

# SESSION 71: LANDING FROM INSTRUMENT APPROACHES — VISUAL REFERENCES AND TRANSITION

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1. Under 14 CFR §91.175(c), to operate below the DA/DH or MDA, three conditions must be met. The first is that the aircraft is:

- A. Continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate using normal maneuvers
- B. Below the MDA
- C. Over the threshold
- D. At the FAF

2. The second §91.175(c) condition is that:

- A. The autopilot is engaged
- B. The DME is tuned
- C. The transponder is set
- D. The flight visibility is not less than the visibility prescribed in the approach being used

3. The third §91.175(c) condition is that at least one of the required visual references for the intended runway is:

- A. Distinctly visible and identifiable to the pilot
- B. Reported by ATC
- C. Shown on the GPS
- D. Forecast in the TAF

4. All three §91.175(c) conditions must be met:

- A. Only at the DA
- B. Only at the MAP
- C. Continuously to operate below the DA/MDA and to continue to a landing
- D. Only at the threshold

5. Which of the following is one of the §91.175(c)(3) required visual references?

- A. The approach light system (with limitations on descent below 100 feet)
- B. The localizer needle
- C. The glideslope
- D. The ATIS

6. Another of the required visual references is the:

- A. Runway threshold, threshold markings, or threshold lights
- B. Taxiway
- C. Windssock only
- D. Control tower

7. Additional required visual references include the:

- A. En route fixes
- B. Holding pattern
- C. Touchdown zone, touchdown zone markings, touchdown zone lights, runway, runway markings, or runway lights (and the VASI/REIL)
- D. Departure end only

8. When the only visual reference acquired is the approach light system (ALS), the pilot may descend below the DA/MDA to:

- A. The runway
- B. Any altitude
- C. The threshold
- D. 100 feet above the touchdown zone elevation, and no lower, unless the red terminating bars or red side row bars are also distinctly visible

9. Below 100 feet above the TDZE using only the ALS, the pilot may continue only if:

- A. ATC approves
- B. The glideslope centers
- C. The DME reads zero
- D. The red terminating bars or red side row bars are distinctly visible and identifiable

10. "Flight visibility" in §91.175(c)(2) refers to:

- A. The reported ground visibility only
- B. The average forward horizontal distance the pilot can see from the cockpit in flight
- C. The forecast visibility
- D. The slant-range visibility to the FAF

11. If the reported visibility is below the approach minimum, a Part 91 pilot:

- A. May not begin the final approach segment in some operations, but generally may fly the approach and the controlling factor for landing is the flight visibility the pilot observes
- B. Must land regardless
- C. May descend below the MDA

D. Must hold

12. An "EFVS" (Enhanced Flight Vision System) under §91.175 allows a suitably equipped/authorized operator to:

A. Land in any weather

B. Ignore the DA

C. Use the enhanced vision imagery to satisfy the visual reference requirement to descend below the DA/MDA, subject to specific rules

D. Replace the approach chart

13. Reaching the DA on an ILS with only the approach lights in sight, the pilot:

A. Must go missed immediately

B. May continue to 100 feet above the TDZE on the ALS, then must have the additional required references to continue

C. May land immediately

D. Must descend to the runway

14. If, at the DA/MDA, none of the required visual references are distinctly visible, the pilot must:

A. Descend to find them

B. Level off and continue

C. Land

D. Execute the missed approach

15. Acquiring the runway environment but being too high or poorly positioned to land normally means the pilot:

A. Should dive to land

- B. May descend below MDA anyway
- C. Has not met the "normal descent/normal maneuvers" condition and should go missed
- D. Should circle below the MDA

16. The "normal rate of descent using normal maneuvers" condition exists to:

- A. Prevent an unstable, abrupt, or excessive maneuver to force a landing from an unsuitable position
- B. Lower the minimums
- C. Replace the glideslope
- D. Set the alternate

17. Once the required visual references are acquired and the conditions met, the pilot:

- A. May continue the descent and land
- B. Must still go missed
- C. Must level at the DA
- D. Must climb

18. The visibility required for the approach is published in the:

- A. En route chart
- B. Minimums section of the approach chart
- C. Airport diagram
- D. Departure procedure

19. A pilot who descends below the DA/MDA without meeting all three §91.175(c) conditions has:

- A. Flown a proper approach

- B. Committed a regulatory violation and risked an unsafe landing or CFIT
- C. Executed the missed approach
- D. Satisfied the rule

20. The transition from instruments to visual references near the DA/MDA requires the pilot to:

- A. Abandon the instruments entirely at the FAF
- B. Stay on instruments to the runway
- C. Look up only at the MAP
- D. Maintain the instrument scan while acquiring and confirming the visual references, then transition to a visual landing

21. The required visual references list is specific so that:

- A. Any light suffices
- B. Seeing the city lights is enough
- C. The DME is required
- D. Only genuine runway-environment cues that support a safe landing are accepted

22. A REIL (Runway End Identifier Lights) or VASI in sight:

- A. Is not a valid reference
- B. Replaces the glideslope
- C. Is among the runway-environment references that can satisfy the requirement
- D. Lowers the minimums

23. A pilot who acquires the approach lights at the DA but loses them before reaching the additional references at 100 feet above TDZE must:

- A. Continue to the runway
- B. Descend anyway
- C. Execute the missed approach
- D. Level off

24. The combination of the three §91.175(c) conditions ensures the pilot lands only when:

- A. ATC approves
- B. The weather is forecast clear
- C. The autopilot is on
- D. Properly positioned, with adequate flight visibility, and with the runway environment in sight

25. The fundamental principle of landing from an instrument approach is that the pilot must:

- A. Land whenever the runway is glimpsed
- B. Continue below the DA/MDA to a landing only when continuously positioned for a normal landing, with the required flight visibility and at least one required visual reference distinctly visible, and otherwise go missed
- C. Descend below the MDA to find the runway
- D. Disregard the visual reference requirement

## **ANSWER KEY & EXPLANATIONS – SESSION 71**

1. A. Normal descent position — The first §91.175(c) condition is being continuously in a position from which a descent to landing can be made at a normal rate using normal maneuvers.

2. D. Flight visibility — The second condition is that the flight visibility is not less than the visibility prescribed in the approach being used.

3. A. Reference visible — The third condition is that at least one required visual reference is distinctly visible and identifiable to the pilot.
  
4. C. Continuously — All three conditions must be met continuously to operate below the DA/MDA and continue to a landing.
  
5. A. ALS (with limits) — The approach light system is a required visual reference (with limitations on descent below 100 feet).
  
6. A. Threshold/markings/lights — The runway threshold, threshold markings, or threshold lights are required visual references.
  
7. C. TDZ/runway references — The touchdown zone, its markings/lights, the runway, runway markings/lights (and VASI/REIL) are required visual references.
  
8. D. 100 ft above TDZE — With only the ALS, the pilot may descend to 100 feet above the TDZE, and no lower, unless the red terminating bars or red side row bars are also distinctly visible.
  
9. D. Red bars visible — Below 100 feet above the TDZE using only the ALS, the pilot may continue only if the red terminating bars or red side row bars are distinctly visible and identifiable.
  
10. B. Forward horizontal distance — Flight visibility is the average forward horizontal distance the pilot can see from the cockpit in flight.
  
11. A. Flight visibility controls landing — A Part 91 pilot generally may fly the approach, and the controlling factor for landing is the flight visibility the pilot observes.
  
12. C. EFVS imagery — An EFVS allows a suitably equipped/authorized operator to use the enhanced vision imagery to satisfy the visual reference requirement to descend below the DA/MDA, subject to specific rules.

13. B. ALS to 100 ft — With only the approach lights at the DA, the pilot may continue to 100 feet above the TDZE on the ALS, then must have the additional required references to continue.

14. D. Missed approach — If none of the required visual references are distinctly visible at the DA/MDA, the pilot must execute the missed approach.

15. C. Go missed — Acquiring the runway but being too high or poorly positioned means the "normal descent" condition is not met, and the pilot should go missed.

16. A. Prevent unsafe maneuver — The "normal rate/normal maneuvers" condition prevents an unstable, abrupt, or excessive maneuver to force a landing from an unsuitable position.

17. A. Continue and land — Once the references are acquired and the conditions met, the pilot may continue the descent and land.

18. B. Minimums section — The required visibility for the approach is published in the minimums section of the approach chart.

19. B. Violation/risk — Descending below the DA/MDA without meeting all three conditions is a regulatory violation and risks an unsafe landing or CFIT.

20. D. Maintain scan/transition — The transition near the DA/MDA requires maintaining the instrument scan while acquiring and confirming the visual references, then transitioning to a visual landing.

21. D. Genuine runway cues — The reference list is specific so that only genuine runway-environment cues that support a safe landing are accepted.

22. C. Valid reference — A REIL or VASI in sight is among the runway-environment references that can satisfy the requirement.

23. C. Missed approach — Losing the approach lights before reaching the additional references at 100 feet above TDZE requires executing the missed approach.

24. D. Positioned/visibility/references — The three conditions ensure the pilot lands only when properly positioned, with adequate flight visibility, and with the runway environment in sight.

25. B. Continue only when conditions met — The fundamental principle is to continue below the DA/MDA to a landing only when continuously positioned for a normal landing, with the required flight visibility and at least one required visual reference distinctly visible, and otherwise go missed.