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PANS-OPS Flight Procedure Design Training for CAAs

23 August – 03 September 2021





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7 – Intermediate approach segment (Doc. 8168, Vol. 2, Part I, section 4, Chap. 4)





- 1. General**
- 2. Alignment criteria**
- 3. Length of intermediate segment**
- 4. Vertical profile**
- 5. Protection**

IAF

IF

FAP/FAF

Landing configuration!

- Track guidance provided;
- Two types of intermediate segments:
 - ☞ One which begins at an IF;
 - ☞ One starting after completion of a DR, reversal or procedure turn
- Not a mandatory segment!
- May not have FAP/FAF!



Segment begins at an IF only if:

☞ Previous segment is a DME arc, a radial or bearing or in PBN;

Segment has no IF:

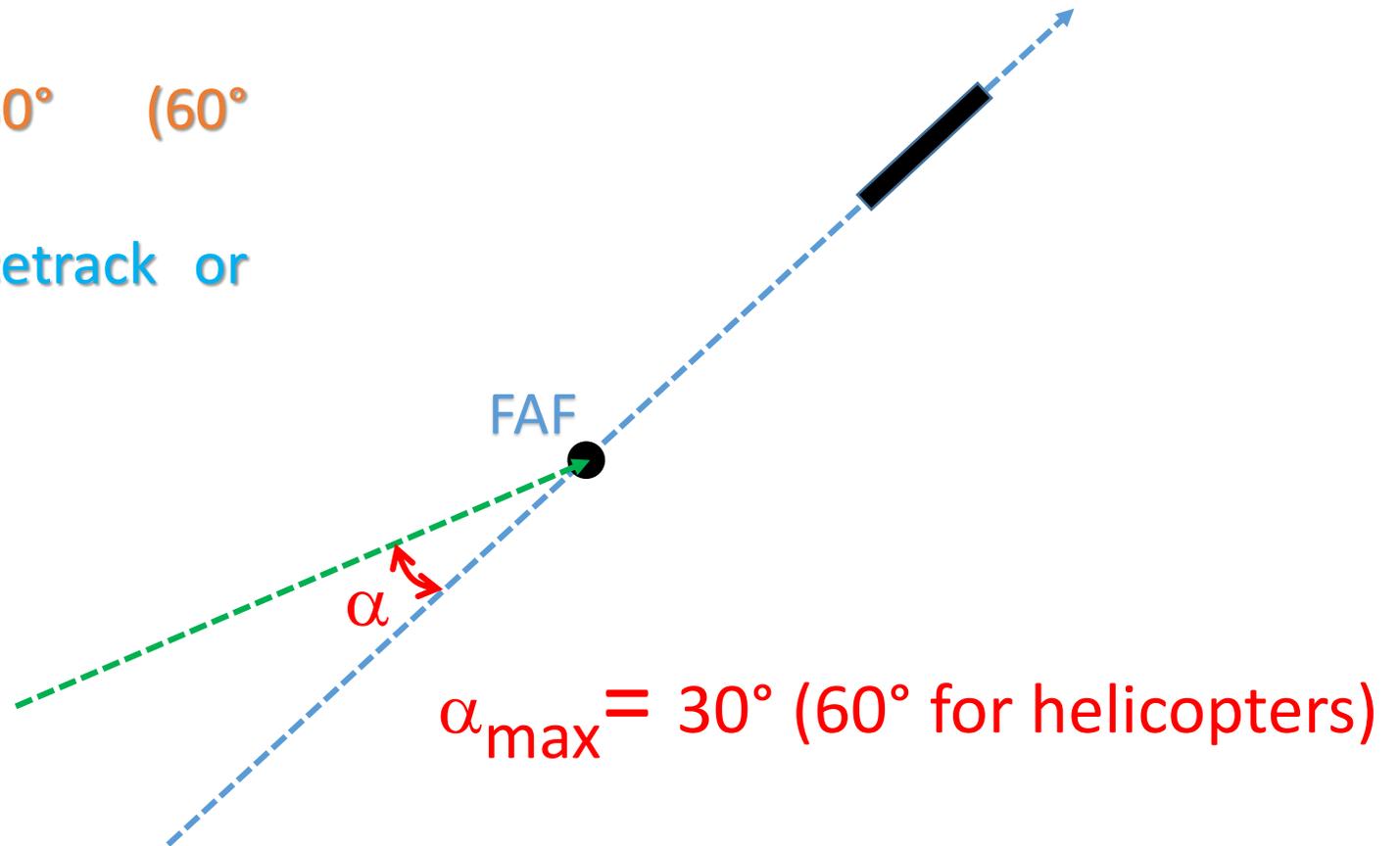
☞ Intermediate begins after a DR, a racetrack or reversal procedure:

- Intermediate starts after completion of the turn.

If no FAP/FAF:

☞ No intermediate segment.

- Segment based on straight track alignment:
 - ☞ Maximum angle: 30° (60° Helicopters)
- Segment after turns (racetrack or reversal):



□ Depends on the type of intermediate:

☞ Based on a straight track alignment:

- Maximum: 15 NM ;
- Optimum: 10 NM
- Minimum: 5 NM;
- *Specific values for PBN and precision approach.*
- *Increased if IF intercept angle >90°:*

Intercept angle (°)	91-96	97-102	103-108	109-114	115-120
Minimum length (NM)	6	7	8	9	10
Minimum length H (NM)	61°-90°: 3 NM		91°-120°: 4 NM		



If IF, compute slope:

👉 Optimum: 0° (flat);

👉 Maximum: 5.2° accounting minimum flat segment of:

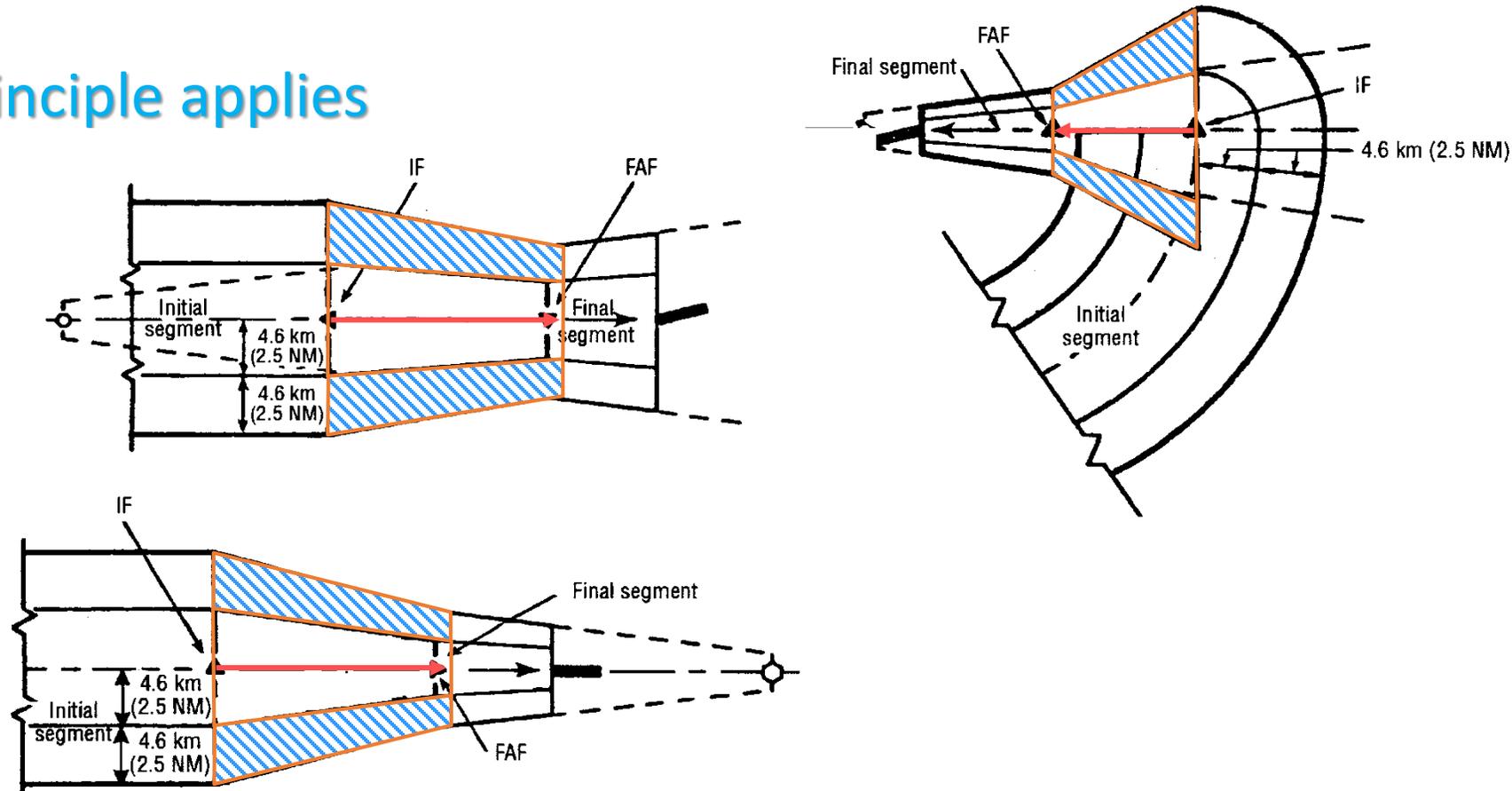
- 1.5 NM for Cat. C & D;
- 1.0 NM for Cat. A & B.

If no IF, check the gradient:

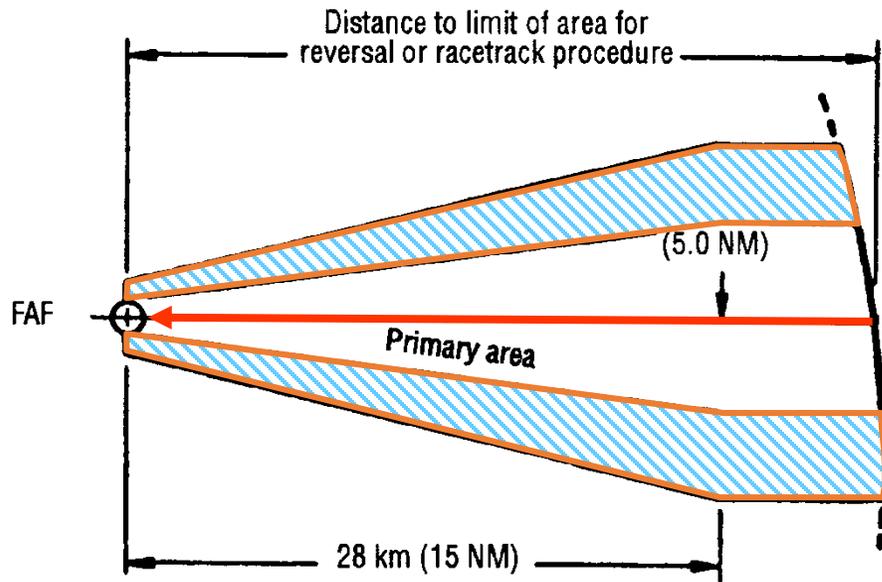
Category of aircraft	Minimum (ft/min)	Maximum (ft/min)
A & B	394	655
C & D	590	1 000

- ❑ MOC: 150 m
- ❑ Secondary area principle applies

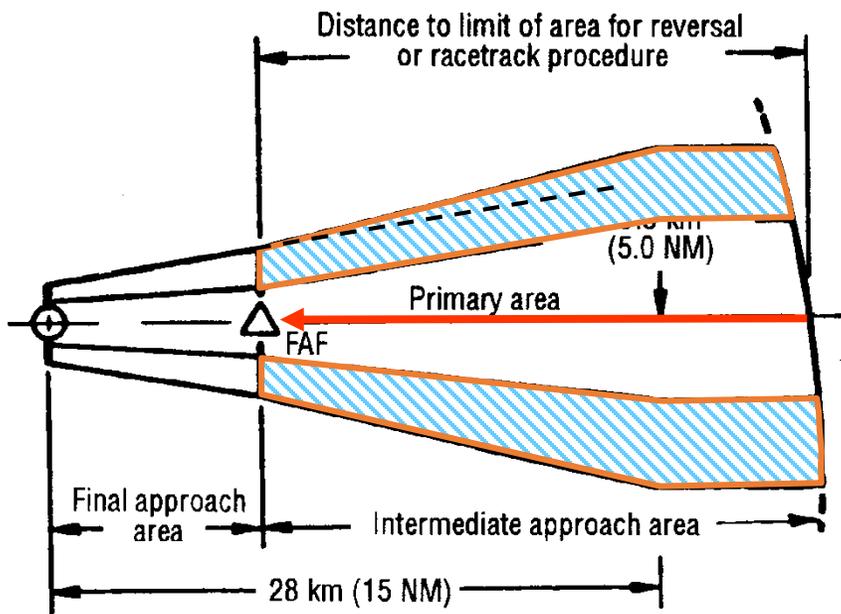
Link between straight segment and final



INTERMEDIATE APPROACH REVERSAL or RACETRACK



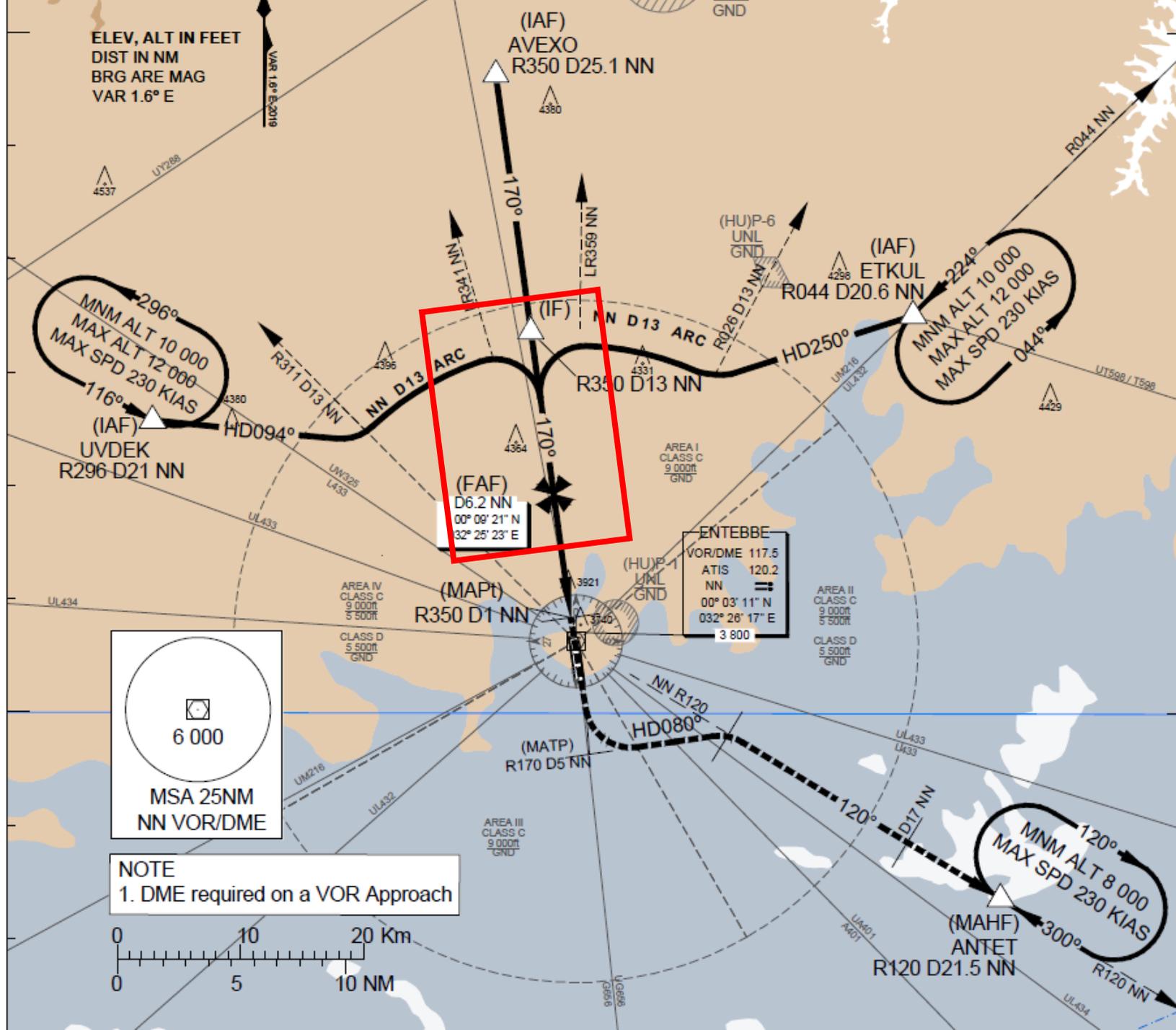
FAF is over the station



FAF is not the station



- Goal of the intermediate segment;
- Special on the segment:
 - ☞ Not mandatory (may not exist);
 - ☞ May not begin at IF;
 - ☞ May not have a FAF;
 - ☞ Specific protection if not after a straight segment.
- Vertical profile management;
- Alignment criterion;
- Length.





Questions:

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