

APPROACH CLEARANCES

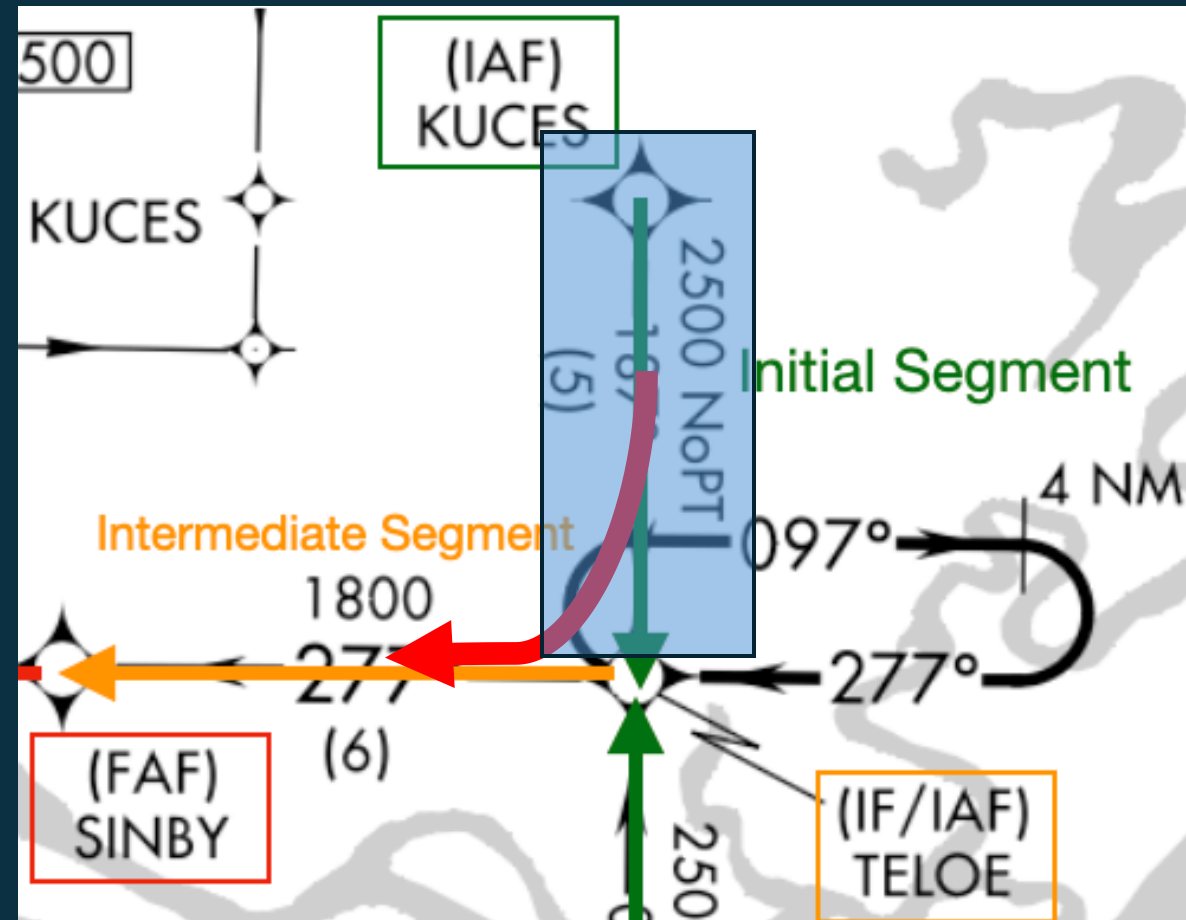
Tiziano Bernard, CFII

Mission Objectives

- Identify and Understand the various approach segments.
- Identify and Understand the Terminal Arrival Areas (TAA).
- Understand expected procedures for arrivals at the:
 - Initial Approach Fix (IAF);
 - IAF which is also a Final Approach Fix (FAF).
- Understand expected procedures for Vectors to Final (VTF).

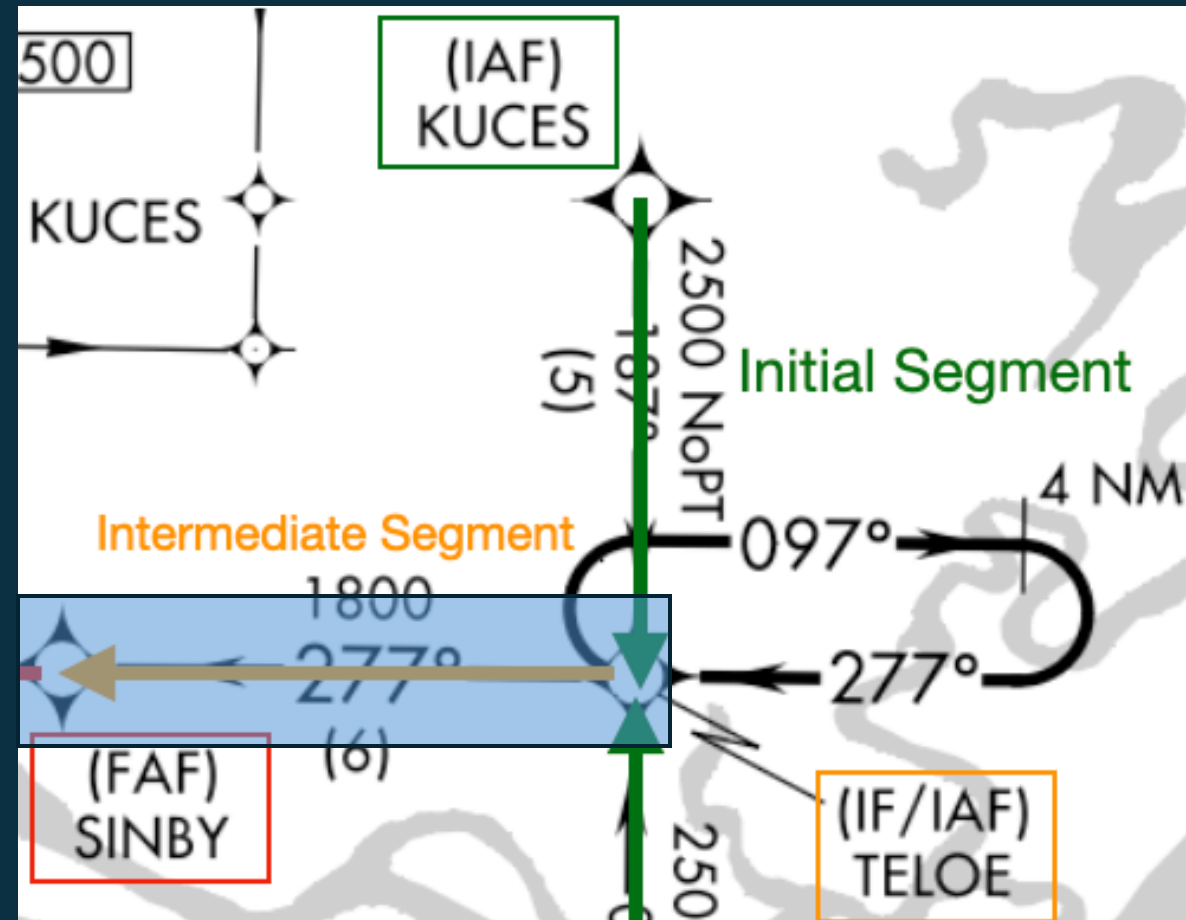
Initial Approach Segment

- **Initial Approach Segment:**
 - Designed to guide the aircraft to the Final Approach Course (FAC);
 - Help the airplane align with final (i.e., the runway).
- RNAV (GPS) approaches have the typical “T” geometry to allow arrivals from multiple directions.



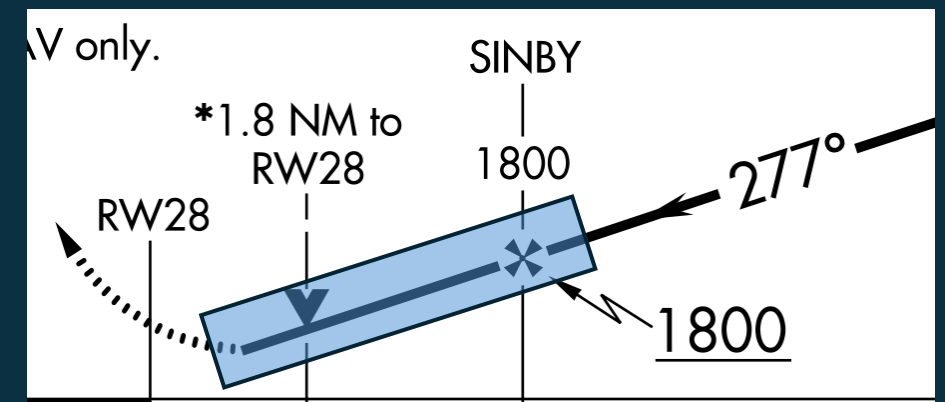
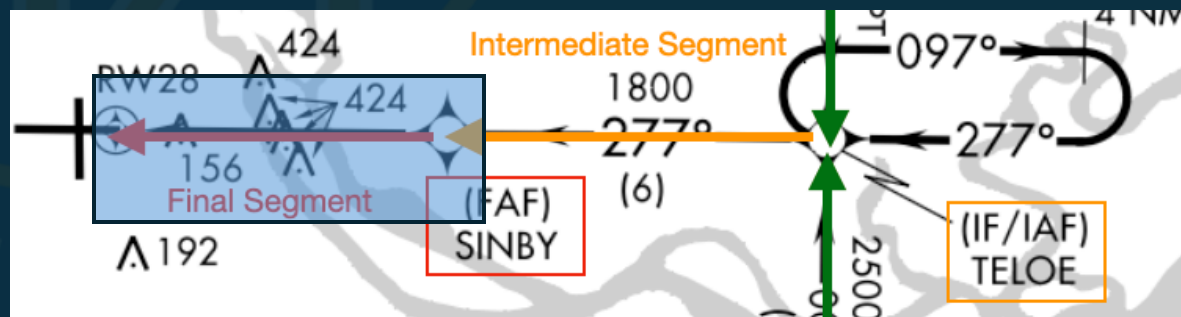
Intermediate Approach Segment

- **Intermediate Approach Segment:**
 - Typically linear segment;
 - Typically aligned with the runway.
- It provides a stable path to allow aircraft to configure for landing prior to the descent at the FAF.
- It is typically aligned with the runway but there are exceptions, depending on the TERPS criteria.



Final Approach Segment

- **Final** Approach Segment:
 - The heart of the approach;
 - Typically aligned with the runway.
- Typically marks the beginning of the non-precision descent phase.
- It is typically aligned with the runway but there are exceptions, depending on the TERPS criteria.



Generic Clearances

- Pilots should typically expect to be cleared for the approach starting at an IAF or IF.
- To facilitate traffic, ATC may issue vectors to final (VTF).
- To be issued an approach clearance, the pilot needs to be on or heading to a published segment of the approach (e.g., direct IAF) and at a safe altitude (e.g., at or above minimum vectoring altitude – MVA).

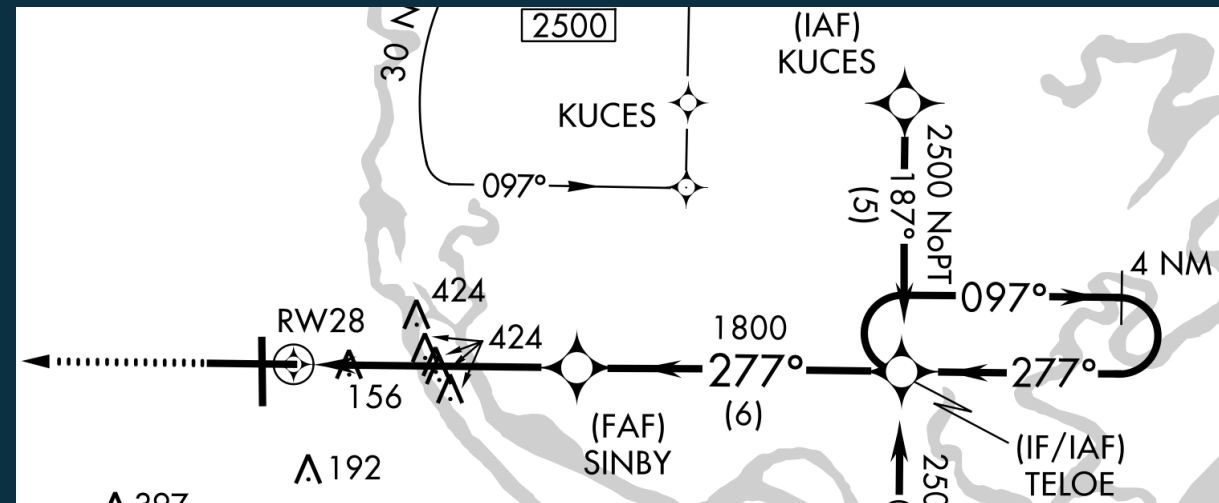
"Cross WOXIT at or above 2,500, cleared RNAV 28 approach"

Clearance to an IAF

- The simplest of the clearances.

"Cross KUCES at or above 2,500, cleared RNAV 28 approach"

- Proceed to the IAF and fly "as published":
 - KUCES (IAF) to TELOE (IF)
 - TELOE (IF) to SINBY (FAF)
 - SINBY (FAF) to Rwy 28 (MAP)

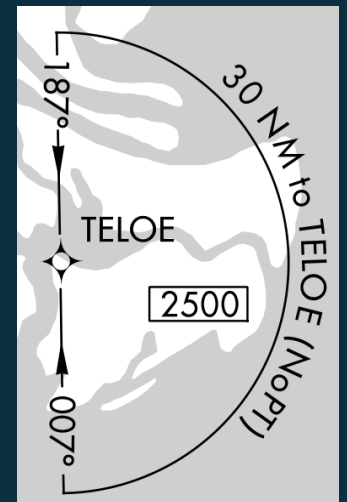


Terminal Arrival Areas (TAAs)

- Approach clearances may not include an altitude restriction.
- That means there must be a TAA available.
- The TAA allows you to descent up to the published altitude in the TAA sector (whichever you are in) as long as the clearance di not include an altitude restriction.

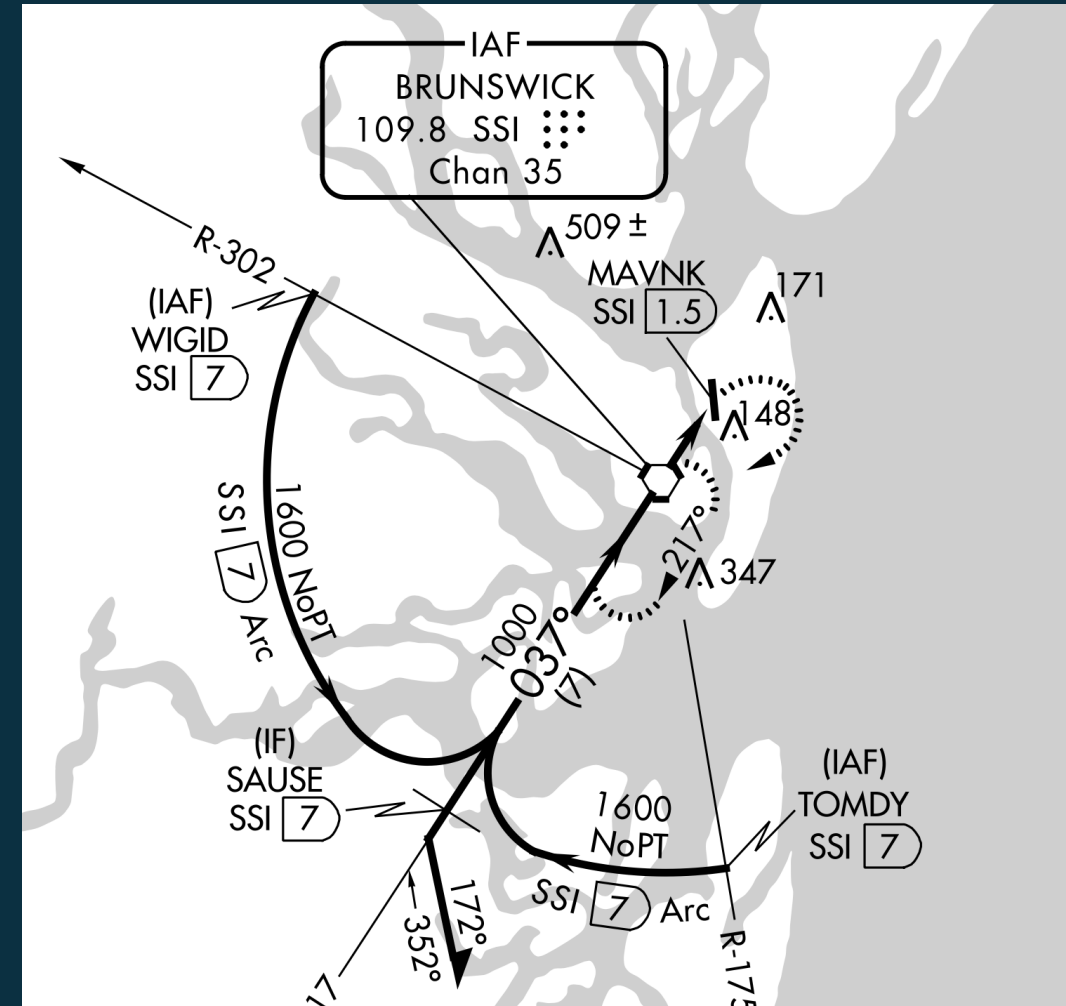
"Proceed direct TELOE, cleared RNAV 28 approach"

- You can therefore descend to 2,500 ft.



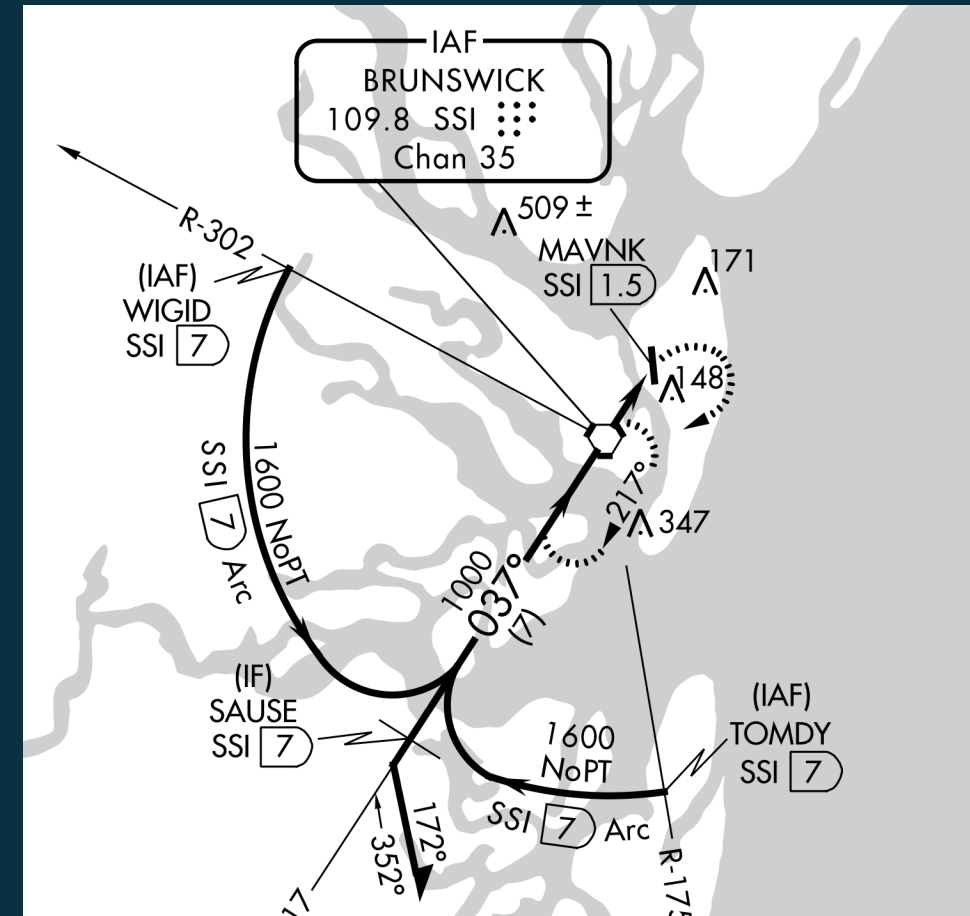
Clearance to an IAF which is also a FAF (1/4)

- ATC **cannot** clear you directly to the FAF, unless the FAF is also an IAF.
- The clearance is the same (location, altitude, etc.), but if the FAF is also an IAF, then the procedure is designed to be flown backwards for a procedure turn.
- In the example, you start at SSI, fly back past SAUSE for the procedure turn and return inbound. The first time you cross SSI it's as the IAF, the second it serves as the FAF.



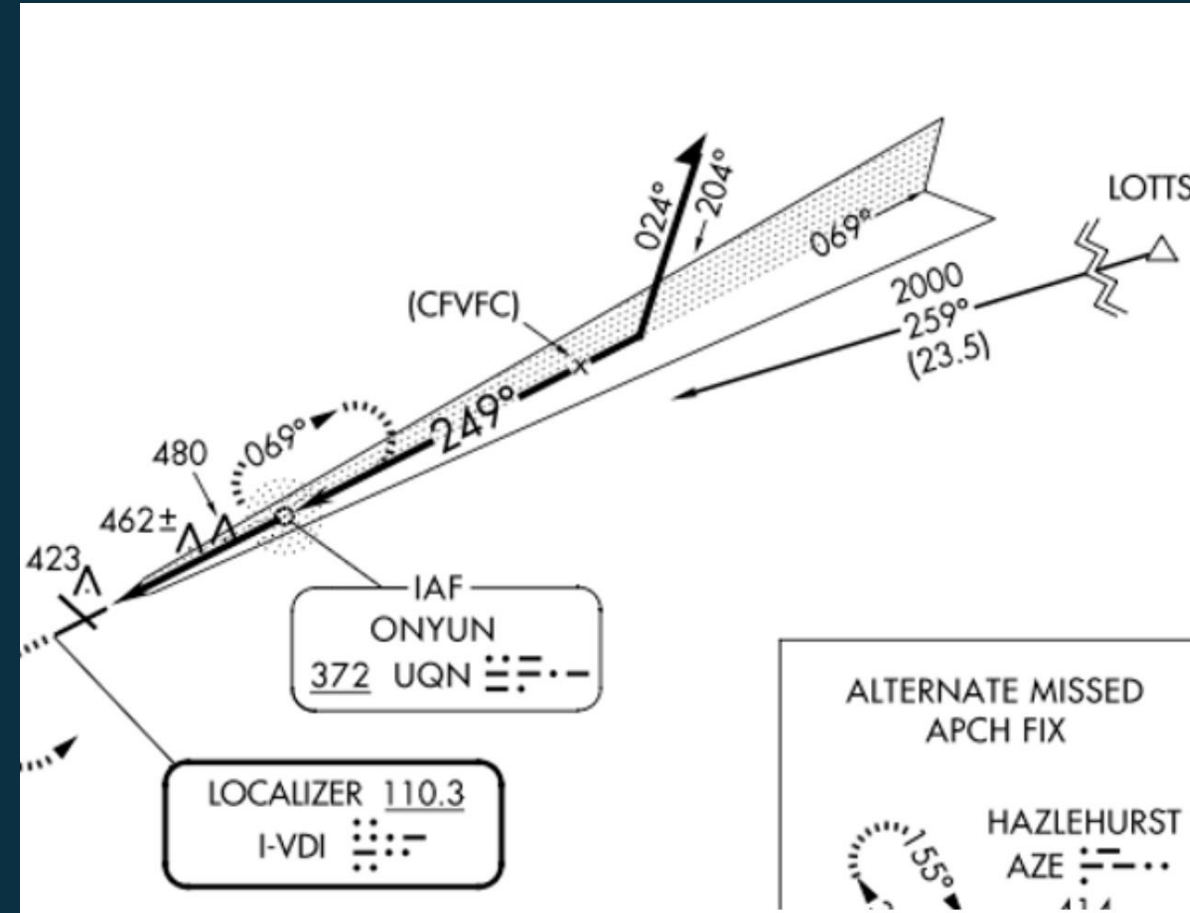
Clearance to an IAF which is also a FAF (2/4)

- Arrivals at the IAF/FAF should always be convenient for aircraft traffic flow and direction.
- If I fly from the north, it works great.
- If I fly from the south, it's useless, because I can begin the procedure at SAUSE (IF).



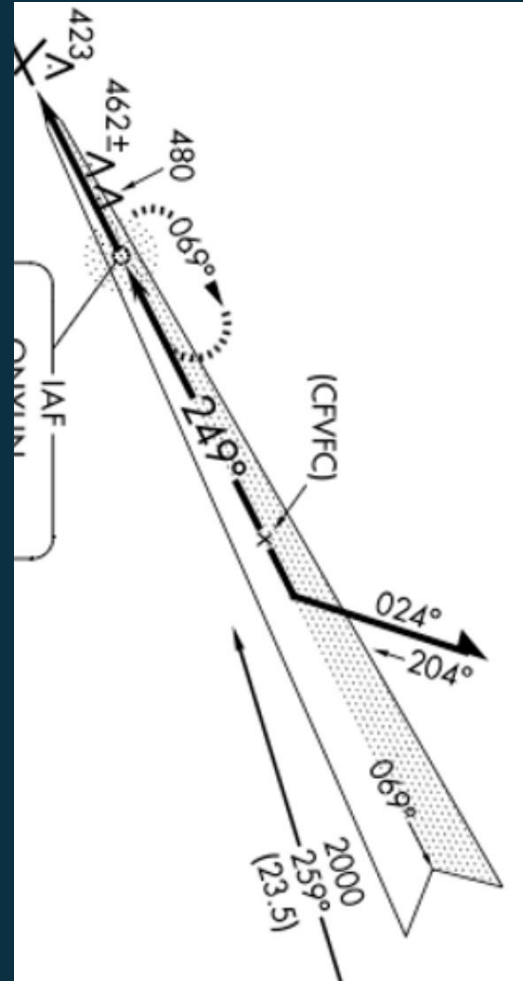
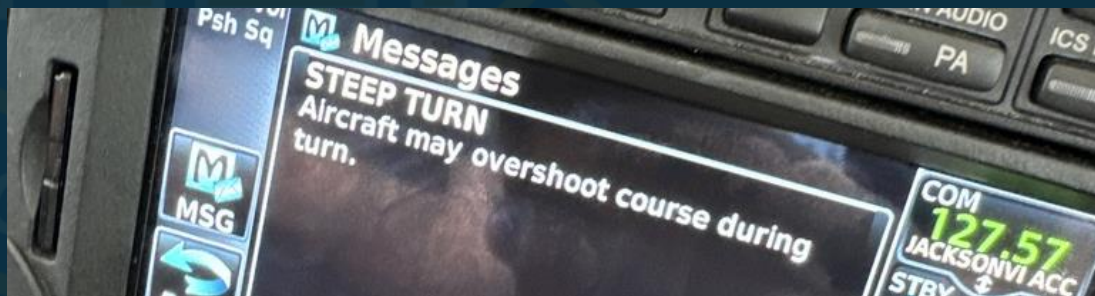
Clearance to an IAF which is also a FAF (3/4)

- There are exceptions - like for situations where there is no convenient fix from a desired direction.
- KVDI ILS 25:
 - Arrivals from the west – use ONYUN as the IAF and do the procedure turn.
 - Arrivals from the east – can use LOTTTS feeder route, but cannot proceed inbound from ONYUN because it's a FAF. I still need to do the procedure turn, even if the angle doesn't make sense.



Clearance to an IAF which is also a FAF (4/4)

- Fly from LOTTS to ONYUN (IAF), then turn back on the localizer, do the procedure turn, and proceed inbound.
- GPS may warn you of the steep turn!



Clearance for Vectors to Final (VTF)

- ATC may give you headings to intercept directly at the final approach segment (FAS).
- This means a convenient intercept angle must be provided.
- Intercepts must occur at least 2NM prior to the FAF.
- Altitude limits are provided “until established” on the FAS.

“Turn left heading 130, maintain 2,000 until established, cleared ILS 10 approach”

“Cherokee 73N, 5 miles from SOVIE, turn left heading 130, maintain 2,000 until established, cleared ILS 10 approach”

Phraseology and Legal Requirements

- You are required to repeat the clearance back to ATC, to include:
- FIX (or heading if VTF), ALTITUDE, APPROACH
- “Savannah Tower, 73N is cleared
 - DIRECT **KUCES**
 - CROSS KUCES AT OR ABOVE **2,500**
 - CLEARED **RNAV 28** APPROACH”

APPROACH CLEARANCES

[Read the full article on FlyWithTizi.com](https://www.flywithtizi.com)