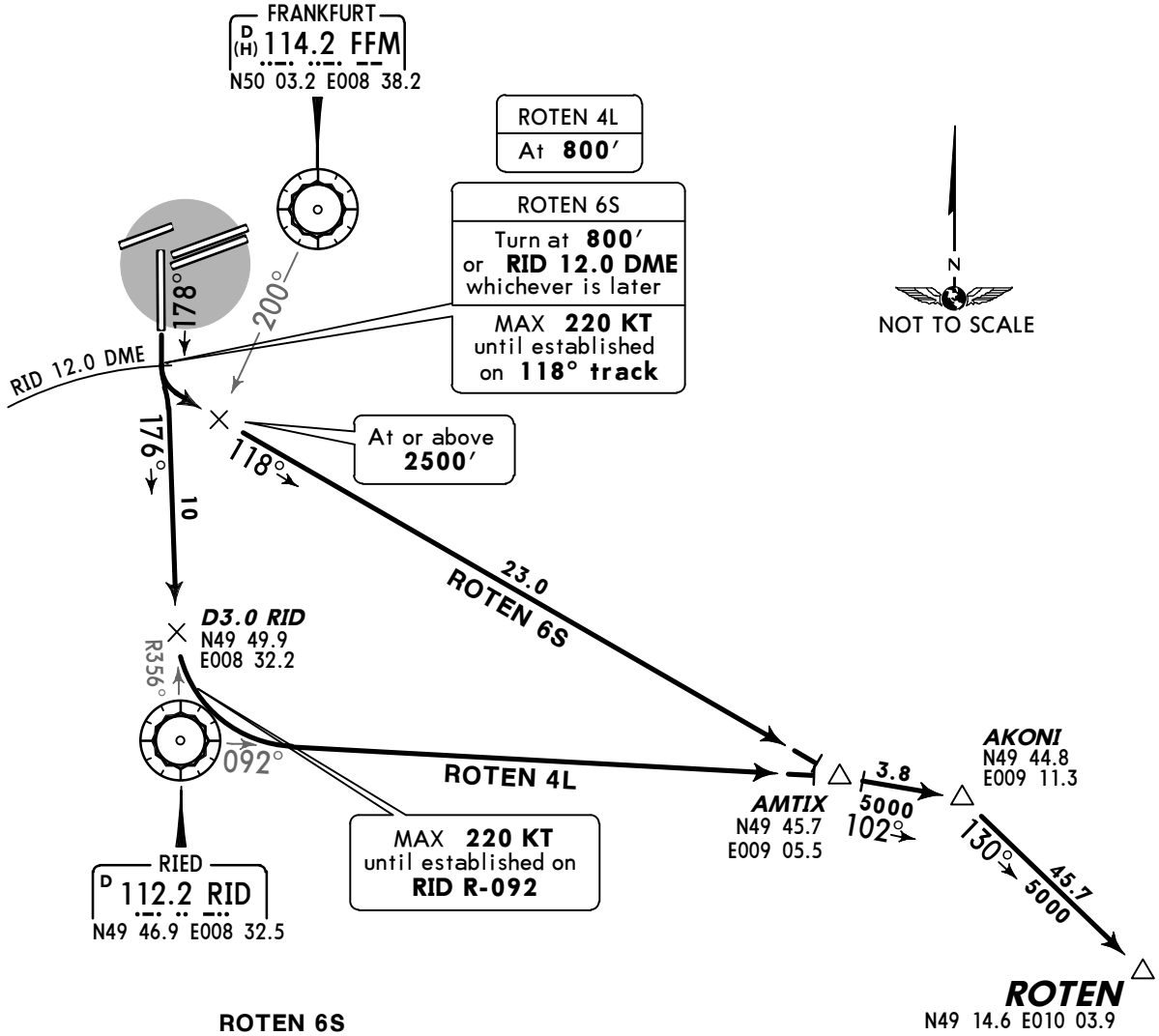
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

ROTEN FOUR LIMA (ROTEN 4L)
ROTEN SIX SIERRA (ROTEN 6S)
RWY 18 DEPARTURES

ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA



MSA
FFM VOR



ROTEN 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 ROTEN 4L.

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

Initial climb clearance **4000′**

SID	ROUTING
ROTEN 4L	Climb on runway track to 800′, intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to AMTIX ❶, turn RIGHT, 102° track to AKONI, turn RIGHT, 130° track to ROTEN.
ROTEN 6S ❷	Climb on runway track to 800′, or RID 12.0 DME, whichever is later, turn LEFT, 118° track to AMTIX, turn LEFT, 102° track to AKONI, turn RIGHT, 130° track to ROTEN.

After AMTIX ❶/passing FFM R-200 ❷ BRNAV equipement necessary.

CHANGES: SIDs renumbered & revised.

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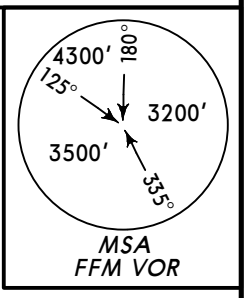
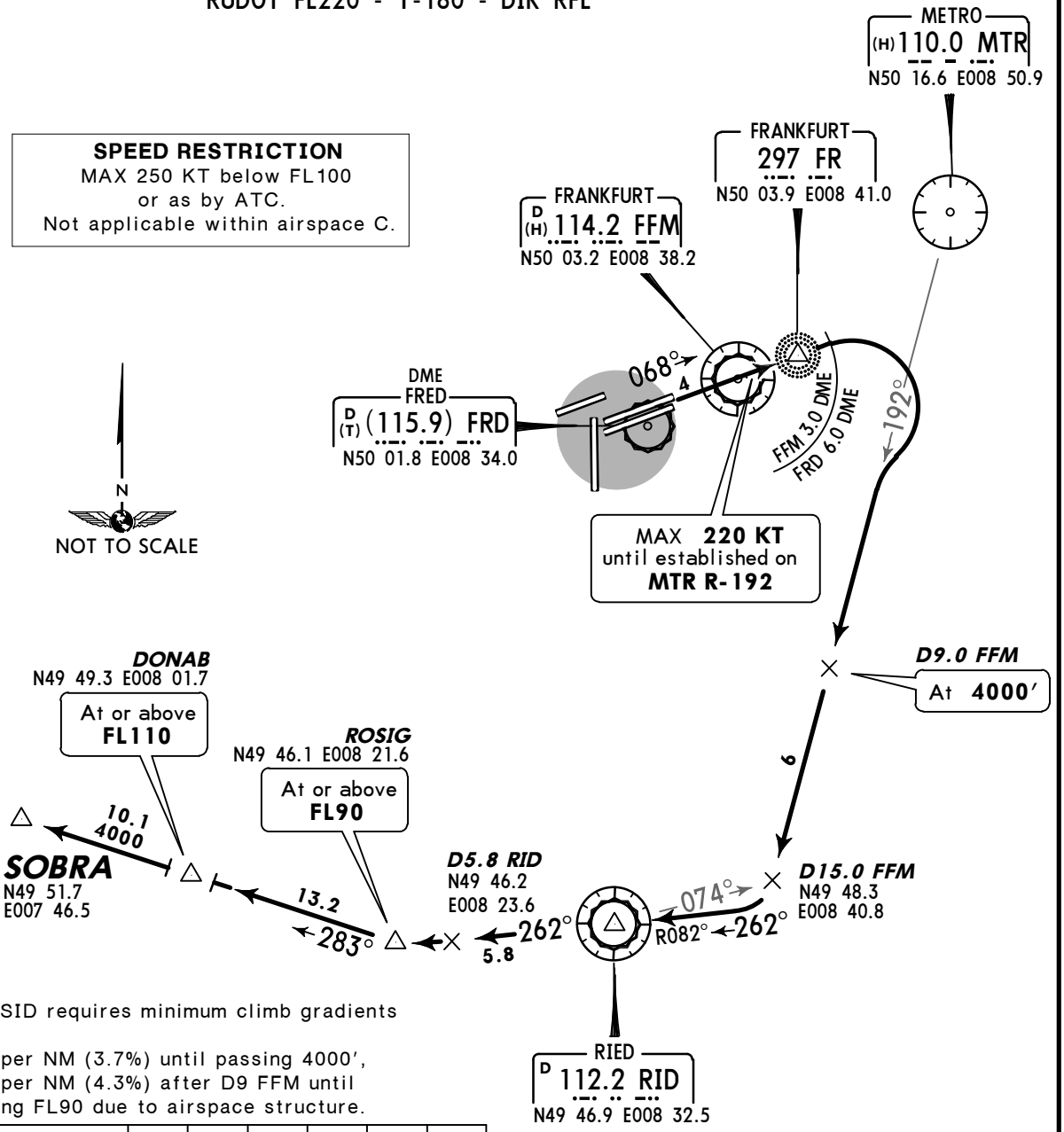
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SOBRA FOUR 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





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

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: Initial contact; chart reindexed.

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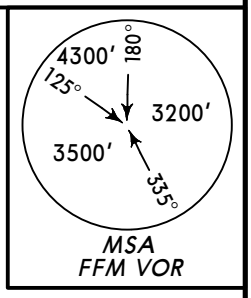
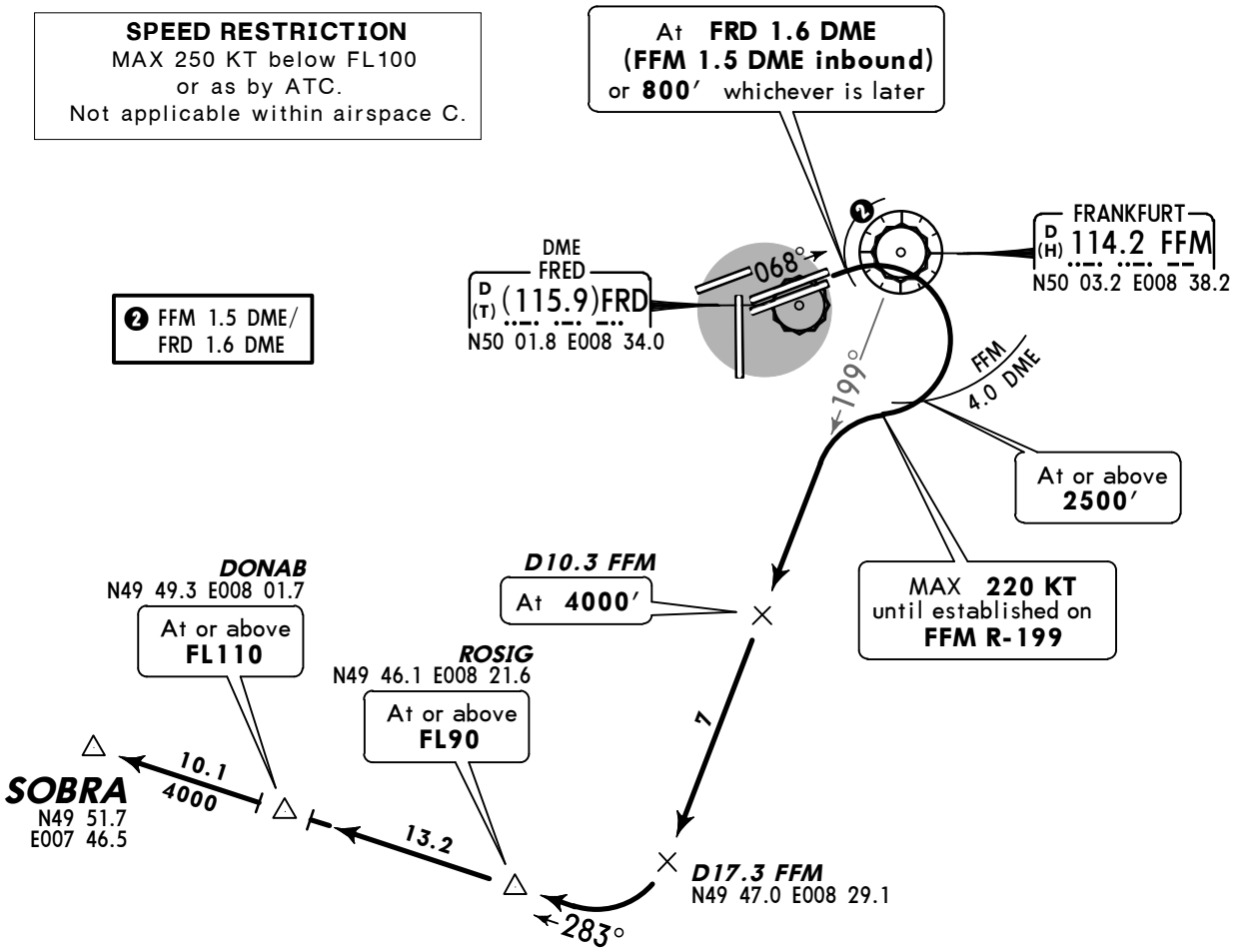
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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

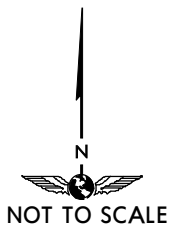




This SID requires minimum climb gradients of
383′ per NM (6.3%) until passing 2500′,
401′ per NM (6.6%) after D10.3 FFM until passing FL90 due to airspace structure.

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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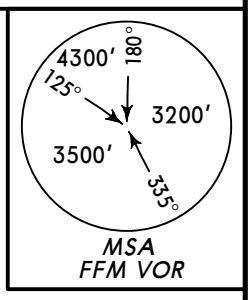
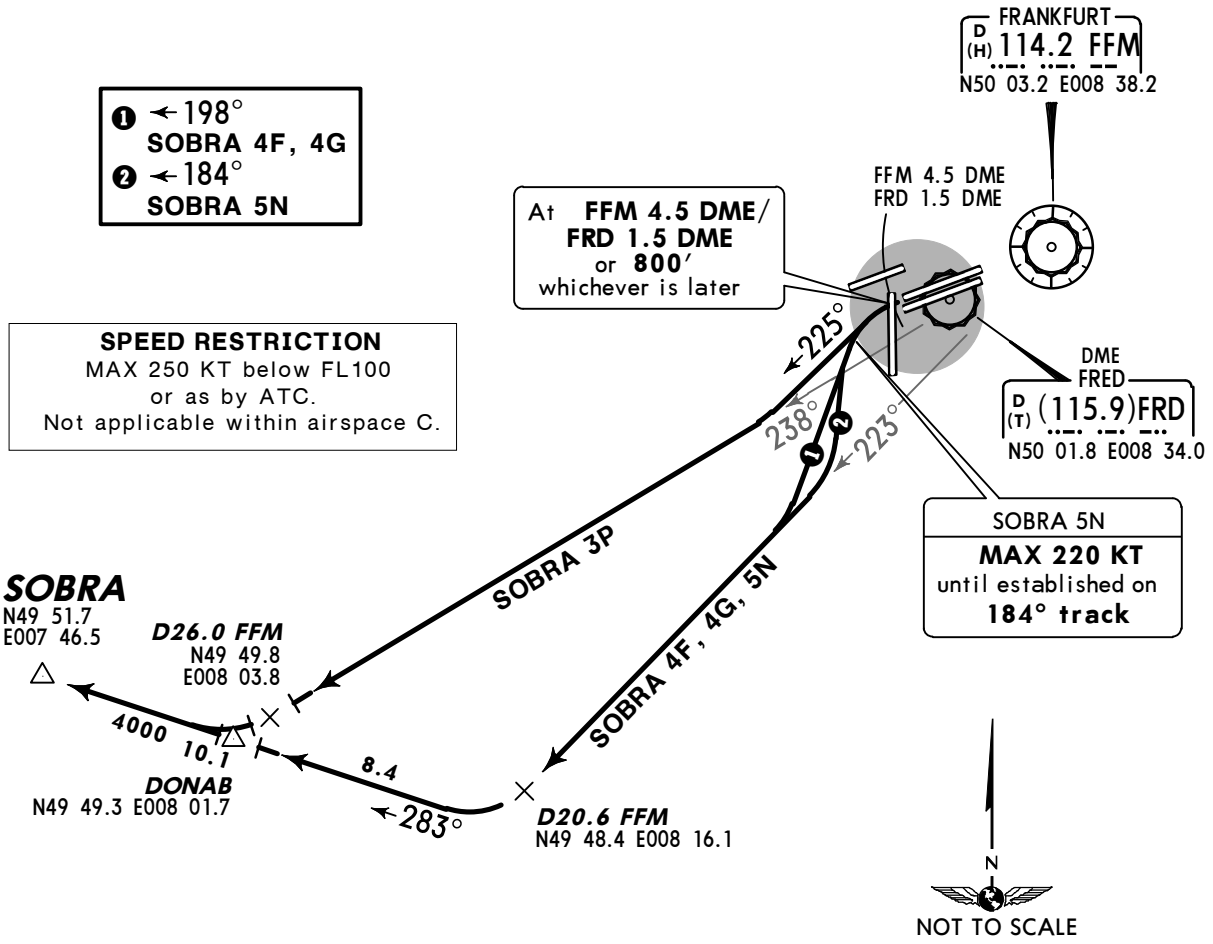
*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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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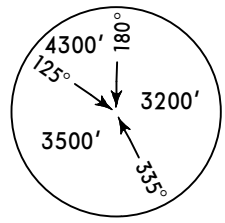
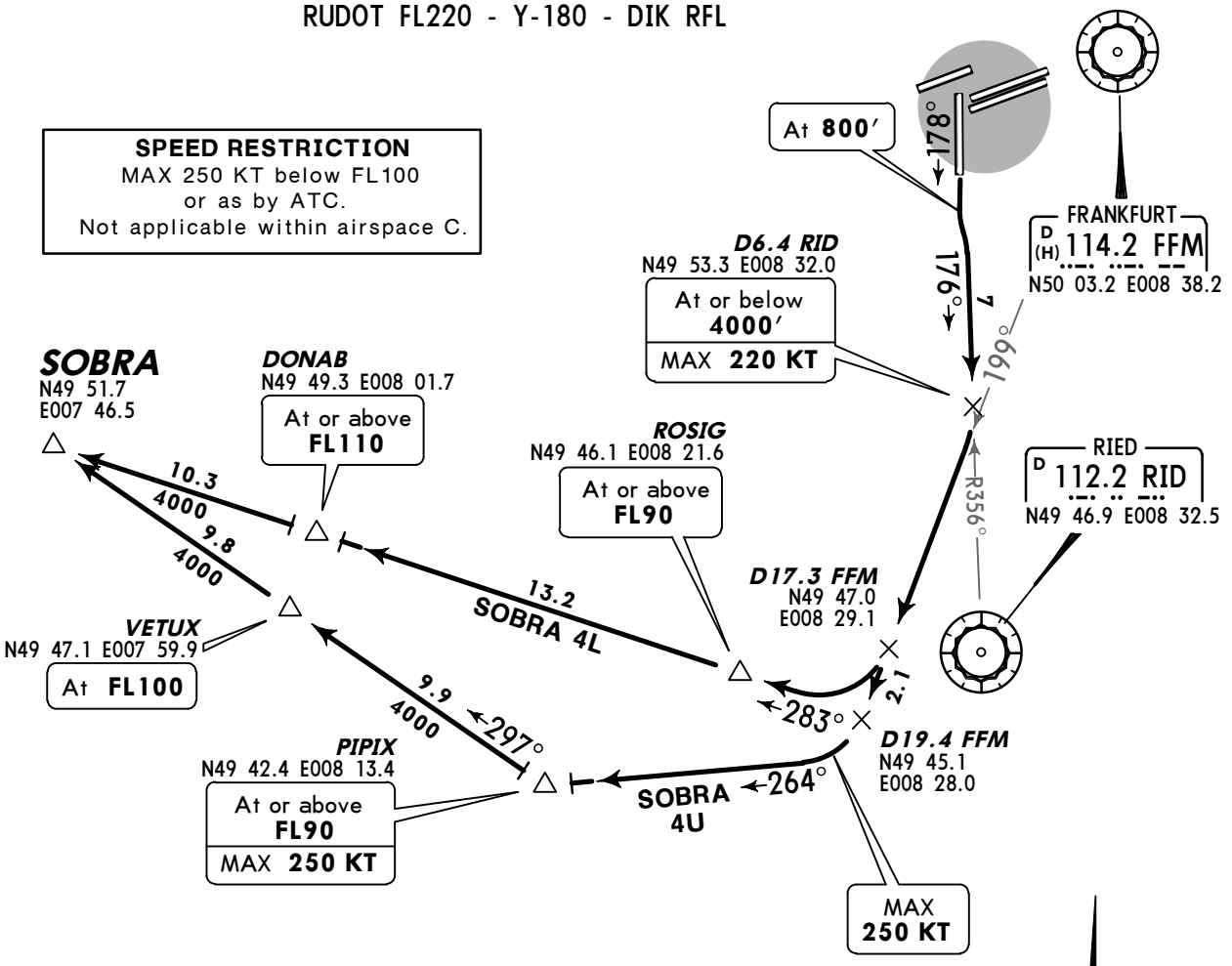
*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

SOBRA FOUR LIMA (SOBRA 4L)
SOBRA 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	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 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 ❷ turn RIGHT, 264° track to PIPIX, turn RIGHT, 297° track via VETUX to SOBRA.

BRNAV equipment necessary after: ❶ D17.3 FFM/ ❷ D19.4 FFM.

CHANGES: None.

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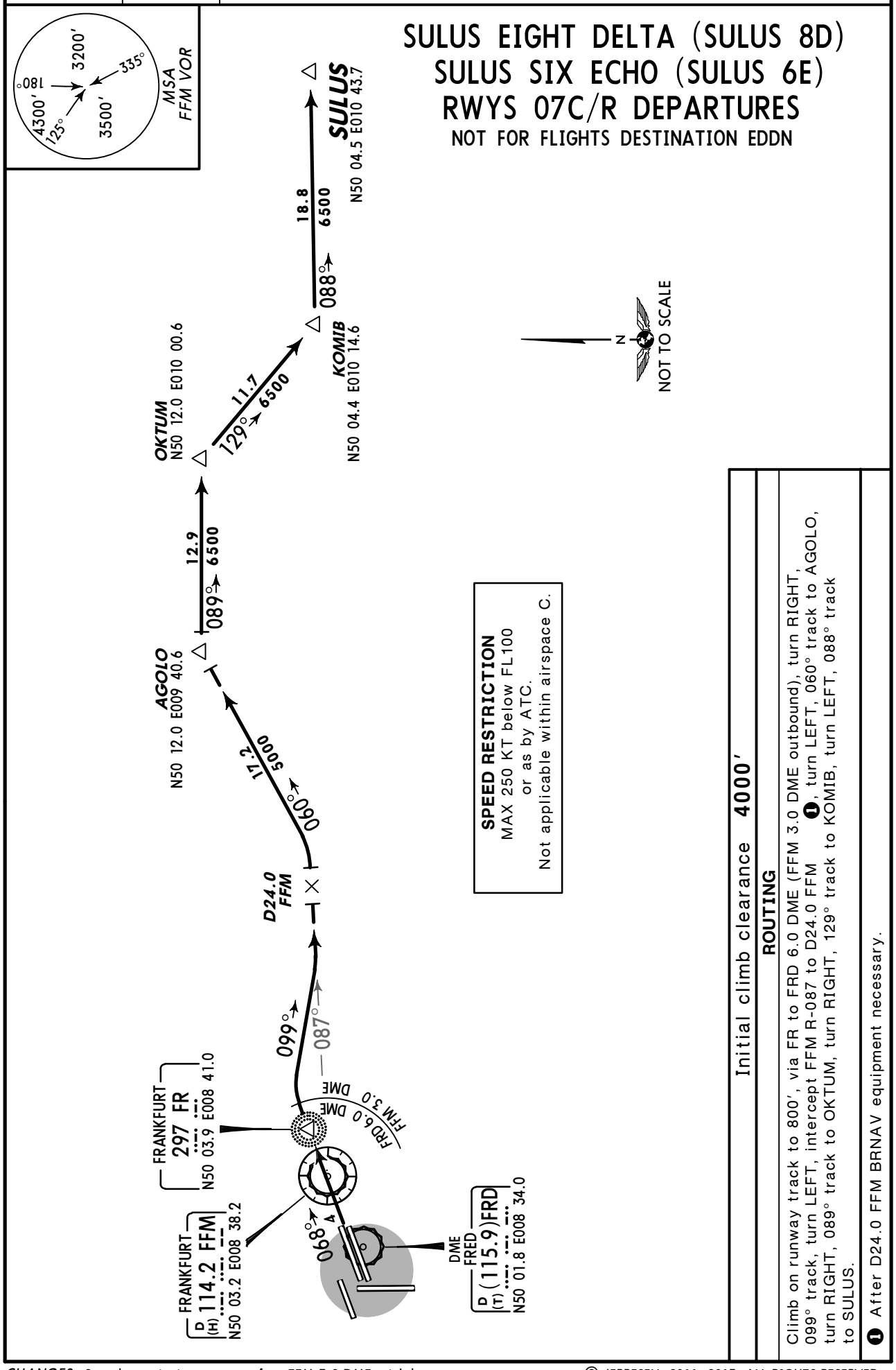
*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SULUS EIGHT DELTA (SULUS 8D)
SULUS SIX ECHO (SULUS 6E)
RWYS 07C/R DEPARTURES

NOT FOR FLIGHTS DESTINATION EDDN



CHANGES: Speed restriction at turn after FFM 3.0 DME withdrawn.

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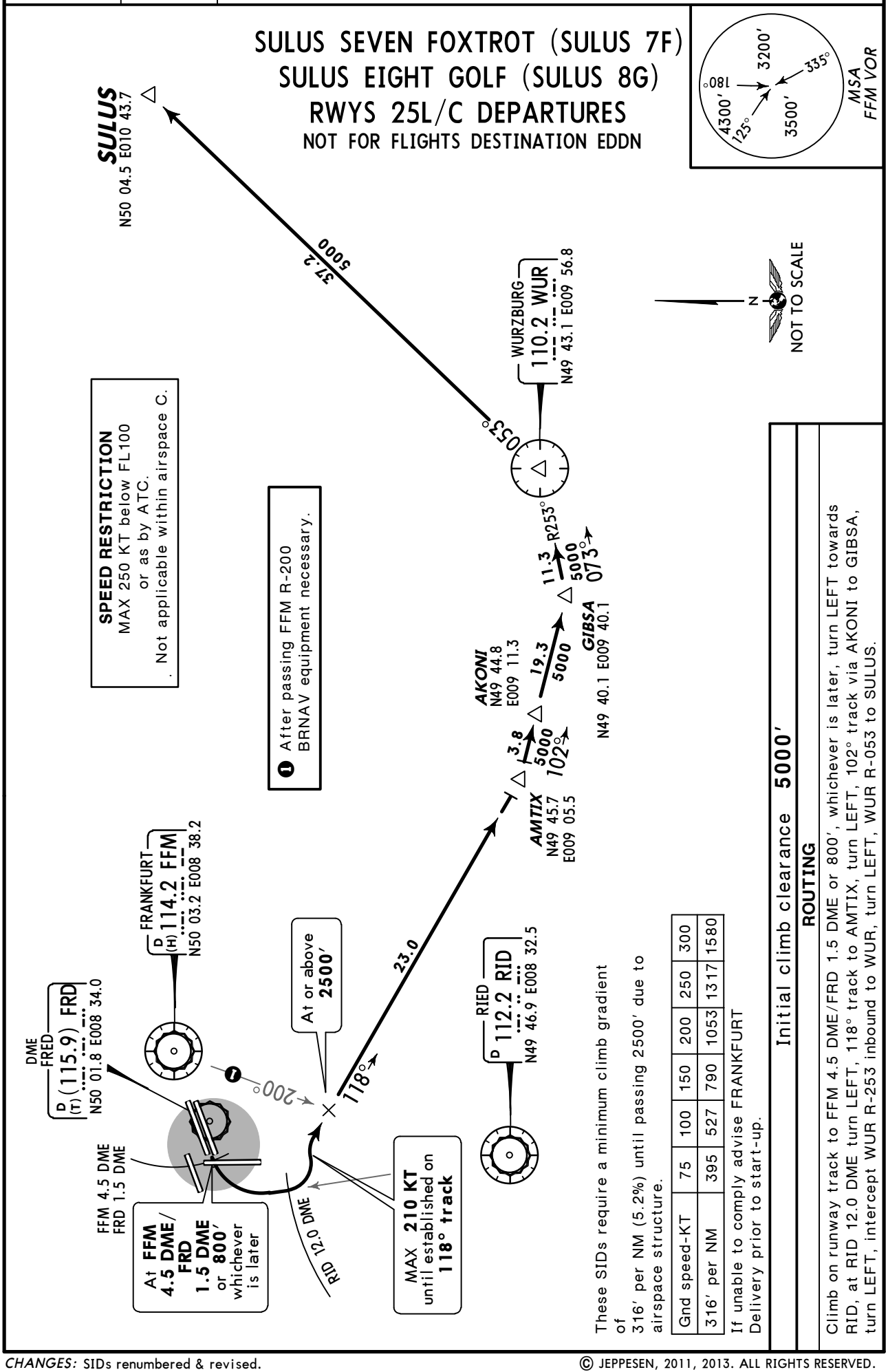
*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SULUS SEVEN FOXTROT (SULUS 7F)
SULUS EIGHT GOLF (SULUS 8G)
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, 118° track to AMTIX, turn LEFT, 102° track via AKONI to GIBSA, turn LEFT, intercept WUR R-253 inbound to WUR, turn LEFT, WUR R-053 to SULUS.

CHANGES: SIDs renumbered & revised.

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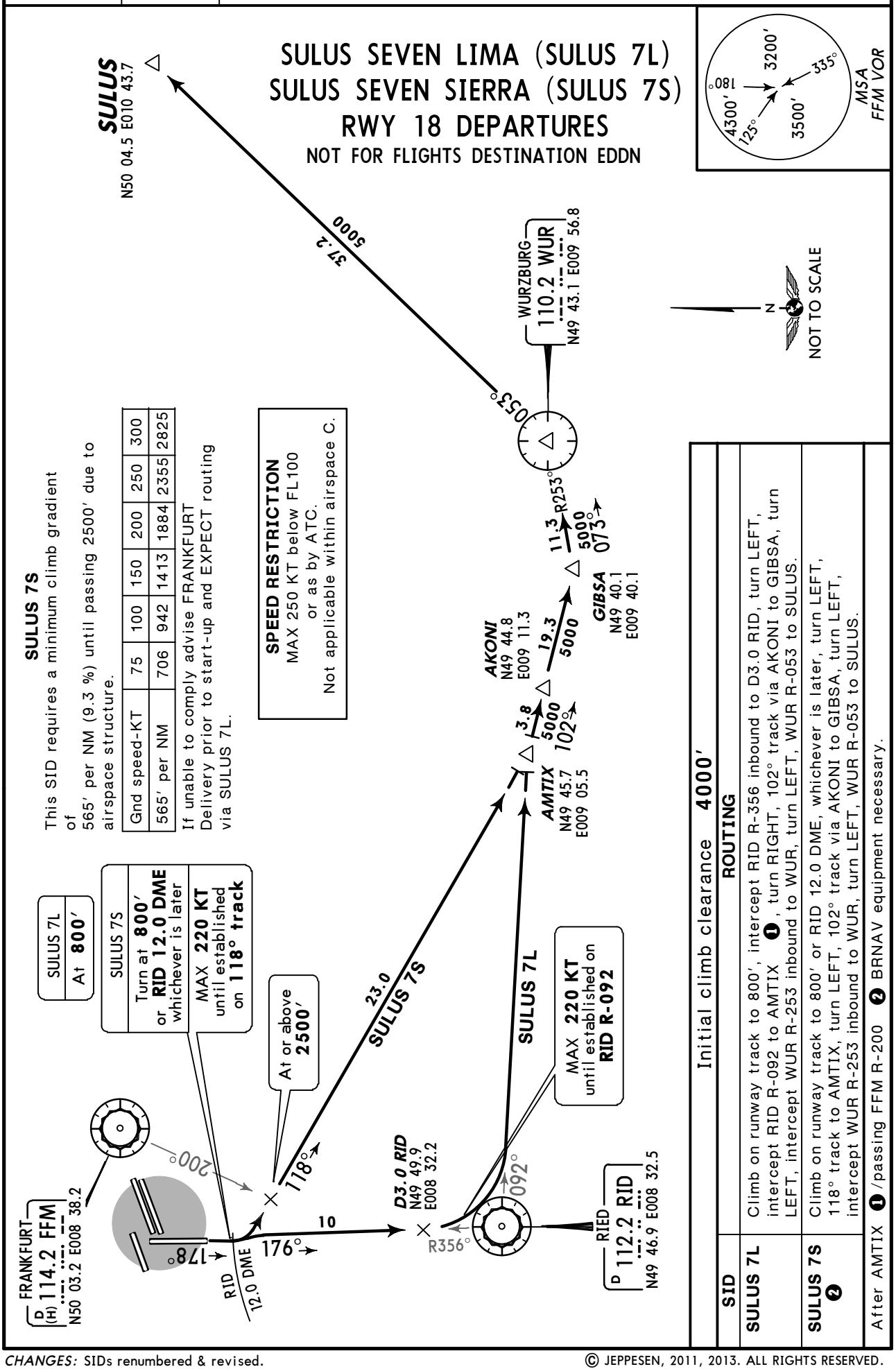
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

SULUS SEVEN LIMA (SULUS 7L)
SULUS SEVEN SIERRA (SULUS 7S)
RWY 18 DEPARTURES
NOT FOR FLIGHTS DESTINATION EDDN



SULUS 7S

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 SULUS 7L.

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

Initial climb clearance 4000′

SID	ROUTING
SULUS 7L	Climb on runway track to 800′, intercept RID R-356 inbound to D3.0 RID, turn LEFT, intercept RID R-092 to AMTIX ❶, turn RIGHT, 102° track via AKONI to GIBSA, turn LEFT, intercept WUR R-253 inbound to WUR, turn LEFT, WUR R-053 to SULUS.
SULUS 7S ❷	Climb on runway track to 800′ or RID 12.0 DME, whichever is later, turn LEFT, 118° track to AMTIX, turn LEFT, 102° track via AKONI to GIBSA, turn LEFT, intercept WUR R-253 inbound to WUR, turn LEFT, WUR R-053 to SULUS.

After AMTIX ❶/passing FFM R-200 ❷ BRNAV equipment necessary.

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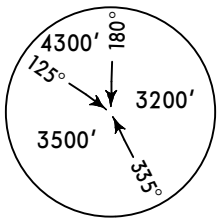
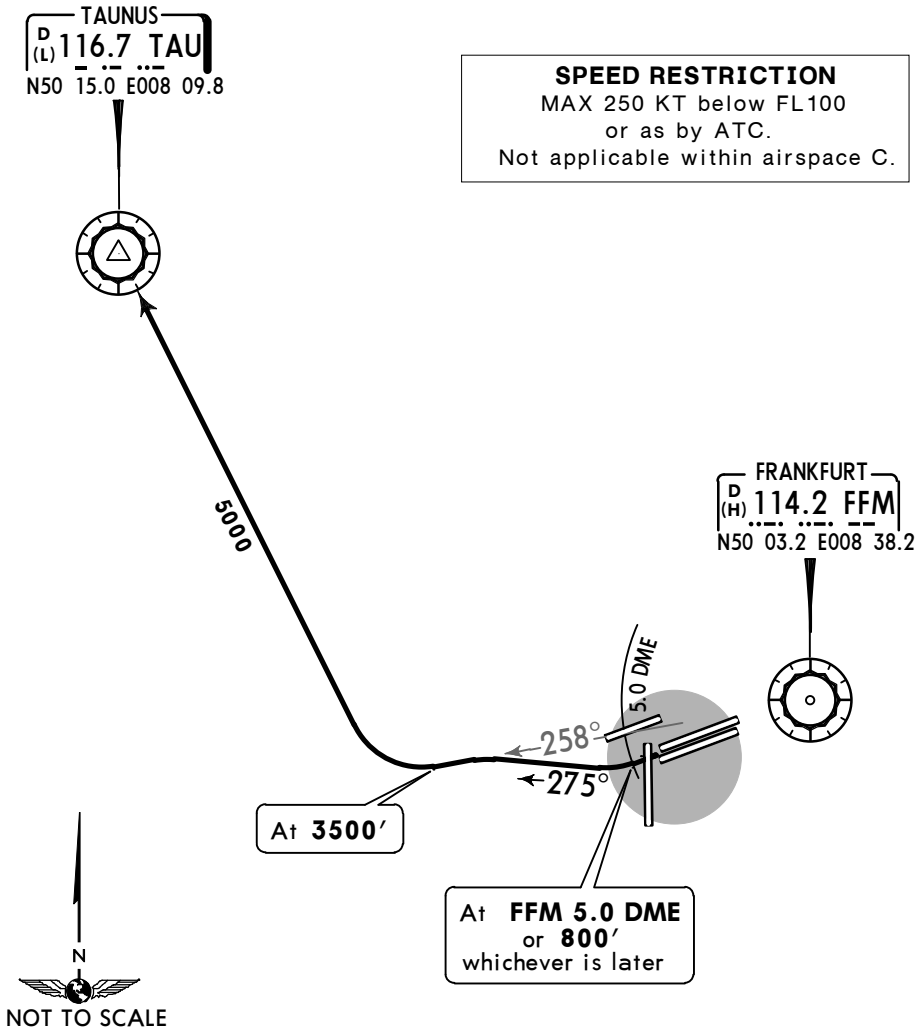
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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



MSA
FFM VOR



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: None.

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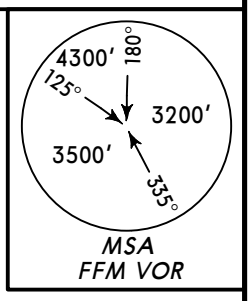
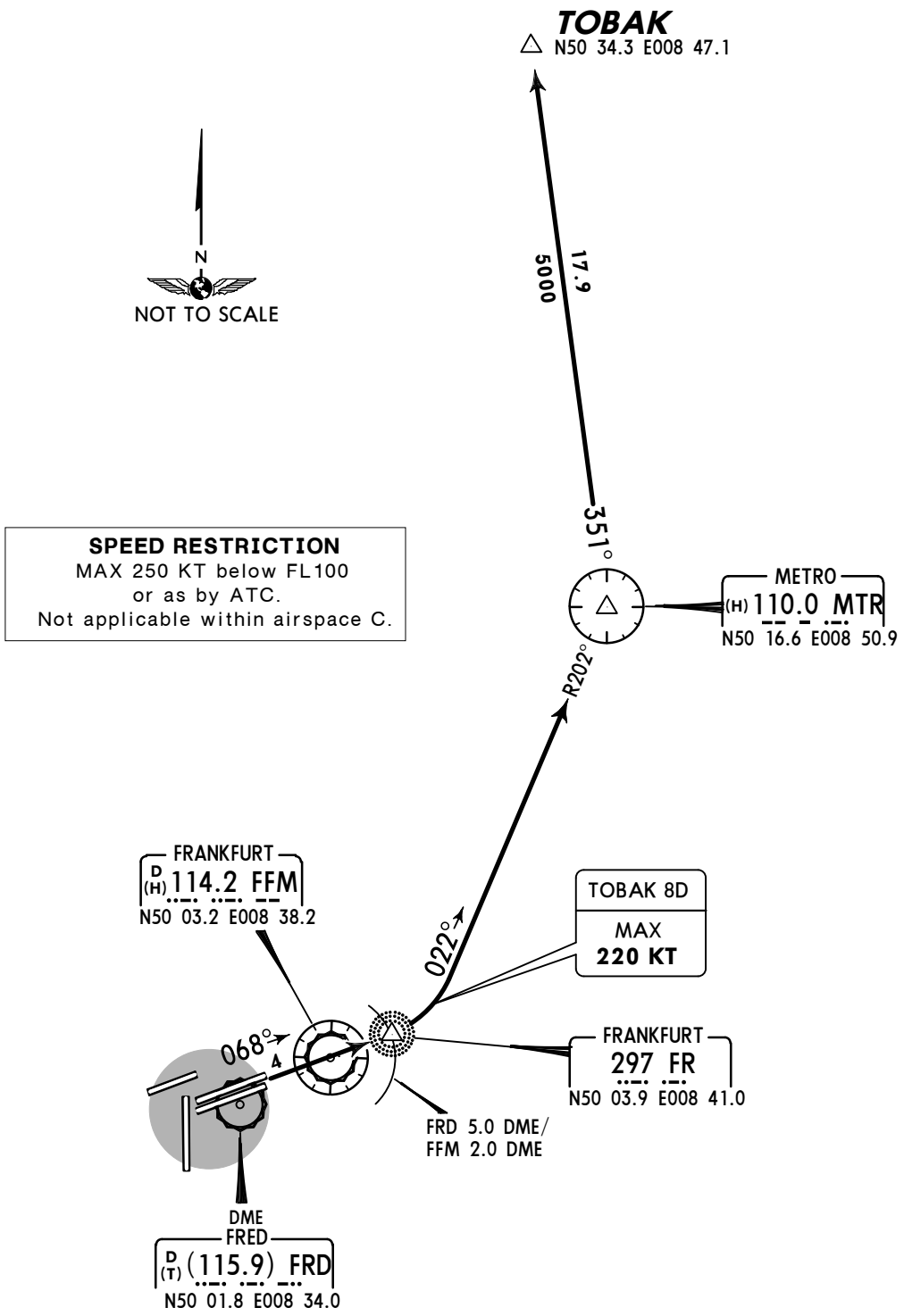
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK 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: Initial contact.

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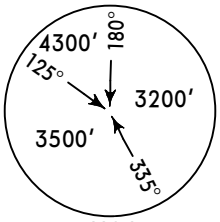
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



MSA
FFM VOR

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
N50 34.3
E008 47.1

9.9
5000
038°

TESGA
N50 26.7 E008 37.1

12.4
040°

TABUM
N50 17.5 E008 24.3

N
NOT TO SCALE

TAUNUS
D (L) 116.7 TAU
N50 15.0 E008 09.8

❸ FFM 5.0 DME/
FRD 2.0 DME

027°
TOBAK 4F, 4J
016°

D11.4 TAU
N50 06.0 E008 20.7
At or above
4400′

R150°
R141°

D9.6 TAU
N50 06.6 E008 17.0
At or above
4400′

FRANKFURT
D (H) 114.2 FFM
N50 03.2 E008 38.2

TOBAK 4F, 4J
At or above
3500′

TOBAK 5G
330°
321°
258°
275°

D9.7 FFM
N50 01.4 E008 23.5
At **D9.7 FFM**
or **3500′**
whichever is later

FFM 8.4 DME

DME
FRED
D (T) (115.9)FRD
N50 01.8 E008 34.0

At **FFM 5.0 DME/**
FRD 2.0 DME or **800′**
whichever is later

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: None.

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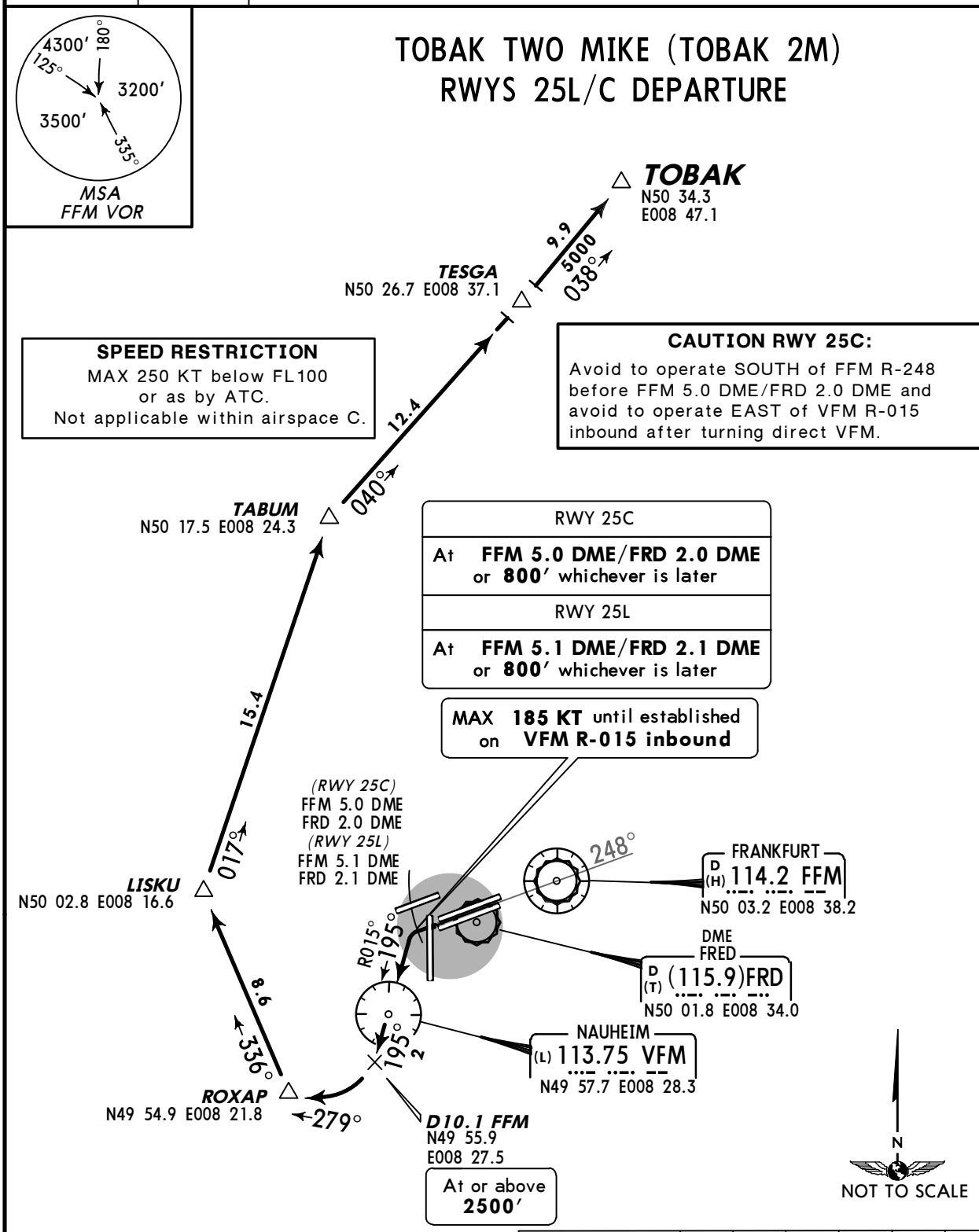
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK TWO MIKE (TOBAK 2M)
RWYS 25L/C DEPARTURE



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.

Initial climb clearance **5000′**

ROUTING

Climb on runway track to FFM 5.0 DME/FRD 2.0 DME (Rwy 25C)/FFM 5.1 DME/FRD 2.1 DME (Rwy 25L) or 800′, whichever is later, turn LEFT, intercept VFM R-015 inbound via VFM to D10.1 FFM ❶ 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.

❶ After D10.1 FFM BRNAV equipment necessary.

CHANGES: Caution note established.

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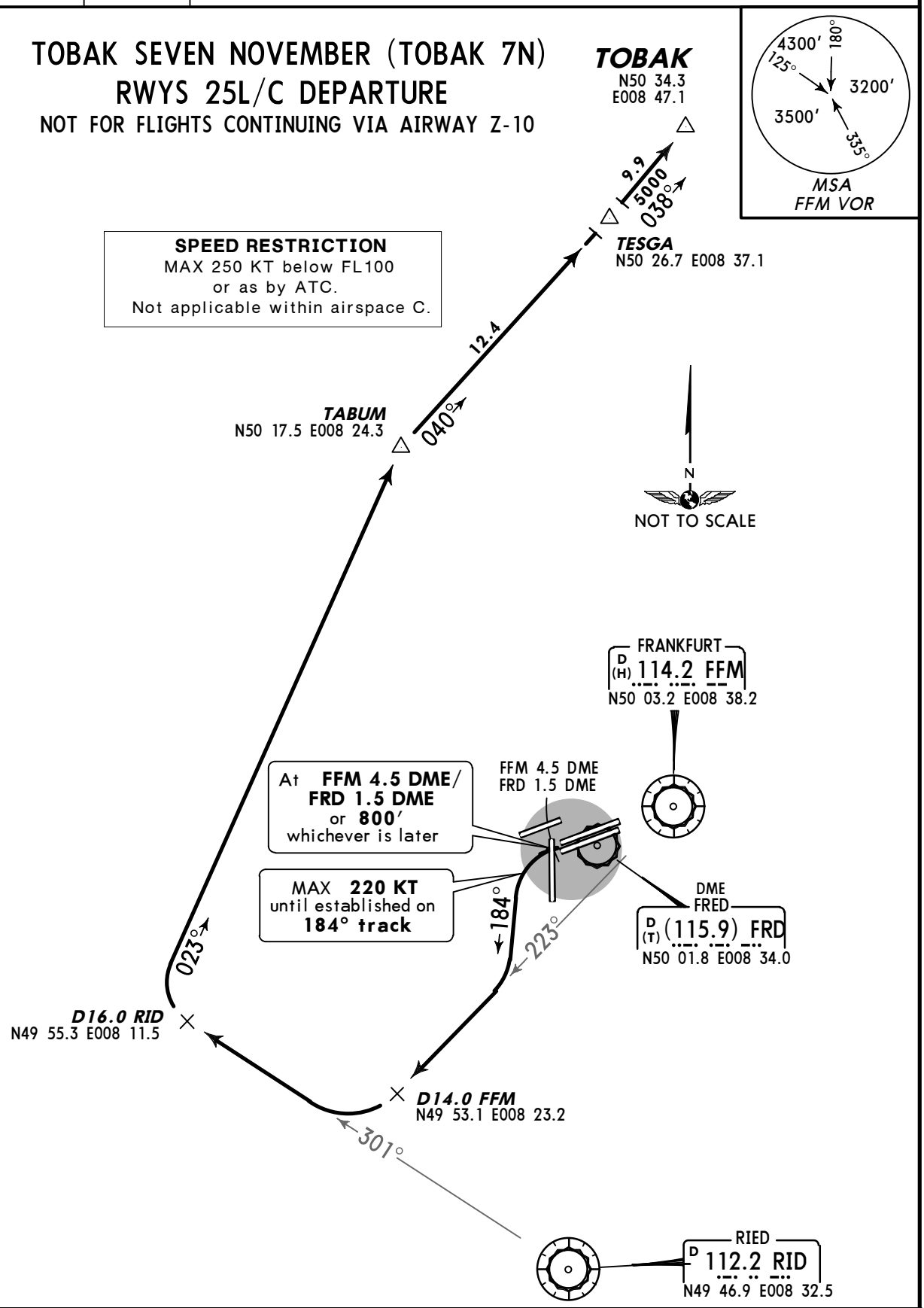
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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: None.

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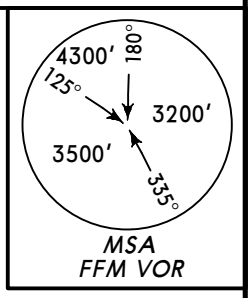
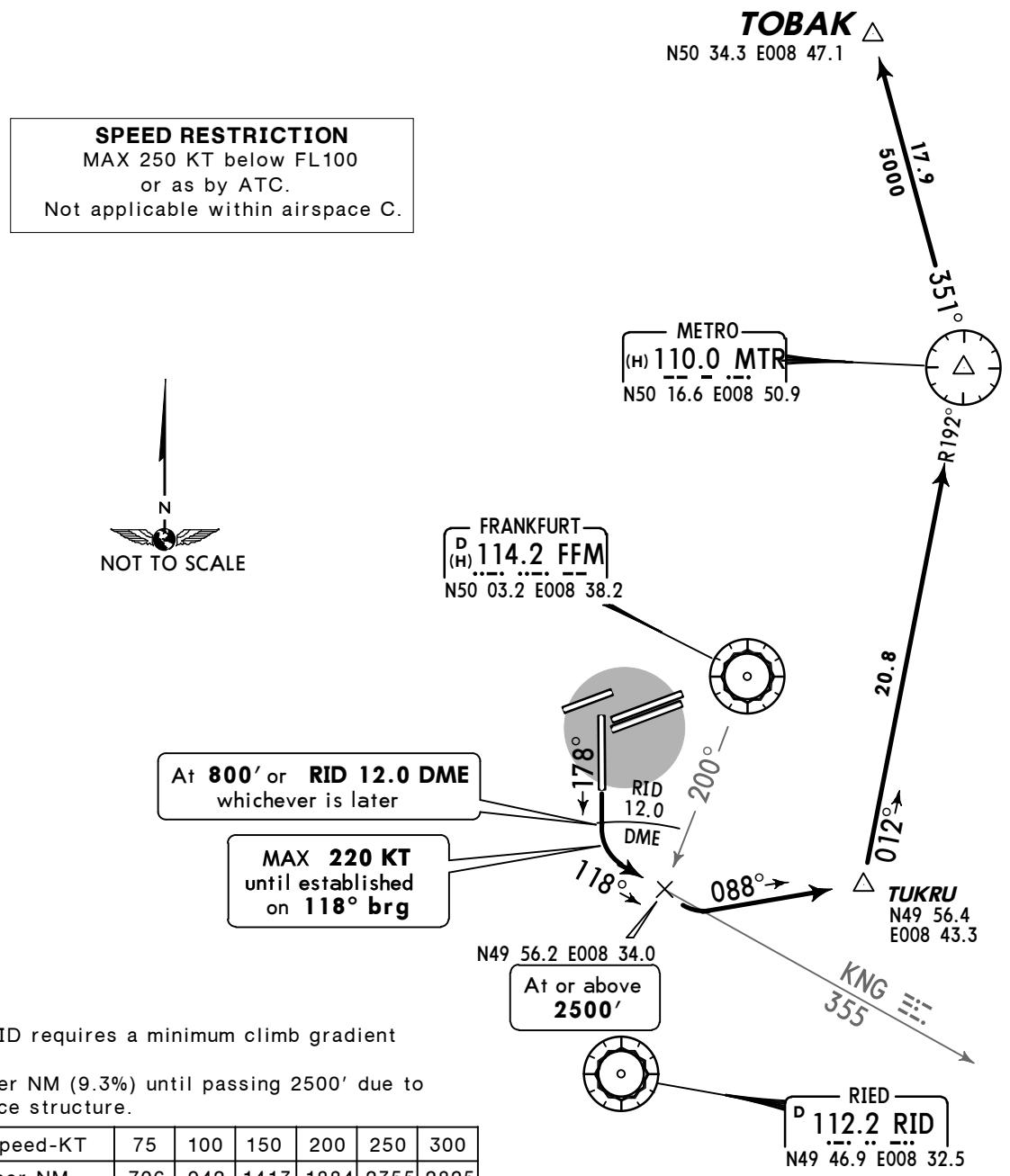
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and 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





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

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-351 to TOBAK.

❶ After FFM R-200 BRNAV equipment necessary.

CHANGES: Initial contact.

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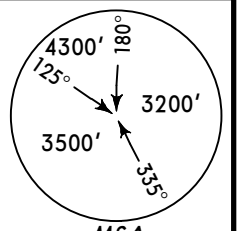
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

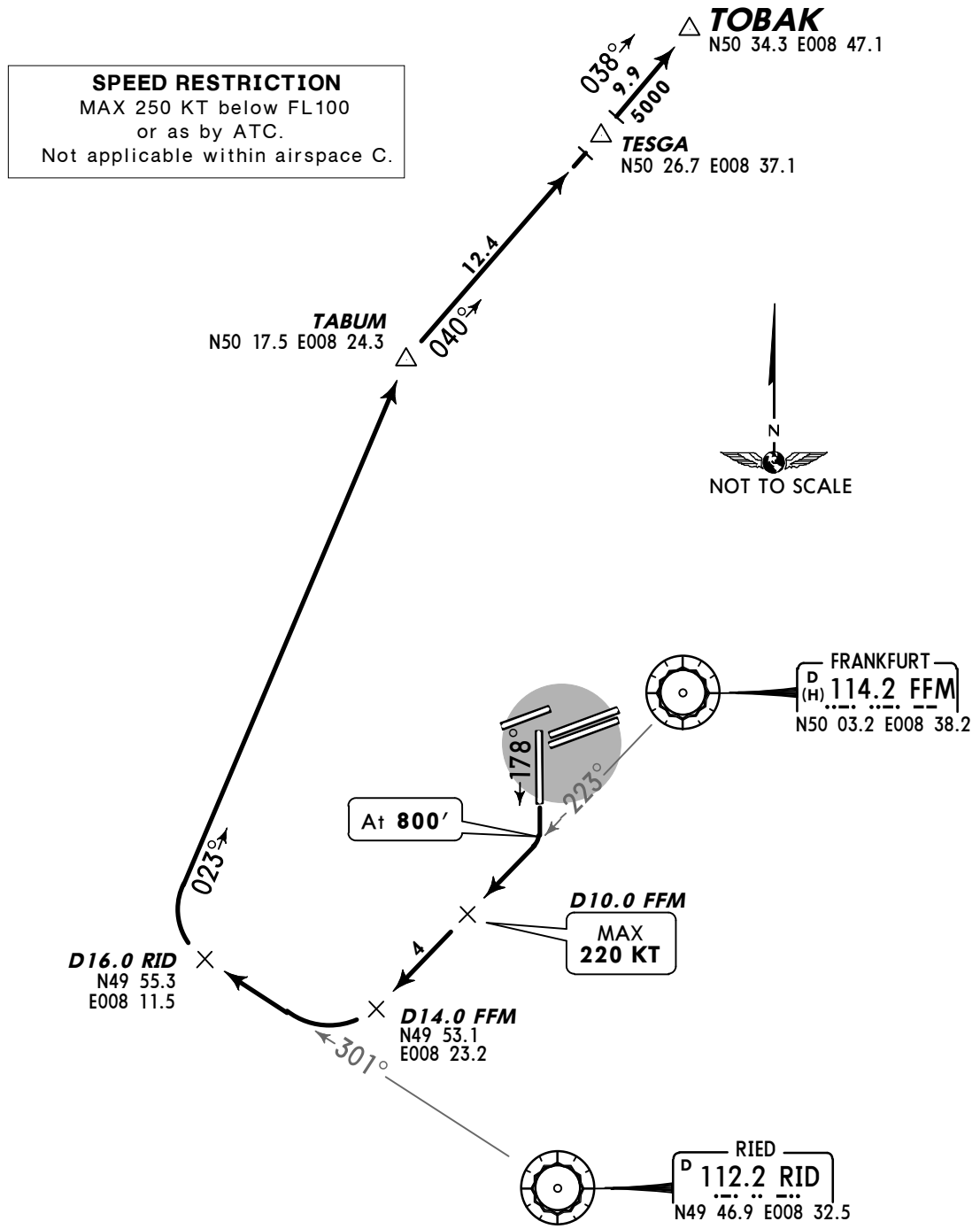
TOBAK SIX SIERRA (TOBAK 6S)
RWY 18 DEPARTURE

BY ATC
WILL ONLY BE ASSIGNED
WHEN LANDING DIRECTION IS RWY 25
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10



MSA
FFM VOR

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: SID renumbered; initial contact.

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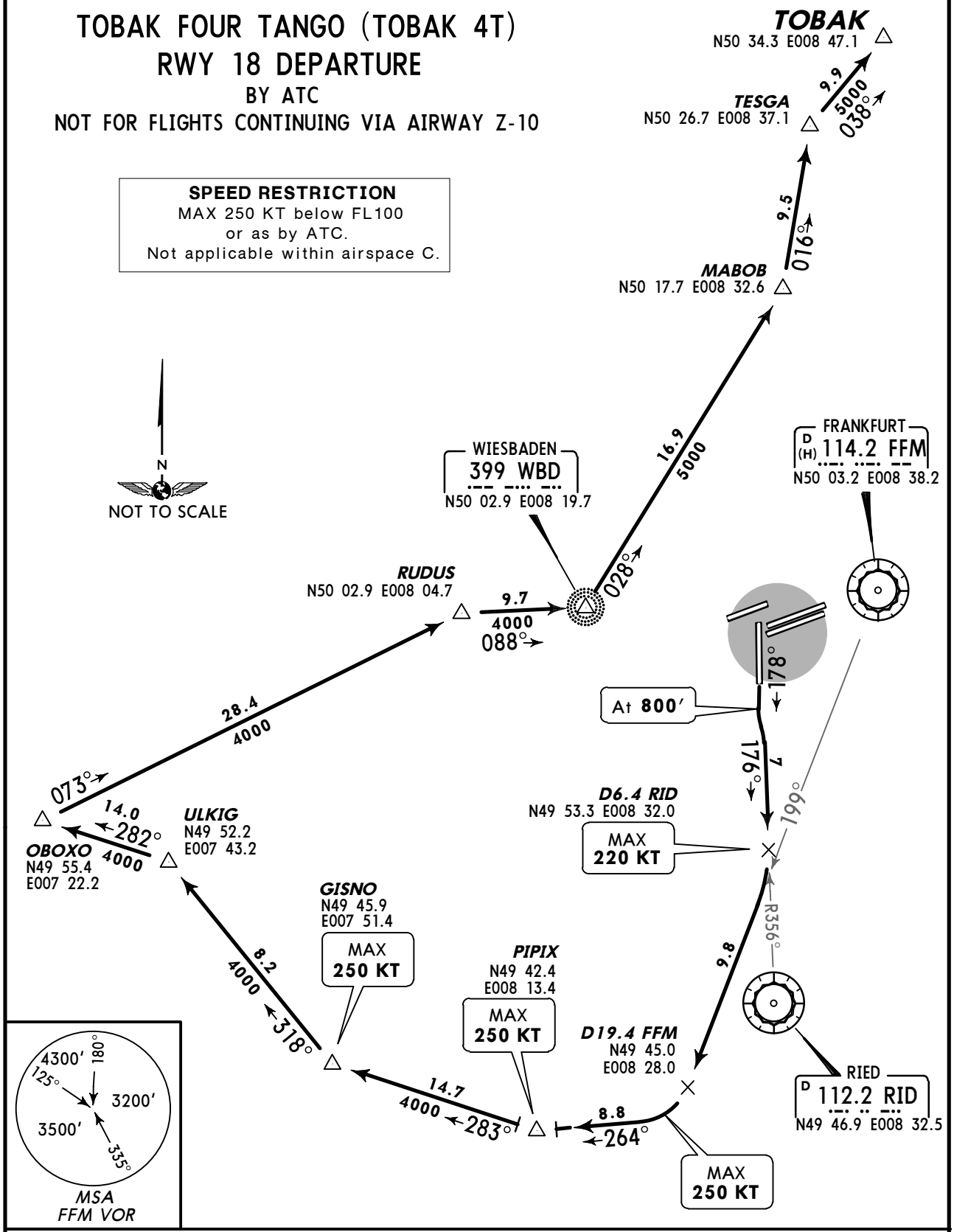
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

TOBAK FOUR TANGO (TOBAK 4T)
RWY 18 DEPARTURE
BY ATC
NOT FOR FLIGHTS CONTINUING VIA AIRWAY Z-10



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: Initial contact.

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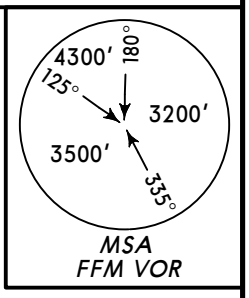
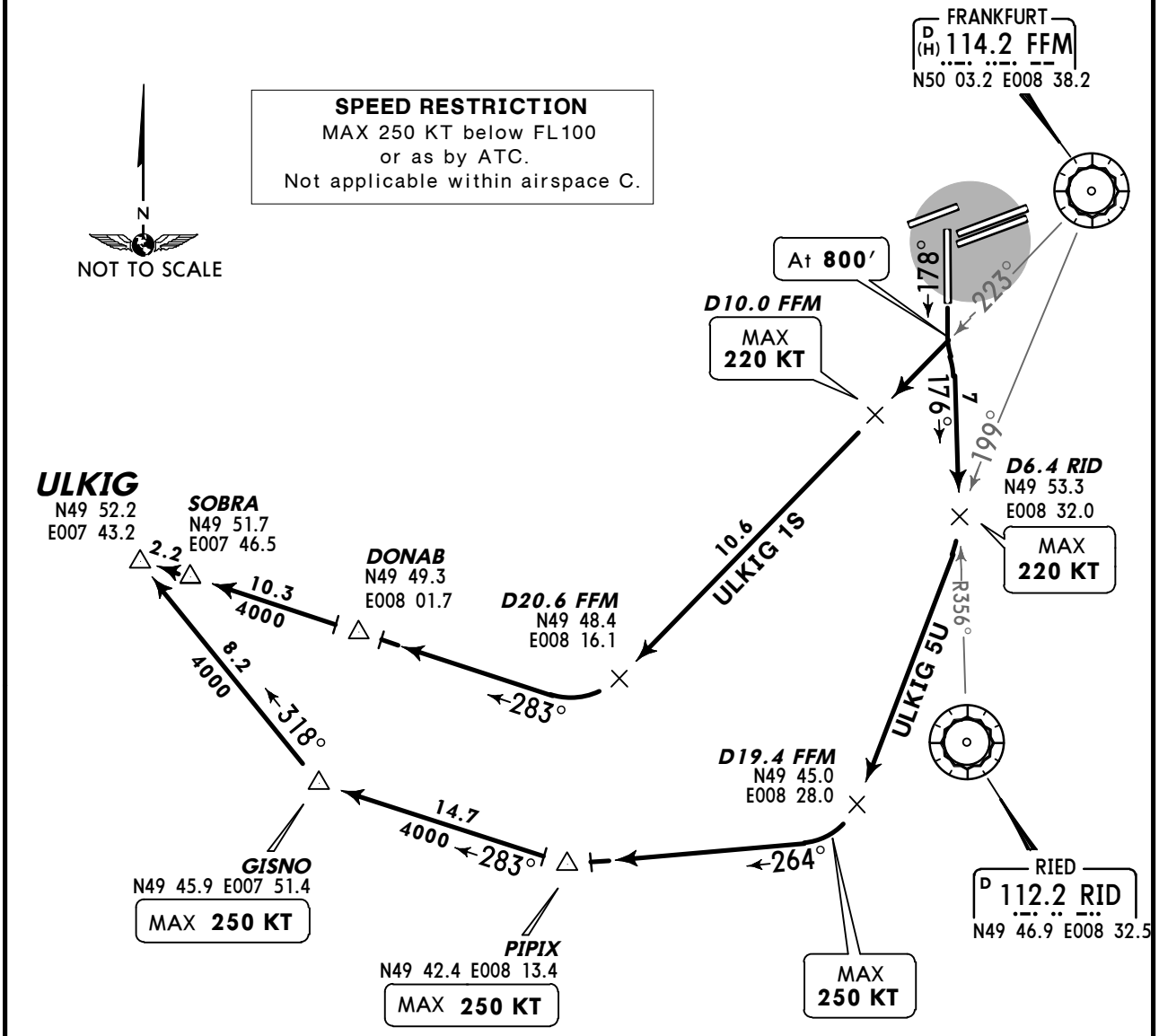
*LANGEN Radar ULKIG 1S 120.15 ULKIG 5U 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

ULKIG ONE SIERRA (ULKIG 1S)
ULKIG FIVE UNIFORM (ULKIG 5U)
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





Initial climb clearance **4000′**

SID	ROUTING
ULKIG 1S 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 ❶ turn RIGHT, 283° track via DONAB and SOBRA to ULKIG.
ULKIG 5U	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 ❷ turn RIGHT, 264° track to PIPIX, turn RIGHT, 283° track to GISNO, turn RIGHT, 318° track to ULKIG.

BRNAV equipment necessary after: ❶ D20.6 FFM/ ❷ D19.4 FFM.

CHANGES: Initial contact; SID ULKIG 1S established.

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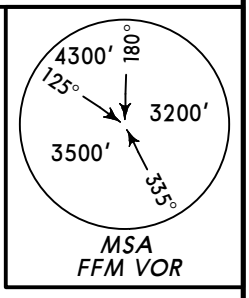
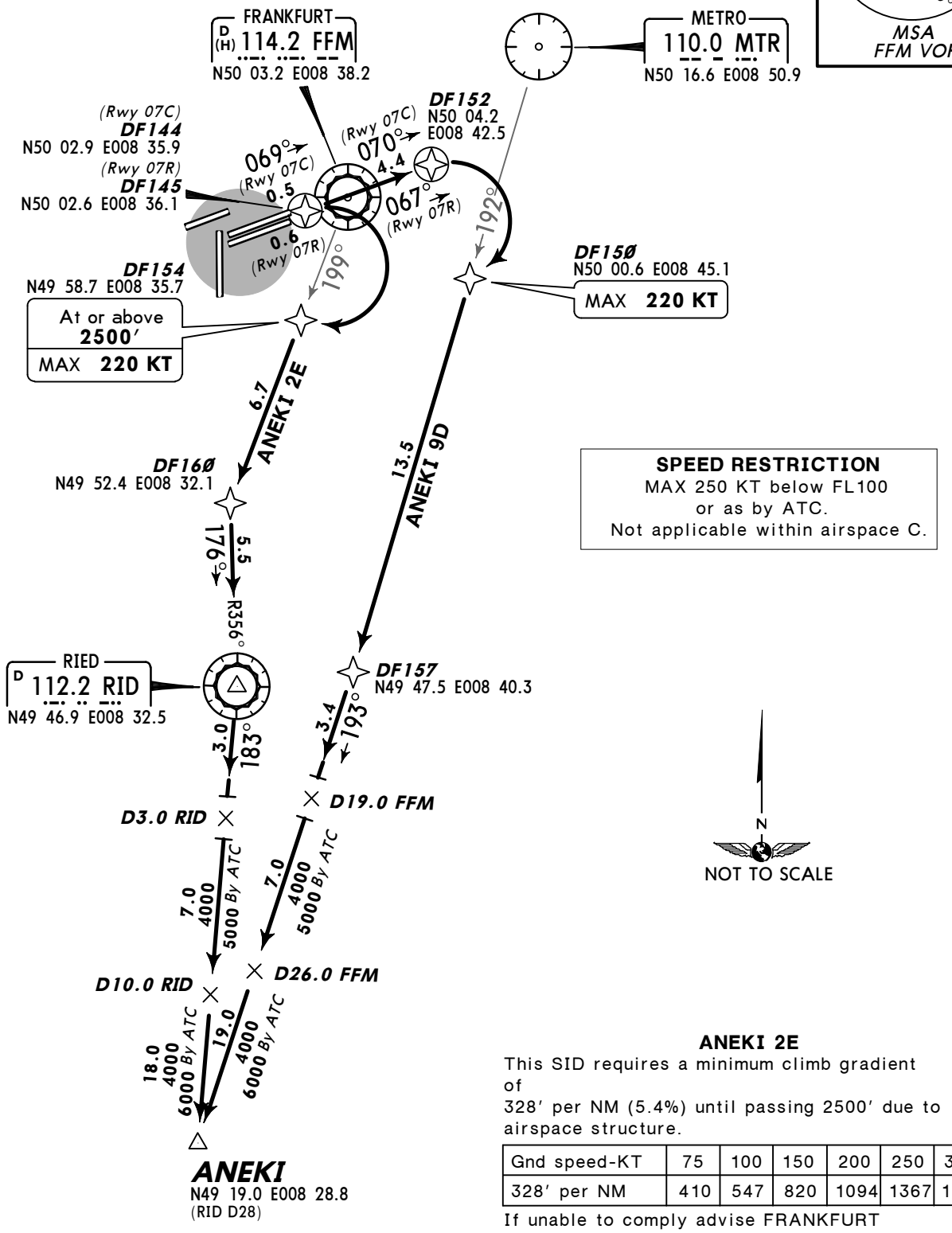
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

ANEKI NINE DELTA (ANEKI 9D) *[ANEK9D]*
ANEKI TWO ECHO (ANEKI 2E) *[ANEK2E]*
RWYS 07C/R RNAV DEPARTURES (OVERLAY 10-3B)





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

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: Initial contact.

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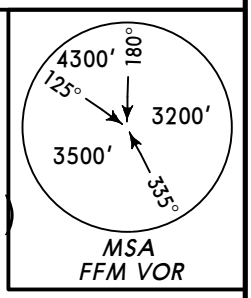
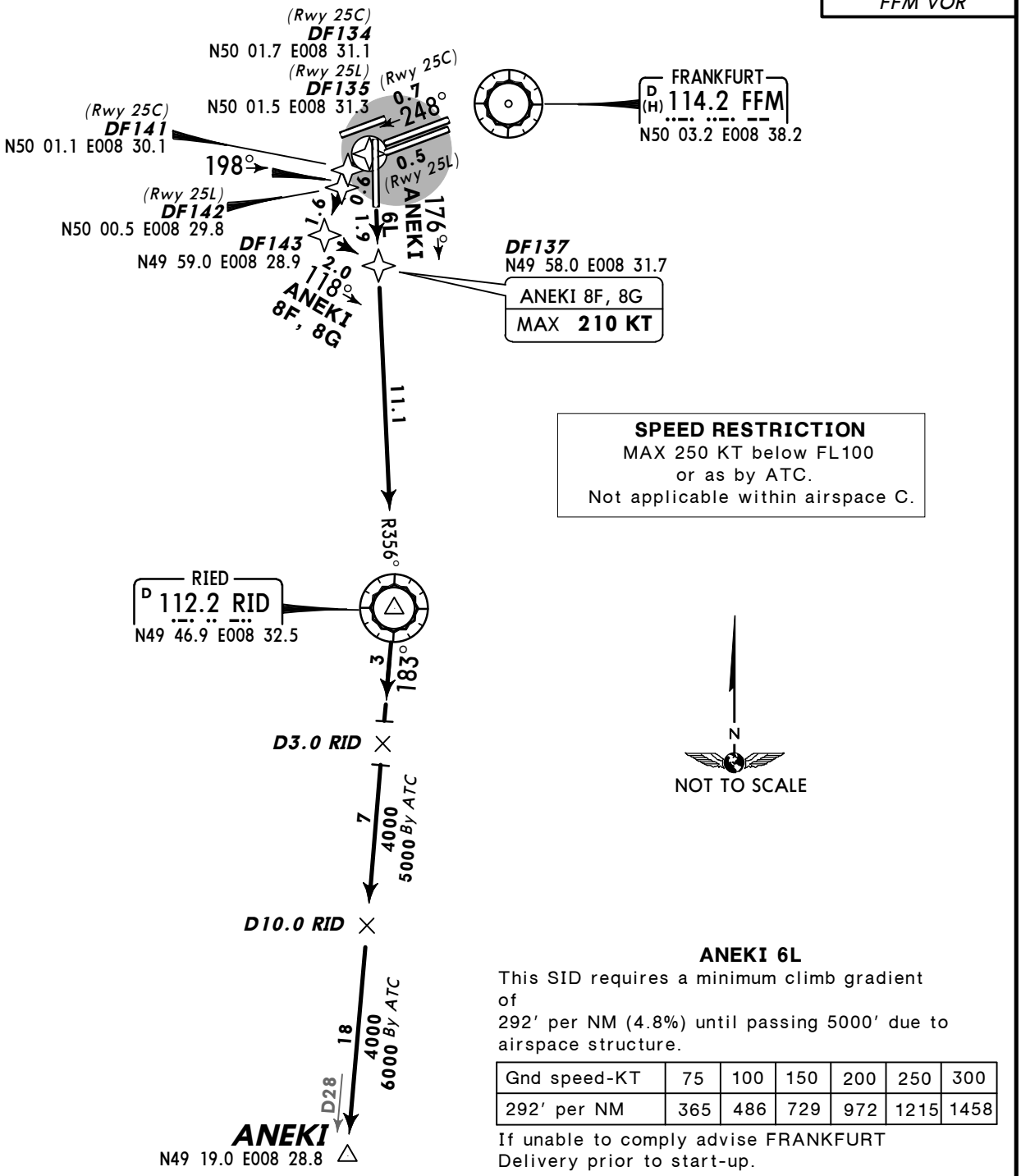
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. RWY 18: EXPECT close-in obstacles. 4. RWY 18: 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: Initial contact.

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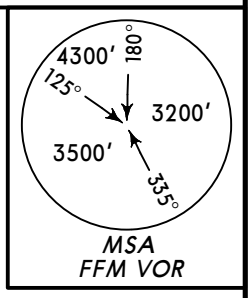
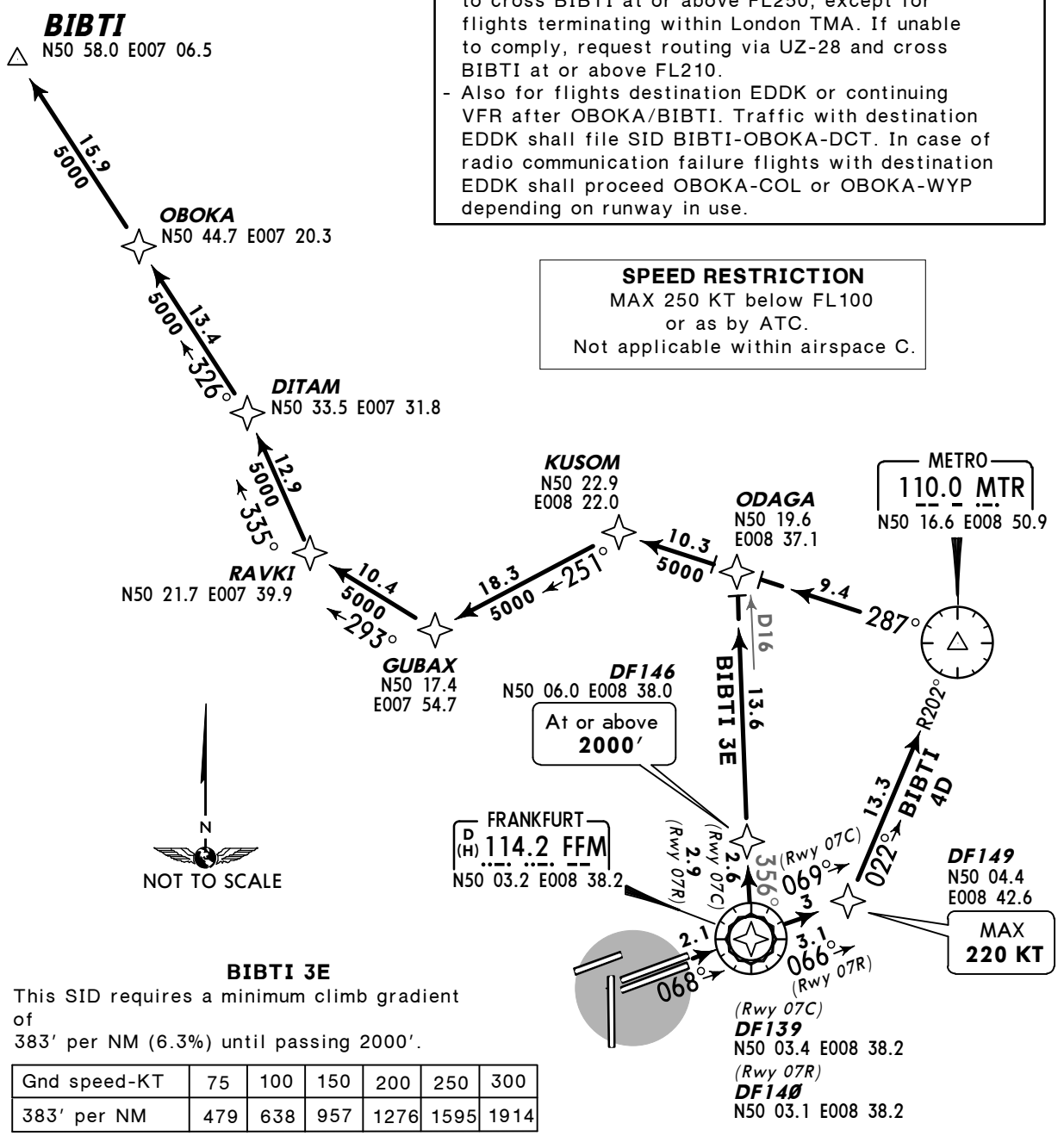
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

BIBTI 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. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-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: Initial contact.

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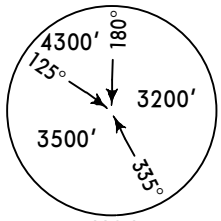
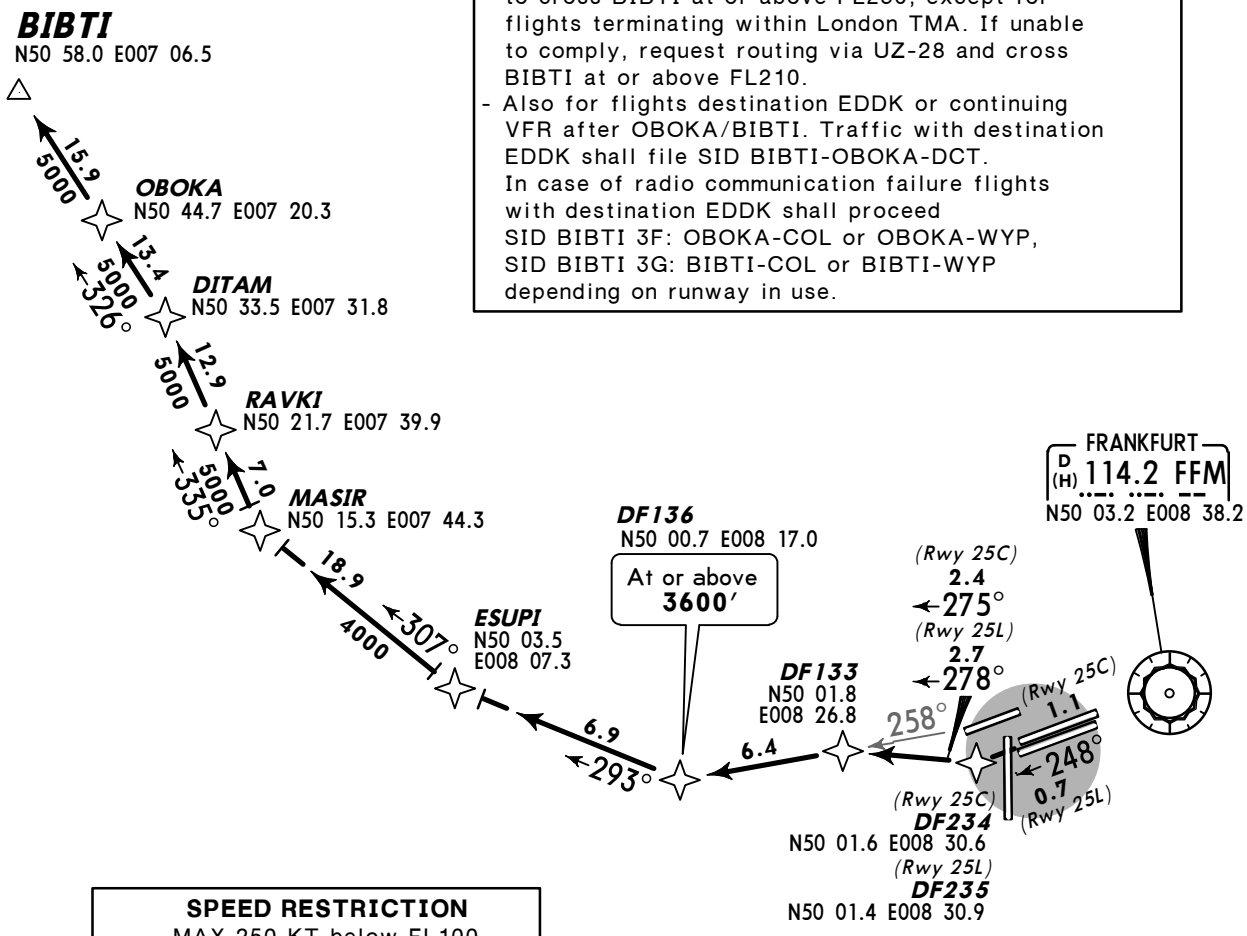
*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

BIBTI THREE FOXTROT (BIBTI 3F)*[BIBT3F]*
BIBTI THREE GOLF (BIBTI 3G)*[BIBT3G]*
RWYS 25L/C RNAV DEPARTURES (OVERLAY 10-3E)



MSA
FFM VOR

- 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. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT.
  In case of radio communication failure flights with destination EDDK shall proceed
  SID BIBTI 3F: OBOKA-COL or OBOKA-WYP,
  SID BIBTI 3G: 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.

N
NOT TO SCALE

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: SID BIBTI 3G com failure note.

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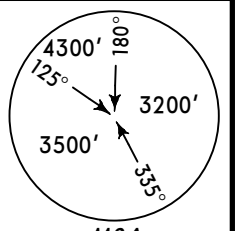
*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

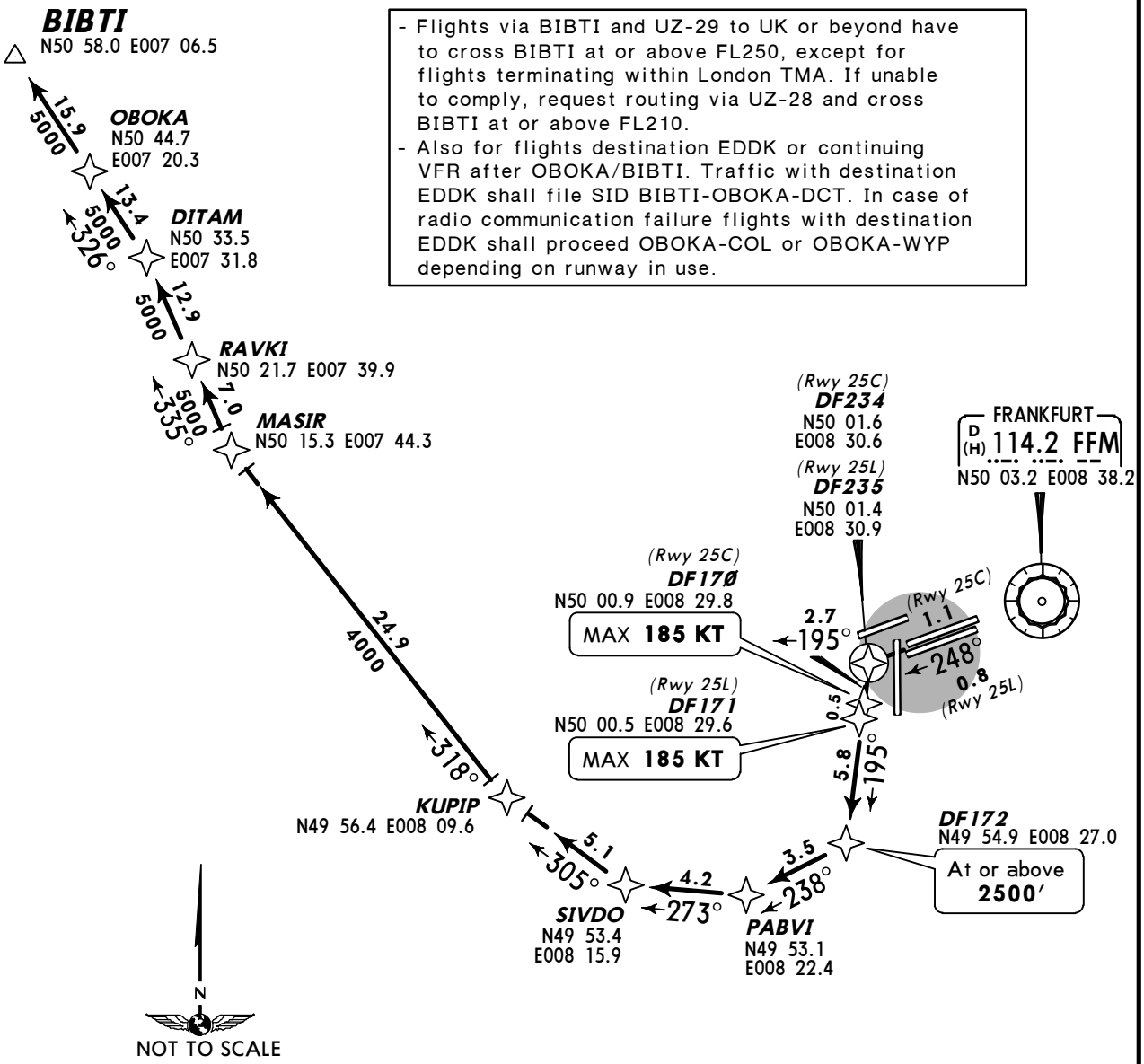
BIBTI TWO MIKE (BIBTI 2M) *[BIBT2M]*
RWYS 25L/C RNAV DEPARTURE (OVERLAY 10-3E1)



MSA
FFM VOR

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. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.



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.

Initial climb clearance **5000′**

ROUTING

(800+) - DF234 (25C)/DF235 (25L) - DF170 (25C; K185-)/DF171 (25L; K185-) - DF172 (2500′+) - PABVI - SIVDO - KUPIP - MASIR - RAVKI - DITAM - OBOKA - BIBTI.

CHANGES: None.

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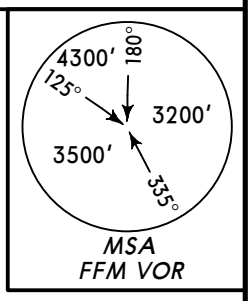
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.

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

318°

KUPIP
N49 56.4 E008 09.6

8.8

DF164
N49 51.7 E008 21.0

301°

7.7

DF166
N49 57.3
E008 29.3

184° 2.9 223°

(Rwy 25L)
DF165
N50 00.1 E008 29.7
MAX **220 KT**

(Rwy 25C)
DF162
N50 00.6 E008 29.8
MAX **220 KT**

(Rwy 25C)
DF134
N50 01.7
E008 31.1

(Rwy 25L)
DF135
N50 01.5
E008 31.3

(Rwy 25C) 0.7
248°
0.5 (Rwy 025L)
0.4

FRANKFURT
D (H) 114.2 FFM
N50 03.2 E008 38.2

RIED
D 112.2 RID
N49 46.9 E008 32.5

N
NOT TO SCALE

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: Availability.

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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. 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.

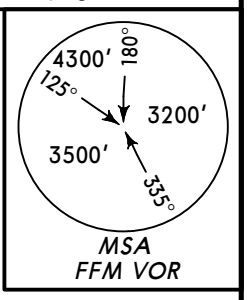
BIBTI TWO LIMA (BIBTI 2L)[BIBT2L]

BIBTI FOUR SIERRA (BIBTI 4S)[BIBT4S]

BY ATC

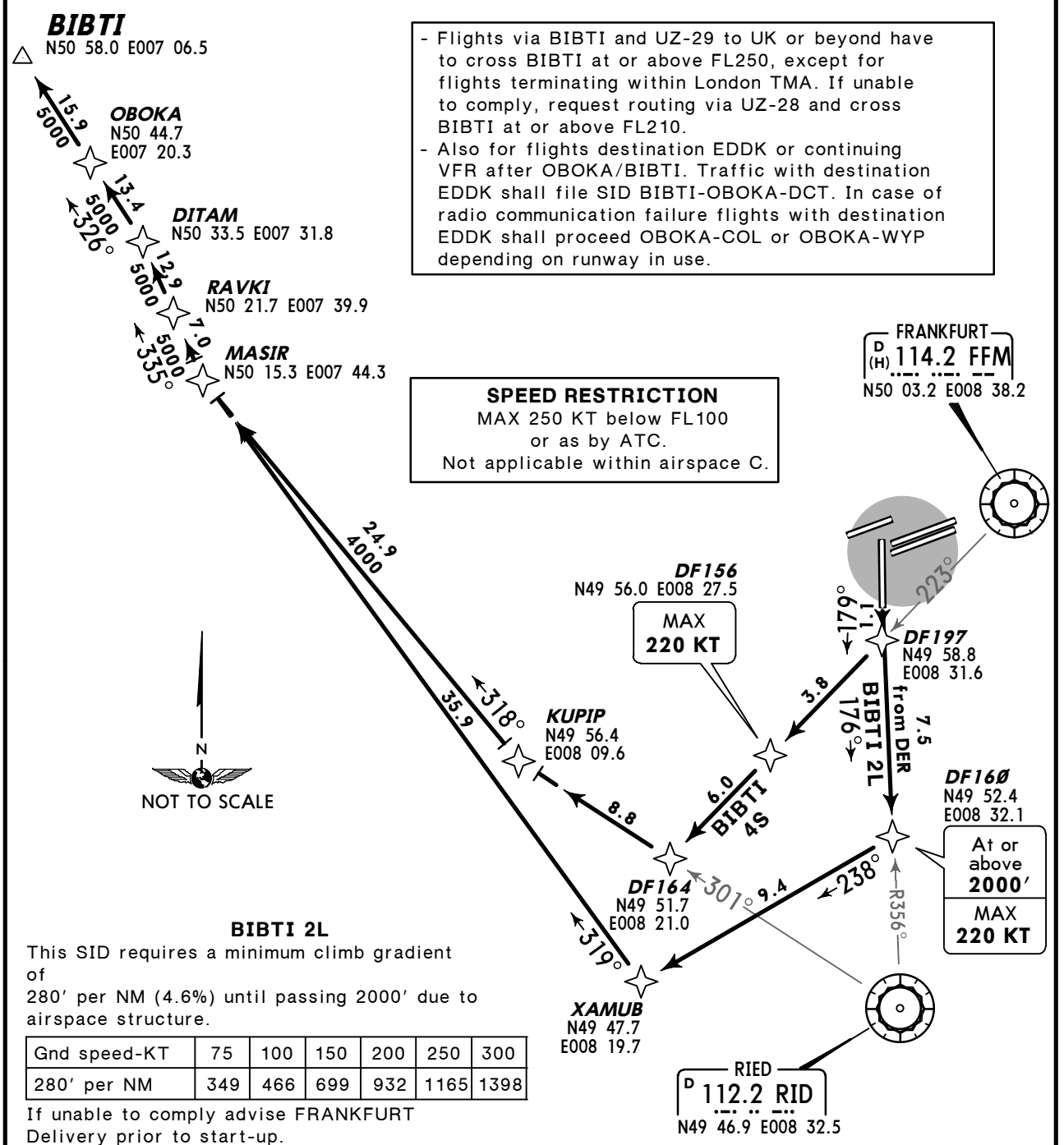
RWY 18 RNAV DEPARTURES (OVERLAY 10-3E3)

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. Traffic with destination EDDK shall file SID BIBTI-OBOKA-DCT. In case of radio communication failure flights with destination EDDK shall proceed OBOKA-COL or OBOKA-WYP depending on runway in use.

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	(800′+) - DF160 (2000′+; K220-) - XAMUB - MASIR - RAVKI - DITAM - OBOKA - BIBTI.
BIBTI 4S	(800′+) - DF197 - DF156 (K220-) - DF164 - KUPIP - MASIR - RAVKI - DITAM - OBOKA - BIBTI.

CHANGES: Availability.

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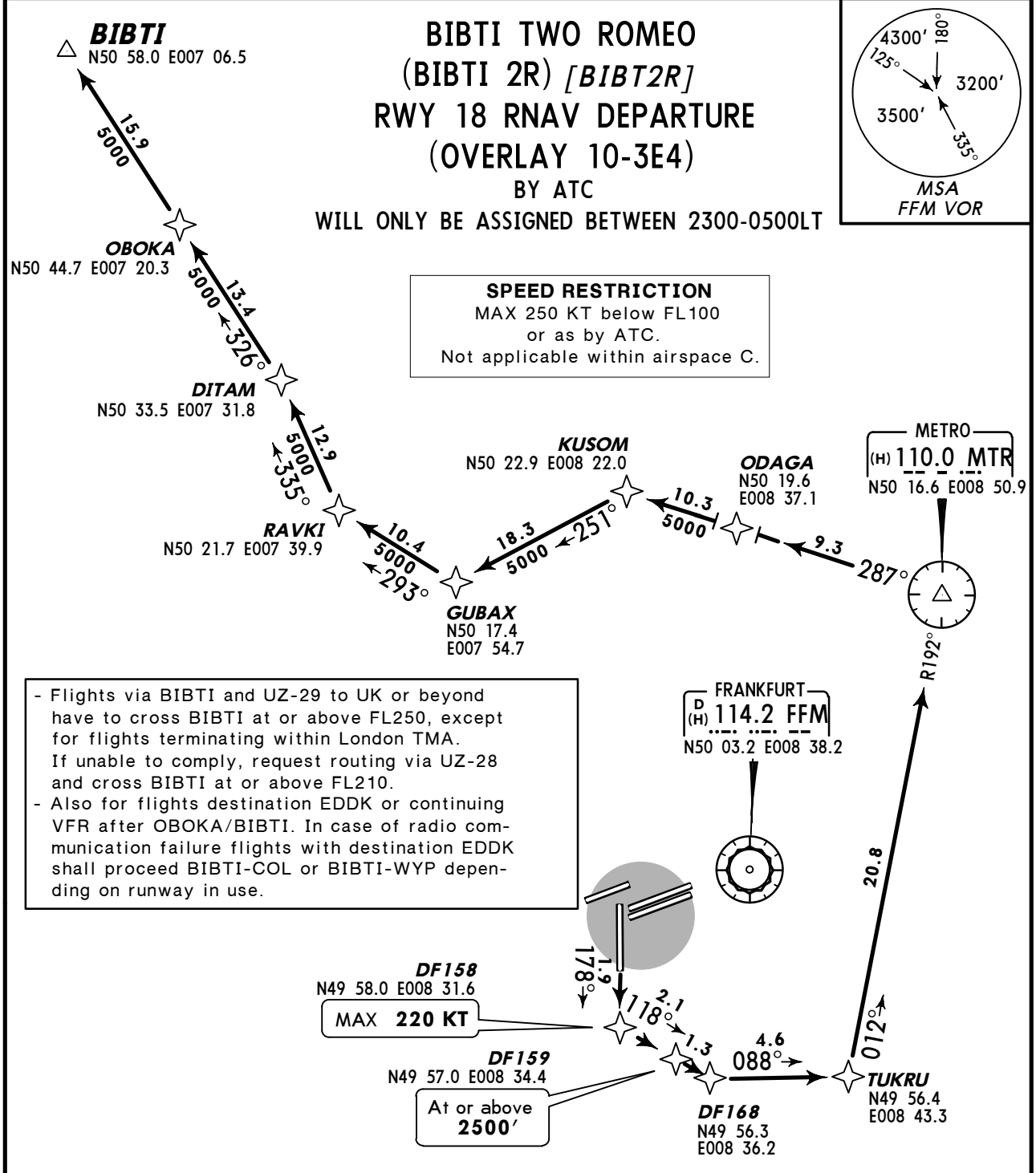
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and 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.

- 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.

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: Initial contact.

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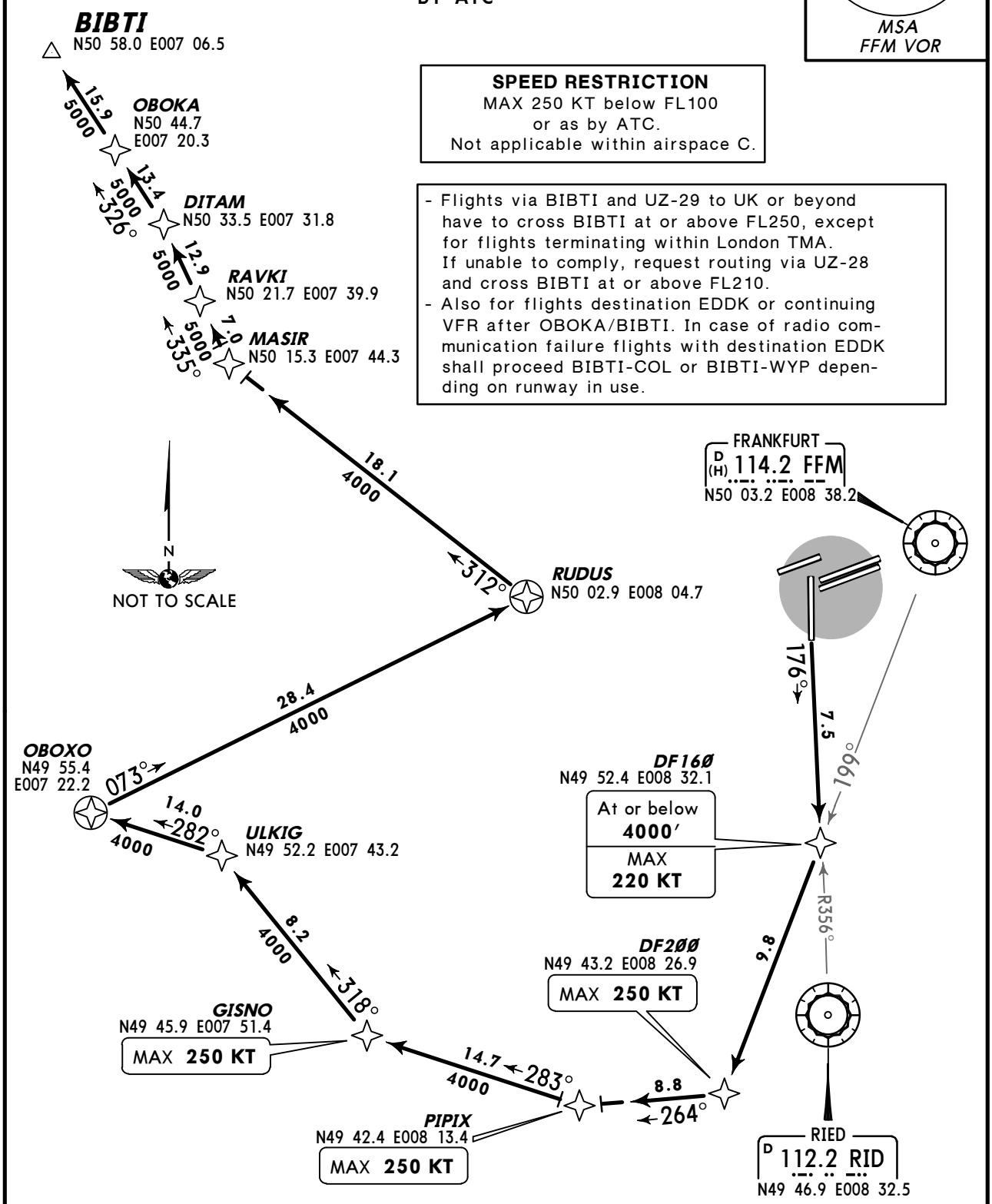
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

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: Initial contact.

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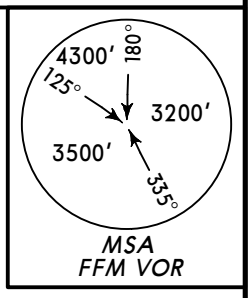
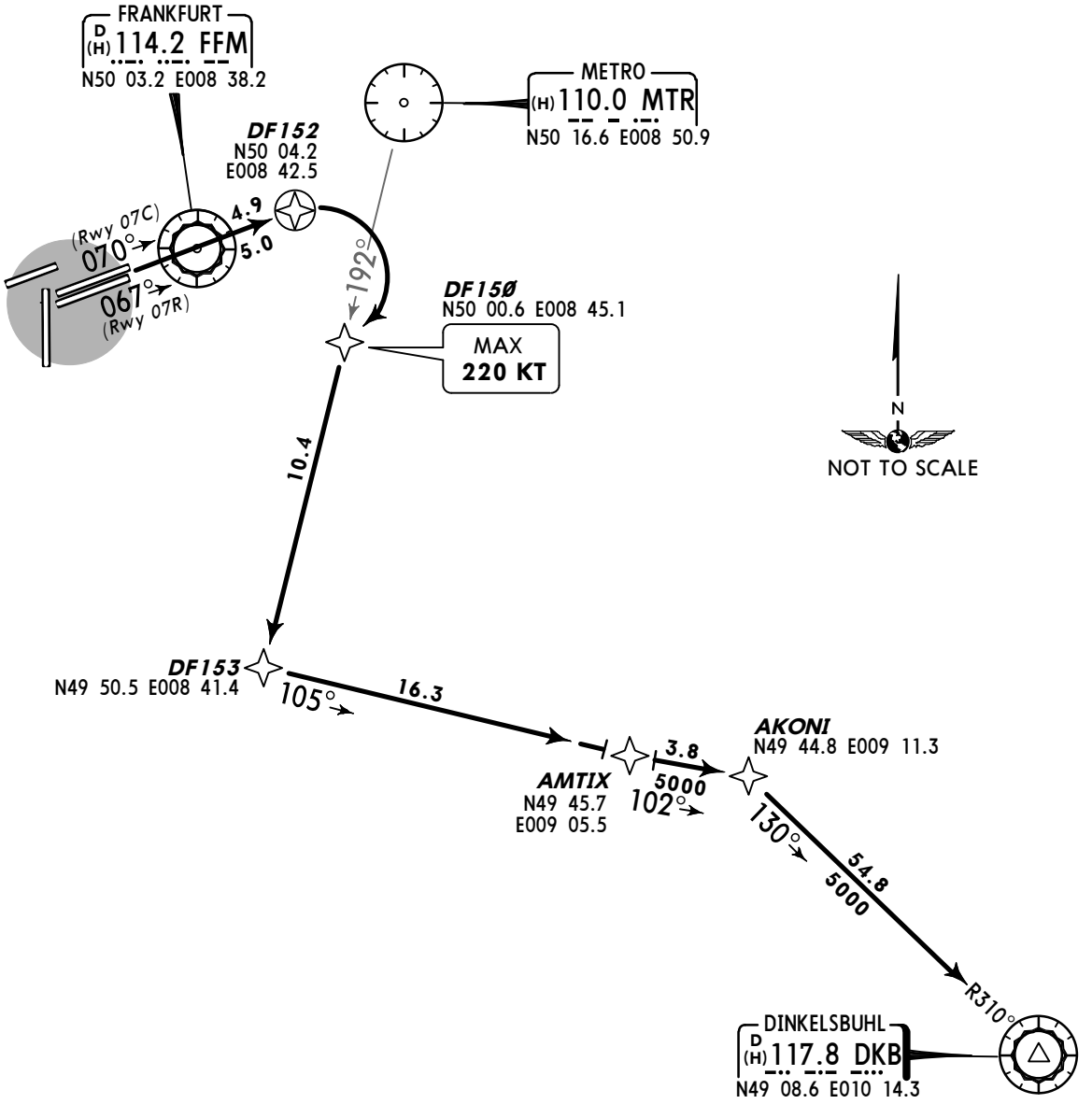
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

DINKELSBUHL NINE DELTA (DKB 9D)
DINKELSBUHL SEVEN ECHO (DKB 7E)
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 - AMTIX - AKONI - DKB.

CHANGES: RNAV SIDs renumbered & revised.

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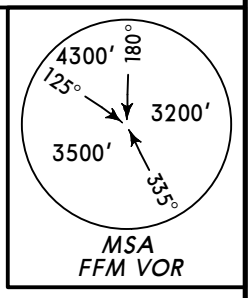
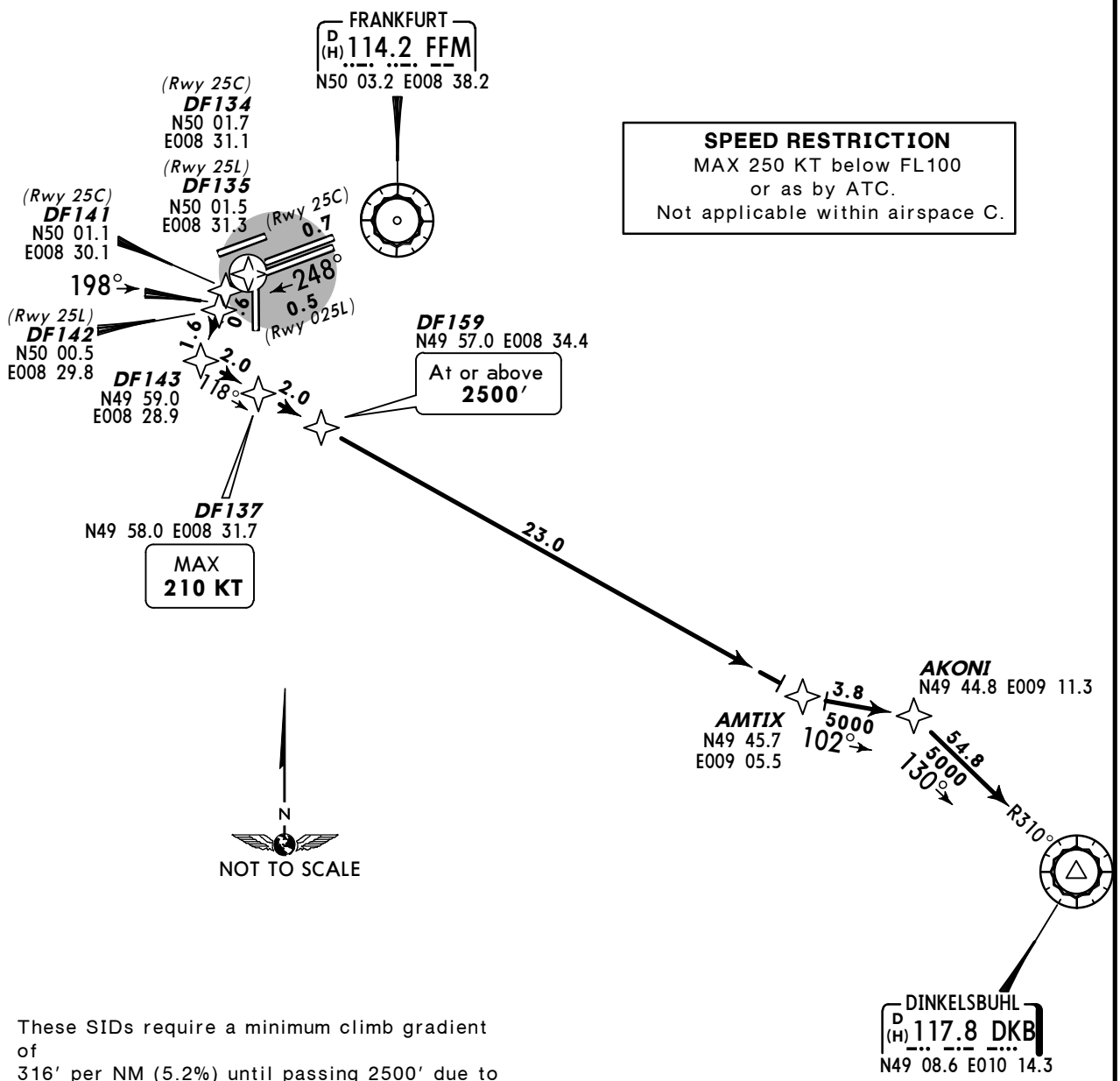
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

DINKELSBUHL SIX FOXTROT (DKB 6F)
DINKELSBUHL SEVEN GOLF (DKB 7G)
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′+) - AMTIX - AKONI - DKB.

CHANGES: RNAV SIDs renumbered & revised.

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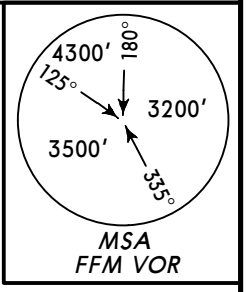
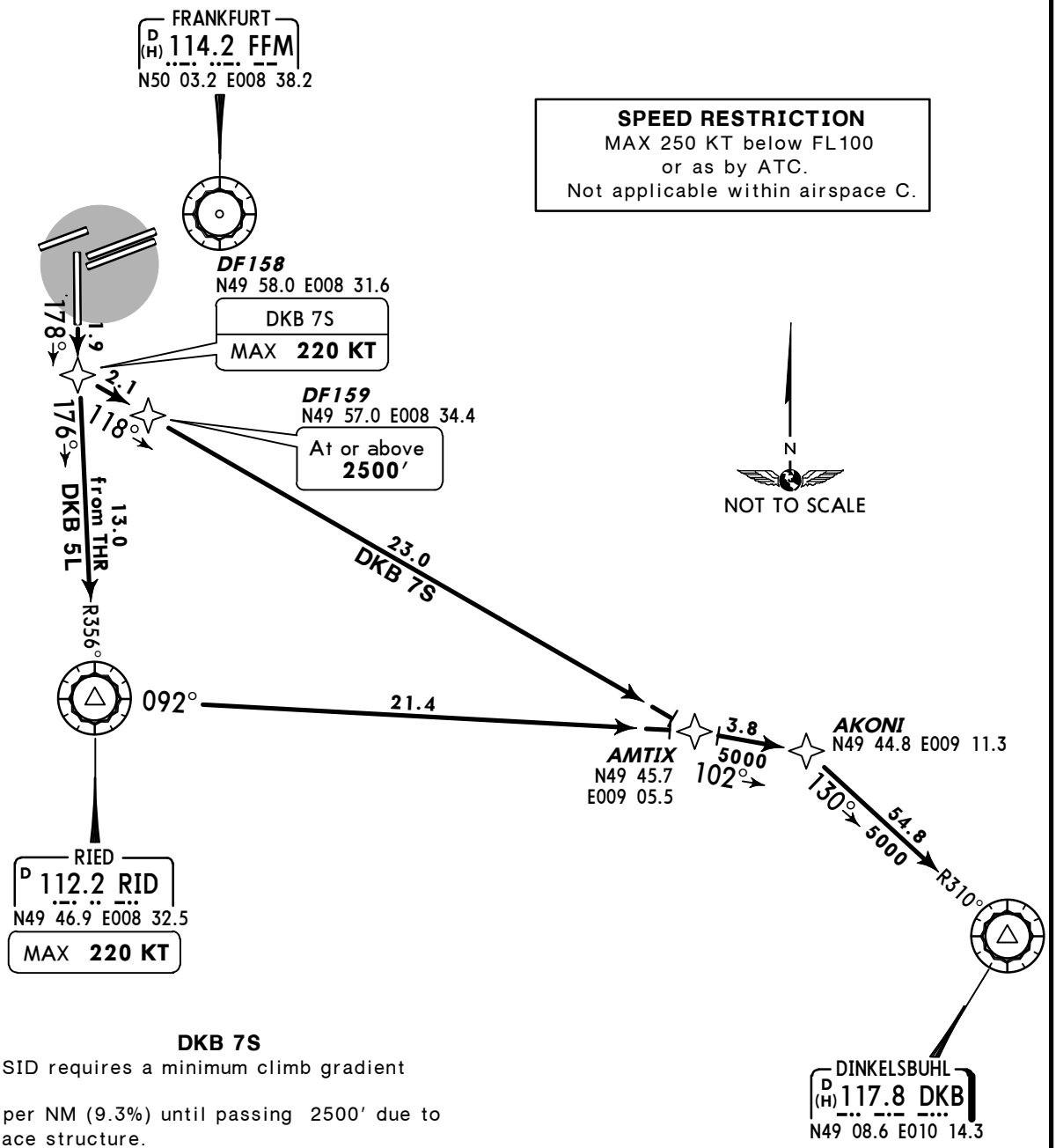
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

DINKELSBUHL FIVE LIMA (DKB 5L)
DINKELSBUHL SEVEN SIERRA (DKB 7S)
RWY 18 RNAV DEPARTURES (OVERLAY 10-3E8)
ONLY FOR FLIGHTS TERMINATING WITHIN EDMM FIR





DKB 7S

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 5L.

Initial climb clearance **4000′**

SID	ROUTING
DKB 5L	(800′+) - RID (K220-) - AMTIX - AKONI - DKB.
DKB 7S	(800′+) - DF158 (K220-) - DF159 (2500′+) - AMTIX - AKONI - DKB.

CHANGES: None.

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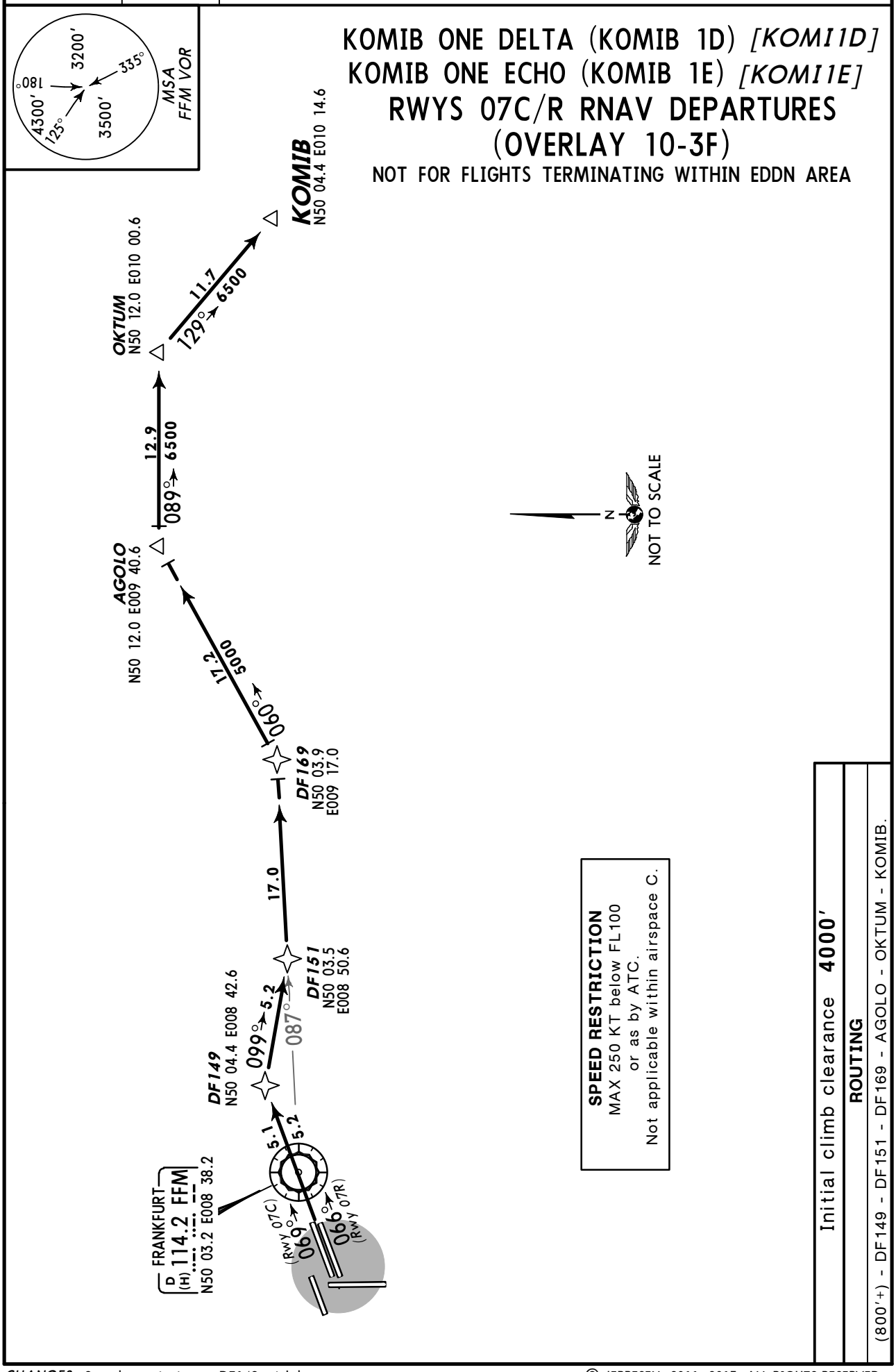
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

KOMIB ONE DELTA (KOMIB 1D) *[KOMI1D]*
KOMIB ONE ECHO (KOMIB 1E) *[KOMI1E]*
RWYS 07C/R RNAV DEPARTURES
(OVERLAY 10-3F)

NOT FOR FLIGHTS TERMINATING WITHIN EDDN AREA



CHANGES: Speed restriction at DF149 withdrawn.

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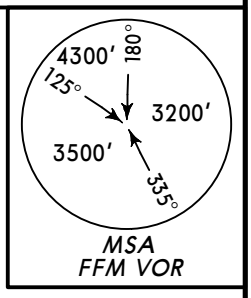
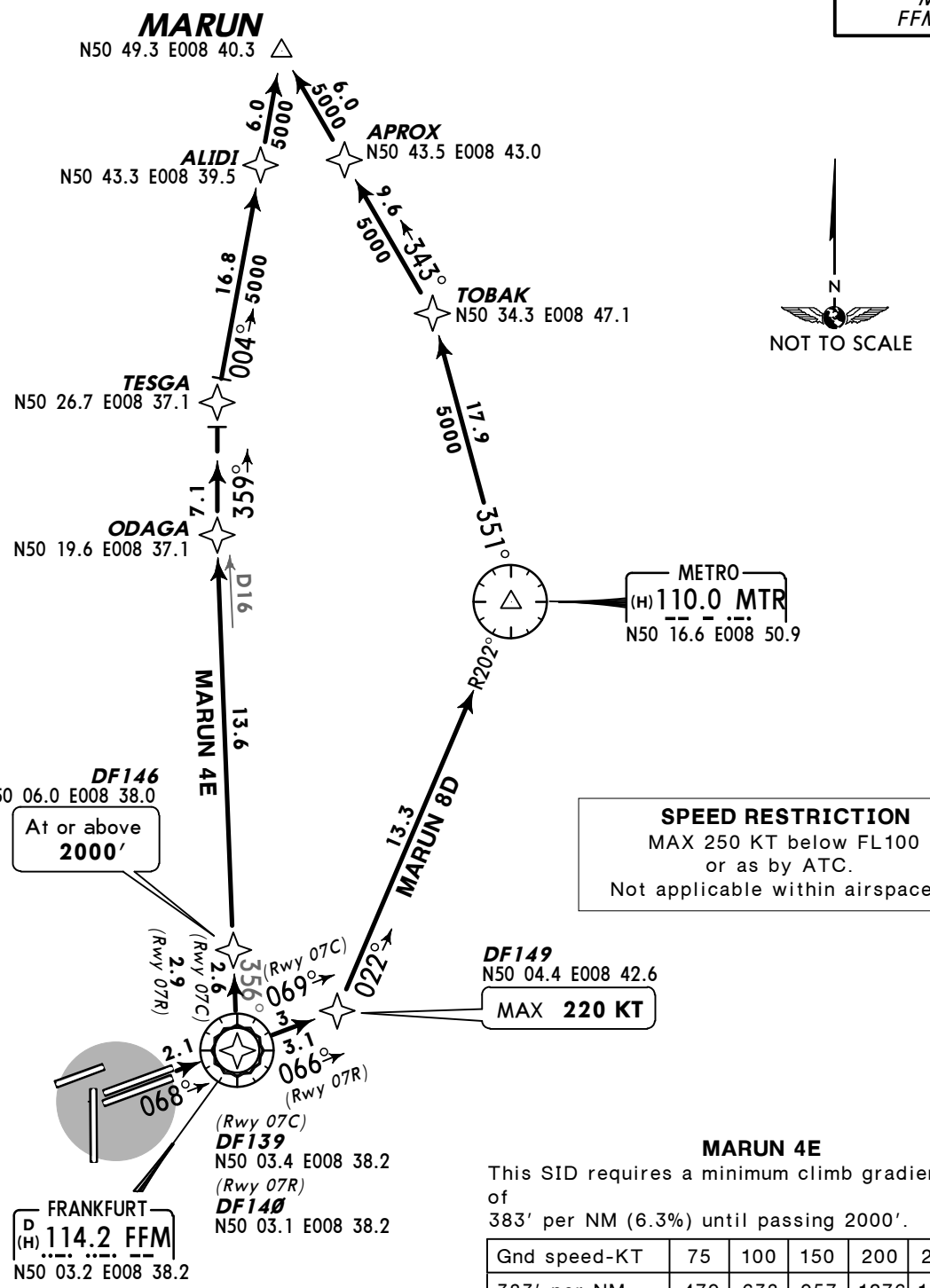
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

MARUN EIGHT DELTA (MARUN 8D) *[MARU8D]*
MARUN FOUR ECHO (MARUN 4E) *[MARU4E]*
RWYS 07C/R RNAV DEPARTURES (OVERLAY 10-3G)





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	(800′+) - DF149 (K220-) - MTR - TOBAK - APROX - MARUN.
MARUN 4E	(800′+) - DF139 (07C)/DF140 (07R) - DF146 (2000′+) - ODAGA - TESGA - ALIDI - MARUN.

CHANGES: Initial contact; chart reindexed.

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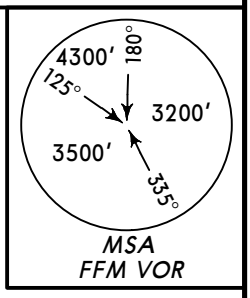
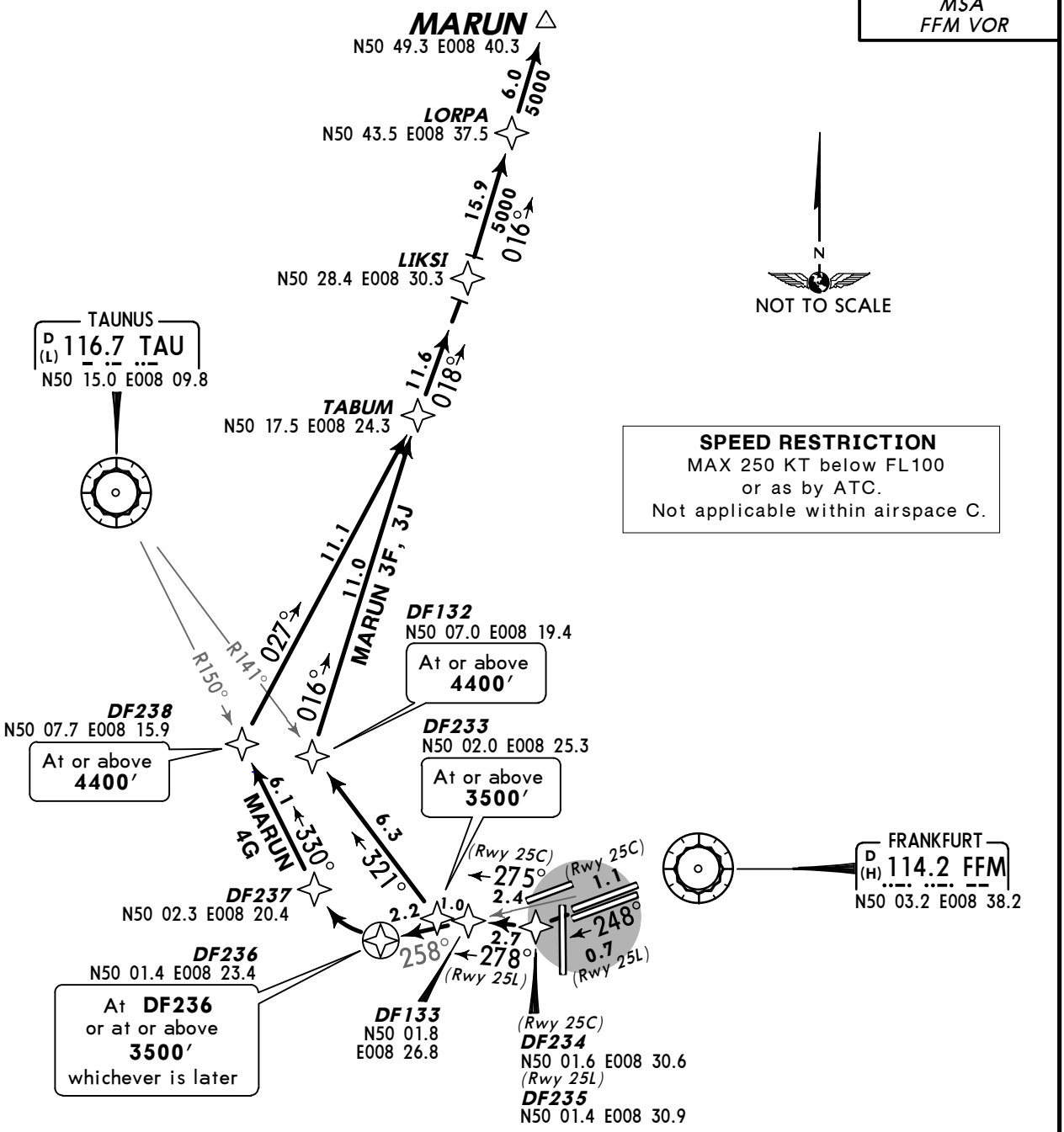
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

MARUN 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: Chart reindexed.

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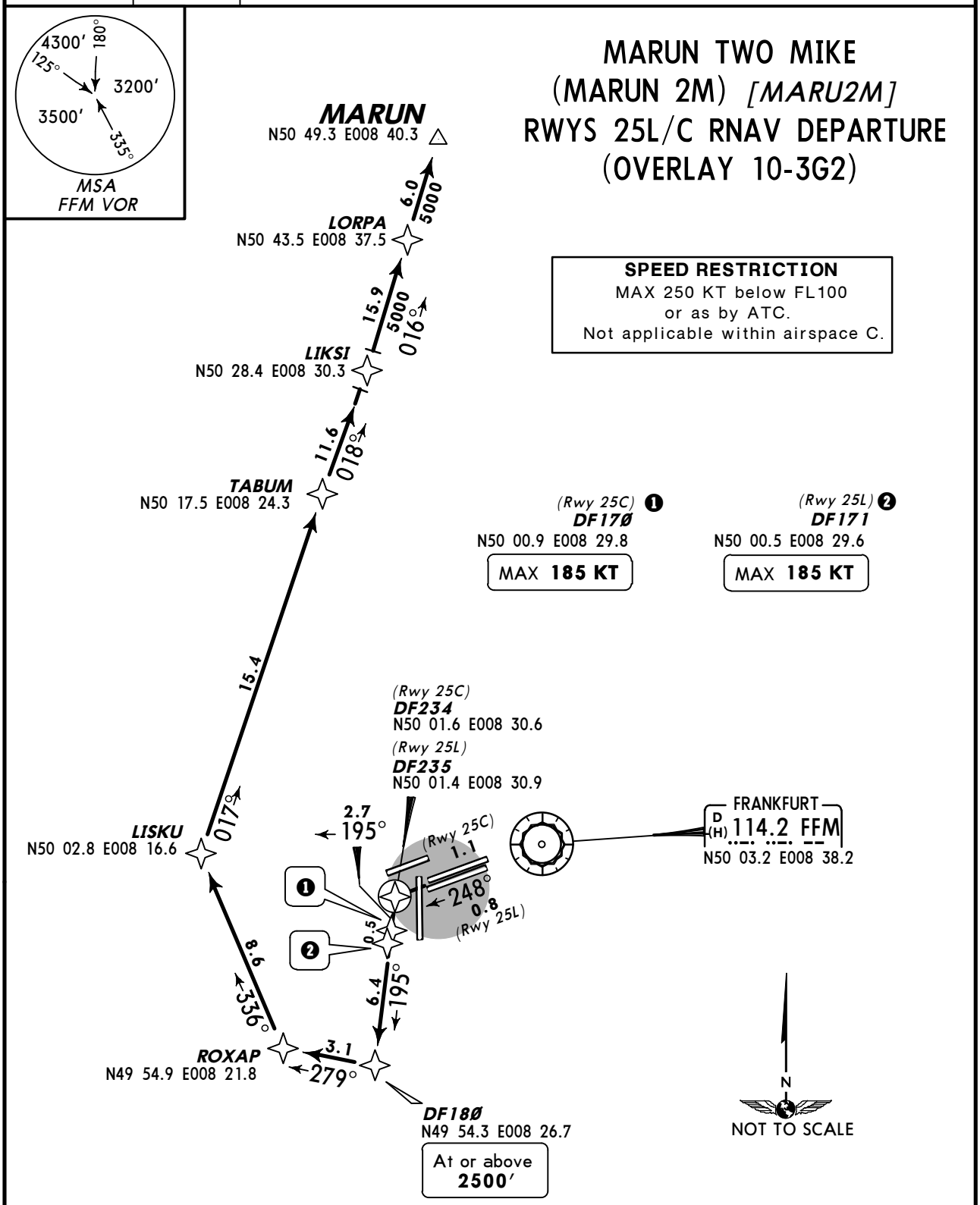
*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



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.

Initial climb clearance **5000′**

ROUTING

(800+) - DF234 (25C)/DF235 (25L) - DF170 (25C; K185-)/DF171 (25L; K185-) - DF180 (2500′+) - ROXAP - LISKU - TABUM - LIKSI - LORPA - MARUN.

CHANGES: Chart reindexed.

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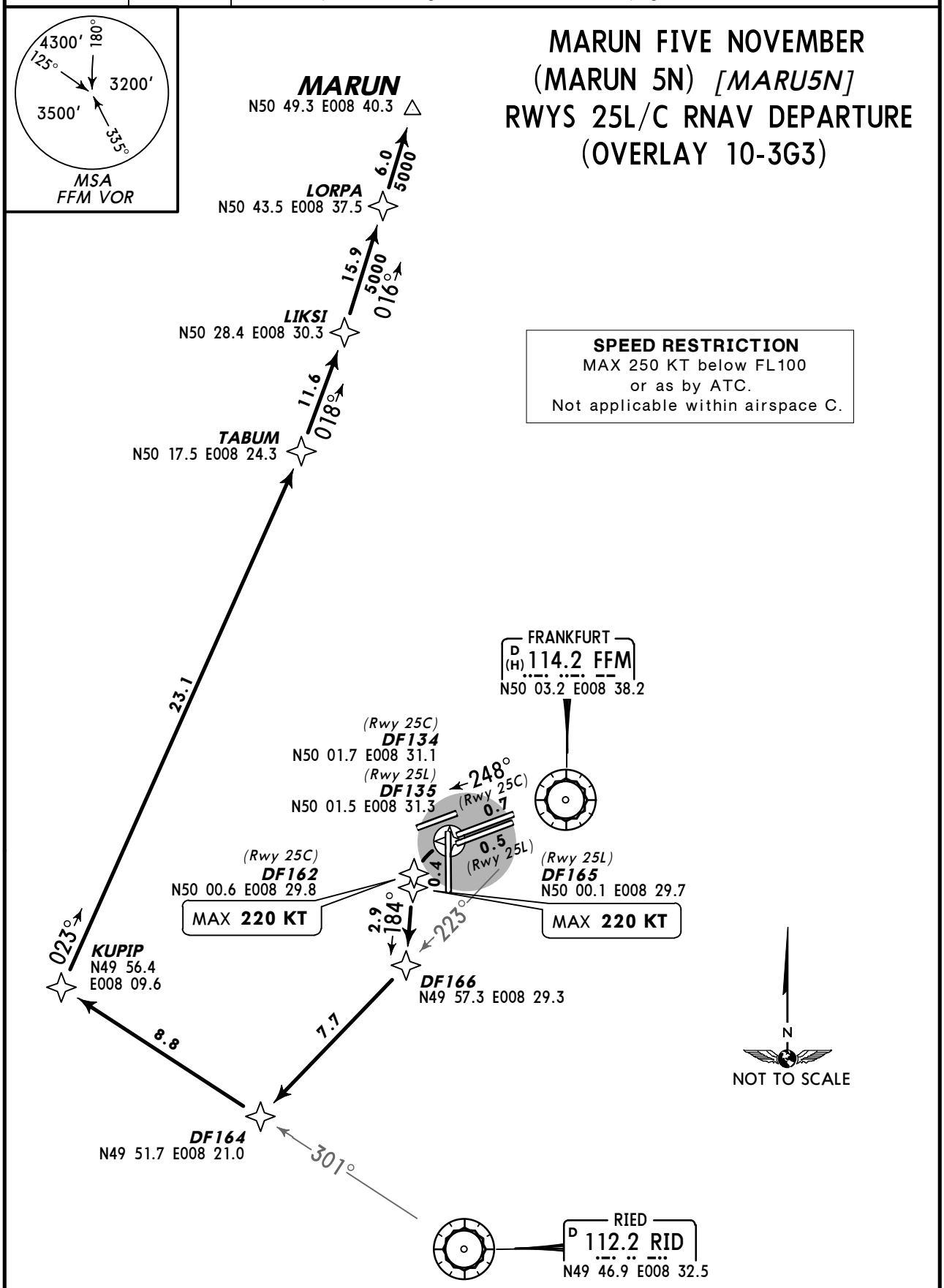
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

MARUN 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: None.

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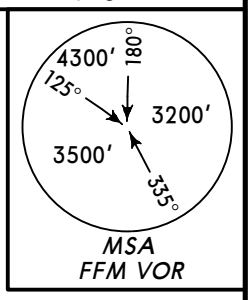
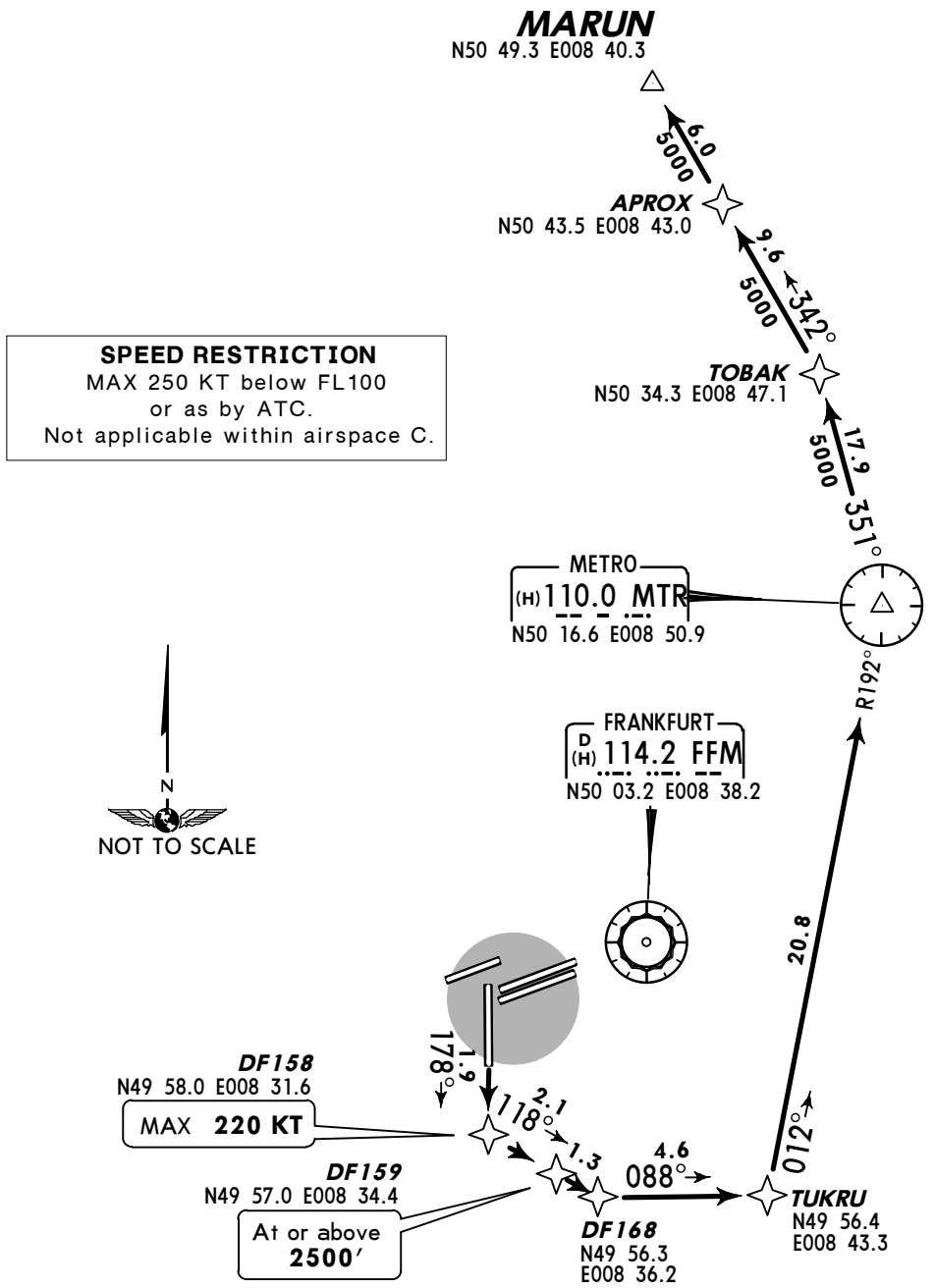
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and 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: Initial contact.

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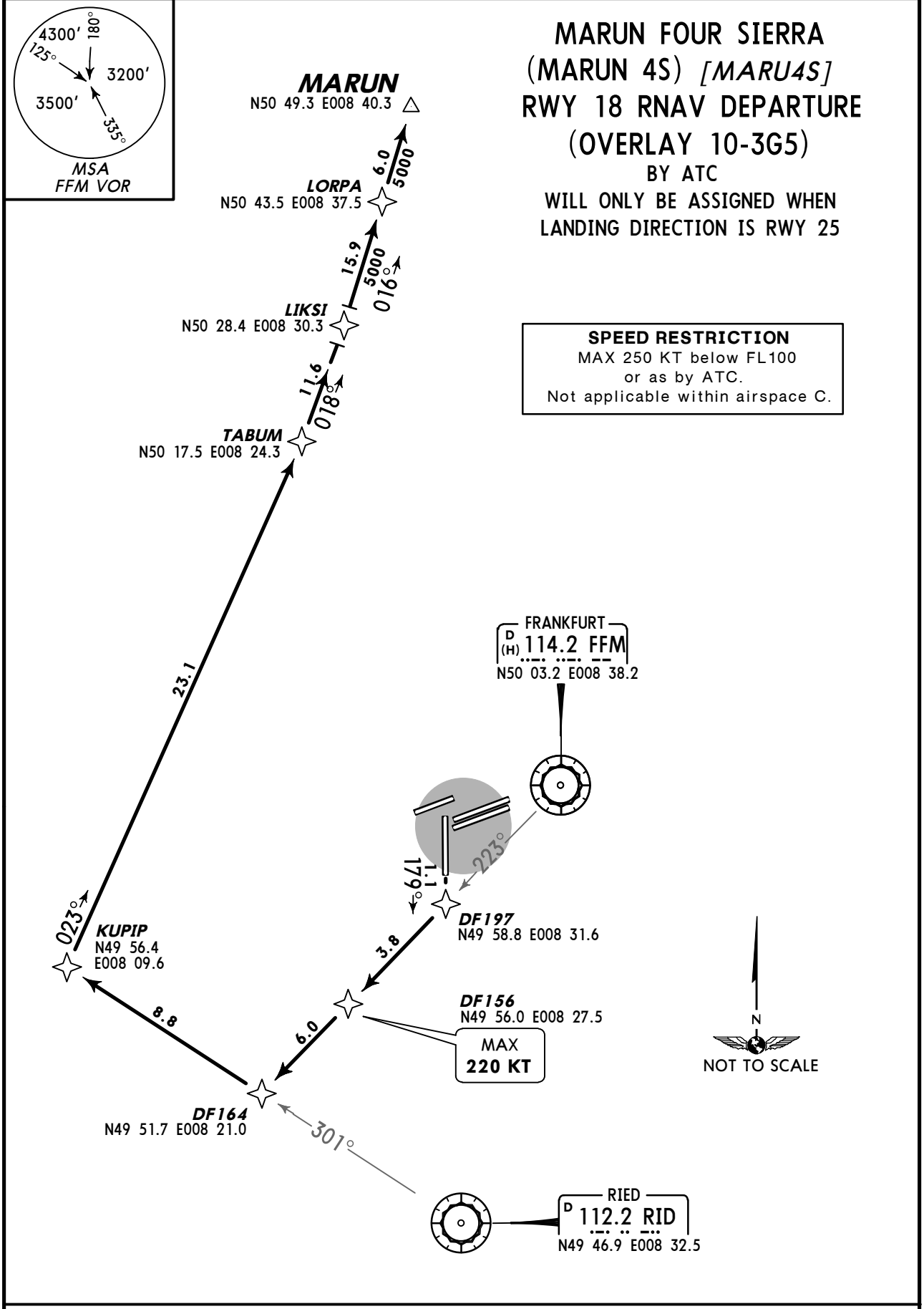
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.



MARUN FOUR SIERRA (MARUN 4S) *[MARU4S]*
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: RNAV SID renumbered; initial contact.

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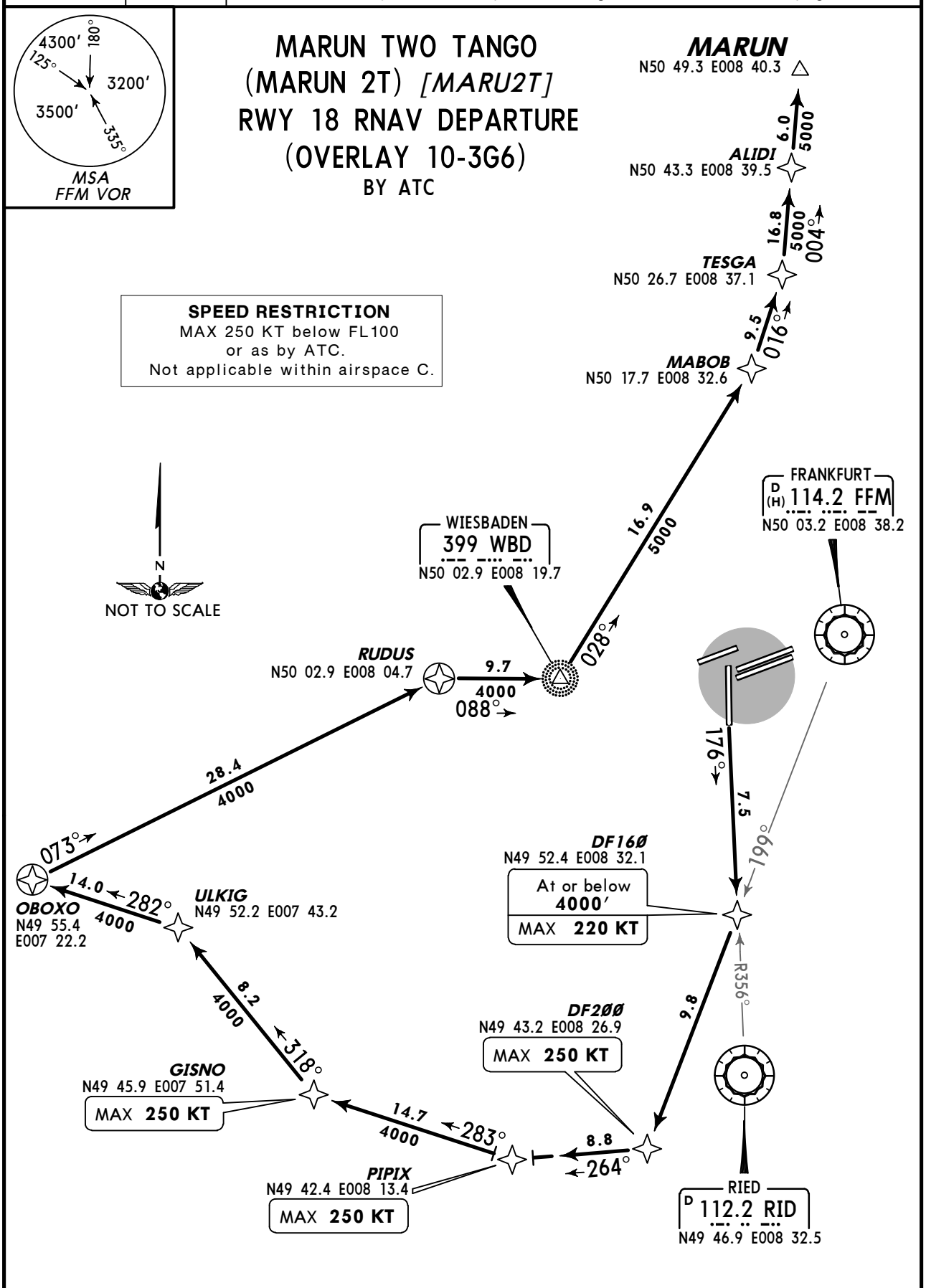
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.



Initial climb clearance **4000′**

ROUTING

(800′+) - DF160 (4000′-; K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG - OBOXO - RUDUS - WBD - MABOB - TESGA - ALIDI - MARUN.

CHANGES: Initial contact.

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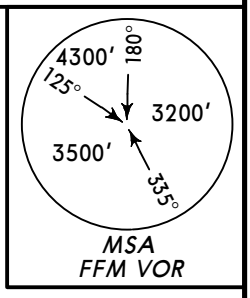
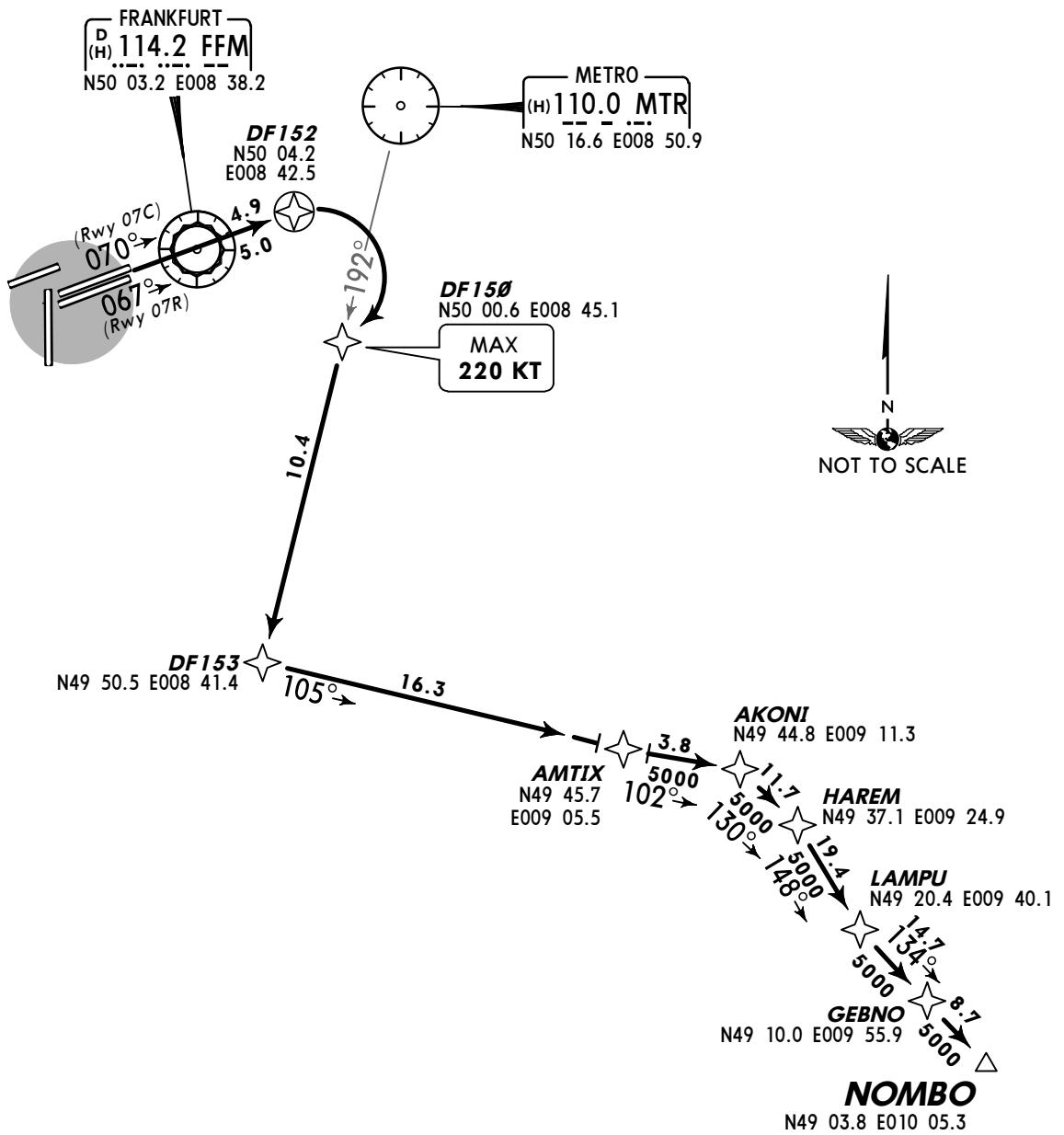
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

NOMBO NINE DELTA (NOMBO 9D) *[NOMB9D]*
NOMBO EIGHT ECHO (NOMBO 8E) *[NOMB8E]*
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 - AMTIX - AKONI - HAREM - LAMPU - GEBNO - NOMBO.

CHANGES: RNAV SIDs renumbered & revised.

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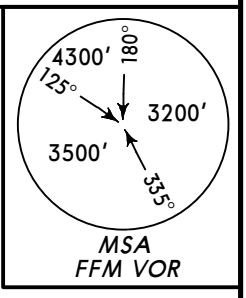
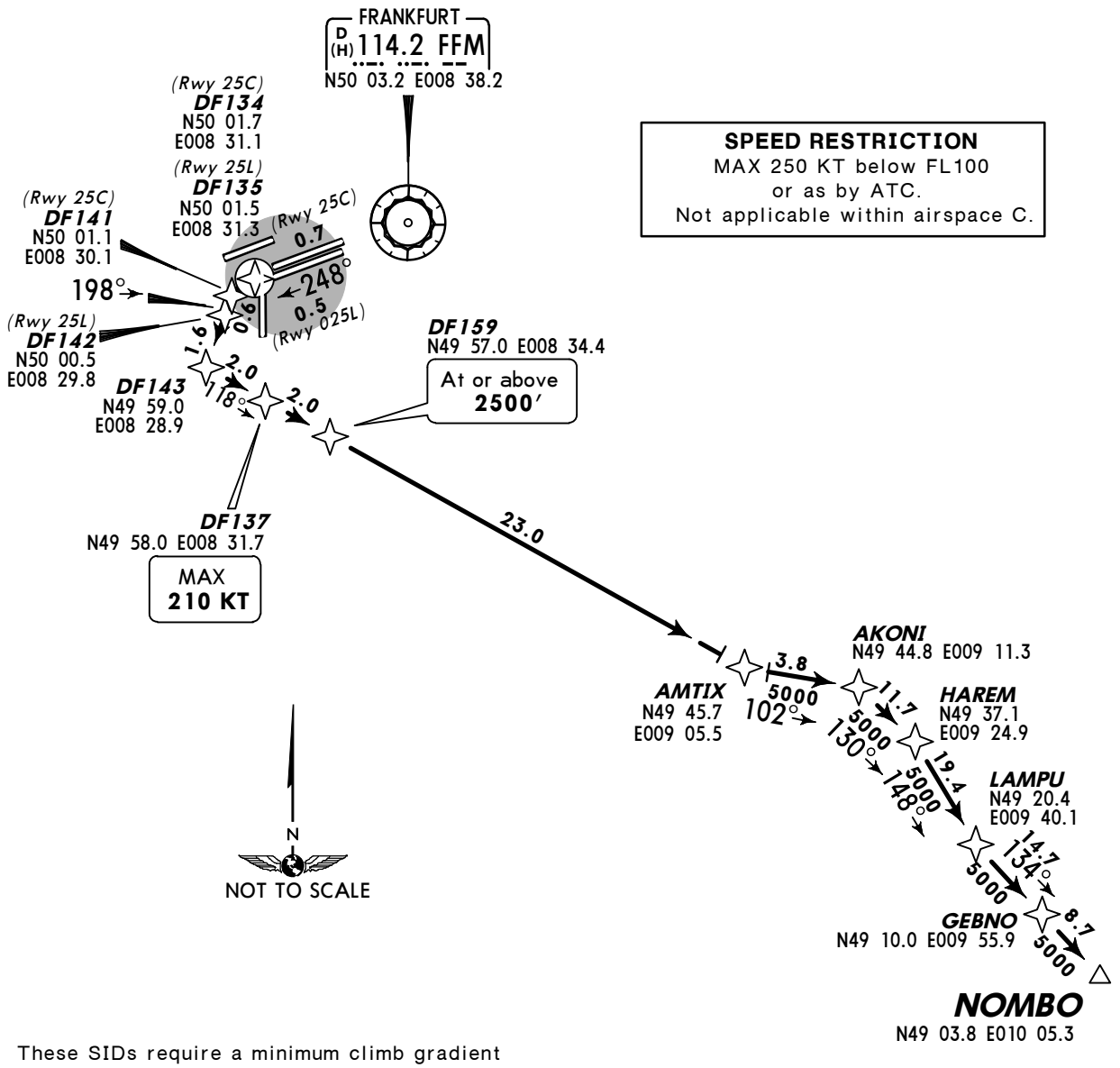
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

NOMBO SEVEN FOXTROT (NOMBO 7F) *[NOMB7F]*
NOMBO EIGHT GOLF (NOMBO 8G) *[NOMB8G]*
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′+) - AMTIX - AKONI - HAREM - LAMPU - GEBNO - NOMBO.

CHANGES: RNAV SIDs renumbered & revised.

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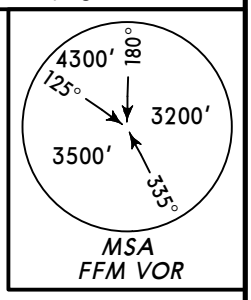
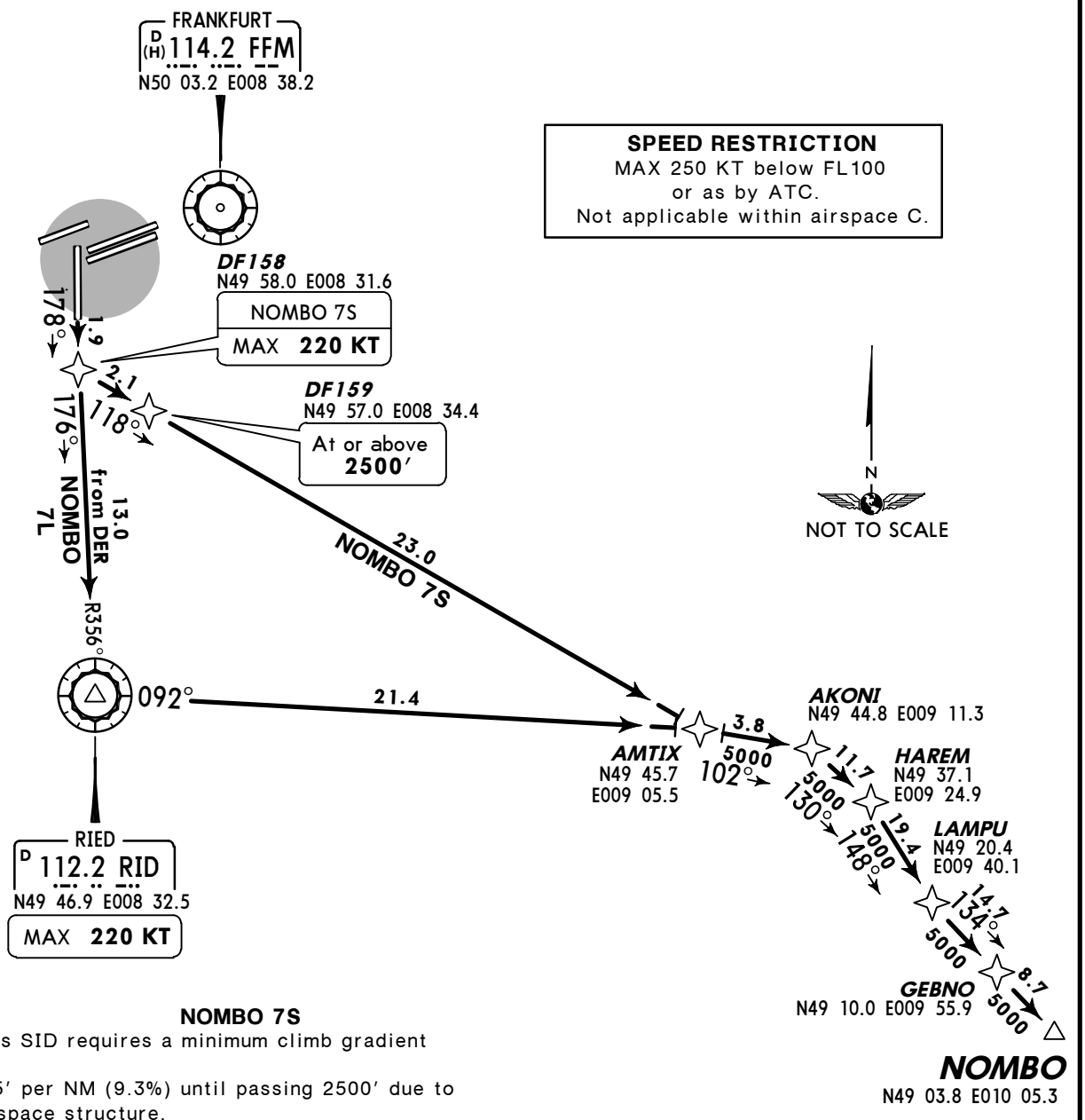
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

NOMBO SEVEN LIMA (NOMBO 7L) *[NOMB7L]*
NOMBO SEVEN SIERRA (NOMBO 7S) *[NOMB7S]*
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 7S

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 7L.

Initial climb clearance **4000′**

SID	ROUTING
NOMBO 7L	(800′+) - RID (K220-) - AMTIX - AKONI - HAREM - LAMPU - GEBNO - NOMBO.
NOMBO 7S	(800′+) - DF158 (K220-) - DF159 (2500′+) - AMTIX - AKONI - HAREM - LAMPU - GEBNO - NOMBO.

CHANGES: RNAV SIDs renumbered & revised.

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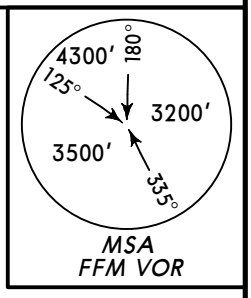
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

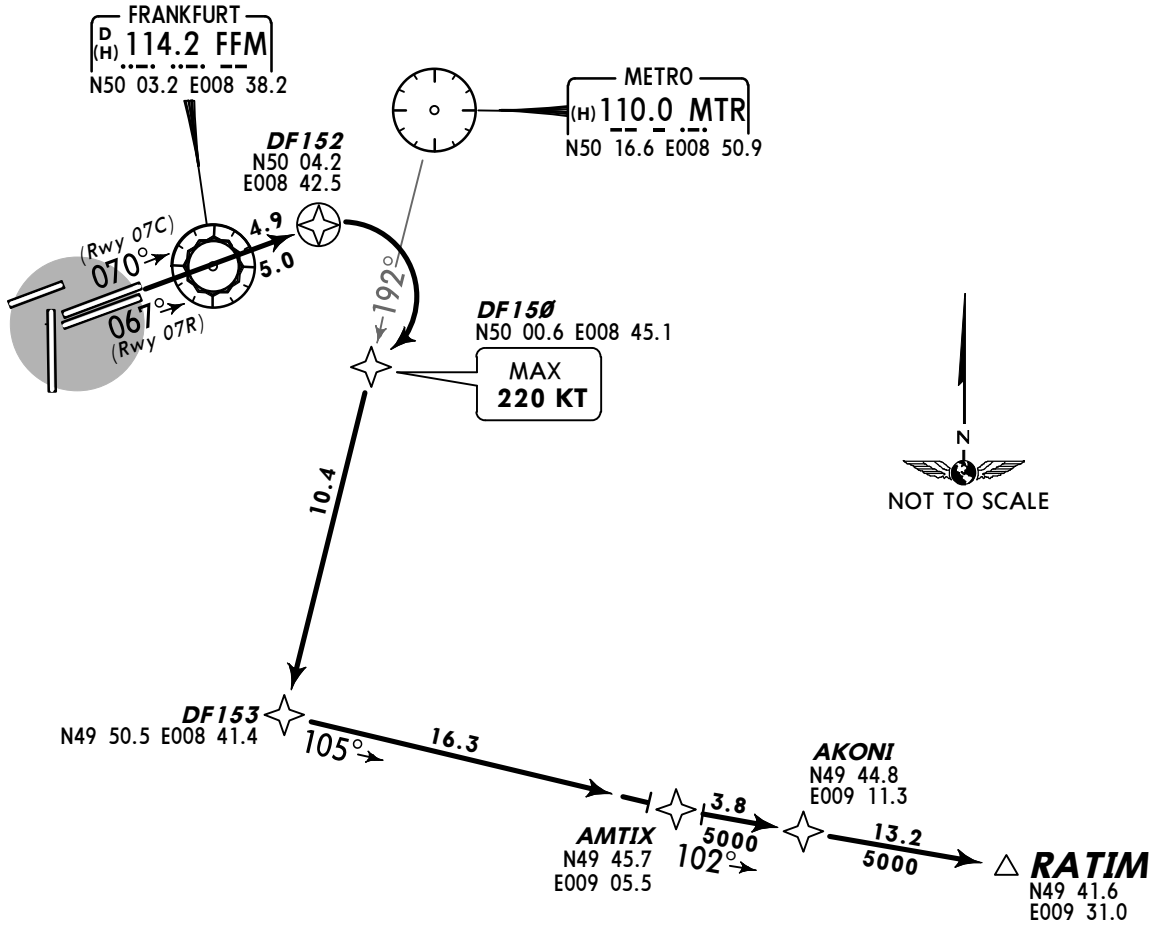
RATIM FIVE DELTA (RATIM 5D) *[RATI5D]*
RATIM FIVE ECHO (RATIM 5E) *[RATI5E]*
RWYS 07C/R RNAV DEPARTURES
(OVERLAY 10-3J1)

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 - AMTIX - AKONI - RATIM.

CHANGES: RNAV SIDs renumbered & revised.

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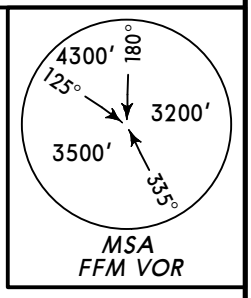
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

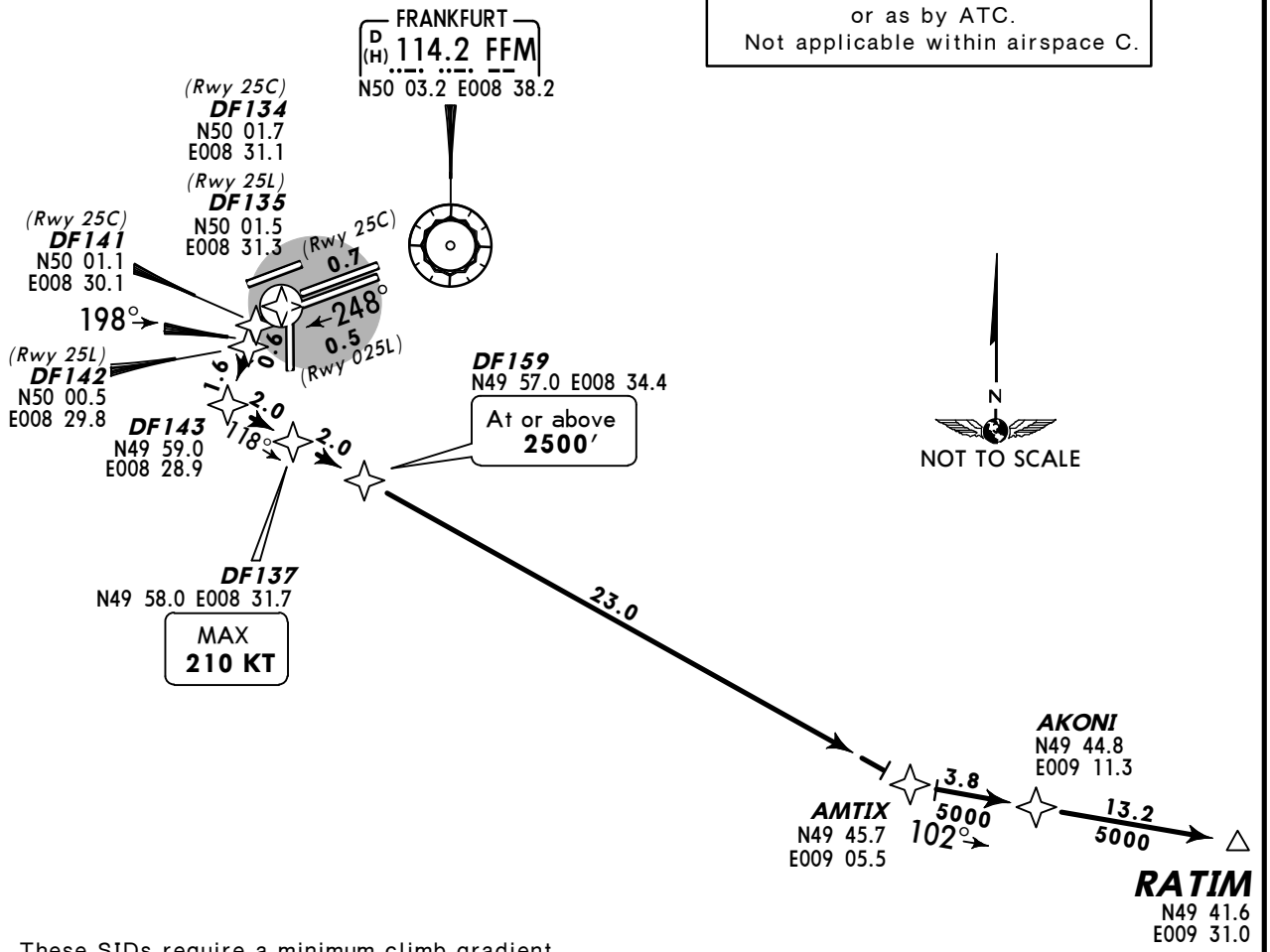
RATIM FIVE FOXTROT (RATIM 5F) *[RATI5F]*
RATIM FIVE GOLF (RATIM 5G) *[RATI5G]*
RWYS 25L/C RNAV DEPARTURES
(OVERLAY 10-3J2)

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.



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′+) - AMTIX - AKONI - RATIM.

CHANGES: RNAV SIDs renumbered & revised.

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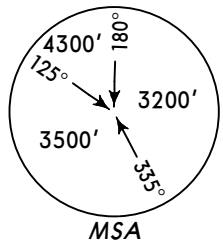
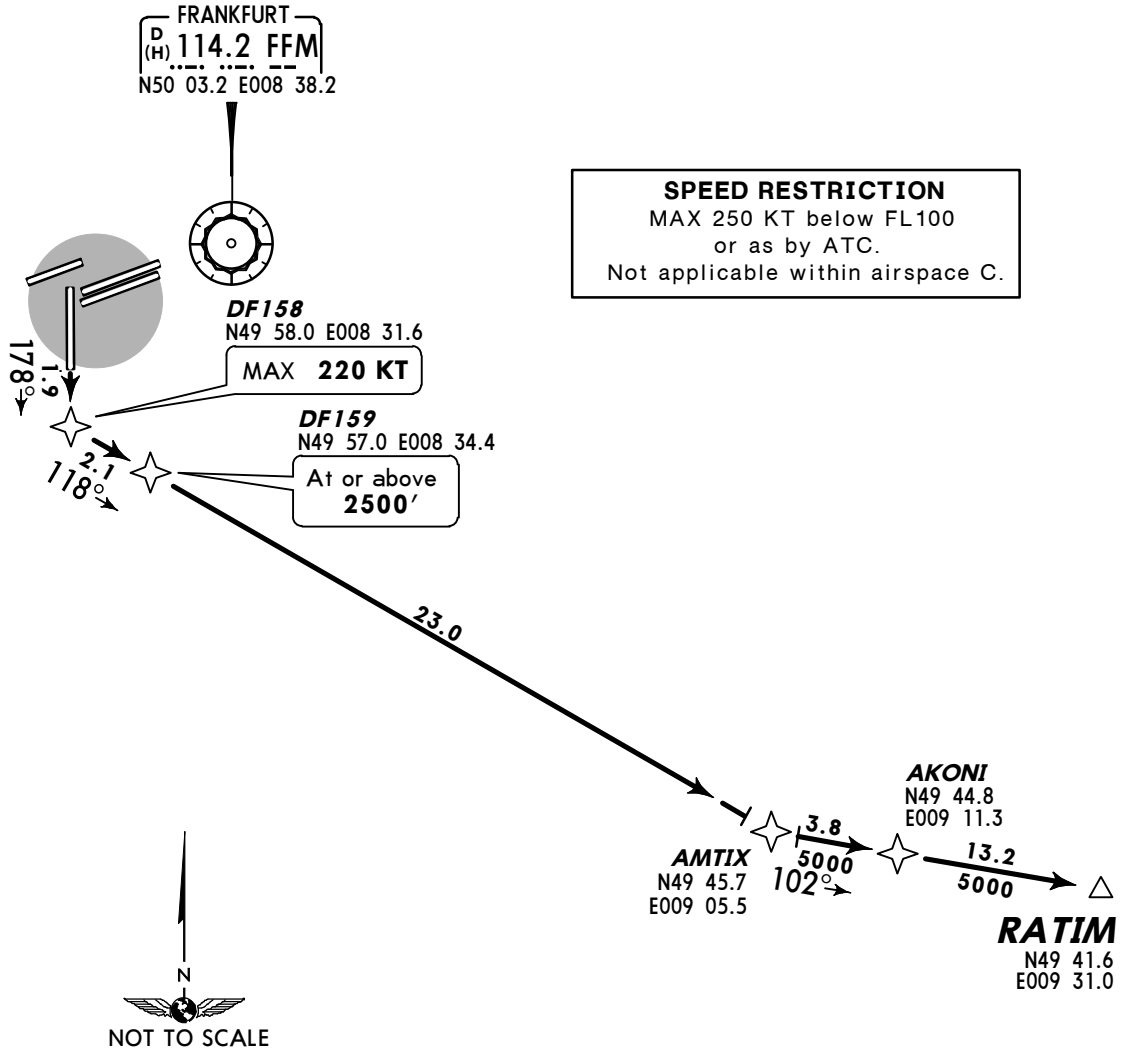
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

RATIM FOUR SIERRA (RATIM 4S) *[RATI4S]*
RWY 18 RNAV DEPARTURE (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



MSA
FFM VOR



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′+) - AMTIX - AKONI - RATIM.

CHANGES: RNAV SID RATIM 3S renumbered 4S & revised.

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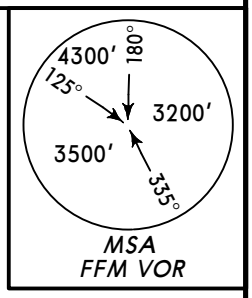
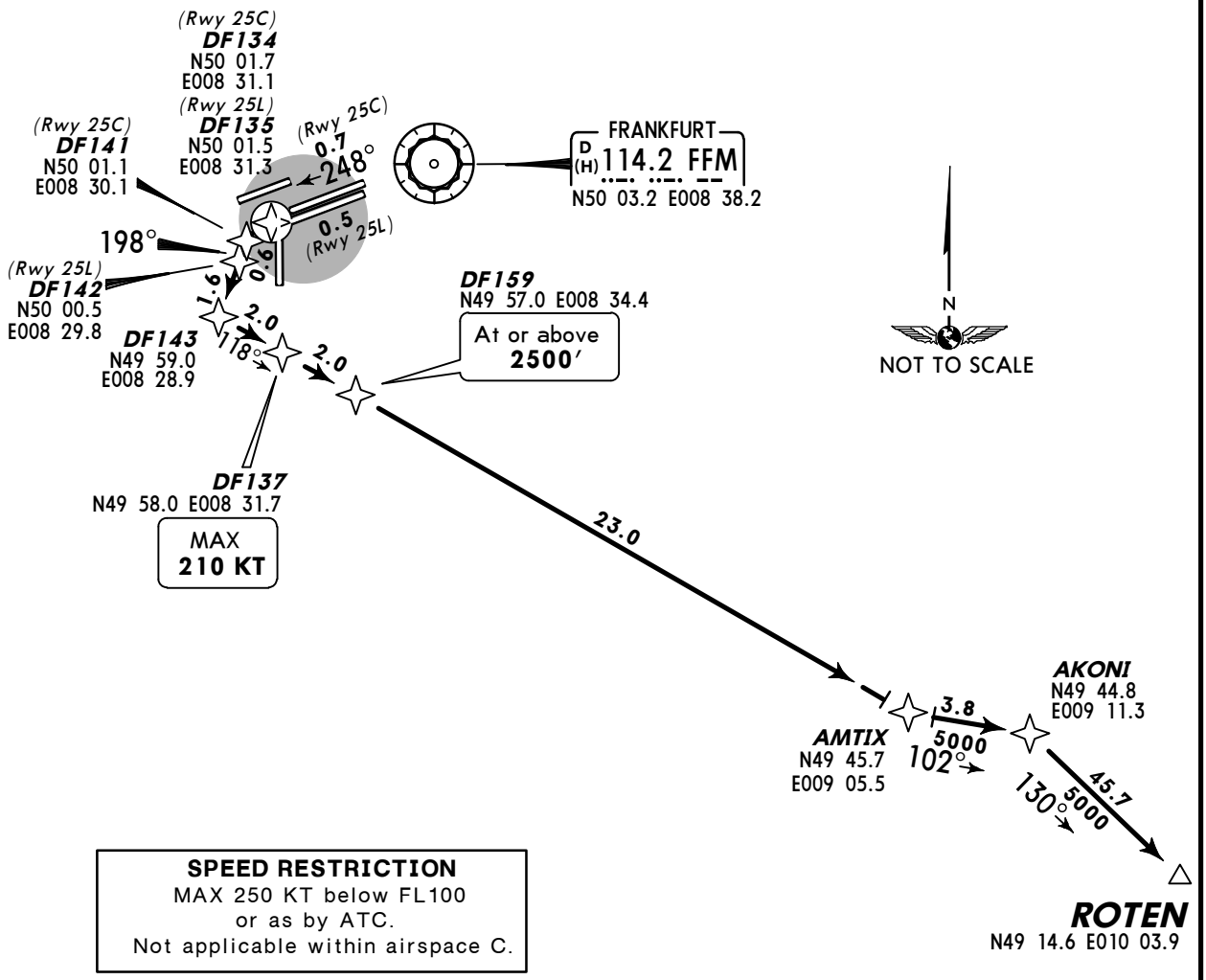
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

ROTEN SIX FOXTROT (ROTEN 6F) *[ROTE6F]*
ROTEN FIVE GOLF (ROTEN 5G) *[ROTE5G]*
RWYS 25L/C RNAV DEPARTURES
(OVERLAY 10-3J5)

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′+) - AMTIX - AKONI - ROTEN.

CHANGES: RNAV SIDs renumbered & revised.

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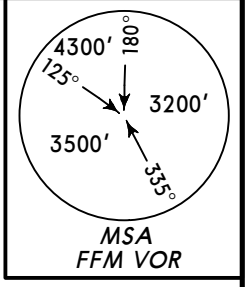
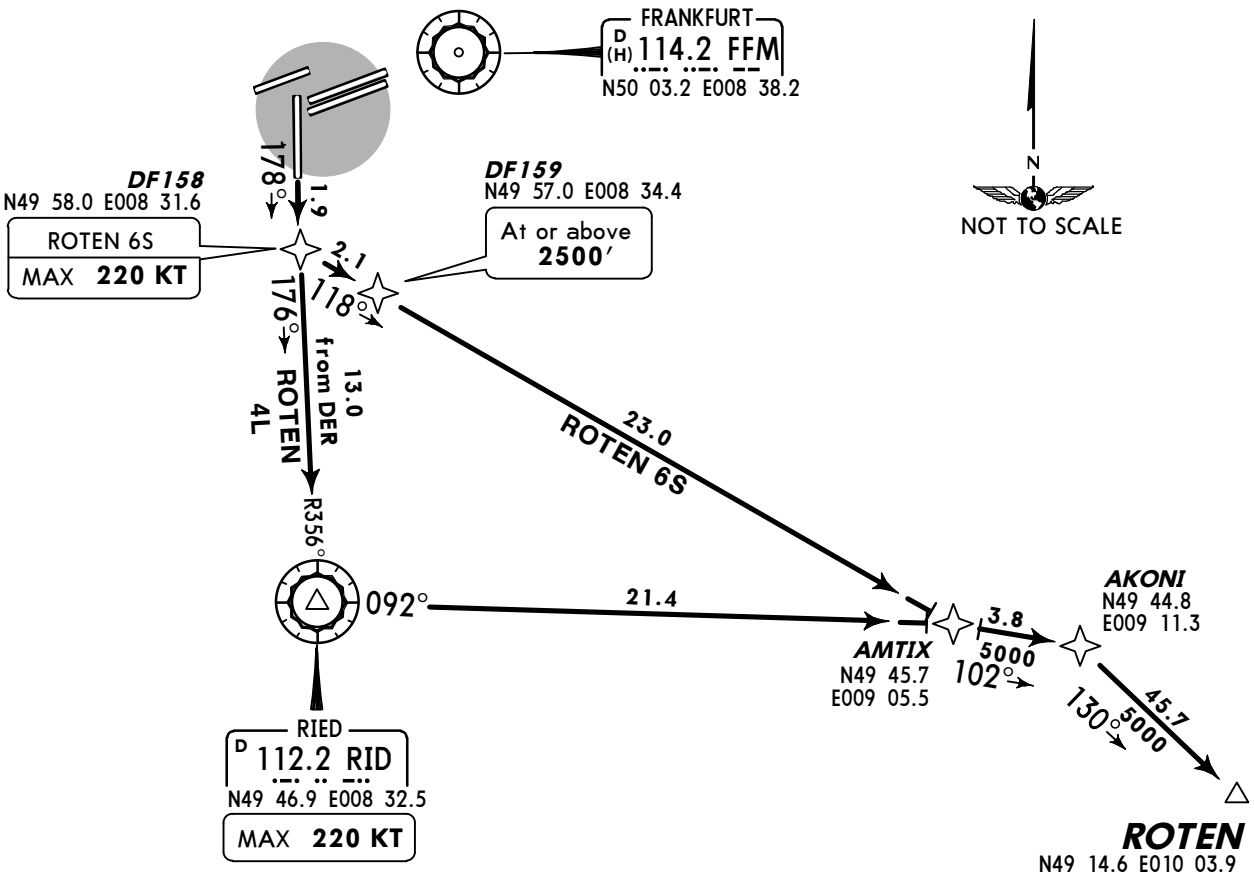
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

ROTEN FOUR LIMA (ROTEN 4L) *[ROTE4L]*
ROTEN SIX SIERRA (ROTEN 6S) *[ROTE6S]*
RWY 18 RNAV DEPARTURES
(OVERLAY 10-3J6)
ONLY FOR FLIGHTS TERMINATING WITHIN EDDN AREA





ROTEN 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 and EXPECT routing via ROTEN 4L.

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

Initial climb clearance **4000′**

SID	ROUTING
ROTEN 4L	(800′+) - RID (K220-) - AMTIX - AKONI - ROTEN.
ROTEN 6S	(800′+) - DF158 (K220-) - DF159 (2500′+) - AMTIX - AKONI - ROTEN.

CHANGES: RNAV SIDs renumbered & revised.

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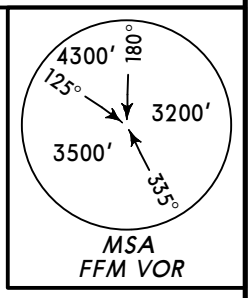
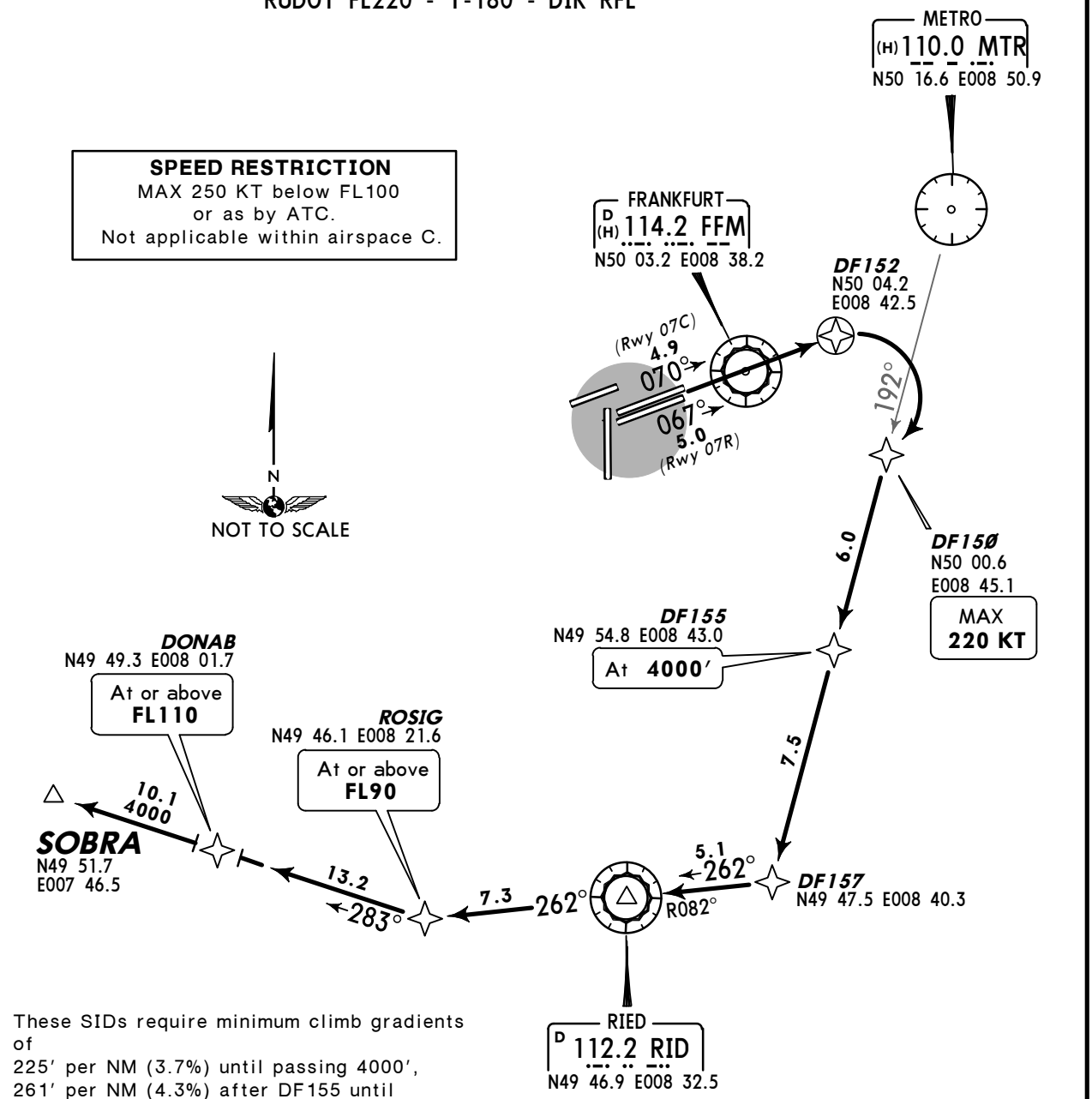
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SOBRA FOUR DELTA (SOBRA 4D) *[SOBR4D]*
RWYS 07C/R RNAV DEPARTURE (OVERLAY 10-3J7)

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: None.

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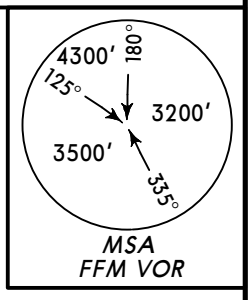
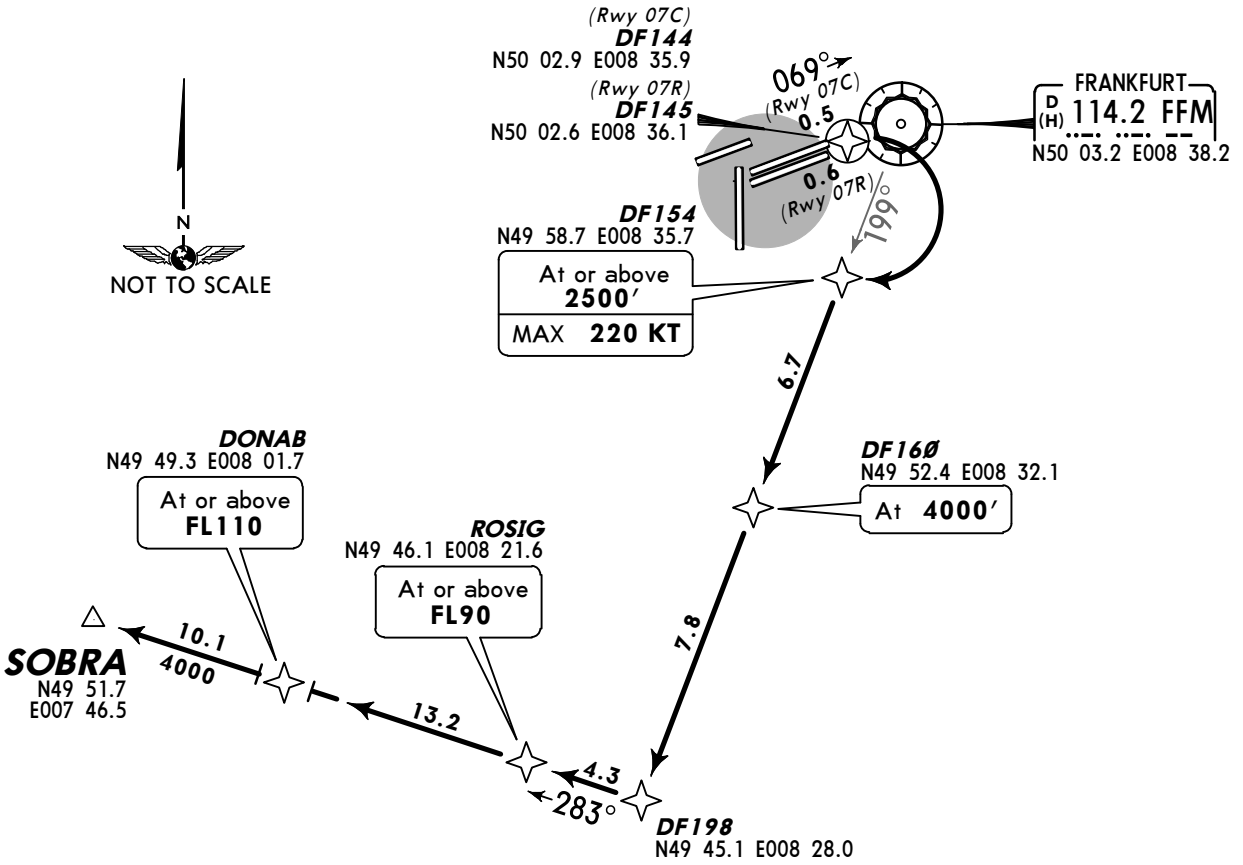
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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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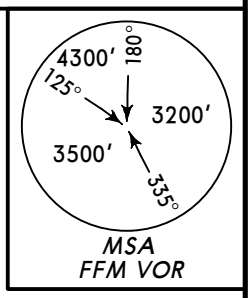
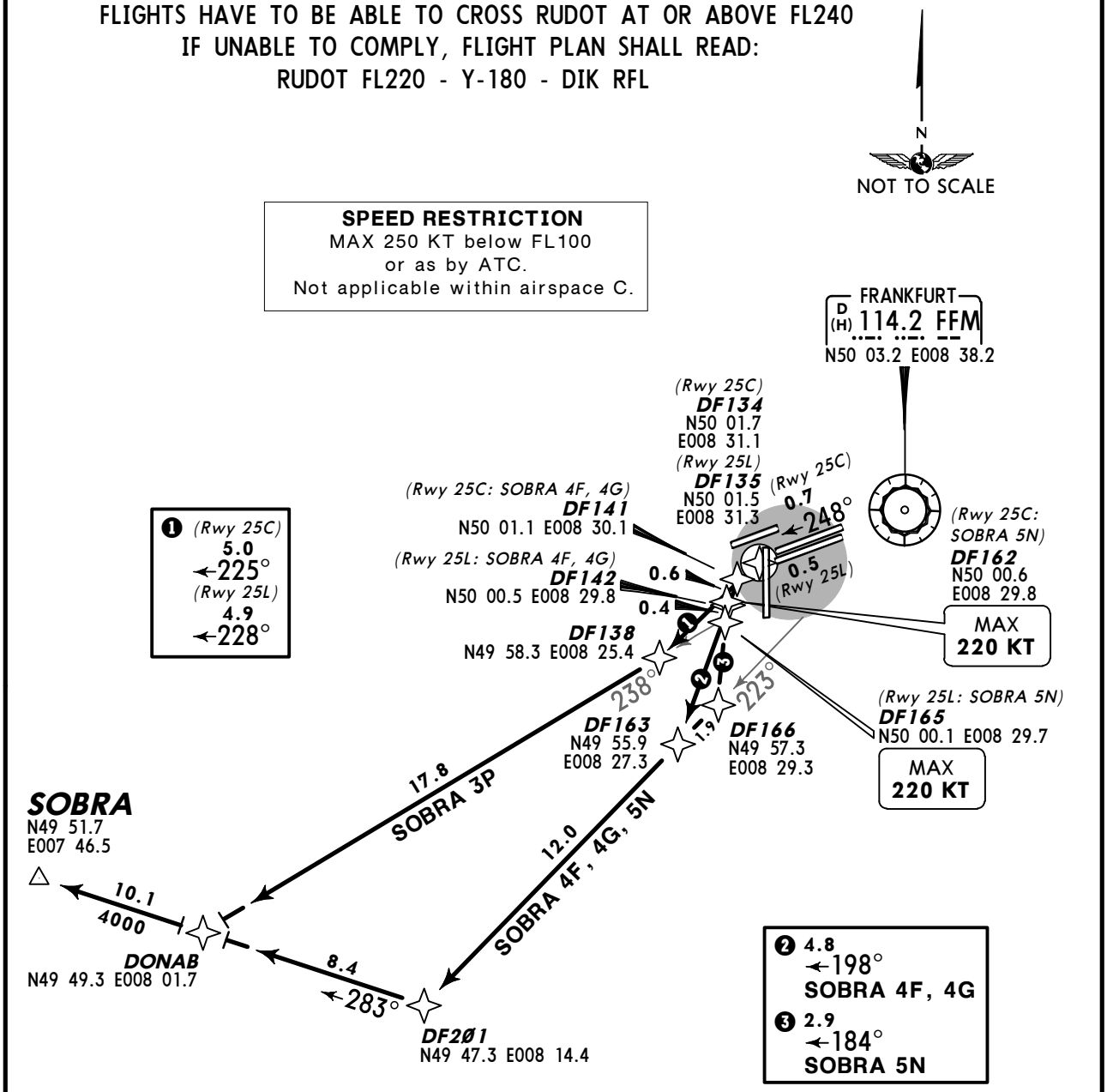
*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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





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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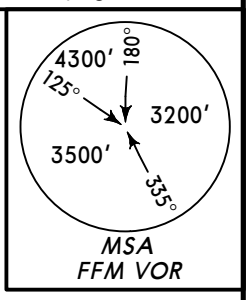
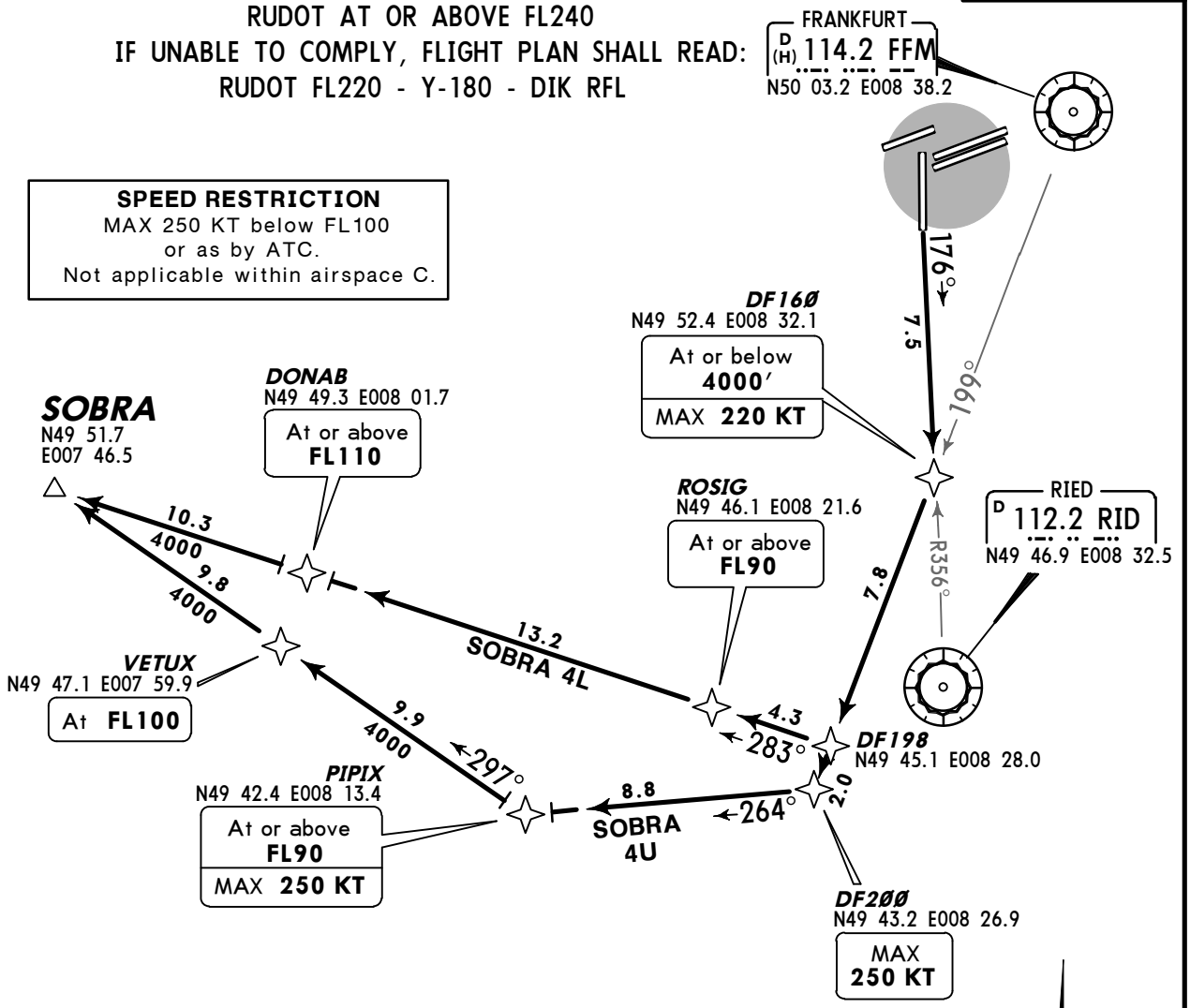
*LANGEN Radar	Apt Elev
136.12	364′

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 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	(800′+) - DF160 (4000′-; K220-) - DF198 - ROSIG (FL90+) - DONAB (FL110+) - SOBRA.
SOBRA 4U	(800′+) - DF160 (4000′-; K220-) - DF200 (K250-) - PIPIX (FL90+; K250-) - VETUX (FL100) - SOBRA.

CHANGES: None.

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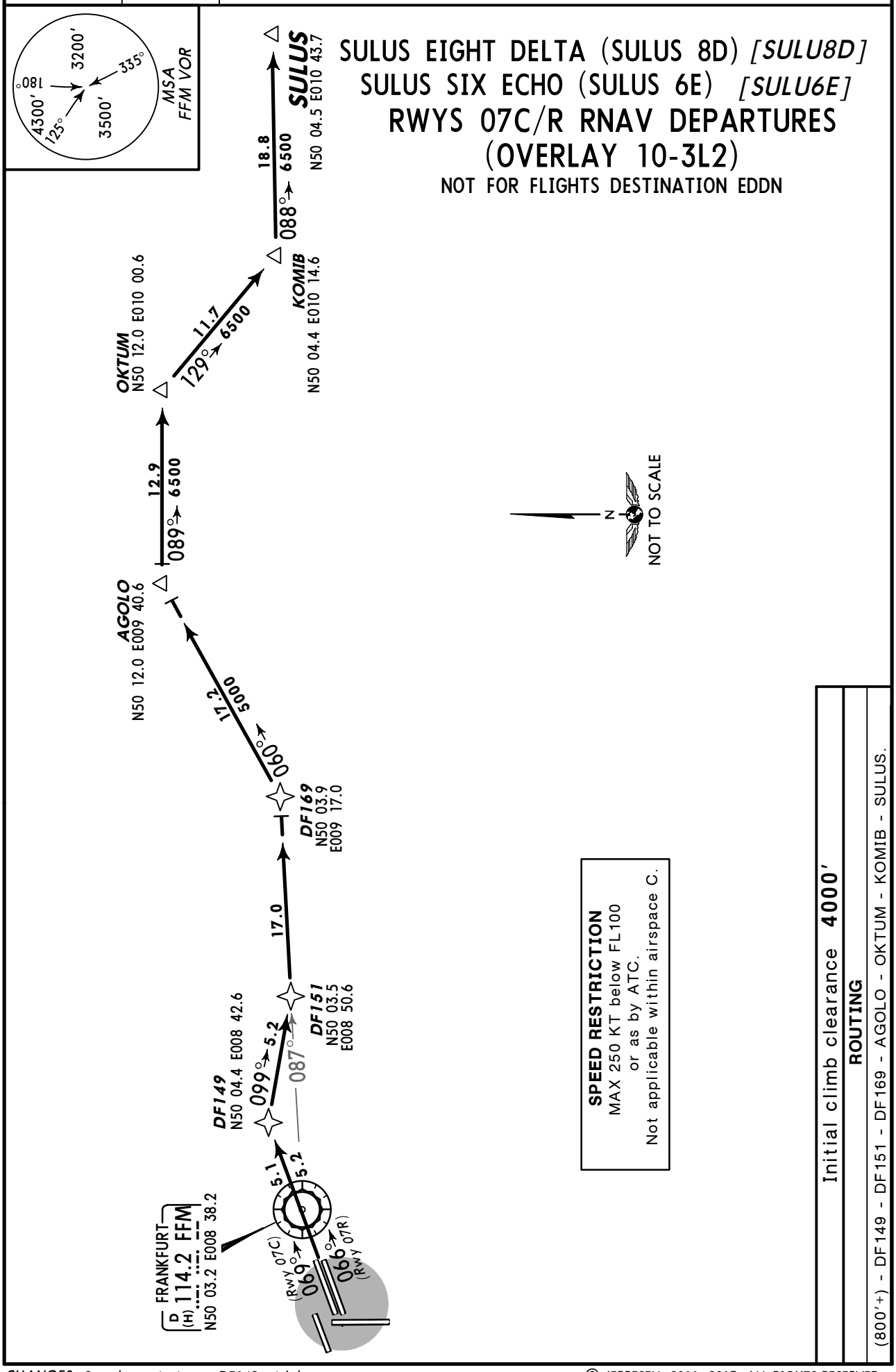
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



CHANGES: Speed restriction at DF149 withdrawn.

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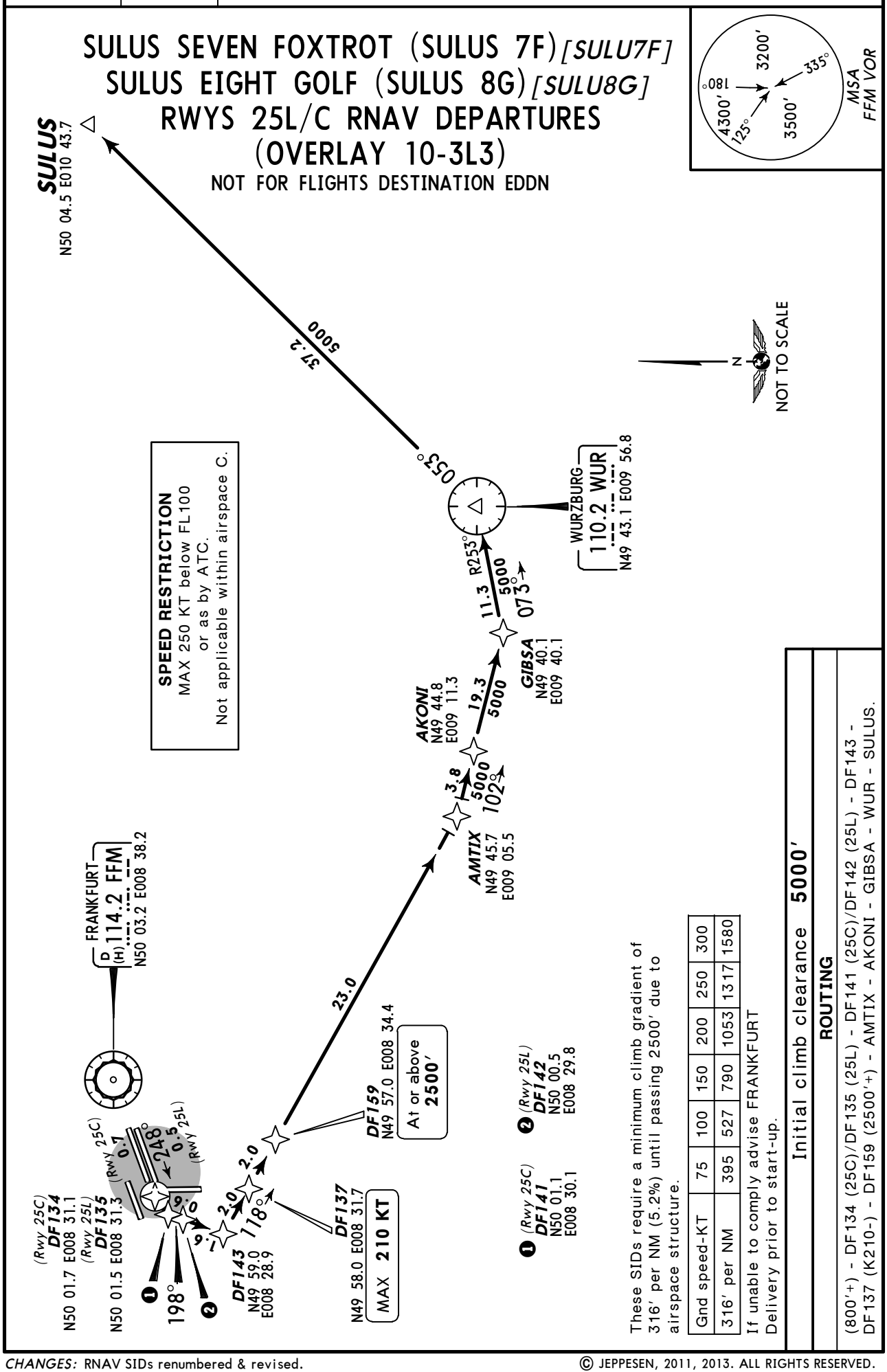
*LANGEN Radar	Apt Elev	
136.12	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

SULUS SEVEN FOXTROT (SULUS 7F) *[SULU7F]*
SULUS EIGHT GOLF (SULUS 8G) *[SULU8G]*
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′+) - AMTIX - AKONI - GIBSA - WUR - SULUS.

CHANGES: RNAV SIDs renumbered & revised.

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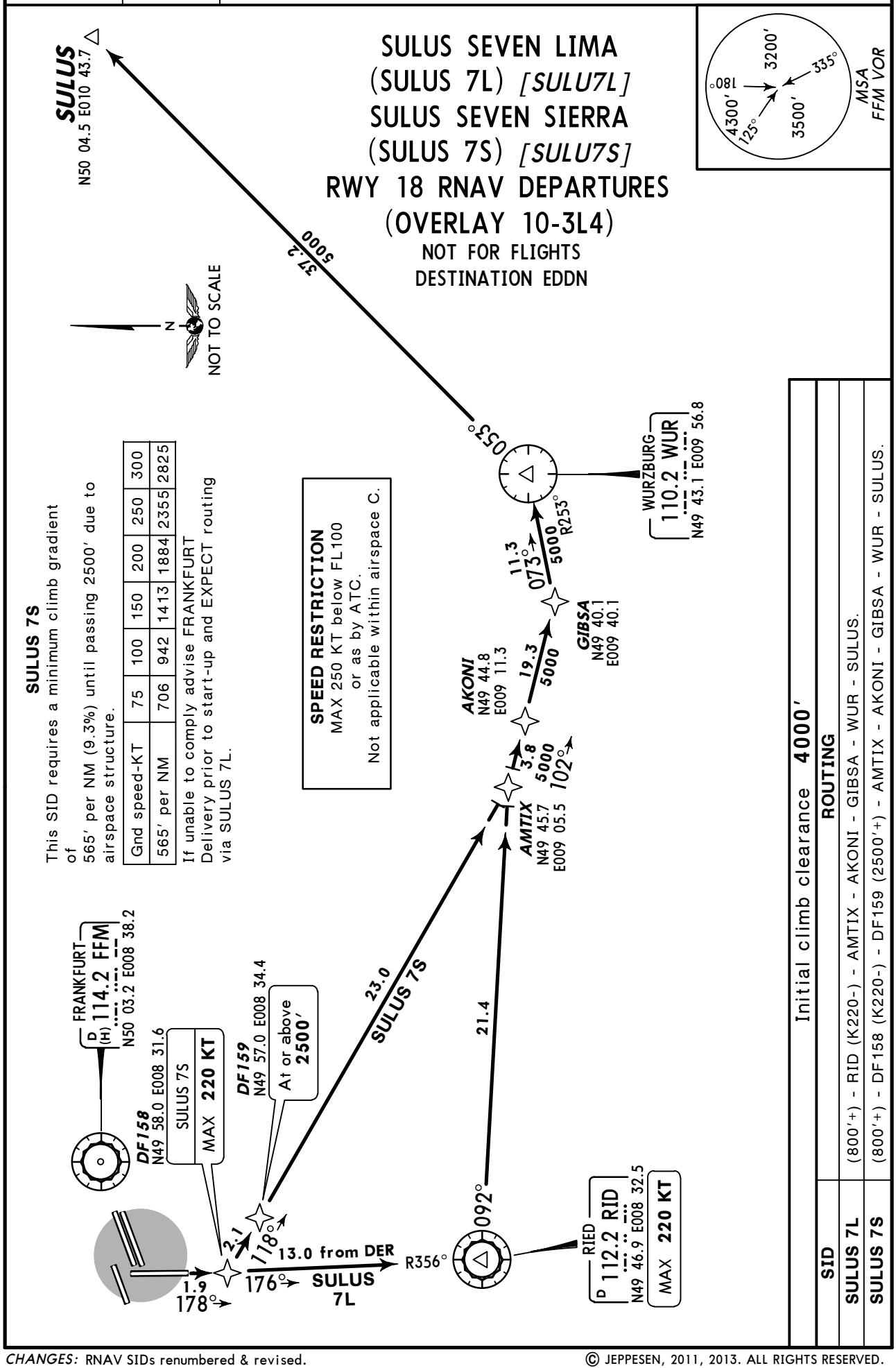
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

SULUS SEVEN LIMA (SULUS 7L) *[SULU7L]* SULUS SEVEN SIERRA (SULUS 7S) *[SULU7S]* RWY 18 RNAV DEPARTURES (OVERLAY 10-3L4)

NOT FOR FLIGHTS
DESTINATION EDDN



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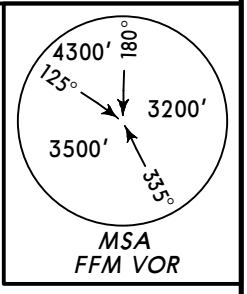
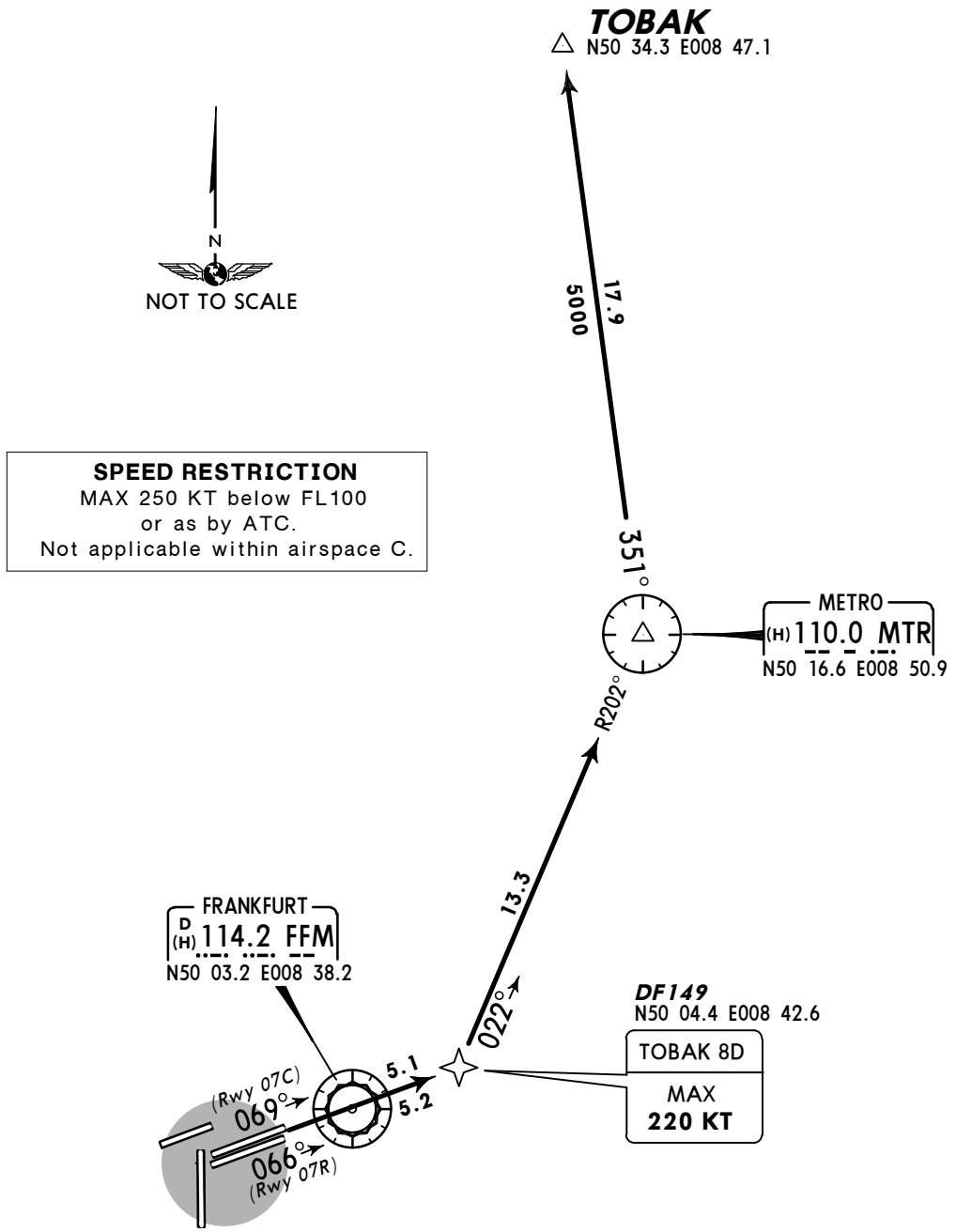
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

TOBAK 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: Initial contact.

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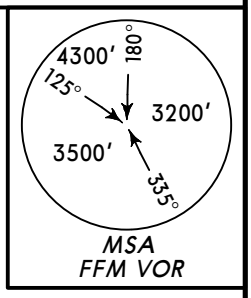
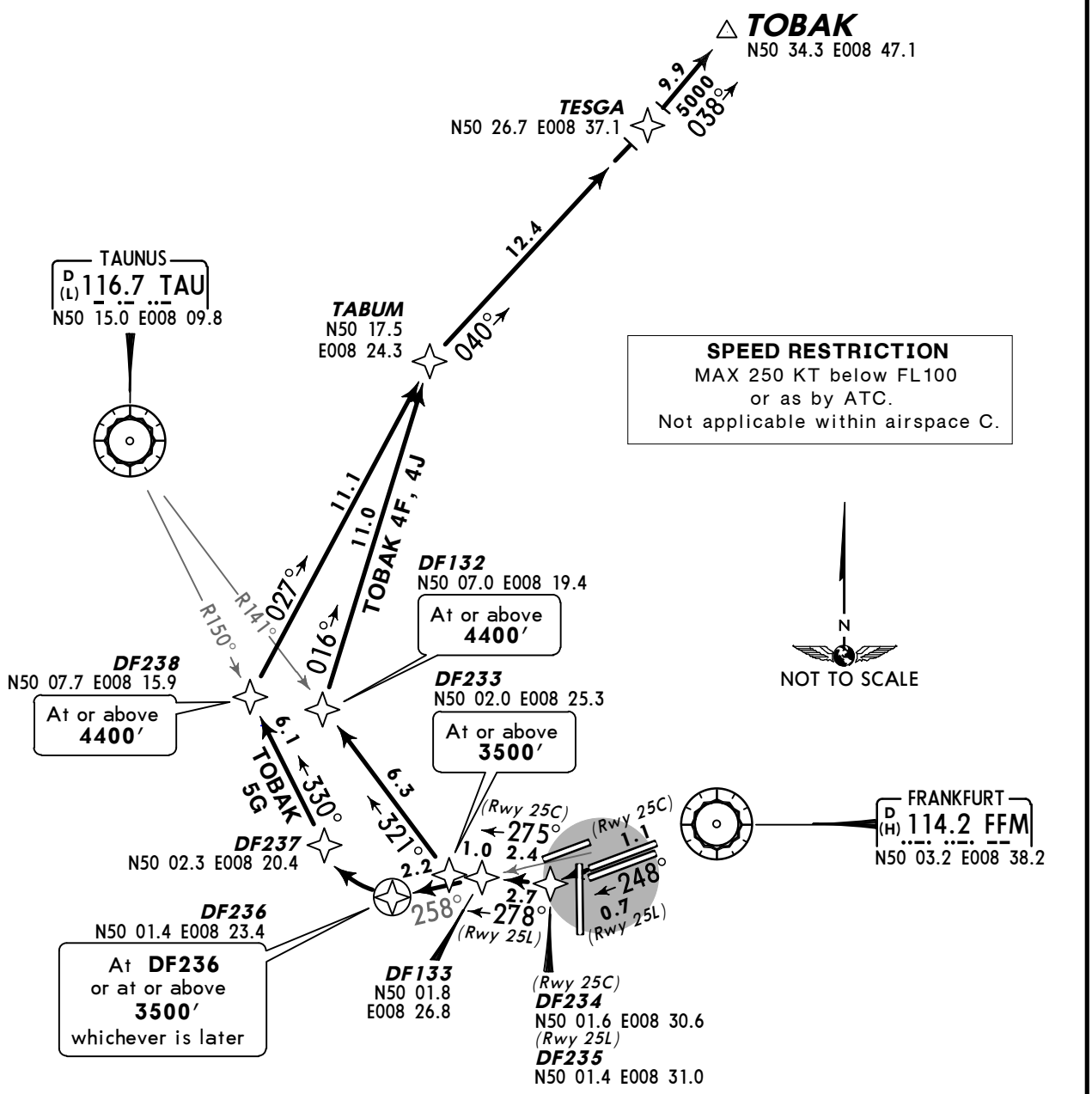
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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: None.

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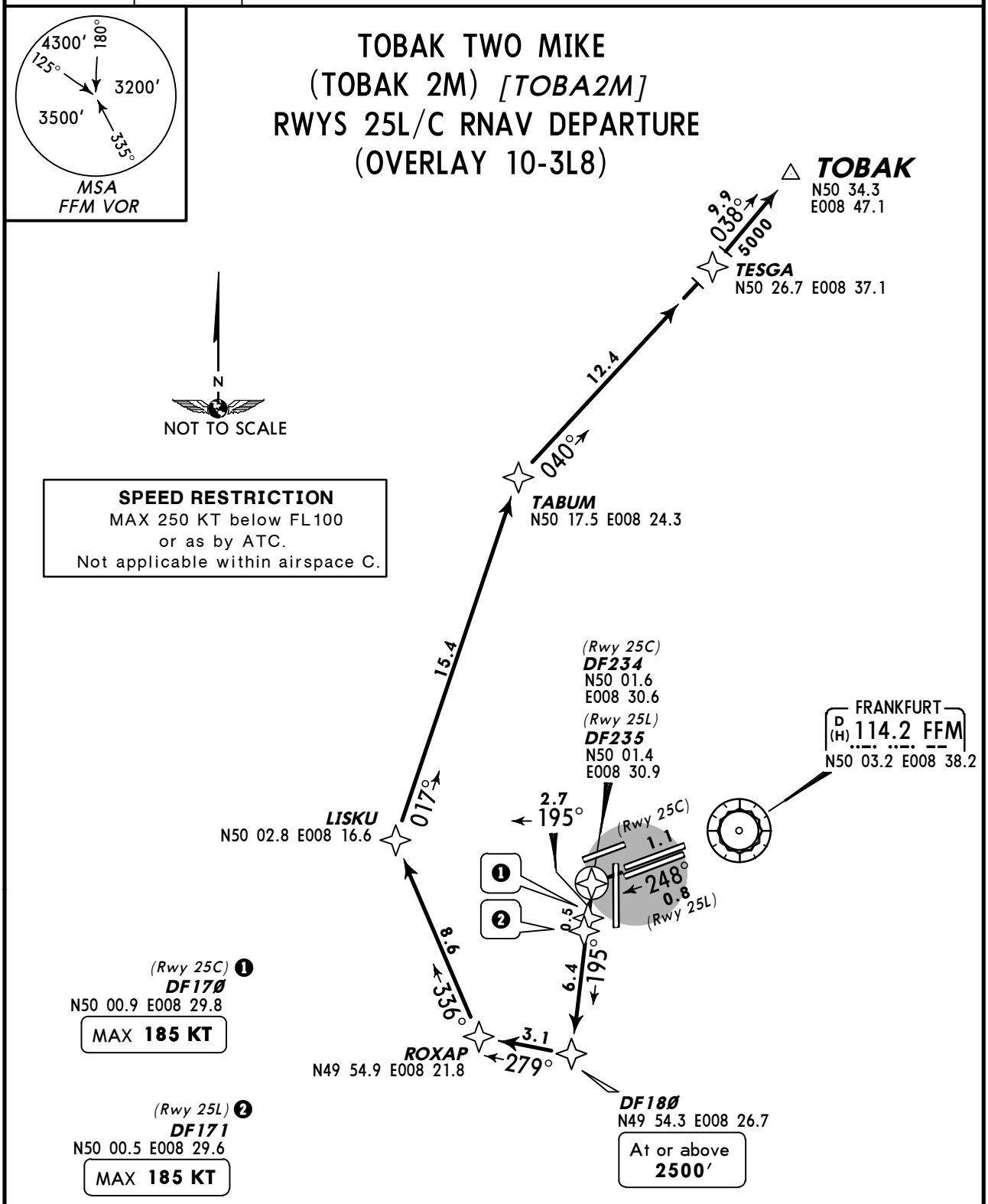
*LANGEN Radar	Apt Elev	
120.15	364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.



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.

Initial climb clearance **5000′**

ROUTING

(800+) - DF234 (25C)/DF235 (25L) - DF170 (25C; K185-)/DF171 (25L; K185-) - DF180 (2500′+) - ROXAP - LISKU - TABUM - TESGA - TOBAK.

CHANGES: RNAV SID TOBAK 2K withdrawn.

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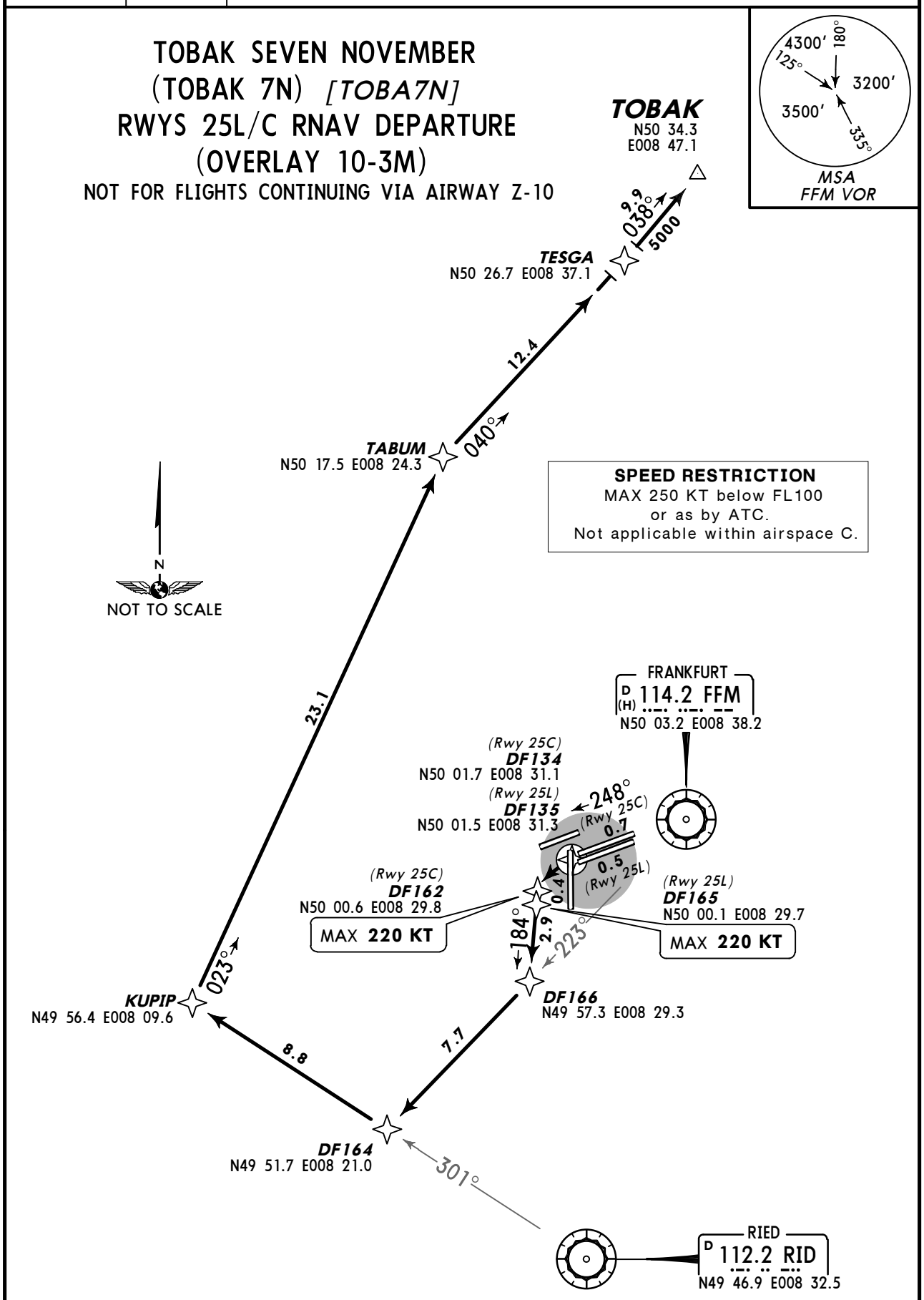
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. For departure designation refer to 10-1P pages.

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: None.

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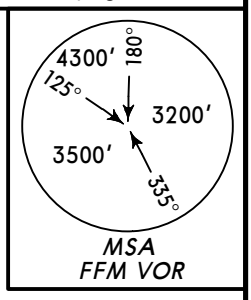
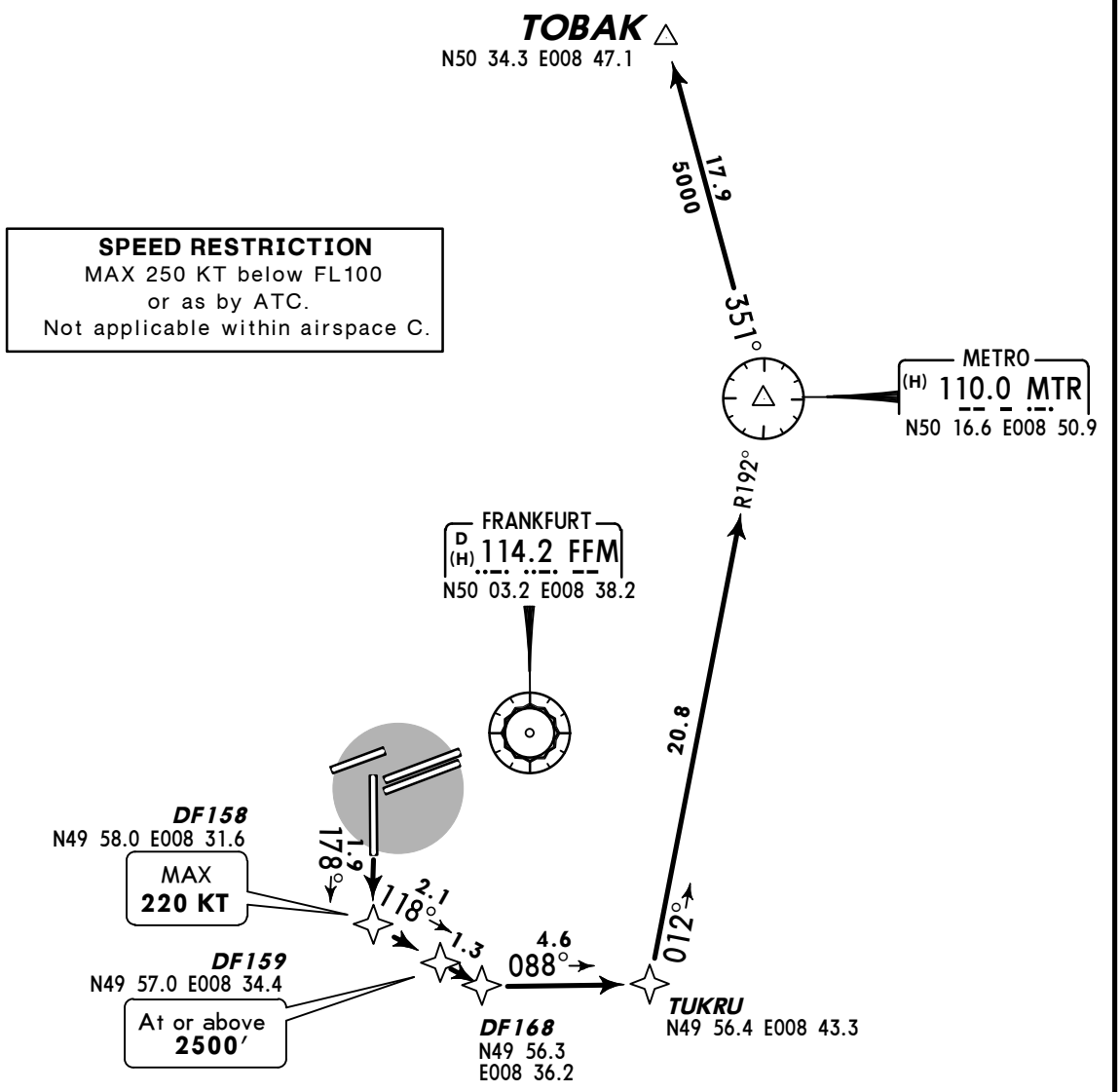
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and 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: Initial contact.

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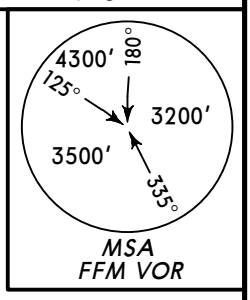
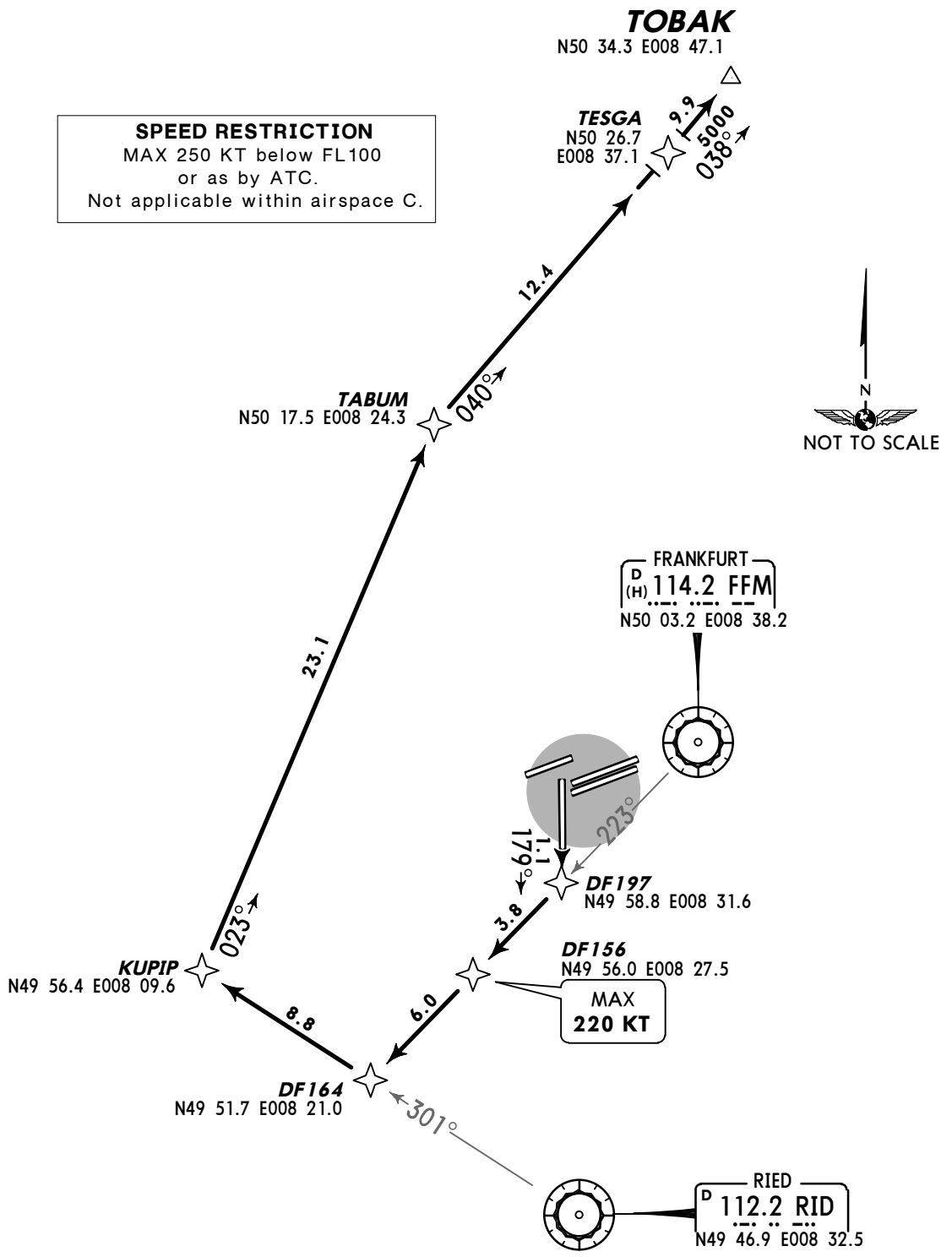
*LANGEN Radar 120.15	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

TOBAK SIX SIERRA (TOBAK 6S) *[TOBA6S]*
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



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 - TESGA - TOBAK.

CHANGES: RNAV SID renumbered; initial contact.

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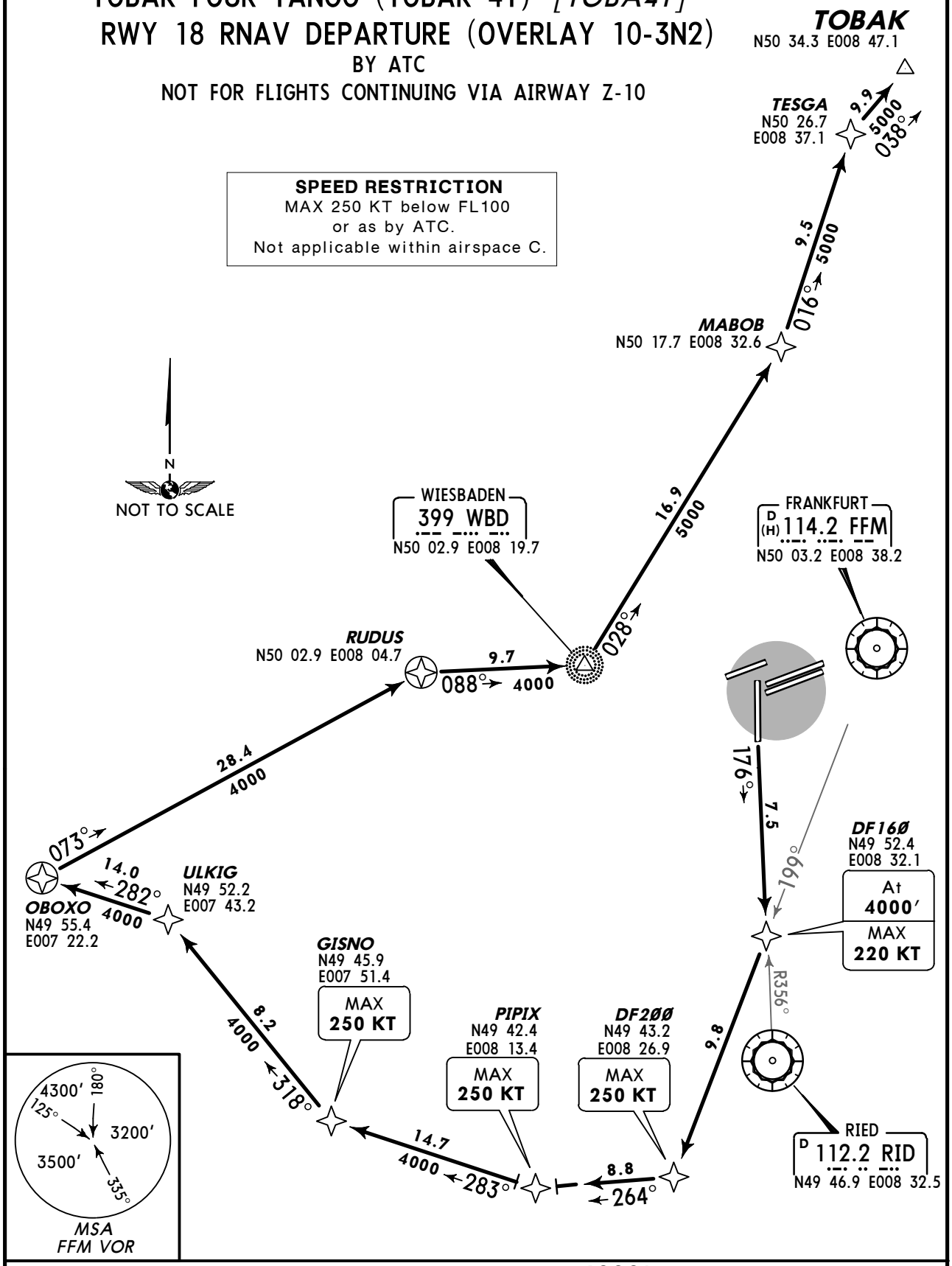
*LANGEN Radar 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

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: None.

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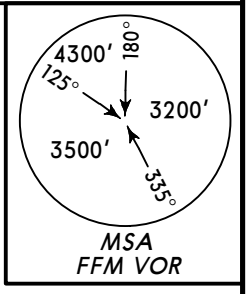
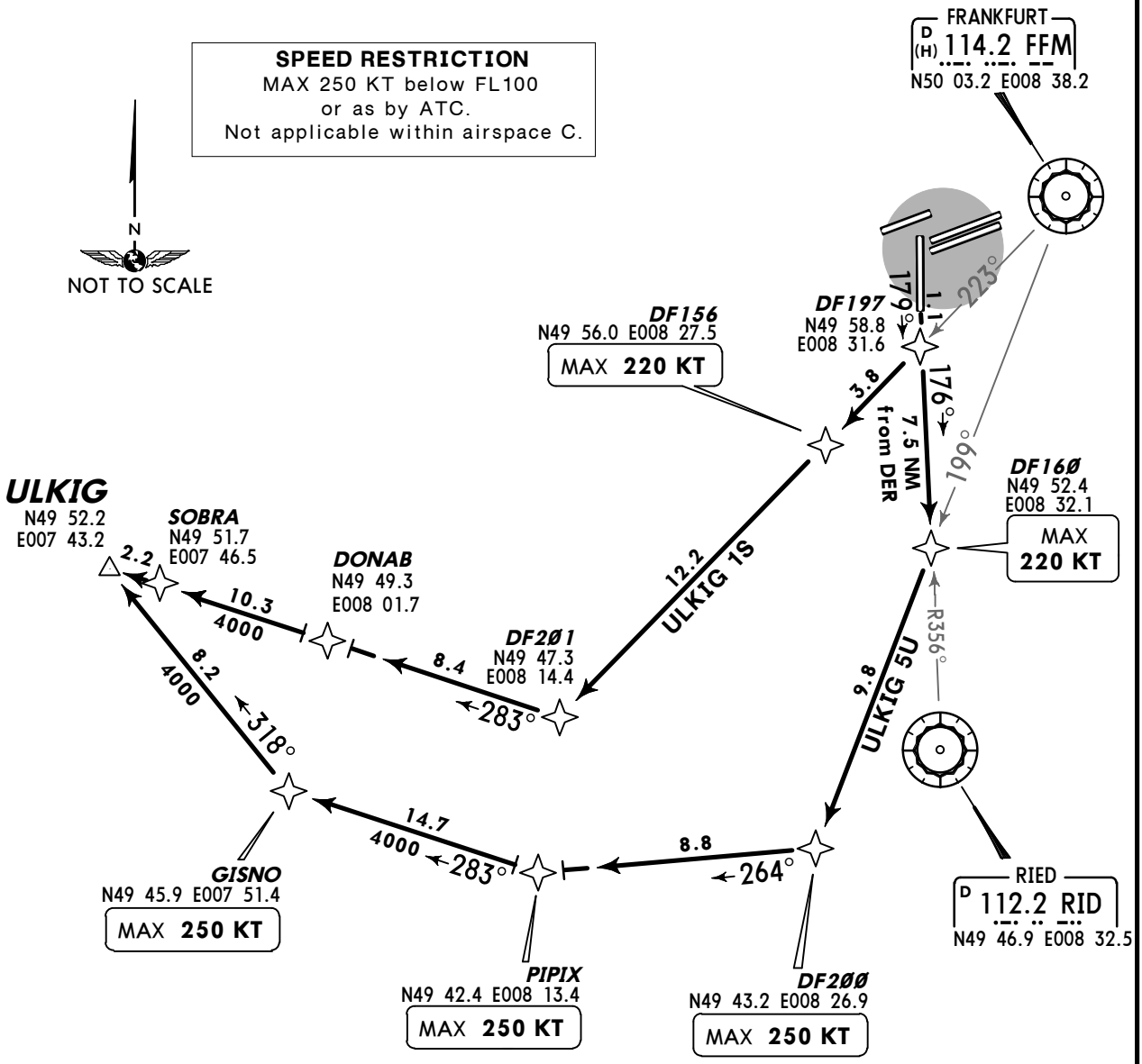
*LANGEN Radar ULKIG 1S 120.15 ULKIG 5U 136.12	Apt Elev 364′	Trans level: By ATC Trans alt: 5000′ 1. Contact LANGEN Radar when advised by Tower. 2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory. 3. EXPECT close-in obstacles. 4. Wind shears and increased turbulences must be expected when winds heavy. 5. For departure designation refer to 10-1P pages.

ULKIG ONE SIERRA (ULKIG 1S) *[ULKI1S]*
ULKIG FIVE UNIFORM (ULKIG 5U) *[ULKI5U]*
RWY 18 RNAV DEPARTURES (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′**

SID	ROUTING
ULKIG 1S Only to be used when landing direction is 25	(800′+) - DF197 - DF156 (K220-) - DF201 - DONAB - SOBRA - ULKIG.
ULKIG 5U	(800′+) - DF160 (K220-) - DF200 (K250-) - PIPIX (K250-) - GISNO (K250-) - ULKIG.

CHANGES: RNAV SID ULKIG 1S established.

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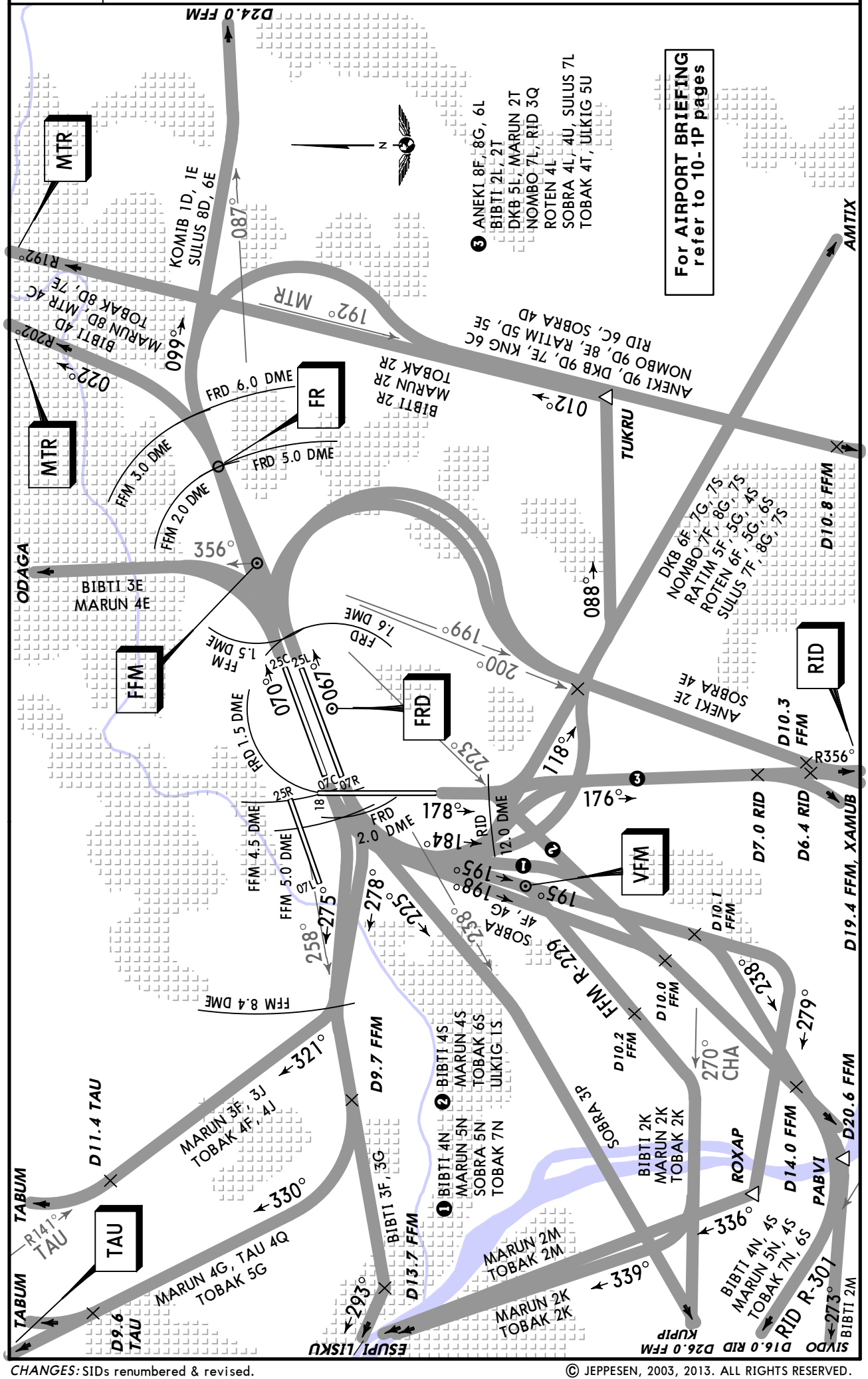
Apt Elev 364'

NOISE ABATEMENT



CHANGES: SIDs renumbered & revised.

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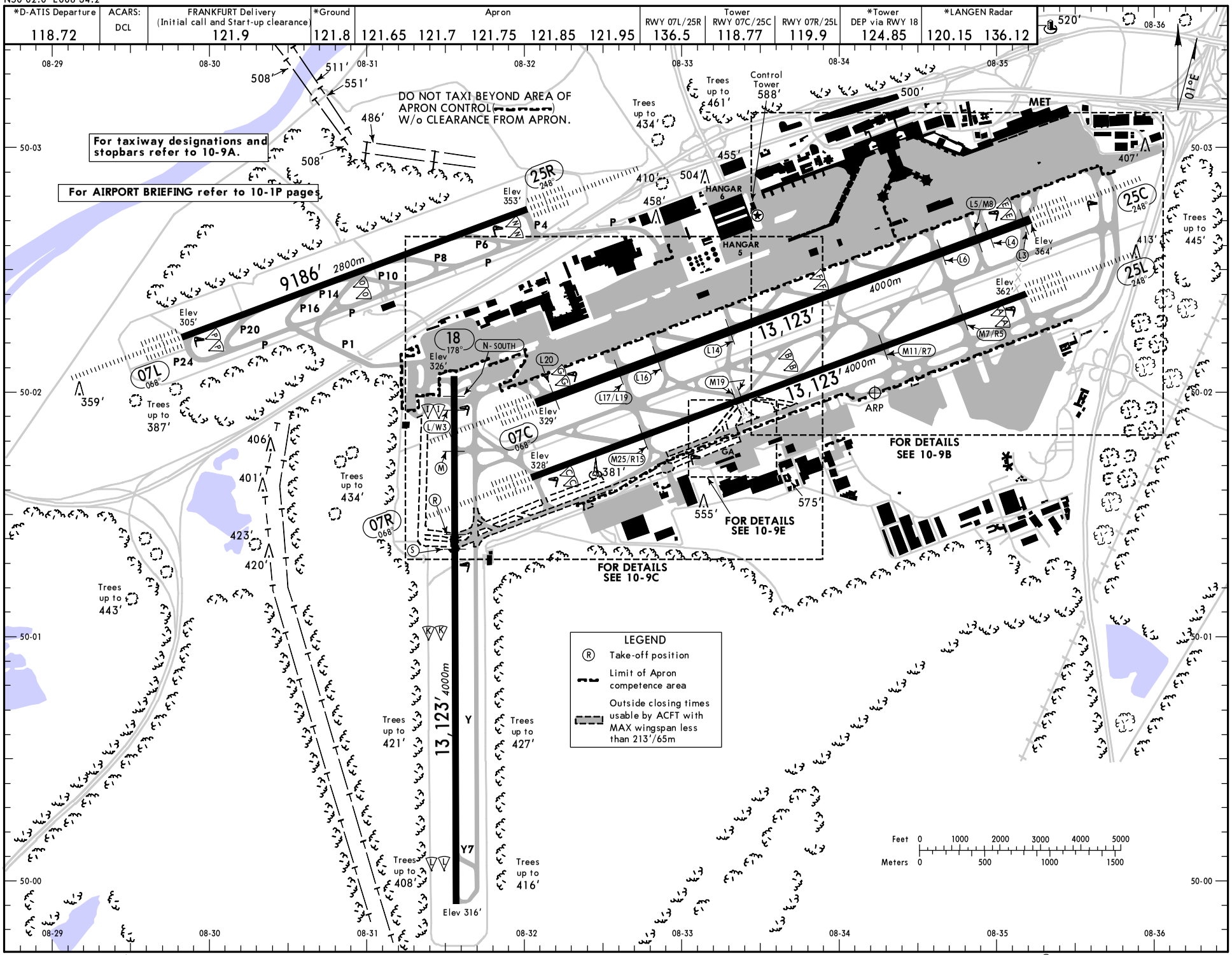
*D-ATIS Departure	ACARS:	FRANKFURT Delivery (Initial call and Start-up clearance)	*Ground	Apron					Tower RWY 07L/25R	Tower RWY 07C/25C	Tower RWY 07R/25L	*Tower DEP via RWY 18	*LANGEN Radar	
118.72	DCL	121.9	121.8	121.65	121.7	121.75	121.85	121.95	136.5	118.77	119.9	124.85	120.15	136.12



CHANGES: Twy to rwy 07R/25L.

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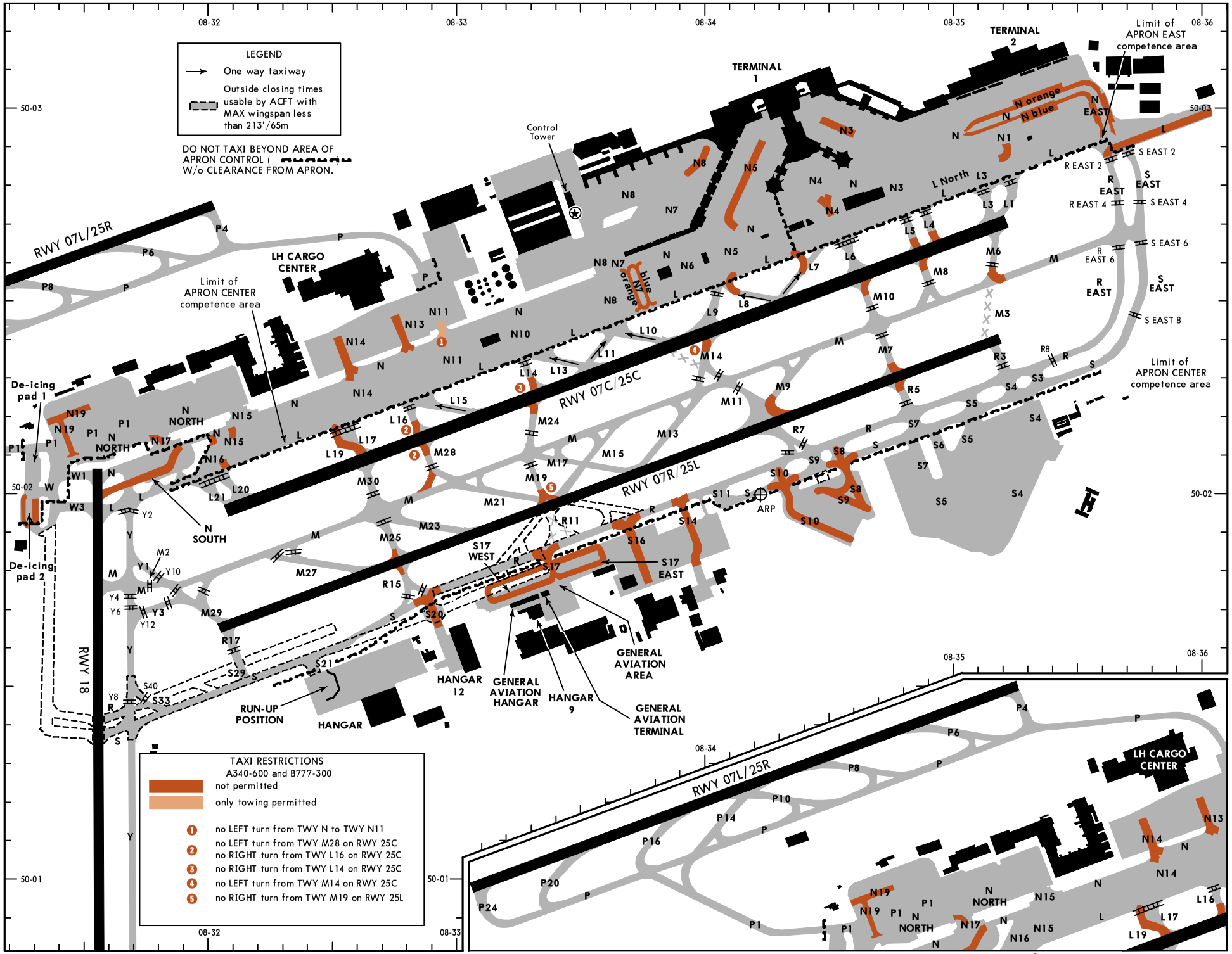

CHANGES: Twy to rwy 07R/25L.

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ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
07L	HIRL CL*(15m)* ALSF-II TDZ REIL PAPI-L (3.0°) RVR		8214′ *2504m*	NA	148′ *45m*
25R	HIRL CL*(15m)* ALSF-II TDZ REIL PAPI-R (3.2°) RVR		7971′ *2430m*		

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		12,090′ *3685m*	❶❶	148′ *45m*
❻ 25L	HIRL ❼CL ❽ALSF-II TDZ REIL PAPI-L (3.0°) ❿ RVR		11,909′ *3630m*		

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
❶❶ TAKE-OFF RUN AVAILABLE

RWY 07R:

From rwy head	13,123′(4000m)
position M25/R15	10,105′(3080m)
position M19	7644′(2330m)

RWY 25L:

From rwy head	13,123′(4000m)
position M7/R5	11,450′(3490m)
position M11/R7	9350′(2850m)
position M19	5607′(1709m)

18	HIRL *(60m)* CL *(15m)* RVR	NA		❶❷	148′ *45m*

❶❷ 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 ❶

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	*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 HUD required below 150m.

CHANGES: Lights. Usable lengths.

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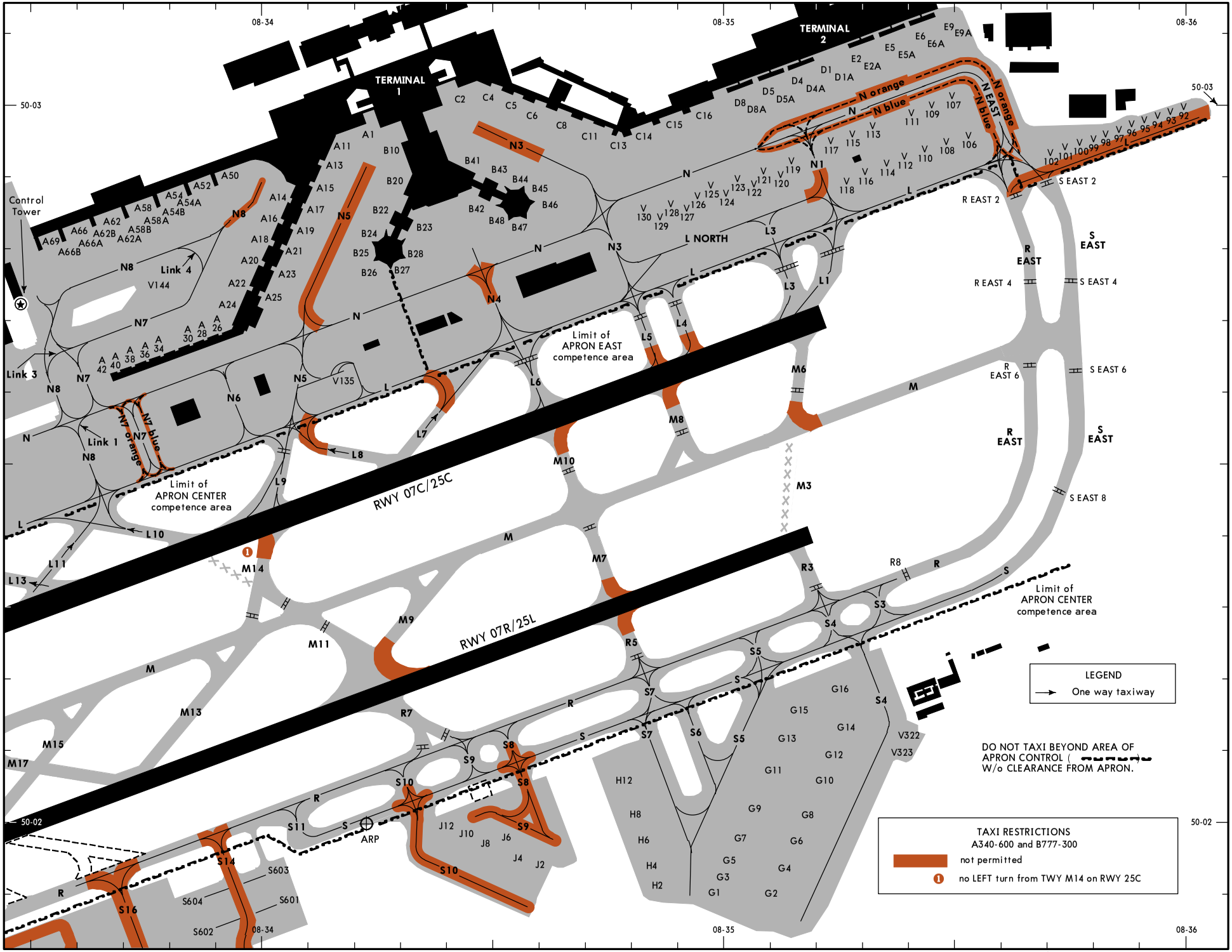
FRANKFURT/MAIN, GERMANY

FRANKFURT/MAIN



CHANGES: None.

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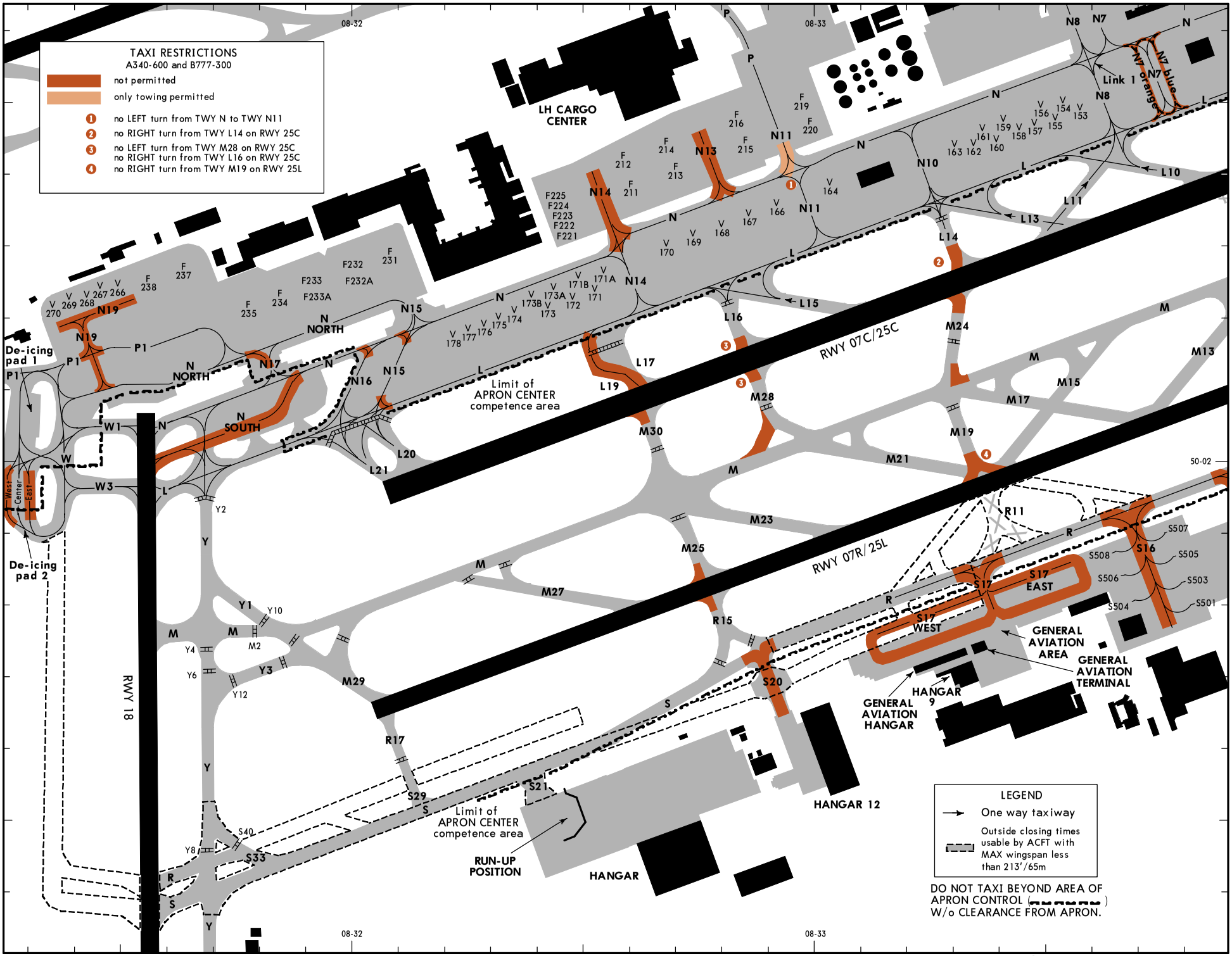

CHANGES: Twy to rwy 07R/25L.

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INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
A1	N50 03.0 E008 34.3	G5	N50 01.9 E008 35.0
A11	N50 03.0 E008 34.2	G6, G7	N50 02.0 E008 35.1
A13	N50 02.9 E008 34.2	G8	N50 02.0 E008 35.2
A14, A15	N50 02.9 E008 34.1	G9	N50 02.0 E008 35.1
A16	N50 02.8 E008 34.1	G10 thru G13	N50 02.1 E008 35.2
A17	N50 02.9 E008 34.1	G14	N50 02.1 E008 35.3
A18, A19	N50 02.8 E008 34.1	G15, G16	N50 02.2 E008 35.2
A20	N50 02.8 E008 34.0	H2	N50 01.9 E008 34.9
A21	N50 02.8 E008 34.1	H4	N50 01.9 E008 34.8
A22	N50 02.7 E008 34.0	H6, H8	N50 02.0 E008 34.8
A23	N50 02.8 E008 34.0	H12	N50 02.1 E008 34.8
A24, A25	N50 02.7 E008 34.0	J2, J4	N50 02.0 E008 34.6
A26 thru A30	N50 02.7 E008 33.9	J6 thru J10	N50 02.0 E008 34.5
A34	N50 02.7 E008 33.8	J12	N50 02.0 E008 34.4
A36	N50 02.6 E008 33.8	S/H401, S/H402	N50 01.8 E008 33.4
A38 thru A42	N50 02.6 E008 33.7	S403	N50 01.8 E008 33.5
A50, A52	N50 02.9 E008 33.9	S404	N50 01.8 E008 33.4
A54 thru A58B	N50 02.9 E008 33.8	S405	N50 01.8 E008 33.5
A62 thru A62B	N50 02.8 E008 33.7	S406	N50 01.8 E008 33.3
A66 thru A69	N50 02.8 E008 33.6	S407	N50 01.8 E008 33.5
B10, B20	N50 02.9 E008 34.3	S408	N50 01.8 E008 33.3
B22 thru B28	N50 02.8 E008 34.3	S409	N50 01.8 E008 33.6
B41 thru B43	N50 02.9 E008 34.5	S410	N50 01.8 E008 33.3
B44 thru B46	N50 02.9 E008 34.6	S411	N50 01.8 E008 33.6
B47	N50 02.8 E008 34.6	S412	N50 01.8 E008 33.3
B48	N50 02.9 E008 34.5	S413	N50 01.8 E008 33.6
C2, C4	N50 03.0 E008 34.5	S414	N50 01.8 E008 33.2
C5, C6	N50 03.0 E008 34.6	S416 thru S420	N50 01.7 E008 33.2
C8, C11	N50 03.0 E008 34.7	S501, S503	N50 01.8 E008 33.9
C13, C14	N50 03.0 E008 34.8	S504	N50 01.8 E008 33.7
C15	N50 03.0 E008 34.9	S505	N50 01.9 E008 33.8
C16	N50 03.0 E008 35.0	S506	N50 01.8 E008 33.6
D1 thru D4A	N50 03.1 E008 35.2	S507	N50 01.9 E008 33.8
D5 thru D8A	N50 03.0 E008 35.1	S508	N50 01.9 E008 33.6
E2, E2A	N50 03.1 E008 35.3	S601	N50 01.9 E008 34.1
E5 thru E6A	N50 03.1 E008 35.4	S602	N50 01.9 E008 33.9
E9, E9A	N50 03.1 E008 35.5	S603	N50 01.9 E008 34.1
F211	N50 02.4 E008 32.7	S604	N50 01.9 E008 33.9
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		
G1	N50 01.9 E008 35.0		
G2	N50 01.9 E008 35.1		
G3	N50 01.9 E008 35.0		
G4	N50 01.9 E008 35.1		

CHANGES: Stand S/H 402.

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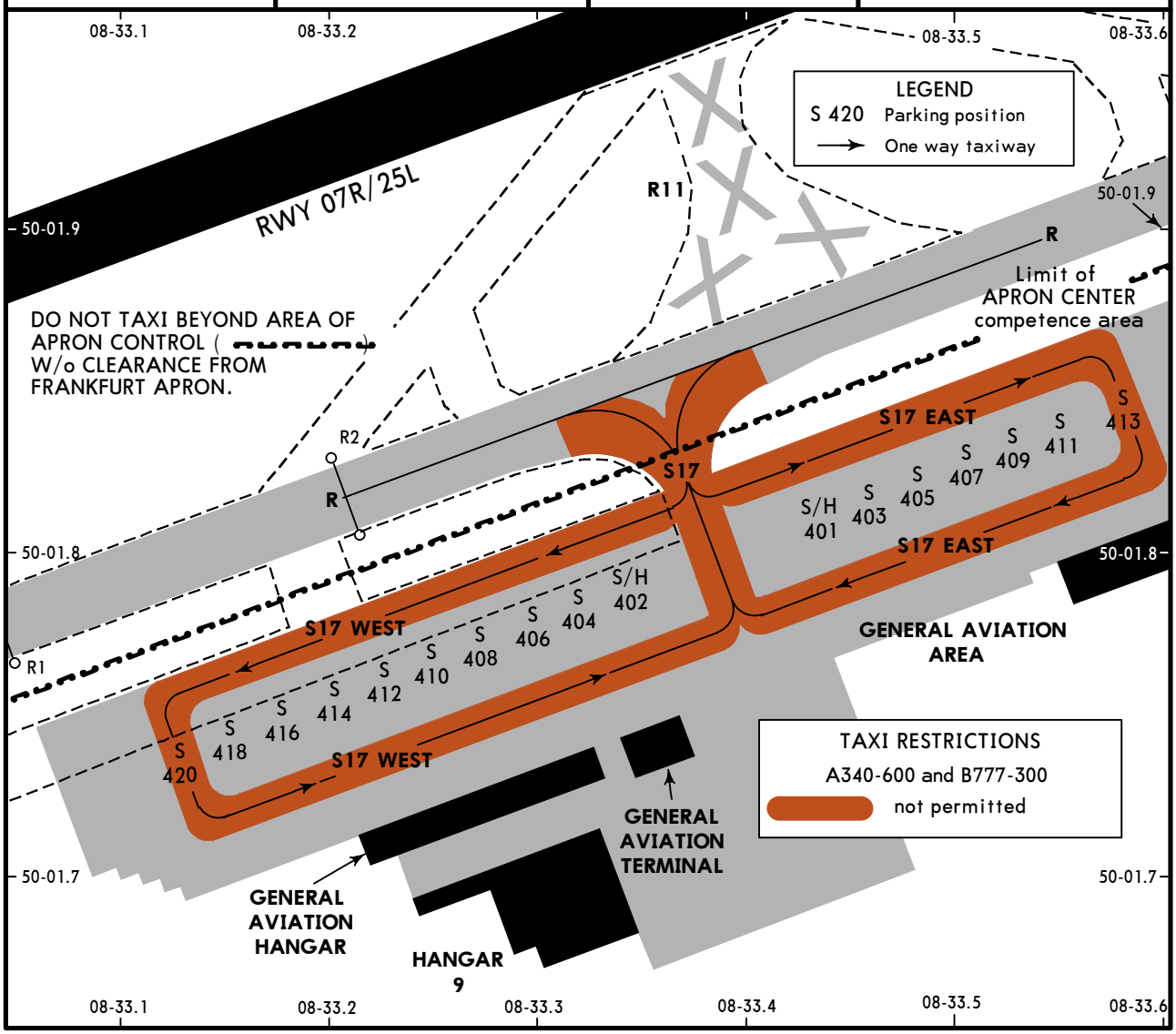
INS COORDINATES

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		
V135	N50 02.6 E008 34.2		
V144	N50 02.8 E008 33.8		
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: Stand S/H 402.

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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.

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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.

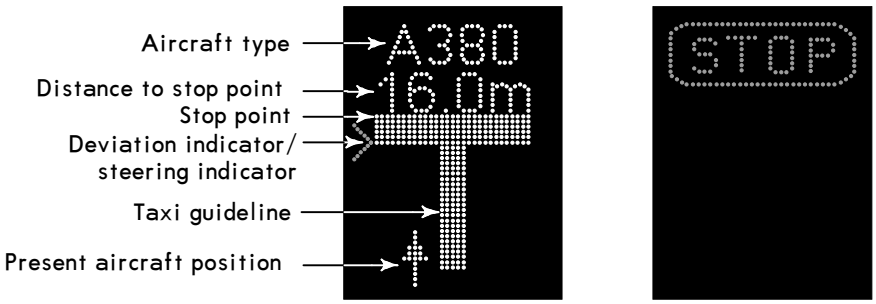
2.4. WAIT and VIEW BLOCK
If the view to the approaching aircraft is hindered, for instance due to contaminated laser lens or other objects reaching into the position, the aircraft may not continue taxiing without the aid of apron supervision.

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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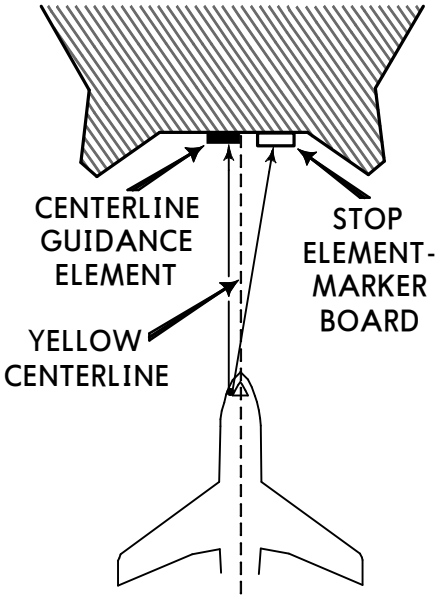
AIRCRAFT GUIDANCE FOR NOSE-IN STANDS (AGNIS)



GENERAL

The visual guidance system for nose-in parking positions AGNIS (Aircraft Guidance for Nose-In Stands) consists of the following elements:

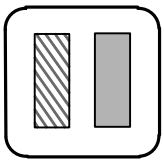
1. CENTERLINE GUIDANCE ELEMENT
2. YELLOW CENTERLINE
3. STOP ELEMENT - MARKER BOARD

> 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.

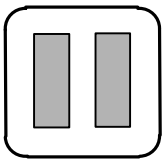
NOTE: Nose-in parking aircraft (on push-back position) have to use towing truck when leaving parking position.

CENTERLINE GUIDANCE ELEMENT

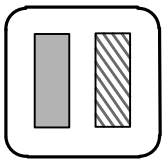
Approach the parking position along the yellow centerline so that both vertical slots in the Centerline Guidance Element show GREEN. Adjustments to the left or right shall always be made towards the GREEN.



LEFT of centerline.
Turn towards GREEN.
(RIGHT)



Aircraft on centerline.



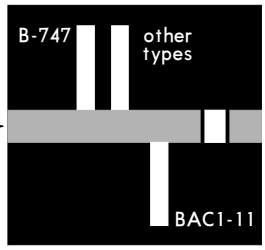
RIGHT of centerline.
Turn towards GREEN.
(LEFT)

STOP ELEMENT - MARKER BOARD

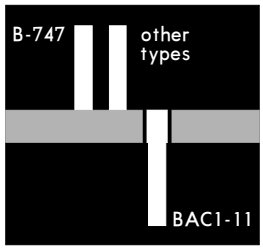
The aircraft is stopped at the correct position by means of the Stop Element. When the tubular light, visible through the horizontal slot in the marker board, registers in line with the appropriate vertical reference mark, the aircraft has reached the correct stopping position.

> 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.

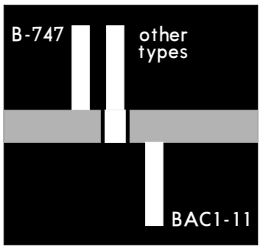
AGNIS CENTRE LINE GUIDANCE STOP ELEMENT - MARKER BOARD



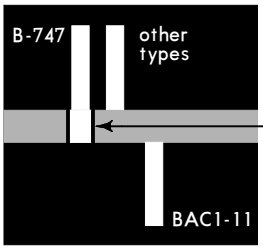
All types continue taxiing.



BAC 1-11 stop. Other types and B-747 continue taxiing.



Other types stop. B-747 continue taxiing.



B-747 stop.

SIGHTING SLOT

LIGHT TUBE

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EDDF/FRA
FRANKFURT/MAIN

12 OCT 12
Eff 18 Oct
(11-1)

JEPPESEN

FRANKFURT/MAIN, GERMANY
MISSED APCH CLIMB GRAD MIM 4.6%
ILS Z Rwy 07L

BRIEFING STRIP ™

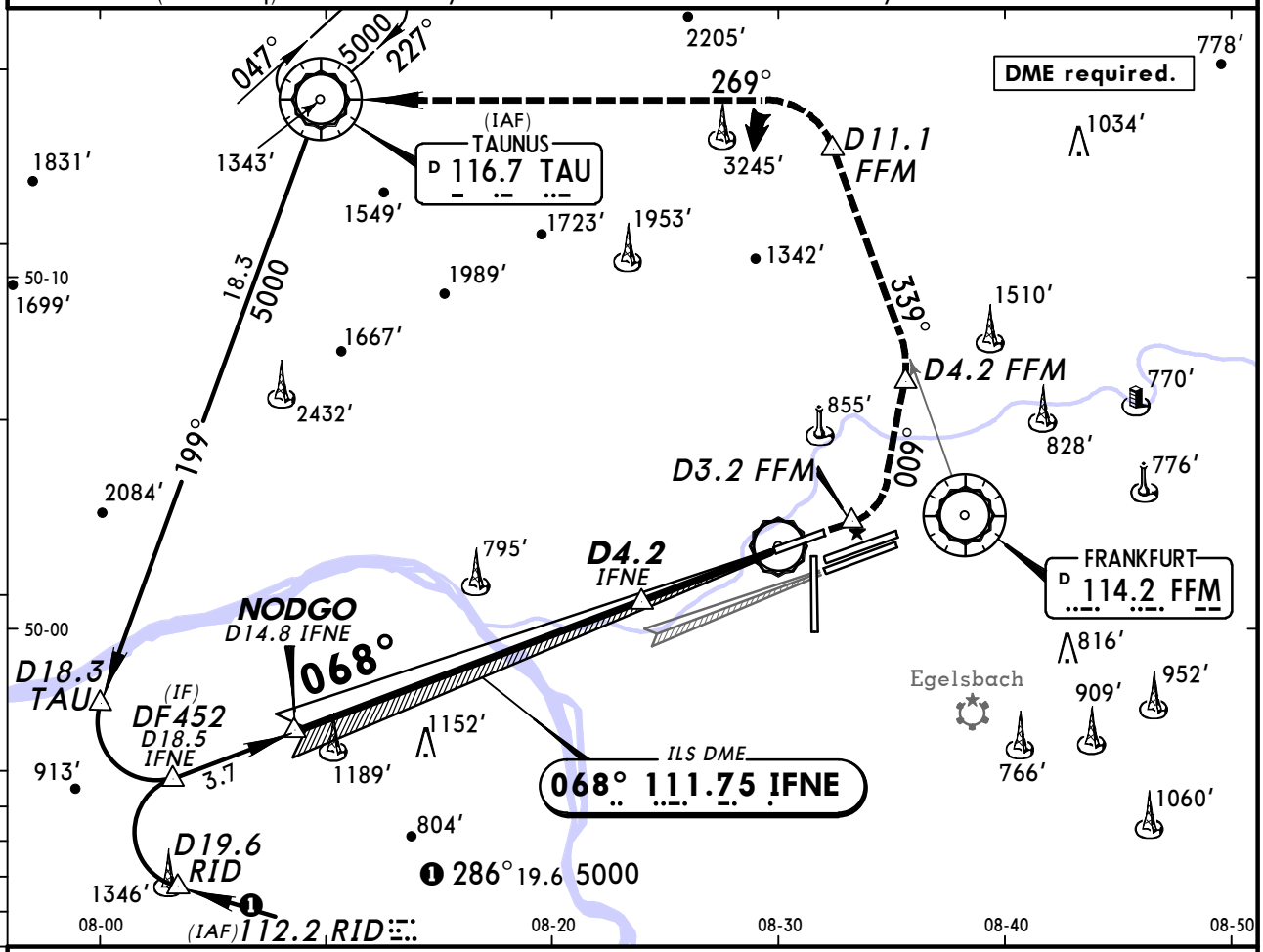
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	136.5	121.8

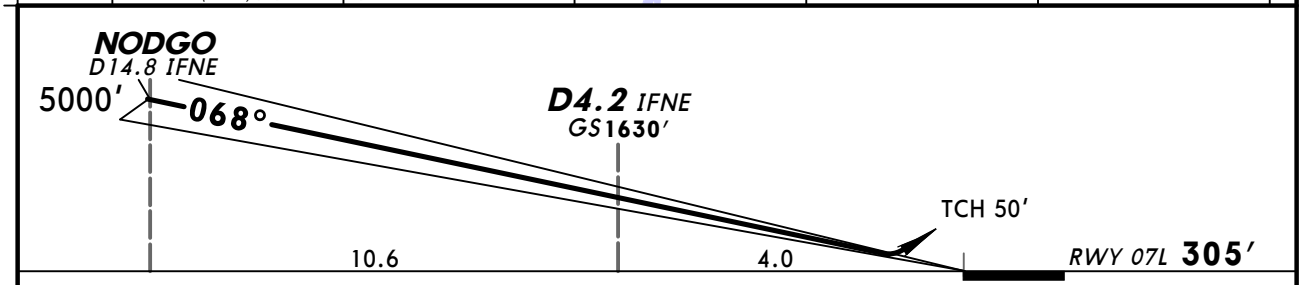
LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 364′
IFNE **111.75**	**068°**	**D4.2 IFNE** **1630′** (1325′)	Refer to Minimums	RWY **305′**

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: 4300′ (125°), 3200′ (180°), 3500′ (335°)

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 | 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′)

PANS OPS

	FULL	Limited	ALS out
A	RVR 550m	RVR 750m	RVR 1200m
B			
C			
D			

CHANGES: Procedure title. Procedure.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN

12 OCT 12
Eff 18 Oct

(11-1A)

FRANKFURT/MAIN, GERMANY
❶ CAT II/III ILS Z Rwy 07L

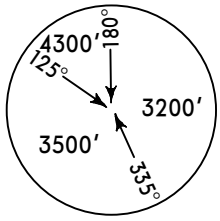
BRIEFING STRIP

*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

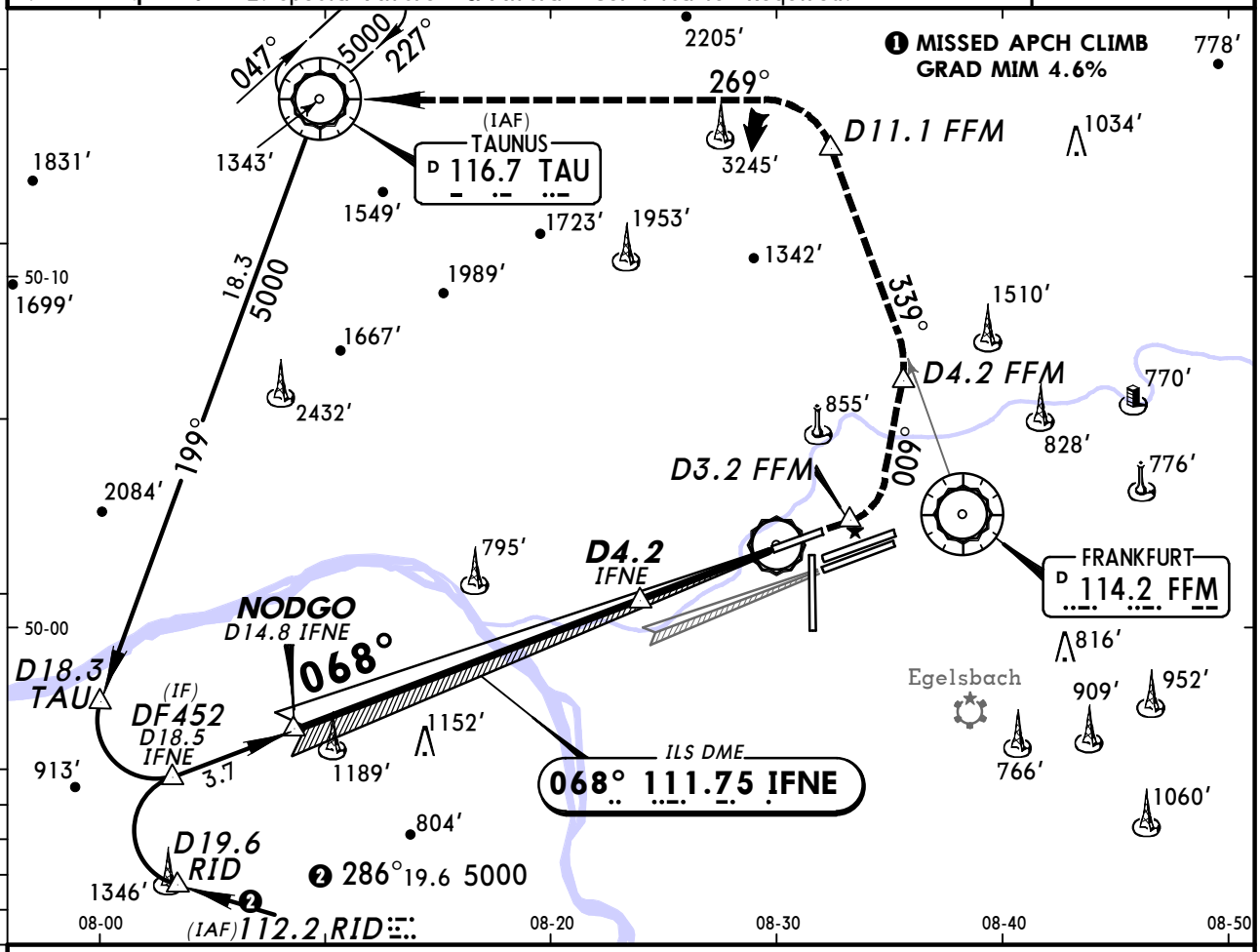
LOC	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev 364′
IFNE **111.75**	**068°**	**D4.2 IFNE** **1630′** (1325′)	Refer to Minimums	RWY **305′**

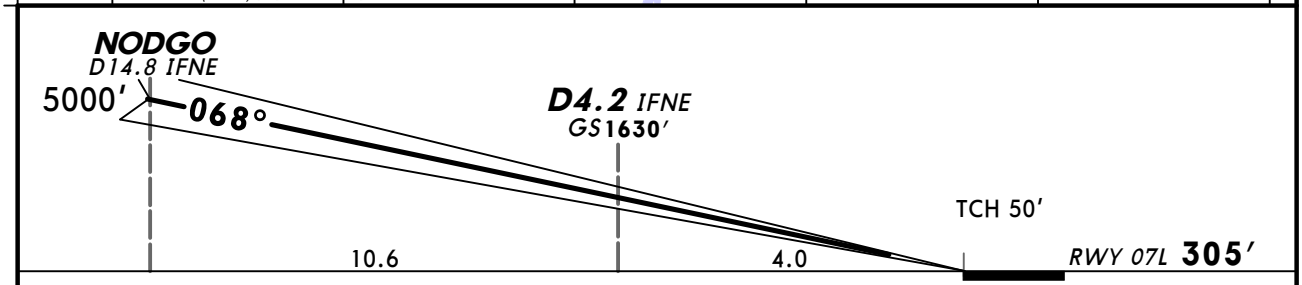
MISSED APCH: Climb STRAIGHT AHEAD. At D3.2 FFM turn LEFT onto 009°. At D4.2 FFM turn LEFT to intercept R-339 FFM. At D11.1 FFM turn LEFT to intercept R-089 inbound TAU VOR climbing to 5000′.
In case of Missed apch inform ATC immediately.

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.



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

Inform **ATC**

D3.2 FFM ↑

009° ↰ LT

D4.2 FFM

PANS OPS

Standard STRAIGHT-IN LANDING RWY **07L**

CAT IIIA ILS	CAT II ILS Missed apch climb gradient mim 4.6% up to 3500′	
DH **50′**	A: **RA 100′** DA(H) **405′** (100′) B: **RA 106′** DA(H) **412′** (107′) C: **RA 119′** DA(H) **425′** (120′)	D: **RA 131′** DA(H) **438′** (133′)
RVR *200m*	RVR *300m* ❶	RVR *400m*

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

CHANGES: Procedure title. Procedure.

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EDDF/FRA
FRANKFURT/MAIN

12 OCT 12
Eff 18 Oct
(11-2)

JEPPESEN

FRANKFURT/MAIN, GERMANY
MISSED APCH CLIMB GRAD MIM 4.6%
ILS Y Rwy 07L

BRIEFING STRIP ™

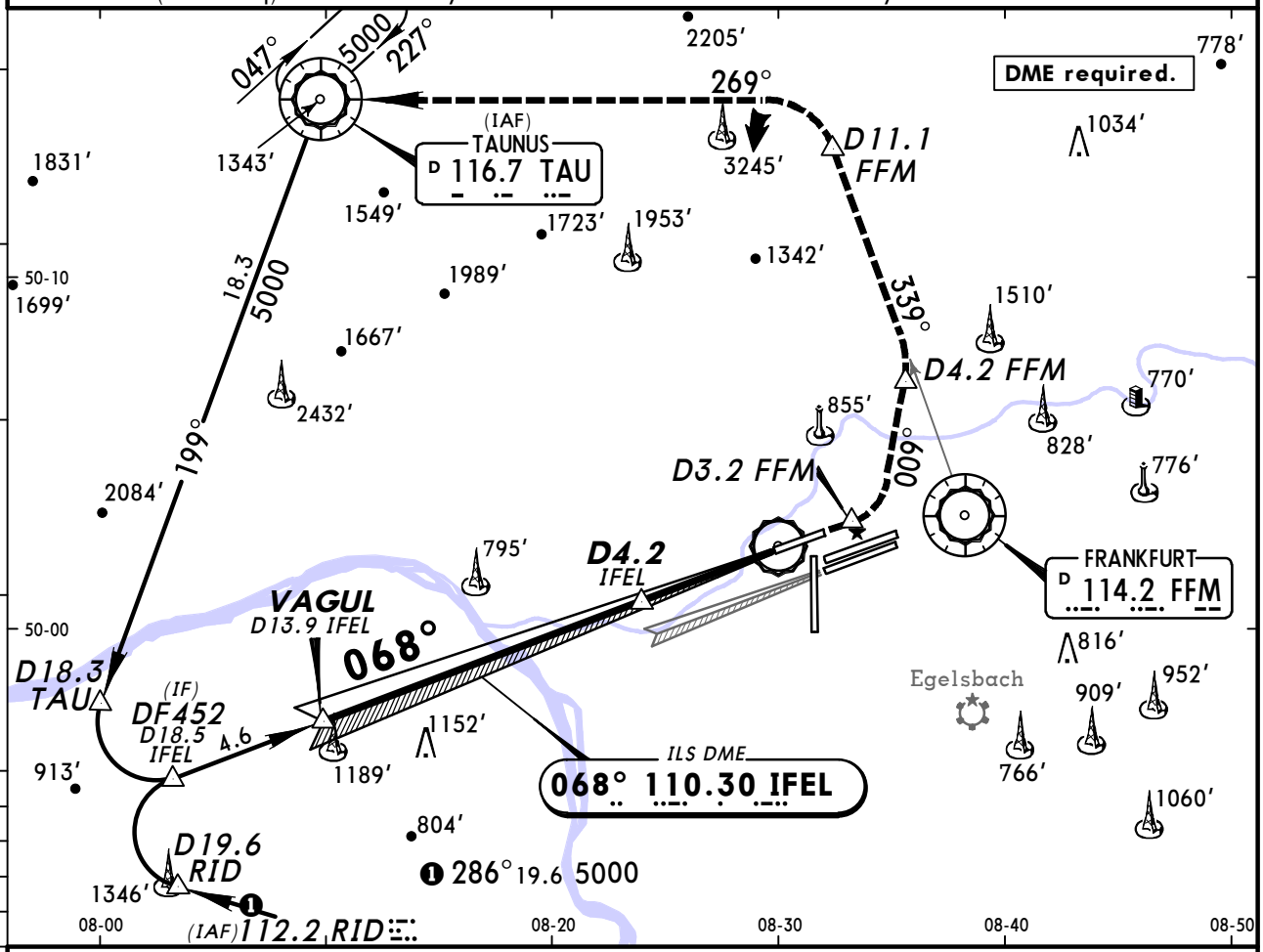
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	136.5	121.8

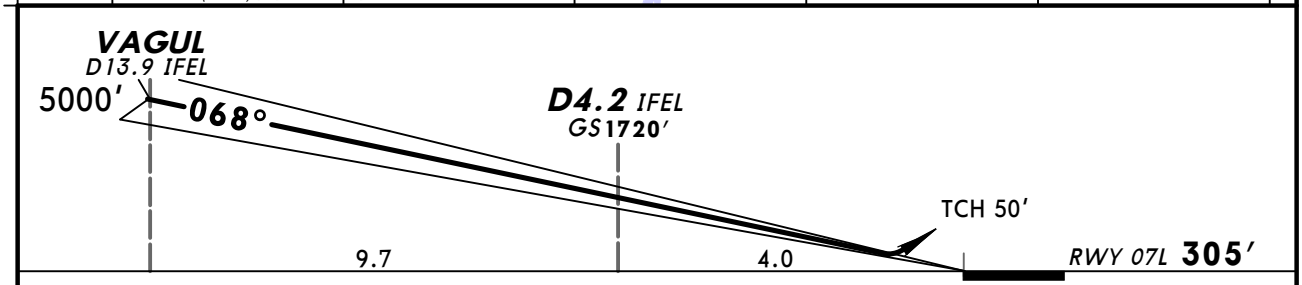
LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 364′
IFEL **110.30**	**068°**	**D4.2 IFEL** **1720′** (1415′)	Refer to Minimums	RWY **305′**

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: 4300′ (125°), 3200′ (180°), 3500′ (335°)

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 3.20°	396	510	566	679	793	906

ALSF-II
REIL
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′)

PANS OPS

	FULL	Limited	ALS out
A	RVR 550m	RVR 750m	RVR 1200m
B			
C			
D			

CHANGES: New procedure.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN 12 OCT 12 (11-3) Eff 18 Oct

FRANKFURT/MAIN, GERMANY
ILS or LOC Rwy 07C

BRIEFING STRIP

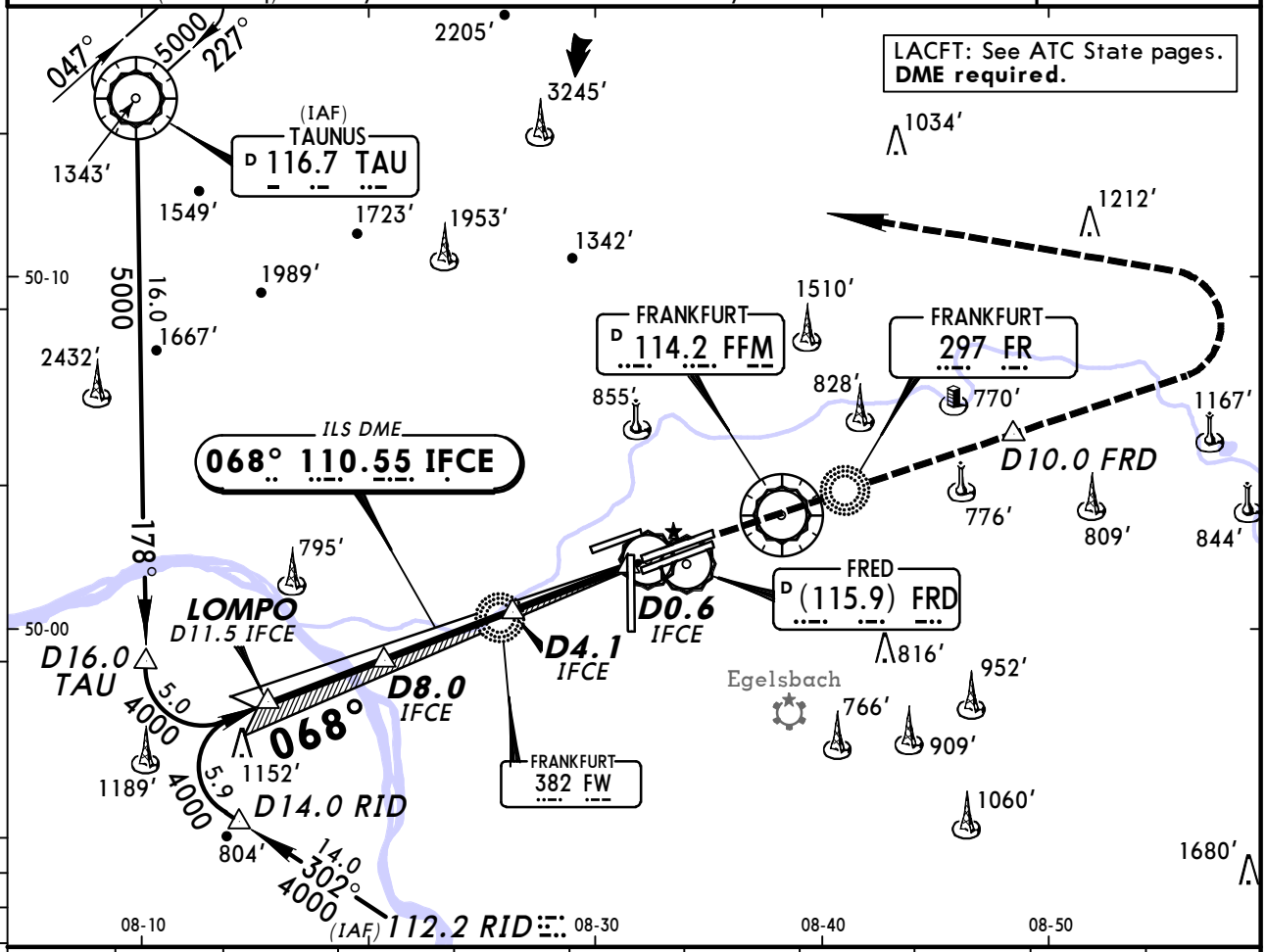
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

LOC IFCE	Final Apch Crs	GS	ILS DA(H)	Apt Elev 364′
110.55	068°	D4.1 IFCE 1630′ (1301′)	Refer to Minimums	RWY 329′

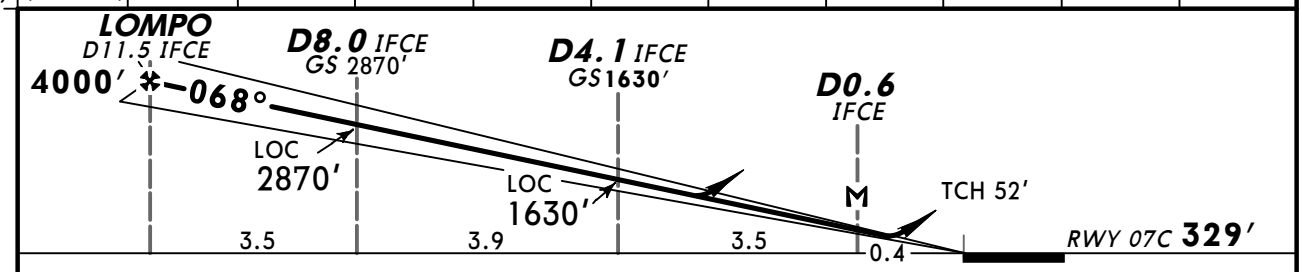
MISSED APCH: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

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°)



LOC (GS out)	IFCE DME	11.0	10.0	9.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3820′	3510′	3190′	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 D0.6 IFCE						

ALSF-II, REIL, PAPI

D10.0 FRD ↑ whichever is later ↑ 5000′ via FR 297

Standard STRAIGHT-IN LANDING RWY 07C

PANS OPS

	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.

CHANGES: Chart reindexed. ILS DME IFCE. Procedure.

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EDDF/FRA
FRANKFURT/MAIN

12 OCT 12 (11-3A) Eff 18 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
CAT II/III ILS Rwy 07C

BRIEFING STRIP

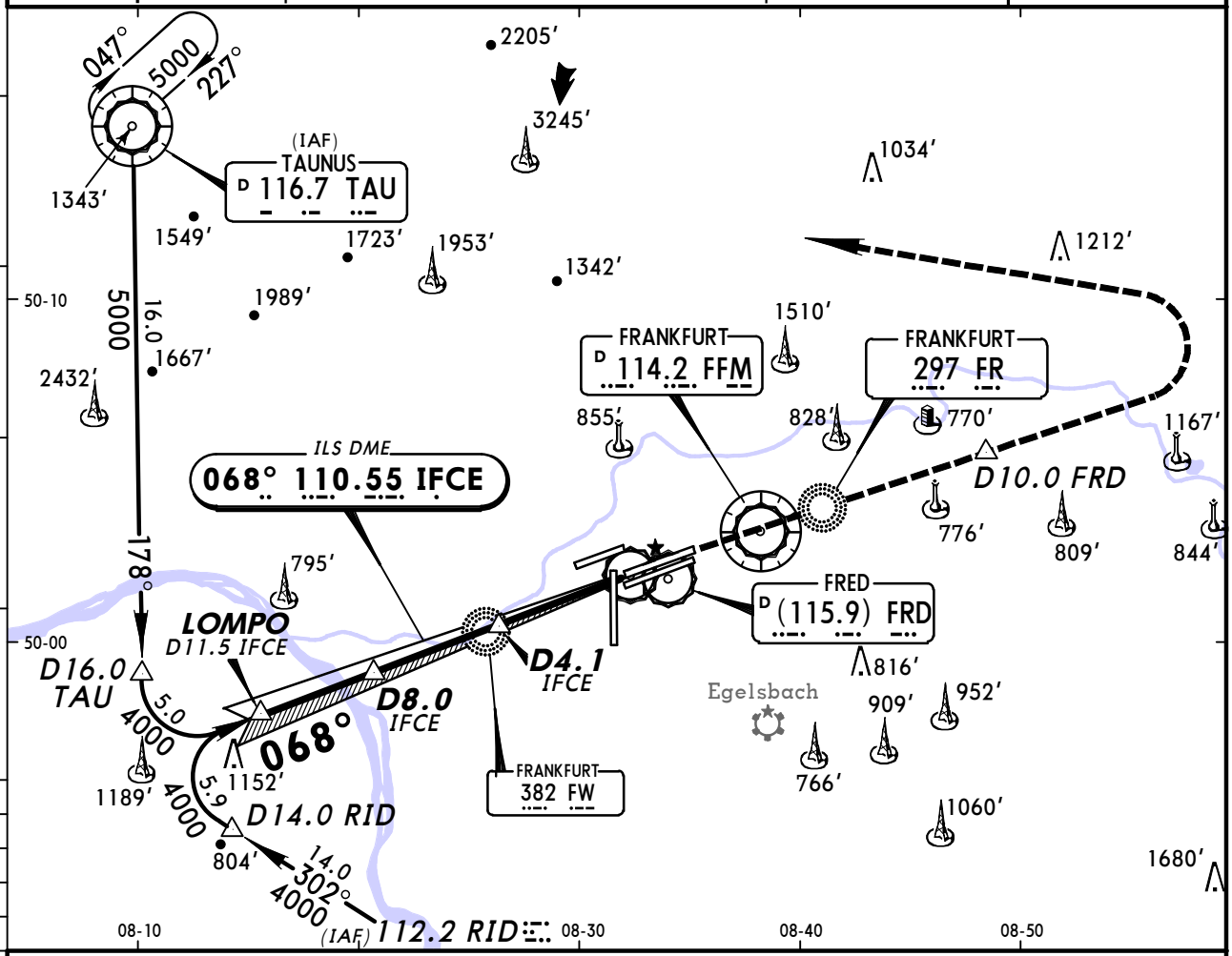
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

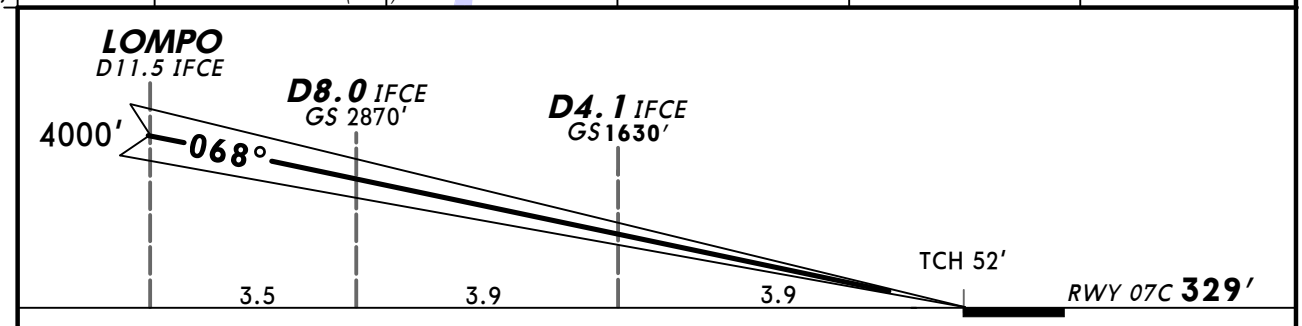
LOC IFCE	Final Apch Crs	GS	CAT II & IIIA ILS	Apt Elev 364′
110.55	068°	D4.1 IFCE 1630′ (1301′)	Refer to Minimums	RWY 329′

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: 4300′ (125°–180°), 3200′ (180°–335°), 3500′ (335°–125°)





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 5000′ whichever is later via FR 297

PANS OPS

Standard STRAIGHT-IN LANDING RWY **07C**

CAT IIIA ILS	CAT II ILS
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.

CHANGES: Chart reindexed. ILS DME IFCE. Procedure.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN FRANKFURT/MAIN, GERMANY

12 OCT 12 (11-4) Eff 18 Oct

ILS or LOC Rwy 07R

BRIEFING STRIP ™

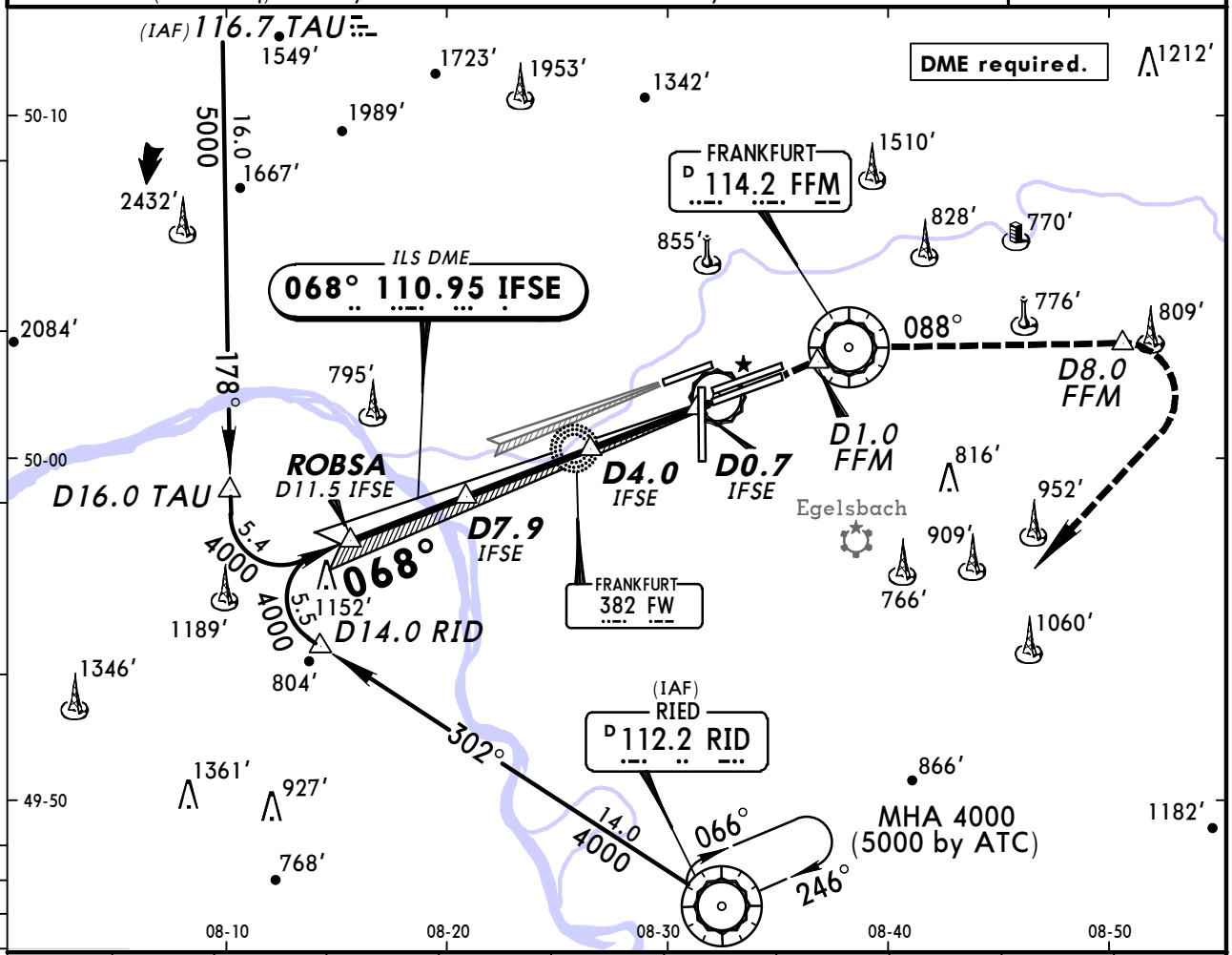
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

LOC IFSE	Final Apch Crs	GS D4.0 IFSE	ILS DA(H)	Apt Elev 364′
110.95	068°	1590′ (1262′)	528′ (200′)	RWY 328′

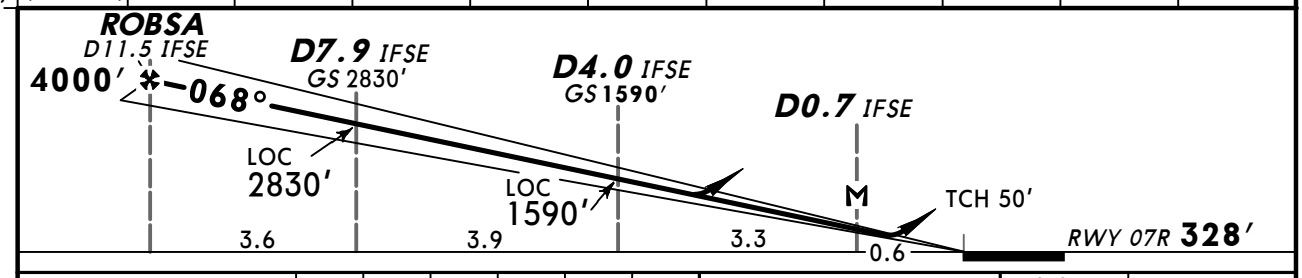
MISSED APCH: Climb STRAIGHT AHEAD to D1.0 inbound FFM, then turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′.

Alt Set: hPa(IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′

MSA FFM VOR: 4300′ 125° 180°; 3200′; 3500′; 335°



LOC (GS out)	IFSE DME	11.0	10.0	9.0	8.0	7.0	6.0	5.0	3.0	2.0
	ALTITUDE	3820′	3500′	3180′	2870′	2550′	2230′	1910′	1270′	960′



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 IFSE						

ALSF-II; REIL; PAPI

D1.0 inbound FFM

Standard STRAIGHT-IN LANDING RWY 07R

	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					

PANS OPS

CHANGES: Chart reindexed.

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EDDF/FRA
FRANKFURT/MAIN

12 OCT 12 (11-4A) Eff 18 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
CAT II/III ILS Rwy 07R

BRIEFING STRIP ™

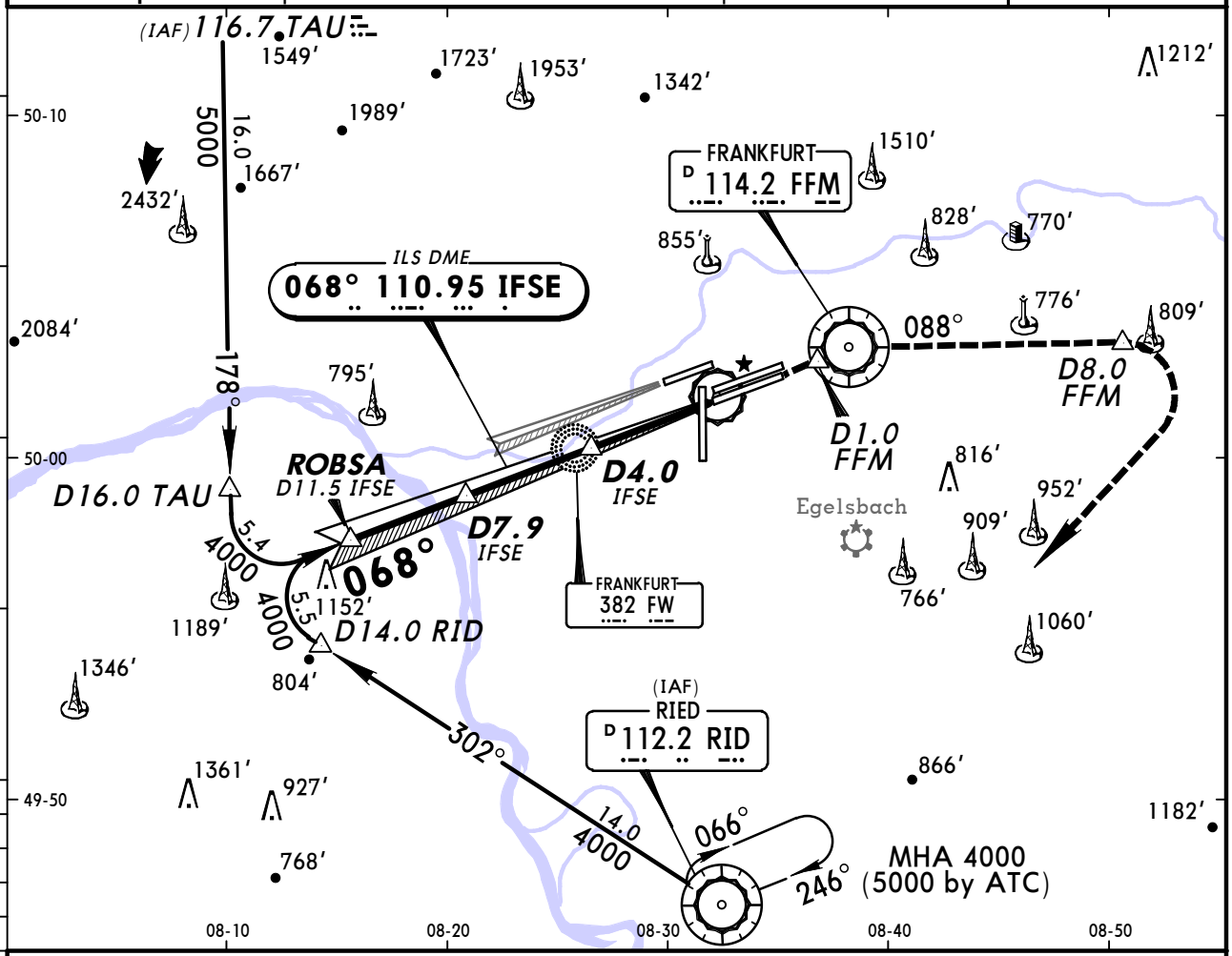
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

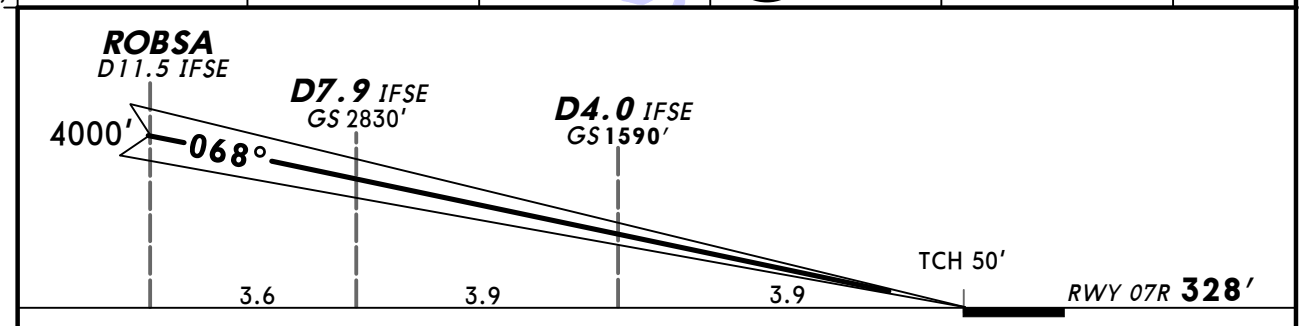
LOC IFSE	Final Apch Crs	GS D4.0 IFSE	CAT II & IIIA ILS Refer to Minimums	Apt Elev 364′ RWY 328′
110.95	068°	1590′ (1262′)		

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: 4300′ (125°–180°), 3200′ (180°–335°), 3500′ (335°–125°)





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

ALSF-II
REIL
PAPI

D1.0 inbound FFM

PANS OPS

Standard STRAIGHT-IN LANDING RWY **07R**

CAT IIIA ILS	CAT II ILS
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.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN 12 OCT 12 (11-5) Eff 18 Oct

FRANKFURT/MAIN, GERMANY
ILS or LOC Rwy 25L

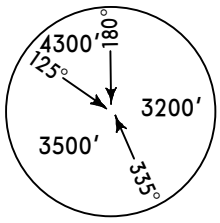
BRIEFING STRIP

*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

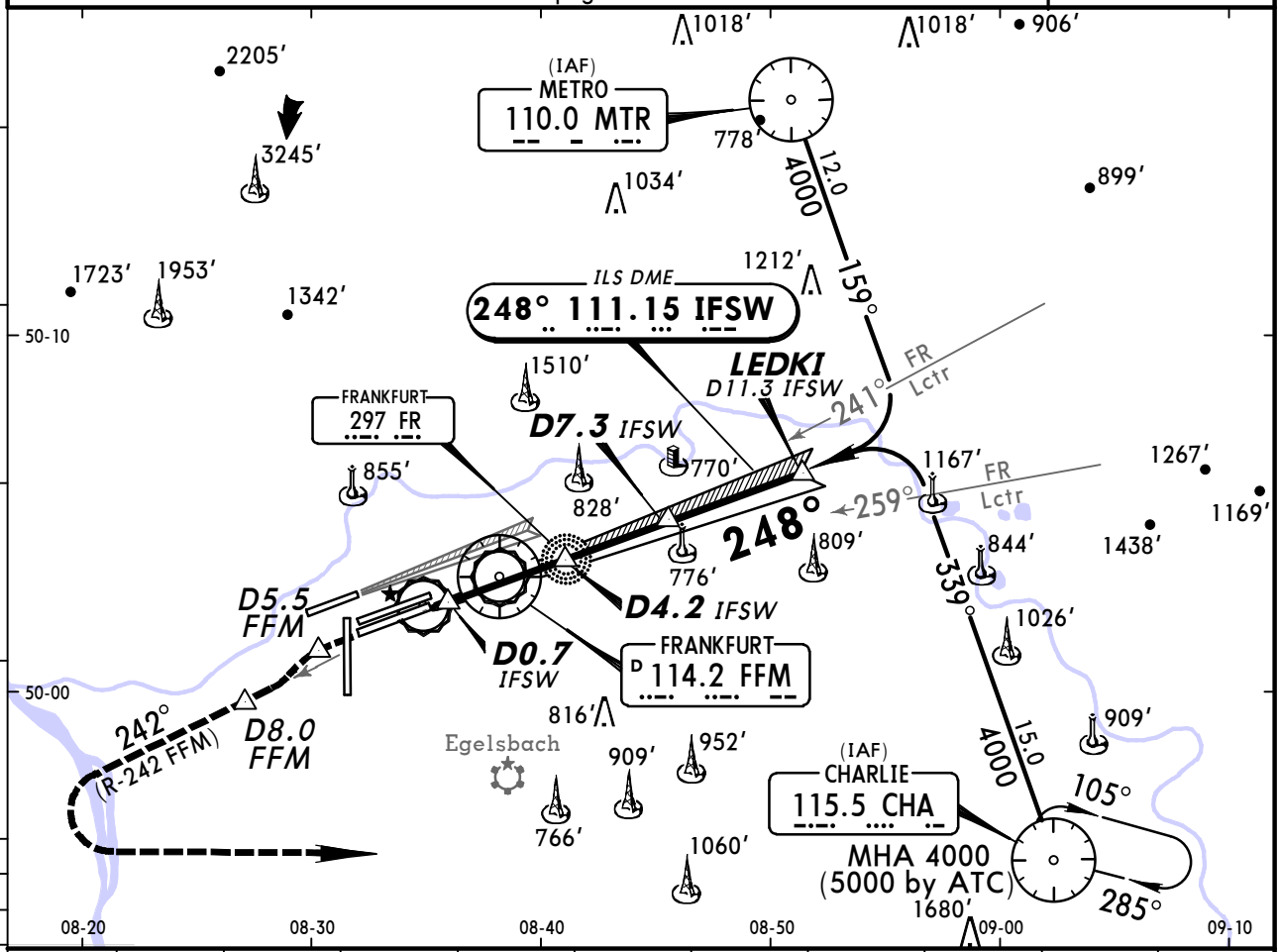
LOC IFSW	Final Apch Crs	GS D4.2 IFSW	ILS DA(H) Refer to Minimums	Apt Elev 364′ RWY 362′
111.15	248°	1710′ (1348′)		

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′.

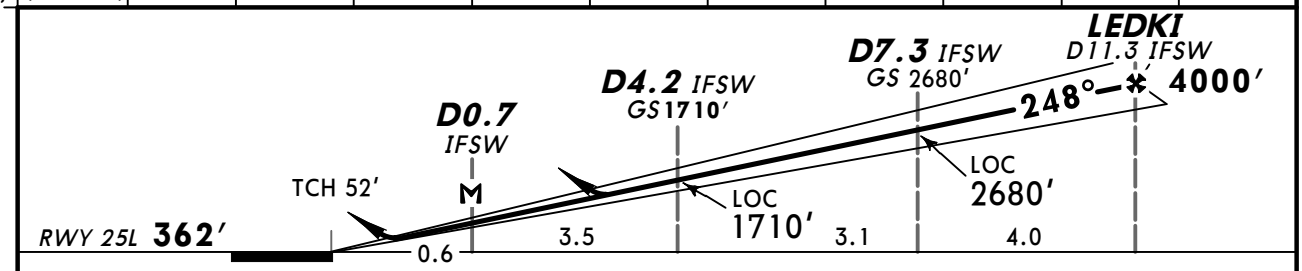
Alt Set: hPa(IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′
1. **DME required.** 2. CAUTION: Independent taxiing acft on Twy R- and S-EAST underneath short final. 3. LACFT: See ATC State pages.



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°	372	478	531	637	743	849
MAP at D0.7 IFSW						

ALSF-II
REIL
PAPI

D5.5 FFM

Standard STRAIGHT-IN LANDING RWY 25L

	ILS 1 DA(H) 562′(200′)			LOC (GS out) 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					

PANS OPS

1 LACFT: DA(H) 580′(218′).

CHANGES: Chart reindexed.

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EDDF/FRA
FRANKFURT/MAIN

12 OCT 12 (11-5A) Eff 18 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY

CAT II/III ILS Rwy 25L

BRIEFING STRIP ™

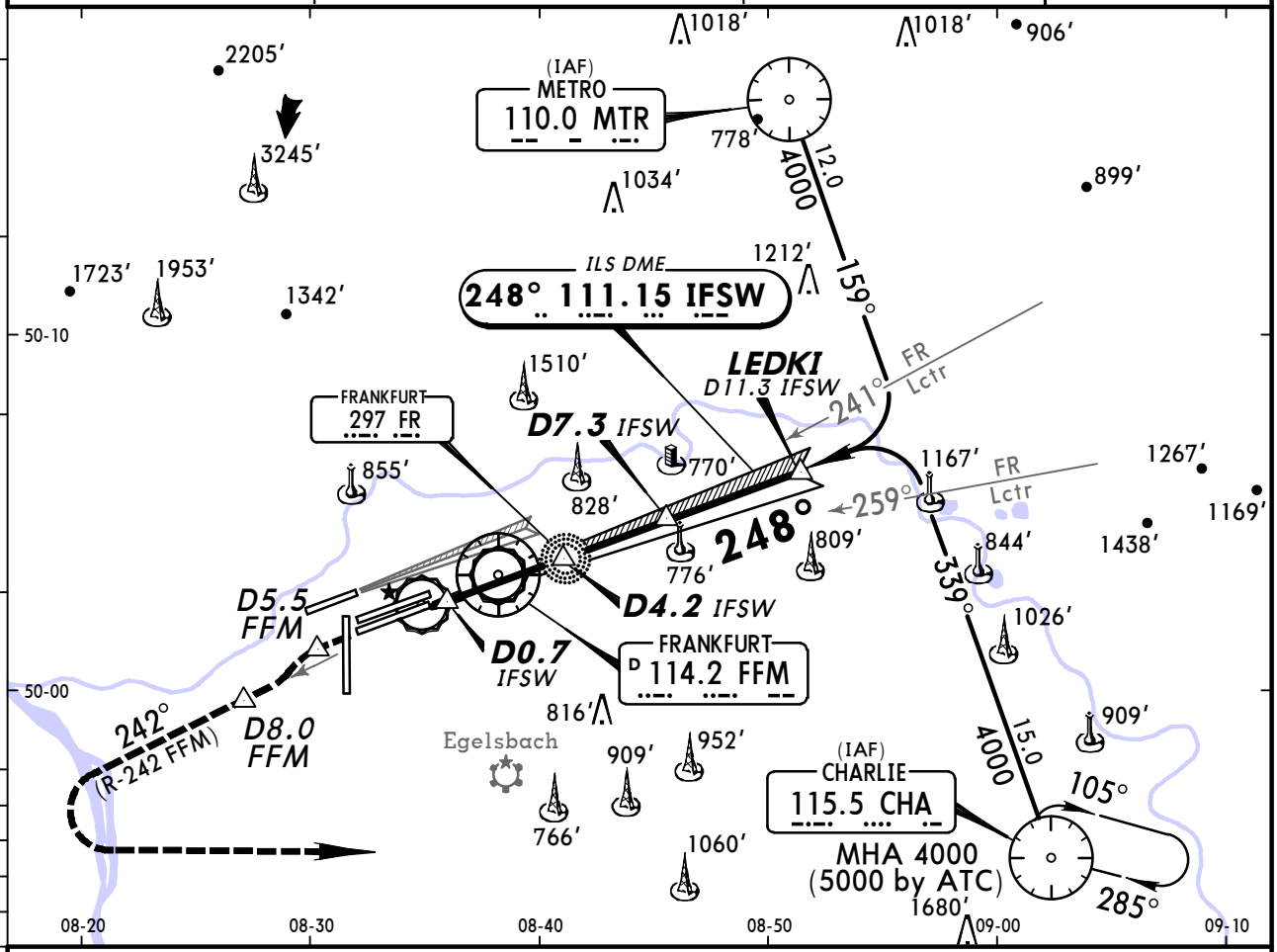
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

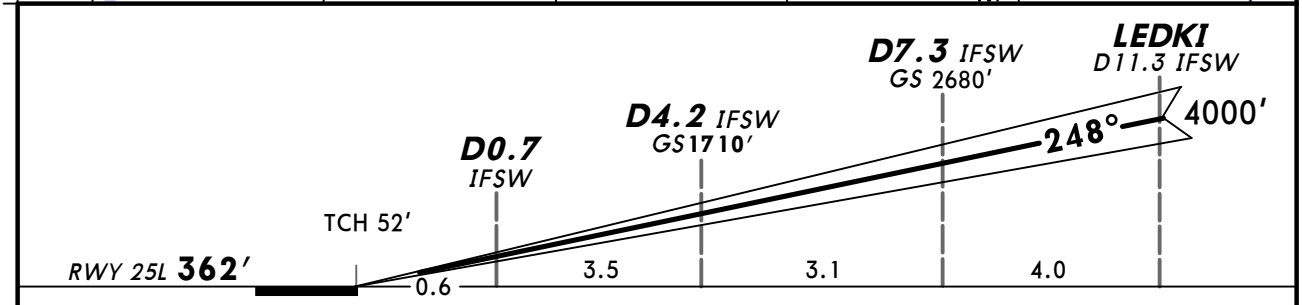
LOC IFSW	Final Apch Crs	GS D4.2 IFSW	CAT II & IIIA ILS Refer to Minimums	Apt Elev 364′
111.15	248°	1710′ (1348′)		RWY 362′

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
4300′ 125° 180° 3200′ 3500′ 335°





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

ALSF-II
REIL
PAPI

D5.5 FFM

PANS OPS

Standard STRAIGHT-IN LANDING RWY **25L**

CAT IIIA ILS	CAT II ILS
DH **50′**	**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.

CHANGES: Chart reindexed.

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JEPPESEN FRANKFURT/MAIN, GERMANY
ILS or LOC Rwy 25C

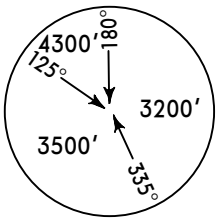
BRIEFING STRIP

*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

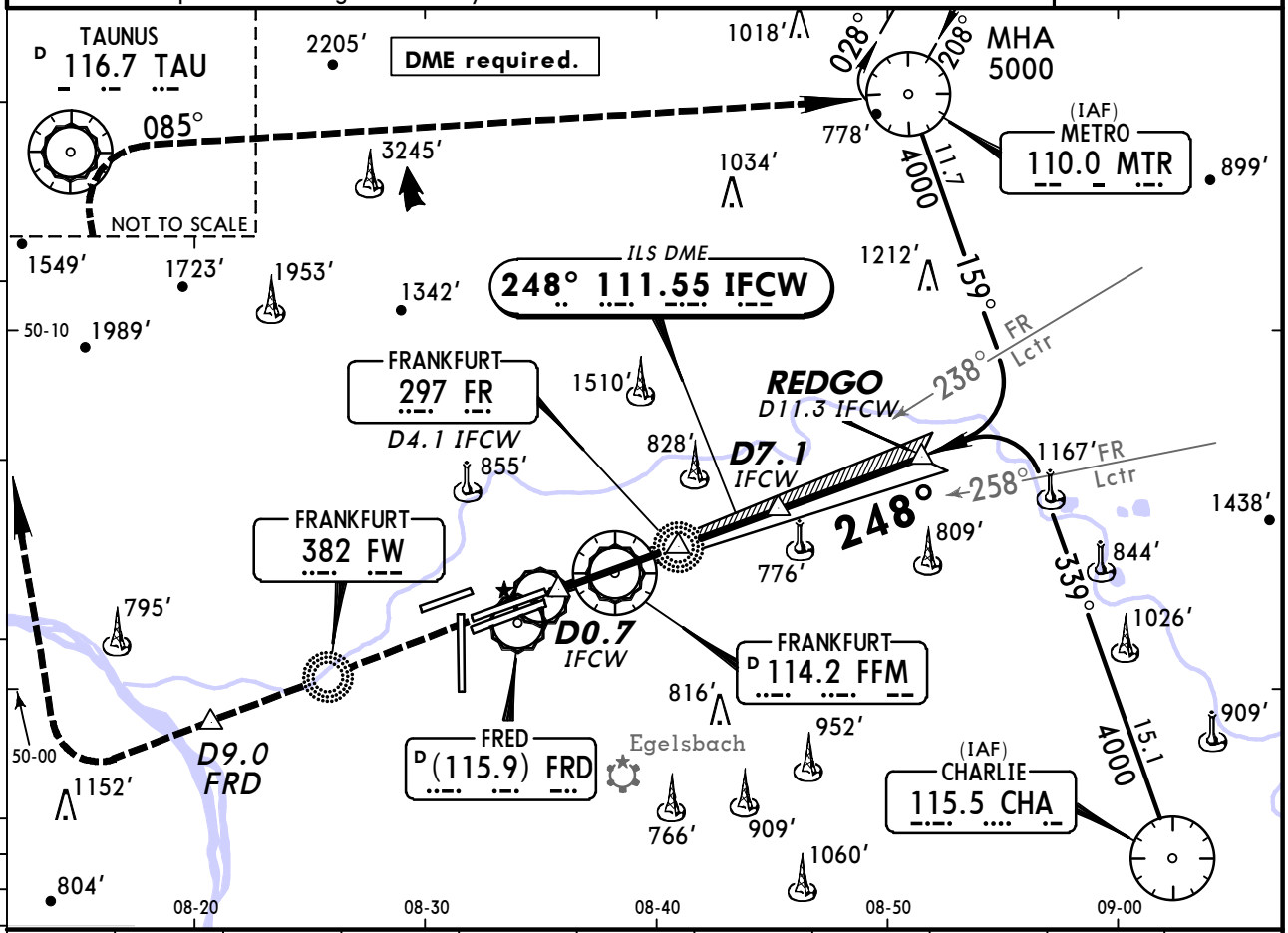
LOC IFCW	Final Apch Crs	GS Lctr	ILS DA(H)	Apt Elev 364′
111.55	248°	1660′ (1296′)	564′ (200′)	RWY 364′

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.

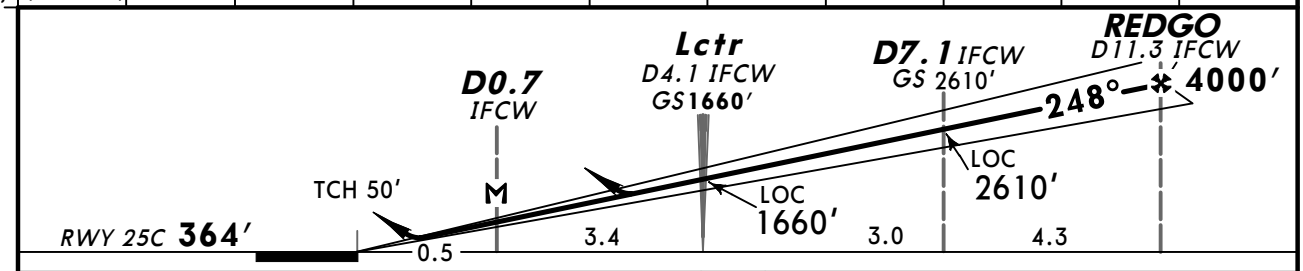
Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′
CAUTION: Independent taxiing acft on Twy R- and S-EAST underneath short final.



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

CHANGES: Chart reindexed. Holding.

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JEPPESEN FRANKFURT/MAIN, GERMANY
CAT II/III ILS Rwy 25C

BRIEFING STRIP

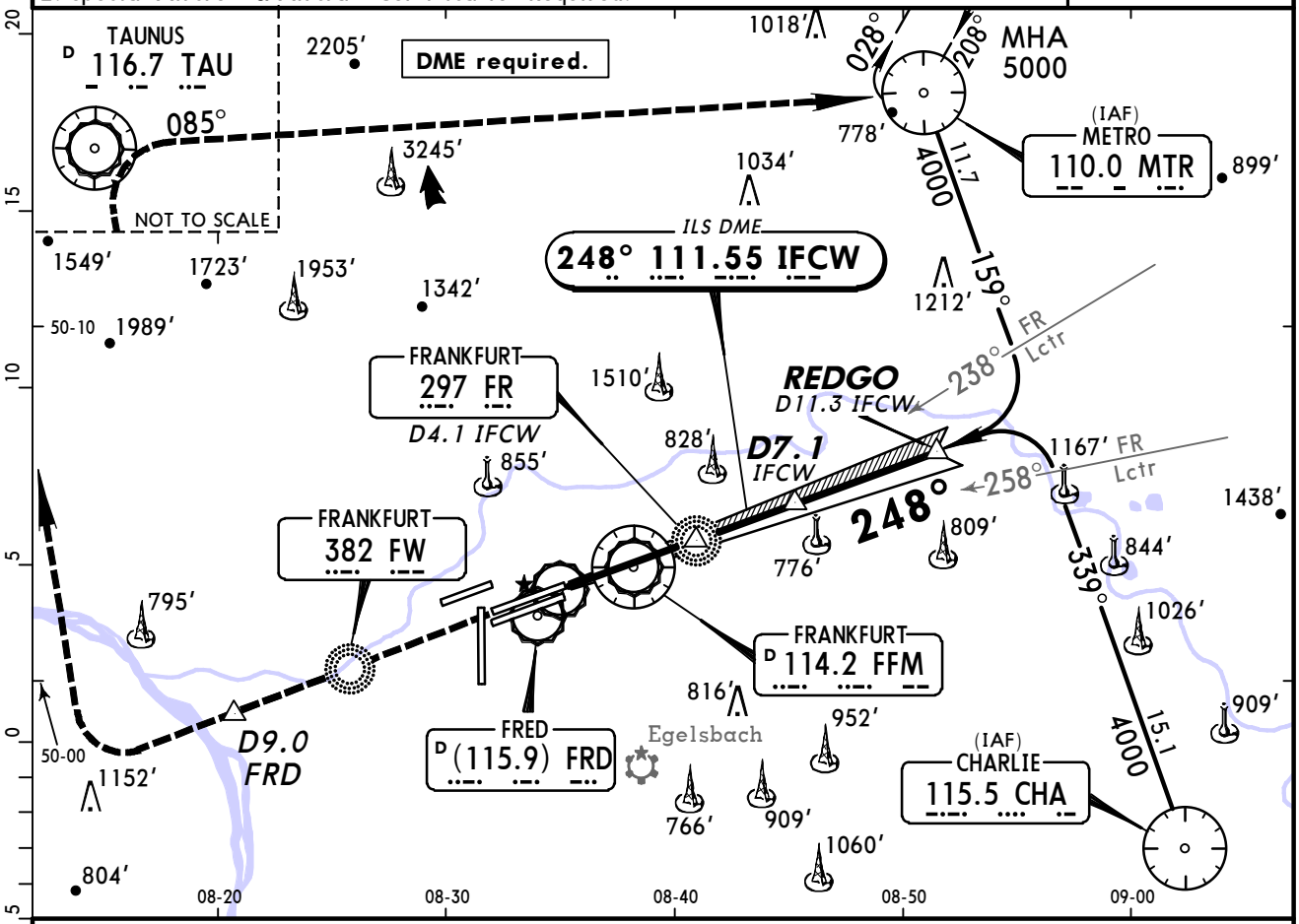
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

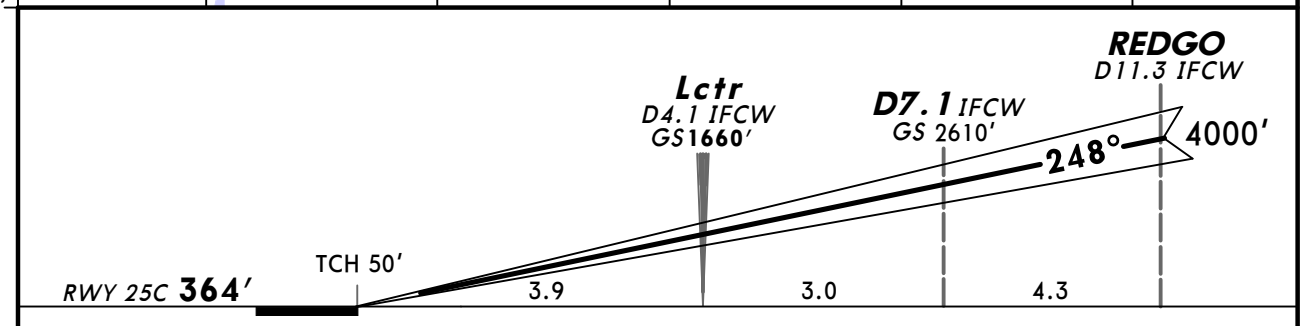
LOC IFCW	Final Apch Crs	GS Lctr	CAT II & IIIA ILS Refer to Minimums	Apt Elev 364′
111.55	248°	1660′ (1296′)		RWY 364′

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′
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

PANS OPS

Standard STRAIGHT-IN LANDING RWY 25C

CAT IIIA ILS	CAT II ILS
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. Holding.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN

12 OCT 12
Eff 18 Oct
(11-7)

FRANKFURT/MAIN, GERMANY
MISSED APCH CLIMB GRAD MIM 5.0%
ILS Z Rwy 25R

BRIEFING STRIP ™

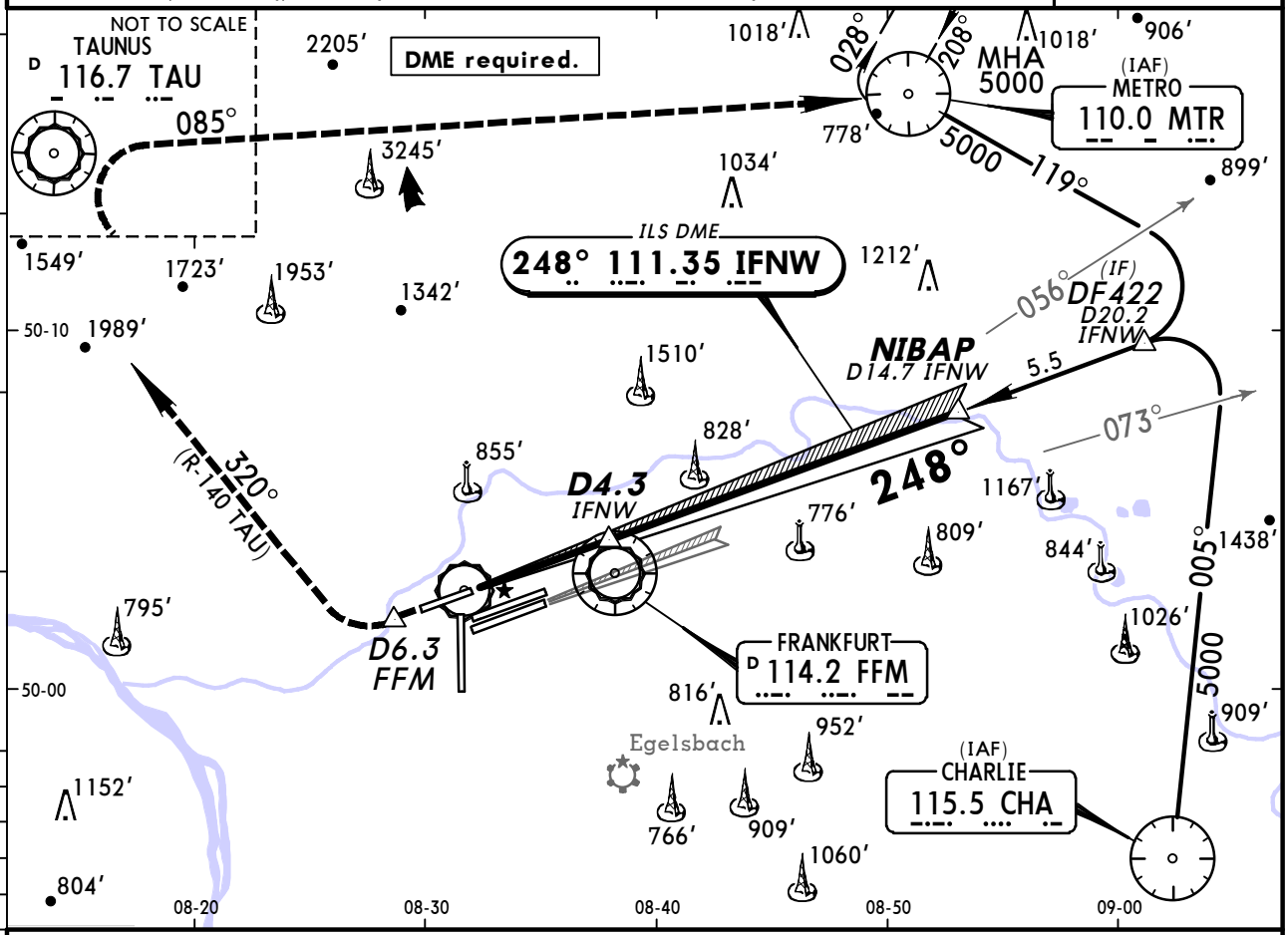
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	136.5	121.8

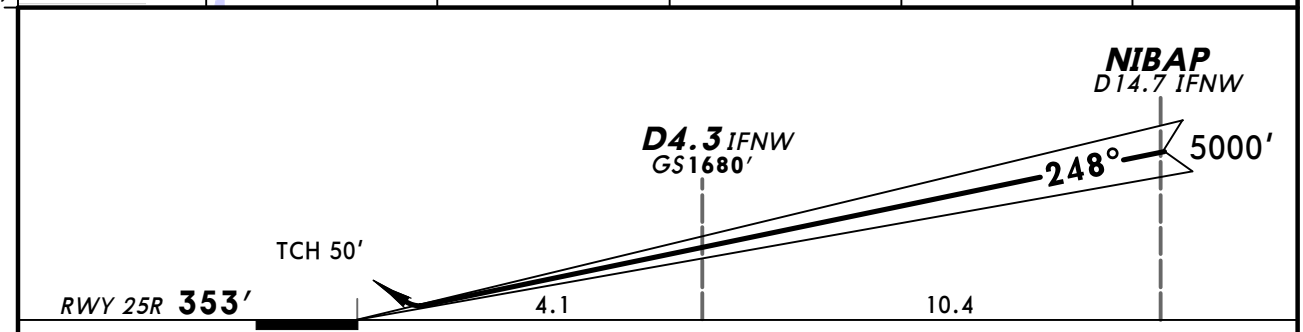
LOC IFNW	Final Apch Crs	GS D4.3 IFNW	ILS DA(H) Refer to Minimums	Apt Elev 364′
111.35	248°	1680′ (1327′)		RWY 353′

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: 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′





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

ALSF-II REIL 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′)

PANS OPS

	FULL	Limited	ALS out
A	RVR 550m	RVR 750m	RVR 1200m
B			
C			
D			

CHANGES: Chart reindexed. Holding. Procedure.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN

12 OCT 12
Eff 18 Oct

(11-7A)

FRANKFURT/MAIN, GERMANY
❶ CAT II/III ILS Z Rwy 25R

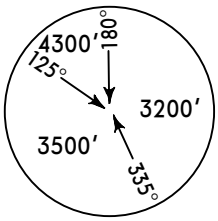
BRIEFING STRIP ™

*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

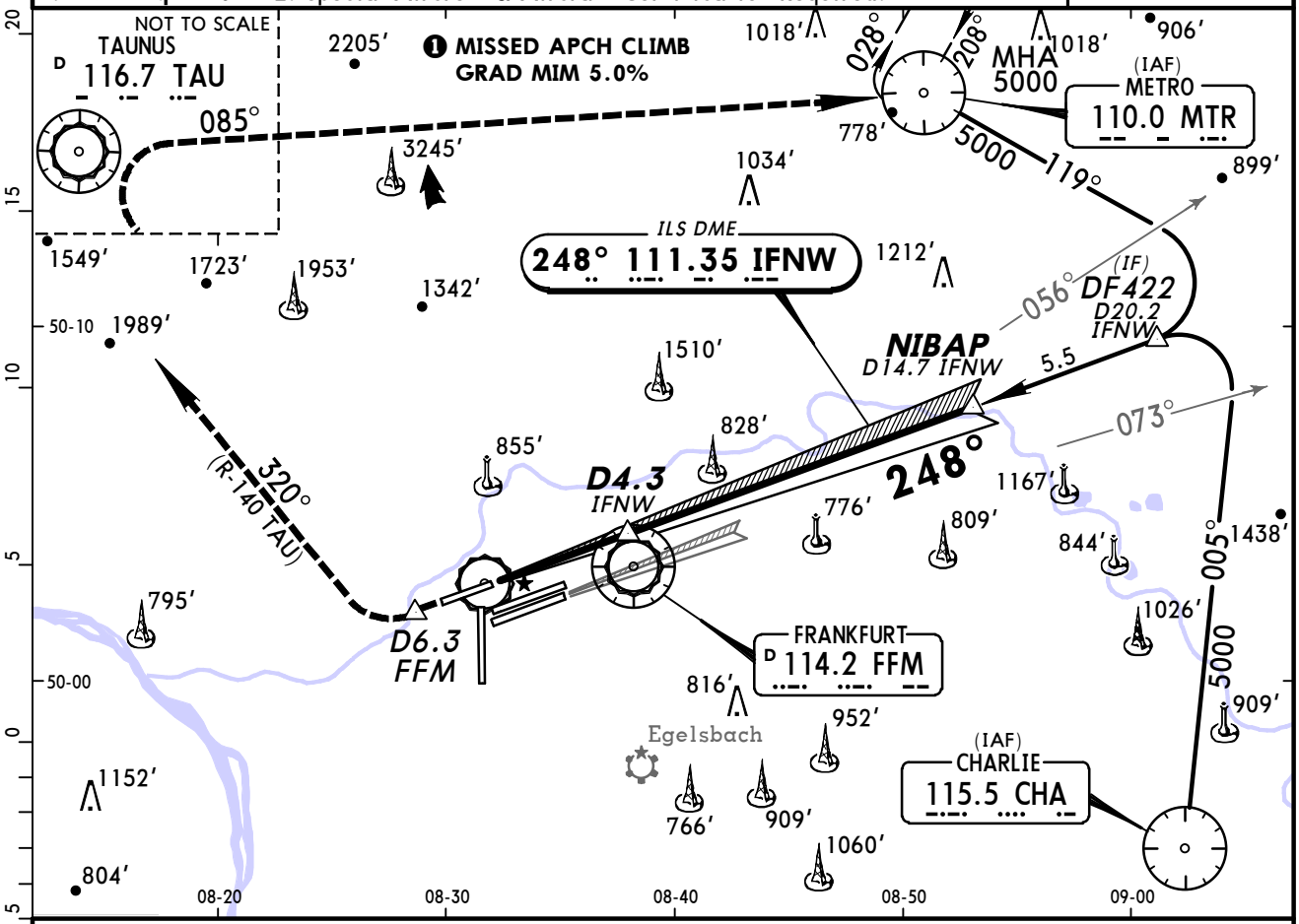
LOC IFNW	Final Apch Crs	GS D4.3 IFNW	CAT II & IIIA ILS Refer to Minimums	Apt Elev 364′
111.35	248°	1680′ (1327′)		RWY 353′

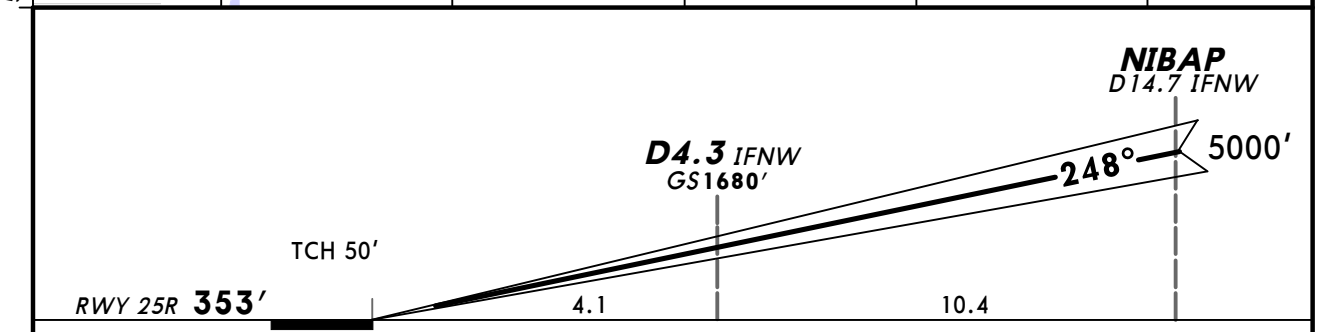
MISSED APCH: Climb STRAIGHT AHEAD to D6.3 FFM at 800′ or above, then turn RIGHT to intercept R-140 inbound TAU VOR. Turn RIGHT to intercept R-085 TAU/R-265 inbound MTR VOR climbing to 5000′. In case of Missed apch inform ATC immediately.

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.



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

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′	
DH **50′**	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′)
RVR 200m	RVR 300m ❶	RVR 400m

PANS OPS

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

CHANGES: Chart reindexed. Holding. Procedure.

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EDDF/FRA
FRANKFURT/MAIN

JEPPESEN

12 OCT 12
Eff 18 Oct
(11-8)

FRANKFURT/MAIN, GERMANY
MISSED APCH CLIMB GRAD MIM 5.0%
ILS Y Rwy 25R

BRIEFING STRIP ™

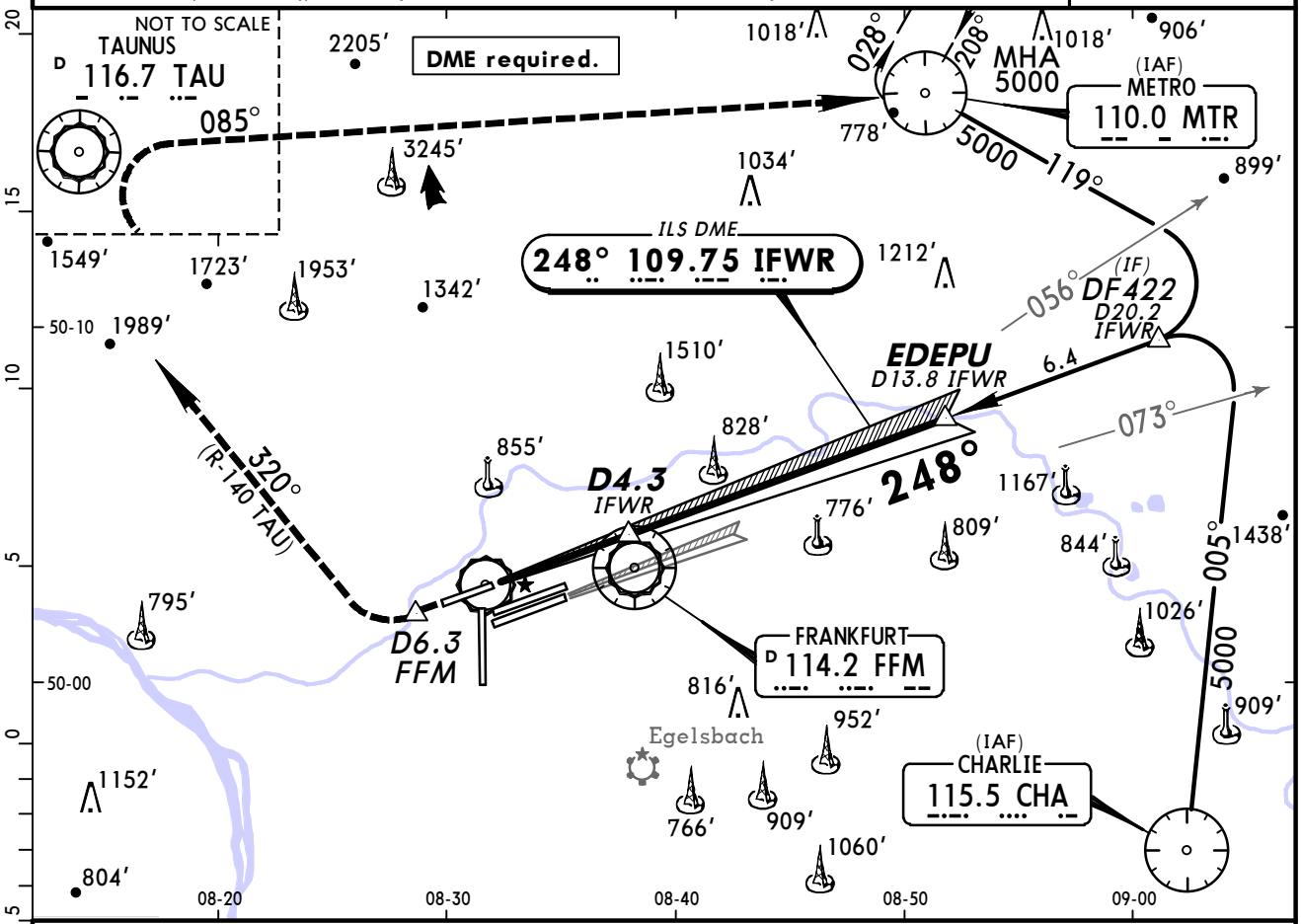
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	136.5	121.8

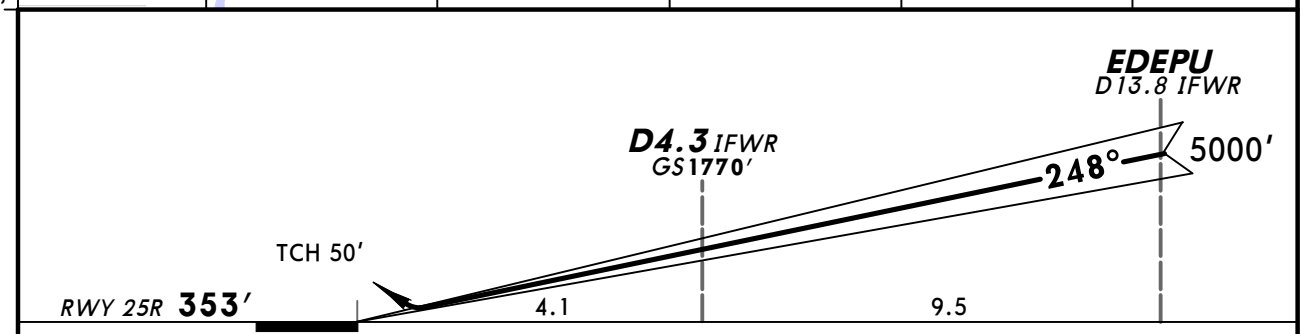
LOC IFWR	Final Apch Crs	GS D4.3 IFWR	ILS DA(H) Refer to Minimums	Apt Elev 364′ RWY 353′
109.75	248°	1770′ (1417′)		

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.

Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′

MSA FFM VOR
4300′ 180° 125° 3200′ 3500′ 335°





Gnd speed-Kts		70	90	100	120	140	160
GS	3.20°	396	510	566	679	793	906

ALSF-II REIL 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′)

PANS OPS

	FULL	Limited	ALS out
A	RVR 550m	RVR 750m	RVR 1200m
B			
C			
D			

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

BRIEFING STRIP ™

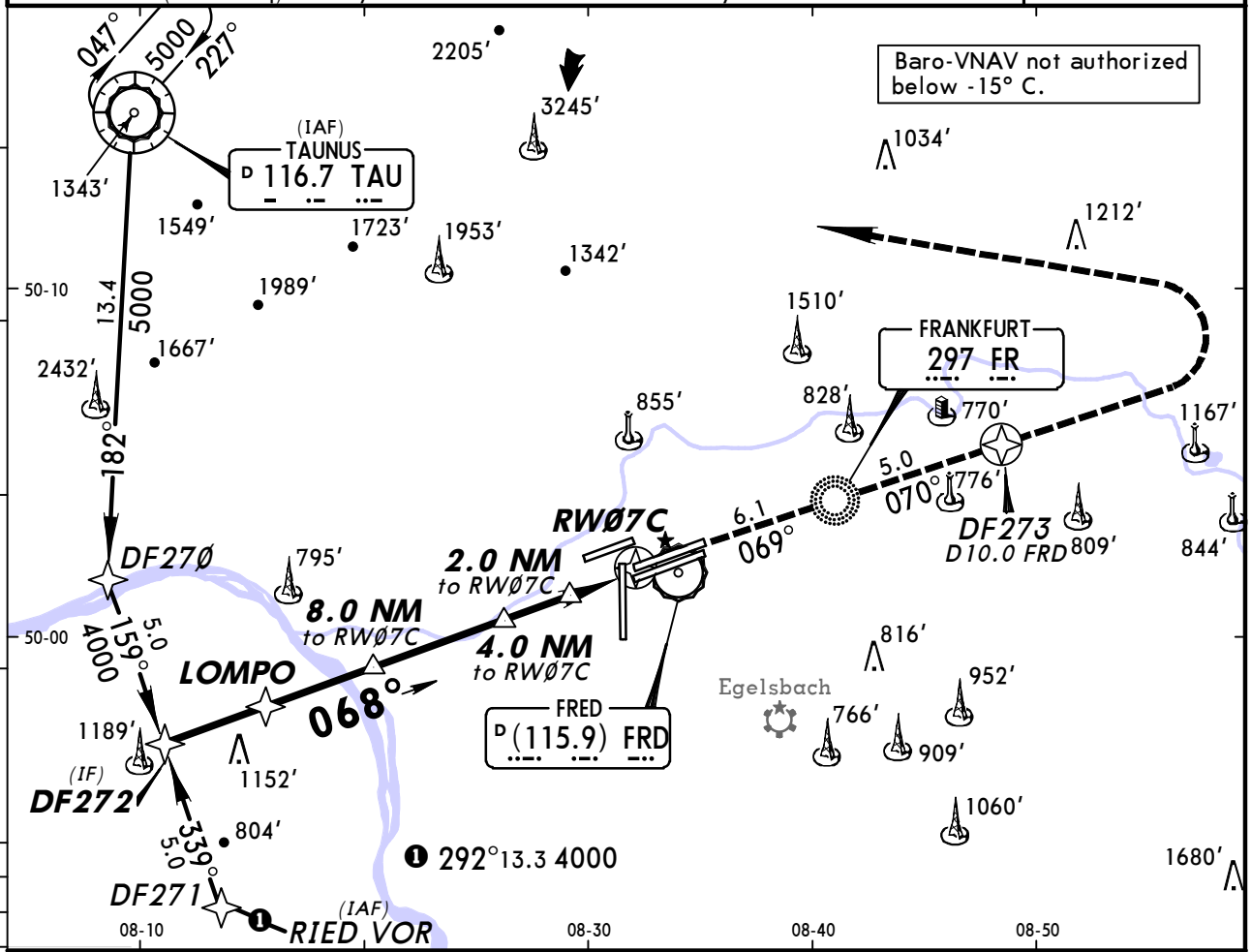
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 364′
	068°	LOMPO 4000′ (3671′)	Refer to Minimums	RWY 329′

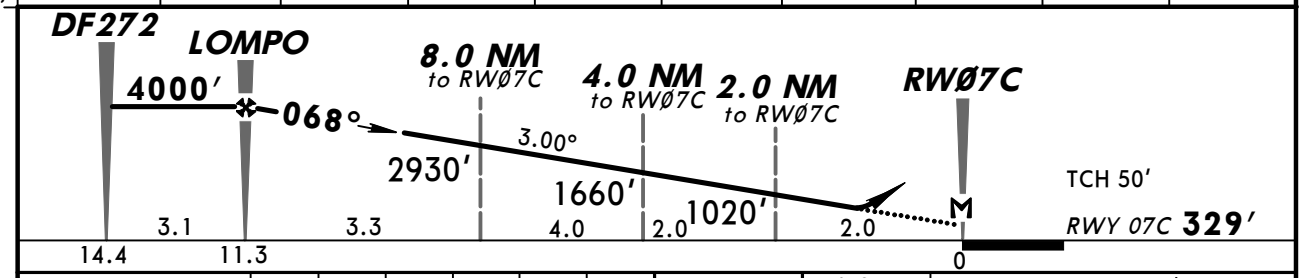
MISSED APCH RNAV: Climb on track 069° via FR Lctr to DF273 or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.
NON-RNAV: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

4300′ MSA ARP

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′



NM to RW07C	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 RW07C						

ALSF-II REIL PAPI

DF273 D10.0 FRD 5000′ ↑ whichever is later ↑ via FR 297

Standard STRAIGHT-IN LANDING RWY 07C

	LNAV/VNAV		LNAV	
DA(H)	ABC: 690′ (361′) D: 720′ (391′)		DA(H) B: 820′ (491′) A: 790′ (461′) CD: 840′ (511′)	
		ALS out		ALS out
A	RVR 1000m	RVR 1500m	RVR 1500m	
B				
C		RVR 1700m	RVR 1600m	CMV 2400m
D	RVR 1100m	RVR 1800m		

PANS OPS 4

CHANGES: Tower frequency.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (12-2) Eff 20 Oct

JEPPESEN FRANKFURT/MAIN, GERMANY
RNAV (GPS) Y Rwy 07C

BRIEFING STRIP ™

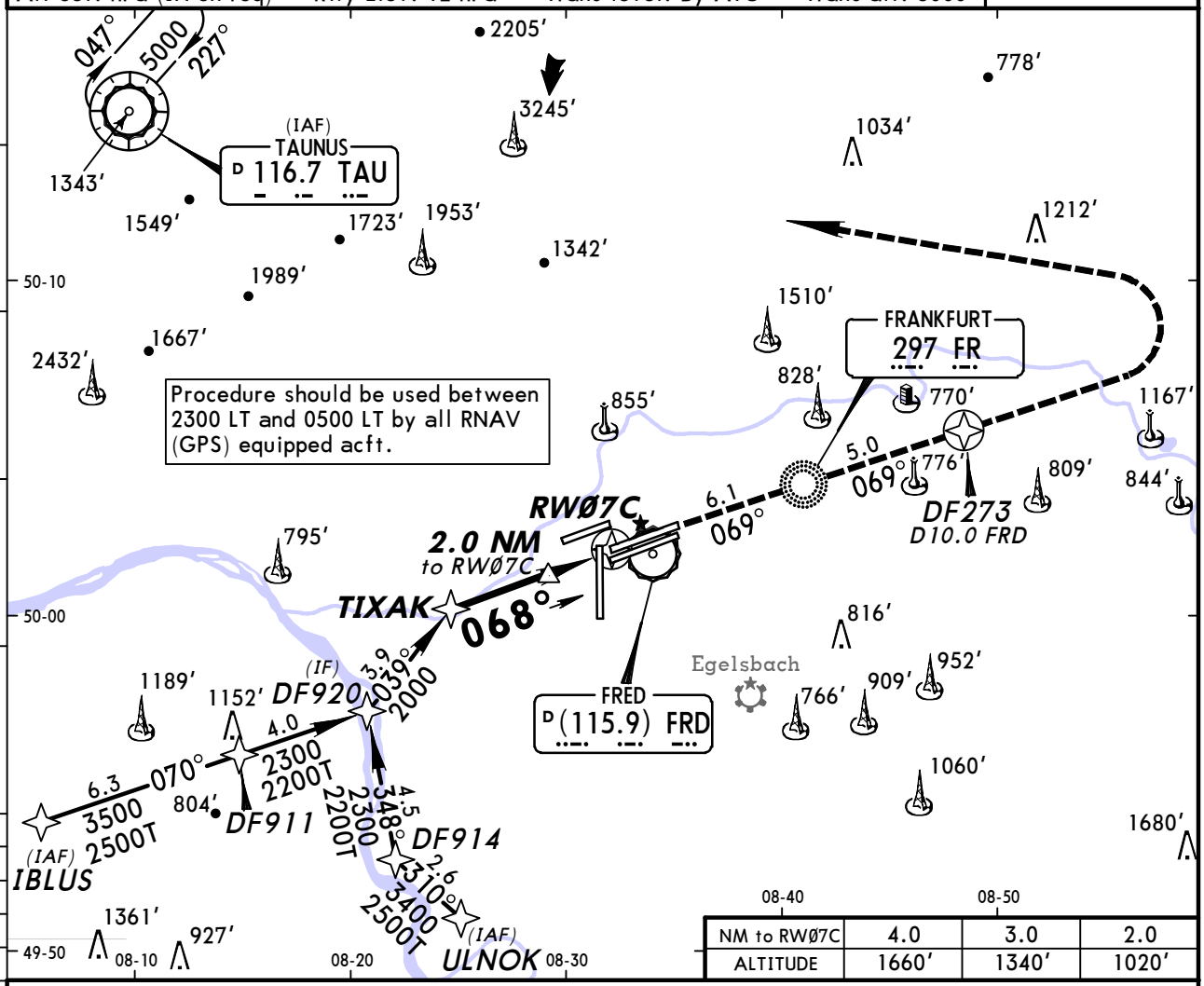
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

RNAV	Final Apch Crs	Minimum Alt	LNAV DA(H)	Apt Elev 364′
	068°	TIXAK 2000′ (1671′)	Refer to Minimums	RWY 329′

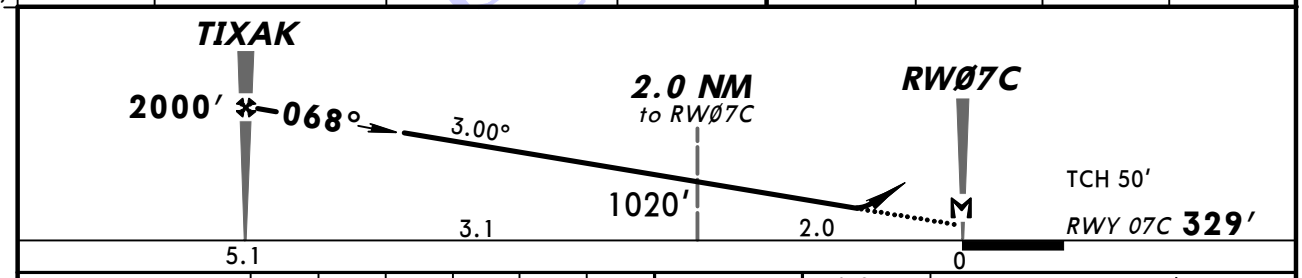
MISSED APCH RNAV: Climb on track 069° via FR Lctr to DF273 or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.
NON-RNAV: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′

4300′ MSA ARP



NM to RWØ7C	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 RWØ7C						

ALSF-II
REIL
PAPI

DF273 D10.0 FRD 5000′ ↑ whichever is later ↑ via FR 297

Standard STRAIGHT-IN LANDING RWY **07C**
LNAV

DA(H) B: **820′** (491′)
A: **790′** (461′) CD: **840′** (511′)

ALS out

PANS OPS 4

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

BRIEFING STRIP ™

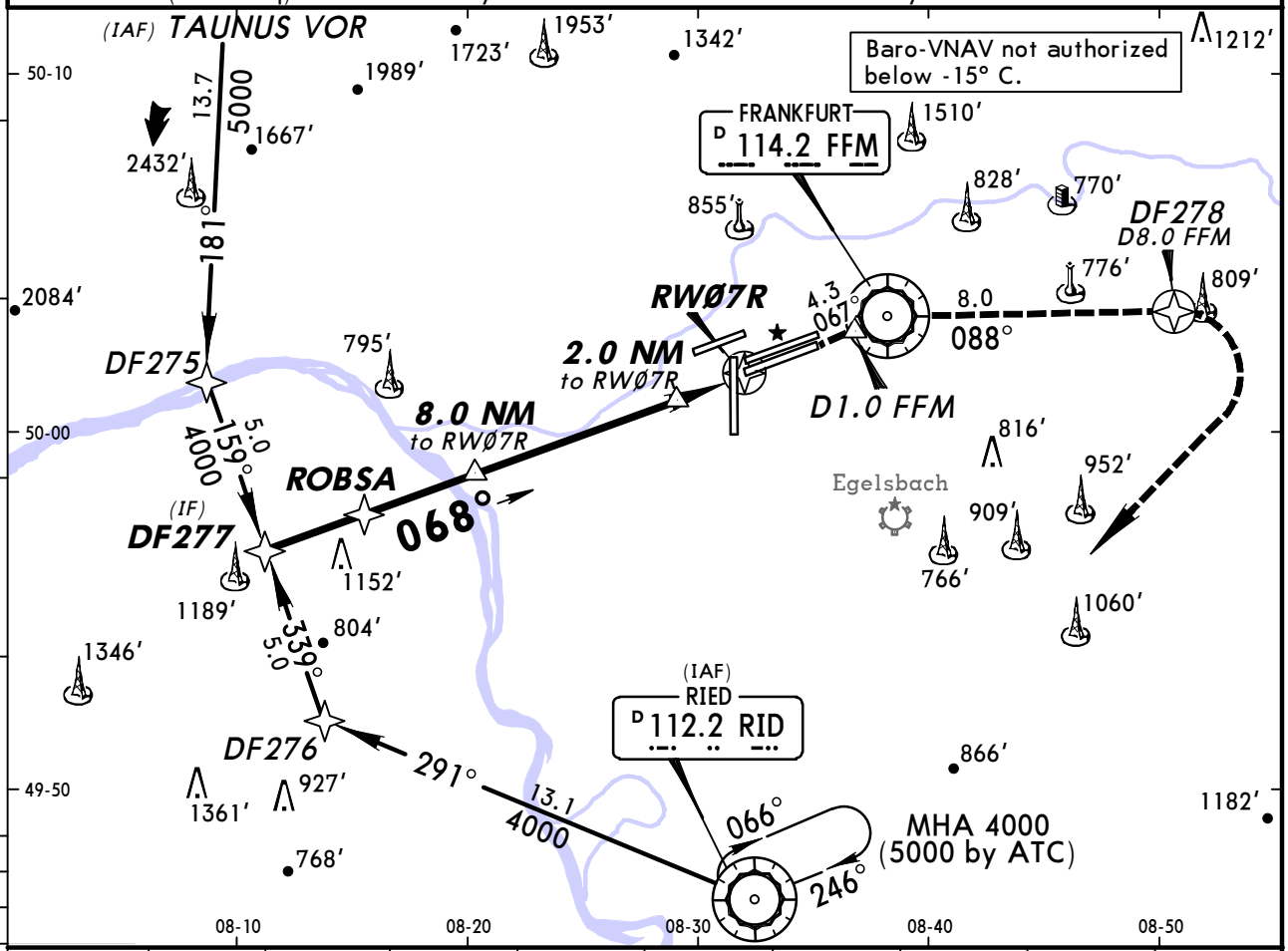
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

RNAV	Final Apch Crs	Minimum Alt ROBSA	LNAV/VNAV DA(H)	Apt Elev 364′
	068°	4000′ (3672′)	680′ (352′)	RWY 328′

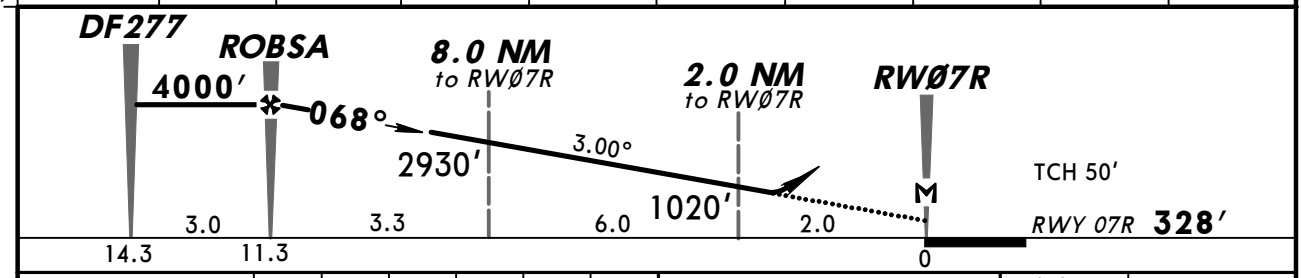
MISSED APCH RNAV: Climb on track 067° to FFM VOR, then turn RIGHT on track 088° to DF278 or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′. **NON-RNAV:** Climb STRAIGHT AHEAD to D1.0 inbound FFM. Turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later. 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	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 RWØ7R						

ALSF-II, REIL, PAPI

Refer to Missed apch above

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

PANS OPS 4

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 7 OCT 11 (12-4) Eff 20 Oct

FRANKFURT/MAIN, GERMANY
RNAV (GPS) Y Rwy 07R

BRIEFING STRIP ™

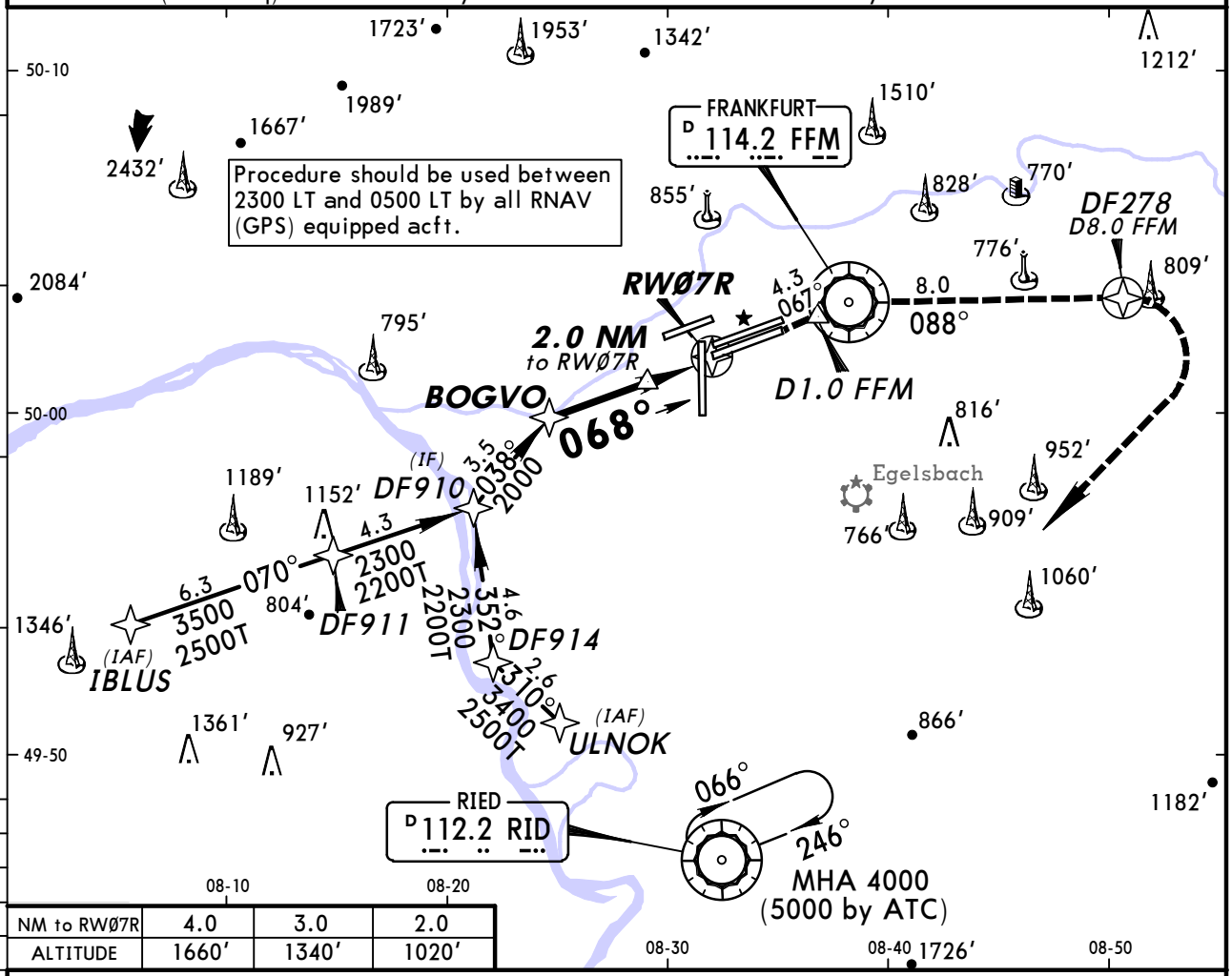
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

RNAV	Final Apch Crs	Minimum Alt BOGVO	LNAV DA(H)	Apt Elev 364′
	068°	2000′ (1672′)	Refer to Minimums	RWY 328′

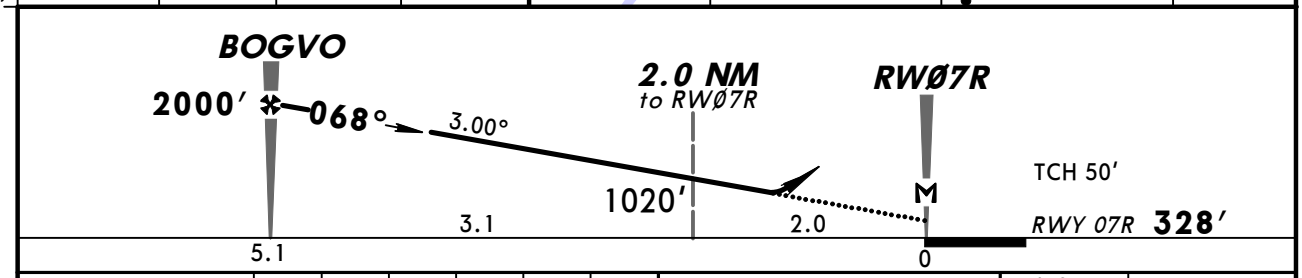
MISSED APCH RNAV: Climb on track 067° to FFM VOR, then turn RIGHT on track 088° to DF278 or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′. **NON-RNAV:** Climb STRAIGHT AHEAD to D1.0 inbound FFM. Turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later. 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) C: **830′** (502′)
AB: **810′** (482′) 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

BRIEFING STRIP ™

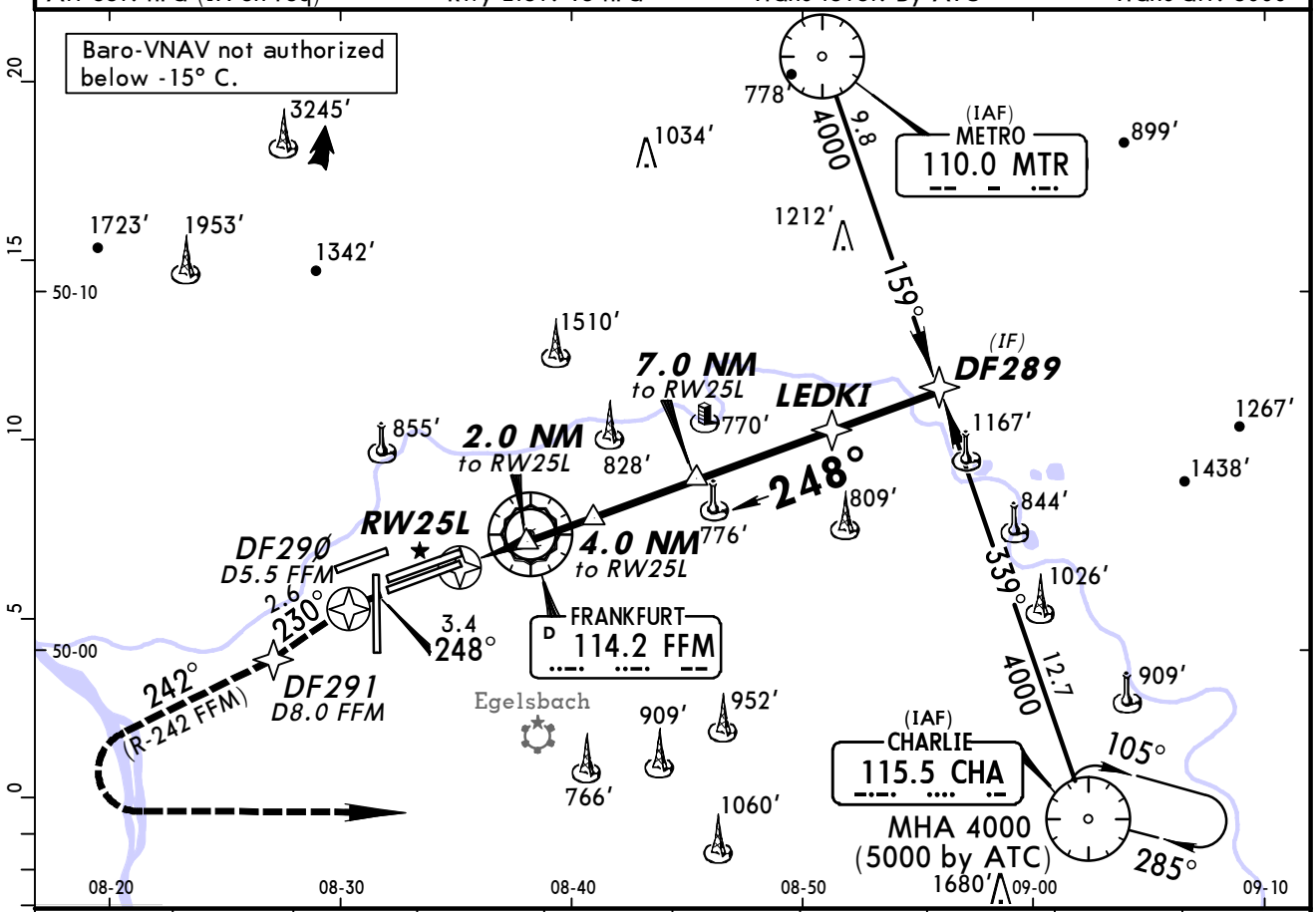
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

RNAV	Final Apch Crs	Minimum Alt LEDKI	LNAV/VNAV DA(H)	Apt Elev 364′
	248°	4000′ (3638′)	770′ (408′)	RWY 362′

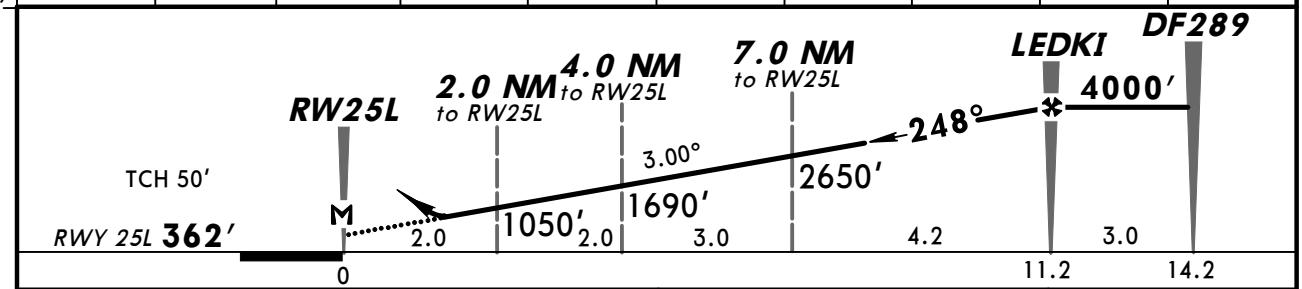
MISSED APCH RNAV: Climb on track 248° to DF29Ø, then turn LEFT on track 230° to DF291. Then turn RIGHT on track 242° climb to 5000′, then turn LEFT to CHA VOR and maintain 5000′. **NON-RNAV:** Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-242 FFM. Then on R-242 FFM to D8.0 FFM or 5000′, 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

Standard STRAIGHT-IN LANDING RWY 25L

	LNAV/VNAV DA(H) 770′ (408′)	ALS out	LNAV DA(H) BC: 820′ (458′) A: 770′ (408′) D: 830′ (468′)	ALS out
A	RVR 1200m	RVR 1500m	RVR 1200m	RVR 1500m
B			RVR 1400m	
C		RVR 1900m		CMV 2100m
D			RVR 1500m	CMV 2200m

PANS OPS 4

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

BRIEFING STRIP ™

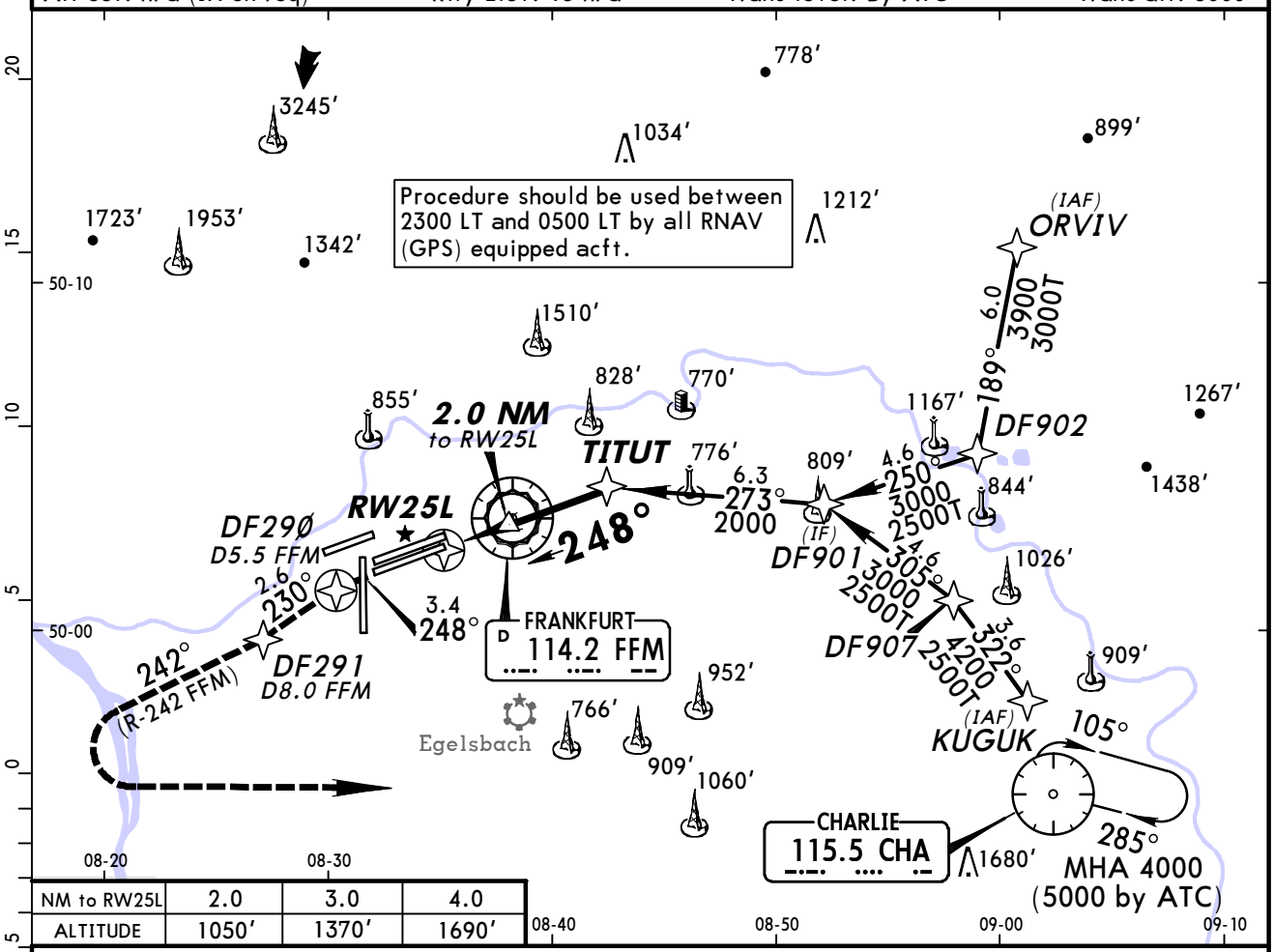
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

RNAV	Final Apch Crs	Minimum Alt	LNAV DA(H)	Apt Elev 364′
	248°	TITUT 2000′ (1638′)	Refer to Minimums	RWY 362′

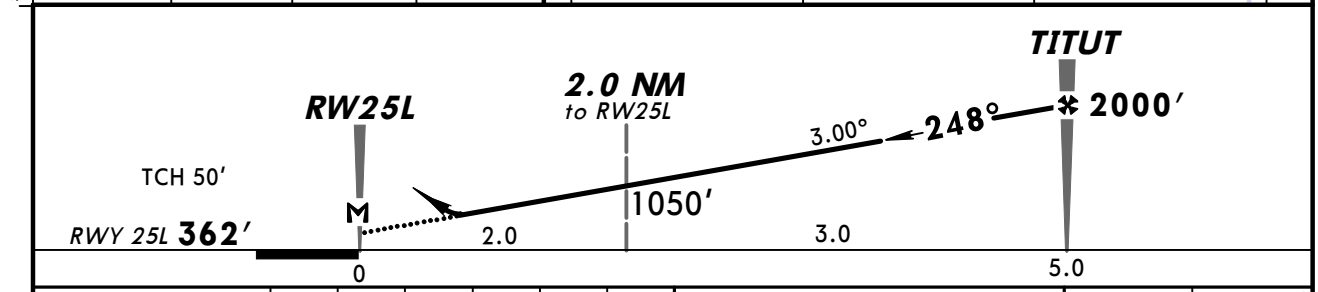
MISSED APCH RNAV: Climb on track 248° to DF29Ø, then turn LEFT on track 230° to DF291. Then turn RIGHT on track 242° climb to 5000′, then turn LEFT to CHA VOR and maintain 5000′. **NON-RNAV:** Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-242 FFM. Then on R-242 FFM to D8.0 FFM or 5000′, 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

8 FEB 13 (12-7)

JEPPESEN FRANKFURT/MAIN, GERMANY
RNAV (GPS) Z Rwy 25C

BRIEFING STRIP ™

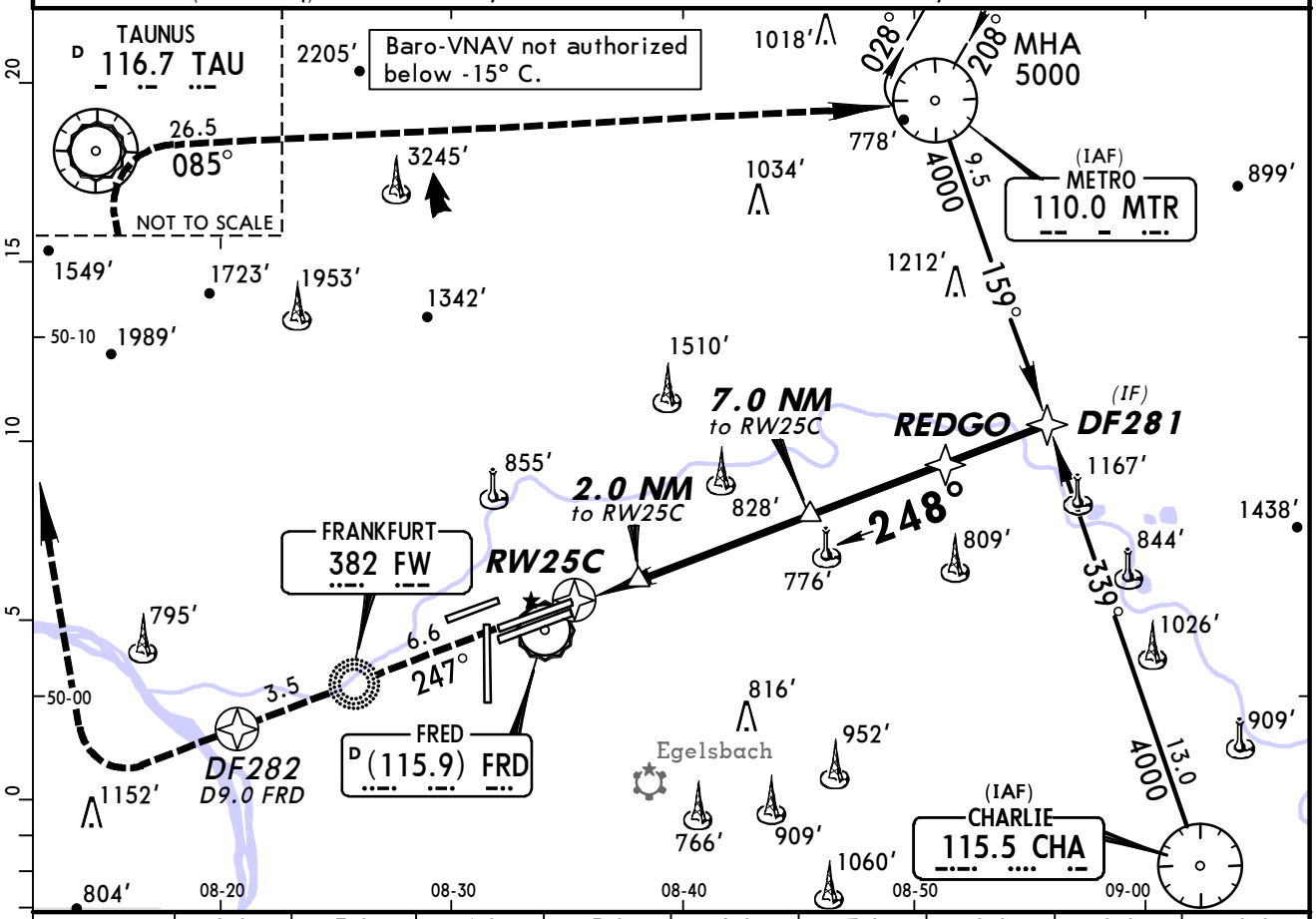
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

RNAV	Final Apch Crs	Minimum Alt	LNAV/VNAV DA(H)	Apt Elev 364′
	248°	REDGO 4000′ (3636′)	Refer to Minimums	RWY 364′

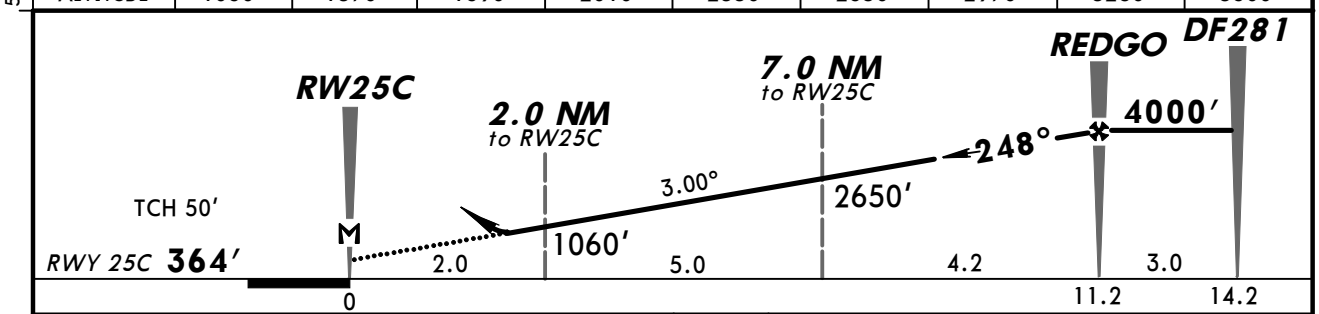
MISSED APCH RNAV: Climb on track 247° via FW Lctr to DF282 or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT on 085° to MTR VOR and maintain 5000′. **NON-RNAV:** Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT to intercept 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 ↑ whichever later ↑ **5000′** via FW **382**

Standard STRAIGHT-IN LANDING RWY **25C**

	LNAV/VNAV DA(H) ABC: 760′ (396′) D: 830′ (466′)		LNAV DA(H) 840′ (476′)	
		ALS out		ALS out
A	RVR 1100m	RVR 1500m	RVR 1500m	RVR 1500m
B				
C		RVR 1800m		CMV 2200m
D	RVR 1500m	CMV 2200m		

PANS OPS

CHANGES: Minimums.

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EDDF/FRA
FRANKFURT/MAIN

8 FEB 13 (12-8)

JEPPESEN

FRANKFURT/MAIN, GERMANY
RNAV (GPS) Y Rwy 25C

BRIEFING STRIP ™

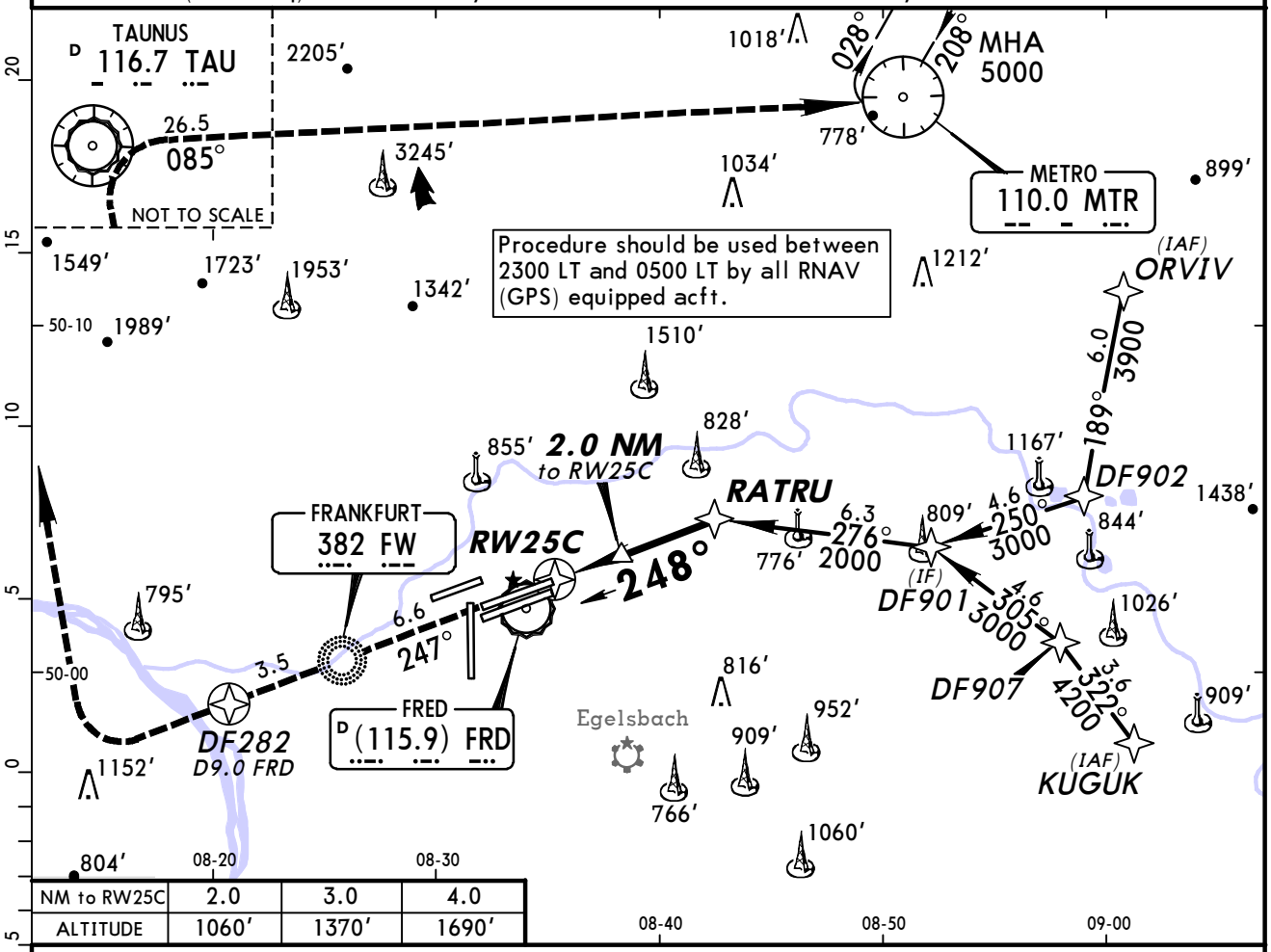
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

RNAV	Final Apch Crs	Minimum Alt RATRU	LNAV DA(H)	Apt Elev 364′
	248°	2000′(1636′)	840′(476′)	RWY 364′

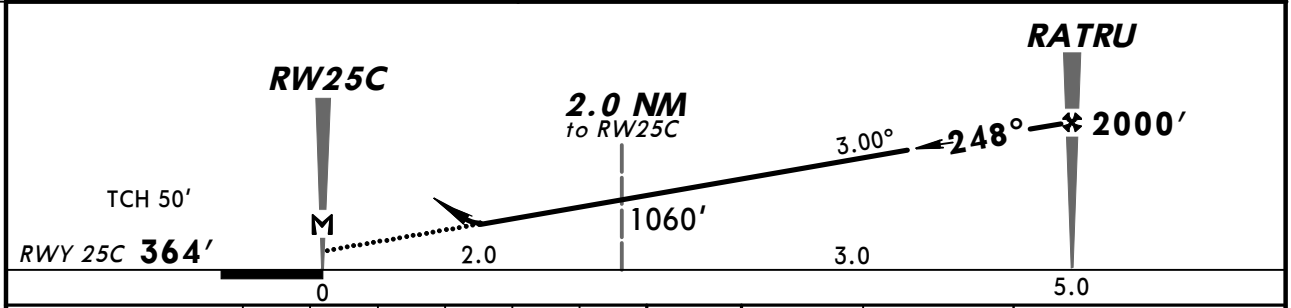
MISSED APCH RNAV: Climb on track 247° via FW Lctr to DF282 or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT on 085° to MTR VOR and maintain 5000′. **NON-RNAV:** Climb STRAIGHT AHEAD via FW Lctr to D9.0 FRD or 5000′, whichever is later, then turn RIGHT to TAU VOR. Turn RIGHT to intercept 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) **840′**(476′)

PANS OPS		ALS out
A	RVR 1500m	RVR 1500m
B		
C		CMV 2200m
D		

CHANGES: Minimums.

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EDDF/FRA
FRANKFURT/MAIN

7 OCT 11 (13-1) **Eff 20 Oct**

JEPPESEN FRANKFURT/MAIN, GERMANY
VOR Rwy 07C

BRIEFING STRIP ™

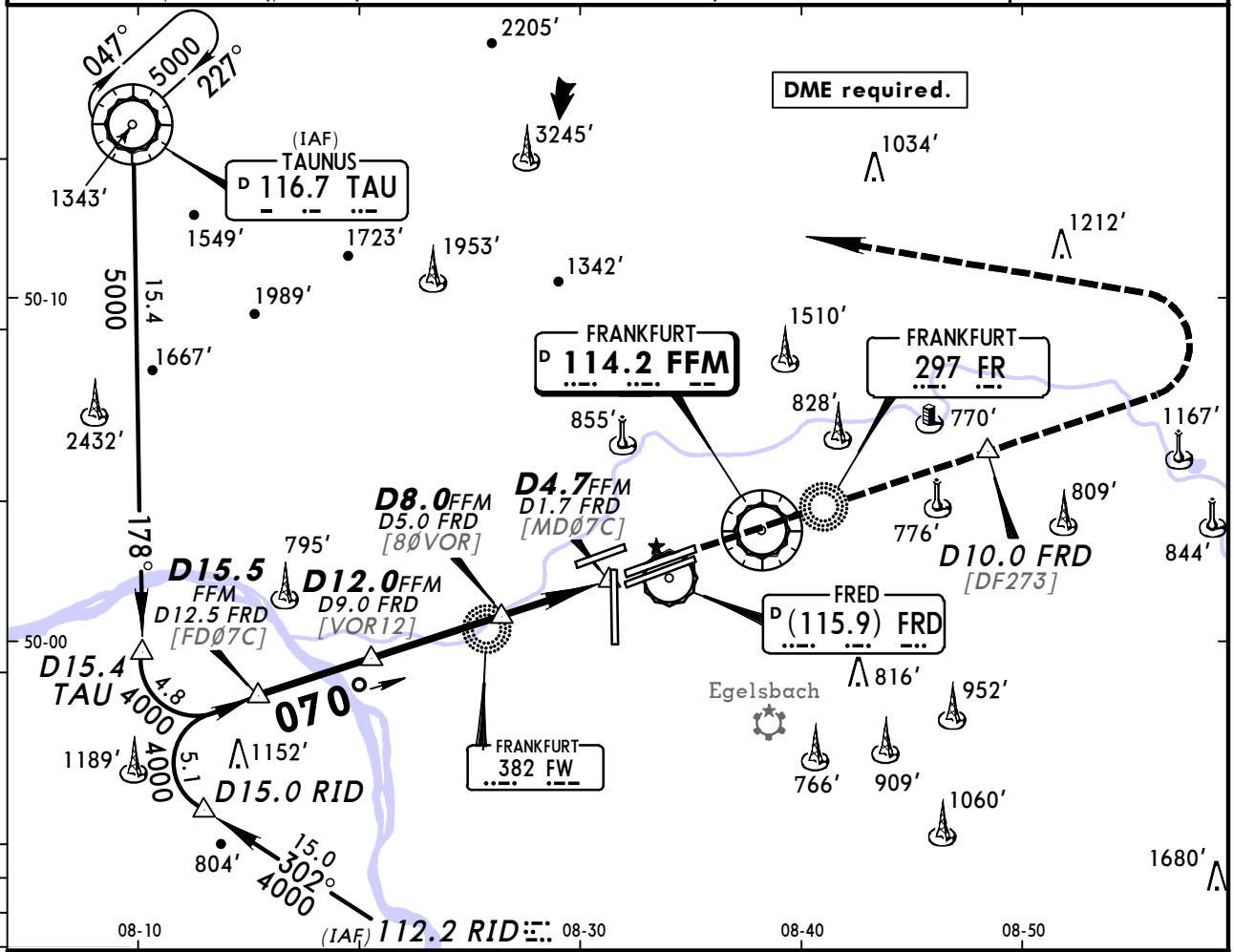
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	118.77	121.8

VOR FFM	Final Apch Crs	Minimum Alt D15.5 FFM	DA(H)	Apt Elev / RWY
114.2	070°	4000′ (3671′)	910′ (581′)	Apt Elev 364′ / RWY 329′

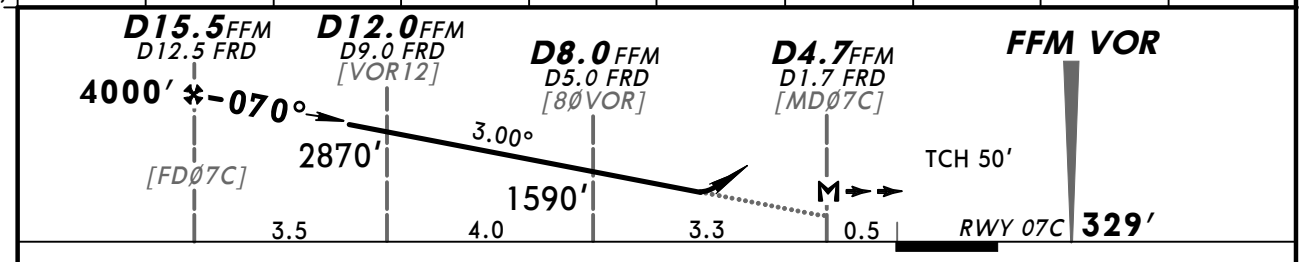
MISSED APCH: Climb STRAIGHT AHEAD via FR Lctr to D10.0 FRD or 5000′, whichever is later, then turn LEFT to TAU VOR maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′

MSA FFM VOR: 4300′ (125°–180°), 3200′ (180°–335°), 3500′ (335°–125°)



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
A	RVR 1500m	
B		
C	RVR 2000m	CMV 2400m
D		

PANS OPS 4

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

BRIEFING STRIP

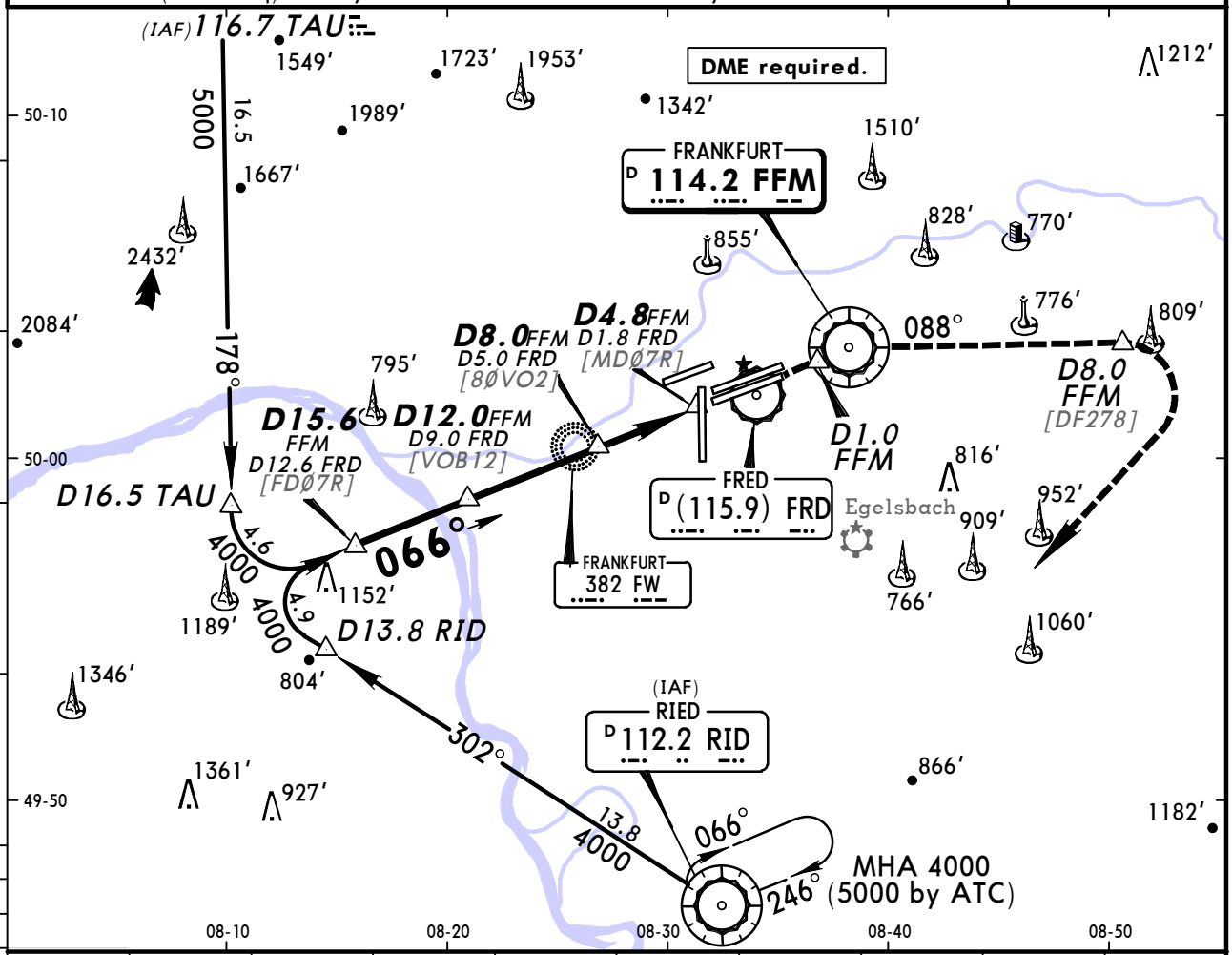
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

VOR FFM	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 364′
114.2	066°	D15.6 FFM 4000′ (3672′)	Refer to Minimums	RWY 328′

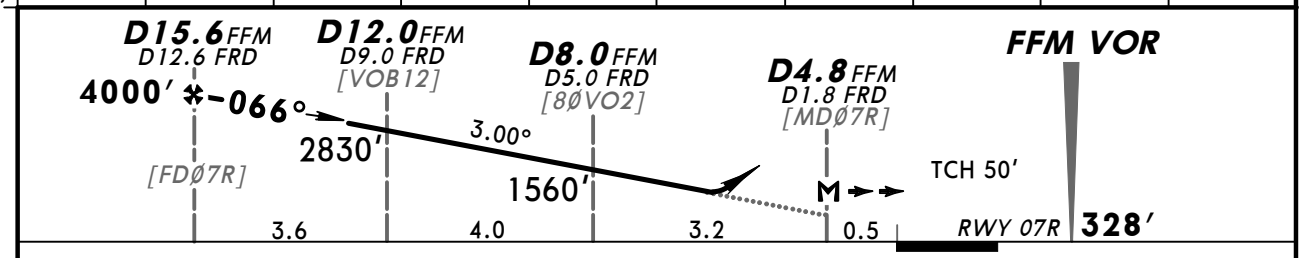
MISSED APCH: Climb STRAIGHT AHEAD to D1.0 inbound FFM, then turn RIGHT to intercept R-088 FFM outbound to D8.0 FFM or 5000′, whichever is later, then turn RIGHT to RID VOR and maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 12 hPa Trans level: By ATC Trans alt: 5000′

MSA FFM VOR: 4300′ (125°–180°), 3200′, 3500′, 335°



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′)

ALS out

PANS OPS 4

A	RVR 1500m	
B		
C	RVR 1500m	CMV 2300m
D		

CHANGES: MHA.

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EDDF/FRA
FRANKFURT/MAIN

8 FEB 13 (13-3)

JEPPESEN

FRANKFURT/MAIN, GERMANY
VOR Rwy 25L

BRIEFING STRIP

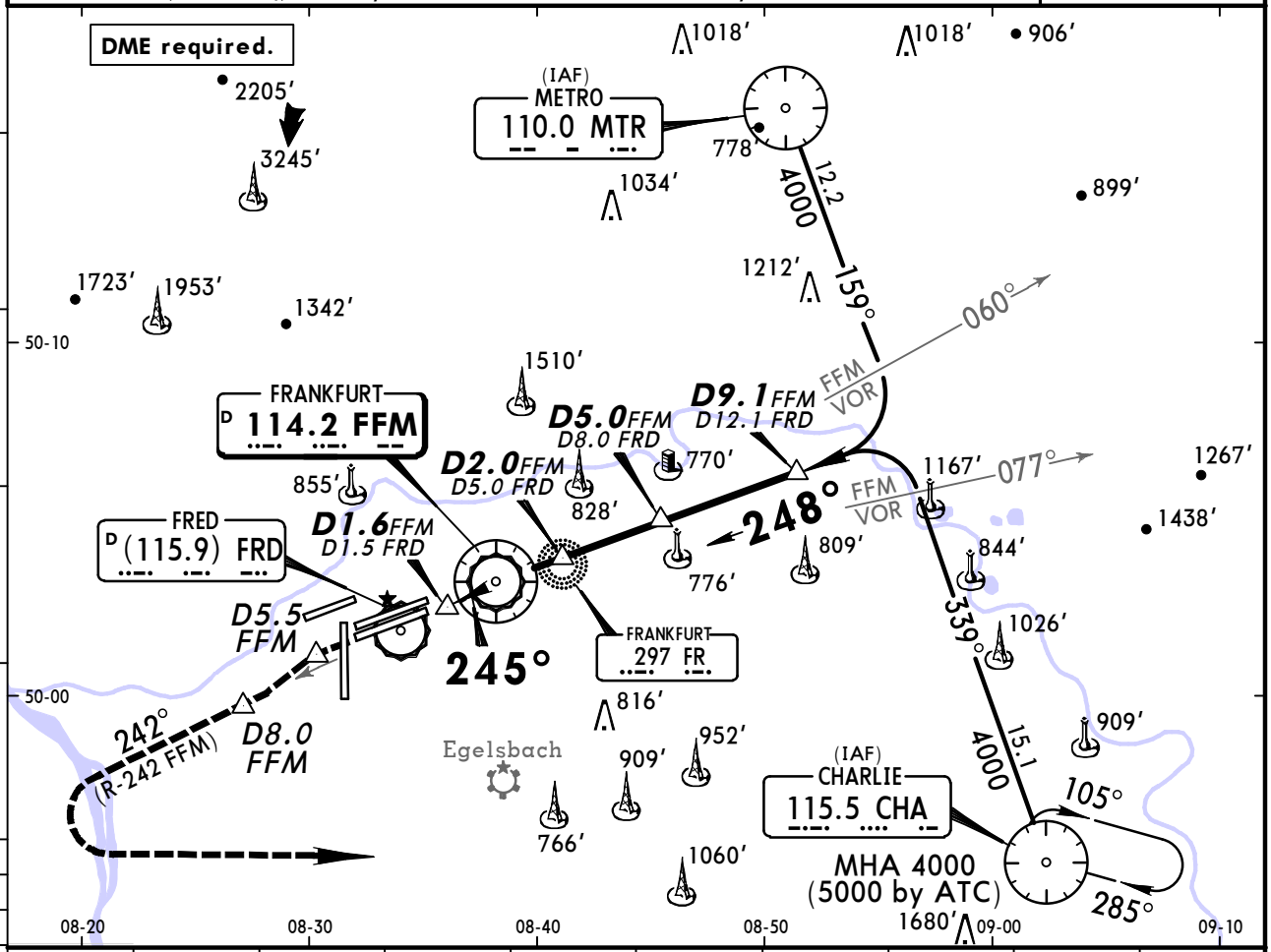
*D-ATIS Arrival	LANGEN Radar (APP) North	LANGEN Radar (APP) South	*FRANKFURT Director (APP)	*FRANKFURT Arrival (APP)	FRANKFURT Tower	*Ground
118.02	120.8	125.35	127.27	118.5	119.9	121.8

VOR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 364′
FFM 114.2	See Below	D9.1 FFM 4000′ (3638′)	860′ (498′)	RWY 362′

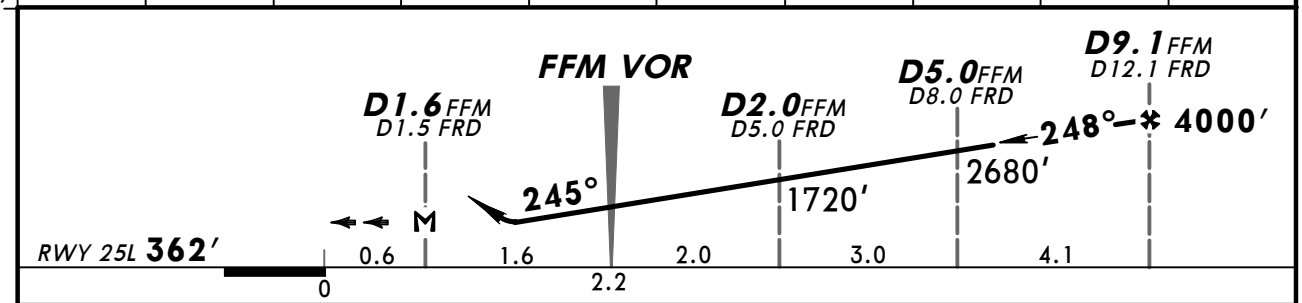
MISSED APCH: Climb STRAIGHT AHEAD to D5.5 FFM, then turn LEFT to intercept R-242 FFM. Then on R-242 FFM to D8.0 FFM or 5000′, whichever is later, then turn LEFT to CHA VOR climb and maintain 5000′.

Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′

MSA FFM VOR: 4300′ (125°–180°), 3200′ (180°–335°), 3500′ (335°–125°)



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

Standard STRAIGHT-IN LANDING RWY **25L**

DA(H) **860′** (498′)

ALS out

PANS OPS

A	RVR 1500m	
B		
C	RVR 1500m	CMV 2300m
D		

CHANGES: None.

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EDDF/FRA
FRANKFURT/MAIN

8 FEB 13 (13-4)

JEPPESEN

FRANKFURT/MAIN, GERMANY
VOR Rwy 25C

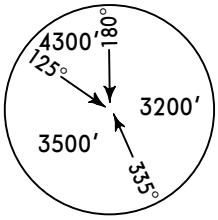
BRIEFING STRIP

*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

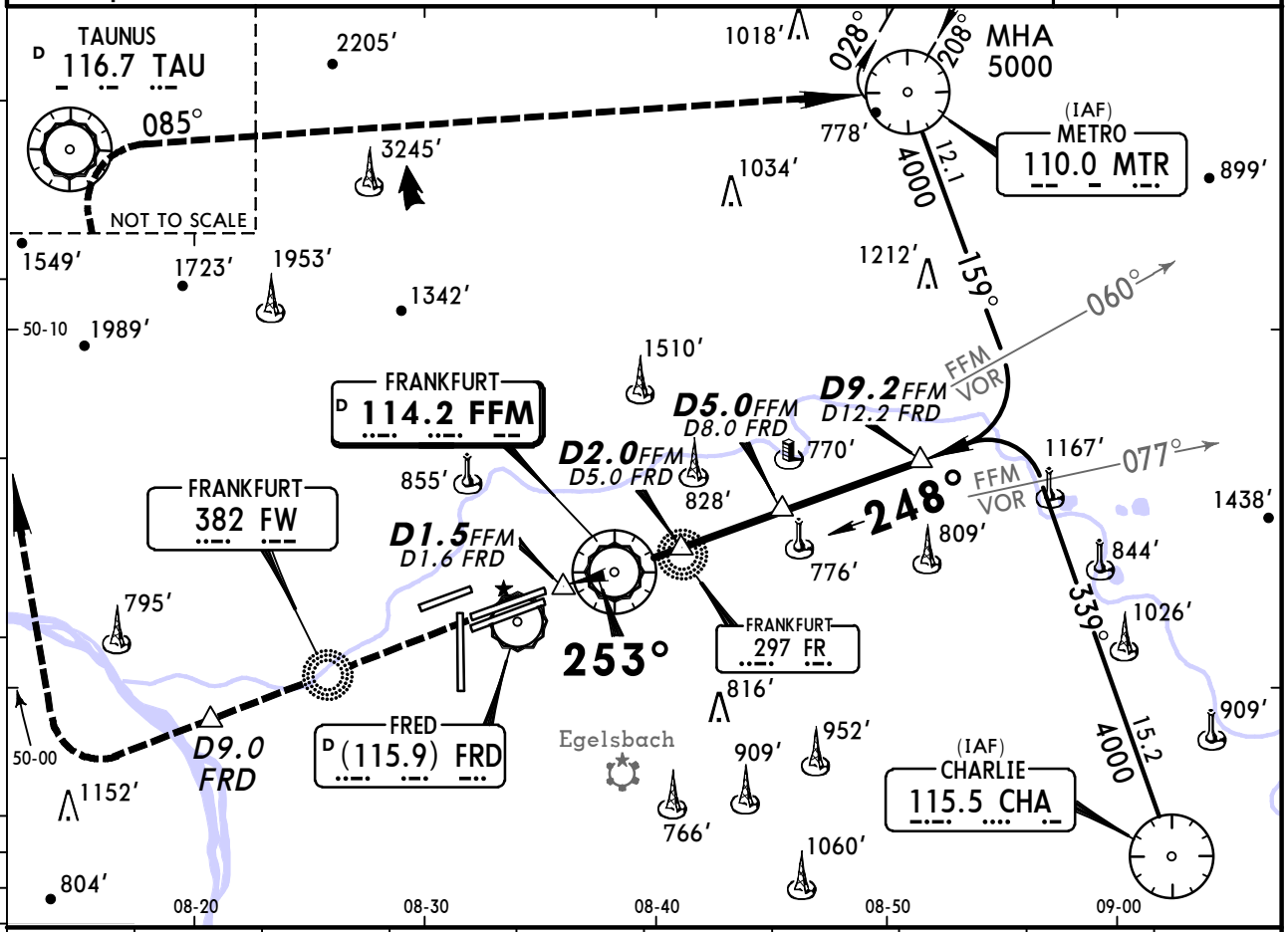
VOR	Final Apch Crs	Minimum Alt	DA(H)	Apt Elev 364′
FFM 114.2	See Below	D9.2 FFM 4000′ (3636′)	870′ (506′)	RWY 364′

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′.

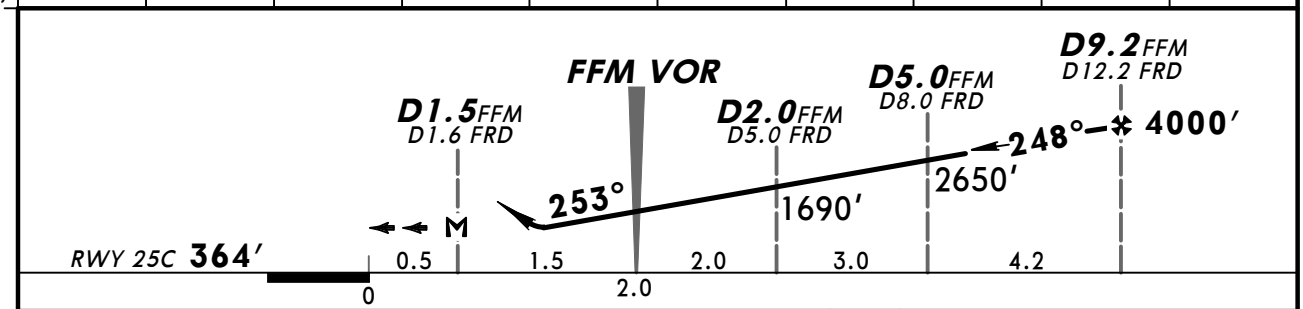
Alt Set: hPa (IN on req) Rwy Elev: 13 hPa Trans level: By ATC Trans alt: 5000′
DME required.



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) **870′** (506′)

ALS out

PANS OPS

A	RVR 1500m	
B		
C	RVR 1600m	CMV 2400m
D		

CHANGES: Minimums.

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Chart changes since cycle 14-2013

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE
FRANKFURT/MAIN, (FRANKFURT/MAIN - EDDF)				
REV	SID DESIGNATION INDEX	10-3	21 Jun 2013	
REV	SID DESIGNATION INDEX (CO...	10-3A	21 Jun 2013	
REV	BIBTI 2M DEP	10-3E1	21 Jun 2013	
REV	BIBTI 4N DEP	10-3E2	21 Jun 2013	
DEL	KOENIG 6C DEP	10-3E9	21 Jun 2013	
REV	KOMIB 1D & 1E DEPS	10-3F	21 Jun 2013	
REV	MARUN 8D & 4E DEPS	10-3G	21 Jun 2013	
REV	MARUN 3F, 4G & 3J DEPS	10-3G1	21 Jun 2013	
REV	MARUN 2M DEP	10-3G2	21 Jun 2013	
REV	SOBRA 4L & 4U DEPS	10-3L1	21 Jun 2013	
REV	SULUS 8D & 6E DEPS	10-3L2	21 Jun 2013	
REV	TOBAK 4F, 5G & 4J DEPS	10-3L7	21 Jun 2013	
REV	TOBAK 2M DEP	10-3L8	21 Jun 2013	
REV	DINKELSBUHL 5L & 7S RNAV ...	10-3Q5	21 Jun 2013	
REV	KOMIB 1D & 1E RNAV DEPS (...	10-3Q6	21 Jun 2013	
REV	SOBRA 4L & 4U RNAV DEPS (...	10-3V5	21 Jun 2013	
REV	SULUS 8D & 6E RNAV DEPS (...	10-3V6	21 Jun 2013	

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TERMINAL CHART CHANGE NOTICES

Chart Change Notices for Airport EDDF

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: 20130621

SIDs (10-3F/10-3L2/10-3Q6/10-3V6): speed restriction (MAX 220KT) after FFM 3.0 DME/at DF149 withdrawn.

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

(10-9/10-9A, 10-9B) TWY S extended westward parallel to TWY R, links between S and R from East to West designated S9, S10 and S11.

Type: Terminal
Effectivity: Permanent
Begin Date: Immediately
End Date: No end date

Parking stand A32 withdrawn.

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

Eff 31 May 12 for optimization of CDO, report ATIS received when contacting arrival sector; CDO avbl btn passing clearance limit KERAX, PSA, ROLIS and UNOKO until reaching final approach alt 5000' or4000' at the lastest; participants are invited to send regular feedback on CDO performance to cdo-feedback@dfs.de.