



U.S. Department  
of Transportation  
Federal Aviation  
Administration

# Memorandum

Subject: INFORMATION: Instrument Departure Criteria in  
Terminal Instrumental Procedure (TERPS)

Date: SEP - 5 2003

From: Manager, Flight Technologies and Procedures  
Division, AFS-400

Reply to  
Attn. of:

To: Program Director, Aviation Systems Standards,  
AVN-1

Evaluation of Instrument Departures With Low, Close In Obstacles  
(Re: Your email, from Mr. James Cecil, June 4, 2003, copy attached)

1. We discussed your questions and this is to provide an interim clarification. A longer-term answer will be in the form of a proposed revision to the TERPS.
2. For the first situation that you describe in the attached email, make the determination *before rounding* and, therefore, your example obstacle is under paragraph 1.3.1, as a "low, close-in obstacle." Use a note as described in paragraph 1.4.6, and no ceiling or visibility value is required because of the determination that the obstacle is considered as "low, close-in."
3. Regarding your second paragraph, for situations when a climb gradient, ceiling, and visibility are required, the minimum values are:
  - a. Ceiling values shall be at least the height of the obstruction; use the method of calculation 1.5.1. The present Volume 4, paragraph 1.5, does not directly mention a minimum ceiling value. But paragraphs 1.3 and 1.4 preclude extremely low ceiling values because ceiling is not to be specified for "low, close-in obstacles." Regarding your question of minimum ceiling requirements, it is acceptable, but not mandatory, to also apply the requirement of paragraph 1208 of the former Chapter 12, that stated, "Ceilings of 200 feet or less shall not be specified."
  - b. Visibility values shall be at least the distance to the obstruction, but no more than 3 statute miles (SM), as indicated in paragraph 1.5.2. Do not publish any visibility values less than 1 SM. This is to be consistent with the standard take off minimums, 1 SM for aircraft with 1 or 2 engines that are required by the Code of Federal Regulations (CFR) (Reference is 14 CFR 91.175).

4. Make determinations of climb gradients, ceilings, and visibilities, based on an evaluation of all factors and circumstances related to a particular situation.

5. This clarification applies pending the next revision of TERPS. We are preparing revisions to paragraphs 1.3, 1.4, and 1.5 Volume 4 of TERPS. You are invited to participate in that process.

For further details, please contact Don Pate at (405) 954-4165.

Original Signed By:

John W. McGraw

File: 1110-6

WP: Instrument Departure Criteria in Terps.doc

AFS-420;JCorman:cf:405-954-0012:08/22/2003

Phil,

A couple of questions -

1. Regarding our conversation yesterday:

DER ELEV: 394.0

OBST ELEV: 480

OBST DIST FROM ICAB LINE: 0.44 NM

CG:  $(480-394) / (0.44 \times .76) = 257.18$  (258) FPNM

RAW CLIMB-TO ALTITUDE:  $(258 \times 0.44) + 394 = 507.52$  (508), WHICH ROUNDS TO 600

RAW HEIGHT ABOVE DER:  $(508-394) = 114$  FT

.46B, SITUATION 2) APPLIES. (LOW, CLOSE-IN OBSTACLE)

ROUNDED CLIMB-TO ALTITUDE: 600

ROUNDED HEIGHT ABOVE DER:  $(600-394) = 206$  FT

.46B, SITUATION 3) APPLIES. (CG AND CEIL/VIS REQUIRED)

Shouldn't the "raw" (non-rounded) climb-to altitude be used to determine which situation to apply?

2. Was the minimum 300 ft ceiling requirement from the former Chapter 12 (para 1208) intentionally dropped and not included in Volume 4? Is there a minimum ceiling value (other than the obvious 100 ft)? In the above example (if applying SITUATION 3), and if the APT ELEV is 394, then the published ceiling would be 100 ft ( $480-394 = 86$  which rounds to 100).

Pls advise.

Thanks,  
Jim C.